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# MEMORANDUM

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| To: | Karl Gailey, Hilltop Group, Inc. |
| From: | Jennifer Reed, Dudek |
| Subject: | North County Environmental Resources Recycling Project Air Quality and Greenhouse Gas Emissions Assessment |
| Date: | June 3, 2019 |
| cc: | Adam Poll, Dudek; David Hubbard, Gatzke Dillon & Ballance LLP |
| Attachment A: | Air Quality and Greenhouse Gas Emissions Calculations |
| Attachment B: | Final Climate Action Plan Consistency Review Checklist |

Dudek is pleased to submit this air quality and greenhouse gas (GHG) emissions assessment to assist the Hilltop Group, Inc. (Hilltop) with environmental planning requirements for the proposed North County Environmental Resources Recycling (NCER) Project (collectively the proposed project or project) located in San Diego County (County), California.

This memorandum estimates criteria air pollutant and GHG emissions from construction and operation of the proposed project and evaluates potential air quality and GHG emissions impacts resulting from project implementation. This memorandum assesses project impacts against applicable California Environmental Quality Act (CEQA) significance criteria.

The contents and organization of this memorandum are as follows: Section 1: Project Description; Section 2: General Analysis and Methodology; Section 3: Air Quality Assessment including Thresholds of Significance and an Impact Analysis; Section 4: GHG Assessment including Thresholds of Significant and Impact Analysis; Section 5: Conclusions; and Section 6: References.

## 1 PROJECT DESCRIPTION

The Project Applicant, Hilltop, is proposing to develop a wood chipping and Construction, Demolition, and Inert (CDI) debris recycling facility in unincorporated San Diego County.

The facility would be constructed on one of the three portions of the site designated I-3 and zoned M54. According to the County Zoning Ordinance, Section 2542(b), recycling facilities are

expressly permitted on land zoned for M54 uses. The remaining parcels are zoned as Semi-Rural Residential, Rural Residential, and Agriculture, and a Site Plan is required in conformance with the County Zoning Ordinance. Additionally, solid waste permits are required by the County Local Enforcement Agency (LEA) in conformance with state and County regulations, and a Habitat Loss Permit is required in conformance with the Natural Communities Conservation Planning Act.

Regional access is provided by Interstate-15 (I-15) to the Deer Springs Road exit and local access to the site is provided by a private easement road via Mesa Rock Road. The current entry is located approximately 400 feet north of the Mesa Rock Road curve. The portion of Mesa Rock Road to the north of the project entry is relatively straight, with no major curves. The nearest driveway providing access to a neighboring community is approximately 1,500 feet north of the existing project entry. The proposed project includes the relocation of the entrance to approximate 120 feet north of its current position. All import/export truck trips would utilize North Centre City Parkway to Mesa Rock Road when traveling to and from the project site. From the I-15/Deer Springs Road/Mountain Meadow Road interchange, all import trucks would turn east onto Mountain Meadow Road then travel south on North Centre City Parkway to Mesa Rock Road/North Centre City Parkway intersection. Import trucks would then turn west onto Mesa Rock Road, proceed through the I-15 underpass to the west side of I-15, and follow the curve along Mesa Rock Road to the proposed entrance to the project site. Export trucks would follow the same route in reverse to travel back to I-15. All import/export trucks would be required to follow this prescribed truck route as part of contractual agreements with the NCER Recycling Facility per project design.

## 2 GENERAL ANALYSIS AND METHODOLOGY

The project is located within the San Diego Air Basin (SDAB) and is within the jurisdictional boundaries of the San Diego Air Pollution Control District (SDAPCD), which has jurisdiction over San Diego County. A spreadsheet based model and emissions factors from the United States (US) Environmental Protection Agency (EPA) AP-42 were used to estimate fugitive dust emissions from the project. The California Emissions Estimator Model (CalEEMod) version 2016.3.1[1] was used to estimate construction and operational emissions from the project.

Criteria air pollutants are defined as pollutants for which the federal and state governments have established ambient air quality standards (AAQS), or criteria, for outdoor concentrations to protect public health. Criteria air pollutants that are evaluated include volatile organic compounds (VOCs; also referred to as reactive organic gases (ROGs)), oxides of nitrogen ($NO_x$), carbon monoxide (CO), sulfur oxides ($SO_x$), particulate matter with an aerodynamic diameter less than or equal to 10 microns in size

[1] This was the version of CalEEMod available at the time the analysis was prepared.

($PM_{10}$), and particulate matter with an aerodynamic diameter less than or equal to 2.5 microns in size ($PM_{2.5}$). VOCs and $NO_x$ are important because they are precursors to ozone ($O_3$). Criteria air pollutant emissions associated with construction of the proposed project were estimated for the following emission sources: operation of off-road construction equipment, on-road hauling and vendor (material delivery) trucks, and worker vehicles. Project operational emission sources evaluated include mobile (vehicle) sources, area sources, energy use, and offroad equipment using the CalEEMod.

GHGs are gases that absorb infrared radiation in the atmosphere. The greenhouse effect is a natural process that contributes to regulating the Earth's temperature. Global climate change concerns are focused on whether human activities are leading to an enhancement of the greenhouse effect. Principal GHGs include carbon dioxide ($CO_2$), methane ($CH_4$), nitrous oxide ($N_2O$), $O_3$, and water vapor. If the atmospheric concentrations of GHGs rise, the average temperature of the lower atmosphere will gradually increase. Globally, climate change has the potential to impact numerous environmental resources though uncertain impacts related to future air temperatures and precipitation patterns. Although climate change is driven by global atmospheric conditions, climate change impacts are felt locally. Climate change is already affecting California: average temperatures have increased, leading to more extreme hot days and fewer cold nights; shifts in the water cycle have been observed, with less winter precipitation falling as snow, and both snowmelt and rainwater running off earlier in the year; sea levels have risen; and wildland fires are becoming more frequent and intense due to dry seasons that start earlier and end later (Climate Action Team (CAT) 2010).

The effect each GHG has on climate change is measured as a combination of the mass of its emissions and the potential of a gas or aerosol to trap heat in the atmosphere, known as its global warming potential (GWP), which varies among GHGs. Total GHG emissions are expressed as a function of how much warming would be caused by the same mass of $CO_2$. Thus, GHG emissions are typically measured in terms of metric tons (MT) of $CO_2$ equivalent ($CO_2E$).[2]

Global climate change is a cumulative impact; a project participates in this potential impact through its incremental contribution combined with the cumulative increase of all other sources of GHGs (CAT 2010). This approach is consistent with the *Final Statement of Reasons for Regulatory Action* for amendments to the CEQA Guidelines, which confirms that an environmental impact report or other environmental document must analyze the incremental contribution of a project to GHG levels and

[2] The $CO_2E$ for a gas is derived by multiplying the mass of the gas by the associated GWP, such that metric tons of $CO_2E$ = (metric tons of a GHG) × (GWP of the GHG). CalEEMod assumes that the GWP for $CH_4$ is 25, which means that emissions of 1 metric ton of $CH_4$ are equivalent to emissions of 25 metric tons of $CO_2$, and the GWP for $N_2O$ is 298, based on the Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report.

determine whether those emissions are cumulatively considerable (California Natural Resources Agency (CNRA) 2009).

GHG emissions associated with construction of the proposed project were estimated for the following emission sources: operation of off-road construction equipment, on-road hauling and vendor trucks, and worker vehicles. GHG emission sources associated with operation of the proposed project were evaluated for energy use (generation of electricity consumed by the project), water supply, area sources, project-generated vehicular traffic, offroad equipment, and solid waste. The detailed project construction and operational assumptions are included in Attachment A for the Project.

# 3 AIR QUALITY ASSESSMENT

## 3.1 Thresholds of Significance

The State of California has developed guidelines to address the significance of air quality impacts based on Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.), which provides guidance that a project would have a significant environmental impact if it would:

- Conflict with or obstruct the implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for $O_3$ precursors);
- Expose sensitive receptors to substantial pollutant concentrations; or
- Create objectionable odors affecting a substantial number of people.

In addition, Appendix G of the CEQA Guidelines indicates that where available, the significance criteria established by the applicable air quality management district or APCD may be relied upon to determine whether the proposed project would have a significant impact on air quality. The following significance thresholds for air quality are based on criteria provided in the County's *Guidelines for Determining Significance and Report Format and Content Requirements – Air Quality* (County of San Diego 2007). The County's guidelines were adapted from Appendix G of the CEQA Guidelines listed previously.

A significant impact would result if any of the following would occur:

- The proposed project would conflict with or obstruct the implementation of the County Regional Air Quality Strategy (RAQS) and/or applicable portions of the State Implementation Plan (SIP).
- The proposed project would result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation:
    - The proposed project would result in emissions that exceed 250 pounds per day of $NO_x$ or 75 pounds per day of VOCs;
    - The proposed project would result in emissions of CO that, when totaled with the ambient concentration, would exceed a 1-hour concentration of 20 ppm or an 8-hour average of 9 ppm;
    - The proposed project would result in emissions of $PM_{2.5}$ that exceed 55 pounds per day;
    - The proposed project would result in emissions of $PM_{10}$ that exceed 100 pounds per day and increase the ambient $PM_{10}$ concentrations by 5 micrograms per cubic meter ($\mu g/m^3$) or greater at the maximum exposed individual.
- The proposed project would result in a cumulatively considerable net increase of any criteria pollutant for which the SDAB is in nonattainment under an applicable federal or state AAQS standard.
    - The following guidelines for determining significance must be used for determining the cumulatively considerable net increases during the construction phase:
        - A project that has a significant direct impact on air quality with regard to emissions of $PM_{10}$, $PM_{2.5}$, $NO_x$, and/or VOCs would also have a significant cumulatively considerable net increase;
        - In the event direct impacts from a proposed project are less than significant, a project may still have a cumulatively considerable impact on air quality if the emissions of concern from the proposed project, in combination with the emissions of concern from other proposed projects or reasonably foreseeable future projects within a proximity relevant to the pollutants of concern, are in excess of the guidelines, including the SDAPCD screening-level thresholds.
    - The following guidelines for determining significance must be used for determining the cumulatively considerable net increase during the operational phase:
        - A project that does not conform to the County's RAQS and/or has a significant direct impact on air quality with regard to operation emissions of $PM_{10}$, $PM_{2.5}$, $NO_x$, and/or VOCs would also have a significant cumulatively considerable net increase;

  - Projects that cause road intersections to operate at or below level of service E (analysis required only when the addition of peak-hour trips from the proposed project and the surrounding projects exceeds 2,000) and create a CO hotspot create a cumulatively considerable net increase of CO.

- The proposed project would expose sensitive receptors to substantial pollutant concentrations:
  - The proposed project places sensitive receptors near CO hotspots or creates CO hotspots near sensitive receptors;
  - Project implementation would result in exposure to TACs, resulting in a maximum incremental cancer risk greater than one in 1 million without application of Toxics-Best Available Control Technology (T-BACT) or a health hazard index greater than one would be deemed as having a potentially significant impact.
- The proposed project, which is not an agricultural, commercial, or an industrial activity subject to SDAPCD standards, as a result of implementation, would either generate objectionable odors or place sensitive receptors next to existing objectionable odors, which would affect a considerable number of persons or the public.

The SDAPCD sets forth quantitative emission thresholds below which a stationary source would not have a significant impact on ambient air quality. Project-related air quality impacts estimated in this environmental analysis would be considered significant if any of the applicable significance thresholds presented in Table 1, SDAPCD Air Quality Significance Thresholds, are exceeded.

**Table 1**
**SDAPCD Air Quality Significance Thresholds**

| **Construction Emissions** | | | |
|---|---|---|---|
| *Pollutant* | *Total Emissions (pounds per day)* | | |
| Respirable particulate matter ($PM_{10}$) | 100 | | |
| Fine particulate matter ($PM_{2.5}$) | 55 | | |
| Oxides of nitrogen ($NO_x$) | 250 | | |
| Oxides of sulfur ($SO_x$) | 250 | | |
| Carbon monoxide (CO) | 550 | | |
| Volatile organic compounds (VOC) | 75* | | |
| **Operational Emissions** | | | |
| *Pollutant* | *Total Emissions* | | |
| | *Pounds per Hour* | *Pounds per Day* | *Tons per Year* |
| Respirable particulate matter ($PM_{10}$) | — | 100 | 15 |
| Fine particulate matter ($PM_{2.5}$) | — | 55 | 10 |
| Oxides of nitrogen ($NO_x$) | 25 | 250 | 40 |

**Table 1**
**SDAPCD Air Quality Significance Thresholds**

| | | | |
|---|---|---|---|
| Sulfur oxides ($SO_x$) | 25 | 250 | 40 |
| Carbon monoxide (CO) | 100 | 550 | 100 |
| Lead and lead compounds | — | 3.2 | 0.6 |
| Volatile organic compounds (VOC) | — | 75* | 13.7 |

**Sources:** County of San Diego 2007; SDAPCD 2016; SDAPCD 2015b.

* VOC threshold based on the significance thresholds recommended by the Monterey Bay Unified Air Pollution Control District for the North Central Coast Air Basin, which has similar federal and state attainment status as the SDAB for $O_3$.

The thresholds listed in Table 1 represent screening-level thresholds that can be used to evaluate whether project-related emissions would cause a significant impact on air quality. Emissions below the screening-level thresholds would not cause a significant impact. In the event that emissions exceed these thresholds, modeling would be required to demonstrate that the project's total air quality impacts result in ground-level concentrations that are below the CAAQS and NAAQS, including appropriate background levels. For non-attainment pollutants, if emissions exceed the thresholds shown in Table 1, the project could have the potential to result in a cumulatively considerable net increase in these pollutants and thus could have a significant impact on the ambient air quality.

SDAPCD Rule 51 (Public Nuisance) prohibits emission of any material that causes nuisance to a considerable number of persons or endangers the comfort, health, or safety of any person (SDAPCD 1976). A project that proposes a use that would produce objectionable odors would be deemed to have a significant odor impact if it would affect a considerable number of off-site receptors.

## 3.2 Impact Analysis

### *3.2.1 Would the Project Conflict With or Obstruct Implementation of the Applicable Air Quality Plan?*

The SDAPCD and San Diego Association of Governments (SANDAG) are responsible for developing and implementing the clean air plans for attainment and maintenance of the AAQS in the SDAB; specifically, the SIP and RAQS.[3] The federal $O_3$ maintenance plan, which is part of the SIP, was adopted in 2016. The SIP includes a demonstration that current strategies and tactics will maintain acceptable air quality in the SDAB based on the NAAQS. The RAQS was initially adopted in 1991 and is updated on a triennial basis (most recently in 2016). The RAQS outlines SDAPCD's plans and control measures designed to attain the state air quality standards for $O_3$.

[3] For the purpose of this discussion, the relevant federal air quality plan is the ozone maintenance plan (SDAPCD 2016). The RAQS is the applicable plan for purposes of state air quality planning. Both plans reflect growth projections in the SDAB.

The SIP and RAQS rely on information from CARB and SANDAG, including mobile and area source emissions, as well as information regarding projected growth in San Diego County and the cities in county, to project future emissions and then determine from that the strategies necessary for the reduction of emissions through regulatory controls. CARB mobile source emission projections and SANDAG growth projections are based on population, vehicle trends, and land use plans developed by San Diego County and the cities in the county as part of the development of their general plans.

If a project would entail development that is greater than that anticipated in the local plan and SANDAG's growth projections, the project might be in conflict with the SIP and RAQS and may contribute to a potentially significant cumulative impact on air quality. The project site is within the North County Metro Subregional Plan Area. The project site's General Plan land use designation is High Impact Industrial (I-3) and the project site's General Plan zoning designation is General Impact Industrial (M54). M54 zoning designation, "allows unenclosed commercial and industrial operations having potential nuisance characteristics such as construction sales and services (County of San Diego 2011)." According to the County's Zoning Ordinance, Section 2542(b), recycling facilities are expressly permitted on land zoned for M54 uses. The project does not require a plan amendment, zone change, or use permit.

As the proposed project would be consistent with the project site's General Plan land use designation, and because the SIP and RAQS rely on information from CARB and SANDAG including growth projections based on population, vehicle trends, and land use plans developed by the County and the cities in the County as part of the development of their general plans, the proposed land uses would be accounted for in the projections contained in the SIP and RAQS. Therefore, the proposed project would not conflict with or obstruct the implementation of local air quality plans and impacts would be **less than significant**.

### *3.2.2 Would the Project Violate Any Air Quality Standard or Contribute Substantially to an Existing or Projected Air Quality Violation?*

**Construction Emissions**

Emissions from the construction phase of the project were estimated using the California Emissions Estimator Model (CalEEMod) Version 2016.3.1 (CAPCOA 2016). Emissions from anticipated project blasting operations were estimated within the January 23, 2015 submittal to the County (Ldn Consulting, Inc. 2013).

For the purposes of modeling, it was assumed that construction of the project would commence in December 2017[4] and would last approximately 12 months based on the anticipated schedule when the analysis was initiated. The analysis contained herein is based on the assumptions outlined in Table 2 (duration of phases is approximate). The project schedule was based on information provided by the project applicant.

**Table 2**
**Construction Phasing Assumptions**

| Proposed Project Construction Phase | Construction Start Month/Year | Construction End Month/Year |
|---|---|---|
| Demolition | 12/2017 | 12/2017 |
| Grading | 12/2017 | 06/2018 |
| Building Construction | 06/2018 | 10/2018 |
| Paving | 10/2018 | 11/2018 |
| Architectural Coating | 10/2018 | 11/2018 |

**Source:** Attachment A

The construction equipment mix used for estimating the construction emissions of the project is based on information provided by the applicant and is shown in Table 3. For the analysis, it was generally assumed that heavy construction equipment would be operating at the site for up to 8 hours per day, 5 days per week (22 days per month) during project construction, unless otherwise noted. The project applicant provided construction worker trip estimates. There is an existing 634 square foot covered patio that would be demolished as part of the project. There would be an estimated 72,000 cubic yards of material imported during the grading of approximately 66 acres. The number of haul trips were estimated using the CalEEMod default truck capacity assumption of 16 cubic yards and the amount of material imported.

**Table 3**
**Construction Scenario Assumptions**

| Construction Phase | One-way Vehicle Trips | | | Equipment | | |
|---|---|---|---|---|---|---|
| | *Average Daily Worker Trips* | *Average Daily Vendor Truck Trips* | *Total Haul Truck Trips* | *Equipment Type* | *Quantity* | *Usage Hours* |
| Demolition | 16 | 0 | 3 | Concrete/Industrial Saws | 1 | 8 |

[4] The analysis assumes a construction start date of December 2017, which represented the earliest date construction would initiate when the project analysis was initiated. Assuming the earliest start date for construction represents the worst-case scenario for criteria air pollutant and GHG emissions because equipment and vehicle emission factors for later years would be slightly less due to more stringent standards for in-use off-road equipment and heavy-duty trucks, as well as fleet turnover replacing older equipment and vehicles in later years.

**Table 3**
**Construction Scenario Assumptions**

| Construction Phase | One-way Vehicle Trips | | | Equipment | | |
|---|---|---|---|---|---|---|
| | *Average Daily Worker Trips* | *Average Daily Vendor Truck Trips* | *Total Haul Truck Trips* | *Equipment Type* | *Quantity* | *Usage Hours* |
| | | | | Excavators | 3 | 8 |
| | | | | Rubber Tired Dozers | 2 | 8 |
| Grading | 16 | 0 | 9,000 | Excavators | 1 | 8 |
| | | | | Graders | 1 | 8 |
| | | | | Rubber Tired Dozers | 1 | 8 |
| | | | | Tractors/Loaders/ Backhoes | 3 | 8 |
| Building Construction | 78 | 30 | 0 | Cranes | 1 | 7 |
| | | | | Crushing/Proc. Equipment | 1 | 8 |
| | | | | Forklifts | 3 | 8 |
| | | | | Generator Sets | 1 | 8 |
| | | | | Graders | 1 | 8 |
| | | | | Rubber Tired Dozers | 1 | 8 |
| | | | | Scrapers | 2 | 8 |
| | | | | Tractors/Loaders/ Backhoes | 2 | 8 |
| | | | | Welders | 1 | 8 |
| Paving | 20 | 0 | 0 | Cement and Mortar Mixers | 2 | 6 |
| | | | | Pavers | 1 | 8 |
| | | | | Paving Equipment | 2 | 6 |
| | | | | Rollers | 2 | 6 |
| | | | | Tractors/Loaders/ Backhoes | 1 | 8 |
| Architectural Coating | 16 | 0 | 0 | Air Compressors | 1 | 6 |

**Notes:** See Attachment A for details.

## Blasting

Blasting operations would be required for processing rock onsite. Rock blasting is the controlled use of explosives to excavate, break down, or remove rock. The result of rock blasting is often known as a rock cut. The most commonly used explosives today are ammonium nitrate/fuel oil (ANFO) based blends due to their lower cost, as compared to dynamite. The chemistry of ANFO detonation is the reaction of ammonium nitrate with a long-chain alkane to form $NO_x$, carbon dioxide ($CO_2$), and water. When detonation conditions are

optimal, these gases are the only products. In practical use, such conditions are impossible to attain, and blasts produce moderate amounts of other gases. The EPA's *Compilation of Air Pollutant Emission* Factors (AP-42), Section 13.3 – Explosives Detonation, (EPA 1980) provided emission factors for CO, $NO_x$, and $SO_x$ used in this assessment. According to AP-42, "Unburned hydrocarbons also result from explosions, but in most instances, methane is the only species that has been reported" (EPA 1980); methane is not a VOC, and a methane emission factor has not been determined for ANFO.

AP-42 states that CO is the pollutant produced in greatest quantity from explosives detonation. All explosives produce measurable amounts of CO. Particulates are produced as well, but such large quantities of particulate are generated in the shattering of the rock and earth by the explosive that the quantity of particulates from the explosive charge cannot be distinguished. Accordingly, AP-42, Section 11.9 – Western Surface Coal Mining (EPA 1998), provided the basis for the $PM_{10}$ and $PM_{2.5}$ emission factors. The emission factors are based on the horizontal area disturbed during blasting. The cubic yards and area to be blasted were provided by the applicant.

It is anticipated that blasting operations would occur during the grading phase. An average of 2.5 tons of ANFO would be applied per blast (Hilltop Group Inc. 2017). Given the number of blasts and time period, it was assumed that only one blast would occur on a given day. All blasting activity will comply with Section 96.1.5601.2 of the County of San Diego, 2014 Consolidated Fire Code. The blasting information provided by the applicant and additional calculation assumptions are provided in Table 4.

**Table 4**
**Blasting Characteristics**

| Activity | Units | Amount |
|---|---|---|
| Blasting Days | Days | 132 |
| Blasted Rock | Cubic yards | 244,464 |
| Blasted Rock | Cubic yards per day | 1,852 |
| Explosive Used | Tons per day | 2.5 |
| Area Blasted | Square feet | 132,000 |
| Area Blasted | Square feet per day | 1,000 |
| Number of blasts per day | Blasts per day | 1 |

**Source:** Hilltop Group Inc. 2017

Construction of project components would be subject to SDAPCD Rule 55 – Fugitive Dust Control. This rule requires that construction of Proposed Project components include steps to restrict visible emissions of fugitive dust beyond the property line (SDAPCD 2009b). Compliance with Rule 55 would limit fugitive dust ($PM_{10}$ and $PM_{2.5}$) that may be generated during grading and

construction activities. The project would use water for dust suppression at least twice daily during construction to limit fugitive dust. The project would also have a Dust Management Plan to reduce emissions of fugitive dust during construction.

A detailed depiction of the construction schedule—including information regarding subphases, demolition, and equipment used during each subphase—is included in Attachment A of this memorandum. The information contained in Attachment A was used as CalEEMod model inputs. The estimated construction emissions for the project are presented in Table 5.

**Table 5**
**Estimated Maximum Daily Construction Criteria Air Pollutant Emissions**

| Year | VOC | $NO_x$ | CO | $SO_x$ | $PM_{10}$ | $PM_{2.5}$ |
|---|---|---|---|---|---|---|
| | *pounds per day* | | | | | |
| 2017 | 8.09 | 143.22 | 213.92 | 5.13 | 13.56 | 6.91 |
| 2018 | 55.83 | 137.73 | 233.03 | 5.12 | 6.35 | 4.71 |
| **Maximum Daily Emissions** | **55.83** | **143.22** | **233.03** | **5.13** | **13.56** | **6.91** |
| *County Threshold* | *75* | *250* | *550* | *250* | *100* | *55* |
| **Threshold Exceeded?** | No | No | No | No | No | No |

**Notes:** CO = carbon monoxide; $NO_x$ = oxides of nitrogen; $PM_{10}$ = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; $SO_x$ = sulfur oxides; VOC = volatile organic compound
Emissions are a summation from CalEEMod and rock blasting.
Watering two times daily surrogate for compliance with SDAPCD Rule 55.
See Attachment A for complete results.

As shown in Table 5, daily construction emissions would not exceed the County's screening level thresholds for any criteria pollutant during construction in all construction years. Therefore, the project construction emissions would be considered **less than significant**.

## Operational Emissions

Emissions from the operational phase of the project were estimated using the CalEEMod. Operational year 2019[5] was assumed as it would be the first full year following completion of construction.

[5] The analysis assumes an operational year of 2019, which represents the earliest date operation would commence based on available information at the time this analysis was initiated. Assuming the earliest start date for operation represents the worst-case scenario for criteria air pollutant and GHG emissions because equipment and vehicle emission factors for later years would be slightly less due to more stringent standards for in-use off-road equipment and heavy-duty trucks, as well as fleet turnover replacing older equipment and vehicles in later years.

**Area Sources**

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

Consumer products are chemically formulated products used by household and institutional consumers, including detergents; cleaning compounds; polishes; floor finishes; cosmetics; personal care products; home, lawn, and garden products; disinfectants; sanitizers; aerosol paints; and automotive specialty products. Other paint products, furniture coatings, or architectural coatings are not considered consumer products (CAPCOA 2016). Consumer product VOC emissions are estimated in CalEEMod based on the floor area of commercial buildings and on the default factor of pounds of VOC per building square foot per day. The CalEEMod default values for consumer products were assumed.

VOC off-gassing emissions result from evaporation of solvents contained in surface coatings such as in paints and primers using during building maintenance. CalEEMod calculates the VOC evaporative emissions from application of surface coatings based on the VOC emission factor, the building square footage, the assumed fraction of surface area, and the reapplication rate. The VOC emission factor is based on the VOC content of the surface coatings, and SDAPCD's Rule 67.0.1 (Architectural Coatings) governs the VOC content for interior and exterior coatings. This rule requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories (SDAPCD 2015a). The project would use architectural coatings that would not exceed 100 grams per liter (g/L) for interior applications and exterior applications. The model default reapplication rate of 10% of area per year is assumed. Consistent with CalEEMod defaults, it is assumed that the surface area for painting equals 2.7 times the floor square footage, with 75% assumed for interior coating and 25% assumed for exterior surface coating (CAPCOA 2016). CalEEMod defaults were assumed for the application of architectural coatings during operation as that would not be controlled by the Proposed Project applicant.

Landscape maintenance includes fuel combustion emissions from equipment such as lawn mowers, rototillers, shredders/grinders, blowers, trimmers, chainsaws, and hedge trimmers. The emissions associated from landscape equipment use are estimated based on CalEEMod default values for emission factors (grams per square foot of building space per day) and number of summer days (when landscape maintenance would generally be performed) and winter days. For San Diego County, the average annual number of summer days is estimated at 180 days (CAPCOA 2016).

**Energy Sources**

As represented in CalEEMod, energy sources include emissions associated with building electricity and natural gas usage. However, there will be no natural gas used onsite. Electricity use would contribute indirectly to criteria air pollutant emissions; however, the emissions from electricity use are only quantified for GHGs in CalEEMod, since criteria pollutant emissions occur at the site of the power plant, which is typically off site.

**Mobile Sources**

During daily operation, the proposed project would generate 36 trips from employees, 12 trips from in-bound material loads, 4 trips from out-bound loads, and 6 trips from the live-in security resident, totaling approximately 58 daily trips. Of these daily trips, it was assumed that all employee and security resident trips would be accounted for by light automobile and light truck trips while the in-bound and out-bound material loads would be accounted for by heavy trucks. For in-bound trucks the assumed one-way distance was 13.2 miles and 15.7 miles for out-bound trucks, for an average one-way distance of 13.8 miles. The out-bound truck distance assumes 10% of trips would to West Riverside County (average distance of 45.6 miles) and 10% would be to areas in San Diego County greater than 10 miles (average distance of 31.7 miles), with the remainder of trips assumed to average 10 miles. For worker trips the CalEEMod default of 10.8 miles was assumed for one-way distance. It should be noted that material to be transported to and from the project site is material that would otherwise be taken to the Miramar Landfill, the Otay Landfill, or another disposal site in southern San Diego County; therefore, the material delivery and truck trips associated with operational import of raw materials to the site are trips that are already occurring in the SDAB. However, for the purposes of this analysis, it was assumed that all trips would be considered new trips and emissions were quantified accordingly. Fugitive dust from both paved and unpaved roads from mobile sources were estimated using a spreadsheet model and emission factors from the EPA AP-42. For full methodology and model outputs, refer to Attachment A.

**Off-road Equipment**

The proposed project is expected to require crushing and grinding for approximately half of the material processed onsite, which equates to approximately 4,000 tons annually or a maximum of 20 tons per day being crushed. Crushing and grinding would result in fugitive dust emissions. Additionally, chipping and grinding of trees and logs would generate fugitive dust during the handling and processing of materials. These emissions were estimated using a spreadsheet model and emission factors from the EPA AP-42.

The material that would be processed by the proposed project is currently sent to the Miramar or Otay landfills for recycling. Each landfill either processes the material on site for resale or for use as alternative daily cover at the landfill (City of San Diego 2017). The material is currently processed at the landfills by the same equipment that would be employed at the proposed project site (pers. comm. Wood 2017). The only additional equipment that would be used at the project site that is not currently used at the landfills would be one trommel screen (Vermeer TR510 or equivalent) for tree waste recycling and construction and demolition wood recycling, and one shaker screen (Spyder 512T or equivalent) for CDI recycling. This equipment would be permitted by the SDAPCD. Therefore, because this material would be diverted away from processing and disposal at the landfills that would otherwise accommodate this material, and thus, in order to avoid double counting emissions from duplicate operational equipment to process the same material (and only account for emissions related to the proposed project), only the additional equipment not currently employed at the landfills was included in the emissions calculations.

Table 6 presents the maximum daily mobile source emissions associated with operation (year 2019) of the project. The values shown are the maximum daily emissions results from the operation of the project. Details of the emission calculations are provided in Attachment A.

**Table 6**
**Estimated Maximum Daily Operational Criteria Air Pollutant Emissions**

| Year | VOC | $NO_x$ | CO | $SO_x$ | $PM_{10}$ | $PM_{2.5}$ |
|---|---|---|---|---|---|---|
| | *pounds per day* | | | | | |
| Area | 0.36 | 0.00 | 0.02 | 0.00 | 0.00 | 0.00 |
| Energy | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Mobile | 0.21 | 4.16 | 2.16 | 0.01 | 0.55 | 0.16 |
| Offroad Equipment | 1.20 | 7.22 | 7.48 | 0.01 | 0.56 | 0.51 |
| Fugitive Dust | - | - | - | - | 31.24 | 7.11 |
| **Total Daily Emissions** | **1.77** | **11.38** | **9.66** | **0.02** | **32.35** | **7.78** |
| *County Threshold* | *75* | *250* | *550* | *250* | *100* | *55* |
| **Threshold Exceeded?** | No | No | No | No | No | No |

**Notes:** CO = carbon monoxide; $NO_x$ = oxides of nitrogen; $PM_{10}$ = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; $SO_x$ = sulfur oxides; VOC = volatile organic compound
Operational emissions in year 2019 are presented.
Fugitive dust emissions includes material handling and grinding fugitive emissions.
See Attachment A for complete results.

