# WINGS LANDING TIDAL HABITAT RESTORATION PROJECT

*CEQA ADDENDUM*

# APPENDIX H

## Greenhouse Gas Emissions Documents

# Greenhouse Gas(GHG) Emissions Reduction Plan Consistency Determination

## For Projects Using Contractors or Other Outside Labor

This form is to be used by DWR project managers to document a DWR CEQA project's consistency with the DWR Greenhouse Gas Emissions Reduction Plan. This form is to be used only when DWR is the Lead Agency and when contractors or outside labor and equipment are used to implement the project.

Additional Guidance on filling out this form can be found at:
http://dwrclimatechange.water.ca.gov/guidance_resources.cfm

The DWR Greenhouse Gas Emissions Reduction Plan can be accessed at:
https://water.ca.gov/Programs/All-Programs/Climate-Change-Program/Climate-Action-Plan

| | |
|---|---|
| **Project Name:** | Wings Landing Tidal Habitat Restoration Project |
| **Environmental Document Type:** | Addendum |
| **Manager's Name:** | Caitlin Roddy |
| **Manager's E-mail:** | Caitlin.Roddy@water.ca.gov |
| **Division:** | Environmental Services |
| **Office, Branch, or Field Division:** | Mitigation and Restoration Branch |

**Short Project Description:**

The proposed project, tiered off the Suisun Marsh Plan EIS/EIR, includes restoration of an approximately 267-acre site, which is a portion of the 273-acre Wings Landing Property. The project consists of restoring managed marsh, managed perennial channels, managed seasonal channels, and uplands to a tidal marsh ecosystem. Returning the project site to natural tidal influence would restore previously inaccessible managed marsh into rearing, and/or food production for Delta Smelt, Longfin Smelt, and salmonids within the north-central Suisun Marsh.

**Project GHG Emissions Summary:**

| | | |
|---|---|---|
| Total Construction Emissions | 523 | $mtCO_2e$ |
| Maximum Annual Construction Emissions | 523 | $mtCO_2e$ |

☒ All other emissions from the project not accounted for above will occur as ongoing operational, maintenance, or business activity emissions and therefore have already been accounted for and analyzed in the GGERP.

**Extraordinary Construction Project Determination:**

Do total project construction emissions exceed 25,000 $mtCO_2e$ for the entire construction phase or exceed 12,500 $mtCO_2e$ in any single year of construction?

☒ No- Additional analysis not required ☐ Yes - Project specific emissions mitigation measures have been included in the environmental analysis document for the project

| **Project GHG Reduction Plan Checklist:** |
|---|
| ☒ All Project Level GHG Emissions Reduction Measures have been incorporated into the design or implementation plan for the project. (Project Level GHG Emissions Reduction Measures)<br>Or<br>☐ All feasible Project Level GHG Emissions Reduction Measures have been incorporated into the design or implementation plan for the project and Measures not incorporated have been listed and determined not to apply to the proposed project (include as an attachment) |
| ☒ Project does not conflict with any of the Specific Action GHG Emissions Reduction Measures (Specific Action GHG Emissions Reduction Measures) |
| Would implementation of the project result in additional energy demands on the SWP system of 15 GWh/yr or greater?<br>☐ Yes ☒ No<br>If you answered Yes, attach a letter documenting that the project has consulted with the DWR SWP Power and Risk Office regarding the additional power requirements of the project. |
| Is there substantial evidence that the effects of the proposed project may be cumulatively considerable notwithstanding the proposed project's compliance with the requirements of the DWR GHG Reduction Plan?<br>☐ Yes ☒ No<br>If you answered Yes, the project is not eligible for streamlined analysis of GHG emissions using the DWR GHG Emissions Reduction Plan. (See CEQA Guidelines, section 15183.5, subdivision (b)(2).) |

Based on the information provided above and information provided in associated environmental documentation completed pursuant to the above referenced project, the DWR CEQA Climate Change Committee has determined that:

☐ The entire proposed project is consistent with the DWR Greenhouse Gas Reduction Plan and the greenhouse gases emitted by the project are covered by the plan's analysis.

☐ The operational and maintenance phase of the project is consistent with the DWR Greenhouse Gas Reduction Plan and the greenhouse gases emitted by the project are covered by the plan's analysis. Emissions from the construction phase of the project are not covered by the DWR Greenhouse Gas Emissions Reduction Plan and will be mitigated as part of the project.

Project Manager Signature:  Date: 12-23-2019

C4 Approval Signature: Jennifer Morales Date: 1/7/2020

**Attachments:**

☒ GHG Emissions Inventory ☐ List and Explanation of excluded Project level GHG Emissions Reduction Measures ☐ SWP Power and Risk Office Consultation Letter

Links:
https://current.water.ca.gov/programs/icc/SitePages/Home.aspx
https://water.ca.gov/Programs/All-Programs/Climate-Change-Program

# Wings Landing Tidal Habitat Restoration Project

**Solano-San Francisco County, Annual**

## 1.0 Project Characteristics

### 1.1 Land Usage

| Land Uses | Size | Metric | Lot Acreage | Floor Surface Area | Population |
|---|---|---|---|---|---|
| City Park | 267.00 | Acre | 267.00 | 11,630,520.00 | 0 |

### 1.2 Other Project Characteristics

| | | | | | |
|---|---|---|---|---|---|
| **Urbanization** | Urban | **Wind Speed (m/s)** | 2.2 | **Precipitation Freq (Days)** | 56 |
| **Climate Zone** | 4 | | | **Operational Year** | 2021 |
| **Utility Company** | Pacific Gas & Electric Company | | | | |
| **CO2 Intensity (lb/MWhr)** | 641.35 | **CH4 Intensity (lb/MWhr)** | 0.029 | **N2O Intensity (lb/MWhr)** | 0.006 |

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

Project Characteristics -

Land Use -

Construction Phase - According to project description, work is anticipated to begin in May 2020 and end by November 30, 2020. Phase proportions are based on cut and fill volumes.

Off-road Equipment - Based on PD and equipment list - mostly clear and grub and staging will be occurring.

Off-road Equipment - According to PD and equipment list.

Off-road Equipment - According to PD and equipment list.

Off-road Equipment - According to PD and equipment list.

Off-road Equipment - According to PD and equipment list.

Off-road Equipment - According to PD and equipment list.

Off-road Equipment - According to PD and equipment list. Roller = compactor.

Off-road Equipment - According to PD and equipment list.

Off-road Equipment - According to PD and equipment list.

Off-road Equipment - According to PD and equipment list.

Grading - All import/export and acres graded values are from Table 2-3 of the PD.

Trips and VMT - Personnel estimated to be 6-20. CalEEMod defaults look accurate. Vendor = water trucks and equipment delivery. 2 trips per equipment. Haul trips are all onsite.

On-road Fugitive Dust - All haul trips are onsite. No pave.

Vehicle Trips - operational emissions are negligible

| Table Name | Column Name | Default Value | New Value |
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| tblConstructionPhase | NumDays | 465.00 | 45.00 |
| tblConstructionPhase | NumDays | 465.00 | 45.00 |
| tblConstructionPhase | NumDays | 465.00 | 30.00 |
| tblConstructionPhase | NumDays | 180.00 | 5.00 |
| tblConstructionPhase | NumDays | 465.00 | 15.00 |
| tblConstructionPhase | NumDays | 465.00 | 30.00 |

| | | | |
|---|---|---|---|
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| tblConstructionPhase | NumDays | 465.00 | 10.00 |
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| tblConstructionPhase | PhaseEndDate | 10/10/2041 | 7/9/2020 |
| tblConstructionPhase | PhaseEndDate | 12/14/2023 | 7/9/2020 |
| tblConstructionPhase | PhaseEndDate | 1/15/2043 | 8/20/2020 |
| tblConstructionPhase | PhaseEndDate | 3/3/2022 | 5/7/2020 |
| tblConstructionPhase | PhaseStartDate | 1/16/2043 | 7/10/2020 |
| tblConstructionPhase | PhaseStartDate | 12/15/2023 | 5/8/2020 |
| tblConstructionPhase | PhaseStartDate | 3/4/2022 | 5/8/2020 |
| tblConstructionPhase | PhaseStartDate | 10/11/2041 | 7/10/2020 |
| tblConstructionPhase | PhaseStartDate | 6/25/2021 | 5/1/2020 |
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| tblGrading | AcresOfGrading | 0.00 | 0.50 |
| tblGrading | AcresOfGrading | 0.00 | 0.50 |
| tblGrading | AcresOfGrading | 0.00 | 7.35 |
| tblGrading | AcresOfGrading | 0.00 | 5.11 |
| tblGrading | AcresOfGrading | 0.00 | 1.56 |
| tblGrading | AcresOfGrading | 0.00 | 1.09 |
| tblGrading | AcresOfGrading | 0.00 | 5.00 |
| tblGrading | AcresOfGrading | 0.00 | 0.07 |
| tblGrading | AcresOfGrading | 0.00 | 0.64 |
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| tblGrading | MaterialExported | 0.00 | 5,035.00 |
| tblGrading | MaterialExported | 0.00 | 4,214.00 |
| tblGrading | MaterialExported | 0.00 | 2,761.33 |

