

**WINGS LANDING TIDAL HABITAT  
RESTORATION PROJECT**

*CEQA ADDENDUM*

**APPENDIX C**

**Air Quality Model Outputs**



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

**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**

<b>Urbanization</b>	Urban	<b>Wind Speed (m/s)</b>	2.2	<b>Precipitation Freq (Days)</b>	56
<b>Climate Zone</b>	4			<b>Operational Year</b>	2021
<b>Utility Company</b>	Pacific Gas & Electric Company				
<b>CO2 Intensity (lb/MW hr)</b>	641.35	<b>CH4 Intensity (lb/MW hr)</b>	0.029	<b>N2O Intensity (lb/MW hr)</b>	0.006

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

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

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
tblConstructionPhase	NumDays	465.00	30.00
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

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

tblConstructionPhase	NumDays	465.00	10.00
tblConstructionPhase	NumDays	465.00	10.00
tblConstructionPhase	NumDays	465.00	7.00
tblConstructionPhase	PhaseEndDate	4/21/2044	8/20/2020
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
tblGrading	AcresOfGrading	0.00	10.85
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
tblGrading	MaterialExported	0.00	26,434.70
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
tblGrading	PhaseName		Tidal Depressions
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
tblOffRoadEquipment	OffRoadEquipmentType	Welders	Pumps
tblOffRoadEquipment	OffRoadEquipmentType	Scrapers	Rollers
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	4.00

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

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	4.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
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
tblOffRoadEquipment	PhaseName		Channel Creation
tblOffRoadEquipment	PhaseName		Channel Enhancement
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
tblOffRoadEquipment	PhaseName		Site Preparation
tblOffRoadEquipment	PhaseName		Borrow-Ditch Restoration
tblOffRoadEquipment	PhaseName		Site Stabilization
tblOnRoadDust	HaulingPercentPave	100.00	0.00
tblOnRoadDust	HaulingPercentPave	100.00	0.00
tblOnRoadDust	HaulingPercentPave	100.00	0.00
tblOnRoadDust	HaulingPercentPave	100.00	0.00

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

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
tblTripsAndVMT	HaulingTripLength	20.00	0.50
tblTripsAndVMT	HaulingTripLength	20.00	0.50
tblTripsAndVMT	HaulingTripLength	20.00	0.50
tblTripsAndVMT	HaulingTripLength	20.00	0.50
tblTripsAndVMT	HaulingTripLength	20.00	0.50
tblTripsAndVMT	HaulingTripLength	20.00	0.50
tblTripsAndVMT	HaulingTripLength	20.00	0.50
tblTripsAndVMT	HaulingTripLength	20.00	0.50
tblTripsAndVMT	HaulingTripLength	20.00	0.50
tblTripsAndVMT	HaulingTripLength	20.00	0.50
tblTripsAndVMT	HaulingTripLength	20.00	0.50
tblTripsAndVMT	HaulingTripLength	20.00	0.50
tblTripsAndVMT	HaulingTripLength	20.00	0.50
tblTripsAndVMT	HaulingTripLength	20.00	0.50
tblTripsAndVMT	HaulingTripNumber	0.00	1,450.00
tblTripsAndVMT	HaulingTripNumber	0.00	2,204.00
tblTripsAndVMT	HaulingTripNumber	0.00	629.00
tblTripsAndVMT	HaulingTripNumber	0.00	527.00
tblTripsAndVMT	HaulingTripNumber	0.00	359.00
tblTripsAndVMT	HaulingTripNumber	0.00	3,304.00
tblTripsAndVMT	HaulingTripNumber	0.00	23.00
tblTripsAndVMT	HaulingTripNumber	0.00	345.00
tblTripsAndVMT	VendorTripNumber	0.00	34.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00



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

tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	34.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblVehicleTrips	ST_TR	22.75	0.00
tblVehicleTrips	SU_TR	16.74	0.00
tblVehicleTrips	WD_TR	1.89	0.00

## 2.0 Emissions Summary

---



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

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
<b>Total</b>	<b>0.1096</b>	<b>2.0000e-005</b>	<b>2.4600e-003</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>1.0000e-005</b>	<b>4.6607</b>	<b>323.9170</b>	<b>328.5777</b>	<b>0.2901</b>	<b>3.0300e-003</b>	<b>336.7332</b>