Table 6 shows the maximum daily operational emissions for the project. The proposed project would not exceed any County screening level significance criteria for daily operational emissions. The opacity of all equipment operating on the project site will be monitored to not exceed Number 1 on the Ringlemann Chart (20% opacity) as required by SDAPCD Rule 50, Visible Emissions.

Additionally, the following operational project design features (PDFs) would be incorporated as required by the County[6]:

1. The project would include a Dust Management Plan for operations that would outline the management practices to reduce fugitive dust emissions onsite. As part of the Dust Management Plan, the project will include contact information on a sign located on the outside fence of the facility for the public to call if a fugitive dust complaint should be made.
2. Material handling source of fugitive dust will be visually monitored by the operator. Operator will be equipped with either truck mounted water apparatus or fixed fixture water source. Water will be misted into feedstock, or recyclable materials to limit fugitive dust.
3. Process machinery source of fugitive dust will be visually monitored by the operator. Process machinery will be equipped with water misting system at source locations. Operators will monitor and apply water via a fixed misting system to limit fugitive dust.
4. Product handling source of fugitive dust will be visually monitored by the operator. Stackers will be equipped with water misting system at source locations. Operators will monitor and apply water via a fixed misting system to limit fugitive dust.
5. The process area will be maintained clean and clear of source material and any potential sources of fugitive dust will be minimized with a truck mounted water apparatus to bind potential fugitive dust sources.
6. Storage areas will be monitored by the operator and any potential sources of fugitive dust will be minimized with a truck mounted water apparatus to bind potential fugitive dust sources.
7. Potential sources of fugitive dust on unpaved travel surfaces will be minimized through treatment of recycled asphalt grindings. Unpaved travel surfaces will be monitored by the operator and any potential sources of fugitive dust will be minimized with a truck mounted water apparatus to bind potential fugitive dust sources.

The prevailing wind direction at the project site is from the west southwest (Meteoblue 2018). There is no sensitive receptor adjacent to the east northeast boundary of the site. The I-15 divides the eastern boundary of the site from the closest sensitive receptor in that direction. The Dust Management Plan will have protocols for operating equipment and suppressing dust in high wind situations, including watering or covering material and stopping operations.

[6] The operational emissions do not include a quantitative reduction based on the included operational fugitive dust PDFs. Therefore, the emissions presented herein are conservative and actual emissions are expected to be lower.

As the proposed project would not exceed any SDAPCD threshold during operation, and the previously listed PDFs would be incorporated into daily operational practices, impacts during operation would be **less than significant**.

### *3.2.3 Would the Project Result in a Cumulatively Considerable Net Increase of Any Criteria Pollutant for Which the Project Region is Non-Attainment under an Applicable Federal or State Ambient Air Quality Standard (Including Releasing Emissions Which Exceed Quantitative Thresholds for Ozone Precursors)?*

In analyzing cumulative impacts from the project, the analysis must specifically evaluate a project's contribution to the cumulative increase in pollutants for which the SDAB is designated as nonattainment for the CAAQS and NAAQS. If the project does not exceed thresholds and is determined to have less-than-significant project-specific impacts, it may still contribute to a significant cumulative impact on air quality if the emissions from the project components, in combination with the emissions from other proposed or reasonably foreseeable future projects, are in excess of established thresholds. However, the project would only be considered to have a significant cumulative impact if its contribution accounts for a significant proportion of the cumulative total emissions (i.e., it represents a "cumulatively considerable contribution" to the cumulative air quality impact).

Additionally, for the SDAB, the RAQS serves as the long-term regional air quality planning document for the purpose of assessing cumulative operational emissions within the SDAB to ensure the SDAB continues to make progress toward NAAQS and CAAQS attainment status. As such, cumulative projects located in the San Diego region would have the potential to result in a cumulative impact to air quality if, in combination, they would conflict with or obstruct implementation of the RAQS. Similarly, individual projects that are inconsistent with the regional planning documents upon which the RAQS is based would have the potential to result in cumulative impacts if they represent development beyond regional projections.

The SDAB has been designated as a federal nonattainment area for $O_3$ and a state nonattainment area for $O_3$, $PM_{10}$, and $PM_{2.5}$. $PM_{10}$ and $PM_{2.5}$ emissions associated with construction generally result in impacts within close proximity to the project site. The nonattainment status is the result of cumulative emissions from all sources of these air pollutants and their precursors within the SDAB. As previously discussed, the emissions of all criteria pollutants would be below the significance levels. Construction would be short term and temporary in nature. Additionally, construction activities required for the implementation of project components would be considered typical of an industrial project and would not require atypical construction practices that would include high-emitting activities. Once construction is completed, construction-related emissions would cease.

Cumulative projects surrounding the project site that have the potential to contribute to a cumulative increase in emissions due to overlapping construction schedules, include subdivisions, rezones, and multi- and single-family residential projects. Based on review of these projects, the subdivision project would only add one residential unit; the rezone does not involve construction; the 126 multi-family residential project has already been constructed; and the other residential project involved a 147 single-family lots, however, the tentative parcel map for the 147 lots expired in November 2014. Therefore, it is not anticipated that the project's construction could contribute to significant increases in emissions as a result of simultaneous construction with other projects.

Operational emissions generated by the project would not result in a significant impact. As such, the project would result in less than significant impacts to air quality relative to operational emissions. Regarding long-term cumulative operational emissions in relation to consistency with local air quality plans, the SIP and RAQS serve as the primary air quality planning documents for the state and SDAB, respectively. The SIP and RAQS rely on SANDAG growth projections based on population, vehicle trends, and land use plans developed by the cities and by the county as part of the development of their general plans. Therefore, projects that propose development that is consistent with the growth anticipated by local plans and underlying land use zoning would be consistent with the SIP and RAQS and would not be considered to result in cumulatively considerable impacts from operational emissions. Implementation of the project would not result in additional population growth or growth-inducing effects and is consistent with the current land use zoning; thus, it would be consistent at a regional level with the SIP and RAQS.

As a result, the proposed project would not result in a cumulatively considerable contribution to regional $O_3$ concentrations or other criteria pollutant emissions. Cumulative impacts would be **less than significant**.

### *3.2.4 Would the Project Expose Sensitive Receptors to Substantial Pollutant Concentrations?*

**Carbon Monoxide Hotspots**

Mobile-source impacts occur on two basic scales of motion. Regionally, project-related travel will add to regional trip generation and increase the vehicle miles travelled within the local airshed and the SDAB. Locally, Project traffic will be added to the County's roadway system. If such traffic occurs during periods of poor atmospheric ventilation, consists of a large number of vehicles "cold-started" and operating at pollution-inefficient speeds, and operates on roadways already crowded with non-project traffic, there is a potential for the formation of microscale CO "hotspots" in the area immediately around points of congested traffic. Because of continued improvement in mobile emissions (due to improvements in vehicle efficiencies and fuel compositions) at a rate faster than

the rate of vehicle growth and/or congestion, the potential for CO hotspots in the SDAB is steadily decreasing. The closest receptor to the project is a residence approximately 620 feet to the south.

Projects contributing to adverse traffic impacts may result in the formation of CO hotspots. To verify that the project would not cause or contribute to a violation of the CO standard, a screening evaluation of the potential for CO hotspots was conducted. A traffic report (RBF 2013), evaluated the level of service (LOS) impacts at intersections affected by the Project. The potential for CO hotspots was evaluated based on the results of the traffic report. The Guidelines for Determining Significance for Air Quality (County of San Diego 2007) CO hotspot screening guidance was followed to determine if the Project would require a site-specific hotspot analysis. In the event the proposed project traffic adds vehicular trips to either an intersection that operates at a LOS E or F or any intersection where the project trips re-classifies the intersection level of service to LOS E or F and when peak-hour trips exceed 3,000 the project must quantify CO levels. As discussed in the traffic study, the project would not add trips to an intersection currently operating at LOS E or F, and would not degrade an existing intersection LOS from an acceptable level (D or better) to LOS E or F. Therefore, impacts from CO "hotspots" would be **less than significant**.

**Health Impacts of TACs**

In addition to impacts from criteria pollutants, project impacts may include emissions of pollutants identified by the state and federal government as toxic air contaminants (TACs) or hazardous air pollutants (HAPs). State law has established the framework for California's TAC identification and control project, which is generally more stringent than the federal project, and is aimed at TACs that are a problem in California. The state has formally identified more than 200 substances as TACs, including the federal HAPs, and is adopting appropriate control measures for sources of these TACs.

The greatest potential for TAC emissions during construction would be diesel particulate matter (DPM) emissions from heavy equipment operations and heavy-duty trucks, and the associated health impacts to sensitive receptors. The closest receptor to the project is a residence approximately 620 feet to the south. Only pre-sorted, non-contaminated wood and construction debris would be accepted for processing and these materials would not have any potential for accidental release of TACs into the environment. To prevent contaminated loads from being accepted and processed at the facility, the project has incorporated the Hazardous Load Check Program as established by the California Integrated Waste Management Board, which is designed to identify, report, deny acceptance, and respond to any load potentially carrying hazardous materials.

Construction and equipment use activities would not be different than that of a typical development of this type, which is subject to a CARB Airborne Toxic Control Measure (ATCM) for in-use diesel construction equipment to reduce DPM, and would not involve extensive use of diesel trucks, which

are also subject to an ATCM. Emissions would be dispersed throughout the site during construction and would not be concentrated. Further, minimal construction activity would take place on the south portion of the site closest to the nearest sensitive receptor. There is also a ridge of more than 200 feet in height separating the project from the nearest sensitive receptor. Also, the prevailing wind direction is from the south southwest and will blow emissions from the project away from the closest sensitive receptor. Following completion of construction activities, project-related TAC emissions would be minimal. The project would operate diesel powered construction equipment to process the material brought in by customers. This equipment would be subject to CARB regulations for non-road equipment and would be used on an as-needed basis. Because of the steep terrain between the project and closest receptor and the prevailing wind direction, the TAC emissions from operation are not expected to impact the closest receptor. Therefore, TAC emissions from construction and operation are expected to be **less than significant**.

**Health Effectsof Criteria Air Pollutants**

Construction and operation of the project would not result in emissions that exceed the SDAPCD's emission thresholds for any criteria air pollutants.

VOCs and $NO_x$ are precursors to $O_3$, for which the SDAB is designated as nonattainment with respect to the NAAQS and CAAQS (the SDAB is designated by the EPA as an attainment area for the 1-hour $O_3$ NAAQS standard and 1997 8-hour NAAQS standard). The health effects associated with $O_3$, are generally associated with reduced lung function. The contribution of VOCs and $NO_x$ to regional ambient $O_3$ concentrations is the result of complex photochemistry. The increases in $O_3$ concentrations in the SDAB due to $O_3$ precursor emissions tend to be found downwind from the source location to allow time for the photochemical reactions to occur. However, the potential for exacerbating excessive $O_3$ concentrations would also depend on the time of year that the VOC and $NO_x$ emissions would occur because exceedances of the $O_3$ AAQS tend to occur between April and October when solar radiation is highest (CARB 2018).

The holistic effect of a single project's emissions of $O_3$ precursors is speculative due to the lack of quantitative methods to assess this impact. Nonetheless, the VOC and $NO_x$ emissions associated with project construction and operation could minimally contribute to regional $O_3$ concentrations and the associated health impacts. Due to the minimal contribution during construction and operation, as well as the existing good air quality in coastal San Diego areas (which is highly influenced by the interaction with the coastal mixing), health impacts would be considered less than significant.

Health effects associated with $PM_{10}$ include premature death and hospitalization, primarily for worsening of respiratory disease (CARB 2019). Similar to $O_3$, construction and operation of the

project would not exceed thresholds for $PM_{10}$ or $PM_{2.5}$ and would not contribute to exceedances of the NAAQS and CAAQS for particulate matter. The project would also not result in substantial DPM emissions during construction and operation and would not result in significant health effects related to DPM exposure. Due to the minimal contribution of particulate matter during construction and operation, health impacts would be considered less than significant.

Health effects associated with NOx include lung irritation and enhanced allergic responses (CARB 2019). Because project-related NOx emissions would not exceed the mass daily thresholds, and because the SDAB is a designated attainment area for NO2 and the existing NO2 concentrations in the area are well below the NAAQS and CAAQS standards, it is not anticipated that the proposed project would cause an exceedance of the NAAQS and CAAQS for NO2 or result in potential health effects associated with NO2 and NOx. Therefore, health impacts would be considered less than significant during construction.

Health effects associated with CO include chest pain in patients with heart disease, headache, light-headedness, and reduced mental alertness (CARB 2019). CO tends to be a localized impact associated with congested intersections. The associated CO "hotspots" were discussed previously as a less-than-significant impact. Thus, the project's CO emissions would not contribute to significant health effects associated with this pollutant.

Health impacts associated with criteria air pollutants would be considered **less than significant** during construction and operation.

### *3.2.5 Would the Project Create Objectionable Odors Affecting a Substantial Number of People?*

Due to the subjective nature of odor impacts, the number of variables that can influence the potential for an odor impact, and the variety of odor sources, there are no quantitative or formulaic methodologies to determine if potential odors would have a significant impact. Odors would be generated from vehicles and/or equipment exhaust emissions during construction of the project facilities. Odors produced during construction would be attributable to concentrations of unburned hydrocarbons from tailpipes of construction equipment and architectural coatings. Such odors are temporary and for the types of construction activities anticipated for project components, would generally occur at magnitudes that would not affect substantial numbers of people. Therefore, impacts associated with odors during construction would be considered less than significant.

Examples of land uses and industrial operations that are commonly associated with odor complaints include agricultural uses, wastewater treatment plants, food processing facilities, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. In addition to the odor source, the

distance between the sensitive receptor(s) and the odor source, as well as the local meteorological conditions, are considerations in the potential for a project to frequently expose the public to objectionable odors. Although localized air quality impacts are focused on potential impacts to sensitive receptors, such as residences and schools, other land uses where people may congregate (e.g., workplaces) or uses with the intent to attract people (e.g., restaurants and visitor-serving accommodations), should also be considered in the evaluation of potential odor nuisance impacts. The project would not accept materials that a typical landfill would that would cause odors such as food waste. The wood waste would be chipped onsite and stored for a minimum time (up to 90 days) before being shipped off to end markets. This would prevent any degradation of the wood waste that is typical of a composting operation. The prevailing wind direction at the project site is from the west southwest. There is no sensitive receptor adjacent to the east northeast boundary of the site. The I-15 divides the eastern boundary of the site from the closest sensitive receptor in that direction. The closest sensitive receptor to the site is upwind and separated by a 200 foot high ridge. Therefore, any odors from the proposed project are not anticipated to be detected or impact any sensitive receptors.

The NCER Recycling Facility would engage in three forms of recycling; of these forms of recycling, chipping and grinding of wood would be the primary sources of potential odor generation. The proposed project would prepare and implement an Odor Impacts Minimization Plan (OIMP) according to Title 14 California Code of Regulations Division 7, Chapter 3.1 17863.4. As specified in the California Code of Regulations, an OIMP shall include an odor monitoring protocol, identification of potential odor receptors, a description of meteorological conditions that would affect the movement of odor, a response protocol, design considerations intended to minimize odor, and a description of operation procedures intended to minimize odor.

The following odor minimizing operational PDFs would be incorporated into the OIMP for the project. These PDFs include:

1. **Feedstock**
    a. Process feedstock[7] within 7 days of receiving.
    b. Expedite material processing to minimize odor creating storage piles.
    c. Implement First In First Out (FIFO) inventory of feedstock in process operations.
    d. Reduce feed stockpiles to increase porosity minimizing decomposition.

[7] Feedstock refers to all raw material to supply the industrial process.

e. Increase amount of wood stock[8] in feedstock piles.

f. If feedstock is anticipated to remain longer than 7 days then increase the frequency of turning piles to every 96 hours.

g. In the event process machinery down time is expected to last more than 7 days, limitations on receiving will be placed to maintain manageable feedstock piles.

h. In the event process machinery downtime is to exceed 14 days, equipment will be leased to process excess feedstock inventory.

**2. Processing and Screening**

a. Reduce grinding and screening activities when wind speeds exceed 25 mph.

i. Reduction would vary depending on product and process. Final product reaction to wind is dependent on product density and screen size. The process equipment will utilize misters on product to minimize dust and increase density. Density can be increased with more misting of output product. And slowing of the process machinery is possible to allow more mist soak time.

1. Each process will be treated Similarly and Operators will be trained to visually assess product output and loading in relation to wind, also adjust misting and process speed. This is typical training of all process equipment operators.

a. Continuously monitor and Identify If the product is creating fines which do not fall into the storage container but are blown slightly from the desired location.

b. If wind affects output - decrease the process speed, thus allowing the product to output slower and receive more water from the misting process. Increasing density of output to resist wind affect.

[8] Woodstock refers to the feedstock that is of wood material (separating concrete, asphalt, and inert materials from the process).

c. If wind speeds affect output to an unmanageable level determined by the operator and management, reduction procedure is Halting operation.

d. If wind speeds continue to increase operators are trained to redirecting process efforts to mitigating any potential windblown material by water soaking of stored materials and covering process equipment

b. Reduce mixing/materials handling activity during stagnant air conditions.

ii. Feed stock will contain moisture and wood, the ingredients of composting. The following Precautions are proposed to reduce potential odors and dust, minimize feedstock pile composting potential, reduce potential odor and dust complaints. The preceding are potential results if feedstock piles are not processed in timely fashion or product delivered in timely fashion. (Comprehensive Compost Odor Response Project Produced under contract by: San Diego State University, section 3.0 MIXING/MATERIALS HANDLING, March 2007 presented to Integrated Waste Management Board, public documents https://www2.calrecycle.ca.gov/Publications/Download/841,)

1. Mist water or odor neutralizer at dust generation points: Anywhere that dust is generated, odor is also likely generated. Most, if not all odorous chemicals released during decomposition are somewhat water-soluble. Misting (either with water or a water/odor neutralizer compound mix) can entrain at least some of the odorants as they fall to the ground.

2. Mixing volatizes particles and re-invigorates a pile The act of mixing and/or turning a pile also volatilizes (releases) many volatile particles and exposes them to the open air, promoting volatilization of many odorous compounds.

3. Stagnant air conditions, typical during temperature inversions, provide the least amount of odor dispersion and can lead to odor complaints, primarily because the air is moving very little or not at all. Although stagnant air conditions typically occur in the early

morning or in the late afternoon/evening, inversions can occur anytime under the right conditions. If possible, reducing or eliminating materials handling activities during these conditions will reduce odor transport.

c. Misting and/or neutralizing throughput at process source and stacking source using process misting system.

d. Increase woodstock content in process to increase porosity in product piles.

**3. Product**

a. Moisture content will be monitored by onsite management to minimize decomposition.

b. Product stockpiles will be reduced to optimize porosity and minimize odor.

c. Odor neutralizers will be readily available to treat stockpiles by misting if necessary.

i. Process equipment operators will be trained by management to identify odors (Similar to those of composting facilities) as they monitor the process equipment and output. This can be achieved by regular monitoring downwind of the process and output machinery during daily activities on the process area.

4. Equipment and neutralizers may be activated into the misting systems upon identification of odors.

With the implementation of the required OIMP and subsequent incorporation of the above identified odor minimization best management practices (BMPs) (such BMPs would be incorporated into the OIMP), odors impacts would be **less than significant**.

# 4 GREENHOUSE GAS EMISSIONS ASSESSMENT

## 4.1 Thresholds of Significance

### *4.1.1 CEQA Guidelines*

The CNRA adopted amendments to the CEQA Guidelines on December 30, 2009, which became effective on March 18, 2010. With respect to GHG emissions, the amended CEQA Guidelines state in Section 15064.4(a) that lead agencies should "make a good faith effort, to the extent possible on scientific and factual data, to describe, calculate or estimate" GHG emissions. The CEQA Guidelines note that an agency may identify emissions by either selecting a "model or methodology" to quantify the emissions or by relying on "qualitative analysis or other performance based standards" (14 CCR 15064.4(a)). Section 15064.4(b) states that the lead agency should consider the following when assessing the significance of impacts from GHG emissions on the environment:

- The extent a project may increase or reduce GHG emissions as compared to the existing environmental setting.
- Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
- The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions (14 CCR 15064.4(b)).

In addition, Section 15064.7(c) of the CEQA Guidelines specifies that "[w]hen adopting thresholds of significance, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the decision of the lead agency to adopt such thresholds is supported by substantial evidence." Similarly, the revisions to Appendix G, Environmental Checklist Form, which is often used as a basis for lead agencies' selection of significance thresholds, do not prescribe specific thresholds.

Rather, the CEQA Guidelines establish two new CEQA thresholds related to GHGs, and these will be used to discuss the significance of project impacts (14 CCR 15000 et seq.):

1. Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?
2. Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs?

Accordingly, the CEQA Guidelines do not prescribe specific methodologies for performing an assessment, establish specific thresholds of significance, or mandate specific mitigation measures. Rather, the CEQA Guidelines emphasize the lead agency's discretion to determine the appropriate methodologies and thresholds of significance that are consistent with the manner in which other impact areas are handled in CEQA (CNRA 2009).

### *4.1.2 Local Guidance*

The significance criteria used to evaluate the Project's GHG emissions impacts are based on the recommendations provided in Appendix G of the CEQA Guidelines and the threshold of significance as provided in the County of San Diego's Guidelines for Determining Significance - Climate Change:

> A proposed project would have a less than significant cumulatively considerable contribution to climate change impacts if it is found to be consistent with the County's Climate Action Plan; and, would normally have a cumulatively considerable contribution to climate change impacts if it is found to be inconsistent with the County's Climate Action Plan.

In evaluating the project relative to the Appendix G criteria, this analysis considers the provisions of CEQA Guidelines Section 15183.5, which states the following:

> Lead agencies may analyze and mitigate the significant effects of greenhouse gas emissions at a programmatic level, such as in a general plan, a long-range development plan, or a separate plan to reduce greenhouse gas emissions. Later project-specific environmental documents may tier from and/or incorporate by reference that existing programmatic review. Project-specific environmental documents may rely on an EIR containing a programmatic analysis of greenhouse gas emissions as provided in section 15152 (tiering), 15167 (staged EIRs) 15168 (program EIRs), 15175–15179.5 (Master EIRs), 15182 (EIRs Prepared for Specific Plans), and 15183 (EIRs Prepared for General Plans, Community Plans, or Zoning).

In 2018, the County adopted a Climate Action Plan (CAP) in accordance with CEQA Guidelines Section 15183.5 in order to afford certain projects the opportunity to use the CAP as a CEQA streamlining tool; specifically, the CAP:

- Describes the County's methodology for quantification of existing baseline and projected emissions for 2020, 2030, and 2050 (see CEQA Guidelines Section 15183.5(b)(1)(A)).

- Describes the recommended reduction targets for horizon years 2020 and 2030, which are designed to be consistent with the recommended community targets in the California Air Resources Board's (CARB's) 2017 Scoping Plan, the State's 2014 GHG emissions inventory, and the targets established by Assembly Bill 32, Senate Bill 32, and Executive Orders B-30-15 and S-3-05 (CEQA Guidelines Section 15183.5(b)(1)(B)).
- Describes the specific strategies and actions the County will take to reduce GHG emissions and quantifies the resultant reductions that would be achieved by each measure (CEQA Guidelines Section 15183.5(b)(1)(C)-(D)).
- Describes how the County will implement the plan, monitor its effectiveness, and adaptively manage implementation of specific strategies to achieve reduction targets (CEQA Guidelines Section 15183.5(b)(1)(E)).

A project's consistency with the CAP, and therefore level of significance under CEQA, is evaluated in a two-step process. Step 1 in the CAP Checklist assesses a project's consistency with the growth projections and land use assumptions made in the CAP. If a project is consistent with the projections in the CAP, its associated growth in terms of GHG emissions was accounted for in the CAP's projections and would not increase emissions beyond what is anticipated in the CAP or inhibit the County from reaching its reduction targets. If a project is consistent with the existing General Plan land use designation(s), it can be determined to be consistent with the CAP projections and can move forward to Step 2 of the Checklist. Step 2 of the Checklist identifies CAP GHG reduction measures that would apply to discretionary projects and establishes clear questions that can be used to assess a project's consistency with CAP measures. The specific applicable requirements outlined in the Checklist shall be required as a condition of project approval. The project must provide substantial evidence that demonstrates how the proposed project would implement each applicable Checklist requirement described in Appendix A to the satisfaction of the Director of Planning and Development Services. As a result, a project that is found to be consistent with the CAP would result in less-than-significant GHG emissions and would not result in a cumulatively considerable contribution to a GHG impact.

**Climate Change Analysis Criteria**

The California Air Pollution Control Officers Association (CAPCOA) prepared a study to determine the level at which development projects would generate GHG that were cumulatively considerable (CAPCOA 2008). The study determined that a 900 MT $CO_2E$ per year screening level for operation would be a conservative screening criterion for determining which projects require further analysis and identification of project design features or potential mitigation measures with regard to GHG emissions. The CAPCOA white paper reports that the 900 MT $CO_2E$ screening level would capture more than 90 percent of development projects, allowing for

mitigation towards achieving the State's GHG reduction goals. The projects emissions are compared to the 900 MT $CO_2E$ per year screening level for informational purposes only.

## 4.2 Impact Analysis

### *4.2.1 Would the Project Generate Greenhouse Gas Emissions, Either Directly or Indirectly, That May Have a Significant Impact on the Environment?*

**Step 1 – Land Use Consistency**

The project site is within the North County Metro Subregional Plan Area. The project site's General Plan land use designation is High Impact Industrial (I-3) and the project site's General Plan zoning designation is General Impact Industrial (M54). M54 zoning designation, "allows unenclosed commercial and industrial operations having potential nuisance characteristics such as construction sales and services (County of San Diego 2011)." According to the County of San Diego Zoning Ordinance, Section 2542(b), recycling facilities are expressly permitted on land zoned for M54 uses. The project does not require a plan amendment, zone change, or use permit. Therefore, the project is consistent with the build out assumptions of the CAP.

**Step 2 – CAP Checklist Consistency**

The project does not include a residential component, typical commuting workers (such as commuters travelling to an office land use), or agricultural operations, which are addressed in the CAP Consistency Checklist. Implementation of the project would not interfere with the County's implementation of the Consistency Checklist action items on projects where they are applicable. Additionally, the project would further the CAP goal T2.2 "Reduce Emissions from New Non-Residential Development Vehicle Miles Traveled" and SW-1.1 "Increase Solid Waste Diversion." Further, the CAP was developed to reduce GHG emissions throughout the County over time; therefore, any project that is contemplated in the CAP and/or would be consistent with the CAP would directly aid in the County's reduction of GHG emissions throughout the County's jurisdictional area.

Each CAP Checklist item and why each specific measure does not apply to the project is outlined in Table 7. A copy of the completed checklist is provided in Attachment B.

## Table 7
## Climate Action Plan Consistency Checklist

| CAP Checklist Item | Project Compliance |
|---|---|
| **1a. Reducing Vehicle Miles Traveled**: Non-Residential: For non-residential projects with anticipated tenant occupants of 25 or more, will the project achieve a 15% reduction in emissions from commute vehicle miles traveled (VMT), and commit to monitoring and reporting results to demonstrate on-going compliance? VMT reduction may be achieved through a combination of Transportation Demand Management (TDM) and parking strategies, as long as the 15% reduction can be substantiated. | **Not Applicable**.<br>The project would employ 19 permanent persons, and thus would not accommodate 25 or more tenant occupants. |
| **2a. Shared and Reduced Parking**: Non-Residential: For non-residential projects with anticipated tenant-occupants of 24 or less, will the project implement shared and reduced parking strategies that achieves a 10% reduction in emissions from commute VMT? Check "N/A" if the project is a residential project or if the project would accommodate 25 or more tenant-occupants. | **Not Applicable**.<br>The project is not a typical commercial or retail development that would include substantial parking supply. The purpose of this Checklist Item is to reduce vehicle trips during typical commute hours. Based on the proposed use of the project, associated vehicle and truck trips are necessary for the operation of the project. The project does support the reduction in VMT related emissions throughout the County from reduced truck traffic going to other disposal sites further away. |
| **3a. Electric or Alternatively-Fueled Water Heating Systems Residential**: For projects that include residential construction, will the project, as a condition of approval, install the following types of electric or alternatively-fueled water heating system(s)?<br>☐ Solar thermal water heater<br>☐ Tankless electric water heater<br>☐ Storage electric water heaters<br>☐ Electric heat pump water heater<br>☐ Tankless gas water heater<br>☐ Other | **Not Applicable**.<br>The project does not include a residential component. |
| **4a. Water Efficient Appliances and Plumbing Fixtures Residential**: For new residential projects, will the project comply with all of the following water efficiency and conservation BMPs?<br>1. Kitchen Faucets: The maximum flow rate of kitchen faucets shall not exceed 1.5 gallons per minute at 60 pounds per square inch (psi). Kitchen faucets may temporarily increase the flow above the maximum rate, but not to exceed 2.2 gallons per minute at 60 psi, and must default to a maximum flow rate of 1.5 gallons per minute at 60 psi.<br>2. Energy Efficient Appliances: Install at least one qualified ENERGY STAR dishwasher or clothes washer per unit. | **Not Applicable**.<br>The project does not include a residential component. |
| **5a. Rain Barrel Installations**: Residential: For new residential projects, will the project make use of incentives to install one rain barrel per every 500 square feet of available roof area? Check "N/A" if the project is a non-residential project; if State, regional or local incentives/rebates to purchase rain barrels are not | **Not Applicable**.<br>The project does not include a residential component. |

**Table 7**
**Climate Action Plan Consistency Checklist**

| CAP Checklist Item | Project Compliance |
|---|---|
| available; or if funding for programs/rebates has been exhausted. | |
| **6a. Reduce Outdoor Water**: Residential: Will the project submit a Landscape Document Package that is compliant with the County's Water Conservation in Landscaping Ordinance and demonstrates a 40% reduction in current Maximum Applied Water Allowance (MAWA) for outdoor use?<br>Non-Residential: Will the project submit a Landscape Document Package that is compliant with the County's Water Conservation in Landscaping Ordinance and demonstrates a 40% reduction in current MAWA for outdoor use? | **Not Applicable**.<br>The project would landscape less than 2,499 square feet and would comply with the Prescriptive Compliance Option within the Water Conservation in Landscaping Ordinance. |
| **7a. Agricultural and Farming Equipment**: Will the project use the San Diego County Air Pollution Control District's (SDAPCD's) farm equipment incentive program to convert gas- and diesel-powered farm equipment to electric equipment? Check "N/A" if the project does not contain any agricultural or farming operations; if the SDAPCD incentive program is no longer available; or if funding for the incentive program has been exhausted. | **Not Applicable**.<br>The project would not contain any agricultural or farming operations. |
| **8a. Electric Irrigation Pumps**: Will the project use SDAPCD's farm equipment incentive program to convert diesel- or gas-powered irrigation pumps to electric irrigation pumps?<br>Check "N/A" if the project does not contain any agricultural or farming operations; if the SDAPCD incentive program is no longer available; or if funding for the incentive program has been exhausted. | **Not Applicable**.<br>This is not applicable to the project, as the project would not contain any agricultural or farming operations. |
| **9a. Tree Planting**: Residential: For residential projects, will the project plant, at a minimum, two trees per every new residential dwelling unit proposed?<br>Check "N/A" if the project is a non-residential project | **Not Applicable**.<br>The project does not include a residential component. |

**Source:** County of San Diego 2018

As shown in Table 7, the project would be consistent with those CAP Checklist measures that apply to the project. Therefore, because the project would comply with the goals and objectives of the state and the County, impacts would be considered **less than significant**.