Wings Landing Tidal Habitat Restoration Project - Solano-San Francisco County, Annual

| | | | |
|---|---|---|---|
| tblGrading | MaterialImported | 0.00 | 17,635.23 |
| tblGrading | MaterialImported | 0.00 | 2,873.31 |
| tblGrading | MaterialImported | 0.00 | 11,600.00 |
| tblGrading | MaterialImported | 0.00 | 180.00 |
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| tblOffRoadEquipment | OffRoadEquipmentType | | Pumps |
| tblOffRoadEquipment | OffRoadEquipmentType | | Tractors/Loaders/Backhoes |
| tblOffRoadEquipment | OffRoadEquipmentType | | Pumps |
| tblOffRoadEquipment | OffRoadEquipmentType | | Rubber Tired Dozers |
| tblOffRoadEquipment | OffRoadEquipmentType | | Pumps |
| tblOffRoadEquipment | OffRoadEquipmentType | | Pumps |
| tblOffRoadEquipment | OffRoadEquipmentType | | Pumps |
| tblOffRoadEquipment | OffRoadEquipmentType | | Rollers |
| tblOffRoadEquipment | OffRoadEquipmentType | | Pumps |
| tblOffRoadEquipment | OffRoadEquipmentType | | Pumps |
| tblOffRoadEquipment | OffRoadEquipmentType | | Pumps |
| tblOffRoadEquipment | OffRoadEquipmentType | | Rubber Tired Dozers |
| tblOffRoadEquipment | OffRoadEquipmentType | Tractors/Loaders/Backhoes | Excavators |
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| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 0.00 | 4.00 |

| | | | |
|---|---|---|---|
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| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 4.00 | 2.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 0.00 | 2.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 0.00 | 1.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 4.00 |
| tblOffRoadEquipment | OffRoadEquipmentUnitAmount | 2.00 | 4.00 |
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| tblOffRoadEquipment | PhaseName | | Tidal Depressions |
| tblOffRoadEquipment | PhaseName | | Channel Plug Creation |
| tblOffRoadEquipment | PhaseName | | Cross-Berm Improvement |
| tblOffRoadEquipment | PhaseName | | Cross-Berm Improvement |
| tblOffRoadEquipment | PhaseName | | Levee Breaches |
| tblOffRoadEquipment | PhaseName | | Structure Removal |
| tblOffRoadEquipment | PhaseName | | Site Stabilization |
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| tblOffRoadEquipment | PhaseName | | Borrow-Ditch Restoration |
| tblOffRoadEquipment | PhaseName | | Site Stabilization |
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| tblOnRoadDust | HaulingPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | HaulingPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | HaulingPercentPave | 100.00 | 0.00 |

| | | | |
|---|---|---|---|
| tblOnRoadDust | HaulingPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | HaulingPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | HaulingPercentPave | 100.00 | 0.00 |
| tblOnRoadDust | HaulingPercentPave | 100.00 | 0.00 |
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| tblTripsAndVMT | VendorTripNumber | 0.00 | 2.00 |

| | | | |
|---|---|---|---|
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| tblTripsAndVMT | VendorTripNumber | 0.00 | 2.00 |
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| tblTripsAndVMT | VendorTripNumber | 0.00 | 2.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 2.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 2.00 |
| tblTripsAndVMT | VendorTripNumber | 0.00 | 2.00 |
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| tblVehicleTrips | SU_TR | 16.74 | 0.00 |
| tblVehicleTrips | WD_TR | 1.89 | 0.00 |

## 2.0 Emissions Summary

## 2.1 Overall Construction

### Unmitigated Construction

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | tons/yr | | | | | | | | | | MT/yr | | | | | |
| 2020 | 0.3814 | 3.9886 | 3.0785 | 5.8900e-003 | 3.4805 | 0.1885 | 3.6689 | 0.6589 | 0.1782 | 0.8371 | 0.0000 | 520.3809 | 520.3809 | 0.1070 | 0.0000 | 523.0561 |
| **Maximum** | **0.3814** | **3.9886** | **3.0785** | **5.8900e-003** | **3.4805** | **0.1885** | **3.6689** | **0.6589** | **0.1782** | **0.8371** | **0.0000** | **520.3809** | **520.3809** | **0.1070** | **0.0000** | **523.0561** |

### 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 | | | | | |
| 2020 | 0.3814 | 3.9886 | 3.0785 | 5.8900e-003 | 3.4805 | 0.1885 | 3.6689 | 0.6589 | 0.1782 | 0.8371 | 0.0000 | 520.3804 | 520.3804 | 0.1070 | 0.0000 | 523.0556 |
| **Maximum** | **0.3814** | **3.9886** | **3.0785** | **5.8900e-003** | **3.4805** | **0.1885** | **3.6689** | **0.6589** | **0.1782** | **0.8371** | **0.0000** | **520.3804** | **520.3804** | **0.1070** | **0.0000** | **523.0556** |

| | 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** |

| Quarter | Start Date | End Date | Maximum Unmitigated ROG + NOX (tons/quarter) | Maximum Mitigated ROG + NOX (tons/quarter) |
|---|---|---|---|---|
| 1 | 5-1-2020 | 7-31-2020 | 2.1622 | 2.1622 |
| 2 | 8-1-2020 | 9-30-2020 | 1.2250 | 1.2250 |
| | | Highest | 2.1622 | 2.1622 |

## 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 | 0.1096 | 2.0000e-005 | 2.4600e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | 0.0000 | 4.7700e-003 | 4.7700e-003 | 1.0000e-005 | 0.0000 | 5.0900e-003 |
| 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 | 0.0000 |
| Mobile | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Waste | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 4.6607 | 0.0000 | 4.6607 | 0.2754 | 0.0000 | 11.5466 |
| Water | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 323.9123 | 323.9123 | 0.0147 | 3.0300e-003 | 325.1815 |
| **Total** | **0.1096** | **2.0000e-005** | **2.4600e-003** | **0.0000** | **0.0000** | **1.0000e-005** | **1.0000e-005** | **0.0000** | **1.0000e-005** | **1.0000e-005** | **4.6607** | **323.9170** | **328.5777** | **0.2901** | **3.0300e-003** | **336.7332** |

## 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 | 0.1096 | 2.0000e-005 | 2.4600e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | 0.0000 | 4.7700e-003 | 4.7700e-003 | 1.0000e-005 | 0.0000 | 5.0900e-003 |
| 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 | 0.0000 |
| Mobile | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Waste | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 4.6607 | 0.0000 | 4.6607 | 0.2754 | 0.0000 | 11.5466 |
| Water | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 323.9123 | 323.9123 | 0.0147 | 3.0300e-003 | 325.1815 |
| **Total** | **0.1096** | **2.0000e-005** | **2.4600e-003** | **0.0000** | **0.0000** | **1.0000e-005** | **1.0000e-005** | **0.0000** | **1.0000e-005** | **1.0000e-005** | **4.6607** | **323.9170** | **328.5777** | **0.2901** | **3.0300e-003** | **336.7332** |

| | 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**

| Phase Number | Phase Name | Phase Type | Start Date | End Date | Num Days Week | Num Days | Phase Description |
|---|---|---|---|---|---|---|---|
| 1 | Site Preparation | Site Preparation | 5/1/2020 | 5/7/2020 | 5 | 5 | |
| 2 | Tidal Depressions | Grading | 5/8/2020 | 7/9/2020 | 5 | 45 | |
| 3 | Borrow-Ditch Restoration | Grading | 5/8/2020 | 7/9/2020 | 5 | 45 | |
| 4 | Channel Enhancement | Grading | 7/10/2020 | 8/20/2020 | 5 | 30 | |
| 5 | Channel Creation | Grading | 7/10/2020 | 8/20/2020 | 5 | 30 | |
| 6 | Channel Plug Creation | Grading | 8/21/2020 | 9/10/2020 | 5 | 15 | |
| 7 | Cross-Berm Improvement | Grading | 9/11/2020 | 10/22/2020 | 5 | 30 | |
| 8 | Structure Removal | Grading | 10/23/2020 | 11/5/2020 | 5 | 10 | |
| 9 | Levee Breaches | Grading | 11/6/2020 | 11/19/2020 | 5 | 10 | |
| 10 | Site Stabilization | Grading | 11/20/2020 | 11/30/2020 | 5 | 7 | |