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

**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
<b>Total</b>	<b>0.1096</b>	<b>2.0000e-005</b>	<b>2.4600e-003</b>	<b>0.0000</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>1.0000e-005</b>	<b>1.0000e-005</b>	<b>4.6607</b>	<b>323.9170</b>	<b>328.5777</b>	<b>0.2901</b>	<b>3.0300e-003</b>	<b>336.7332</b>

	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
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**

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

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

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

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

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

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**

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

**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
<b>Total</b>	<b>4.9700e-003</b>	<b>0.0509</b>	<b>0.0381</b>	<b>6.0000e-005</b>	<b>0.0153</b>	<b>2.6400e-003</b>	<b>0.0180</b>	<b>8.3000e-003</b>	<b>2.4300e-003</b>	<b>0.0107</b>	<b>0.0000</b>	<b>5.5091</b>	<b>5.5091</b>	<b>1.7800e-003</b>	<b>0.0000</b>	<b>5.5537</b>

**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
<b>Total</b>	<b>5.0000e-004</b>	<b>9.7700e-003</b>	<b>3.5200e-003</b>	<b>2.0000e-005</b>	<b>8.2000e-004</b>	<b>5.0000e-005</b>	<b>8.7000e-004</b>	<b>2.3000e-004</b>	<b>5.0000e-005</b>	<b>2.8000e-004</b>	<b>0.0000</b>	<b>2.5501</b>	<b>2.5501</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>2.5533</b>



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

**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
<b>Total</b>	<b>4.9700e-003</b>	<b>0.0509</b>	<b>0.0381</b>	<b>6.0000e-005</b>	<b>0.0153</b>	<b>2.6400e-003</b>	<b>0.0180</b>	<b>8.3000e-003</b>	<b>2.4300e-003</b>	<b>0.0107</b>	<b>0.0000</b>	<b>5.5091</b>	<b>5.5091</b>	<b>1.7800e-003</b>	<b>0.0000</b>	<b>5.5537</b>

**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
<b>Total</b>	<b>5.0000e-004</b>	<b>9.7700e-003</b>	<b>3.5200e-003</b>	<b>2.0000e-005</b>	<b>8.2000e-004</b>	<b>5.0000e-005</b>	<b>8.7000e-004</b>	<b>2.3000e-004</b>	<b>5.0000e-005</b>	<b>2.8000e-004</b>	<b>0.0000</b>	<b>2.5501</b>	<b>2.5501</b>	<b>1.3000e-004</b>	<b>0.0000</b>	<b>2.5533</b>

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

**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
<b>Total</b>	<b>0.0732</b>	<b>0.7118</b>	<b>0.6145</b>	<b>1.0000e-003</b>	<b>0.1427</b>	<b>0.0391</b>	<b>0.1818</b>	<b>0.0753</b>	<b>0.0367</b>	<b>0.1120</b>	<b>0.0000</b>	<b>87.2950</b>	<b>87.2950</b>	<b>0.0215</b>	<b>0.0000</b>	<b>87.8332</b>

**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
<b>Total</b>	<b>3.8100e-003</b>	<b>0.0847</b>	<b>0.0244</b>	<b>1.6000e-004</b>	<b>0.4561</b>	<b>1.3000e-004</b>	<b>0.4563</b>	<b>0.0463</b>	<b>1.3000e-004</b>	<b>0.0464</b>	<b>0.0000</b>	<b>15.3251</b>	<b>15.3251</b>	<b>1.8000e-003</b>	<b>0.0000</b>	<b>15.3702</b>

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

**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
<b>Total</b>	<b>0.0732</b>	<b>0.7118</b>	<b>0.6145</b>	<b>1.0000e-003</b>	<b>0.1427</b>	<b>0.0391</b>	<b>0.1818</b>	<b>0.0753</b>	<b>0.0367</b>	<b>0.1120</b>	<b>0.0000</b>	<b>87.2949</b>	<b>87.2949</b>	<b>0.0215</b>	<b>0.0000</b>	<b>87.8331</b>

**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
<b>Total</b>	<b>3.8100e-003</b>	<b>0.0847</b>	<b>0.0244</b>	<b>1.6000e-004</b>	<b>0.4561</b>	<b>1.3000e-004</b>	<b>0.4563</b>	<b>0.0463</b>	<b>1.3000e-004</b>	<b>0.0464</b>	<b>0.0000</b>	<b>15.3251</b>	<b>15.3251</b>	<b>1.8000e-003</b>	<b>0.0000</b>	<b>15.3702</b>