### *Project Emissions Disclosure*

For informational purposes only, the following discussion is provided to disclose the project's construction and operational emissions.

**Construction Emissions**

GHG emissions would be associated with the construction phase of the project components through use of construction equipment and vehicle trips. Emissions of $CO_2E$ were estimated using CalEEMod, version 2016.3.1. The proposed project assumed CalEEMod defaults where applicant provided data were not available.

The construction assumptions in Section 3.2 also apply to estimating the GHG emissions from construction of the project. The combustion of fuels from construction equipment, worker vehicle trips, vendor trips, and hauling trips all generate GHG emissions. The estimated GHG emissions associated with the construction of this project are shown in Table 8. Construction emissions were amortized over 30 years and added to the operational emissions to compare to the 900 MT $CO_2E$ per year screening level (SCAQMD 2008).

**Table 8**
**Estimated Annual Construction GHG Emissions**

| Year | $CO_2$ | $CH_4$ | $N_2O$ | $CO_2E$ |
|---|---|---|---|---|
| | *metric tons per year* | | | |
| 2017 | 124.17 | 0.02 | 0.00 | 124.76 |
| 2018 | 895.95 | 0.18 | 0.00 | 900.39 |
| **Total** | **1,020.12** | **0.20** | **0.00** | **1,025.15** |
| | | | **Amortized Construction Emissions** | **34.17** |

**Notes:** $CH_4$ = methane; $CO_2$ = carbon dioxide; $CO_2E$ = carbon dioxide equivalent; $N_2O$ = nitrous oxide
See Attachment A and B for complete results.

As shown in Table 8, the estimated total GHG emissions during construction of would be approximately 125 MT $CO_2E$ in 2017 and 900 MT $CO_2E$ in 2018, for a total of 1,025 MT $CO_2E$ over the total construction period.

Carbon sequestration is the process by which $CO_2$ is removed from the atmosphere and deposited into a carbon reservoir (e.g., vegetation). Trees and vegetation take in $CO_2$ from the atmosphere during photosynthesis, break down the $CO_2$, store the carbon within plant parts, and release the oxygen back into the atmosphere. The loss of sequestered carbon is estimated based on the carbon content for each vegetation land use type (MT $CO_2$ per acre) and the initial and final acreage of the vegetation land use type. The project would permanently impact 1.93 acres of coastal sage scrub and 11.82 acres of chaparral (BLUE Consulting Group 2013). The loss of sequestered carbon is presented in Table 9.

**Table 9**
**Estimated Loss of Sequestered Carbon**

| Vegetation Type | CalEEMod Vegetation Land Use Category | $CO_2$ Emissions Factor (MT $CO_2$/acre) | Initial (acres) | Final (acres) | Sequestered Carbon (MT $CO_2$) |
|---|---|---|---|---|---|
| Coastal Sage Scrub | Scrub | 14.3 | 4.02 | 2.09 | 27.60 |
| Chaparral | Grassland | 4.31 | 121.32 | 109.50 | 50.94 |
| | | | | **Total** | **78.54** |
| | | | | **Amortized Sequestration Loss** | **2.62** |

**Source:** CAPCOA 2016
**Notes:** MT $CO_2$ – metric tons carbon dioxide.
See Attachment A for calculations and sources.

As presented in Table 9, the removal of coastal sage scrub and chaparral would result in the release of approximately 79 MT $CO_2$. The total estimated GHG emissions from the construction of the proposed project (Table 8) plus the loss of sequestered carbon (Table 9) would be approximately 1,104 MT $CO_2E$. Estimated project-generated construction emissions amortized over 30 years would be approximately 37 MT $CO_2E$ per year.

As with project-generated construction air quality pollutant emissions, GHG emissions generated during construction of the project would be short-term in nature, lasting only for the duration of the construction period, and would not represent a long-term source of GHG emissions. Because there is no separate GHG threshold for construction, the amortized construction emissions are added to the operational emissions to evaluate against the GHG screening threshold for disclosure, as discussed in the following text.

## Operational Emissions

Operation of the project would generate GHG emissions through motor vehicle trips to and from the project site; energy use (electricity consumed by the project); offroad equipment; solid waste disposal; and generation of electricity associated with water supply, treatment, and distribution and wastewater treatment. CalEEMod was used to calculate the annual GHG emissions based on the operational assumptions described in Section 3.2.

The methodology for estimating emissions for project operations is described in Section 3.2.2 "Operational Emissions". The same methodology was applied when estimating the project's GHG emissions including that for mobile emissions and operational off-road equipment.

### *Energy Sources*

As represented in CalEEMod, energy sources include emissions associated with building electricity. There will be no natural gas used onsite. The electricity will be used for water well pumping, to power the maintenance building, office, and security trailer. It is estimated that the project would use up to 200 kilowatt-hours per day of electricity.

### *Solid Waste*

The project would generate solid waste, and therefore, result in $CO_2E$ emissions associated with landfill off-gassing. CalEEMod default values for solid waste generation were used to estimate GHG emissions associated with solid waste. A project diversion rate of 75% was assumed, which is consistent with the statewide goals outlined in Assembly Bill 939.

### *Water and Wastewater*

Supply, conveyance, treatment, and distribution of water for the project require the use of electricity, which would result in associated indirect GHG emissions. Water pumped from the on-site wells would be used for landscape irrigation, and would be put directly back into the groundwater table. Approximately 3.68 acre-feet per year (AFY) would be pumped with implementation of the proposed project. The project is anticipated to need approximately 2,400,000 gallons of water per year (7.36 AFY) and roughly half would be delivered by the Vallecitos Water District and the other half would be pumped from on-site wells. The proposed project would rely completely on an on-site wastewater system (septic system).

The estimated operational (year 2019) project-generated GHG emissions from area sources, energy usage, motor vehicles, offroad equipment, solid waste generation, and water usage and wastewater generation are shown in Table 10.

**Table 10**
**Estimated Annual Operational GHG Emissions**

| Emission Source | $CO_2$ | $CH_4$ | $N_2O$ | $CO_2E$ |
|---|---|---|---|---|
| | *metric tons per year* | | | |
| Area | 0.00 | 0.00 | 0.00 | 0.00 |
| Energy | 20.39 | 0.00 | 0.00 | 20.46 |
| Mobile | 190.43 | 0.02 | 0.00 | 190.83 |
| Offroad Equipment | 118.79 | 0.04 | 0.00 | 119.71 |
| Waste | 0.76 | 0.05 | 0.00 | 1.87 |
| Water | 4.36 | 0.27 | 0.00 | 11.46 |
| | | | **Total** | **344.34** |

**Notes:** $CH_4$ = methane; $CO_2$ = carbon dioxide; $CO_2E$ = carbon dioxide equivalent; $N_2O$ = nitrous oxide. See Attachment A for complete results.

As shown in Table 10, the annual operational related emissions for the project would be 344 MT $CO_2E$ per year.

The gain of sequestered carbon resulting from planting and growth of approximately 165 trees on site is estimated based on the carbon sequestration rate for the tree species, the number of new trees, and the growing period. It is assumed that all 165 trees will grow for a minimum of 20 years. Table 11 presents the estimated one-time carbon-stock change resulting from proposed planting of new trees.

**Table 11**
**Planted Trees Sequestered Carbon**

| Tree Species | Growing Period (years) | Sequestration Rate (MT $CO_2$/tree/year) | Quantity of New Tree Plantings (trees) | Sequestered Carbon (MT $CO_2$) |
|---|---|---|---|---|
| Rhus lancea | 20 | 0.0121 | 58 | 14.04 |
| Quercus agrifolia | 20 | 0.0367 | 50 | 36.70 |
| Juglans californica | 20 | 0.0433 | 19 | 16.45 |
| Platanus racemose | 20 | 0.0521 | 16 | 16.67 |
| Sambucus mexicana | 20 | 0.0121 | 22 | 5.32 |
| | | | **Total** | **89.19** |
| | | | **Amortized Sequestration** | **2.97** |

**Source:** CAPCOA 2016
**Notes:** MT $CO_2$ – metric tons carbon dioxide
See Appendix A for calculations and sources.

As presented in Table 11, the gain in sequestered carbon resulting from planting 165 trees would be approximately 89 MT $CO_2$. Therefore, the project would sequester more carbon then it released during construction (Table 9) over the project lifetime from vegetation related GHG emissions.

**Table 12**
**Estimated Annual Operational GHG Emissions**

| Emission Source | $CO_2$ | $CH_4$ | $N_2O$ | $CO_2E$ |
|---|---|---|---|---|
| | *metric tons per year* | | | |
| Area | 0.00 | 0.00 | 0.00 | 0.00 |
| Energy | 20.39 | 0.00 | 0.00 | 20.46 |
| Mobile | 190.43 | 0.02 | 0.00 | 190.83 |
| Offroad Equipment | 118.79 | 0.04 | 0.00 | 119.71 |
| Waste | 0.76 | 0.05 | 0.00 | 1.87 |
| Water | 4.36 | 0.27 | 0.00 | 11.46 |
| | | | Amortized Construction | 34.17 |
| | | | Amortized Sequestration Loss | 2.62 |
| | | | Amortized Sequestration | (2.97) |

**Table 12**
**Estimated Annual Operational GHG Emissions**

| Emission Source | $CO_2$ | $CH_4$ | $N_2O$ | $CO_2E$ |
|---|---|---|---|---|
| | *metric tons per year* | | | |
| | | | **Total** | **378.16** |

See Attachment A for complete results.

As shown in Table 12, including the sequestered carbon from planted trees and the amortized construction emissions, a conservative estimate of annual project-generated GHG emissions would be approximately 378 MT $CO_2E$ per year as a result of project operation. Therefore, the total annual emissions would not exceed the GHG screening threshold of 900 MT $CO_2E$ per year.

### *4.2.2 Would the Project Conflict With an Applicable Plan, Policy, or Regulation Adopted for the Purpose of Reducing the Emissions of Greenhouse Gases?*

As discussed in Section 4.2.1, the County evaluates GHG significance based on a project's consistency with the County's CAP using the CAP Consistency Checklist (see Attachment B). As shown in Section 4.2.1 and Table 7, the project would be consistent with the CAP Consistency Checklist and thus the County's CAP. The following discussion outlines the projects consistency with other applicable GHG plans, policies, or regulations.

The County of San Diego's General Plan includes several elements that would impact GHG emissions. Table 12 outlines the proposed project's consistency with applicable General Plan goals.

**Table 12**
**County of San Diego General Plan – Project Consistency Analysis**

| Goal | Consistency Analysis |
|---|---|
| *Conservation and Open Space Element* | |
| COS-4.1 Water Conservation. Require development to reduce the waste of potable water through use of efficient technologies and conservation efforts that minimize the County's dependence on imported water and conserve groundwater resources. | Consistent. The project would supply half of its water needs from on-site water wells thus reducing the need for water from the local utility. |
| COS-11.7 Underground Utilities. Require new development to place utilities underground and encourage "undergrounding" in existing development to maintain viewsheds, reduce hazards associated with hanging lines and utility poles, and to keep pace with current and future technologies. | Consistent. All new utilities provided for the project would be underground to maintain viewsheds of local neighbors. |
| COS-14.3 Require design of residential subdivisions and nonresidential development through "green" and sustainable | Consistent. The proposed project does not include residential land uses. The project would be designed consistent with |

| | |
|---|---|
| land development practices to conserve energy, water, open space, and natural resources. | CalGreen and other low impact development standards to ensure conservation of land, water, and other natural resources as much as possible. |
| COS-14.4 Sustainable Technology and Projects. Require technologies and projects that contribute to the conservation of resources in a sustainable manner, that are compatible with community character, and that increase the self-sufficiency of individual communities, residents, and businesses. | Consistent. The proposed project would provide a vital resource to the County by accepting and recycling construction and demolition debris that may otherwise be sent to the landfill. |
| COS-14.8 Minimize Air Pollution. Minimize land use conflicts that expose people to significant amounts of air pollutants. | Consistent. The proposed project would utilize equipment that meets CARB requirements for non-road equipment. All vehicles onsite would be required to comply with CARB diesel and idling requirements. |
| COS-14.10 Low Emission Construction Vehicles and Equipment. Require County contractors and encourage other developers to use low emission construction vehicles and equipment to improve air quality and reduce GHG emissions. | Consistent. The proposed project would employ low emission construction vehicles and practices that reduce air pollution such as watering for dust suppression. |
| COS-15.4 Title 24 Energy Standards. Require development to minimize energy impacts from new buildings in accordance with or exceeding Title 24 energy standards. | Consistent. The proposed project would be built in accordance with the most recent Title 24 energy standards, insuring maximum energy efficiency. |
| COS-15.6 Design and Construction Methods. Require development design and construction methods to minimize impacts to air quality. | Consistent. The proposed project would be built in accordance with the most recent Title 24 energy standards, which would encourage the use of low- and zero-emissions equipment to minimize impacts to air quality and reduce GHG emissions. |
| COS-17.1 Reduction of Solid Waste Materials. Reduce GHG emissions and future landfill capacity needs through reduction, reuse, or recycling of all types of solid waste that is generated. Divert solid waste from landfills in compliance with state law. | Consistent. The project would help divert construction and demolition waste from the County helping to meet the states goals. |
| COST-17.2 Construction and Demolition Waste. Require recycling, reduction and reuse of construction and demolition debris. | Consistent. The proposed project would process construction and demolition debris from projects throughout the County and recycle them for sale. |
| COS-17.6 Recycling Containers. Require that all new land development projects include space for recycling containers. | Consistent. The proposed project would be serviced by recycling containers. |
| COS-19.1 Sustainable Development Practices. Require land development, building design, landscaping, and operational practices that minimize water consumption. | Consistent. The proposed project would use onsite water wells for up to half of the water needs thus reducing the demand from the local utility. |
| N-6.4 Hours of Construction. Require development to limit the hours of operation as appropriate for non-emergency construction and maintenance, trash collection, and parking lot sweeper activity near noise sensitive land uses. | Consistent. The hours of construction will be limited to 8:00 a.m. to 5:00 p.m., Monday through Friday. |

**Source:** County of San Diego 2011

The proposed project would be consistent with the goals set forth in the County's Conservation and Open Space Element of the General Plan that are designed to reduce the emissions of GHGs; reduce energy use in buildings and infrastructure; and promote the use of renewable energy sources, conservation, and other methods of efficiency. As shown in Table 12, the proposed project

would be consistent with applicable goals and policies of the County's General Plan. Impacts would be less than significant.

The SANDAG 2016 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) incorporates local land use projections and circulation networks in city and county general plans. The 2016 RTP/SCS is not directly applicable to the project because the underlying purpose of the 2016 RTP/SCS is to provide direction and guidance by making the best transportation and land use choices for future development, though project would support the goals and policies of the 2016 RTP/SCS. Additionally, the project would not have a significant impact on local transportation and land use during operation.

In regards to consistency with Executive Order B-30-15 (goal of reducing GHG emissions to 40% below 1990 levels by 2030) and Executive Order S-3-05 (goal of reducing GHG emissions to 80% below 1990 levels by 2050), there are no established protocols or thresholds of significance for that future year analysis. However, CARB forecasts that compliance with the current Scoping Plan puts the state on a trajectory of meeting these long-term GHG goals, although the specific path to compliance is unknown (CARB 2014). The project is consistent with the GHG emission reduction measures in the Scoping Plan and would not conflict with the state's trajectory toward future GHG reductions. In addition, since the specific path to compliance for the state in regards to the long-term goals will likely require development of technology or other changes that are not currently known or available, specific additional mitigation measures for the project would be speculative and cannot be identified at this time. The project's consistency would assist in meeting the County's contribution to GHG emission reduction targets in California. With respect to future GHG targets under the executive orders, CARB has also made clear its legal interpretation that it has the requisite authority to adopt whatever regulations are necessary, beyond the Assembly Bill 32 horizon year of 2020, to meet Executive Order S-3-05's 80% reduction target in 2050; this legal interpretation by an expert agency provides evidence that future regulations will be adopted to continue the state on its trajectory toward meeting these future GHG targets.

Finally, the project would be consistent with the County's CAP; therefore, this analysis provides support for the conclusion that the project would not conflict with Executive Order S-3-05's GHG reduction goals for California. As such, the project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs, and no mitigation is required. Therefore, this impact would be **less than significant**.

# 5 CONCLUSIONS

Emissions generated during construction of the proposed project would not exceed the SDAPCD's significance thresholds for criteria pollutants. Operation of the proposed project would also not

result in net criteria air pollutant emissions that would exceed the SDAPCD thresholds. Potential impacts related to TACs, siting health risk, odors, and consistency with applicable plans would be **less than significant**.

The project was deemed consistent with the County's CAP through application of the CAP Consistency Checklist. The project would not conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs as there are currently no mandatory GHG regulations or finalized agency guidelines that would apply to implementation of this project. Accordingly, potential cumulative GHG impacts would be **less than significant**.

As such, the proposed project would not result in significant impacts to air quality and GHG emissions

Sincerely,

Jennifer L. Reed

Jennifer Reed
Air Quality Services Manager

# 6 REFERENCES

14 CCR 15000–15387 and Appendices A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

14 CCR 15064.4. Determining the Significance of Impacts from Greenhouse Gas Emissions.

BLUE Consulting Group. 2013. Biological Resources Technical Report for the North County Environmental Resources Project. March 10.

CAT (Climate Action Team). 2010. *Climate Action Team Biennial Report*. Sacramento, California: California Environmental Protection Agency, California Climate Action Team. April 2010. http://www.energy.ca.gov/2010publications/CAT-1000-2010-004/CAT-1000-2010-004.PDF.

CAPCOA. 2008. CEQA & Climate Change Evaluation and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act. January. Accessed March 2017. http://www.capcoa.org/wp-content/uploads/downloads/2010/05/CAPCOA-White-Paper.pdf.

CARB. 2014. *First Update to the Climate Change Scoping Plan Building on the Framework Pursuant to AB 32 – The California Global Warming Solutions Act of 2006*. May 2014. Accessed August 2014. http://www.arb.ca.gov/cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf.

CARB. 2018. "iADAM: Air Quality Data Statistics." Accessed December 2018. http://www.arb.ca.gov/adam/topfour/topfour1.php.

CARB. 2019. "Common Air Pollutants." https://ww2.arb.ca.gov/resources/common-air-pollutants.

CNRA (California Natural Resources Agency). 2009. *Final Statement of Reasons for Regulatory Action: Amendments to the State CEQA Guidelines Addressing Analysis and Mitigation of Greenhouse Gas Emissions Pursuant to SB97*. December 2009. http://resources.ca.gov/ceqa/docs/Final_Statement_of_Reasons.pdf.

City of San Diego. 2017. Miramar Landfill. Accessed March 2017. https://www.sandiego.gov/environmental-services/miramar#General.

County of San Diego. 2007. County of San Diego Guidelines for Determining Significance and Report Format and Content Requirements Air Quality. March 19.

http://www.sandiegocounty.gov/content/dam/sdc/pds/ProjectPlanning/docs/AQ-Guidelines.pdf.

County of San Diego. 2011. General Plan. August. Accessed March 2017. http://www.sandiegocounty.gov/pds/generalplan.html.

County of San Diego. 2018. *County of San Diego Guidelines for Determining Significance, Climate Change.* January 2018. https://www.sandiegocounty.gov/content/dam/sdc/pds/advance/cap/publicreviewdocuments/PostBOSDocs/Guidelines%20for%20Determining%20Significance.pdf.

Hilltop Group Inc. 2017. Blasting characteristics for the North County Environmental Resources Recycling Center. March.

Ldn Consulting Inc. 2013. Air Quality Assessment for the North County Environmental Resources Recycling Center. July 13.

Meteoblue. 2018. Climate Escondido. Accessed December 2018. https://www.meteoblue.com/en/weather/forecast/modelclimate/escondido_united-states-of-america_5346827.

RBF. 2013. Preliminary Traffic Assessment, North County Environmental Resources. May 6.

SDAPCD. 1976. Regulation IV – Prohibitions, Rule 51: Nuisance. November 8. Accessed March 2017. http://www.sdapcd.org/content/dam/sdc/apcd/PDF/Rules_and_Regulations/Prohibitions/APCD_R50-1-51.pdf.

SDAPCD. 2015a. Rules and Regulations. Regulation IV. Prohibitions. Rule 67.0.1. Architectural Coatings. Revised June 24, 2015.

SDAPCD. 2015b. *Supplemental Guidelines for Submission of Air Toxics "Hot Spots" Program Health Risk Assessments (HRAs)*. June 2015.

SDAPCD. 2016. "Attainment Status." Accessed October 2016. http://www.sdapcd.org/content/sdc/apcd/en/air-quality-planning/attainment-status.html.

SCAQMD (South Coast Air Quality Management District). 2008. Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans. http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgboardsynopsis.pdf?sfvrsn=2.

Wood, Lisa. Personal communication between Lisa Wood, Senior Planner, City of San Diego - Environmental Services Department and Adam Poll, Dudek. Operational equipment currently employed at Miramar Landfill. March 20, 2017.

# ATTACHMENT A

*Air Quality and Greenhouse Gas Emissions Calculations*

# Hilltop NCER

**San Diego County APCD Air District, Annual**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| General Light Industry | 12.00 | 1000sqft | 0.28 | 12,000.00 | 0 |
| Other Asphalt Surfaces | 173.20 | 1000sqft | 3.98 | 173,200.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.6 | **Precipitation Freq (Days)** | 40 |
| **Climate Zone** | 10 | | | **Operational Year** | 2018 |
| **Utility Company** | San Diego Gas & Electric | | | | |
| **CO2 Intensity (lb/MWhr)** | 720.49 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics - GHG intensity based on SDG&E energy mix.

Land Use - See Section 1.0 of the DEIR for more information.

Construction Phase - See Section 1.0 of the DEIR for more information.

Off-road Equipment - See Section 2.2.3.2 for Construction Details.

Off-road Equipment - See Section 2.2.3.2 for Construction Details.

Off-road Equipment - See Section 2.2.3.2 for Construction Details.

Off-road Equipment - See Section 2.2.3.2 for Construction Details.

Off-road Equipment - See Section 2.2.3.2 for Construction Details.

Off-road Equipment - See Section 2.2.3.2 for Construction Details.

Trips and VMT - See Section 2.2.3.2 for Construction Details.

On-road Fugitive Dust - CalEEMod defaults.

Demolition - No demolition of structures anticipated for this project.

Grading - See Section 2.2.3.2 for Construction Details.

Architectural Coating - Architectural coatings in accordance with SDAPCD Rule 67.0.1.

Vehicle Trips - Based on client provided trip rates and distance.

Vehicle Emission Factors - CalEEMod defaults.

Vehicle Emission Factors - CalEEMod defaults.

Vehicle Emission Factors - CalEEMod defaults.

Road Dust - CalEEMod defaults.

Woodstoves - No woodstoves or fireplaces.

Consumer Products - CalEEMod defaults.

Area Coating - Architectural coatings in accordance with SDAPCD Rule 67.0.1.

Landscape Equipment - CalEEMod defaults.

Energy Use - See Section 1.0 of the DEIR for more information.

Water And Wastewater - See Section 1.0 of the DEIR for more information.

Solid Waste - CalEEMod defaults.

Land Use Change - Calculated outside of CalEEMod.

Sequestration - Calculated outside of CalEEMod.

Construction Off-road Equipment Mitigation - Fugitive dust mitigation in accordance with SDAPCD Rule 55.

Mobile Land Use Mitigation - No traffic mitigation.

Mobile Commute Mitigation - No commute mitigation.

Area Mitigation - Architectural coatings in accordance with SDAPCD Rule 67.0.1.

Energy Mitigation - No energy mitigation.

Water Mitigation - No water use mitigation.

Waste Mitigation - Consistent with statewide goal in AB 939.

Operational Off-Road Equipment - One trommel screen (Vermeer TR510 or equivalent) for C&G tree waste recycling and C&D wood recycling, and one shaker

screen (Spyder 512T or equivalent) for CDI recycling
Fleet Mix - Based on fleet mix for customers and employees.

Stationary Sources - Emergency Generators and Fire Pumps - Does not apply to the project.

Stationary Sources - Process Boilers - Does not apply to this project.

Stationary Sources - User Defined - Does not apply to this project.

Stationary Sources - Emergency Generators and Fire Pumps EF - Does not apply to the project.

Stationary Sources - Process Boilers EF - Does not apply to this project.

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblArchitecturalCoating | ConstArea_Parking | 10,392.00 | 173,200.00 |
| tblArchitecturalCoating | EF_Nonresidential_Exterior | 250.00 | 100.00 |
| tblArchitecturalCoating | EF_Nonresidential_Interior | 250.00 | 100.00 |
| tblArchitecturalCoating | EF_Parking | 250.00 | 100.00 |
| tblAreaCoating | Area_EF_Nonresidential_Exterior | 250 | 100 |
| tblAreaCoating | Area_EF_Nonresidential_Interior | 250 | 100 |
| tblAreaCoating | Area_EF_Parking | 250 | 100 |
| tblAreaMitigation | UseLowVOCPaintParkingCheck | False | True |
| tblConstDustMitigation | WaterUnpavedRoadVehicleSpeed | 40 | 0 |
| tblEnergyUse | LightingElect | 3.01 | 0.00 |
| tblEnergyUse | NT24E | 5.02 | 0.00 |
| tblEnergyUse | NT24NG | 17.13 | 0.00 |
| tblEnergyUse | T24E | 2.31 | 5.20 |
| tblEnergyUse | T24NG | 15.43 | 0.00 |
| tblFleetMix | HHD | 0.02 | 1.00 |
| tblFleetMix | HHD | 0.02 | 0.00 |
| tblFleetMix | LDA | 0.57 | 0.00 |
| tblFleetMix | LDA | 0.57 | 0.70 |
| tblFleetMix | LDT1 | 0.05 | 0.00 |

| | | | |
|---|---|---|---|
| tblFleetMix | LDT1 | 0.05 | 0.06 |
| tblFleetMix | LDT2 | 0.19 | 0.00 |
| tblFleetMix | LDT2 | 0.19 | 0.23 |
| tblFleetMix | LHD1 | 0.02 | 0.00 |
| tblFleetMix | LHD1 | 0.02 | 0.00 |
| tblFleetMix | LHD2 | 5.6460e-003 | 0.00 |
| tblFleetMix | LHD2 | 5.6460e-003 | 0.00 |
| tblFleetMix | MCY | 6.3850e-003 | 0.00 |
| tblFleetMix | MCY | 6.3850e-003 | 7.8300e-003 |
| tblFleetMix | MDV | 0.12 | 0.00 |
| tblFleetMix | MDV | 0.12 | 0.00 |
| tblFleetMix | MH | 1.4520e-003 | 0.00 |
| tblFleetMix | MH | 1.4520e-003 | 0.00 |
| tblFleetMix | MHD | 0.01 | 0.00 |
| tblFleetMix | MHD | 0.01 | 0.00 |
| tblFleetMix | OBUS | 1.8710e-003 | 0.00 |
| tblFleetMix | OBUS | 1.8710e-003 | 0.00 |
| tblFleetMix | SBUS | 7.3900e-004 | 0.00 |
| tblFleetMix | SBUS | 7.3900e-004 | 0.00 |
| tblFleetMix | UBUS | 2.1730e-003 | 0.00 |
| tblFleetMix | UBUS | 2.1730e-003 | 0.00 |
| tblGrading | MaterialImported | 0.00 | 72,000.00 |
| tblOperationalOffRoadEquipment | OperDaysPerYear | 260.00 | 312.00 |
| tblOperationalOffRoadEquipment | OperDaysPerYear | 260.00 | 312.00 |
| tblOperationalOffRoadEquipment | OperDaysPerYear | 260.00 | 312.00 |
| tblOperationalOffRoadEquipment | OperDaysPerYear | 260.00 | 312.00 |
| tblOperationalOffRoadEquipment | OperDaysPerYear | 260.00 | 312.00 |

| | | | |
|---|---|---|---|
| tblOperationalOffRoadEquipment | OperDaysPerYear | 260.00 | 312.00 |
| tblOperationalOffRoadEquipment | OperDaysPerYear | 260.00 | 312.00 |
| tblOperationalOffRoadEquipment | OperHorsePower | 85.00 | 510.00 |
| tblOperationalOffRoadEquipment | OperHorsePower | 85.00 | 1,200.00 |
| tblOperationalOffRoadEquipment | OperHorsePower | 85.00 | 250.00 |
| tblOperationalOffRoadEquipment | OperHorsePower | 172.00 | 29.00 |
| tblOperationalOffRoadEquipment | OperHorsePower | 168.00 | 49.00 |
| tblOperationalOffRoadEquipment | OperHorsePower | 168.00 | 84.00 |
| tblOperationalOffRoadEquipment | OperHorsePower | 203.00 | 125.00 |
| tblOperationalOffRoadEquipment | OperHoursPerDay | 8.00 | 14.00 |
| tblOperationalOffRoadEquipment | OperHoursPerDay | 8.00 | 14.00 |
| tblOperationalOffRoadEquipment | OperHoursPerDay | 8.00 | 14.00 |
| tblOperationalOffRoadEquipment | OperHoursPerDay | 8.00 | 14.00 |
| tblOperationalOffRoadEquipment | OperHoursPerDay | 8.00 | 14.00 |
| tblOperationalOffRoadEquipment | OperHoursPerDay | 8.00 | 14.00 |
| tblOperationalOffRoadEquipment | OperHoursPerDay | 8.00 | 14.00 |
| tblOperationalOffRoadEquipment | OperOffRoadEquipmentNumber | 0.00 | 1.00 |
| tblOperationalOffRoadEquipment | OperOffRoadEquipmentNumber | 0.00 | 1.00 |
| tblTripsAndVMT | WorkerTripNumber | 15.00 | 16.00 |
| tblTripsAndVMT | WorkerTripNumber | 15.00 | 16.00 |
| tblVehicleTrips | CC_TL | 7.30 | 13.83 |
| tblVehicleTrips | CC_TL | 7.30 | 0.00 |
| tblVehicleTrips | CC_TTP | 28.00 | 100.00 |
| tblVehicleTrips | CNW_TL | 7.30 | 0.00 |
| tblVehicleTrips | CNW_TL | 7.30 | 0.00 |
| tblVehicleTrips | CNW_TTP | 13.00 | 0.00 |
| tblVehicleTrips | CW_TL | 9.50 | 0.00 |

| | | | |
|---|---|---|---|
| tblVehicleTrips | CW_TL | 9.50 | 0.00 |
| tblVehicleTrips | CW_TTP | 59.00 | 0.00 |
| tblVehicleTrips | DV_TP | 5.00 | 0.00 |
| tblVehicleTrips | HW_TL | 0.00 | 10.80 |
| tblVehicleTrips | HW_TTP | 0.00 | 100.00 |
| tblVehicleTrips | PB_TP | 3.00 | 0.00 |
| tblVehicleTrips | PR_TP | 92.00 | 100.00 |
| tblVehicleTrips | PR_TP | 0.00 | 100.00 |
| tblVehicleTrips | ST_TR | 1.32 | 1.33 |
| tblVehicleTrips | ST_TR | 0.00 | 0.24 |
| tblVehicleTrips | SU_TR | 0.68 | 0.00 |
| tblVehicleTrips | WD_TR | 6.97 | 1.33 |
| tblVehicleTrips | WD_TR | 0.00 | 0.24 |
| tblWater | AerobicPercent | 87.46 | 0.00 |
| tblWater | AnaDigestCombDigestGasPercent | 100.00 | 0.00 |
| tblWater | AnaerobicandFacultativeLagoonsPercent | 2.21 | 0.00 |
| tblWater | ElectricityIntensityFactorForWastewaterTreatment | 1,911.00 | 0.00 |
| tblWater | IndoorWaterUseRate | 2,775,000.00 | 1,200,000.00 |
| tblWater | SepticTankPercent | 10.33 | 100.00 |