**Acres of Grading (Site Preparation Phase): 0.5**

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

**Acres of Paving: 0**

**Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating in sqft)**

**OffRoad Equipment**

| Phase Name | Offroad Equipment Type | Amount | Usage Hours | Horse Power | Load Factor |
|---|---|---|---|---|---|
| Channel Creation | Pumps | 2 | 8.00 | 84 | 0.74 |
| Structure Removal | Tractors/Loaders/Backhoes | 4 | 8.00 | 97 | 0.37 |
| Site Stabilization | Tractors/Loaders/Backhoes | 2 | 8.00 | 97 | 0.37 |
| Channel Enhancement | Pumps | 2 | 8.00 | 84 | 0.74 |
| Site Preparation | Rubber Tired Dozers | 1 | 8.00 | 247 | 0.40 |
| Tidal Depressions | Pumps | 2 | 8.00 | 84 | 0.74 |

| | | | | | |
|---|---|---|---|---|---|
| Channel Plug Creation | Pumps | 4 | 8.00 | 84 | 0.74 |
| Cross-Berm Improvement | Pumps | 4 | 8.00 | 84 | 0.74 |
| Cross-Berm Improvement | Rollers | 1 | 8.00 | 80 | 0.38 |
| Levee Breaches | Pumps | 4 | 8.00 | 84 | 0.74 |
| Structure Removal | Pumps | 4 | 8.00 | 84 | 0.74 |
| Site Stabilization | Pumps | 2 | 8.00 | 84 | 0.74 |
| Tidal Depressions | Rubber Tired Dozers | 1 | 8.00 | 247 | 0.40 |
| Site Stabilization | Excavators | 2 | 8.00 | 158 | 0.38 |
| Borrow-Ditch Restoration | Excavators | 2 | 8.00 | 158 | 0.38 |
| Tidal Depressions | Excavators | 2 | 8.00 | 158 | 0.38 |
| Channel Enhancement | Excavators | 2 | 8.00 | 158 | 0.38 |
| Tidal Depressions | Tractors/Loaders/Backhoes | 4 | 8.00 | 97 | 0.37 |
| Site Preparation | Excavators | 2 | 8.00 | 158 | 0.38 |
| Site Preparation | Tractors/Loaders/Backhoes | 2 | 8.00 | 97 | 0.37 |
| Borrow-Ditch Restoration | Pumps | 2 | 8.00 | 84 | 0.74 |
| Channel Creation | Excavators | 2 | 8.00 | 158 | 0.38 |
| Channel Plug Creation | Excavators | 2 | 8.00 | 158 | 0.38 |
| Cross-Berm Improvement | Excavators | 2 | 8.00 | 158 | 0.38 |
| Structure Removal | Excavators | 2 | 8.00 | 158 | 0.38 |
| Levee Breaches | Excavators | 2 | 8.00 | 158 | 0.38 |
| Site Stabilization | Rubber Tired Dozers | 1 | 8.00 | 247 | 0.40 |
| Borrow-Ditch Restoration | Rubber Tired Dozers | 1 | 8.00 | 247 | 0.40 |
| Channel Enhancement | Rubber Tired Dozers | 1 | 8.00 | 247 | 0.40 |
| Channel Creation | Rubber Tired Dozers | 1 | 8.00 | 247 | 0.40 |
| Channel Plug Creation | Rubber Tired Dozers | 1 | 8.00 | 247 | 0.40 |
| Cross-Berm Improvement | Rubber Tired Dozers | 1 | 8.00 | 247 | 0.40 |
| Structure Removal | Rubber Tired Dozers | 1 | 8.00 | 247 | 0.40 |

| | | | | | |
|---|---|---|---|---|---|
| Levee Breaches | Rubber Tired Dozers | 1 | 8.00 | 247 | 0.40 |
| Site Stabilization | Rollers | 1 | 8.00 | 80 | 0.38 |
| Channel Enhancement | Tractors/Loaders/Backhoes | 2 | 8.00 | 97 | 0.37 |
| Channel Creation | Tractors/Loaders/Backhoes | 2 | 8.00 | 97 | 0.37 |
| Channel Plug Creation | Tractors/Loaders/Backhoes | 4 | 8.00 | 97 | 0.37 |
| Cross-Berm Improvement | Tractors/Loaders/Backhoes | 4 | 8.00 | 97 | 0.37 |

**Trips and VMT**

| Phase Name | Offroad Equipment Count | Worker Trip Number | Vendor Trip Number | Hauling Trip Number | Worker Trip Length | Vendor Trip Length | Hauling Trip Length | Worker Vehicle Class | Vendor Vehicle Class | Hauling Vehicle Class |
|---|---|---|---|---|---|---|---|---|---|---|
| Site Stabilization | 8 | 20.00 | 34.00 | 0.00 | 10.80 | 7.30 | 0.50 | LD_Mix | HDT_Mix | HHDT |
| Site Preparation | 5 | 13.00 | 34.00 | 0.00 | 10.80 | 7.30 | 0.50 | LD_Mix | HDT_Mix | HHDT |
| Tidal Depressions | 9 | 23.00 | 2.00 | 1,450.00 | 10.80 | 7.30 | 0.50 | LD_Mix | HDT_Mix | HHDT |
| Borrow-Ditch Restoration | 5 | 13.00 | 2.00 | 2,204.00 | 10.80 | 7.30 | 0.50 | LD_Mix | HDT_Mix | HHDT |
| Channel Enhancement | 7 | 18.00 | 2.00 | 629.00 | 10.80 | 7.30 | 0.50 | LD_Mix | HDT_Mix | HHDT |
| Channel Creation | 7 | 18.00 | 2.00 | 527.00 | 10.80 | 7.30 | 0.50 | LD_Mix | HDT_Mix | HHDT |
| Channel Plug Creation | 11 | 28.00 | 2.00 | 359.00 | 10.80 | 7.30 | 0.50 | LD_Mix | HDT_Mix | HHDT |
| Cross-Berm Improvement | 12 | 30.00 | 2.00 | 3,304.00 | 10.80 | 7.30 | 0.50 | LD_Mix | HDT_Mix | HHDT |
| Structure Removal | 11 | 28.00 | 2.00 | 23.00 | 10.80 | 7.30 | 0.50 | LD_Mix | HDT_Mix | HHDT |
| Levee Breaches | 7 | 18.00 | 2.00 | 345.00 | 10.80 | 7.30 | 0.50 | LD_Mix | HDT_Mix | HHDT |

## 3.1 Mitigation Measures Construction

## 3.2 Site Preparation - 2020

### 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 | | | | | 0.0153 | 0.0000 | 0.0153 | 8.3000e-003 | 0.0000 | 8.3000e-003 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 4.9700e-003 | 0.0509 | 0.0381 | 6.0000e-005 | | 2.6400e-003 | 2.6400e-003 | | 2.4300e-003 | 2.4300e-003 | 0.0000 | 5.5091 | 5.5091 | 1.7800e-003 | 0.0000 | 5.5537 |
| **Total** | **4.9700e-003** | **0.0509** | **0.0381** | **6.0000e-005** | **0.0153** | **2.6400e-003** | **0.0180** | **8.3000e-003** | **2.4300e-003** | **0.0107** | **0.0000** | **5.5091** | **5.5091** | **1.7800e-003** | **0.0000** | **5.5537** |

### 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 | 3.8000e-004 | 9.6900e-003 | 2.7000e-003 | 2.0000e-005 | 5.6000e-004 | 5.0000e-005 | 6.1000e-004 | 1.6000e-004 | 5.0000e-005 | 2.1000e-004 | 0.0000 | 2.3153 | 2.3153 | 1.2000e-004 | 0.0000 | 2.3184 |
| Worker | 1.2000e-004 | 8.0000e-005 | 8.2000e-004 | 0.0000 | 2.6000e-004 | 0.0000 | 2.6000e-004 | 7.0000e-005 | 0.0000 | 7.0000e-005 | 0.0000 | 0.2348 | 0.2348 | 1.0000e-005 | 0.0000 | 0.2349 |
| **Total** | **5.0000e-004** | **9.7700e-003** | **3.5200e-003** | **2.0000e-005** | **8.2000e-004** | **5.0000e-005** | **8.7000e-004** | **2.3000e-004** | **5.0000e-005** | **2.8000e-004** | **0.0000** | **2.5501** | **2.5501** | **1.3000e-004** | **0.0000** | **2.5533** |

## 3.2 Site Preparation - 2020

### 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 | | | | | 0.0153 | 0.0000 | 0.0153 | 8.3000e-003 | 0.0000 | 8.3000e-003 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 4.9700e-003 | 0.0509 | 0.0381 | 6.0000e-005 | | 2.6400e-003 | 2.6400e-003 | | 2.4300e-003 | 2.4300e-003 | 0.0000 | 5.5091 | 5.5091 | 1.7800e-003 | 0.0000 | 5.5537 |
| **Total** | **4.9700e-003** | **0.0509** | **0.0381** | **6.0000e-005** | **0.0153** | **2.6400e-003** | **0.0180** | **8.3000e-003** | **2.4300e-003** | **0.0107** | **0.0000** | **5.5091** | **5.5091** | **1.7800e-003** | **0.0000** | **5.5537** |

