


**Appendix A. Air Quality and Greenhouse Gas
Emissions Modeling Results and
Consistency Determination**

Appendix H. Checklist and Assessment Form for Consistency and Compliance with GHG Emissions Reduction Plan

DWR GHG Emissions Reduction Plan Consistency Determination Form



California Department of Water Resources
1416 9th Street
Sacramento, CA 95814
dwr.climatechange.water.ca.gov
www.water.ca.gov/climatechange

Project Name:

Environmental Document type:

Manager's Name:

Division:

Short Project Description:

Project GHG Emissions Summary

Total Construction Emissions	<input style="width: 90%; height: 20px;" type="text"/>	mtCO ₂ e
Maximum Annual Construction Emissions	<input style="width: 90%; height: 20px;" type="text"/>	mtCO ₂ e
Project SWP Operational Emissions (annual)	<input style="width: 90%; height: 20px;" type="text"/>	mtCO ₂ e/year
Project Maintenance Emissions (annual)	<input style="width: 90%; height: 20px;" type="text"/>	mtCO ₂ e/year
Project Business Activity Emissions (annual)	<input style="width: 90%; height: 20px;" type="text"/>	mtCO ₂ e/year

Project GHG Reduction Plan Checklist

Inventory and quantify the GHG emissions from the proposed project and alternatives. (Included as attachment)

Total project construction emissions do not exceed 25,000 mtCO₂e for the entire construction phase nor do they exceed 12,500 mtCO₂e in any single year of construction.

All Project Level GHG Emissions Reduction Measures have been incorporated into the design or implementation plan for the project.

Or

 All feasible Project Level GHG Emissions Reduction Measures have been incorporated into the design or implementation plan for the project and and Measures not incorporated have been listed and determined not be apply to the proposed project (include as an attachment)

California Department of Water Resources

Project does not conflict with any of the Specific Action GHG Emissions Reduction Measures

Yes No

Would implementation of the project result in additional energy demands on the SWP system of 15 GWh/yr or greater?

If you answered Yes to this question attach a Renewable Power Procurement Plan update approval letter from the DWR SWP Power and Risk Office.

Yes No

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?

If 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 proposed project is consistent with the DWR Greenhouse Gas Reduction Plan and the greenhouse gasses emitted by the project are covered by the plan's analysis.

Project Manager Signature:	<input type="text"/>	Date: <input type="text"/>
C4 Approval Signature:	<input type="text"/>	Date: <input type="text"/>

Attachments:

- GHG Emissions Inventory
- List and Explanation of excluded Project Level GHG Emissions Reduction Measures
- Plan to update Renewable Energy Procurement Plan from DWR SWP Power and Risk Office

Eastside Bypass Project - Merced County, Summer

Eastside Bypass Project
Merced County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Commercial	0.00	User Defined Unit	0.00	0.00	0
Other Asphalt Surfaces	0.00	Acre	0.00	0.00	0
User Defined Residential	0.00	Dwelling Unit	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	49
Climate Zone	3			Operational Year	2020
Utility Company					
CO2 Intensity (lb/MWhr)	0	CH4 Intensity (lb/MWhr)	0	N2O Intensity (lb/MWhr)	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - operational 2020

Land Use -

Construction Phase - Daily data

Off-road Equipment -

Off-road Equipment - from project description

Off-road Equipment - from project description

Off-road Equipment - from project description

Off-road Equipment - from project description

Eastside Bypass Project - Merced County, Summer

Off-road Equipment - from project description

Off-road Equipment -

Off-road Equipment - from project description

Off-road Equipment -

Off-road Equipment - from project description

Off-road Equipment - from project description

Off-road Equipment - from project description

Off-road Equipment - from project description

Off-road Equipment - from project description

Trips and VMT - Inputs derived from material volumes and construction schedule

On-road Fugitive Dust - Adjust worker % paved to 100

Grading - 31 acres staging area + 7 acres for reaches

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Road Dust - Imposed speed limit for non-paved roads

Area Coating -

Landscape Equipment -

Energy Use - default

Water And Wastewater -

Construction Off-road Equipment Mitigation - No mitigation.