## 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 | | | | | |
| 2017 | 0.0826 | 1.0385 | 0.4734 | 1.3100e-003 | 0.5014 | 0.0420 | 0.5434 | 0.2391 | 0.0390 | 0.2781 | 0.0000 | 124.1668 | 124.1668 | 0.0239 | 0.0000 | 124.7638 |
| 2018 | 1.0569 | 7.0314 | 3.7606 | 9.6200e-003 | 0.5627 | 0.2864 | 0.8492 | 0.2569 | 0.2667 | 0.5236 | 0.0000 | 895.9538 | 895.9538 | 0.1776 | 0.0000 | 900.3939 |
| **Maximum** | **1.0569** | **7.0314** | **3.7606** | **9.6200e-003** | **0.5627** | **0.2864** | **0.8492** | **0.2569** | **0.2667** | **0.5236** | **0.0000** | **895.9538** | **895.9538** | **0.1776** | **0.0000** | **900.3939** |

### 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 | | | | | |
| 2017 | 0.0826 | 1.0385 | 0.4734 | 1.3100e-003 | 0.2606 | 0.0420 | 0.3026 | 0.1164 | 0.0390 | 0.1554 | 0.0000 | 124.1667 | 124.1667 | 0.0239 | 0.0000 | 124.7638 |
| 2018 | 1.0569 | 7.0314 | 3.7606 | 9.6200e-003 | 0.3221 | 0.2864 | 0.6085 | 0.1343 | 0.2667 | 0.4010 | 0.0000 | 895.9532 | 895.9532 | 0.1776 | 0.0000 | 900.3933 |
| **Maximum** | **1.0569** | **7.0314** | **3.7606** | **9.6200e-003** | **0.3221** | **0.2864** | **0.6085** | **0.1343** | **0.2667** | **0.4010** | **0.0000** | **895.9532** | **895.9532** | **0.1776** | **0.0000** | **900.3933** |

| | 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** | **45.24** | **0.00** | **34.57** | **49.47** | **0.00** | **30.60** | **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) |
|---|---|---|---|---|
| 4 | 10-25-2017 | 1-24-2018 | 1.6355 | 1.6355 |
| 5 | 1-25-2018 | 4-24-2018 | 1.8022 | 1.8022 |
| 6 | 4-25-2018 | 7-24-2018 | 2.3575 | 2.3575 |
| 7 | 7-25-2018 | 9-30-2018 | 2.0935 | 2.0935 |
| | | Highest | 2.3575 | 2.3575 |

## 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 | 0.0662 | 2.0000e-005 | 1.7300e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | 0.0000 | 3.3100e-003 | 3.3100e-003 | 1.0000e-005 | 0.0000 | 3.5400e-003 |
| Energy | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 20.3929 | 20.3929 | 8.2000e-004 | 1.7000e-004 | 20.4640 |
| Mobile | 0.0318 | 0.6547 | 0.3286 | 1.9800e-003 | 0.0820 | 2.5800e-003 | 0.0845 | 0.0220 | 2.4600e-003 | 0.0245 | 0.0000 | 190.4326 | 190.4326 | 0.0159 | 0.0000 | 190.8288 |
| Offroad | 0.1876 | 1.1271 | 1.1665 | 1.3000e-003 | | 0.0870 | 0.0870 | | 0.0800 | 0.0800 | 0.0000 | 118.7889 | 118.7889 | 0.0370 | 0.0000 | 119.7135 |
| Waste | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 3.0205 | 0.0000 | 3.0205 | 0.1785 | 0.0000 | 7.4832 |
| Water | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 4.3570 | 4.3570 | 0.2727 | 9.6000e-004 | 11.4611 |
| **Total** | **0.2855** | **1.7817** | **1.4968** | **3.2800e-003** | **0.0820** | **0.0896** | **0.1715** | **0.0220** | **0.0825** | **0.1045** | **3.0205** | **333.9747** | **336.9952** | **0.5049** | **1.1300e-003** | **349.9540** |

## 2.2 Overall Operational

**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 | 0.0662 | 2.0000e-005 | 1.7300e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | 0.0000 | 3.3100e-003 | 3.3100e-003 | 1.0000e-005 | 0.0000 | 3.5400e-003 |
| Energy | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 20.3929 | 20.3929 | 8.2000e-004 | 1.7000e-004 | 20.4640 |
| Mobile | 0.0318 | 0.6547 | 0.3286 | 1.9800e-003 | 0.0820 | 2.5800e-003 | 0.0845 | 0.0220 | 2.4600e-003 | 0.0245 | 0.0000 | 190.4326 | 190.4326 | 0.0159 | 0.0000 | 190.8288 |
| Offroad | 0.1876 | 1.1271 | 1.1665 | 1.3000e-003 | | 0.0870 | 0.0870 | | 0.0800 | 0.0800 | 0.0000 | 118.7889 | 118.7889 | 0.0370 | 0.0000 | 119.7135 |
| Waste | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.7551 | 0.0000 | 0.7551 | 0.0446 | 0.0000 | 1.8708 |
| Water | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 4.3570 | 4.3570 | 0.2727 | 9.6000e-004 | 11.4611 |
| **Total** | **0.2855** | **1.7817** | **1.4968** | **3.2800e-003** | **0.0820** | **0.0896** | **0.1715** | **0.0220** | **0.0825** | **0.1045** | **0.7551** | **333.9747** | **334.7299** | **0.3710** | **1.1300e-003** | **344.3417** |

| | 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** | **75.00** | **0.00** | **0.67** | **26.52** | **0.00** | **1.60** |

## 3.0 Construction Detail

**Construction Phase**

Hilltop NCER - San Diego County APCD Air District, Annual

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|---|---|---|---|---|---|---|---|
| 1 | Demolition | Demolition | 12/1/2017 | 12/28/2017 | 5 | 20 | |
| 2 | Grading | Grading | 12/1/2017 | 6/4/2018 | 5 | 132 | |
| 3 | Building Construction | Building Construction | 6/5/2018 | 10/22/2018 | 5 | 100 | |
| 4 | Paving | Paving | 10/15/2018 | 11/9/2018 | 5 | 20 | |
| 5 | Architectural Coating | Architectural Coating | 10/15/2018 | 11/9/2018 | 5 | 20 | |

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 66**

**Acres of Paving: 3.98**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 18,000; Non-Residential Outdoor: 6,000; Striped Parking Area: 173,200 (Architectural Coating – sqft)**

**OffRoad Equipment**

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|---|---|---|---|---|---|
| Demolition | Concrete/Industrial Saws | 1 | 8.00 | 81 | 0.73 |
| Demolition | Excavators | 3 | 8.00 | 158 | 0.38 |
| Demolition | Rubber Tired Dozers | 2 | 8.00 | 247 | 0.40 |
| Grading | Excavators | 1 | 8.00 | 158 | 0.38 |
| Grading | Graders | 1 | 8.00 | 187 | 0.41 |
| Grading | Rubber Tired Dozers | 1 | 8.00 | 247 | 0.40 |
| Grading | Tractors/Loaders/Backhoes | 3 | 8.00 | 97 | 0.37 |
| Building Construction | Cranes | 1 | 7.00 | 231 | 0.29 |
| Building Construction | Crushing/Proc. Equipment | 1 | 8.00 | 85 | 0.78 |
| Building Construction | Forklifts | 3 | 8.00 | 89 | 0.20 |
| Building Construction | Generator Sets | 1 | 8.00 | 84 | 0.74 |
| Building Construction | Graders | 1 | 8.00 | 187 | 0.41 |
| Building Construction | Rubber Tired Dozers | 1 | 8.00 | 247 | 0.40 |
| Building Construction | Scrapers | 2 | 8.00 | 367 | 0.48 |
| Building Construction | Tractors/Loaders/Backhoes | 2 | 8.00 | 97 | 0.37 |
| Building Construction | Welders | 1 | 8.00 | 46 | 0.45 |
| Paving | Cement and Mortar Mixers | 2 | 6.00 | 9 | 0.56 |
| Paving | Pavers | 1 | 8.00 | 130 | 0.42 |
| Paving | Paving Equipment | 2 | 6.00 | 132 | 0.36 |
| Paving | Rollers | 2 | 6.00 | 80 | 0.38 |
| Paving | Tractors/Loaders/Backhoes | 1 | 8.00 | 97 | 0.37 |
| Architectural Coating | Air Compressors | 1 | 6.00 | 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 | 16.00 | 0.00 | 3.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Grading | 6 | 16.00 | 0.00 | 9,000.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Building Construction | 13 | 78.00 | 30.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Paving | 8 | 20.00 | 0.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Architectural Coating | 1 | 16.00 | 0.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |

## 3.1 Mitigation Measures Construction

Water Exposed Area

## 3.2 Demolition - 2017

**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 | | | | | 3.2000e-004 | 0.0000 | 3.2000e-004 | 5.0000e-005 | 0.0000 | 5.0000e-005 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0410 | 0.4275 | 0.2301 | 3.9000e-004 | | 0.0219 | 0.0219 | | 0.0204 | 0.0204 | 0.0000 | 35.6005 | 35.6005 | 9.7300e-003 | 0.0000 | 35.8438 |
| **Total** | **0.0410** | **0.4275** | **0.2301** | **3.9000e-004** | **3.2000e-004** | **0.0219** | **0.0223** | **5.0000e-005** | **0.0204** | **0.0205** | **0.0000** | **35.6005** | **35.6005** | **9.7300e-003** | **0.0000** | **35.8438** |

## 3.2 Demolition - 2017

### 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 | 2.0000e-005 | 5.3000e-004 | 1.1000e-004 | 0.0000 | 3.0000e-005 | 0.0000 | 3.0000e-005 | 1.0000e-005 | 0.0000 | 1.0000e-005 | 0.0000 | 0.1192 | 0.1192 | 1.0000e-005 | 0.0000 | 0.1195 |
| 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 | 7.6000e-004 | 6.1000e-004 | 5.8800e-003 | 1.0000e-005 | 1.2800e-003 | 1.0000e-005 | 1.2900e-003 | 3.4000e-004 | 1.0000e-005 | 3.5000e-004 | 0.0000 | 1.2706 | 1.2706 | 5.0000e-005 | 0.0000 | 1.2718 |
| **Total** | **7.8000e-004** | **1.1400e-003** | **5.9900e-003** | **1.0000e-005** | **1.3100e-003** | **1.0000e-005** | **1.3200e-003** | **3.5000e-004** | **1.0000e-005** | **3.6000e-004** | **0.0000** | **1.3898** | **1.3898** | **6.0000e-005** | **0.0000** | **1.3913** |

### 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 | | | | | 1.4000e-004 | 0.0000 | 1.4000e-004 | 2.0000e-005 | 0.0000 | 2.0000e-005 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0410 | 0.4275 | 0.2301 | 3.9000e-004 | | 0.0219 | 0.0219 | | 0.0204 | 0.0204 | 0.0000 | 35.6005 | 35.6005 | 9.7300e-003 | 0.0000 | 35.8438 |
| **Total** | **0.0410** | **0.4275** | **0.2301** | **3.9000e-004** | **1.4000e-004** | **0.0219** | **0.0221** | **2.0000e-005** | **0.0204** | **0.0205** | **0.0000** | **35.6005** | **35.6005** | **9.7300e-003** | **0.0000** | **35.8438** |

## 3.2 Demolition - 2017

**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 | 2.0000e-005 | 5.3000e-004 | 1.1000e-004 | 0.0000 | 3.0000e-005 | 0.0000 | 3.0000e-005 | 1.0000e-005 | 0.0000 | 1.0000e-005 | 0.0000 | 0.1192 | 0.1192 | 1.0000e-005 | 0.0000 | 0.1195 |
| 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 | 7.6000e-004 | 6.1000e-004 | 5.8800e-003 | 1.0000e-005 | 1.2800e-003 | 1.0000e-005 | 1.2900e-003 | 3.4000e-004 | 1.0000e-005 | 3.5000e-004 | 0.0000 | 1.2706 | 1.2706 | 5.0000e-005 | 0.0000 | 1.2718 |
| **Total** | **7.8000e-004** | **1.1400e-003** | **5.9900e-003** | **1.0000e-005** | **1.3100e-003** | **1.0000e-005** | **1.3200e-003** | **3.5000e-004** | **1.0000e-005** | **3.6000e-004** | **0.0000** | **1.3898** | **1.3898** | **6.0000e-005** | **0.0000** | **1.3913** |

## 3.3 Grading - 2017

**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 | | | | | 0.4375 | 0.0000 | 0.4375 | 0.2230 | 0.0000 | 0.2230 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0322 | 0.3558 | 0.1796 | 3.1000e-004 | | 0.0187 | 0.0187 | | 0.0172 | 0.0172 | 0.0000 | 28.9374 | 28.9374 | 8.8700e-003 | 0.0000 | 29.1591 |
| **Total** | **0.0322** | **0.3558** | **0.1796** | **3.1000e-004** | **0.4375** | **0.0187** | **0.4562** | **0.2230** | **0.0172** | **0.2402** | **0.0000** | **28.9374** | **28.9374** | **8.8700e-003** | **0.0000** | **29.1591** |

## 3.3 Grading - 2017

### 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 | 7.8000e-003 | 0.2534 | 0.0515 | 5.8000e-004 | 0.0609 | 1.4100e-003 | 0.0623 | 0.0153 | 1.3500e-003 | 0.0167 | 0.0000 | 56.9049 | 56.9049 | 5.1700e-003 | 0.0000 | 57.0343 |
| 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 | 7.9000e-004 | 6.4000e-004 | 6.1700e-003 | 1.0000e-005 | 1.3500e-003 | 1.0000e-005 | 1.3600e-003 | 3.6000e-004 | 1.0000e-005 | 3.7000e-004 | 0.0000 | 1.3341 | 1.3341 | 5.0000e-005 | 0.0000 | 1.3354 |
| **Total** | **8.5900e-003** | **0.2540** | **0.0577** | **5.9000e-004** | **0.0623** | **1.4200e-003** | **0.0637** | **0.0157** | **1.3600e-003** | **0.0170** | **0.0000** | **58.2390** | **58.2390** | **5.2200e-003** | **0.0000** | **58.3696** |

### 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 | | | | | 0.1969 | 0.0000 | 0.1969 | 0.1004 | 0.0000 | 0.1004 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0322 | 0.3558 | 0.1796 | 3.1000e-004 | | 0.0187 | 0.0187 | | 0.0172 | 0.0172 | 0.0000 | 28.9374 | 28.9374 | 8.8700e-003 | 0.0000 | 29.1591 |
| **Total** | **0.0322** | **0.3558** | **0.1796** | **3.1000e-004** | **0.1969** | **0.0187** | **0.2155** | **0.1004** | **0.0172** | **0.1175** | **0.0000** | **28.9374** | **28.9374** | **8.8700e-003** | **0.0000** | **29.1591** |

## 3.3 Grading - 2017

**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 | 7.8000e-003 | 0.2534 | 0.0515 | 5.8000e-004 | 0.0609 | 1.4100e-003 | 0.0623 | 0.0153 | 1.3500e-003 | 0.0167 | 0.0000 | 56.9049 | 56.9049 | 5.1700e-003 | 0.0000 | 57.0343 |
| 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 | 7.9000e-004 | 6.4000e-004 | 6.1700e-003 | 1.0000e-005 | 1.3500e-003 | 1.0000e-005 | 1.3600e-003 | 3.6000e-004 | 1.0000e-005 | 3.7000e-004 | 0.0000 | 1.3341 | 1.3341 | 5.0000e-005 | 0.0000 | 1.3354 |
| **Total** | **8.5900e-003** | **0.2540** | **0.0577** | **5.9000e-004** | **0.0623** | **1.4200e-003** | **0.0637** | **0.0157** | **1.3600e-003** | **0.0170** | **0.0000** | **58.2390** | **58.2390** | **5.2200e-003** | **0.0000** | **58.3696** |

## 3.3 Grading - 2018

**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 | | | | | 0.4375 | 0.0000 | 0.4375 | 0.2230 | 0.0000 | 0.2230 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.1539 | 1.7023 | 0.9200 | 1.6500e-003 | | 0.0861 | 0.0861 | | 0.0792 | 0.0792 | 0.0000 | 150.4432 | 150.4432 | 0.0468 | 0.0000 | 151.6140 |
| **Total** | **0.1539** | **1.7023** | **0.9200** | **1.6500e-003** | **0.4375** | **0.0861** | **0.5236** | **0.2230** | **0.0792** | **0.3022** | **0.0000** | **150.4432** | **150.4432** | **0.0468** | **0.0000** | **151.6140** |

## 3.3 Grading - 2018

### 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 | 0.0351 | 1.2285 | 0.2563 | 3.0200e-003 | 0.0740 | 4.7800e-003 | 0.0787 | 0.0201 | 4.5700e-003 | 0.0246 | 0.0000 | 298.1989 | 298.1989 | 0.0269 | 0.0000 | 298.8716 |
| 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 | 3.8000e-003 | 3.0100e-003 | 0.0288 | 8.0000e-005 | 7.1200e-003 | 5.0000e-005 | 7.1700e-003 | 1.8900e-003 | 5.0000e-005 | 1.9400e-003 | 0.0000 | 6.8534 | 6.8534 | 2.4000e-004 | 0.0000 | 6.8593 |
| **Total** | **0.0389** | **1.2315** | **0.2851** | **3.1000e-003** | **0.0811** | **4.8300e-003** | **0.0859** | **0.0219** | **4.6200e-003** | **0.0266** | **0.0000** | **305.0523** | **305.0523** | **0.0272** | **0.0000** | **305.7309** |

### 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 | | | | | 0.1969 | 0.0000 | 0.1969 | 0.1004 | 0.0000 | 0.1004 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.1539 | 1.7023 | 0.9200 | 1.6500e-003 | | 0.0861 | 0.0861 | | 0.0792 | 0.0792 | 0.0000 | 150.4430 | 150.4430 | 0.0468 | 0.0000 | 151.6139 |
| **Total** | **0.1539** | **1.7023** | **0.9200** | **1.6500e-003** | **0.1969** | **0.0861** | **0.2830** | **0.1004** | **0.0792** | **0.1796** | **0.0000** | **150.4430** | **150.4430** | **0.0468** | **0.0000** | **151.6139** |

## 3.3 Grading - 2018

**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 | 0.0351 | 1.2285 | 0.2563 | 3.0200e-003 | 0.0740 | 4.7800e-003 | 0.0787 | 0.0201 | 4.5700e-003 | 0.0246 | 0.0000 | 298.1989 | 298.1989 | 0.0269 | 0.0000 | 298.8716 |
| 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 | 3.8000e-003 | 3.0100e-003 | 0.0288 | 8.0000e-005 | 7.1200e-003 | 5.0000e-005 | 7.1700e-003 | 1.8900e-003 | 5.0000e-005 | 1.9400e-003 | 0.0000 | 6.8534 | 6.8534 | 2.4000e-004 | 0.0000 | 6.8593 |
| **Total** | **0.0389** | **1.2315** | **0.2851** | **3.1000e-003** | **0.0811** | **4.8300e-003** | **0.0859** | **0.0219** | **4.6200e-003** | **0.0266** | **0.0000** | **305.0523** | **305.0523** | **0.0272** | **0.0000** | **305.7309** |

## 3.4 Building Construction - 2018

**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 | 0.3586 | 3.7178 | 2.2192 | 3.8700e-003 | | 0.1838 | 0.1838 | | 0.1719 | 0.1719 | 0.0000 | 347.8911 | 347.8911 | 0.0938 | 0.0000 | 350.2360 |
| **Total** | **0.3586** | **3.7178** | **2.2192** | **3.8700e-003** | | **0.1838** | **0.1838** | | **0.1719** | **0.1719** | **0.0000** | **347.8911** | **347.8911** | **0.0938** | **0.0000** | **350.2360** |

## 3.4 Building Construction - 2018

### 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 | 7.8700e-003 | 0.2002 | 0.0551 | 4.1000e-004 | 9.9600e-003 | 1.5600e-003 | 0.0115 | 2.8700e-003 | 1.4900e-003 | 4.3600e-003 | 0.0000 | 40.1488 | 40.1488 | 3.3100e-003 | 0.0000 | 40.2315 |
| Worker | 0.0167 | 0.0132 | 0.1266 | 3.3000e-004 | 0.0313 | 2.3000e-004 | 0.0315 | 8.3100e-003 | 2.1000e-004 | 8.5200e-003 | 0.0000 | 30.0992 | 30.0992 | 1.0400e-003 | 0.0000 | 30.1252 |
| **Total** | **0.0245** | **0.2134** | **0.1817** | **7.4000e-004** | **0.0412** | **1.7900e-003** | **0.0430** | **0.0112** | **1.7000e-003** | **0.0129** | **0.0000** | **70.2481** | **70.2481** | **4.3500e-003** | **0.0000** | **70.3567** |

### 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 | 0.3586 | 3.7178 | 2.2192 | 3.8700e-003 | | 0.1838 | 0.1838 | | 0.1719 | 0.1719 | 0.0000 | 347.8907 | 347.8907 | 0.0938 | 0.0000 | 350.2356 |
| **Total** | **0.3586** | **3.7178** | **2.2192** | **3.8700e-003** | | **0.1838** | **0.1838** | | **0.1719** | **0.1719** | **0.0000** | **347.8907** | **347.8907** | **0.0938** | **0.0000** | **350.2356** |

## 3.4 Building Construction - 2018

**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 | 7.8700e-003 | 0.2002 | 0.0551 | 4.1000e-004 | 9.9600e-003 | 1.5600e-003 | 0.0115 | 2.8700e-003 | 1.4900e-003 | 4.3600e-003 | 0.0000 | 40.1488 | 40.1488 | 3.3100e-003 | 0.0000 | 40.2315 |
| Worker | 0.0167 | 0.0132 | 0.1266 | 3.3000e-004 | 0.0313 | 2.3000e-004 | 0.0315 | 8.3100e-003 | 2.1000e-004 | 8.5200e-003 | 0.0000 | 30.0992 | 30.0992 | 1.0400e-003 | 0.0000 | 30.1252 |
| **Total** | **0.0245** | **0.2134** | **0.1817** | **7.4000e-004** | **0.0412** | **1.7900e-003** | **0.0430** | **0.0112** | **1.7000e-003** | **0.0129** | **0.0000** | **70.2481** | **70.2481** | **4.3500e-003** | **0.0000** | **70.3567** |

## 3.5 Paving - 2018

**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 | 0.0142 | 0.1452 | 0.1243 | 1.9000e-004 | | 8.3700e-003 | 8.3700e-003 | | 7.7200e-003 | 7.7200e-003 | 0.0000 | 16.9875 | 16.9875 | 5.1500e-003 | 0.0000 | 17.1161 |
| Paving | 5.2100e-003 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0195** | **0.1452** | **0.1243** | **1.9000e-004** | | **8.3700e-003** | **8.3700e-003** | | **7.7200e-003** | **7.7200e-003** | **0.0000** | **16.9875** | **16.9875** | **5.1500e-003** | **0.0000** | **17.1161** |

## 3.5 Paving - 2018

### 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 | 8.5000e-004 | 6.8000e-004 | 6.4900e-003 | 2.0000e-005 | 1.6000e-003 | 1.0000e-005 | 1.6200e-003 | 4.3000e-004 | 1.0000e-005 | 4.4000e-004 | 0.0000 | 1.5436 | 1.5436 | 5.0000e-005 | 0.0000 | 1.5449 |
| **Total** | **8.5000e-004** | **6.8000e-004** | **6.4900e-003** | **2.0000e-005** | **1.6000e-003** | **1.0000e-005** | **1.6200e-003** | **4.3000e-004** | **1.0000e-005** | **4.4000e-004** | **0.0000** | **1.5436** | **1.5436** | **5.0000e-005** | **0.0000** | **1.5449** |

### 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 | 0.0142 | 0.1452 | 0.1243 | 1.9000e-004 | | 8.3700e-003 | 8.3700e-003 | | 7.7200e-003 | 7.7200e-003 | 0.0000 | 16.9875 | 16.9875 | 5.1500e-003 | 0.0000 | 17.1161 |
| Paving | 5.2100e-003 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | **0.0195** | **0.1452** | **0.1243** | **1.9000e-004** | | **8.3700e-003** | **8.3700e-003** | | **7.7200e-003** | **7.7200e-003** | **0.0000** | **16.9875** | **16.9875** | **5.1500e-003** | **0.0000** | **17.1161** |

## 3.5 Paving - 2018

**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 | 8.5000e-004 | 6.8000e-004 | 6.4900e-003 | 2.0000e-005 | 1.6000e-003 | 1.0000e-005 | 1.6200e-003 | 4.3000e-004 | 1.0000e-005 | 4.4000e-004 | 0.0000 | 1.5436 | 1.5436 | 5.0000e-005 | 0.0000 | 1.5449 |
| **Total** | **8.5000e-004** | **6.8000e-004** | **6.4900e-003** | **2.0000e-005** | **1.6000e-003** | **1.0000e-005** | **1.6200e-003** | **4.3000e-004** | **1.0000e-005** | **4.4000e-004** | **0.0000** | **1.5436** | **1.5436** | **5.0000e-005** | **0.0000** | **1.5449** |

## 3.6 Architectural Coating - 2018

**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 | | | | | |
| Archit. Coating | 0.4570 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 2.9900e-003 | 0.0201 | 0.0185 | 3.0000e-005 | | 1.5100e-003 | 1.5100e-003 | | 1.5100e-003 | 1.5100e-003 | 0.0000 | 2.5533 | 2.5533 | 2.4000e-004 | 0.0000 | 2.5593 |
| **Total** | **0.4600** | **0.0201** | **0.0185** | **3.0000e-005** | | **1.5100e-003** | **1.5100e-003** | | **1.5100e-003** | **1.5100e-003** | **0.0000** | **2.5533** | **2.5533** | **2.4000e-004** | **0.0000** | **2.5593** |

## 3.6 Architectural Coating - 2018

### 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 | 6.8000e-004 | 5.4000e-004 | 5.1900e-003 | 1.0000e-005 | 1.2800e-003 | 1.0000e-005 | 1.2900e-003 | 3.4000e-004 | 1.0000e-005 | 3.5000e-004 | 0.0000 | 1.2348 | 1.2348 | 4.0000e-005 | 0.0000 | 1.2359 |
| **Total** | **6.8000e-004** | **5.4000e-004** | **5.1900e-003** | **1.0000e-005** | **1.2800e-003** | **1.0000e-005** | **1.2900e-003** | **3.4000e-004** | **1.0000e-005** | **3.5000e-004** | **0.0000** | **1.2348** | **1.2348** | **4.0000e-005** | **0.0000** | **1.2359** |

### 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 | | | | | |
| Archit. Coating | 0.4570 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 2.9900e-003 | 0.0201 | 0.0185 | 3.0000e-005 | | 1.5100e-003 | 1.5100e-003 | | 1.5100e-003 | 1.5100e-003 | 0.0000 | 2.5533 | 2.5533 | 2.4000e-004 | 0.0000 | 2.5593 |
| **Total** | **0.4600** | **0.0201** | **0.0185** | **3.0000e-005** | | **1.5100e-003** | **1.5100e-003** | | **1.5100e-003** | **1.5100e-003** | **0.0000** | **2.5533** | **2.5533** | **2.4000e-004** | **0.0000** | **2.5593** |

### 3.6 Architectural Coating - 2018

**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 | 6.8000e-004 | 5.4000e-004 | 5.1900e-003 | 1.0000e-005 | 1.2800e-003 | 1.0000e-005 | 1.2900e-003 | 3.4000e-004 | 1.0000e-005 | 3.5000e-004 | 0.0000 | 1.2348 | 1.2348 | 4.0000e-005 | 0.0000 | 1.2359 |
| **Total** | **6.8000e-004** | **5.4000e-004** | **5.1900e-003** | **1.0000e-005** | **1.2800e-003** | **1.0000e-005** | **1.2900e-003** | **3.4000e-004** | **1.0000e-005** | **3.5000e-004** | **0.0000** | **1.2348** | **1.2348** | **4.0000e-005** | **0.0000** | **1.2359** |

## 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 | 0.0318 | 0.6547 | 0.3286 | 1.9800e-003 | 0.0820 | 2.5800e-003 | 0.0845 | 0.0220 | 2.4600e-003 | 0.0245 | 0.0000 | 190.4326 | 190.4326 | 0.0159 | 0.0000 | 190.8288 |
| Unmitigated | 0.0318 | 0.6547 | 0.3286 | 1.9800e-003 | 0.0820 | 2.5800e-003 | 0.0845 | 0.0220 | 2.4600e-003 | 0.0245 | 0.0000 | 190.4326 | 190.4326 | 0.0159 | 0.0000 | 190.8288 |

## 4.2 Trip Summary Information

| | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|---|---|---|---|---|---|
| Land Use | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| General Light Industry | 16.00 | 16.00 | 0.00 | 69,053 | 69,053 |
| Other Asphalt Surfaces | 42.00 | 42.00 | 0.00 | 141,527 | 141,527 |
| Total | 58.00 | 58.00 | 0.00 | 210,580 | 210,580 |

## 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 |
| General Light Industry | 0.00 | 13.83 | 0.00 | 0.00 | 100.00 | 0.00 | 100 | 0 | 0 |
| Other Asphalt Surfaces | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100 | 0 | 0 |

## 4.4 Fleet Mix

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| General Light Industry | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 1.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 |
| Other Asphalt Surfaces | 0.704103 | 0.055831 | 0.232237 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.007830 | 0.000000 | 0.000000 |

## 5.0 Energy Detail

Historical Energy Use: N

### 5.1 Mitigation Measures 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 | 20.3929 | 20.3929 | 8.2000e-004 | 1.7000e-004 | 20.4640 |
| Electricity Unmitigated | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 20.3929 | 20.3929 | 8.2000e-004 | 1.7000e-004 | 20.4640 |
| 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 | | | | | |
| General Light Industry | 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 |
| Other Asphalt Surfaces | 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 | | | | | |
| General Light Industry | 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 |
| Other Asphalt Surfaces | 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 | | | |
| General Light Industry | 62400 | 20.3929 | 8.2000e-004 | 1.7000e-004 | 20.4640 |
| Other Asphalt Surfaces | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | **20.3929** | **8.2000e-004** | **1.7000e-004** | **20.4640** |

**Mitigated**

| | Electricity Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | kWh/yr | MT/yr | | | |
| General Light Industry | 62400 | 20.3929 | 8.2000e-004 | 1.7000e-004 | 20.4640 |
| Other Asphalt Surfaces | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | **20.3929** | **8.2000e-004** | **1.7000e-004** | **20.4640** |

# 6.0 Area Detail

## 6.1 Mitigation Measures Area

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

No Hearths Installed

| | 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 | 0.0662 | 2.0000e-005 | 1.7300e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | 0.0000 | 3.3100e-003 | 3.3100e-003 | 1.0000e-005 | 0.0000 | 3.5400e-003 |
| Unmitigated | 0.0662 | 2.0000e-005 | 1.7300e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | 0.0000 | 3.3100e-003 | 3.3100e-003 | 1.0000e-005 | 0.0000 | 3.5400e-003 |