### 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 | 3.8000e-004 | 9.6900e-003 | 2.7000e-003 | 2.0000e-005 | 5.6000e-004 | 5.0000e-005 | 6.1000e-004 | 1.6000e-004 | 5.0000e-005 | 2.1000e-004 | 0.0000 | 2.3153 | 2.3153 | 1.2000e-004 | 0.0000 | 2.3184 |
| Worker | 1.2000e-004 | 8.0000e-005 | 8.2000e-004 | 0.0000 | 2.6000e-004 | 0.0000 | 2.6000e-004 | 7.0000e-005 | 0.0000 | 7.0000e-005 | 0.0000 | 0.2348 | 0.2348 | 1.0000e-005 | 0.0000 | 0.2349 |
| **Total** | **5.0000e-004** | **9.7700e-003** | **3.5200e-003** | **2.0000e-005** | **8.2000e-004** | **5.0000e-005** | **8.7000e-004** | **2.3000e-004** | **5.0000e-005** | **2.8000e-004** | **0.0000** | **2.5501** | **2.5501** | **1.3000e-004** | **0.0000** | **2.5533** |

## 3.3 Tidal Depressions - 2020

### 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 | | | | | 0.1427 | 0.0000 | 0.1427 | 0.0753 | 0.0000 | 0.0753 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0732 | 0.7118 | 0.6145 | 1.0000e-003 | | 0.0391 | 0.0391 | | 0.0367 | 0.0367 | 0.0000 | 87.2950 | 87.2950 | 0.0215 | 0.0000 | 87.8332 |
| **Total** | **0.0732** | **0.7118** | **0.6145** | **1.0000e-003** | **0.1427** | **0.0391** | **0.1818** | **0.0753** | **0.0367** | **0.1120** | **0.0000** | **87.2950** | **87.2950** | **0.0215** | **0.0000** | **87.8332** |

### 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 | 1.7300e-003 | 0.0782 | 9.9500e-003 | 1.1000e-004 | 0.4517 | 7.0000e-005 | 0.4518 | 0.0451 | 7.0000e-005 | 0.0452 | 0.0000 | 10.3612 | 10.3612 | 1.6400e-003 | 0.0000 | 10.4023 |
| Vendor | 2.0000e-004 | 5.1300e-003 | 1.4300e-003 | 1.0000e-005 | 3.0000e-004 | 3.0000e-005 | 3.2000e-004 | 9.0000e-005 | 3.0000e-005 | 1.1000e-004 | 0.0000 | 1.2258 | 1.2258 | 7.0000e-005 | 0.0000 | 1.2274 |
| Worker | 1.8800e-003 | 1.3200e-003 | 0.0130 | 4.0000e-005 | 4.1100e-003 | 3.0000e-005 | 4.1400e-003 | 1.0900e-003 | 3.0000e-005 | 1.1200e-003 | 0.0000 | 3.7381 | 3.7381 | 9.0000e-005 | 0.0000 | 3.7405 |
| **Total** | **3.8100e-003** | **0.0847** | **0.0244** | **1.6000e-004** | **0.4561** | **1.3000e-004** | **0.4563** | **0.0463** | **1.3000e-004** | **0.0464** | **0.0000** | **15.3251** | **15.3251** | **1.8000e-003** | **0.0000** | **15.3702** |

## 3.3 Tidal Depressions - 2020

### 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 | | | | | 0.1427 | 0.0000 | 0.1427 | 0.0753 | 0.0000 | 0.0753 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0732 | 0.7118 | 0.6145 | 1.0000e-003 | | 0.0391 | 0.0391 | | 0.0367 | 0.0367 | 0.0000 | 87.2949 | 87.2949 | 0.0215 | 0.0000 | 87.8331 |
| **Total** | **0.0732** | **0.7118** | **0.6145** | **1.0000e-003** | **0.1427** | **0.0391** | **0.1818** | **0.0753** | **0.0367** | **0.1120** | **0.0000** | **87.2949** | **87.2949** | **0.0215** | **0.0000** | **87.8331** |

### 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 | 1.7300e-003 | 0.0782 | 9.9500e-003 | 1.1000e-004 | 0.4517 | 7.0000e-005 | 0.4518 | 0.0451 | 7.0000e-005 | 0.0452 | 0.0000 | 10.3612 | 10.3612 | 1.6400e-003 | 0.0000 | 10.4023 |
| Vendor | 2.0000e-004 | 5.1300e-003 | 1.4300e-003 | 1.0000e-005 | 3.0000e-004 | 3.0000e-005 | 3.2000e-004 | 9.0000e-005 | 3.0000e-005 | 1.1000e-004 | 0.0000 | 1.2258 | 1.2258 | 7.0000e-005 | 0.0000 | 1.2274 |
| Worker | 1.8800e-003 | 1.3200e-003 | 0.0130 | 4.0000e-005 | 4.1100e-003 | 3.0000e-005 | 4.1400e-003 | 1.0900e-003 | 3.0000e-005 | 1.1200e-003 | 0.0000 | 3.7381 | 3.7381 | 9.0000e-005 | 0.0000 | 3.7405 |
| **Total** | **3.8100e-003** | **0.0847** | **0.0244** | **1.6000e-004** | **0.4561** | **1.3000e-004** | **0.4563** | **0.0463** | **1.3000e-004** | **0.0464** | **0.0000** | **15.3251** | **15.3251** | **1.8000e-003** | **0.0000** | **15.3702** |

## 3.4 Borrow-Ditch Restoration - 2020

### 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 | | | | | 0.1404 | 0.0000 | 0.1404 | 0.0751 | 0.0000 | 0.0751 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0544 | 0.5224 | 0.4093 | 7.2000e-004 | | 0.0271 | 0.0271 | | 0.0257 | 0.0257 | 0.0000 | 62.7383 | 62.7383 | 0.0136 | 0.0000 | 63.0779 |
| **Total** | **0.0544** | **0.5224** | **0.4093** | **7.2000e-004** | **0.1404** | **0.0271** | **0.1675** | **0.0751** | **0.0257** | **0.1007** | **0.0000** | **62.7383** | **62.7383** | **0.0136** | **0.0000** | **63.0779** |

### 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 | 2.6300e-003 | 0.1189 | 0.0151 | 1.7000e-004 | 0.6866 | 1.0000e-004 | 0.6867 | 0.0686 | 1.0000e-004 | 0.0687 | 0.0000 | 15.7491 | 15.7491 | 2.5000e-003 | 0.0000 | 15.8115 |
| Vendor | 2.0000e-004 | 5.1300e-003 | 1.4300e-003 | 1.0000e-005 | 3.0000e-004 | 3.0000e-005 | 3.2000e-004 | 9.0000e-005 | 3.0000e-005 | 1.1000e-004 | 0.0000 | 1.2258 | 1.2258 | 7.0000e-005 | 0.0000 | 1.2274 |
| Worker | 1.0600e-003 | 7.5000e-004 | 7.3600e-003 | 2.0000e-005 | 2.3200e-003 | 2.0000e-005 | 2.3400e-003 | 6.2000e-004 | 1.0000e-005 | 6.3000e-004 | 0.0000 | 2.1129 | 2.1129 | 5.0000e-005 | 0.0000 | 2.1142 |
| **Total** | **3.8900e-003** | **0.1248** | **0.0239** | **2.0000e-004** | **0.6892** | **1.5000e-004** | **0.6894** | **0.0693** | **1.4000e-004** | **0.0694** | **0.0000** | **19.0877** | **19.0877** | **2.6200e-003** | **0.0000** | **19.1531** |

## 3.4 Borrow-Ditch Restoration - 2020

### 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 | | | | | 0.1404 | 0.0000 | 0.1404 | 0.0751 | 0.0000 | 0.0751 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0544 | 0.5224 | 0.4093 | 7.2000e-004 | | 0.0271 | 0.0271 | | 0.0257 | 0.0257 | 0.0000 | 62.7382 | 62.7382 | 0.0136 | 0.0000 | 63.0779 |
| **Total** | **0.0544** | **0.5224** | **0.4093** | **7.2000e-004** | **0.1404** | **0.0271** | **0.1675** | **0.0751** | **0.0257** | **0.1007** | **0.0000** | **62.7382** | **62.7382** | **0.0136** | **0.0000** | **63.0779** |

### 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 | 2.6300e-003 | 0.1189 | 0.0151 | 1.7000e-004 | 0.6866 | 1.0000e-004 | 0.6867 | 0.0686 | 1.0000e-004 | 0.0687 | 0.0000 | 15.7491 | 15.7491 | 2.5000e-003 | 0.0000 | 15.8115 |
| Vendor | 2.0000e-004 | 5.1300e-003 | 1.4300e-003 | 1.0000e-005 | 3.0000e-004 | 3.0000e-005 | 3.2000e-004 | 9.0000e-005 | 3.0000e-005 | 1.1000e-004 | 0.0000 | 1.2258 | 1.2258 | 7.0000e-005 | 0.0000 | 1.2274 |
| Worker | 1.0600e-003 | 7.5000e-004 | 7.3600e-003 | 2.0000e-005 | 2.3200e-003 | 2.0000e-005 | 2.3400e-003 | 6.2000e-004 | 1.0000e-005 | 6.3000e-004 | 0.0000 | 2.1129 | 2.1129 | 5.0000e-005 | 0.0000 | 2.1142 |
| **Total** | **3.8900e-003** | **0.1248** | **0.0239** | **2.0000e-004** | **0.6892** | **1.5000e-004** | **0.6894** | **0.0693** | **1.4000e-004** | **0.0694** | **0.0000** | **19.0877** | **19.0877** | **2.6200e-003** | **0.0000** | **19.1531** |