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

**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
<b>Total</b>	<b>0.0544</b>	<b>0.5224</b>	<b>0.4093</b>	<b>7.2000e-004</b>	<b>0.1404</b>	<b>0.0271</b>	<b>0.1675</b>	<b>0.0751</b>	<b>0.0257</b>	<b>0.1007</b>	<b>0.0000</b>	<b>62.7383</b>	<b>62.7383</b>	<b>0.0136</b>	<b>0.0000</b>	<b>63.0779</b>

**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
<b>Total</b>	<b>3.8900e-003</b>	<b>0.1248</b>	<b>0.0239</b>	<b>2.0000e-004</b>	<b>0.6892</b>	<b>1.5000e-004</b>	<b>0.6894</b>	<b>0.0693</b>	<b>1.4000e-004</b>	<b>0.0694</b>	<b>0.0000</b>	<b>19.0877</b>	<b>19.0877</b>	<b>2.6200e-003</b>	<b>0.0000</b>	<b>19.1531</b>

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

**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
<b>Total</b>	<b>0.0544</b>	<b>0.5224</b>	<b>0.4093</b>	<b>7.2000e-004</b>	<b>0.1404</b>	<b>0.0271</b>	<b>0.1675</b>	<b>0.0751</b>	<b>0.0257</b>	<b>0.1007</b>	<b>0.0000</b>	<b>62.7382</b>	<b>62.7382</b>	<b>0.0136</b>	<b>0.0000</b>	<b>63.0779</b>

**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
<b>Total</b>	<b>3.8900e-003</b>	<b>0.1248</b>	<b>0.0239</b>	<b>2.0000e-004</b>	<b>0.6892</b>	<b>1.5000e-004</b>	<b>0.6894</b>	<b>0.0693</b>	<b>1.4000e-004</b>	<b>0.0694</b>	<b>0.0000</b>	<b>19.0877</b>	<b>19.0877</b>	<b>2.6200e-003</b>	<b>0.0000</b>	<b>19.1531</b>

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

**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
<b>Total</b>	<b>0.0425</b>	<b>0.4114</b>	<b>0.3413</b>	<b>5.7000e-004</b>	<b>0.0933</b>	<b>0.0220</b>	<b>0.1154</b>	<b>0.0500</b>	<b>0.0208</b>	<b>0.0708</b>	<b>0.0000</b>	<b>50.0111</b>	<b>50.0111</b>	<b>0.0117</b>	<b>0.0000</b>	<b>50.3037</b>

**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
<b>Total</b>	<b>1.8600e-003</b>	<b>0.0381</b>	<b>0.0121</b>	<b>8.0000e-005</b>	<b>0.1983</b>	<b>6.0000e-005</b>	<b>0.1984</b>	<b>0.0202</b>	<b>6.0000e-005</b>	<b>0.0202</b>	<b>0.0000</b>	<b>7.2621</b>	<b>7.2621</b>	<b>8.0000e-004</b>	<b>0.0000</b>	<b>7.2823</b>

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

**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
<b>Total</b>	<b>0.0425</b>	<b>0.4114</b>	<b>0.3413</b>	<b>5.7000e-004</b>	<b>0.0933</b>	<b>0.0220</b>	<b>0.1154</b>	<b>0.0500</b>	<b>0.0208</b>	<b>0.0708</b>	<b>0.0000</b>	<b>50.0110</b>	<b>50.0110</b>	<b>0.0117</b>	<b>0.0000</b>	<b>50.3037</b>

**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
<b>Total</b>	<b>1.8600e-003</b>	<b>0.0381</b>	<b>0.0121</b>	<b>8.0000e-005</b>	<b>0.1983</b>	<b>6.0000e-005</b>	<b>0.1984</b>	<b>0.0202</b>	<b>6.0000e-005</b>	<b>0.0202</b>	<b>0.0000</b>	<b>7.2621</b>	<b>7.2621</b>	<b>8.0000e-004</b>	<b>0.0000</b>	<b>7.2823</b>

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

**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
<b>Total</b>	<b>0.0425</b>	<b>0.4114</b>	<b>0.3413</b>	<b>5.7000e-004</b>	<b>0.0914</b>	<b>0.0220</b>	<b>0.1134</b>	<b>0.0498</b>	<b>0.0208</b>	<b>0.0706</b>	<b>0.0000</b>	<b>50.0111</b>	<b>50.0111</b>	<b>0.0117</b>	<b>0.0000</b>	<b>50.3037</b>