## 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 | 7.9700e-003 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Consumer Products | 0.0581 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Landscaping | 1.6000e-004 | 2.0000e-005 | 1.7300e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | 0.0000 | 3.3100e-003 | 3.3100e-003 | 1.0000e-005 | 0.0000 | 3.5400e-003 |
| **Total** | **0.0662** | **2.0000e-005** | **1.7300e-003** | **0.0000** | | **1.0000e-005** | **1.0000e-005** | | **1.0000e-005** | **1.0000e-005** | **0.0000** | **3.3100e-003** | **3.3100e-003** | **1.0000e-005** | **0.0000** | **3.5400e-003** |

**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 | 7.9700e-003 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Consumer Products | 0.0581 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Landscaping | 1.6000e-004 | 2.0000e-005 | 1.7300e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | 0.0000 | 3.3100e-003 | 3.3100e-003 | 1.0000e-005 | 0.0000 | 3.5400e-003 |
| **Total** | **0.0662** | **2.0000e-005** | **1.7300e-003** | **0.0000** | | **1.0000e-005** | **1.0000e-005** | | **1.0000e-005** | **1.0000e-005** | **0.0000** | **3.3100e-003** | **3.3100e-003** | **1.0000e-005** | **0.0000** | **3.5400e-003** |

## 7.0 Water Detail

## 7.1 Mitigation Measures Water

| | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|
| Category | MT/yr | | | |
| Mitigated | 4.3570 | 0.2727 | 9.6000e-004 | 11.4611 |
| Unmitigated | 4.3570 | 0.2727 | 9.6000e-004 | 11.4611 |

## 7.2 Water by Land Use

**Unmitigated**

| | Indoor/Outdoor Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | Mgal | MT/yr | | | |
| General Light Industry | 1.2 / 0 | 4.3570 | 0.2727 | 9.6000e-004 | 11.4611 |
| Other Asphalt Surfaces | 0 / 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | **4.3570** | **0.2727** | **9.6000e-004** | **11.4611** |

### 7.2 Water by Land Use

**Mitigated**

| | Indoor/Outdoor Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | Mgal | MT/yr | | | |
| General Light Industry | 1.2 / 0 | 4.3570 | 0.2727 | 9.6000e-004 | 11.4611 |
| Other Asphalt Surfaces | 0 / 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | **4.3570** | **0.2727** | **9.6000e-004** | **11.4611** |

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

**Category/Year**

| | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|
| | MT/yr | | | |
| Mitigated | 0.7551 | 0.0446 | 0.0000 | 1.8708 |
| Unmitigated | 3.0205 | 0.1785 | 0.0000 | 7.4832 |

## 8.2 Waste by Land Use

**Unmitigated**

| | Waste Disposed | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | tons | MT/yr | | | |
| General Light Industry | 14.88 | 3.0205 | 0.1785 | 0.0000 | 7.4832 |
| Other Asphalt Surfaces | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | **3.0205** | **0.1785** | **0.0000** | **7.4832** |

### 8.2 Waste by Land Use

**Mitigated**

| | Waste Disposed | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | tons | MT/yr | | | |
| General Light Industry | 3.72 | 0.7551 | 0.0446 | 0.0000 | 1.8708 |
| Other Asphalt Surfaces | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | **0.7551** | **0.0446** | **0.0000** | **1.8708** |

## 9.0 Operational Offroad

| Equipment Type | Number | Hours/Day | Days/Year | Horse Power | Load Factor | Fuel Type |
|---|---|---|---|---|---|---|
| Crushing/Proc. Equipment | 0 | 14.00 | 312 | 510 | 0.78 | Diesel |
| Crushing/Proc. Equipment | 0 | 14.00 | 312 | 1200 | 0.78 | Diesel |
| Crushing/Proc. Equipment | 0 | 14.00 | 312 | 250 | 0.78 | Diesel |
| Other Construction Equipment | 0 | 14.00 | 312 | 29 | 0.42 | Diesel |
| Other Material Handling Equipment | 1 | 14.00 | 312 | 49 | 0.40 | Diesel |
| Other Material Handling Equipment | 1 | 14.00 | 312 | 84 | 0.40 | Diesel |
| Rubber Tired Loaders | 0 | 14.00 | 312 | 125 | 0.36 | Diesel |

**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 | | | | | |
| Crushing/Proc. Equipment | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Other Construction Equipment | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Other Material Handling Equipment | 0.1876 | 1.1271 | 1.1665 | 1.3000e-003 | | 0.0870 | 0.0870 | | 0.0800 | 0.0800 | 0.0000 | 118.7889 | 118.7889 | 0.0370 | 0.0000 | 119.7135 |
| Rubber Tired Loaders | 0.0000 | 0.0000 | 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** | **0.1876** | **1.1271** | **1.1665** | **1.3000e-003** | | **0.0870** | **0.0870** | | **0.0800** | **0.0800** | **0.0000** | **118.7889** | **118.7889** | **0.0370** | **0.0000** | **119.7135** |

## 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

# Hilltop NCER

**San Diego County APCD Air District, Summer**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| General Light Industry | 12.00 | 1000sqft | 0.28 | 12,000.00 | 0 |
| Other Asphalt Surfaces | 173.20 | 1000sqft | 3.98 | 173,200.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.6 | **Precipitation Freq (Days)** | 40 |
| **Climate Zone** | 10 | | | **Operational Year** | 2018 |
| **Utility Company** | San Diego Gas & Electric | | | | |
| **CO2 Intensity (lb/MWhr)** | 720.49 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics - GHG intensity based on SDG&E energy mix.

Land Use - See Section 1.0 of the DEIR for more information.

Construction Phase - See Section 1.0 of the DEIR for more information.

Off-road Equipment - See Section 2.2.3.2 for Construction Details.

Off-road Equipment - See Section 2.2.3.2 for Construction Details.

Off-road Equipment - See Section 2.2.3.2 for Construction Details.

Off-road Equipment - See Section 2.2.3.2 for Construction Details.

Off-road Equipment - See Section 2.2.3.2 for Construction Details.

Off-road Equipment - See Section 2.2.3.2 for Construction Details.

Trips and VMT - See Section 2.2.3.2 for Construction Details.

On-road Fugitive Dust - CalEEMod defaults.

Demolition - No demolition of structures anticipated for this project.

Grading - See Section 2.2.3.2 for Construction Details.

Architectural Coating - Architectural coatings in accordance with SDAPCD Rule 67.0.1.

Vehicle Trips - Based on client provided trip rates and distance.

Vehicle Emission Factors - CalEEMod defaults.

Vehicle Emission Factors - CalEEMod defaults.

Vehicle Emission Factors - CalEEMod defaults.

Road Dust - CalEEMod defaults.

Woodstoves - No woodstoves or fireplaces.

Consumer Products - CalEEMod defaults.

Area Coating - Architectural coatings in accordance with SDAPCD Rule 67.0.1.

Landscape Equipment - CalEEMod defaults.

Energy Use - See Section 1.0 of the DEIR for more information.

Water And Wastewater - See Section 1.0 of the DEIR for more information.

Solid Waste - CalEEMod defaults.

Land Use Change - Calculated outside of CalEEMod.

Sequestration - Calculated outside of CalEEMod.

Construction Off-road Equipment Mitigation - Fugitive dust mitigation in accordance with SDAPCD Rule 55.

Mobile Land Use Mitigation - No traffic mitigation.

Mobile Commute Mitigation - No commute mitigation.

Area Mitigation - Architectural coatings in accordance with SDAPCD Rule 67.0.1.

Energy Mitigation - No energy mitigation.

Water Mitigation - No water use mitigation.

Waste Mitigation - Consistent with statewide goal in AB 939.

Operational Off-Road Equipment - One trommel screen (Vermeer TR510 or equivalent) for C&G tree waste recycling and C&D wood recycling, and one shaker

screen (Spyder 512T or equivalent) for CDI recycling
Fleet Mix - Based on fleet mix for customers and employees.

Stationary Sources - Emergency Generators and Fire Pumps - Does not apply to the project.

Stationary Sources - Process Boilers - Does not apply to this project.

Stationary Sources - User Defined - Does not apply to this project.

Stationary Sources - Emergency Generators and Fire Pumps EF - Does not apply to the project.

Stationary Sources - Process Boilers EF - Does not apply to this project.

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblArchitecturalCoating | ConstArea_Parking | 10,392.00 | 173,200.00 |
| tblArchitecturalCoating | EF_Nonresidential_Exterior | 250.00 | 100.00 |
| tblArchitecturalCoating | EF_Nonresidential_Interior | 250.00 | 100.00 |
| tblArchitecturalCoating | EF_Parking | 250.00 | 100.00 |
| tblAreaCoating | Area_EF_Nonresidential_Exterior | 250 | 100 |
| tblAreaCoating | Area_EF_Nonresidential_Interior | 250 | 100 |
| tblAreaCoating | Area_EF_Parking | 250 | 100 |
| tblAreaMitigation | UseLowVOCPaintParkingCheck | False | True |
| tblConstDustMitigation | WaterUnpavedRoadVehicleSpeed | 40 | 0 |
| tblEnergyUse | LightingElect | 3.01 | 0.00 |
| tblEnergyUse | NT24E | 5.02 | 0.00 |
| tblEnergyUse | NT24NG | 17.13 | 0.00 |
| tblEnergyUse | T24E | 2.31 | 5.20 |
| tblEnergyUse | T24NG | 15.43 | 0.00 |
| tblFleetMix | HHD | 0.02 | 1.00 |
| tblFleetMix | HHD | 0.02 | 0.00 |
| tblFleetMix | LDA | 0.57 | 0.00 |
| tblFleetMix | LDA | 0.57 | 0.70 |
| tblFleetMix | LDT1 | 0.05 | 0.00 |

| | | | |
|---|---|---|---|
| tblFleetMix | LDT1 | 0.05 | 0.06 |
| tblFleetMix | LDT2 | 0.19 | 0.00 |
| tblFleetMix | LDT2 | 0.19 | 0.23 |
| tblFleetMix | LHD1 | 0.02 | 0.00 |
| tblFleetMix | LHD1 | 0.02 | 0.00 |
| tblFleetMix | LHD2 | 5.6460e-003 | 0.00 |
| tblFleetMix | LHD2 | 5.6460e-003 | 0.00 |
| tblFleetMix | MCY | 6.3850e-003 | 0.00 |
| tblFleetMix | MCY | 6.3850e-003 | 7.8300e-003 |
| tblFleetMix | MDV | 0.12 | 0.00 |
| tblFleetMix | MDV | 0.12 | 0.00 |
| tblFleetMix | MH | 1.4520e-003 | 0.00 |
| tblFleetMix | MH | 1.4520e-003 | 0.00 |
| tblFleetMix | MHD | 0.01 | 0.00 |
| tblFleetMix | MHD | 0.01 | 0.00 |
| tblFleetMix | OBUS | 1.8710e-003 | 0.00 |
| tblFleetMix | OBUS | 1.8710e-003 | 0.00 |
| tblFleetMix | SBUS | 7.3900e-004 | 0.00 |
| tblFleetMix | SBUS | 7.3900e-004 | 0.00 |
| tblFleetMix | UBUS | 2.1730e-003 | 0.00 |
| tblFleetMix | UBUS | 2.1730e-003 | 0.00 |
| tblGrading | MaterialImported | 0.00 | 72,000.00 |
| tblOperationalOffRoadEquipment | OperDaysPerYear | 260.00 | 312.00 |
| tblOperationalOffRoadEquipment | OperDaysPerYear | 260.00 | 312.00 |
| tblOperationalOffRoadEquipment | OperDaysPerYear | 260.00 | 312.00 |
| tblOperationalOffRoadEquipment | OperDaysPerYear | 260.00 | 312.00 |
| tblOperationalOffRoadEquipment | OperDaysPerYear | 260.00 | 312.00 |

| | | | |
|---|---|---|---|
| tblOperationalOffRoadEquipment | OperDaysPerYear | 260.00 | 312.00 |
| tblOperationalOffRoadEquipment | OperDaysPerYear | 260.00 | 312.00 |
| tblOperationalOffRoadEquipment | OperHorsePower | 85.00 | 510.00 |
| tblOperationalOffRoadEquipment | OperHorsePower | 85.00 | 1,200.00 |
| tblOperationalOffRoadEquipment | OperHorsePower | 85.00 | 250.00 |
| tblOperationalOffRoadEquipment | OperHorsePower | 172.00 | 29.00 |
| tblOperationalOffRoadEquipment | OperHorsePower | 168.00 | 49.00 |
| tblOperationalOffRoadEquipment | OperHorsePower | 168.00 | 84.00 |
| tblOperationalOffRoadEquipment | OperHorsePower | 203.00 | 125.00 |
| tblOperationalOffRoadEquipment | OperHoursPerDay | 8.00 | 14.00 |
| tblOperationalOffRoadEquipment | OperHoursPerDay | 8.00 | 14.00 |
| tblOperationalOffRoadEquipment | OperHoursPerDay | 8.00 | 14.00 |
| tblOperationalOffRoadEquipment | OperHoursPerDay | 8.00 | 14.00 |
| tblOperationalOffRoadEquipment | OperHoursPerDay | 8.00 | 14.00 |
| tblOperationalOffRoadEquipment | OperHoursPerDay | 8.00 | 14.00 |
| tblOperationalOffRoadEquipment | OperHoursPerDay | 8.00 | 14.00 |
| tblOperationalOffRoadEquipment | OperOffRoadEquipmentNumber | 0.00 | 1.00 |
| tblOperationalOffRoadEquipment | OperOffRoadEquipmentNumber | 0.00 | 1.00 |
| tblTripsAndVMT | WorkerTripNumber | 15.00 | 16.00 |
| tblTripsAndVMT | WorkerTripNumber | 15.00 | 16.00 |
| tblVehicleTrips | CC_TL | 7.30 | 13.83 |
| tblVehicleTrips | CC_TL | 7.30 | 0.00 |
| tblVehicleTrips | CC_TTP | 28.00 | 100.00 |
| tblVehicleTrips | CNW_TL | 7.30 | 0.00 |
| tblVehicleTrips | CNW_TL | 7.30 | 0.00 |
| tblVehicleTrips | CNW_TTP | 13.00 | 0.00 |
| tblVehicleTrips | CW_TL | 9.50 | 0.00 |

| | | | |
|---|---|---|---|
| tblVehicleTrips | CW_TL | 9.50 | 0.00 |
| tblVehicleTrips | CW_TTP | 59.00 | 0.00 |
| tblVehicleTrips | DV_TP | 5.00 | 0.00 |
| tblVehicleTrips | HW_TL | 0.00 | 10.80 |
| tblVehicleTrips | HW_TTP | 0.00 | 100.00 |
| tblVehicleTrips | PB_TP | 3.00 | 0.00 |
| tblVehicleTrips | PR_TP | 92.00 | 100.00 |
| tblVehicleTrips | PR_TP | 0.00 | 100.00 |
| tblVehicleTrips | ST_TR | 1.32 | 1.33 |
| tblVehicleTrips | ST_TR | 0.00 | 0.24 |
| tblVehicleTrips | SU_TR | 0.68 | 0.00 |
| tblVehicleTrips | WD_TR | 6.97 | 1.33 |
| tblVehicleTrips | WD_TR | 0.00 | 0.24 |
| tblWater | AerobicPercent | 87.46 | 0.00 |
| tblWater | AnaDigestCombDigestGasPercent | 100.00 | 0.00 |
| tblWater | AnaerobicandFacultativeLagoonsPercent | 2.21 | 0.00 |
| tblWater | ElectricityIntensityFactorForWastewaterTreatment | 1,911.00 | 0.00 |
| tblWater | IndoorWaterUseRate | 2,775,000.00 | 1,200,000.00 |
| tblWater | SepticTankPercent | 10.33 | 100.00 |

## 2.0 Emissions Summary

## 2.1 Overall Construction (Maximum Daily Emission)

### 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 | lb/day | | | | | | | | | | lb/day | | | | | |
| 2017 | 8.0600 | 100.4199 | 46.1139 | 0.1271 | 12.8823 | 4.1064 | 16.9886 | 4.9504 | 3.8073 | 8.7577 | 0.0000 | 13,285.1237 | 13,285.1237 | 2.5500 | 0.0000 | 13,348.8744 |
| 2018 | 55.7560 | 95.1815 | 63.6215 | 0.1180 | 8.1224 | 4.7016 | 9.7600 | 3.7823 | 4.3970 | 5.2920 | 0.0000 | 11,741.0913 | 11,741.0913 | 2.7677 | 0.0000 | 11,810.2831 |
| **Maximum** | **55.7560** | **100.4199** | **63.6215** | **0.1271** | **12.8823** | **4.7016** | **16.9886** | **4.9504** | **4.3970** | **8.7577** | **0.0000** | **13,285.1237** | **13,285.1237** | **2.7677** | **0.0000** | **13,348.8744** |

### 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 | lb/day | | | | | | | | | | lb/day | | | | | |
| 2017 | 8.0600 | 100.4199 | 46.1139 | 0.1271 | 9.2190 | 4.1064 | 13.3253 | 3.0892 | 3.8073 | 6.8966 | 0.0000 | 13,285.1237 | 13,285.1237 | 2.5500 | 0.0000 | 13,348.8744 |
| 2018 | 55.7560 | 95.1815 | 63.6215 | 0.1180 | 4.4765 | 4.7016 | 6.1140 | 1.9238 | 4.3970 | 4.7038 | 0.0000 | 11,741.0913 | 11,741.0913 | 2.7677 | 0.0000 | 11,810.2831 |
| **Maximum** | **55.7560** | **100.4199** | **63.6215** | **0.1271** | **9.2190** | **4.7016** | **13.3253** | **3.0892** | **4.3970** | **6.8966** | **0.0000** | **13,285.1237** | **13,285.1237** | **2.7677** | **0.0000** | **13,348.8744** |

| | 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** | **34.80** | **0.00** | **27.33** | **42.59** | **0.00** | **17.43** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** |

## 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 | lb/day | | | | | | | | | | lb/day | | | | | |
| Area | 0.3637 | 1.8000e-004 | 0.0192 | 0.0000 | | 7.0000e-005 | 7.0000e-005 | | 7.0000e-005 | 7.0000e-005 | | 0.0405 | 0.0405 | 1.1000e-004 | | 0.0433 |
| Energy | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Mobile | 0.2070 | 4.1263 | 2.1274 | 0.0130 | 0.5375 | 0.0164 | 0.5539 | 0.1442 | 0.0156 | 0.1597 | | 1,375.6212 | 1,375.6212 | 0.1105 | | 1,378.3825 |
| Offroad | 1.2023 | 7.2247 | 7.4775 | 8.3300e-003 | | 0.5575 | 0.5575 | | 0.5129 | 0.5129 | | 839.3743 | 839.3743 | 0.2613 | | 845.9070 |
| **Total** | **1.7729** | **11.3512** | **9.6241** | **0.0213** | **0.5375** | **0.5739** | **1.1114** | **0.1442** | **0.5285** | **0.6727** | | **2,215.0359** | **2,215.0359** | **0.3719** | **0.0000** | **2,224.3327** |

## 2.2 Overall Operational

**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 | lb/day | | | | | | | | | | lb/day | | | | | |
| Area | 0.3637 | 1.8000e-004 | 0.0192 | 0.0000 | | 7.0000e-005 | 7.0000e-005 | | 7.0000e-005 | 7.0000e-005 | | 0.0405 | 0.0405 | 1.1000e-004 | | 0.0433 |
| Energy | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Mobile | 0.2070 | 4.1263 | 2.1274 | 0.0130 | 0.5375 | 0.0164 | 0.5539 | 0.1442 | 0.0156 | 0.1597 | | 1,375.6212 | 1,375.6212 | 0.1105 | | 1,378.3825 |
| Offroad | 1.2023 | 7.2247 | 7.4775 | 8.3300e-003 | | 0.5575 | 0.5575 | | 0.5129 | 0.5129 | | 839.3743 | 839.3743 | 0.2613 | | 845.9070 |
| **Total** | **1.7729** | **11.3512** | **9.6241** | **0.0213** | **0.5375** | **0.5739** | **1.1114** | **0.1442** | **0.5285** | **0.6727** | | **2,215.0359** | **2,215.0359** | **0.3719** | **0.0000** | **2,224.3327** |

| | 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** |

## 3.0 Construction Detail

**Construction Phase**

Hilltop NCER - San Diego County APCD Air District, Summer

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|---|---|---|---|---|---|---|---|
| 1 | Demolition | Demolition | 12/1/2017 | 12/28/2017 | 5 | 20 | |
| 2 | Grading | Grading | 12/1/2017 | 6/4/2018 | 5 | 132 | |
| 3 | Building Construction | Building Construction | 6/5/2018 | 10/22/2018 | 5 | 100 | |
| 4 | Paving | Paving | 10/15/2018 | 11/9/2018 | 5 | 20 | |
| 5 | Architectural Coating | Architectural Coating | 10/15/2018 | 11/9/2018 | 5 | 20 | |

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 66**

**Acres of Paving: 3.98**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 18,000; Non-Residential Outdoor: 6,000; Striped Parking Area: 173,200 (Architectural Coating – sqft)**

**OffRoad Equipment**

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|---|---|---|---|---|---|
| Demolition | Concrete/Industrial Saws | 1 | 8.00 | 81 | 0.73 |
| Demolition | Excavators | 3 | 8.00 | 158 | 0.38 |
| Demolition | Rubber Tired Dozers | 2 | 8.00 | 247 | 0.40 |
| Grading | Excavators | 1 | 8.00 | 158 | 0.38 |
| Grading | Graders | 1 | 8.00 | 187 | 0.41 |
| Grading | Rubber Tired Dozers | 1 | 8.00 | 247 | 0.40 |
| Grading | Tractors/Loaders/Backhoes | 3 | 8.00 | 97 | 0.37 |
| Building Construction | Cranes | 1 | 7.00 | 231 | 0.29 |
| Building Construction | Crushing/Proc. Equipment | 1 | 8.00 | 85 | 0.78 |
| Building Construction | Forklifts | 3 | 8.00 | 89 | 0.20 |
| Building Construction | Generator Sets | 1 | 8.00 | 84 | 0.74 |
| Building Construction | Graders | 1 | 8.00 | 187 | 0.41 |
| Building Construction | Rubber Tired Dozers | 1 | 8.00 | 247 | 0.40 |
| Building Construction | Scrapers | 2 | 8.00 | 367 | 0.48 |
| Building Construction | Tractors/Loaders/Backhoes | 2 | 8.00 | 97 | 0.37 |
| Building Construction | Welders | 1 | 8.00 | 46 | 0.45 |
| Paving | Cement and Mortar Mixers | 2 | 6.00 | 9 | 0.56 |
| Paving | Pavers | 1 | 8.00 | 130 | 0.42 |
| Paving | Paving Equipment | 2 | 6.00 | 132 | 0.36 |
| Paving | Rollers | 2 | 6.00 | 80 | 0.38 |
| Paving | Tractors/Loaders/Backhoes | 1 | 8.00 | 97 | 0.37 |
| Architectural Coating | Air Compressors | 1 | 6.00 | 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 | 16.00 | 0.00 | 3.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Grading | 6 | 16.00 | 0.00 | 9,000.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Building Construction | 13 | 78.00 | 30.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Paving | 8 | 20.00 | 0.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Architectural Coating | 1 | 16.00 | 0.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |

## 3.1 Mitigation Measures Construction

Water Exposed Area

## 3.2 Demolition - 2017

**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 | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 0.0316 | 0.0000 | 0.0316 | 4.7800e-003 | 0.0000 | 4.7800e-003 | | | 0.0000 | | | 0.0000 |
| Off-Road | 4.1031 | 42.7475 | 23.0122 | 0.0388 | | 2.1935 | 2.1935 | | 2.0425 | 2.0425 | | 3,924.2833 | 3,924.2833 | 1.0730 | | 3,951.1070 |
| **Total** | **4.1031** | **42.7475** | **23.0122** | **0.0388** | **0.0316** | **2.1935** | **2.2251** | **4.7800e-003** | **2.0425** | **2.0473** | | **3,924.2833** | **3,924.2833** | **1.0730** | | **3,951.1070** |

## 3.2 Demolition - 2017

### 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 | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 1.6200e-003 | 0.0520 | 0.0105 | 1.2000e-004 | 2.6200e-003 | 2.9000e-004 | 2.9100e-003 | 7.2000e-004 | 2.8000e-004 | 1.0000e-003 | | 13.2315 | 13.2315 | 1.1800e-003 | | 13.2608 |
| 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 |
| Worker | 0.0752 | 0.0555 | 0.6176 | 1.4800e-003 | 0.1314 | 9.7000e-004 | 0.1324 | 0.0349 | 8.9000e-004 | 0.0358 | | 147.6980 | 147.6980 | 5.4800e-003 | | 147.8350 |
| **Total** | **0.0768** | **0.1074** | **0.6281** | **1.6000e-003** | **0.1341** | **1.2600e-003** | **0.1353** | **0.0356** | **1.1700e-003** | **0.0368** | | **160.9294** | **160.9294** | **6.6600e-003** | | **161.0958** |

### 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 | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 0.0142 | 0.0000 | 0.0142 | 2.1500e-003 | 0.0000 | 2.1500e-003 | | | 0.0000 | | | 0.0000 |
| Off-Road | 4.1031 | 42.7475 | 23.0122 | 0.0388 | | 2.1935 | 2.1935 | | 2.0425 | 2.0425 | 0.0000 | 3,924.2833 | 3,924.2833 | 1.0730 | | 3,951.1070 |
| **Total** | **4.1031** | **42.7475** | **23.0122** | **0.0388** | **0.0142** | **2.1935** | **2.2077** | **2.1500e-003** | **2.0425** | **2.0447** | **0.0000** | **3,924.2833** | **3,924.2833** | **1.0730** | | **3,951.1070** |

## 3.2 Demolition - 2017

**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 | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 1.6200e-003 | 0.0520 | 0.0105 | 1.2000e-004 | 2.6200e-003 | 2.9000e-004 | 2.9100e-003 | 7.2000e-004 | 2.8000e-004 | 1.0000e-003 | | 13.2315 | 13.2315 | 1.1800e-003 | | 13.2608 |
| 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 |
| Worker | 0.0752 | 0.0555 | 0.6176 | 1.4800e-003 | 0.1314 | 9.7000e-004 | 0.1324 | 0.0349 | 8.9000e-004 | 0.0358 | | 147.6980 | 147.6980 | 5.4800e-003 | | 147.8350 |
| **Total** | **0.0768** | **0.1074** | **0.6281** | **1.6000e-003** | **0.1341** | **1.2600e-003** | **0.1353** | **0.0356** | **1.1700e-003** | **0.0368** | | **160.9294** | **160.9294** | **6.6600e-003** | | **161.0958** |

## 3.3 Grading - 2017

**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 | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 6.6290 | 0.0000 | 6.6290 | 3.3791 | 0.0000 | 3.3791 | | | 0.0000 | | | 0.0000 |
| Off-Road | 3.0705 | 33.8868 | 17.1042 | 0.0297 | | 1.7774 | 1.7774 | | 1.6352 | 1.6352 | | 3,037.9107 | 3,037.9107 | 0.9308 | | 3,061.1809 |
| **Total** | **3.0705** | **33.8868** | **17.1042** | **0.0297** | **6.6290** | **1.7774** | **8.4064** | **3.3791** | **1.6352** | **5.0143** | | **3,037.9107** | **3,037.9107** | **0.9308** | | **3,061.1809** |

## 3.3 Grading - 2017

### 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 | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.7344 | 23.6226 | 4.7518 | 0.0555 | 5.9562 | 0.1333 | 6.0895 | 1.4961 | 0.1275 | 1.6236 | | 6,014.3023 | 6,014.3023 | 0.5341 | | 6,027.6557 |
| 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 |
| Worker | 0.0752 | 0.0555 | 0.6176 | 1.4800e-003 | 0.1314 | 9.7000e-004 | 0.1324 | 0.0349 | 8.9000e-004 | 0.0358 | | 147.6980 | 147.6980 | 5.4800e-003 | | 147.8350 |
| **Total** | **0.8096** | **23.6781** | **5.3694** | **0.0570** | **6.0876** | **0.1342** | **6.2219** | **1.5309** | **0.1284** | **1.6593** | | **6,162.0002** | **6,162.0002** | **0.5396** | | **6,175.4907** |

### 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 | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 2.9830 | 0.0000 | 2.9830 | 1.5206 | 0.0000 | 1.5206 | | | 0.0000 | | | 0.0000 |
| Off-Road | 3.0705 | 33.8868 | 17.1042 | 0.0297 | | 1.7774 | 1.7774 | | 1.6352 | 1.6352 | 0.0000 | 3,037.9107 | 3,037.9107 | 0.9308 | | 3,061.1809 |
| **Total** | **3.0705** | **33.8868** | **17.1042** | **0.0297** | **2.9830** | **1.7774** | **4.7605** | **1.5206** | **1.6352** | **3.1558** | **0.0000** | **3,037.9107** | **3,037.9107** | **0.9308** | | **3,061.1809** |

## 3.3 Grading - 2017

**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 | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.7344 | 23.6226 | 4.7518 | 0.0555 | 5.9562 | 0.1333 | 6.0895 | 1.4961 | 0.1275 | 1.6236 | | 6,014.3023 | 6,014.3023 | 0.5341 | | 6,027.6557 |
| 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 |
| Worker | 0.0752 | 0.0555 | 0.6176 | 1.4800e-003 | 0.1314 | 9.7000e-004 | 0.1324 | 0.0349 | 8.9000e-004 | 0.0358 | | 147.6980 | 147.6980 | 5.4800e-003 | | 147.8350 |
| **Total** | **0.8096** | **23.6781** | **5.3694** | **0.0570** | **6.0876** | **0.1342** | **6.2219** | **1.5309** | **0.1284** | **1.6593** | | **6,162.0002** | **6,162.0002** | **0.5396** | | **6,175.4907** |

## 3.3 Grading - 2018

**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 | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 6.6290 | 0.0000 | 6.6290 | 3.3791 | 0.0000 | 3.3791 | | | 0.0000 | | | 0.0000 |
| Off-Road | 2.7733 | 30.6725 | 16.5770 | 0.0297 | | 1.5513 | 1.5513 | | 1.4272 | 1.4272 | | 2,988.0216 | 2,988.0216 | 0.9302 | | 3,011.2769 |
| **Total** | **2.7733** | **30.6725** | **16.5770** | **0.0297** | **6.6290** | **1.5513** | **8.1803** | **3.3791** | **1.4272** | **4.8063** | | **2,988.0216** | **2,988.0216** | **0.9302** | | **3,011.2769** |

## 3.3 Grading - 2018

### 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 | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.6241 | 21.6868 | 4.4728 | 0.0548 | 1.3620 | 0.0853 | 1.4473 | 0.3684 | 0.0816 | 0.4500 | | 5,964.2355 | 5,964.2355 | 0.5258 | | 5,977.3793 |
| 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 |
| Worker | 0.0681 | 0.0491 | 0.5477 | 1.4400e-003 | 0.1314 | 9.5000e-004 | 0.1324 | 0.0349 | 8.7000e-004 | 0.0357 | | 143.5559 | 143.5559 | 4.9100e-003 | | 143.6787 |
| **Total** | **0.6922** | **21.7359** | **5.0205** | **0.0563** | **1.4934** | **0.0863** | **1.5797** | **0.4032** | **0.0825** | **0.4857** | | **6,107.7915** | **6,107.7915** | **0.5307** | | **6,121.0580** |