## 3.5 Channel Enhancement - 2020

### 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 | | | | | 0.0933 | 0.0000 | 0.0933 | 0.0500 | 0.0000 | 0.0500 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0425 | 0.4114 | 0.3413 | 5.7000e-004 | | 0.0220 | 0.0220 | | 0.0208 | 0.0208 | 0.0000 | 50.0111 | 50.0111 | 0.0117 | 0.0000 | 50.3037 |
| **Total** | **0.0425** | **0.4114** | **0.3413** | **5.7000e-004** | **0.0933** | **0.0220** | **0.1154** | **0.0500** | **0.0208** | **0.0708** | **0.0000** | **50.0111** | **50.0111** | **0.0117** | **0.0000** | **50.3037** |

### 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 | 7.5000e-004 | 0.0339 | 4.3100e-003 | 5.0000e-005 | 0.1960 | 3.0000e-005 | 0.1960 | 0.0196 | 3.0000e-005 | 0.0196 | 0.0000 | 4.4946 | 4.4946 | 7.1000e-004 | 0.0000 | 4.5125 |
| Vendor | 1.3000e-004 | 3.4200e-003 | 9.5000e-004 | 1.0000e-005 | 2.0000e-004 | 2.0000e-005 | 2.2000e-004 | 6.0000e-005 | 2.0000e-005 | 7.0000e-005 | 0.0000 | 0.8172 | 0.8172 | 4.0000e-005 | 0.0000 | 0.8183 |
| Worker | 9.8000e-004 | 6.9000e-004 | 6.7900e-003 | 2.0000e-005 | 2.1400e-003 | 1.0000e-005 | 2.1600e-003 | 5.7000e-004 | 1.0000e-005 | 5.8000e-004 | 0.0000 | 1.9503 | 1.9503 | 5.0000e-005 | 0.0000 | 1.9516 |
| **Total** | **1.8600e-003** | **0.0381** | **0.0121** | **8.0000e-005** | **0.1983** | **6.0000e-005** | **0.1984** | **0.0202** | **6.0000e-005** | **0.0202** | **0.0000** | **7.2621** | **7.2621** | **8.0000e-004** | **0.0000** | **7.2823** |

## 3.5 Channel Enhancement - 2020

### 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 | | | | | 0.0933 | 0.0000 | 0.0933 | 0.0500 | 0.0000 | 0.0500 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0425 | 0.4114 | 0.3413 | 5.7000e-004 | | 0.0220 | 0.0220 | | 0.0208 | 0.0208 | 0.0000 | 50.0110 | 50.0110 | 0.0117 | 0.0000 | 50.3037 |
| **Total** | **0.0425** | **0.4114** | **0.3413** | **5.7000e-004** | **0.0933** | **0.0220** | **0.1154** | **0.0500** | **0.0208** | **0.0708** | **0.0000** | **50.0110** | **50.0110** | **0.0117** | **0.0000** | **50.3037** |

### 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 | 7.5000e-004 | 0.0339 | 4.3100e-003 | 5.0000e-005 | 0.1960 | 3.0000e-005 | 0.1960 | 0.0196 | 3.0000e-005 | 0.0196 | 0.0000 | 4.4946 | 4.4946 | 7.1000e-004 | 0.0000 | 4.5125 |
| Vendor | 1.3000e-004 | 3.4200e-003 | 9.5000e-004 | 1.0000e-005 | 2.0000e-004 | 2.0000e-005 | 2.2000e-004 | 6.0000e-005 | 2.0000e-005 | 7.0000e-005 | 0.0000 | 0.8172 | 0.8172 | 4.0000e-005 | 0.0000 | 0.8183 |
| Worker | 9.8000e-004 | 6.9000e-004 | 6.7900e-003 | 2.0000e-005 | 2.1400e-003 | 1.0000e-005 | 2.1600e-003 | 5.7000e-004 | 1.0000e-005 | 5.8000e-004 | 0.0000 | 1.9503 | 1.9503 | 5.0000e-005 | 0.0000 | 1.9516 |
| **Total** | **1.8600e-003** | **0.0381** | **0.0121** | **8.0000e-005** | **0.1983** | **6.0000e-005** | **0.1984** | **0.0202** | **6.0000e-005** | **0.0202** | **0.0000** | **7.2621** | **7.2621** | **8.0000e-004** | **0.0000** | **7.2823** |

## 3.6 Channel Creation - 2020

### 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 | | | | | 0.0914 | 0.0000 | 0.0914 | 0.0498 | 0.0000 | 0.0498 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0425 | 0.4114 | 0.3413 | 5.7000e-004 | | 0.0220 | 0.0220 | | 0.0208 | 0.0208 | 0.0000 | 50.0111 | 50.0111 | 0.0117 | 0.0000 | 50.3037 |
| **Total** | **0.0425** | **0.4114** | **0.3413** | **5.7000e-004** | **0.0914** | **0.0220** | **0.1134** | **0.0498** | **0.0208** | **0.0706** | **0.0000** | **50.0111** | **50.0111** | **0.0117** | **0.0000** | **50.3037** |

### 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 | 6.3000e-004 | 0.0284 | 3.6100e-003 | 4.0000e-005 | 0.1642 | 2.0000e-005 | 0.1642 | 0.0164 | 2.0000e-005 | 0.0164 | 0.0000 | 3.7658 | 3.7658 | 6.0000e-004 | 0.0000 | 3.7807 |
| Vendor | 1.3000e-004 | 3.4200e-003 | 9.5000e-004 | 1.0000e-005 | 2.0000e-004 | 2.0000e-005 | 2.2000e-004 | 6.0000e-005 | 2.0000e-005 | 7.0000e-005 | 0.0000 | 0.8172 | 0.8172 | 4.0000e-005 | 0.0000 | 0.8183 |
| Worker | 9.8000e-004 | 6.9000e-004 | 6.7900e-003 | 2.0000e-005 | 2.1400e-003 | 1.0000e-005 | 2.1600e-003 | 5.7000e-004 | 1.0000e-005 | 5.8000e-004 | 0.0000 | 1.9503 | 1.9503 | 5.0000e-005 | 0.0000 | 1.9516 |
| **Total** | **1.7400e-003** | **0.0325** | **0.0114** | **7.0000e-005** | **0.1665** | **5.0000e-005** | **0.1666** | **0.0170** | **5.0000e-005** | **0.0171** | **0.0000** | **6.5333** | **6.5333** | **6.9000e-004** | **0.0000** | **6.5505** |

## 3.6 Channel Creation - 2020

### 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 | | | | | 0.0914 | 0.0000 | 0.0914 | 0.0498 | 0.0000 | 0.0498 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0425 | 0.4114 | 0.3413 | 5.7000e-004 | | 0.0220 | 0.0220 | | 0.0208 | 0.0208 | 0.0000 | 50.0110 | 50.0110 | 0.0117 | 0.0000 | 50.3037 |
| **Total** | **0.0425** | **0.4114** | **0.3413** | **5.7000e-004** | **0.0914** | **0.0220** | **0.1134** | **0.0498** | **0.0208** | **0.0706** | **0.0000** | **50.0110** | **50.0110** | **0.0117** | **0.0000** | **50.3037** |

### 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 | 6.3000e-004 | 0.0284 | 3.6100e-003 | 4.0000e-005 | 0.1642 | 2.0000e-005 | 0.1642 | 0.0164 | 2.0000e-005 | 0.0164 | 0.0000 | 3.7658 | 3.7658 | 6.0000e-004 | 0.0000 | 3.7807 |
| Vendor | 1.3000e-004 | 3.4200e-003 | 9.5000e-004 | 1.0000e-005 | 2.0000e-004 | 2.0000e-005 | 2.2000e-004 | 6.0000e-005 | 2.0000e-005 | 7.0000e-005 | 0.0000 | 0.8172 | 0.8172 | 4.0000e-005 | 0.0000 | 0.8183 |
| Worker | 9.8000e-004 | 6.9000e-004 | 6.7900e-003 | 2.0000e-005 | 2.1400e-003 | 1.0000e-005 | 2.1600e-003 | 5.7000e-004 | 1.0000e-005 | 5.8000e-004 | 0.0000 | 1.9503 | 1.9503 | 5.0000e-005 | 0.0000 | 1.9516 |
| **Total** | **1.7400e-003** | **0.0325** | **0.0114** | **7.0000e-005** | **0.1665** | **5.0000e-005** | **0.1666** | **0.0170** | **5.0000e-005** | **0.0171** | **0.0000** | **6.5333** | **6.5333** | **6.9000e-004** | **0.0000** | **6.5505** |