**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
<b>Total</b>	<b>1.7400e-003</b>	<b>0.0325</b>	<b>0.0114</b>	<b>7.0000e-005</b>	<b>0.1665</b>	<b>5.0000e-005</b>	<b>0.1666</b>	<b>0.0170</b>	<b>5.0000e-005</b>	<b>0.0171</b>	<b>0.0000</b>	<b>6.5333</b>	<b>6.5333</b>	<b>6.9000e-004</b>	<b>0.0000</b>	<b>6.5505</b>



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

**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
<b>Total</b>	<b>0.0425</b>	<b>0.4114</b>	<b>0.3413</b>	<b>5.7000e-004</b>	<b>0.0914</b>	<b>0.0220</b>	<b>0.1134</b>	<b>0.0498</b>	<b>0.0208</b>	<b>0.0706</b>	<b>0.0000</b>	<b>50.0110</b>	<b>50.0110</b>	<b>0.0117</b>	<b>0.0000</b>	<b>50.3037</b>

**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
<b>Total</b>	<b>1.7400e-003</b>	<b>0.0325</b>	<b>0.0114</b>	<b>7.0000e-005</b>	<b>0.1665</b>	<b>5.0000e-005</b>	<b>0.1666</b>	<b>0.0170</b>	<b>5.0000e-005</b>	<b>0.0171</b>	<b>0.0000</b>	<b>6.5333</b>	<b>6.5333</b>	<b>6.9000e-004</b>	<b>0.0000</b>	<b>6.5505</b>

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

**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
<b>Total</b>	<b>0.0308</b>	<b>0.2902</b>	<b>0.2613</b>	<b>4.3000e-004</b>	<b>0.0459</b>	<b>0.0161</b>	<b>0.0620</b>	<b>0.0249</b>	<b>0.0153</b>	<b>0.0402</b>	<b>0.0000</b>	<b>37.5764</b>	<b>37.5764</b>	<b>7.6800e-003</b>	<b>0.0000</b>	<b>37.7685</b>

**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
<b>Total</b>	<b>1.2600e-003</b>	<b>0.0216</b>	<b>8.2200e-003</b>	<b>5.0000e-005</b>	<b>0.1136</b>	<b>4.0000e-005</b>	<b>0.1137</b>	<b>0.0116</b>	<b>4.0000e-005</b>	<b>0.0117</b>	<b>0.0000</b>	<b>4.4908</b>	<b>4.4908</b>	<b>4.7000e-004</b>	<b>0.0000</b>	<b>4.5025</b>

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

**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
<b>Total</b>	<b>0.0308</b>	<b>0.2902</b>	<b>0.2613</b>	<b>4.3000e-004</b>	<b>0.0459</b>	<b>0.0161</b>	<b>0.0620</b>	<b>0.0249</b>	<b>0.0153</b>	<b>0.0402</b>	<b>0.0000</b>	<b>37.5764</b>	<b>37.5764</b>	<b>7.6800e-003</b>	<b>0.0000</b>	<b>37.7685</b>

**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
<b>Total</b>	<b>1.2600e-003</b>	<b>0.0216</b>	<b>8.2200e-003</b>	<b>5.0000e-005</b>	<b>0.1136</b>	<b>4.0000e-005</b>	<b>0.1137</b>	<b>0.0116</b>	<b>4.0000e-005</b>	<b>0.0117</b>	<b>0.0000</b>	<b>4.4908</b>	<b>4.4908</b>	<b>4.7000e-004</b>	<b>0.0000</b>	<b>4.5025</b>

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

**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
<b>Total</b>	<b>0.0646</b>	<b>0.6116</b>	<b>0.5509</b>	<b>9.0000e-004</b>	<b>0.0936</b>	<b>0.0342</b>	<b>0.1279</b>	<b>0.0500</b>	<b>0.0325</b>	<b>0.0825</b>	<b>0.0000</b>	<b>78.6102</b>	<b>78.6102</b>	<b>0.0165</b>	<b>0.0000</b>	<b>79.0223</b>

**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
<b>Total</b>	<b>5.7200e-003</b>	<b>0.1828</b>	<b>0.0349</b>	<b>3.0000e-004</b>	<b>1.0331</b>	<b>2.0000e-004</b>	<b>1.0333</b>	<b>0.1038</b>	<b>1.9000e-004</b>	<b>0.1040</b>	<b>0.0000</b>	<b>27.6770</b>	<b>27.6770</b>	<b>3.8700e-003</b>	<b>0.0000</b>	<b>27.7738</b>