### 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 | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 2.9830 | 0.0000 | 2.9830 | 1.5206 | 0.0000 | 1.5206 | | | 0.0000 | | | 0.0000 |
| Off-Road | 2.7733 | 30.6725 | 16.5770 | 0.0297 | | 1.5513 | 1.5513 | | 1.4272 | 1.4272 | 0.0000 | 2,988.0216 | 2,988.0216 | 0.9302 | | 3,011.2769 |
| **Total** | **2.7733** | **30.6725** | **16.5770** | **0.0297** | **2.9830** | **1.5513** | **4.5344** | **1.5206** | **1.4272** | **2.9478** | **0.0000** | **2,988.0216** | **2,988.0216** | **0.9302** | | **3,011.2769** |

## 3.3 Grading - 2018

**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 | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.6241 | 21.6868 | 4.4728 | 0.0548 | 1.3620 | 0.0853 | 1.4473 | 0.3684 | 0.0816 | 0.4500 | | 5,964.2355 | 5,964.2355 | 0.5258 | | 5,977.3793 |
| 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 |
| Worker | 0.0681 | 0.0491 | 0.5477 | 1.4400e-003 | 0.1314 | 9.5000e-004 | 0.1324 | 0.0349 | 8.7000e-004 | 0.0357 | | 143.5559 | 143.5559 | 4.9100e-003 | | 143.6787 |
| **Total** | **0.6922** | **21.7359** | **5.0205** | **0.0563** | **1.4934** | **0.0863** | **1.5797** | **0.4032** | **0.0825** | **0.4857** | | **6,107.7915** | **6,107.7915** | **0.5307** | | **6,121.0580** |

## 3.4 Building Construction - 2018

**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 | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 7.1710 | 74.3552 | 44.3848 | 0.0775 | | 3.6764 | 3.6764 | | 3.4389 | 3.4389 | | 7,669.6867 | 7,669.6867 | 2.0678 | | 7,721.3816 |
| **Total** | **7.1710** | **74.3552** | **44.3848** | **0.0775** | | **3.6764** | **3.6764** | | **3.4389** | **3.4389** | | **7,669.6867** | **7,669.6867** | **2.0678** | | **7,721.3816** |

## 3.4 Building Construction - 2018

### 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 | lb/day | | | | | | | | | | lb/day | | | | | |
| 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 |
| Vendor | 0.1547 | 3.9526 | 1.0467 | 8.3600e-003 | 0.2031 | 0.0309 | 0.2340 | 0.0585 | 0.0296 | 0.0880 | | 894.5696 | 894.5696 | 0.0709 | | 896.3421 |
| Worker | 0.3320 | 0.2391 | 2.6702 | 7.0300e-003 | 0.6408 | 4.6100e-003 | 0.6454 | 0.1700 | 4.2500e-003 | 0.1742 | | 699.8352 | 699.8352 | 0.0240 | | 700.4338 |
| **Total** | **0.4867** | **4.1917** | **3.7168** | **0.0154** | **0.8438** | **0.0355** | **0.8794** | **0.2284** | **0.0338** | **0.2623** | | **1,594.4048** | **1,594.4048** | **0.0949** | | **1,596.7760** |

### 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 | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 7.1710 | 74.3552 | 44.3848 | 0.0775 | | 3.6764 | 3.6764 | | 3.4389 | 3.4389 | 0.0000 | 7,669.6866 | 7,669.6866 | 2.0678 | | 7,721.3816 |
| **Total** | **7.1710** | **74.3552** | **44.3848** | **0.0775** | | **3.6764** | **3.6764** | | **3.4389** | **3.4389** | **0.0000** | **7,669.6866** | **7,669.6866** | **2.0678** | | **7,721.3816** |

## 3.4 Building Construction - 2018

**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 | lb/day | | | | | | | | | | lb/day | | | | | |
| 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 |
| Vendor | 0.1547 | 3.9526 | 1.0467 | 8.3600e-003 | 0.2031 | 0.0309 | 0.2340 | 0.0585 | 0.0296 | 0.0880 | | 894.5696 | 894.5696 | 0.0709 | | 896.3421 |
| Worker | 0.3320 | 0.2391 | 2.6702 | 7.0300e-003 | 0.6408 | 4.6100e-003 | 0.6454 | 0.1700 | 4.2500e-003 | 0.1742 | | 699.8352 | 699.8352 | 0.0240 | | 700.4338 |
| **Total** | **0.4867** | **4.1917** | **3.7168** | **0.0154** | **0.8438** | **0.0355** | **0.8794** | **0.2284** | **0.0338** | **0.2623** | | **1,594.4048** | **1,594.4048** | **0.0949** | | **1,596.7760** |

## 3.5 Paving - 2018

**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 | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.4239 | 14.5184 | 12.4333 | 0.0189 | | 0.8370 | 0.8370 | | 0.7718 | 0.7718 | | 1,872.5505 | 1,872.5505 | 0.5672 | | 1,886.7312 |
| Paving | 0.5214 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| **Total** | **1.9453** | **14.5184** | **12.4333** | **0.0189** | | **0.8370** | **0.8370** | | **0.7718** | **0.7718** | | **1,872.5505** | **1,872.5505** | **0.5672** | | **1,886.7312** |

## 3.5 Paving - 2018

### 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 | lb/day | | | | | | | | | | lb/day | | | | | |
| 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 |
| 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 |
| Worker | 0.0851 | 0.0613 | 0.6847 | 1.8000e-003 | 0.1643 | 1.1800e-003 | 0.1655 | 0.0436 | 1.0900e-003 | 0.0447 | | 179.4449 | 179.4449 | 6.1400e-003 | | 179.5984 |
| **Total** | **0.0851** | **0.0613** | **0.6847** | **1.8000e-003** | **0.1643** | **1.1800e-003** | **0.1655** | **0.0436** | **1.0900e-003** | **0.0447** | | **179.4449** | **179.4449** | **6.1400e-003** | | **179.5984** |

### 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 | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.4239 | 14.5184 | 12.4333 | 0.0189 | | 0.8370 | 0.8370 | | 0.7718 | 0.7718 | 0.0000 | 1,872.5505 | 1,872.5505 | 0.5672 | | 1,886.7312 |
| Paving | 0.5214 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| **Total** | **1.9453** | **14.5184** | **12.4333** | **0.0189** | | **0.8370** | **0.8370** | | **0.7718** | **0.7718** | **0.0000** | **1,872.5505** | **1,872.5505** | **0.5672** | | **1,886.7312** |

## 3.5 Paving - 2018

**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 | lb/day | | | | | | | | | | lb/day | | | | | |
| 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 |
| 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 |
| Worker | 0.0851 | 0.0613 | 0.6847 | 1.8000e-003 | 0.1643 | 1.1800e-003 | 0.1655 | 0.0436 | 1.0900e-003 | 0.0447 | | 179.4449 | 179.4449 | 6.1400e-003 | | 179.5984 |
| **Total** | **0.0851** | **0.0613** | **0.6847** | **1.8000e-003** | **0.1643** | **1.1800e-003** | **0.1655** | **0.0436** | **1.0900e-003** | **0.0447** | | **179.4449** | **179.4449** | **6.1400e-003** | | **179.5984** |

## 3.6 Architectural Coating - 2018

**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 | lb/day | | | | | | | | | | lb/day | | | | | |
| Archit. Coating | 45.7011 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.2986 | 2.0058 | 1.8542 | 2.9700e-003 | | 0.1506 | 0.1506 | | 0.1506 | 0.1506 | | 281.4485 | 281.4485 | 0.0267 | | 282.1171 |
| **Total** | **45.9997** | **2.0058** | **1.8542** | **2.9700e-003** | | **0.1506** | **0.1506** | | **0.1506** | **0.1506** | | **281.4485** | **281.4485** | **0.0267** | | **282.1171** |

## 3.6 Architectural Coating - 2018

### 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 | lb/day | | | | | | | | | | lb/day | | | | | |
| 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 |
| 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 |
| Worker | 0.0681 | 0.0491 | 0.5477 | 1.4400e-003 | 0.1314 | 9.5000e-004 | 0.1324 | 0.0349 | 8.7000e-004 | 0.0357 | | 143.5559 | 143.5559 | 4.9100e-003 | | 143.6787 |
| **Total** | **0.0681** | **0.0491** | **0.5477** | **1.4400e-003** | **0.1314** | **9.5000e-004** | **0.1324** | **0.0349** | **8.7000e-004** | **0.0357** | | **143.5559** | **143.5559** | **4.9100e-003** | | **143.6787** |

### 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 | lb/day | | | | | | | | | | lb/day | | | | | |
| Archit. Coating | 45.7011 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.2986 | 2.0058 | 1.8542 | 2.9700e-003 | | 0.1506 | 0.1506 | | 0.1506 | 0.1506 | 0.0000 | 281.4485 | 281.4485 | 0.0267 | | 282.1171 |
| **Total** | **45.9997** | **2.0058** | **1.8542** | **2.9700e-003** | | **0.1506** | **0.1506** | | **0.1506** | **0.1506** | **0.0000** | **281.4485** | **281.4485** | **0.0267** | | **282.1171** |

### 3.6 Architectural Coating - 2018

**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 | lb/day | | | | | | | | | | lb/day | | | | | |
| 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 |
| 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 |
| Worker | 0.0681 | 0.0491 | 0.5477 | 1.4400e-003 | 0.1314 | 9.5000e-004 | 0.1324 | 0.0349 | 8.7000e-004 | 0.0357 | | 143.5559 | 143.5559 | 4.9100e-003 | | 143.6787 |
| **Total** | **0.0681** | **0.0491** | **0.5477** | **1.4400e-003** | **0.1314** | **9.5000e-004** | **0.1324** | **0.0349** | **8.7000e-004** | **0.0357** | | **143.5559** | **143.5559** | **4.9100e-003** | | **143.6787** |

## 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 | lb/day | | | | | | | | | | lb/day | | | | | |
| Mitigated | 0.2070 | 4.1263 | 2.1274 | 0.0130 | 0.5375 | 0.0164 | 0.5539 | 0.1442 | 0.0156 | 0.1597 | | 1,375.6212 | 1,375.6212 | 0.1105 | | 1,378.3825 |
| Unmitigated | 0.2070 | 4.1263 | 2.1274 | 0.0130 | 0.5375 | 0.0164 | 0.5539 | 0.1442 | 0.0156 | 0.1597 | | 1,375.6212 | 1,375.6212 | 0.1105 | | 1,378.3825 |

## 4.2 Trip Summary Information

| | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|---|---|---|---|---|---|
| Land Use | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| General Light Industry | 16.00 | 16.00 | 0.00 | 69,053 | 69,053 |
| Other Asphalt Surfaces | 42.00 | 42.00 | 0.00 | 141,527 | 141,527 |
| Total | 58.00 | 58.00 | 0.00 | 210,580 | 210,580 |

## 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 |
| General Light Industry | 0.00 | 13.83 | 0.00 | 0.00 | 100.00 | 0.00 | 100 | 0 | 0 |
| Other Asphalt Surfaces | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100 | 0 | 0 |

## 4.4 Fleet Mix

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| General Light Industry | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 1.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 |
| Other Asphalt Surfaces | 0.704103 | 0.055831 | 0.232237 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.007830 | 0.000000 | 0.000000 |

## 5.0 Energy Detail

Historical Energy Use: N

### 5.1 Mitigation Measures 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 | lb/day | | | | | | | | | | lb/day | | | | | |
| 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 |
| 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 |

## 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 | lb/day | | | | | | | | | | lb/day | | | | | |
| General Light Industry | 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 |
| Other Asphalt Surfaces | 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 |
| **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** |

**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 | lb/day | | | | | | | | | | lb/day | | | | | |
| General Light Industry | 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 |
| Other Asphalt Surfaces | 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 |
| **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** |

# 6.0 Area Detail

## 6.1 Mitigation Measures Area

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

No Hearths Installed

| | 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 | lb/day | | | | | | | | | | lb/day | | | | | |
| Mitigated | 0.3637 | 1.8000e-004 | 0.0192 | 0.0000 | | 7.0000e-005 | 7.0000e-005 | | 7.0000e-005 | 7.0000e-005 | | 0.0405 | 0.0405 | 1.1000e-004 | | 0.0433 |
| Unmitigated | 0.3637 | 1.8000e-004 | 0.0192 | 0.0000 | | 7.0000e-005 | 7.0000e-005 | | 7.0000e-005 | 7.0000e-005 | | 0.0405 | 0.0405 | 1.1000e-004 | | 0.0433 |

## 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 | lb/day | | | | | | | | | | lb/day | | | | | |
| Architectural Coating | 0.0437 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 0.3182 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Landscaping | 1.8300e-003 | 1.8000e-004 | 0.0192 | 0.0000 | | 7.0000e-005 | 7.0000e-005 | | 7.0000e-005 | 7.0000e-005 | | 0.0405 | 0.0405 | 1.1000e-004 | | 0.0433 |
| **Total** | **0.3637** | **1.8000e-004** | **0.0192** | **0.0000** | | **7.0000e-005** | **7.0000e-005** | | **7.0000e-005** | **7.0000e-005** | | **0.0405** | **0.0405** | **1.1000e-004** | | **0.0433** |

**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 | lb/day | | | | | | | | | | lb/day | | | | | |
| Architectural Coating | 0.0437 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 0.3182 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Landscaping | 1.8300e-003 | 1.8000e-004 | 0.0192 | 0.0000 | | 7.0000e-005 | 7.0000e-005 | | 7.0000e-005 | 7.0000e-005 | | 0.0405 | 0.0405 | 1.1000e-004 | | 0.0433 |
| **Total** | **0.3637** | **1.8000e-004** | **0.0192** | **0.0000** | | **7.0000e-005** | **7.0000e-005** | | **7.0000e-005** | **7.0000e-005** | | **0.0405** | **0.0405** | **1.1000e-004** | | **0.0433** |

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

## 9.0 Operational Offroad

| Equipment Type | Number | Hours/Day | Days/Year | Horse Power | Load Factor | Fuel Type |
|---|---|---|---|---|---|---|
| Crushing/Proc. Equipment | 0 | 14.00 | 312 | 510 | 0.78 | Diesel |
| Crushing/Proc. Equipment | 0 | 14.00 | 312 | 1200 | 0.78 | Diesel |
| Crushing/Proc. Equipment | 0 | 14.00 | 312 | 250 | 0.78 | Diesel |
| Other Construction Equipment | 0 | 14.00 | 312 | 29 | 0.42 | Diesel |
| Other Material Handling Equipment | 1 | 14.00 | 312 | 49 | 0.40 | Diesel |
| Other Material Handling Equipment | 1 | 14.00 | 312 | 84 | 0.40 | Diesel |
| Rubber Tired Loaders | 0 | 14.00 | 312 | 125 | 0.36 | Diesel |

**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 | lb/day | | | | | | | | | | lb/day | | | | | |
| Crushing/Proc. Equipment | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Other Construction Equipment | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Other Material Handling Equipment | 1.2023 | 7.2247 | 7.4775 | 8.3300e-003 | | 0.5575 | 0.5575 | | 0.5129 | 0.5129 | | 839.3743 | 839.3743 | 0.2613 | | 845.9070 |
| Rubber Tired Loaders | 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** | **1.2023** | **7.2247** | **7.4775** | **8.3300e-003** | | **0.5575** | **0.5575** | | **0.5129** | **0.5129** | | **839.3743** | **839.3743** | **0.2613** | | **845.9070** |

## 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

# Hilltop NCER

**San Diego County APCD Air District, Winter**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| General Light Industry | 12.00 | 1000sqft | 0.28 | 12,000.00 | 0 |
| Other Asphalt Surfaces | 173.20 | 1000sqft | 3.98 | 173,200.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.6 | **Precipitation Freq (Days)** | 40 |
| **Climate Zone** | 10 | | | **Operational Year** | 2018 |
| **Utility Company** | San Diego Gas & Electric | | | | |
| **CO2 Intensity (lb/MWhr)** | 720.49 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

### 1.3 User Entered Comments & Non-Default Data

Project Characteristics - GHG intensity based on SDG&E energy mix.

Land Use - See Section 1.0 of the DEIR for more information.

Construction Phase - See Section 1.0 of the DEIR for more information.

Off-road Equipment - See Section 2.2.3.2 for Construction Details.

Off-road Equipment - See Section 2.2.3.2 for Construction Details.

Off-road Equipment - See Section 2.2.3.2 for Construction Details.

Off-road Equipment - See Section 2.2.3.2 for Construction Details.

Off-road Equipment - See Section 2.2.3.2 for Construction Details.

Off-road Equipment - See Section 2.2.3.2 for Construction Details.

Trips and VMT - See Section 2.2.3.2 for Construction Details.

On-road Fugitive Dust - CalEEMod defaults.

Demolition - No demolition of structures anticipated for this project.

Grading - See Section 2.2.3.2 for Construction Details.

Architectural Coating - Architectural coatings in accordance with SDAPCD Rule 67.0.1.

Vehicle Trips - Based on client provided trip rates and distance.

Vehicle Emission Factors - CalEEMod defaults.

Vehicle Emission Factors - CalEEMod defaults.

Vehicle Emission Factors - CalEEMod defaults.

Road Dust - CalEEMod defaults.

Woodstoves - No woodstoves or fireplaces.

Consumer Products - CalEEMod defaults.

Area Coating - Architectural coatings in accordance with SDAPCD Rule 67.0.1.

Landscape Equipment - CalEEMod defaults.

Energy Use - See Section 1.0 of the DEIR for more information.

Water And Wastewater - See Section 1.0 of the DEIR for more information.

Solid Waste - CalEEMod defaults.

Land Use Change - Calculated outside of CalEEMod.

Sequestration - Calculated outside of CalEEMod.

Construction Off-road Equipment Mitigation - Fugitive dust mitigation in accordance with SDAPCD Rule 55.

Mobile Land Use Mitigation - No traffic mitigation.

Mobile Commute Mitigation - No commute mitigation.

Area Mitigation - Architectural coatings in accordance with SDAPCD Rule 67.0.1.

Energy Mitigation - No energy mitigation.

Water Mitigation - No water use mitigation.

Waste Mitigation - Consistent with statewide goal in AB 939.

Operational Off-Road Equipment - One trommel screen (Vermeer TR510 or equivalent) for C&G tree waste recycling and C&D wood recycling, and one shaker

screen (Spyder 512T or equivalent) for CDI recycling
Fleet Mix - Based on fleet mix for customers and employees.

Stationary Sources - Emergency Generators and Fire Pumps - Does not apply to the project.

Stationary Sources - Process Boilers - Does not apply to this project.

Stationary Sources - User Defined - Does not apply to this project.

Stationary Sources - Emergency Generators and Fire Pumps EF - Does not apply to the project.

Stationary Sources - Process Boilers EF - Does not apply to this project.

| Table Name | Column Name | Default Value | New Value |
|---|---|---|---|
| tblArchitecturalCoating | ConstArea_Parking | 10,392.00 | 173,200.00 |
| tblArchitecturalCoating | EF_Nonresidential_Exterior | 250.00 | 100.00 |
| tblArchitecturalCoating | EF_Nonresidential_Interior | 250.00 | 100.00 |
| tblArchitecturalCoating | EF_Parking | 250.00 | 100.00 |
| tblAreaCoating | Area_EF_Nonresidential_Exterior | 250 | 100 |
| tblAreaCoating | Area_EF_Nonresidential_Interior | 250 | 100 |
| tblAreaCoating | Area_EF_Parking | 250 | 100 |
| tblAreaMitigation | UseLowVOCPaintParkingCheck | False | True |
| tblConstDustMitigation | WaterUnpavedRoadVehicleSpeed | 40 | 0 |
| tblEnergyUse | LightingElect | 3.01 | 0.00 |
| tblEnergyUse | NT24E | 5.02 | 0.00 |
| tblEnergyUse | NT24NG | 17.13 | 0.00 |
| tblEnergyUse | T24E | 2.31 | 5.20 |
| tblEnergyUse | T24NG | 15.43 | 0.00 |
| tblFleetMix | HHD | 0.02 | 1.00 |
| tblFleetMix | HHD | 0.02 | 0.00 |
| tblFleetMix | LDA | 0.57 | 0.00 |
| tblFleetMix | LDA | 0.57 | 0.70 |
| tblFleetMix | LDT1 | 0.05 | 0.00 |

| | | | |
|---|---|---|---|
| tblFleetMix | LDT1 | 0.05 | 0.06 |
| tblFleetMix | LDT2 | 0.19 | 0.00 |
| tblFleetMix | LDT2 | 0.19 | 0.23 |
| tblFleetMix | LHD1 | 0.02 | 0.00 |
| tblFleetMix | LHD1 | 0.02 | 0.00 |
| tblFleetMix | LHD2 | 5.6460e-003 | 0.00 |
| tblFleetMix | LHD2 | 5.6460e-003 | 0.00 |
| tblFleetMix | MCY | 6.3850e-003 | 0.00 |
| tblFleetMix | MCY | 6.3850e-003 | 7.8300e-003 |
| tblFleetMix | MDV | 0.12 | 0.00 |
| tblFleetMix | MDV | 0.12 | 0.00 |
| tblFleetMix | MH | 1.4520e-003 | 0.00 |
| tblFleetMix | MH | 1.4520e-003 | 0.00 |
| tblFleetMix | MHD | 0.01 | 0.00 |
| tblFleetMix | MHD | 0.01 | 0.00 |
| tblFleetMix | OBUS | 1.8710e-003 | 0.00 |
| tblFleetMix | OBUS | 1.8710e-003 | 0.00 |
| tblFleetMix | SBUS | 7.3900e-004 | 0.00 |
| tblFleetMix | SBUS | 7.3900e-004 | 0.00 |
| tblFleetMix | UBUS | 2.1730e-003 | 0.00 |
| tblFleetMix | UBUS | 2.1730e-003 | 0.00 |
| tblGrading | MaterialImported | 0.00 | 72,000.00 |
| tblOperationalOffRoadEquipment | OperDaysPerYear | 260.00 | 312.00 |
| tblOperationalOffRoadEquipment | OperDaysPerYear | 260.00 | 312.00 |
| tblOperationalOffRoadEquipment | OperDaysPerYear | 260.00 | 312.00 |
| tblOperationalOffRoadEquipment | OperDaysPerYear | 260.00 | 312.00 |
| tblOperationalOffRoadEquipment | OperDaysPerYear | 260.00 | 312.00 |

| | | | |
|---|---|---|---|
| tblOperationalOffRoadEquipment | OperDaysPerYear | 260.00 | 312.00 |
| tblOperationalOffRoadEquipment | OperDaysPerYear | 260.00 | 312.00 |
| tblOperationalOffRoadEquipment | OperHorsePower | 85.00 | 510.00 |
| tblOperationalOffRoadEquipment | OperHorsePower | 85.00 | 1,200.00 |
| tblOperationalOffRoadEquipment | OperHorsePower | 85.00 | 250.00 |
| tblOperationalOffRoadEquipment | OperHorsePower | 172.00 | 29.00 |
| tblOperationalOffRoadEquipment | OperHorsePower | 168.00 | 49.00 |
| tblOperationalOffRoadEquipment | OperHorsePower | 168.00 | 84.00 |
| tblOperationalOffRoadEquipment | OperHorsePower | 203.00 | 125.00 |
| tblOperationalOffRoadEquipment | OperHoursPerDay | 8.00 | 14.00 |
| tblOperationalOffRoadEquipment | OperHoursPerDay | 8.00 | 14.00 |
| tblOperationalOffRoadEquipment | OperHoursPerDay | 8.00 | 14.00 |
| tblOperationalOffRoadEquipment | OperHoursPerDay | 8.00 | 14.00 |
| tblOperationalOffRoadEquipment | OperHoursPerDay | 8.00 | 14.00 |
| tblOperationalOffRoadEquipment | OperHoursPerDay | 8.00 | 14.00 |
| tblOperationalOffRoadEquipment | OperHoursPerDay | 8.00 | 14.00 |
| tblOperationalOffRoadEquipment | OperOffRoadEquipmentNumber | 0.00 | 1.00 |
| tblOperationalOffRoadEquipment | OperOffRoadEquipmentNumber | 0.00 | 1.00 |
| tblTripsAndVMT | WorkerTripNumber | 15.00 | 16.00 |
| tblTripsAndVMT | WorkerTripNumber | 15.00 | 16.00 |
| tblVehicleTrips | CC_TL | 7.30 | 13.83 |
| tblVehicleTrips | CC_TL | 7.30 | 0.00 |
| tblVehicleTrips | CC_TTP | 28.00 | 100.00 |
| tblVehicleTrips | CNW_TL | 7.30 | 0.00 |
| tblVehicleTrips | CNW_TL | 7.30 | 0.00 |
| tblVehicleTrips | CNW_TTP | 13.00 | 0.00 |
| tblVehicleTrips | CW_TL | 9.50 | 0.00 |

| | | | |
|---|---|---|---|
| tblVehicleTrips | CW_TL | 9.50 | 0.00 |
| tblVehicleTrips | CW_TTP | 59.00 | 0.00 |
| tblVehicleTrips | DV_TP | 5.00 | 0.00 |
| tblVehicleTrips | HW_TL | 0.00 | 10.80 |
| tblVehicleTrips | HW_TTP | 0.00 | 100.00 |
| tblVehicleTrips | PB_TP | 3.00 | 0.00 |
| tblVehicleTrips | PR_TP | 92.00 | 100.00 |
| tblVehicleTrips | PR_TP | 0.00 | 100.00 |
| tblVehicleTrips | ST_TR | 1.32 | 1.33 |
| tblVehicleTrips | ST_TR | 0.00 | 0.24 |
| tblVehicleTrips | SU_TR | 0.68 | 0.00 |
| tblVehicleTrips | WD_TR | 6.97 | 1.33 |
| tblVehicleTrips | WD_TR | 0.00 | 0.24 |
| tblWater | AerobicPercent | 87.46 | 0.00 |
| tblWater | AnaDigestCombDigestGasPercent | 100.00 | 0.00 |
| tblWater | AnaerobicandFacultativeLagoonsPercent | 2.21 | 0.00 |
| tblWater | ElectricityIntensityFactorForWastewaterTreatment | 1,911.00 | 0.00 |
| tblWater | IndoorWaterUseRate | 2,775,000.00 | 1,200,000.00 |
| tblWater | SepticTankPercent | 10.33 | 100.00 |

## 2.0 Emissions Summary

## 2.1 Overall Construction (Maximum Daily Emission)

### 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 | lb/day | | | | | | | | | | lb/day | | | | | |
| 2017 | 8.0986 | 100.7174 | 46.4185 | 0.1260 | 12.8823 | 4.1088 | 16.9911 | 4.9504 | 3.8096 | 8.7600 | 0.0000 | 13,170.8896 | 13,170.8896 | 2.5702 | 0.0000 | 13,235.1446 |
| 2018 | 55.8255 | 95.2312 | 63.5322 | 0.1172 | 8.1224 | 4.7021 | 9.7620 | 3.7823 | 4.3975 | 5.2940 | 0.0000 | 11,656.0326 | 11,656.0326 | 2.7705 | 0.0000 | 11,725.2954 |
| **Maximum** | **55.8255** | **100.7174** | **63.5322** | **0.1260** | **12.8823** | **4.7021** | **16.9911** | **4.9504** | **4.3975** | **8.7600** | **0.0000** | **13,170.8896** | **13,170.8896** | **2.7705** | **0.0000** | **13,235.1446** |

### 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 | lb/day | | | | | | | | | | lb/day | | | | | |
| 2017 | 8.0986 | 100.7174 | 46.4185 | 0.1260 | 9.2190 | 4.1088 | 13.3278 | 3.0892 | 3.8096 | 6.8989 | 0.0000 | 13,170.8896 | 13,170.8896 | 2.5702 | 0.0000 | 13,235.1446 |
| 2018 | 55.8255 | 95.2312 | 63.5322 | 0.1172 | 4.4765 | 4.7021 | 6.1160 | 1.9238 | 4.3975 | 4.7043 | 0.0000 | 11,656.0326 | 11,656.0326 | 2.7705 | 0.0000 | 11,725.2954 |
| **Maximum** | **55.8255** | **100.7174** | **63.5322** | **0.1260** | **9.2190** | **4.7021** | **13.3278** | **3.0892** | **4.3975** | **6.8989** | **0.0000** | **13,170.8896** | **13,170.8896** | **2.7705** | **0.0000** | **13,235.1446** |

| | 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** | **34.80** | **0.00** | **27.32** | **42.59** | **0.00** | **17.44** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** | **0.00** |

## 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 | lb/day | | | | | | | | | | lb/day | | | | | |
| Area | 0.3637 | 1.8000e-004 | 0.0192 | 0.0000 | | 7.0000e-005 | 7.0000e-005 | | 7.0000e-005 | 7.0000e-005 | | 0.0405 | 0.0405 | 1.1000e-004 | | 0.0433 |
| Energy | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Mobile | 0.2084 | 4.1564 | 2.1602 | 0.0125 | 0.5375 | 0.0168 | 0.5544 | 0.1442 | 0.0160 | 0.1602 | | 1,330.3718 | 1,330.3718 | 0.1147 | | 1,333.2394 |
| Offroad | 1.2023 | 7.2247 | 7.4775 | 8.3300e-003 | | 0.5575 | 0.5575 | | 0.5129 | 0.5129 | | 839.3743 | 839.3743 | 0.2613 | | 845.9070 |
| **Total** | **1.7744** | **11.3813** | **9.6568** | **0.0209** | **0.5375** | **0.5743** | **1.1119** | **0.1442** | **0.5289** | **0.6731** | | **2,169.7866** | **2,169.7866** | **0.3761** | **0.0000** | **2,179.1897** |

## 2.2 Overall Operational

**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 | lb/day | | | | | | | | | | lb/day | | | | | |
| Area | 0.3637 | 1.8000e-004 | 0.0192 | 0.0000 | | 7.0000e-005 | 7.0000e-005 | | 7.0000e-005 | 7.0000e-005 | | 0.0405 | 0.0405 | 1.1000e-004 | | 0.0433 |
| Energy | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Mobile | 0.2084 | 4.1564 | 2.1602 | 0.0125 | 0.5375 | 0.0168 | 0.5544 | 0.1442 | 0.0160 | 0.1602 | | 1,330.3718 | 1,330.3718 | 0.1147 | | 1,333.2394 |
| Offroad | 1.2023 | 7.2247 | 7.4775 | 8.3300e-003 | | 0.5575 | 0.5575 | | 0.5129 | 0.5129 | | 839.3743 | 839.3743 | 0.2613 | | 845.9070 |
| **Total** | **1.7744** | **11.3813** | **9.6568** | **0.0209** | **0.5375** | **0.5743** | **1.1119** | **0.1442** | **0.5289** | **0.6731** | | **2,169.7866** | **2,169.7866** | **0.3761** | **0.0000** | **2,179.1897** |

| | 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** |

## 3.0 Construction Detail

**Construction Phase**

Hilltop NCER - San Diego County APCD Air District, Winter

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|---|---|---|---|---|---|---|---|
| 1 | Demolition | Demolition | 12/1/2017 | 12/28/2017 | 5 | 20 | |
| 2 | Grading | Grading | 12/1/2017 | 6/4/2018 | 5 | 132 | |
| 3 | Building Construction | Building Construction | 6/5/2018 | 10/22/2018 | 5 | 100 | |
| 4 | Paving | Paving | 10/15/2018 | 11/9/2018 | 5 | 20 | |
| 5 | Architectural Coating | Architectural Coating | 10/15/2018 | 11/9/2018 | 5 | 20 | |

**Acres of Grading (Site Preparation Phase): 0**

**Acres of Grading (Grading Phase): 66**

**Acres of Paving: 3.98**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 18,000; Non-Residential Outdoor: 6,000; Striped Parking Area: 173,200 (Architectural Coating – sqft)**