## 3.7 Channel Plug Creation - 2020

### 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 | | | | | 0.0459 | 0.0000 | 0.0459 | 0.0249 | 0.0000 | 0.0249 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0308 | 0.2902 | 0.2613 | 4.3000e-004 | | 0.0161 | 0.0161 | | 0.0153 | 0.0153 | 0.0000 | 37.5764 | 37.5764 | 7.6800e-003 | 0.0000 | 37.7685 |
| **Total** | **0.0308** | **0.2902** | **0.2613** | **4.3000e-004** | **0.0459** | **0.0161** | **0.0620** | **0.0249** | **0.0153** | **0.0402** | **0.0000** | **37.5764** | **37.5764** | **7.6800e-003** | **0.0000** | **37.7685** |

### 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 | 4.3000e-004 | 0.0194 | 2.4600e-003 | 3.0000e-005 | 0.1118 | 2.0000e-005 | 0.1119 | 0.0112 | 2.0000e-005 | 0.0112 | 0.0000 | 2.5653 | 2.5653 | 4.1000e-004 | 0.0000 | 2.5755 |
| Vendor | 7.0000e-005 | 1.7100e-003 | 4.8000e-004 | 0.0000 | 1.0000e-004 | 1.0000e-005 | 1.1000e-004 | 3.0000e-005 | 1.0000e-005 | 4.0000e-005 | 0.0000 | 0.4086 | 0.4086 | 2.0000e-005 | 0.0000 | 0.4091 |
| Worker | 7.6000e-004 | 5.4000e-004 | 5.2800e-003 | 2.0000e-005 | 1.6700e-003 | 1.0000e-005 | 1.6800e-003 | 4.4000e-004 | 1.0000e-005 | 4.5000e-004 | 0.0000 | 1.5169 | 1.5169 | 4.0000e-005 | 0.0000 | 1.5179 |
| **Total** | **1.2600e-003** | **0.0216** | **8.2200e-003** | **5.0000e-005** | **0.1136** | **4.0000e-005** | **0.1137** | **0.0116** | **4.0000e-005** | **0.0117** | **0.0000** | **4.4908** | **4.4908** | **4.7000e-004** | **0.0000** | **4.5025** |

## 3.7 Channel Plug Creation - 2020

### 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 | | | | | 0.0459 | 0.0000 | 0.0459 | 0.0249 | 0.0000 | 0.0249 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0308 | 0.2902 | 0.2613 | 4.3000e-004 | | 0.0161 | 0.0161 | | 0.0153 | 0.0153 | 0.0000 | 37.5764 | 37.5764 | 7.6800e-003 | 0.0000 | 37.7685 |
| **Total** | **0.0308** | **0.2902** | **0.2613** | **4.3000e-004** | **0.0459** | **0.0161** | **0.0620** | **0.0249** | **0.0153** | **0.0402** | **0.0000** | **37.5764** | **37.5764** | **7.6800e-003** | **0.0000** | **37.7685** |

### 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 | 4.3000e-004 | 0.0194 | 2.4600e-003 | 3.0000e-005 | 0.1118 | 2.0000e-005 | 0.1119 | 0.0112 | 2.0000e-005 | 0.0112 | 0.0000 | 2.5653 | 2.5653 | 4.1000e-004 | 0.0000 | 2.5755 |
| Vendor | 7.0000e-005 | 1.7100e-003 | 4.8000e-004 | 0.0000 | 1.0000e-004 | 1.0000e-005 | 1.1000e-004 | 3.0000e-005 | 1.0000e-005 | 4.0000e-005 | 0.0000 | 0.4086 | 0.4086 | 2.0000e-005 | 0.0000 | 0.4091 |
| Worker | 7.6000e-004 | 5.4000e-004 | 5.2800e-003 | 2.0000e-005 | 1.6700e-003 | 1.0000e-005 | 1.6800e-003 | 4.4000e-004 | 1.0000e-005 | 4.5000e-004 | 0.0000 | 1.5169 | 1.5169 | 4.0000e-005 | 0.0000 | 1.5179 |
| **Total** | **1.2600e-003** | **0.0216** | **8.2200e-003** | **5.0000e-005** | **0.1136** | **4.0000e-005** | **0.1137** | **0.0116** | **4.0000e-005** | **0.0117** | **0.0000** | **4.4908** | **4.4908** | **4.7000e-004** | **0.0000** | **4.5025** |

## 3.8 Cross-Berm Improvement - 2020

### 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 | | | | | 0.0936 | 0.0000 | 0.0936 | 0.0500 | 0.0000 | 0.0500 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0646 | 0.6116 | 0.5509 | 9.0000e-004 | | 0.0342 | 0.0342 | | 0.0325 | 0.0325 | 0.0000 | 78.6102 | 78.6102 | 0.0165 | 0.0000 | 79.0223 |
| **Total** | **0.0646** | **0.6116** | **0.5509** | **9.0000e-004** | **0.0936** | **0.0342** | **0.1279** | **0.0500** | **0.0325** | **0.0825** | **0.0000** | **78.6102** | **78.6102** | **0.0165** | **0.0000** | **79.0223** |

### 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 | 3.9500e-003 | 0.1783 | 0.0227 | 2.5000e-004 | 1.0293 | 1.6000e-004 | 1.0295 | 0.1028 | 1.5000e-004 | 0.1029 | 0.0000 | 23.6093 | 23.6093 | 3.7500e-003 | 0.0000 | 23.7030 |
| Vendor | 1.3000e-004 | 3.4200e-003 | 9.5000e-004 | 1.0000e-005 | 2.0000e-004 | 2.0000e-005 | 2.2000e-004 | 6.0000e-005 | 2.0000e-005 | 7.0000e-005 | 0.0000 | 0.8172 | 0.8172 | 4.0000e-005 | 0.0000 | 0.8183 |
| Worker | 1.6400e-003 | 1.1500e-003 | 0.0113 | 4.0000e-005 | 3.5700e-003 | 2.0000e-005 | 3.6000e-003 | 9.5000e-004 | 2.0000e-005 | 9.7000e-004 | 0.0000 | 3.2506 | 3.2506 | 8.0000e-005 | 0.0000 | 3.2526 |
| **Total** | **5.7200e-003** | **0.1828** | **0.0349** | **3.0000e-004** | **1.0331** | **2.0000e-004** | **1.0333** | **0.1038** | **1.9000e-004** | **0.1040** | **0.0000** | **27.6770** | **27.6770** | **3.8700e-003** | **0.0000** | **27.7738** |

## 3.8 Cross-Berm Improvement - 2020

### 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 | | | | | 0.0936 | 0.0000 | 0.0936 | 0.0500 | 0.0000 | 0.0500 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0646 | 0.6116 | 0.5509 | 9.0000e-004 | | 0.0342 | 0.0342 | | 0.0325 | 0.0325 | 0.0000 | 78.6101 | 78.6101 | 0.0165 | 0.0000 | 79.0222 |
| **Total** | **0.0646** | **0.6116** | **0.5509** | **9.0000e-004** | **0.0936** | **0.0342** | **0.1279** | **0.0500** | **0.0325** | **0.0825** | **0.0000** | **78.6101** | **78.6101** | **0.0165** | **0.0000** | **79.0222** |

### 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 | 3.9500e-003 | 0.1783 | 0.0227 | 2.5000e-004 | 1.0293 | 1.6000e-004 | 1.0295 | 0.1028 | 1.5000e-004 | 0.1029 | 0.0000 | 23.6093 | 23.6093 | 3.7500e-003 | 0.0000 | 23.7030 |
| Vendor | 1.3000e-004 | 3.4200e-003 | 9.5000e-004 | 1.0000e-005 | 2.0000e-004 | 2.0000e-005 | 2.2000e-004 | 6.0000e-005 | 2.0000e-005 | 7.0000e-005 | 0.0000 | 0.8172 | 0.8172 | 4.0000e-005 | 0.0000 | 0.8183 |
| Worker | 1.6400e-003 | 1.1500e-003 | 0.0113 | 4.0000e-005 | 3.5700e-003 | 2.0000e-005 | 3.6000e-003 | 9.5000e-004 | 2.0000e-005 | 9.7000e-004 | 0.0000 | 3.2506 | 3.2506 | 8.0000e-005 | 0.0000 | 3.2526 |
| **Total** | **5.7200e-003** | **0.1828** | **0.0349** | **3.0000e-004** | **1.0331** | **2.0000e-004** | **1.0333** | **0.1038** | **1.9000e-004** | **0.1040** | **0.0000** | **27.6770** | **27.6770** | **3.8700e-003** | **0.0000** | **27.7738** |

## 3.9 Structure Removal - 2020

### 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 | | | | | 0.0302 | 0.0000 | 0.0302 | 0.0166 | 0.0000 | 0.0166 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0205 | 0.1935 | 0.1742 | 2.9000e-004 | | 0.0108 | 0.0108 | | 0.0102 | 0.0102 | 0.0000 | 25.0510 | 25.0510 | 5.1200e-003 | 0.0000 | 25.1790 |
| **Total** | **0.0205** | **0.1935** | **0.1742** | **2.9000e-004** | **0.0302** | **0.0108** | **0.0409** | **0.0166** | **0.0102** | **0.0268** | **0.0000** | **25.0510** | **25.0510** | **5.1200e-003** | **0.0000** | **25.1790** |