Area Mitigation - Default

Fleet Mix -

Off-road Equipment - from project description

Off-road Equipment - from project description

Eastside Bypass Project - Merced County, Summer

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	0.5
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblFireplaces	FireplaceWoodMass	3,078.40	4,558.40
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00

Eastside Bypass Project - Merced County, Summer

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	3.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00

Eastside Bypass Project - Merced County, Summer

tbloffRoadEquipment	PhaseName	McNamara Road Crossing-Sept
tbloffRoadEquipment	PhaseName	McNamara Road Crossing-Oct
tbloffRoadEquipment	PhaseName	Merced NWR Weirs
tbloffRoadEquipment	PhaseName	Fish Passage on ESBCS-May
tbloffRoadEquipment	PhaseName	Levee Improvements-June
tbloffRoadEquipment	PhaseName	Levee Improvements-June
tbloffRoadEquipment	PhaseName	Fish Passage on ESBCS-June
tbloffRoadEquipment	PhaseName	Fish Passage on ESBCS-June
tbloffRoadEquipment	PhaseName	Levee Improvements-July
tbloffRoadEquipment	PhaseName	Levee Improvements-July
tbloffRoadEquipment	PhaseName	Fish Passage on ESBCS-July
tbloffRoadEquipment	PhaseName	Fish Passage on ESBCS-July
tbloffRoadEquipment	PhaseName	Levee Improvements-Aug
tbloffRoadEquipment	PhaseName	Levee Improvements-Aug
tbloffRoadEquipment	PhaseName	Levee Improvements-Sept
tbloffRoadEquipment	PhaseName	McNamara Road Crossing-Sept
tbloffRoadEquipment	PhaseName	McNamara Road Crossing-Oct
tbloffRoadEquipment	PhaseName	Merced NWR Weirs
tbloffRoadEquipment	PhaseName	Fish Passage on ESBCS-June
tbloffRoadEquipment	PhaseName	Fish Passage on ESBCS-July
tbloffRoadEquipment	PhaseName	Levee Improvements-Oct
tbloffRoadEquipment	PhaseName	McNamara Road Crossing-Oct
tbloffRoadEquipment	PhaseName	Levee Improvements-Nov
tbloffRoadEquipment	PhaseName	Levee Improvements-July
tbloffRoadEquipment	PhaseName	Levee Improvements-Aug
tbloffRoadEquipment	PhaseName	Levee Improvements-Sept
tbloffRoadEquipment	PhaseName	McNamara Road Crossing-Sept

Eastside Bypass Project - Merced County, Summer

tbloffRoadEquipment	PhaseName	McNamara Road Crossing-Sept
tbloffRoadEquipment	PhaseName	McNamara Road Crossing-Oct
tbloffRoadEquipment	PhaseName	McNamara Road Crossing-Oct
tbloffRoadEquipment	PhaseName	Merced NWR Weirs
tbloffRoadEquipment	PhaseName	Merced NWR Weirs
tbloffRoadEquipment	PhaseName	Levee Improvements-May
tbloffRoadEquipment	PhaseName	Fish Passage on ESBCS-May
tbloffRoadEquipment	PhaseName	Levee Improvements-June
tbloffRoadEquipment	PhaseName	Levee Improvements-June
tbloffRoadEquipment	PhaseName	Fish Passage on ESBCS-June
tbloffRoadEquipment	PhaseName	Levee Improvements-July
tbloffRoadEquipment	PhaseName	Levee Improvements-July
tbloffRoadEquipment	PhaseName	Fish Passage on ESBCS-July
tbloffRoadEquipment	PhaseName	Levee Improvements-Aug
tbloffRoadEquipment	PhaseName	Levee Improvements-Sept
tbloffRoadEquipment	PhaseName	Merced NWR Weirs
tbloffRoadEquipment	PhaseName	Fish Passage on ESBCS-June
tbloffRoadEquipment	PhaseName	Fish Passage on ESBCS-July
tbloffRoadEquipment	PhaseName	Levee Improvements-Oct
tbloffRoadEquipment	PhaseName	McNamara Road Crossing-Oct
tbloffRoadEquipment	PhaseName	Levee Improvements-Nov
tbloffRoadEquipment	PhaseName	Fish Passage on ESBCS-June
tbloffRoadEquipment	PhaseName	Levee Improvements-July
tbloffRoadEquipment	PhaseName	Fish Passage on ESBCS-July
tbloffRoadEquipment	PhaseName	Levee Improvements-Aug
tbloffRoadEquipment	PhaseName	Levee Improvements-Sept
tbloffRoadEquipment	PhaseName	McNamara Road Crossing-Sept