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

**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
<b>Total</b>	<b>0.0646</b>	<b>0.6116</b>	<b>0.5509</b>	<b>9.0000e-004</b>	<b>0.0936</b>	<b>0.0342</b>	<b>0.1279</b>	<b>0.0500</b>	<b>0.0325</b>	<b>0.0825</b>	<b>0.0000</b>	<b>78.6101</b>	<b>78.6101</b>	<b>0.0165</b>	<b>0.0000</b>	<b>79.0222</b>

**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
<b>Total</b>	<b>5.7200e-003</b>	<b>0.1828</b>	<b>0.0349</b>	<b>3.0000e-004</b>	<b>1.0331</b>	<b>2.0000e-004</b>	<b>1.0333</b>	<b>0.1038</b>	<b>1.9000e-004</b>	<b>0.1040</b>	<b>0.0000</b>	<b>27.6770</b>	<b>27.6770</b>	<b>3.8700e-003</b>	<b>0.0000</b>	<b>27.7738</b>

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

**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
<b>Total</b>	<b>0.0205</b>	<b>0.1935</b>	<b>0.1742</b>	<b>2.9000e-004</b>	<b>0.0302</b>	<b>0.0108</b>	<b>0.0409</b>	<b>0.0166</b>	<b>0.0102</b>	<b>0.0268</b>	<b>0.0000</b>	<b>25.0510</b>	<b>25.0510</b>	<b>5.1200e-003</b>	<b>0.0000</b>	<b>25.1790</b>

**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
<b>Total</b>	<b>5.8000e-004</b>	<b>2.7400e-003</b>	<b>4.0000e-003</b>	<b>1.0000e-005</b>	<b>8.3500e-003</b>	<b>2.0000e-005</b>	<b>8.3600e-003</b>	<b>1.0400e-003</b>	<b>2.0000e-005</b>	<b>1.0400e-003</b>	<b>0.0000</b>	<b>1.4480</b>	<b>1.4480</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>1.4497</b>

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

**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
<b>Total</b>	<b>0.0205</b>	<b>0.1935</b>	<b>0.1742</b>	<b>2.9000e-004</b>	<b>0.0302</b>	<b>0.0108</b>	<b>0.0409</b>	<b>0.0166</b>	<b>0.0102</b>	<b>0.0268</b>	<b>0.0000</b>	<b>25.0509</b>	<b>25.0509</b>	<b>5.1200e-003</b>	<b>0.0000</b>	<b>25.1790</b>

**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
<b>Total</b>	<b>5.8000e-004</b>	<b>2.7400e-003</b>	<b>4.0000e-003</b>	<b>1.0000e-005</b>	<b>8.3500e-003</b>	<b>2.0000e-005</b>	<b>8.3600e-003</b>	<b>1.0400e-003</b>	<b>2.0000e-005</b>	<b>1.0400e-003</b>	<b>0.0000</b>	<b>1.4480</b>	<b>1.4480</b>	<b>7.0000e-005</b>	<b>0.0000</b>	<b>1.4497</b>

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

**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
<b>Total</b>	<b>0.0163</b>	<b>0.1514</b>	<b>0.1286</b>	<b>2.3000e-004</b>	<b>0.0306</b>	<b>8.0900e-003</b>	<b>0.0387</b>	<b>0.0166</b>	<b>7.7700e-003</b>	<b>0.0244</b>	<b>0.0000</b>	<b>19.5939</b>	<b>19.5939</b>	<b>3.3600e-003</b>	<b>0.0000</b>	<b>19.6778</b>

**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
<b>Total</b>	<b>7.8000e-004</b>	<b>0.0200</b>	<b>4.9500e-003</b>	<b>4.0000e-005</b>	<b>0.1083</b>	<b>3.0000e-005</b>	<b>0.1083</b>	<b>0.0109</b>	<b>3.0000e-005</b>	<b>0.0110</b>	<b>0.0000</b>	<b>3.3878</b>	<b>3.3878</b>	<b>4.2000e-004</b>	<b>0.0000</b>	<b>3.3983</b>



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

**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
<b>Total</b>	<b>0.0163</b>	<b>0.1514</b>	<b>0.1286</b>	<b>2.3000e-004</b>	<b>0.0306</b>	<b>8.0900e-003</b>	<b>0.0387</b>	<b>0.0166</b>	<b>7.7700e-003</b>	<b>0.0244</b>	<b>0.0000</b>	<b>19.5939</b>	<b>19.5939</b>	<b>3.3600e-003</b>	<b>0.0000</b>	<b>19.6778</b>