### 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 | 3.0000e-005 | 1.2400e-003 | 1.6000e-004 | 0.0000 | 7.1700e-003 | 0.0000 | 7.1700e-003 | 7.2000e-004 | 0.0000 | 7.2000e-004 | 0.0000 | 0.1644 | 0.1644 | 3.0000e-005 | 0.0000 | 0.1650 |
| Vendor | 4.0000e-005 | 1.1400e-003 | 3.2000e-004 | 0.0000 | 7.0000e-005 | 1.0000e-005 | 7.0000e-005 | 2.0000e-005 | 1.0000e-005 | 2.0000e-005 | 0.0000 | 0.2724 | 0.2724 | 1.0000e-005 | 0.0000 | 0.2728 |
| Worker | 5.1000e-004 | 3.6000e-004 | 3.5200e-003 | 1.0000e-005 | 1.1100e-003 | 1.0000e-005 | 1.1200e-003 | 3.0000e-004 | 1.0000e-005 | 3.0000e-004 | 0.0000 | 1.0113 | 1.0113 | 3.0000e-005 | 0.0000 | 1.0119 |
| **Total** | **5.8000e-004** | **2.7400e-003** | **4.0000e-003** | **1.0000e-005** | **8.3500e-003** | **2.0000e-005** | **8.3600e-003** | **1.0400e-003** | **2.0000e-005** | **1.0400e-003** | **0.0000** | **1.4480** | **1.4480** | **7.0000e-005** | **0.0000** | **1.4497** |

## 3.9 Structure Removal - 2020

### 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 | | | | | 0.0302 | 0.0000 | 0.0302 | 0.0166 | 0.0000 | 0.0166 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0205 | 0.1935 | 0.1742 | 2.9000e-004 | | 0.0108 | 0.0108 | | 0.0102 | 0.0102 | 0.0000 | 25.0509 | 25.0509 | 5.1200e-003 | 0.0000 | 25.1790 |
| **Total** | **0.0205** | **0.1935** | **0.1742** | **2.9000e-004** | **0.0302** | **0.0108** | **0.0409** | **0.0166** | **0.0102** | **0.0268** | **0.0000** | **25.0509** | **25.0509** | **5.1200e-003** | **0.0000** | **25.1790** |

### 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 | 3.0000e-005 | 1.2400e-003 | 1.6000e-004 | 0.0000 | 7.1700e-003 | 0.0000 | 7.1700e-003 | 7.2000e-004 | 0.0000 | 7.2000e-004 | 0.0000 | 0.1644 | 0.1644 | 3.0000e-005 | 0.0000 | 0.1650 |
| Vendor | 4.0000e-005 | 1.1400e-003 | 3.2000e-004 | 0.0000 | 7.0000e-005 | 1.0000e-005 | 7.0000e-005 | 2.0000e-005 | 1.0000e-005 | 2.0000e-005 | 0.0000 | 0.2724 | 0.2724 | 1.0000e-005 | 0.0000 | 0.2728 |
| Worker | 5.1000e-004 | 3.6000e-004 | 3.5200e-003 | 1.0000e-005 | 1.1100e-003 | 1.0000e-005 | 1.1200e-003 | 3.0000e-004 | 1.0000e-005 | 3.0000e-004 | 0.0000 | 1.0113 | 1.0113 | 3.0000e-005 | 0.0000 | 1.0119 |
| **Total** | **5.8000e-004** | **2.7400e-003** | **4.0000e-003** | **1.0000e-005** | **8.3500e-003** | **2.0000e-005** | **8.3600e-003** | **1.0400e-003** | **2.0000e-005** | **1.0400e-003** | **0.0000** | **1.4480** | **1.4480** | **7.0000e-005** | **0.0000** | **1.4497** |

## 3.10 Levee Breaches - 2020

### 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 | | | | | 0.0306 | 0.0000 | 0.0306 | 0.0166 | 0.0000 | 0.0166 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0163 | 0.1514 | 0.1286 | 2.3000e-004 | | 8.0900e-003 | 8.0900e-003 | | 7.7700e-003 | 7.7700e-003 | 0.0000 | 19.5939 | 19.5939 | 3.3600e-003 | 0.0000 | 19.6778 |
| **Total** | **0.0163** | **0.1514** | **0.1286** | **2.3000e-004** | **0.0306** | **8.0900e-003** | **0.0387** | **0.0166** | **7.7700e-003** | **0.0244** | **0.0000** | **19.5939** | **19.5939** | **3.3600e-003** | **0.0000** | **19.6778** |

### 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 | 4.1000e-004 | 0.0186 | 2.3700e-003 | 3.0000e-005 | 0.1075 | 2.0000e-005 | 0.1075 | 0.0107 | 2.0000e-005 | 0.0108 | 0.0000 | 2.4653 | 2.4653 | 3.9000e-004 | 0.0000 | 2.4750 |
| Vendor | 4.0000e-005 | 1.1400e-003 | 3.2000e-004 | 0.0000 | 7.0000e-005 | 1.0000e-005 | 7.0000e-005 | 2.0000e-005 | 1.0000e-005 | 2.0000e-005 | 0.0000 | 0.2724 | 0.2724 | 1.0000e-005 | 0.0000 | 0.2728 |
| Worker | 3.3000e-004 | 2.3000e-004 | 2.2600e-003 | 1.0000e-005 | 7.1000e-004 | 0.0000 | 7.2000e-004 | 1.9000e-004 | 0.0000 | 1.9000e-004 | 0.0000 | 0.6501 | 0.6501 | 2.0000e-005 | 0.0000 | 0.6505 |
| **Total** | **7.8000e-004** | **0.0200** | **4.9500e-003** | **4.0000e-005** | **0.1083** | **3.0000e-005** | **0.1083** | **0.0109** | **3.0000e-005** | **0.0110** | **0.0000** | **3.3878** | **3.3878** | **4.2000e-004** | **0.0000** | **3.3983** |

## 3.10 Levee Breaches - 2020

### 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 | | | | | 0.0306 | 0.0000 | 0.0306 | 0.0166 | 0.0000 | 0.0166 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0163 | 0.1514 | 0.1286 | 2.3000e-004 | | 8.0900e-003 | 8.0900e-003 | | 7.7700e-003 | 7.7700e-003 | 0.0000 | 19.5939 | 19.5939 | 3.3600e-003 | 0.0000 | 19.6778 |
| **Total** | **0.0163** | **0.1514** | **0.1286** | **2.3000e-004** | **0.0306** | **8.0900e-003** | **0.0387** | **0.0166** | **7.7700e-003** | **0.0244** | **0.0000** | **19.5939** | **19.5939** | **3.3600e-003** | **0.0000** | **19.6778** |

### 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 | 4.1000e-004 | 0.0186 | 2.3700e-003 | 3.0000e-005 | 0.1075 | 2.0000e-005 | 0.1075 | 0.0107 | 2.0000e-005 | 0.0108 | 0.0000 | 2.4653 | 2.4653 | 3.9000e-004 | 0.0000 | 2.4750 |
| Vendor | 4.0000e-005 | 1.1400e-003 | 3.2000e-004 | 0.0000 | 7.0000e-005 | 1.0000e-005 | 7.0000e-005 | 2.0000e-005 | 1.0000e-005 | 2.0000e-005 | 0.0000 | 0.2724 | 0.2724 | 1.0000e-005 | 0.0000 | 0.2728 |
| Worker | 3.3000e-004 | 2.3000e-004 | 2.2600e-003 | 1.0000e-005 | 7.1000e-004 | 0.0000 | 7.2000e-004 | 1.9000e-004 | 0.0000 | 1.9000e-004 | 0.0000 | 0.6501 | 0.6501 | 2.0000e-005 | 0.0000 | 0.6505 |
| **Total** | **7.8000e-004** | **0.0200** | **4.9500e-003** | **4.0000e-005** | **0.1083** | **3.0000e-005** | **0.1083** | **0.0109** | **3.0000e-005** | **0.0110** | **0.0000** | **3.3878** | **3.3878** | **4.2000e-004** | **0.0000** | **3.3983** |

## 3.11 Site Stabilization - 2020

### 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 | | | | | 0.0213 | 0.0000 | 0.0213 | 0.0116 | 0.0000 | 0.0116 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0107 | 0.1033 | 0.0863 | 1.4000e-004 | | 5.6100e-003 | 5.6100e-003 | | 5.2700e-003 | 5.2700e-003 | 0.0000 | 12.4760 | 12.4760 | 2.9900e-003 | 0.0000 | 12.5508 |
| **Total** | **0.0107** | **0.1033** | **0.0863** | **1.4000e-004** | **0.0213** | **5.6100e-003** | **0.0270** | **0.0116** | **5.2700e-003** | **0.0169** | **0.0000** | **12.4760** | **12.4760** | **2.9900e-003** | **0.0000** | **12.5508** |