**OffRoad Equipment**

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|---|---|---|---|---|---|
| Demolition | Concrete/Industrial Saws | 1 | 8.00 | 81 | 0.73 |
| Demolition | Excavators | 3 | 8.00 | 158 | 0.38 |
| Demolition | Rubber Tired Dozers | 2 | 8.00 | 247 | 0.40 |
| Grading | Excavators | 1 | 8.00 | 158 | 0.38 |
| Grading | Graders | 1 | 8.00 | 187 | 0.41 |
| Grading | Rubber Tired Dozers | 1 | 8.00 | 247 | 0.40 |
| Grading | Tractors/Loaders/Backhoes | 3 | 8.00 | 97 | 0.37 |
| Building Construction | Cranes | 1 | 7.00 | 231 | 0.29 |
| Building Construction | Crushing/Proc. Equipment | 1 | 8.00 | 85 | 0.78 |
| Building Construction | Forklifts | 3 | 8.00 | 89 | 0.20 |
| Building Construction | Generator Sets | 1 | 8.00 | 84 | 0.74 |
| Building Construction | Graders | 1 | 8.00 | 187 | 0.41 |
| Building Construction | Rubber Tired Dozers | 1 | 8.00 | 247 | 0.40 |
| Building Construction | Scrapers | 2 | 8.00 | 367 | 0.48 |
| Building Construction | Tractors/Loaders/Backhoes | 2 | 8.00 | 97 | 0.37 |
| Building Construction | Welders | 1 | 8.00 | 46 | 0.45 |
| Paving | Cement and Mortar Mixers | 2 | 6.00 | 9 | 0.56 |
| Paving | Pavers | 1 | 8.00 | 130 | 0.42 |
| Paving | Paving Equipment | 2 | 6.00 | 132 | 0.36 |
| Paving | Rollers | 2 | 6.00 | 80 | 0.38 |
| Paving | Tractors/Loaders/Backhoes | 1 | 8.00 | 97 | 0.37 |
| Architectural Coating | Air Compressors | 1 | 6.00 | 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 | 16.00 | 0.00 | 3.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Grading | 6 | 16.00 | 0.00 | 9,000.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Building Construction | 13 | 78.00 | 30.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Paving | 8 | 20.00 | 0.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |
| Architectural Coating | 1 | 16.00 | 0.00 | 0.00 | 10.80 | 7.30 | 20.00 | LD_Mix | HDT_Mix | HHDT |

## 3.1 Mitigation Measures Construction

Water Exposed Area

## 3.2 Demolition - 2017

**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 | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 0.0316 | 0.0000 | 0.0316 | 4.7800e-003 | 0.0000 | 4.7800e-003 | | | 0.0000 | | | 0.0000 |
| Off-Road | 4.1031 | 42.7475 | 23.0122 | 0.0388 | | 2.1935 | 2.1935 | | 2.0425 | 2.0425 | | 3,924.2833 | 3,924.2833 | 1.0730 | | 3,951.1070 |
| **Total** | **4.1031** | **42.7475** | **23.0122** | **0.0388** | **0.0316** | **2.1935** | **2.2251** | **4.7800e-003** | **2.0425** | **2.0473** | | **3,924.2833** | **3,924.2833** | **1.0730** | | **3,951.1070** |

## 3.2 Demolition - 2017

### 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 | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 1.6600e-003 | 0.0526 | 0.0113 | 1.2000e-004 | 2.6200e-003 | 3.0000e-004 | 2.9200e-003 | 7.2000e-004 | 2.9000e-004 | 1.0000e-003 | | 13.0203 | 13.0203 | 1.2200e-003 | | 13.0508 |
| 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 |
| Worker | 0.0849 | 0.0623 | 0.5893 | 1.3900e-003 | 0.1314 | 9.7000e-004 | 0.1324 | 0.0349 | 8.9000e-004 | 0.0358 | | 138.6749 | 138.6749 | 5.2300e-003 | | 138.8057 |
| **Total** | **0.0866** | **0.1149** | **0.6006** | **1.5100e-003** | **0.1341** | **1.2700e-003** | **0.1353** | **0.0356** | **1.1800e-003** | **0.0368** | | **151.6952** | **151.6952** | **6.4500e-003** | | **151.8565** |

### 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 | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 0.0142 | 0.0000 | 0.0142 | 2.1500e-003 | 0.0000 | 2.1500e-003 | | | 0.0000 | | | 0.0000 |
| Off-Road | 4.1031 | 42.7475 | 23.0122 | 0.0388 | | 2.1935 | 2.1935 | | 2.0425 | 2.0425 | 0.0000 | 3,924.2833 | 3,924.2833 | 1.0730 | | 3,951.1070 |
| **Total** | **4.1031** | **42.7475** | **23.0122** | **0.0388** | **0.0142** | **2.1935** | **2.2077** | **2.1500e-003** | **2.0425** | **2.0447** | **0.0000** | **3,924.2833** | **3,924.2833** | **1.0730** | | **3,951.1070** |

## 3.2 Demolition - 2017

**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 | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 1.6600e-003 | 0.0526 | 0.0113 | 1.2000e-004 | 2.6200e-003 | 3.0000e-004 | 2.9200e-003 | 7.2000e-004 | 2.9000e-004 | 1.0000e-003 | | 13.0203 | 13.0203 | 1.2200e-003 | | 13.0508 |
| 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 |
| Worker | 0.0849 | 0.0623 | 0.5893 | 1.3900e-003 | 0.1314 | 9.7000e-004 | 0.1324 | 0.0349 | 8.9000e-004 | 0.0358 | | 138.6749 | 138.6749 | 5.2300e-003 | | 138.8057 |
| **Total** | **0.0866** | **0.1149** | **0.6006** | **1.5100e-003** | **0.1341** | **1.2700e-003** | **0.1353** | **0.0356** | **1.1800e-003** | **0.0368** | | **151.6952** | **151.6952** | **6.4500e-003** | | **151.8565** |

## 3.3 Grading - 2017

**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 | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 6.6290 | 0.0000 | 6.6290 | 3.3791 | 0.0000 | 3.3791 | | | 0.0000 | | | 0.0000 |
| Off-Road | 3.0705 | 33.8868 | 17.1042 | 0.0297 | | 1.7774 | 1.7774 | | 1.6352 | 1.6352 | | 3,037.9107 | 3,037.9107 | 0.9308 | | 3,061.1809 |
| **Total** | **3.0705** | **33.8868** | **17.1042** | **0.0297** | **6.6290** | **1.7774** | **8.4064** | **3.3791** | **1.6352** | **5.0143** | | **3,037.9107** | **3,037.9107** | **0.9308** | | **3,061.1809** |

## 3.3 Grading - 2017

### 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 | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.7536 | 23.9059 | 5.1122 | 0.0546 | 5.9562 | 0.1357 | 6.0919 | 1.4961 | 0.1298 | 1.6259 | | 5,918.3254 | 5,918.3254 | 0.5548 | | 5,932.1945 |
| 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 |
| Worker | 0.0849 | 0.0623 | 0.5893 | 1.3900e-003 | 0.1314 | 9.7000e-004 | 0.1324 | 0.0349 | 8.9000e-004 | 0.0358 | | 138.6749 | 138.6749 | 5.2300e-003 | | 138.8057 |
| **Total** | **0.8385** | **23.9682** | **5.7015** | **0.0560** | **6.0876** | **0.1367** | **6.2243** | **1.5309** | **0.1307** | **1.6616** | | **6,057.0004** | **6,057.0004** | **0.5600** | | **6,071.0002** |

### 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 | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 2.9830 | 0.0000 | 2.9830 | 1.5206 | 0.0000 | 1.5206 | | | 0.0000 | | | 0.0000 |
| Off-Road | 3.0705 | 33.8868 | 17.1042 | 0.0297 | | 1.7774 | 1.7774 | | 1.6352 | 1.6352 | 0.0000 | 3,037.9107 | 3,037.9107 | 0.9308 | | 3,061.1809 |
| **Total** | **3.0705** | **33.8868** | **17.1042** | **0.0297** | **2.9830** | **1.7774** | **4.7605** | **1.5206** | **1.6352** | **3.1558** | **0.0000** | **3,037.9107** | **3,037.9107** | **0.9308** | | **3,061.1809** |

## 3.3 Grading - 2017

**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 | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.7536 | 23.9059 | 5.1122 | 0.0546 | 5.9562 | 0.1357 | 6.0919 | 1.4961 | 0.1298 | 1.6259 | | 5,918.3254 | 5,918.3254 | 0.5548 | | 5,932.1945 |
| 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 |
| Worker | 0.0849 | 0.0623 | 0.5893 | 1.3900e-003 | 0.1314 | 9.7000e-004 | 0.1324 | 0.0349 | 8.9000e-004 | 0.0358 | | 138.6749 | 138.6749 | 5.2300e-003 | | 138.8057 |
| **Total** | **0.8385** | **23.9682** | **5.7015** | **0.0560** | **6.0876** | **0.1367** | **6.2243** | **1.5309** | **0.1307** | **1.6616** | | **6,057.0004** | **6,057.0004** | **0.5600** | | **6,071.0002** |

## 3.3 Grading - 2018

**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 | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 6.6290 | 0.0000 | 6.6290 | 3.3791 | 0.0000 | 3.3791 | | | 0.0000 | | | 0.0000 |
| Off-Road | 2.7733 | 30.6725 | 16.5770 | 0.0297 | | 1.5513 | 1.5513 | | 1.4272 | 1.4272 | | 2,988.0216 | 2,988.0216 | 0.9302 | | 3,011.2769 |
| **Total** | **2.7733** | **30.6725** | **16.5770** | **0.0297** | **6.6290** | **1.5513** | **8.1803** | **3.3791** | **1.4272** | **4.8063** | | **2,988.0216** | **2,988.0216** | **0.9302** | | **3,011.2769** |

## 3.3 Grading - 2018

### 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 | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.6420 | 21.9188 | 4.8090 | 0.0539 | 1.3620 | 0.0873 | 1.4493 | 0.3684 | 0.0835 | 0.4519 | | 5,865.2643 | 5,865.2643 | 0.5455 | | 5,878.9005 |
| 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 |
| Worker | 0.0769 | 0.0551 | 0.5196 | 1.3500e-003 | 0.1314 | 9.5000e-004 | 0.1324 | 0.0349 | 8.7000e-004 | 0.0357 | | 134.7724 | 134.7724 | 4.6700e-003 | | 134.8891 |
| **Total** | **0.7189** | **21.9738** | **5.3286** | **0.0553** | **1.4934** | **0.0883** | **1.5817** | **0.4032** | **0.0844** | **0.4877** | | **6,000.0367** | **6,000.0367** | **0.5501** | | **6,013.7896** |

### 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 | lb/day | | | | | | | | | | lb/day | | | | | |
| Fugitive Dust | | | | | 2.9830 | 0.0000 | 2.9830 | 1.5206 | 0.0000 | 1.5206 | | | 0.0000 | | | 0.0000 |
| Off-Road | 2.7733 | 30.6725 | 16.5770 | 0.0297 | | 1.5513 | 1.5513 | | 1.4272 | 1.4272 | 0.0000 | 2,988.0216 | 2,988.0216 | 0.9302 | | 3,011.2769 |
| **Total** | **2.7733** | **30.6725** | **16.5770** | **0.0297** | **2.9830** | **1.5513** | **4.5344** | **1.5206** | **1.4272** | **2.9478** | **0.0000** | **2,988.0216** | **2,988.0216** | **0.9302** | | **3,011.2769** |

## 3.3 Grading - 2018

**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 | lb/day | | | | | | | | | | lb/day | | | | | |
| Hauling | 0.6420 | 21.9188 | 4.8090 | 0.0539 | 1.3620 | 0.0873 | 1.4493 | 0.3684 | 0.0835 | 0.4519 | | 5,865.2643 | 5,865.2643 | 0.5455 | | 5,878.9005 |
| 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 |
| Worker | 0.0769 | 0.0551 | 0.5196 | 1.3500e-003 | 0.1314 | 9.5000e-004 | 0.1324 | 0.0349 | 8.7000e-004 | 0.0357 | | 134.7724 | 134.7724 | 4.6700e-003 | | 134.8891 |
| **Total** | **0.7189** | **21.9738** | **5.3286** | **0.0553** | **1.4934** | **0.0883** | **1.5817** | **0.4032** | **0.0844** | **0.4877** | | **6,000.0367** | **6,000.0367** | **0.5501** | | **6,013.7896** |

## 3.4 Building Construction - 2018

**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 | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 7.1710 | 74.3552 | 44.3848 | 0.0775 | | 3.6764 | 3.6764 | | 3.4389 | 3.4389 | | 7,669.6867 | 7,669.6867 | 2.0678 | | 7,721.3816 |
| **Total** | **7.1710** | **74.3552** | **44.3848** | **0.0775** | | **3.6764** | **3.6764** | | **3.4389** | **3.4389** | | **7,669.6867** | **7,669.6867** | **2.0678** | | **7,721.3816** |

## 3.4 Building Construction - 2018

### 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 | lb/day | | | | | | | | | | lb/day | | | | | |
| 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 |
| Vendor | 0.1613 | 3.9593 | 1.1580 | 8.1500e-003 | 0.2031 | 0.0314 | 0.2345 | 0.0585 | 0.0301 | 0.0885 | | 872.0938 | 872.0938 | 0.0755 | | 873.9804 |
| Worker | 0.3750 | 0.2685 | 2.5329 | 6.6000e-003 | 0.6408 | 4.6100e-003 | 0.6454 | 0.1700 | 4.2500e-003 | 0.1742 | | 657.0153 | 657.0153 | 0.0228 | | 657.5845 |
| **Total** | **0.5363** | **4.2279** | **3.6909** | **0.0148** | **0.8438** | **0.0360** | **0.8799** | **0.2284** | **0.0343** | **0.2627** | | **1,529.1091** | **1,529.1091** | **0.0982** | | **1,531.5649** |

### 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 | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 7.1710 | 74.3552 | 44.3848 | 0.0775 | | 3.6764 | 3.6764 | | 3.4389 | 3.4389 | 0.0000 | 7,669.6866 | 7,669.6866 | 2.0678 | | 7,721.3816 |
| **Total** | **7.1710** | **74.3552** | **44.3848** | **0.0775** | | **3.6764** | **3.6764** | | **3.4389** | **3.4389** | **0.0000** | **7,669.6866** | **7,669.6866** | **2.0678** | | **7,721.3816** |

## 3.4 Building Construction - 2018

**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 | lb/day | | | | | | | | | | lb/day | | | | | |
| 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 |
| Vendor | 0.1613 | 3.9593 | 1.1580 | 8.1500e-003 | 0.2031 | 0.0314 | 0.2345 | 0.0585 | 0.0301 | 0.0885 | | 872.0938 | 872.0938 | 0.0755 | | 873.9804 |
| Worker | 0.3750 | 0.2685 | 2.5329 | 6.6000e-003 | 0.6408 | 4.6100e-003 | 0.6454 | 0.1700 | 4.2500e-003 | 0.1742 | | 657.0153 | 657.0153 | 0.0228 | | 657.5845 |
| **Total** | **0.5363** | **4.2279** | **3.6909** | **0.0148** | **0.8438** | **0.0360** | **0.8799** | **0.2284** | **0.0343** | **0.2627** | | **1,529.1091** | **1,529.1091** | **0.0982** | | **1,531.5649** |

## 3.5 Paving - 2018

**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 | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.4239 | 14.5184 | 12.4333 | 0.0189 | | 0.8370 | 0.8370 | | 0.7718 | 0.7718 | | 1,872.5505 | 1,872.5505 | 0.5672 | | 1,886.7312 |
| Paving | 0.5214 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| **Total** | **1.9453** | **14.5184** | **12.4333** | **0.0189** | | **0.8370** | **0.8370** | | **0.7718** | **0.7718** | | **1,872.5505** | **1,872.5505** | **0.5672** | | **1,886.7312** |

## 3.5 Paving - 2018

### 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 | lb/day | | | | | | | | | | lb/day | | | | | |
| 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 |
| 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 |
| Worker | 0.0962 | 0.0689 | 0.6495 | 1.6900e-003 | 0.1643 | 1.1800e-003 | 0.1655 | 0.0436 | 1.0900e-003 | 0.0447 | | 168.4655 | 168.4655 | 5.8400e-003 | | 168.6114 |
| **Total** | **0.0962** | **0.0689** | **0.6495** | **1.6900e-003** | **0.1643** | **1.1800e-003** | **0.1655** | **0.0436** | **1.0900e-003** | **0.0447** | | **168.4655** | **168.4655** | **5.8400e-003** | | **168.6114** |

### 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 | lb/day | | | | | | | | | | lb/day | | | | | |
| Off-Road | 1.4239 | 14.5184 | 12.4333 | 0.0189 | | 0.8370 | 0.8370 | | 0.7718 | 0.7718 | 0.0000 | 1,872.5505 | 1,872.5505 | 0.5672 | | 1,886.7312 |
| Paving | 0.5214 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| **Total** | **1.9453** | **14.5184** | **12.4333** | **0.0189** | | **0.8370** | **0.8370** | | **0.7718** | **0.7718** | **0.0000** | **1,872.5505** | **1,872.5505** | **0.5672** | | **1,886.7312** |

## 3.5 Paving - 2018

**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 | lb/day | | | | | | | | | | lb/day | | | | | |
| 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 |
| 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 |
| Worker | 0.0962 | 0.0689 | 0.6495 | 1.6900e-003 | 0.1643 | 1.1800e-003 | 0.1655 | 0.0436 | 1.0900e-003 | 0.0447 | | 168.4655 | 168.4655 | 5.8400e-003 | | 168.6114 |
| **Total** | **0.0962** | **0.0689** | **0.6495** | **1.6900e-003** | **0.1643** | **1.1800e-003** | **0.1655** | **0.0436** | **1.0900e-003** | **0.0447** | | **168.4655** | **168.4655** | **5.8400e-003** | | **168.6114** |

## 3.6 Architectural Coating - 2018

**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 | lb/day | | | | | | | | | | lb/day | | | | | |
| Archit. Coating | 45.7011 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.2986 | 2.0058 | 1.8542 | 2.9700e-003 | | 0.1506 | 0.1506 | | 0.1506 | 0.1506 | | 281.4485 | 281.4485 | 0.0267 | | 282.1171 |
| **Total** | **45.9997** | **2.0058** | **1.8542** | **2.9700e-003** | | **0.1506** | **0.1506** | | **0.1506** | **0.1506** | | **281.4485** | **281.4485** | **0.0267** | | **282.1171** |

## 3.6 Architectural Coating - 2018

### 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 | lb/day | | | | | | | | | | lb/day | | | | | |
| 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 |
| 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 |
| Worker | 0.0769 | 0.0551 | 0.5196 | 1.3500e-003 | 0.1314 | 9.5000e-004 | 0.1324 | 0.0349 | 8.7000e-004 | 0.0357 | | 134.7724 | 134.7724 | 4.6700e-003 | | 134.8891 |
| **Total** | **0.0769** | **0.0551** | **0.5196** | **1.3500e-003** | **0.1314** | **9.5000e-004** | **0.1324** | **0.0349** | **8.7000e-004** | **0.0357** | | **134.7724** | **134.7724** | **4.6700e-003** | | **134.8891** |

### 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 | lb/day | | | | | | | | | | lb/day | | | | | |
| Archit. Coating | 45.7011 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Off-Road | 0.2986 | 2.0058 | 1.8542 | 2.9700e-003 | | 0.1506 | 0.1506 | | 0.1506 | 0.1506 | 0.0000 | 281.4485 | 281.4485 | 0.0267 | | 282.1171 |
| **Total** | **45.9997** | **2.0058** | **1.8542** | **2.9700e-003** | | **0.1506** | **0.1506** | | **0.1506** | **0.1506** | **0.0000** | **281.4485** | **281.4485** | **0.0267** | | **282.1171** |

### 3.6 Architectural Coating - 2018

**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 | lb/day | | | | | | | | | | lb/day | | | | | |
| 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 |
| 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 |
| Worker | 0.0769 | 0.0551 | 0.5196 | 1.3500e-003 | 0.1314 | 9.5000e-004 | 0.1324 | 0.0349 | 8.7000e-004 | 0.0357 | | 134.7724 | 134.7724 | 4.6700e-003 | | 134.8891 |
| **Total** | **0.0769** | **0.0551** | **0.5196** | **1.3500e-003** | **0.1314** | **9.5000e-004** | **0.1324** | **0.0349** | **8.7000e-004** | **0.0357** | | **134.7724** | **134.7724** | **4.6700e-003** | | **134.8891** |

## 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 | lb/day | | | | | | | | | | lb/day | | | | | |
| Mitigated | 0.2084 | 4.1564 | 2.1602 | 0.0125 | 0.5375 | 0.0168 | 0.5544 | 0.1442 | 0.0160 | 0.1602 | | 1,330.3718 | 1,330.3718 | 0.1147 | | 1,333.2394 |
| Unmitigated | 0.2084 | 4.1564 | 2.1602 | 0.0125 | 0.5375 | 0.0168 | 0.5544 | 0.1442 | 0.0160 | 0.1602 | | 1,330.3718 | 1,330.3718 | 0.1147 | | 1,333.2394 |

## 4.2 Trip Summary Information

| | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|---|---|---|---|---|---|
| Land Use | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| General Light Industry | 16.00 | 16.00 | 0.00 | 69,053 | 69,053 |
| Other Asphalt Surfaces | 42.00 | 42.00 | 0.00 | 141,527 | 141,527 |
| Total | 58.00 | 58.00 | 0.00 | 210,580 | 210,580 |

## 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 |
| General Light Industry | 0.00 | 13.83 | 0.00 | 0.00 | 100.00 | 0.00 | 100 | 0 | 0 |
| Other Asphalt Surfaces | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 100 | 0 | 0 |

## 4.4 Fleet Mix

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| General Light Industry | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 1.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 |
| Other Asphalt Surfaces | 0.704103 | 0.055831 | 0.232237 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.007830 | 0.000000 | 0.000000 |

## 5.0 Energy Detail

Historical Energy Use: N

### 5.1 Mitigation Measures 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 | lb/day | | | | | | | | | | lb/day | | | | | |
| 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 |
| 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 |

## 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 | lb/day | | | | | | | | | | lb/day | | | | | |
| General Light Industry | 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 |
| Other Asphalt Surfaces | 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 |
| **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** |

**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 | lb/day | | | | | | | | | | lb/day | | | | | |
| General Light Industry | 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 |
| Other Asphalt Surfaces | 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 |
| **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** |

# 6.0 Area Detail

## 6.1 Mitigation Measures Area

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

No Hearths Installed

| | 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 | lb/day | | | | | | | | | | lb/day | | | | | |
| Mitigated | 0.3637 | 1.8000e-004 | 0.0192 | 0.0000 | | 7.0000e-005 | 7.0000e-005 | | 7.0000e-005 | 7.0000e-005 | | 0.0405 | 0.0405 | 1.1000e-004 | | 0.0433 |
| Unmitigated | 0.3637 | 1.8000e-004 | 0.0192 | 0.0000 | | 7.0000e-005 | 7.0000e-005 | | 7.0000e-005 | 7.0000e-005 | | 0.0405 | 0.0405 | 1.1000e-004 | | 0.0433 |

## 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 | lb/day | | | | | | | | | | lb/day | | | | | |
| Architectural Coating | 0.0437 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 0.3182 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Landscaping | 1.8300e-003 | 1.8000e-004 | 0.0192 | 0.0000 | | 7.0000e-005 | 7.0000e-005 | | 7.0000e-005 | 7.0000e-005 | | 0.0405 | 0.0405 | 1.1000e-004 | | 0.0433 |
| **Total** | **0.3637** | **1.8000e-004** | **0.0192** | **0.0000** | | **7.0000e-005** | **7.0000e-005** | | **7.0000e-005** | **7.0000e-005** | | **0.0405** | **0.0405** | **1.1000e-004** | | **0.0433** |

**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 | lb/day | | | | | | | | | | lb/day | | | | | |
| Architectural Coating | 0.0437 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Consumer Products | 0.3182 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | | 0.0000 | | | 0.0000 |
| Landscaping | 1.8300e-003 | 1.8000e-004 | 0.0192 | 0.0000 | | 7.0000e-005 | 7.0000e-005 | | 7.0000e-005 | 7.0000e-005 | | 0.0405 | 0.0405 | 1.1000e-004 | | 0.0433 |
| **Total** | **0.3637** | **1.8000e-004** | **0.0192** | **0.0000** | | **7.0000e-005** | **7.0000e-005** | | **7.0000e-005** | **7.0000e-005** | | **0.0405** | **0.0405** | **1.1000e-004** | | **0.0433** |

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

## 9.0 Operational Offroad

| Equipment Type | Number | Hours/Day | Days/Year | Horse Power | Load Factor | Fuel Type |
|---|---|---|---|---|---|---|
| Crushing/Proc. Equipment | 0 | 14.00 | 312 | 510 | 0.78 | Diesel |
| Crushing/Proc. Equipment | 0 | 14.00 | 312 | 1200 | 0.78 | Diesel |
| Crushing/Proc. Equipment | 0 | 14.00 | 312 | 250 | 0.78 | Diesel |
| Other Construction Equipment | 0 | 14.00 | 312 | 29 | 0.42 | Diesel |
| Other Material Handling Equipment | 1 | 14.00 | 312 | 49 | 0.40 | Diesel |
| Other Material Handling Equipment | 1 | 14.00 | 312 | 84 | 0.40 | Diesel |
| Rubber Tired Loaders | 0 | 14.00 | 312 | 125 | 0.36 | Diesel |

**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 | lb/day | | | | | | | | | | lb/day | | | | | |
| Crushing/Proc. Equipment | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Other Construction Equipment | 0.0000 | 0.0000 | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | | 0.0000 |
| Other Material Handling Equipment | 1.2023 | 7.2247 | 7.4775 | 8.3300e-003 | | 0.5575 | 0.5575 | | 0.5129 | 0.5129 | | 839.3743 | 839.3743 | 0.2613 | | 845.9070 |
| Rubber Tired Loaders | 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** | **1.2023** | **7.2247** | **7.4775** | **8.3300e-003** | | **0.5575** | **0.5575** | | **0.5129** | **0.5129** | | **839.3743** | **839.3743** | **0.2613** | | **845.9070** |

## 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

**NCER Recycling**
**Blasting Emissions**

**Anticipated blasting activities is assumed to include the following:**

| | |
|---|---|
| 244,464 | cubic yard/phase |
| 132 | days |
| 1,852 | cubic yard/day |
| 330 | ton explosives/phase |
| 2.5 | ton explosives/day |
| 132,000 | square feet blasted/phase |
| 1,000 | square feet blasted/day |

**Emissions Calculations:**

| Pollutant | Source | Emission Factor | Units | Maximum Daily (lbs/day) | Annual (lbs/year) | Annual (ton/year) |
|---|---|---|---|---|---|---|
| ROG | 1 | N/A | lb/ton | — | — | — |
| NOx | 1 | 17 | lb/ton | 42.50 | 5,610.00 | 2.81 |
| CO | 1 | 67 | lb/ton | 167.50 | 22,110.00 | 11.06 |
| SOx | 1 | 2 | lb/ton | 5.00 | 660.00 | 0.33 |
| $PM_{10}$ | 2 | — | lb/blast | 0.23 | 349.13 | 0.17 |
| $PM_{2.5}$ | 2 | — | lb/blast | 0.01 | 20.14 | 0.01 |

*Source/Reference:*

1. AP-42, Section 13.3, Table 13.3-1 for ANFO.
2. AP-42, Section 11.9, Table 11.9-1.
   $PM_{10} = 0.52 \times 0.000014 \times (A)^{1.5}$, where A is the horizontal area blasted.
   $PM_{2.5} = 0.03 \times 0.000014 \times (A)^{1.5}$, where A is the horizontal area blasted.

*Notes:*
lb = pounds

**Fugitive Dust Emissions Summary**

| | PM10 (lb/day | PM2.5 (lb/day) | PM10 (ton/year) | PM2.5 (ton/year) |
|---|---|---|---|---|
| **Unpaved Roads** | 3.78 | 0.38 | 0.59 | 0.06 |
| **Paved Roads** | 27.37 | 6.72 | 4.27 | 1.05 |
| **Wood Recycling** | 0.07 | 0.01 | 0.01 | 0.00 |
| **CDI** | 0.02 | 0.00 | 0.00 | 0.00 |
| **Total** | **31.24** | **7.11** | **4.87** | **1.11** |

# Unpaved Road Fugitive Dust Emissions

| OffRoad Equipment Type | Pieces of Equipment | Hours Per Day | Days Per Year | Horsepower | Load Factor | Fuel | Weight | Hours/year | acre/yr | ft2 | miles/yr | miles/day |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Rubber Tired Loaders | 2 | 14 | 312 | 125 | 0.36 | Diesel | 12.85 | 8736 | 546 | 23,783,760 | 563.06 | 1.80 |

E=k(s/12)^a(W/3)^b

| | PM10 | PM2.5 |
|---|---|---|
| k= | 1.5 | 0.15 |
| s= | 8.4 | 8.4 |
| a | 0.9 | 0.9 |
| b | 0.45 | 0.45 |
| W= | 12.85 | 12.85 |
| | | |
| $E_{2.5}$= | 0.21 | lb/mile |
| $E_{10}$= | 2.09 | lb/mile |

340000ft2
0.5acre/8-hour day
1acre=43560ft2
8ft wide

| | lb/day | ton/year |
|---|---|---|
| PM10 | 3.78 | 0.59 |
| PM2.5 | 0.38 | 0.06 |

**Note:** Emissions calculated based on equation from US EPA AP-42 Section 13.2.2, Un-Paved Roads.

# Paved Road Fugitive Dust Emissions

E=[k(sL)^0.91 x (W)^1.02]

| | PM10 | PM2.5 |
|---|---|---|
| k= | 0.0022 | 0.00054 |
| sL= | 0.1 | 0.1 |

| Source | % trips | miles/trip | Trips/day | miles/day | days | miles/yr | Weight | PM10 (lb/mile) | PM2.5 (lb/mile | PM10 (lb/day) | PM2.5 (lb/day) | PM10 (ton/year) | PM2.5 (ton/year) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Employees: C-NW | 32.7 | 10 | 36 | 720 | 312 | 224640 | 2 | 0.000549 | 0.000135 | 0.40 | 0.10 | 0.06 | 0.02 |
| Delivery Trucks: C-C | 54.5 | 15 | 60 | 1800 | 312 | 561600 | 40.5 | 0.011804 | 0.002897 | 21.25 | 5.22 | 3.31 | 0.81 |
| Export Trucks: C-W | 7.3 | 30 | 8 | 480 | 312 | 149760 | 40.5 | 0.011804 | 0.002897 | 5.67 | 1.39 | 0.88 | 0.22 |
| On-site Security Residence: C-NW | 5.5 | 10 | 6 | 120 | 312 | 37440 | 2 | 0.000549 | 0.000135 | 0.07 | 0.02 | 0.01 | 0.00 |
| | | | | | | | | | **Total** | **27.37** | **6.72** | **4.27** | **1.05** |

**Note:** Emissions based on US EPA AP-42 Section 13.2.1, Paved Roads.

# Wood Recycling Handling Fugitive Dust Emissions

| | Specification | Daily Allowed to Process (tons) |
|---|---|---|
| *Export Capacity* | | |
| *Small Volume C&D Wood Debris Chipping and Grinding Facility* | | |
| Receiving Inbound | Daily | 0-199 |
| C&G and C&D Wood Mulch processing | Daily | 199 |
| C&G and C&D Wood Mulch storage (unprocessed) | 30 Days | 199 |
| C&D Wood Mulch storage (processed) | 90 Days | 199 |
| C&D Temperature Regulation | 122 degrees | 199 |
| Compostable materials (unprocessed) | 48 hours | 199 |
| Compostable materials (processed) | 7 days by special permit | 199 |

| | |
|---|---|
| received | 8 possible drops |
| sorted | 3 different waste streams, C&G, C&D, compost |

Truck Loading/Unloading/Drops
EF=k x (0.0032) x (U/5)^1.3/(M/2)^1.4

| | PM10 | PM2.5 |
|---|---|---|
| U= | 2.6 | 2.6 |
| M= | 25 | 25 |
| k= | 0.35 | 0.053 |
| EF (lb/ton)= | 1.39E-05 | 2.11E-06 |
| | | |
| | | |
| | **lb/day** | **ton/year** |
| **PM10** | 0.07 | 0.01 |
| **PM2.5** | 0.01 | 0.00 |

**Note:** Emissions based on US EPA AP-42 Section 13.2.4, Aggregate Handling and Storage Piles

# CDI Recycling Fugitive Dust Emissions

| | Specification | Daily Allowed to Process (tons) |
|---|---|---|
| *Medium Volume CDI Processing Facility (Regulation Limitations)* | | |
| Receiving Inbound | Daily | 25-174 |
| CDI Processing | Daily | 174 |
| CDI Storage (unprocessed) | 15 days | 174 |
| CDI storage (processed) | 12 months | 174 |
| Inert Debris Storage (unprocessed) | 6 months | 174 |
| Inert Debris Storage (processed) | 18 months | 174 |

| | |
|---|---|
| received | 8 possible drops |
| sorted | 1 waste stream |

Truck Loading/Unloading/Drops

EF=k x (0.0032) x (U/5)^1.3/(M/2)^1.4

| | PM10 | PM2.5 |
|---|---|---|
| U= | 2.6 | 2.6 |
| M= | 25 | 25 |
| k= | 0.35 | 0.053 |
| EF (lb/ton)= | 1.39E-05 | 2.11E-06 |
| | | |
| | | |
| | **lb/day** | **ton/year** |
| PM10 | 0.02 | 0.00 |
| PM2.5 | 0.00 | 0.00 |

**Note:** Emissions based on US EPA AP-42 Section 13.2.4, Aggregate Handling and Storage Piles

**North County Environmental Resources Recycling Project**

## Vegetation

### Land Use Change - Net Sequestered Carbon

The project's changes in land use results in changes in $CO_2$ sequestration from the atmosphere which would not have been captured had there been no land-type change.