**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
<b>Total</b>	<b>7.8000e-004</b>	<b>0.0200</b>	<b>4.9500e-003</b>	<b>4.0000e-005</b>	<b>0.1083</b>	<b>3.0000e-005</b>	<b>0.1083</b>	<b>0.0109</b>	<b>3.0000e-005</b>	<b>0.0110</b>	<b>0.0000</b>	<b>3.3878</b>	<b>3.3878</b>	<b>4.2000e-004</b>	<b>0.0000</b>	<b>3.3983</b>

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

**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
<b>Total</b>	<b>0.0107</b>	<b>0.1033</b>	<b>0.0863</b>	<b>1.4000e-004</b>	<b>0.0213</b>	<b>5.6100e-003</b>	<b>0.0270</b>	<b>0.0116</b>	<b>5.2700e-003</b>	<b>0.0169</b>	<b>0.0000</b>	<b>12.4760</b>	<b>12.4760</b>	<b>2.9900e-003</b>	<b>0.0000</b>	<b>12.5508</b>

**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
<b>Total</b>	<b>7.8000e-004</b>	<b>0.0138</b>	<b>5.5300e-003</b>	<b>4.0000e-005</b>	<b>1.3400e-003</b>	<b>7.0000e-005</b>	<b>1.4200e-003</b>	<b>3.8000e-004</b>	<b>7.0000e-005</b>	<b>4.4000e-004</b>	<b>0.0000</b>	<b>3.7471</b>	<b>3.7471</b>	<b>1.8000e-004</b>	<b>0.0000</b>	<b>3.7517</b>

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

**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
<b>Total</b>	<b>0.0107</b>	<b>0.1033</b>	<b>0.0863</b>	<b>1.4000e-004</b>	<b>0.0213</b>	<b>5.6100e-003</b>	<b>0.0270</b>	<b>0.0116</b>	<b>5.2700e-003</b>	<b>0.0169</b>	<b>0.0000</b>	<b>12.4759</b>	<b>12.4759</b>	<b>2.9900e-003</b>	<b>0.0000</b>	<b>12.5507</b>

**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
<b>Total</b>	<b>7.8000e-004</b>	<b>0.0138</b>	<b>5.5300e-003</b>	<b>4.0000e-005</b>	<b>1.3400e-003</b>	<b>7.0000e-005</b>	<b>1.4200e-003</b>	<b>3.8000e-004</b>	<b>7.0000e-005</b>	<b>4.4000e-004</b>	<b>0.0000</b>	<b>3.7471</b>	<b>3.7471</b>	<b>1.8000e-004</b>	<b>0.0000</b>	<b>3.7517</b>

**4.0 Operational Detail - Mobile**

---

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

**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**

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	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**

Land Use	Miles			Trip %			Trip Purpose %		
	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





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

**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
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**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
<b>Total</b>		<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>

**6.0 Area Detail**

**6.1 Mitigation Measures Area**

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

	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
<b>Total</b>	<b>0.1096</b>	<b>2.0000e-005</b>	<b>2.4600e-003</b>	<b>0.0000</b>		<b>1.0000e-005</b>	<b>1.0000e-005</b>		<b>1.0000e-005</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>4.7700e-003</b>	<b>4.7700e-003</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>5.0900e-003</b>



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

**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
<b>Total</b>	<b>0.1096</b>	<b>2.0000e-005</b>	<b>2.4600e-003</b>	<b>0.0000</b>		<b>1.0000e-005</b>	<b>1.0000e-005</b>		<b>1.0000e-005</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>4.7700e-003</b>	<b>4.7700e-003</b>	<b>1.0000e-005</b>	<b>0.0000</b>	<b>5.0900e-003</b>

**7.0 Water Detail**

---

**7.1 Mitigation Measures Water**

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

	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
<b>Total</b>		<b>323.9123</b>	<b>0.0147</b>	<b>3.0300e-003</b>	<b>325.1815</b>

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

**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
<b>Total</b>		<b>323.9123</b>	<b>0.0147</b>	<b>3.0300e-003</b>	<b>325.1815</b>

**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

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

**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
<b>Total</b>		<b>4.6607</b>	<b>0.2754</b>	<b>0.0000</b>	<b>11.5466</b>

**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
<b>Total</b>		<b>4.6607</b>	<b>0.2754</b>	<b>0.0000</b>	<b>11.5466</b>

**9.0 Operational Offroad**

---

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

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

**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**

---