### 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 | 5.3000e-004 | 0.0136 | 3.7700e-003 | 3.0000e-005 | 7.8000e-004 | 7.0000e-005 | 8.6000e-004 | 2.3000e-004 | 7.0000e-005 | 2.9000e-004 | 0.0000 | 3.2414 | 3.2414 | 1.7000e-004 | 0.0000 | 3.2458 |
| Worker | 2.5000e-004 | 1.8000e-004 | 1.7600e-003 | 1.0000e-005 | 5.6000e-004 | 0.0000 | 5.6000e-004 | 1.5000e-004 | 0.0000 | 1.5000e-004 | 0.0000 | 0.5056 | 0.5056 | 1.0000e-005 | 0.0000 | 0.5060 |
| **Total** | **7.8000e-004** | **0.0138** | **5.5300e-003** | **4.0000e-005** | **1.3400e-003** | **7.0000e-005** | **1.4200e-003** | **3.8000e-004** | **7.0000e-005** | **4.4000e-004** | **0.0000** | **3.7471** | **3.7471** | **1.8000e-004** | **0.0000** | **3.7517** |

### 3.11 Site Stabilization - 2020

**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 | | | | | 0.0213 | 0.0000 | 0.0213 | 0.0116 | 0.0000 | 0.0116 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Off-Road | 0.0107 | 0.1033 | 0.0863 | 1.4000e-004 | | 5.6100e-003 | 5.6100e-003 | | 5.2700e-003 | 5.2700e-003 | 0.0000 | 12.4759 | 12.4759 | 2.9900e-003 | 0.0000 | 12.5507 |
| **Total** | **0.0107** | **0.1033** | **0.0863** | **1.4000e-004** | **0.0213** | **5.6100e-003** | **0.0270** | **0.0116** | **5.2700e-003** | **0.0169** | **0.0000** | **12.4759** | **12.4759** | **2.9900e-003** | **0.0000** | **12.5507** |

**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 | 5.3000e-004 | 0.0136 | 3.7700e-003 | 3.0000e-005 | 7.8000e-004 | 7.0000e-005 | 8.6000e-004 | 2.3000e-004 | 7.0000e-005 | 2.9000e-004 | 0.0000 | 3.2414 | 3.2414 | 1.7000e-004 | 0.0000 | 3.2458 |
| Worker | 2.5000e-004 | 1.8000e-004 | 1.7600e-003 | 1.0000e-005 | 5.6000e-004 | 0.0000 | 5.6000e-004 | 1.5000e-004 | 0.0000 | 1.5000e-004 | 0.0000 | 0.5056 | 0.5056 | 1.0000e-005 | 0.0000 | 0.5060 |
| **Total** | **7.8000e-004** | **0.0138** | **5.5300e-003** | **4.0000e-005** | **1.3400e-003** | **7.0000e-005** | **1.4200e-003** | **3.8000e-004** | **7.0000e-005** | **4.4000e-004** | **0.0000** | **3.7471** | **3.7471** | **1.8000e-004** | **0.0000** | **3.7517** |

## 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 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| 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 | 0.0000 | 0.0000 |

## 4.2 Trip Summary Information

| | Average Daily Trip Rate | | | Unmitigated | Mitigated |
|---|---|---|---|---|---|
| Land Use | Weekday | Saturday | Sunday | Annual VMT | Annual VMT |
| City Park | 0.00 | 0.00 | 0.00 | | |
| Total | 0.00 | 0.00 | 0.00 | | |

## 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 |
| City Park | 9.50 | 7.30 | 7.30 | 33.00 | 48.00 | 19.00 | 66 | 28 | 6 |

## 4.4 Fleet Mix

| Land Use | LDA | LDT1 | LDT2 | MDV | LHD1 | LHD2 | MHD | HHD | OBUS | UBUS | MCY | SBUS | MH |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| City Park | 0.584264 | 0.036754 | 0.174658 | 0.112986 | 0.019233 | 0.005457 | 0.009466 | 0.043414 | 0.003239 | 0.002257 | 0.006611 | 0.000609 | 0.001053 |

## 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 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Electricity Unmitigated | | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| 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 | | | | | |
| City Park | 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 | | | | | |
| City Park | 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 | | | |
| City Park | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

**Mitigated**

| | Electricity Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | kWh/yr | MT/yr | | | |
| City Park | 0 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| **Total** | | **0.0000** | **0.0000** | **0.0000** | **0.0000** |

## 6.0 Area Detail

### 6.1 Mitigation Measures Area

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Category | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Mitigated | 0.1096 | 2.0000e-005 | 2.4600e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | 0.0000 | 4.7700e-003 | 4.7700e-003 | 1.0000e-005 | 0.0000 | 5.0900e-003 |
| Unmitigated | 0.1096 | 2.0000e-005 | 2.4600e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | 0.0000 | 4.7700e-003 | 4.7700e-003 | 1.0000e-005 | 0.0000 | 5.0900e-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 | 0.0000 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Consumer Products | 0.1094 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Landscaping | 2.3000e-004 | 2.0000e-005 | 2.4600e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | 0.0000 | 4.7700e-003 | 4.7700e-003 | 1.0000e-005 | 0.0000 | 5.0900e-003 |
| **Total** | **0.1096** | **2.0000e-005** | **2.4600e-003** | **0.0000** | | **1.0000e-005** | **1.0000e-005** | | **1.0000e-005** | **1.0000e-005** | **0.0000** | **4.7700e-003** | **4.7700e-003** | **1.0000e-005** | **0.0000** | **5.0900e-003** |

### 6.2 Area by SubCategory

**Mitigated**

| | ROG | NOx | CO | SO2 | Fugitive PM10 | Exhaust PM10 | PM10 Total | Fugitive PM2.5 | Exhaust PM2.5 | PM2.5 Total | Bio- CO2 | NBio- CO2 | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SubCategory | tons/yr | | | | | | | | | | MT/yr | | | | | |
| Architectural Coating | 0.0000 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Consumer Products | 0.1094 | | | | | 0.0000 | 0.0000 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| Landscaping | 2.3000e-004 | 2.0000e-005 | 2.4600e-003 | 0.0000 | | 1.0000e-005 | 1.0000e-005 | | 1.0000e-005 | 1.0000e-005 | 0.0000 | 4.7700e-003 | 4.7700e-003 | 1.0000e-005 | 0.0000 | 5.0900e-003 |
| **Total** | **0.1096** | **2.0000e-005** | **2.4600e-003** | **0.0000** | | **1.0000e-005** | **1.0000e-005** | | **1.0000e-005** | **1.0000e-005** | **0.0000** | **4.7700e-003** | **4.7700e-003** | **1.0000e-005** | **0.0000** | **5.0900e-003** |

## 7.0 Water Detail

### 7.1 Mitigation Measures Water

| | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|
| Category | MT/yr | | | |
| Mitigated | 323.9123 | 0.0147 | 3.0300e-003 | 325.1815 |
| Unmitigated | 323.9123 | 0.0147 | 3.0300e-003 | 325.1815 |

## 7.2 Water by Land Use

**Unmitigated**

| | Indoor/Outdoor Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | Mgal | MT/yr | | | |
| City Park | 0 / 318.126 | 323.9123 | 0.0147 | 3.0300e-003 | 325.1815 |
| **Total** | | **323.9123** | **0.0147** | **3.0300e-003** | **325.1815** |

### 7.2 Water by Land Use

**Mitigated**

| | Indoor/Outdoor Use | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | Mgal | MT/yr | | | |
| City Park | 0 / 318.126 | 323.9123 | 0.0147 | 3.0300e-003 | 325.1815 |
| **Total** | | **323.9123** | **0.0147** | **3.0300e-003** | **325.1815** |

## 8.0 Waste Detail

### 8.1 Mitigation Measures Waste

**Category/Year**

| | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|
| | MT/yr | | | |
| Mitigated | 4.6607 | 0.2754 | 0.0000 | 11.5466 |
| Unmitigated | 4.6607 | 0.2754 | 0.0000 | 11.5466 |

## 8.2 Waste by Land Use

**Unmitigated**

| | Waste Disposed | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | tons | MT/yr | | | |
| City Park | 22.96 | 4.6607 | 0.2754 | 0.0000 | 11.5466 |
| **Total** | | **4.6607** | **0.2754** | **0.0000** | **11.5466** |

**Mitigated**

| | Waste Disposed | Total CO2 | CH4 | N2O | CO2e |
|---|---|---|---|---|---|
| Land Use | tons | MT/yr | | | |
| City Park | 22.96 | 4.6607 | 0.2754 | 0.0000 | 11.5466 |
| **Total** | | **4.6607** | **0.2754** | **0.0000** | **11.5466** |

## 9.0 Operational Offroad

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

## 10.0 Stationary Equipment

### Fire Pumps and Emergency Generators

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

### Boilers

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

### User Defined Equipment

| Equipment Type | Number |
|---|---|

## 11.0 Vegetation