Eastside Bypass Project - Merced County, Summer

tblOffRoadEquipment	PhaseName		Merced NWR Weirs
tblOffRoadEquipment	PhaseName		Levee Improvements-May
tblOffRoadEquipment	PhaseName		Levee Improvements-June
tblOffRoadEquipment	PhaseName		Fish Passage on ESBCS-June
tblOffRoadEquipment	PhaseName		Levee Improvements-July
tblOffRoadEquipment	PhaseName		Fish Passage on ESBCS-July
tblOffRoadEquipment	PhaseName		McNamara Road Crossing-Sept
tblOffRoadEquipment	PhaseName		McNamara Road Crossing-Oct
tblOffRoadEquipment	PhaseName		Levee Improvements-May
tblOffRoadEquipment	PhaseName		Levee Improvements-June
tblOffRoadEquipment	PhaseName		Fish Passage on ESBCS-June
tblOffRoadEquipment	PhaseName		Fish Passage on ESBCS-June
tblOffRoadEquipment	PhaseName		Levee Improvements-July
tblOffRoadEquipment	PhaseName		Fish Passage on ESBCS-July
tblOffRoadEquipment	PhaseName		Fish Passage on ESBCS-July
tblOffRoadEquipment	UsageHours	4.00	8.00
tblOffRoadEquipment	UsageHours	4.00	8.00
tblOffRoadEquipment	UsageHours	4.00	8.00
tblOffRoadEquipment	UsageHours	4.00	8.00
tblProjectCharacteristics	OperationalYear	2018	2020
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblRoadDust	MeanVehicleSpeed	40	15
tblWoodstoves	WoodstoveWoodMass	3,019.20	4,558.40

2.0 Emissions Summary

Eastside Bypass Project - Merced County, Summer

	ROG	NOx	CO	SO2	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

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Levee Improvements-April	Building Construction	4/1/2019	4/30/2019	5	22	
2	Levee Improvements-May	Building Construction	5/1/2019	5/31/2019	5	22	
3	Fish Passage on ESBCS-May	Building Construction	5/1/2019	5/31/2019	5	22	
4	Levee Improvements-June	Building Construction	6/1/2019	6/30/2019	5	22	
5	Fish Passage on ESBCS-June	Building Construction	6/1/2019	6/30/2019	5	22	
6	Levee Improvements-July	Building Construction	7/1/2019	7/31/2019	5	22	
7	Fish Passage on ESBCS-July	Building Construction	7/1/2019	7/31/2019	5	22	
8	Levee Improvements-Aug	Building Construction	8/1/2019	8/31/2019	5	22	
9	Levee Improvements-Sept	Building Construction	9/1/2019	9/30/2019	5	22	
10	McNamara Road Crossing-Sept	Building Construction	9/1/2019	9/30/2019	5	22	
11	Levee Improvements-Oct	Building Construction	10/1/2019	10/31/2019	5	23	
12	McNamara Road Crossing-Oct	Building Construction	10/1/2019	10/31/2019	5	23	
13	Levee Improvements-Nov	Building Construction	11/1/2019	11/30/2019	5	21	
14	Levee Improvements-Dec	Building Construction	12/1/2019	12/31/2019	5	22	
15	Merced NWR Weirs	Building Construction	4/1/2020	7/31/2020	5	88	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Eastside Bypass Project - Merced County, Summer

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Levee Improvements-May	Off-Highway Trucks	1	8.00	402	0.38
Levee Improvements-May	Rubber Tired Dozers	1	8.00	247	0.40
Levee Improvements-May	Rubber Tired Loaders	1	8.00	203	0.36
Fish Passage on ESBCS-May	Excavators	1	8.00	158	0.38
Fish Passage on ESBCS-May	Off-Highway Trucks	1	8.00	402	0.38
Levee Improvements-June	Excavators	2	8.00	158	0.38
Levee Improvements-June	Excavators	1	8.00	158	0.38
Levee Improvements-June	Off-Highway Trucks	1	8.00	402	0.38
Levee Improvements-June	Off-Highway Trucks	1	8.00	402	0.38
Levee Improvements-June	Rubber Tired Dozers	1	8.00	247	0.40
Levee Improvements-June	Rubber Tired Loaders	1	8.00	203	0.36
Fish Passage on ESBCS-June	Bore/Drill Rigs	1	8.00	221	0.50
Fish Passage on ESBCS-June	Cranes	1	8.00	231	0.29
Fish Passage on ESBCS-June	Excavators	1	8.00	158	0.38
Fish Passage on ESBCS-June	Excavators	1	8.00	158	0.38
Fish Passage on ESBCS-June	Generator Sets	1	8.00	84	0.74
Fish Passage on ESBCS-June	Off-Highway Trucks	1	8.00	402	0.38
Fish Passage on ESBCS-June	Pumps	2	8.00	84	0.74
Fish Passage on ESBCS-June	Rollers	1	8.00	80	0.38
Fish Passage on ESBCS-June	Rubber Tired Dozers	1	8.00	247	0.40
Fish Passage on ESBCS-June	Rubber Tired Loaders	1	8.00	203	0.36
Fish Passage on ESBCS-June	Rubber Tired Loaders	1	8.00	203	0.36