Future planting of trees within the project site will sequester $CO_2$ and is considered to result in a one-time carbon-stock change. Trees sequester $CO_2$ while they are actively growing.

**Summary:**

| Project Vegetation Land Use | Vegetation Land Use Category Subtype | Net Loss (acres) | Loss of Sequestered $CO_2$ (MT $CO_2$) |
|---|---|---|---|
| Coastal Sage Scrub | Forest Land | 1.93 | 27.60 |
| Chaparral | Grassland | 11.82 | 50.94 |
| **Total** | | | **78.54** |

| Project Tree Category/Species | Tree Category | Number of Trees (trees) | Gain of Sequestered $CO_2$ (MT $CO_2$) |
|---|---|---|---|
| Rhus lancea | Juniper | 58.00 | 14.04 |
| Quercus agrifolia | Mixed Hardwood | 50.00 | 36.70 |
| Juglans californica | Soft Maple | 19.00 | 16.45 |
| Platanus racemose | Hardwood Maple | 16.00 | 16.67 |
| Sambucus mexicana | Juniper | 22.00 | 5.32 |
| **Total** | | | **89.19** |

| | |
|---|---|
| **Total $CO_2E$ emissions released (loss) (MT)** | **78.54** |
| **$CO_2E$ sequestered from Net New Trees (gain) (MT)** | **89.19** |
| **Total $CO_2E$ Released (loss - gain) (MT)** | **-10.64** |
| **Amortized Net Change of $CO_2E$ over 30 years (MT/year)** | **-0.35** |

**North County Environmental Resources Recycling Project**

## Vegetation

### Land Use Change - Loss of Sequestered Carbon

A development which changes land use type results in changes in $CO_2$ sequestration from the atmosphere which would not have been captured had there been no land-type change.

**Equation:**

Sequestered $CO_2$ (MT $CO_2$) = $\Sigma_f$ ($SeqCO_2$ )$_f$ x (area)$_f$ - $\Sigma_i$ (SeqCO2 )$_i$ x (area)$_i$

*Where:*

$SeqCO_2$ = mass of sequestered $CO_2$ per unit area (MT $CO_2$/acre)

area = area of land for specific land use type (acre)

*f* = index for final land use type

*I* = index for initial land use type

**Default CalEEMod Factors**

The mass of sequestered $CO_2$ per unit area (MT $CO_2$/acre) is dependent on the specific land use type. The program uses default $CO_2$ sequestration values from the California Climate Action Registry for each land use that will be preserved or created:

| Vegetation Land Use Type | Vegetation Land Use Subtype | Biogenic $CO_2$ Emissions (MT $CO_2$/Acre) |
|---|---|---|
| Cropland | Cropland | 6.2 |
| Forest Land | Scrub | 14.3 |
| Forest Land | Trees | 111 |
| Grassland | Grassland | 4.31 |
| Wetlands | Wetlands | 0 |
| Others | Others | 0 |

*Notes:*

Based on values indicated in IPCC Guidelines for National Greenhouse Gas Inventories (IPCC Guidelines). Available online at http://www.ipcc-nggip.iges.or.jp/public/2006gl/

*Reference:*

CalEEMod Users Guide, Appendix A Calculation Details (Section 11 Vegetation, pages 50-52)

**Custom Content Factors**

| Vegetation Land Use Type | Vegetation Land Use Subtype | Biogenic $CO_2$ Emissions (MT $CO_2$/Acre) |
|---|---|---|
| Coastal Sage Scrub | Scrub | 14.3 |
| Chaparral | Grassland | 4.31 |
| Others | Grassland | 4.31 |

*Reference:*

See "Estimate of Sequestered Carbon - Citrus Trees"

**North County Environmental Resources Recycling Project**

**Calculations:**

| Project Vegetation Land Use | Vegetation Land Use Category | Vegetation Land Use Category Subtype | Initial Acres (acres) | Final Acres (acres) | Net Loss (acres) | Biogenic $CO_2$ Emissions ($MT\ CO_2$/Acre) | Sequestered $CO_2$ ($MT\ CO_2$) |
|---|---|---|---|---|---|---|---|
| Coastal Sage Scrub | Forest Land | Scrub | 4.02 | 2.09 | 1.93 | 14.3 | 27.60 |
| Chaparral | Grassland | Grassland | 121.32 | 109.50 | 11.82 | 4.31 | 50.94 |
| **Total** | | | **125.34** | **111.59** | **13.75** | | **78.54** |

***Notes:***

The data for impacted plant communities from the project was taken from the Biological Impacts report prepared for the site (BlUE Consulting Group 2013).

The default annual CO2 is calculated by multiplying total biomass (MT dry matter/acre) from IPCC data by the carbon fraction in plant material (0.47), then using the ratio of molecular weights (44/12) to convert from MT of carbon (C) to MT of carbon dioxide (CO2).

*Vegetation Type*

Vegetation types are defined by IPCC as follows:

Forest Land

This category includes all land with woody vegetation consistent with thresholds used to define Forest Land in the national greenhouse gas inventory. It also includes systems with a vegetation structure that currently fall below, but *in situ* could potentially reach the threshold values used by a country to define the Forest Land category.

Cropland

This category includes cropped land, including rice fields, and agro-forestry systems where the vegetation structure falls below the thresholds used for the Forest Land category.

Grassland

This category includes rangelands and pasture land that are not considered Cropland. It also includes systems with woody vegetation and other non-grass vegetation such as herbs and brushes that fall below the threshold values used in the Forest Land category. The category also includes all grassland from wild lands to recreational areas as well as agricultural and silvi-pastural systems, consistent with national definitions.

Wetlands

This category includes areas of peat extraction and land that is covered or saturated by water for all or part of the year (e.g., peatlands) and that does not fall into the Forest Land, Cropland, Grassland or Settlements categories. It includes reservoirs as a managed sub-division and natural rivers and lakes as unmanaged sub-divisions.

*Area*

The user must specify area of land in acres for specific final and initial land use types. These area changes include not only the area of land that will be converted to buildings, but also areas disrupted by the construction of utility corridors, water tank sites, and associated borrow and grading areas. Areas temporarily disturbed that will eventually recover to become vegetated will not be counted as vegetation removed as there is no net change in vegetation or land use.

This assumption facilitates the calculation as a yearly growth rate and CO2 removal rate does not have to be calculated. As long as the disturbed land will indeed return to its original state, this assumption is valid for time periods over 20 years.

**North County Environmental Resources Recycling Project**

## Vegetation

### Land Use Change - Gain of Sequestered Carbon

Planting trees will sequester $CO_2$ and is considered to result in a one-time carbon-stock change. Trees sequester $CO_2$ while they are actively growing. The amount of $CO_2$ sequestered depends on the type of tree.

**Equation:**

Total Sequestered $CO_2$ (MT $CO_2$) = (Growing Period x $\Sigma\ t$ (Sequestration $t$ x Trees $t$ ))

*Where:*

Growing Period = growing period for all trees, expressed in years (20 years is the default)

Sequestration $t$ = default annual $CO_2$ accumulation per tree for broad species class $t$

Trees $t$ = number of net new trees of broad species class $t$

Total Sequestered $CO_2$ is the growing period for all trees multiplied by the summation of annual $CO_2$ accumulation multiplied by the number of new trees per broad species class.

**Default CalEEMod Factors**

The program uses default annual $CO_2$ accumulation per tree for broad species class as follows:

| Species | $CO_2$ Sequestered (MT/tree/year) |
|---|---|
| Aspen | 0.0352 |
| Soft Maple | 0.0433 |
| Mixed Hardwood | 0.0367 |
| Hardwood Maple | 0.0521 |
| Juniper | 0.0121 |
| Cedar/Larch | 0.0264 |
| Douglas Fir | 0.0447 |
| True Fir/Hemlock | 0.0381 |
| Pine | 0.0319 |
| Spruce | 0.0337 |
| Miscellaneous | 0.0354 |

*Notes:*

"CO2 Sequestered" is based on IPCC's carbon (C) values converted to carbon dioxide (CO2) using ratio of molecular weights (44/12).
Miscellaneous is the average of all other broad species classes. To be assumed if tree type is not known.

*Reference:*

CalEEMod Users Guide, Appendix A Calculation Details (Section 11 Vegetation, pages 50-53)

**North County Environmental Resources Recycling Project**

**Calculations:**

| Project Tree Category/Species | Tree Category | Growing Period (year) | Number of Trees (trees) | Tree $CO_2$ Sequestered Factor (MT $CO_2$/Tree/Year) | Sequestered $CO_2$ (MT $CO_2$) |
|---|---|---|---|---|---|
| Rhus lancea | Juniper | 20 | 58 | 0.0121 | 14.04 |
| Quercus agrifolia | Mixed Hardwood | 20 | 50 | 0.0367 | 36.70 |
| Juglans californica | Soft Maple | 20 | 19 | 0.0433 | 16.45 |
| Platanus racemose | Hardwood Maple | 20 | 16 | 0.0521 | 16.67 |
| Sambucus mexicana | Juniper | 20 | 22 | 0.0121 | 5.32 |
| **Total** | | | | | **89.19** |

***Notes:***

The trees and species were provided by the architect (Howard Associates, Inc. 2017).

Growing Period

The program assumes the IPCC active growing period of 20 years. Thereafter, the accumulation of carbon in biomass slows with age, and will be completely offset by losses from clipping, pruning, and occasional death. Actual active growing periods are subject to, among other things, species, climate regime, and planting density. Note that trees may also be replaced at the end of the 20-year cycle, which would result in additional years of carbon sequestration. However, this would be offset by the potential net release of carbon from the removal of the replaced tree.

# ATTACHMENT B

## *Final Climate Action Plan Consistency Review Checklist*

**Permit Number:** _____

COUNTY OF SAN DIEGO

LAND USE AND ENVIRONMENT GROUP

**Department of Planning & Development Services**

# Appendix A: Final Climate Action Plan Consistency Review Checklist

## Introduction

The County of San Diego (County) Climate Action Plan (CAP), adopted by the Board of Supervisors on February 14, 2018, outlines actions that the County will undertake to meet its greenhouse gas (GHG) emissions reduction targets. Implementation of the CAP will require that new development projects incorporate more sustainable design standards and implement applicable reduction measures consistent with the CAP. To help plan and design projects consistent with the CAP, and to assist County staff in implementing the CAP and determining the consistency of proposed projects with the CAP during development review, the County has prepared a CAP Consistency Review Checklist (Checklist). This Checklist, in conjunction with the CAP, provides a streamlined review process for proposed discretionary projects that require environmental review pursuant to the California Environmental Quality Act (CEQA). Please refer to the County's Guidelines for Determining Significance for Climate Change (Guidelines) for more information on GHG emissions, climate change impact requirements, thresholds of significance, and compliance with CEQA Guidelines Section 15183.5.

The purpose of this Checklist is to implement GHG reduction measures from the CAP that apply to new development projects. The CAP presents the County's comprehensive strategy to reduce GHG emissions to meet its reduction targets. These reductions will be achieved through a combination of County initiatives and reduction actions for both existing and new development. Reduction actions that apply to existing and new development will be implemented through a combination of mandatory requirements and incentives. This Checklist specifically applies to proposed discretionary projects that require environmental review pursuant to CEQA. Therefore, the Checklist represents one implementation tool in the County's overall strategy to implement the CAP. Implementation of measures that do not apply to new development projects will occur through the implementation mechanisms identified in Chapter 5 of the CAP. Implementation of applicable reduction measures in new development projects will help the County achieve incremental reductions towards its targets, with additional reductions occurring through County initiatives and measures related to existing development that are implemented outside of the Checklist process.

The Checklist follows a two-step process to determine if projects are consistent with the CAP and whether they may have a significant cumulative impact under the County's adopted GHG thresholds of significance. The Checklist first assesses a project's consistency with the growth projections and land use assumptions that formed the basis of CAP emissions projections. If a project is consistent with the projections and land use assumptions in the CAP, its associated growth in terms of GHG emissions would have been accounted for in the CAP's projections and project implementation of the CAP reduction measures will contribute towards reducing the County's emissions and meeting the County's reduction targets. Projects that include a land use plan and/or zoning designation amendment that would result in an equivalent or less GHG-intensive project

when compared to existing designation, would also be within the projections assumed in the CAP. Projects responding in the affirmative to Step 1 questions can move forward to Step 2 of the Checklist. If a land use and/or zoning designation amendment results in a more GHG-intensive project, the project is required to demonstrate consistency with applicable CAP measures and offset the increase in emissions as described in the Guidelines. Step 2 of the Checklist contains the CAP GHG reduction measures that projects are required to implement to ensure compliance with the CAP. Implementation of these measures would ensure that new development is consistent with relevant CAP strategies and measures and will contribute towards achieving the identified GHG reduction targets. Projects that are consistent with the CAP, as determined using this Checklist, may rely on the CAP for the cumulative impacts analysis of GHG emissions under CEQA.

A project's incremental contribution to cumulative GHG emissions may be determined to not be cumulatively considerable if it is determined to be consistent with the CAP. As specified in the CEQA Guidelines, the mere existence of significant cumulative impacts caused by other projects alone shall not constitute substantial evidence that the project's incremental effects are "cumulatively considerable" (CCR, Title 14, Division 6, Chapter 3, Section 15064[h][4]). Projects requiring discretionary review that cannot demonstrate consistency with the CAP using this Checklist may have a cumulatively considerable contribution to a significant cumulative impact and would be required to prepare a separate, more detailed project-level GHG analysis as part of the CEQA document prepared for the project.

# Checklist Applicability

This Checklist only applies to development projects that require discretionary review and are subject to environmental review (i.e., not statutorily or categorically exempt projects) pursuant to CEQA. Projects that are limited to ministerial review and approval (e.g., only building permits) would not be subject to the Checklist. The CAP contains other measures that, when implemented, would apply broadly to all ministerial and discretionary projects. These measures are included for discretionary projects in this Checklist, but could also apply more broadly once the County takes action to codify specific requirements or standards.

# Checklist Procedures

General procedures for Checklist compliance and review are described below. Specific guidance is also provided under each of the questions under Steps 1 and 2 of the Checklist in subsequent pages.

1. The County's Department of Planning & Development Services (PDS) reviews development applications and makes determinations regarding environmental review requirements under CEQA. Procedures for CEQA can be found on the County's Process Guidance & Regulations/Statutes Homepage. The Director of PDS will determine whether environmental review is required, and if so, whether completion of the CAP Checklist is required for a proposed project or whether a separate project-level GHG analysis is required.

2. The specific applicable requirements outlined in the Checklist shall be required as a condition of project approval.

3. The project must provide substantial evidence that demonstrates how the proposed project will implement each applicable Checklist requirement described herein to the satisfaction of the Director of PDS.

4. If a question in the Checklist is deemed not applicable (N/A) to a project, substantial evidence shall be provided to the satisfaction of the Director of PDS demonstrating why the Checklist item is not applicable. Feasibility of reduction measures for new projects was assessed in development of the

CAP and measures determined to be feasible were incorporated into the Checklist. Therefore, it is expected that projects would have the ability to comply with all applicable Checklist measures.

5. Development projects requiring discretionary review that cannot demonstrate consistency with the CAP using this Checklist shall prepare a separate, project-level GHG analysis as part of the CEQA document prepared for the project and may be required to prepare an Environmental Impact Report (EIR). Guidance for project-specific GHG Technical Reports is outlined in the Report Format and Content Requirements for Climate Change document, provided under separate cover. The Report Format and Content Requirements document provides guidance on the outline and content of GHG analyses for discretionary projects processed by PDS that cannot show compliance with the CAP Checklist.

# Checklist Updates

The Guidelines and Checklist may be administratively updated by the County from time to time to comply with amendments to State laws or court directives, or to remove measures that may become mandatory through future updates to State or local codes. Administrative revisions to the Guidelines and Checklist will be limited to changes that do not trigger a subsequent EIR or a supplement to the SEIR for the CAP pursuant to CEQA Guidelines Section 15162. Administrative revisions, as described above, will not require approval by the Board of Supervisors (Board). All other changes to the Guidelines and Checklist require Board approval.

Comprehensive updates to the Guidelines and Checklist will be coordinated with each CAP update (i.e., every five years beginning in 2025) and would require Board approval. Future updates of the CAP, Guidelines, and Checklist shall comply with CEQA.

## Application Information

### Contact Information

Project No. and Name: North County Environmental Resources (NCER) Recycling Facility

Property Address and APN: 25568 Mesa Rock Road, Escondido CA

Applicant Name and Co.: Karl Gailey, Arie deJong Hilltop Group Inc

Contact Phone: 760.744.9040 Contact Email: karlg@hilltopgroupinc.com

Was a consultant retained to complete this checklist? ☐ Yes ☐ No
If Yes, complete the following:

Consultant Name: Adam Poll Contact Phone: 805.308.8516

Company Name: Dudek Contact Email: apoll@dudek.com

### Project Information

1. What is the size of the project site (acres [gross and net])? 139.5 gross acres (135.6 net acres), 35.5 acre buildout

2. Identify all applicable proposed land uses (indicate square footage [gross and net]):

   ☐ Residential (indicate # of single-family dwelling units):

   ☐ Residential (indicate # of multi-family dwelling units):

   ☐ Commercial (indicate total square footage [gross and net]):

   ☐ Industrial (indicate total square footage [gross and net]):

   ☐ Agricultural (indicate total acreage [gross and net]):

   ■ Other (describe): C&D and wood waste recycling facility

3. Provide a description of the project proposed. This description should match the project description used for the CEQA document. The description may be attached to the Checklist if there are space constraints.

The project is a wood chipping and construction, demolition and inert debris (CDI) recycling facility in the northern unincorporated area of San Diego County within the North County Metropolitan Subregional Plan Area.

# CAP Consistency Checklist Questions

## Step 1: Land Use Consistency

For projects that are subject to CAP consistency review, the first step in determining consistency is to assess the project's consistency with the growth projections used in the development of the CAP. This section allows the County to determine a project's consistency with the land use assumptions used in the CAP.

| Step 1: Land Use Consistency | | |
|---|---|---|
| Checklist Item<br>(Check the appropriate box and provide explanation and supporting documentation for your answer) | Yes | No |
| 1. Is the proposed project consistent with the existing General Plan regional category, land use designations, and zoning designations?<br><br>If **"Yes,"** provide substantiation below and then proceed to Step 2 (CAP Measures Consistency) of the Checklist.<br><br>If **"No,"** proceed to question 2 below. | ☒ | ☐ |
| Project Detail:<br>Please substantiate how the project satisfies question 1.<br>The project site is within the North County Metro Subregional Plan Area. The project site's General Plan land use designation is High Impact Industrial (I-3) and the project site's General Plan zoning designation is General Impact Industrial (M54). M54 zoning designation, "allows unenclosed commercial and industrial operations having potential nuisance characteristics such as construction sales and services (County of San Diego 2011)." According to the County of San Diego Zoning Ordinance, Section 2542(b), recycling facilities are expressly permitted on land zoned for M54 uses. | | |
| 2. Does the project include a land use element and/or zoning designation amendment that would result in an equivalent or less GHG-intensive project when compared to the existing designations?<br><br>If **"Yes,"** the project must provide estimated project GHG emissions under both existing and proposed designation(s) for comparison to substantiate the response and proceed to Step 2 (CAP Measures Consistency) of the Checklist.<br><br>If **"No,"** (i.e., the project proposes an increase in density or intensity above that which is allowed under existing General Plan designations and consequently would not result in an equivalent or less GHG-intensive project when compared to the existing designations), the project must prepare a separate, more detailed project-level GHG analysis. As outlined in the County's Guidelines for Determining Significance for Climate Change and Report Format and Content Requirements for Climate Change, this analysis must demonstrate how the project would offset the increase in GHG emissions over the existing designations or baseline conditions. The project must also incorporate each of the CAP measures identified in Step 2 to mitigate cumulative GHG emissions impacts. Proceed and complete a separate project-specific GHG analysis and Step 2 of the Checklist. Refer to Section 4 of the County's Guidelines for procedures on analyzing General Plan Amendments. | ☐ | ☐ |
| Project Detail:<br>Please substantiate how the project satisfies question 2.<br>N/A | | |

# Step 2: CAP Measures Consistency

The second step of the CAP consistency review is to review and evaluate a project's consistency with the applicable measures of the CAP. Each checklist item is associated with a specific GHG reduction measure(s) in the County CAP.

| Step 2: CAP Measures Consistency | | | | |
|---|---|---|---|---|
| Checklist Item<br>(Check the appropriate box and provide an explanation for your answer) | CAP Measure | Yes | No | N/A |
| **Step 2A: Project Operations<br>(All projects with an operational component must fill out this portion of the Checklist)** | | | | |
| **Reducing Vehicle Miles Traveled** | | | | |
| 1a. Reducing Vehicle Miles Traveled<br><br>Non-Residential: For non-residential projects with anticipated tenant-occupants of 25 or more, will the project achieve a 15% reduction in emissions from commute vehicle miles traveled (VMT), and commit to monitoring and reporting results to demonstrate on-going compliance? VMT reduction may be achieved through a combination of Transportation Demand Management (TDM) and parking strategies, as long as the 15% reduction can be substantiated.<br><br>VMT reduction actions though TDM may include, but are not limited to:<br>☐ Telecommuting<br>☐ Car Sharing<br>☐ Shuttle Service<br>☐ Carpools<br>☐ Vanpools<br>☐ Bicycle Parking Facilities<br>☐ Transit Subsidies<br><br>Shared and reduced parking strategies may include, but are not limited to:[1]<br>☐ Shared parking facilities<br>☐ Carpool/vanpool-only parking spaces<br>☐ Shuttle facilities<br>☐ Electric Vehicle-only parking spaces<br><br>The project may incorporate the measures listed above, and propose additional trip reduction measures, as long as a 15% reduction in emissions from commute VMT can be demonstrated through substantial evidence.<br><br>Check "N/A" if the project is a residential project or if the project would not accommodate more than 25 tenant-occupants. | T-2.2 and T-2.4 | ☐ | ☐ | ☒ |
| 1b. Project Detail:<br>Please substantiate how the project satisfies question 1a.<br>The project would employ 19 permanent persons, and thus would not accommodate 25 or more tenant occupants. | | | | |

[1] Reduction actions and strategies under 1a may be used to achieve a 10% reduction in emissions from commute VMT under 2a

| Step 2: CAP Measures Consistency | | | | |
|---|---|---|---|---|
| Checklist Item<br>(Check the appropriate box and provide an explanation for your answer) | CAP Measure | Yes | No | N/A |
| **Shared and Reduced Parking** | | | | |
| 2a. Shared and Reduced Parking<br><br>Non-Residential: For non-residential projects with anticipated tenant-occupants of 24 or less, will the project implement shared and reduced parking strategies that achieves a 10% reduction in emissions from commute VMT?<br><br>Shared and reduced parking strategies may include, but are not limited to:<br>☐ Shared parking facilities<br>☐ Carpool/vanpool-only parking spaces<br>☐ Shuttle facilities<br>☐ Electric Vehicle-only parking spaces<br><br>Check "N/A" if the project is a residential project or if the project would accommodate 25 or more tenant-occupants. | T-2.4 | ☐ | ☐ | ☒ |

2b. Project Detail:
Please substantiate how the project satisfies question 2a.

The project is not a typical commercial or retail development that would include substantial parking supply. The purpose of this Checklist Item is to reduce vehicle trips during typical commute hours. Based on the proposed use of the project, associated vehicle and truck trips are necessary for the operation of the project. The project does support the reduction in VMT related emissions throughout the County from reduced truck traffic going to other disposal sites further away.

| | | | | |
|---|---|---|---|---|
| **Water Heating Systems** | | | | |
| 3a. Electric or Alternatively-Fueled Water Heating Systems<br><br>Residential: For projects that include residential construction, will the project, as a condition of approval, install the following types of electric or alternatively-fueled water heating system(s)? Please check which types of system(s) will be installed:<br><br>☐ Solar thermal water heater<br>☐ Tankless electric water heater<br>☐ Storage electric water heaters<br>☐ Electric heat pump water heater<br>☐ Tankless gas water heater<br>☐ Other<br><br>Check "N/A" if the project does not contain any residential buildings. | E-1.2 | ☐ | ☐ | ☒ |

3b. Project Detail:
Please substantiate how the project satisfies question 3a.

The Project does not include a residential component.

| Step 2: CAP Measures Consistency | | | | |
|---|---|---|---|---|
| Checklist Item<br>(Check the appropriate box and provide an explanation for your answer) | CAP Measure | Yes | No | N/A |
| **Water-Efficient Appliances and Plumbing Fixtures** | | | | |
| 4a. Water Efficient Appliances and Plumbing Fixtures<br><br>Residential: For new residential projects, will the project comply with all of the following water efficiency and conservation BMPs[2]?<br><br>☐ Kitchen Faucets: The maximum flow rate of kitchen faucets shall not exceed 1.5 gallons per minute at 60 psi. Kitchen faucets may temporarily increase the flow above the maximum rate, but not to exceed 2.2 gallons per minute at 60 psi, and must default to a maximum flow rate of 1.5 gallons per minute at 60 psi[3].<br>☐ Energy Efficient Appliances: Install at least one qualified ENERGY STAR dishwasher or clothes washer per unit.<br><br>Check "N/A" if the project is a non-residential project. | W-1.1 | ☐ | ☐ | ☒ |
| 4b. Project Detail:<br>Please substantiate how the project satisfies question 4a.<br><br>The Project does not include a residential component. | | | | |
| **Rain Barrel Installations** | | | | |
| 5a. Rain Barrel Installations<br><br>Residential: For new residential projects, will the project make use of incentives to install one rain barrel per every 500 square feet of available roof area?<br><br>Check "N/A" if the project is a non-residential project; if State, regional or local incentives/rebates to purchase rain barrels are not available; or if funding for programs/rebates has been exhausted. | W-2.1 | ☐ | ☐ | ☒ |
| 5b. Project Detail:<br>Please substantiate how the project satisfies question 5a.<br><br>The Project does not include a residential component. | | | | |

[2] CALGreen Tier 1 residential voluntary measure A4.303 of the California Green Building Standards Code.
[3] Where complying faucets are unavailable, aerators or other means may be used to achieve reduction.

| Step 2: CAP Measures Consistency | | | | |
|---|---|---|---|---|
| Checklist Item<br>(Check the appropriate box and provide an explanation for your answer) | CAP Measure | Yes | No | N/A |
| **Reduce Outdoor Water Use** | | | | |
| 6a. Reduce Outdoor Water Use<br><br>Residential: Will the project submit a Landscape Document Package that is compliant with the County's Water Conservation in Landscaping Ordinance[4] and demonstrates a 40% reduction in current Maximum Applied Water Allowance (MAWA) for outdoor use?<br><br>Non-Residential: Will the project submit a Landscape Document Package that is compliant with the County's Water Conservation in Landscaping Ordinance and demonstrates a 40% reduction in current MAWA for outdoor use?<br><br>Check "N/A" if the project does not propose any landscaping, or if the aggregate landscaped area is between 500 – 2,499 square feet and elects to comply with the Prescriptive Compliance Option within the Water Conservation in Landscaping Ordinance. | W-1.2 | ☐ | ☐ | ☒ |
| 6b. Project Detail:<br>Please substantiate how the project satisfies question 6a.<br><br>The Project would landscape less than 2,499 square feet and would comply with the Prescriptive Compliance Option within the Water Conservation in Landscaping Ordinance. | | | | |
| **Agricultural and Farming Operations[5]** | | | | |
| 7a. Agricultural and Farming Equipment<br><br>Will the project use the San Diego County Air Pollution Control District's (SDAPCD's) farm equipment incentive program to convert gas- and diesel-powered farm equipment to electric equipment?<br><br>Check "N/A" if the project does not contain any agricultural or farming operations; if the SDAPCD incentive program is no longer available; or if funding for the incentive program has been exhausted. | A-1.1 | ☐ | ☐ | ☒ |
| 7b. Project Detail:<br>Please substantiate how the project satisfies question 7a.<br><br>The Project will not include farming or agricultural operations. | | | | |

[4] http://www.sandiegocounty.gov/content/dam/sdc/cob/ordinances/ord10427.pdf.
[5] Existing agricultural operations would not be subject to questions 7 and 8 of the Checklist, unless a proposed expansion is subject to discretionary review and requires environmental review pursuant to CEQA.

| Step 2: CAP Measures Consistency | | | | |
|---|---|---|---|---|
| Checklist Item<br>(Check the appropriate box and provide an explanation for your answer) | CAP Measure | Yes | No | N/A |
| 8a. Electric Irrigation Pumps<br><br>Will the project use SDAPCD's farm equipment incentive program to convert diesel- or gas-powered irrigation pumps to electric irrigation pumps?<br><br>Check "N/A" if the project does not contain any agricultural or farming operations; if the SDAPCD incentive program is no longer available; or if funding for the incentive program has been exhausted. | A-1.2 | ☐ | ☐ | ☒ |

8b. Project Detail:
Please substantiate how the project satisfies question 8a.

The Project will not include farming or agricultural operations.

| Tree Planting | | | | |
|---|---|---|---|---|
| 9a. Tree Planting<br><br><u>Residential:</u> For residential projects, will the project plant, at a minimum, two trees per every new residential dwelling unit proposed?<br><br>Check "N/A" if the project is a non-residential project. | A-2.1 | ☐ | ☐ | ☒ |

9b. Project Detail:
Please substantiate how the project satisfies question 9a.

The project would not include a residential component.