Eastside Bypass Project - Merced County, Summer

Levee Improvements-July	Excavators	2	8.00	158	0.38
Levee Improvements-July	Excavators	1	8.00	158	0.38
Levee Improvements-July	Graders	1	8.00	187	0.41
Levee Improvements-July	Off-Highway Trucks	1	8.00	402	0.38
Levee Improvements-July	Off-Highway Trucks	1	8.00	402	0.38
Levee Improvements-July	Rollers	1	8.00	80	0.38
Levee Improvements-July	Rubber Tired Dozers	1	8.00	247	0.40
Levee Improvements-July	Rubber Tired Loaders	1	8.00	203	0.36
Fish Passage on ESBCS-July	Bore/Drill Rigs	1	8.00	221	0.50
Fish Passage on ESBCS-July	Cranes	1	8.00	231	0.29
Fish Passage on ESBCS-July	Excavators	1	8.00	158	0.38
Fish Passage on ESBCS-July	Excavators	1	8.00	158	0.38
Fish Passage on ESBCS-July	Generator Sets	1	8.00	84	0.74
Fish Passage on ESBCS-July	Off-Highway Trucks	1	8.00	402	0.38
Fish Passage on ESBCS-July	Pumps	2	8.00	84	0.74
Fish Passage on ESBCS-July	Rollers	1	8.00	80	0.38
Fish Passage on ESBCS-July	Rubber Tired Dozers	1	8.00	247	0.40
Fish Passage on ESBCS-July	Rubber Tired Loaders	1	8.00	203	0.36
Fish Passage on ESBCS-July	Rubber Tired Loaders	1	8.00	203	0.36
Levee Improvements-Aug	Excavators	2	8.00	158	0.38
Levee Improvements-Aug	Excavators	1	8.00	158	0.38
Levee Improvements-Aug	Graders	1	8.00	187	0.41
Levee Improvements-Aug	Off-Highway Trucks	1	8.00	402	0.38
Levee Improvements-Aug	Rollers	2	8.00	80	0.38
Levee Improvements-Sept	Excavators	2	8.00	158	0.38
Levee Improvements-Sept	Graders	1	8.00	187	0.41
Levee Improvements-Sept	Off-Highway Trucks	1	8.00	402	0.38

Eastside Bypass Project - Merced County, Summer

Levee Improvements-Sept	Rollers	2	8.00	80	0.38
McNamara Road Crossing-Sept	Cranes	1	8.00	231	0.29
McNamara Road Crossing-Sept	Excavators	1	8.00	158	0.38
McNamara Road Crossing-Sept	Generator Sets	1	8.00	84	0.74
McNamara Road Crossing-Sept	Off-Highway Trucks	3	8.00	402	0.38
McNamara Road Crossing-Sept	Off-Highway Trucks	1	8.00	402	0.38
McNamara Road Crossing-Sept	Rubber Tired Dozers	1	8.00	247	0.40
McNamara Road Crossing-Sept	Rubber Tired Loaders	1	8.00	203	0.36
McNamara Road Crossing-Sept	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Levee Improvements-Oct	Graders	1	8.00	187	0.41
Levee Improvements-Oct	Rollers	1	8.00	80	0.38
McNamara Road Crossing-Oct	Excavators	1	8.00	158	0.38
McNamara Road Crossing-Oct	Generator Sets	1	8.00	84	0.74
McNamara Road Crossing-Oct	Graders	1	8.00	187	0.41
McNamara Road Crossing-Oct	Off-Highway Trucks	3	8.00	402	0.38
McNamara Road Crossing-Oct	Off-Highway Trucks	1	8.00	402	0.38
McNamara Road Crossing-Oct	Rollers	1	8.00	80	0.38
McNamara Road Crossing-Oct	Rubber Tired Loaders	1	8.00	203	0.36
McNamara Road Crossing-Oct	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Levee Improvements-Nov	Graders	1	8.00	187	0.41
Levee Improvements-Nov	Rollers	1	8.00	80	0.38
Merced NWR Weirs	Bore/Drill Rigs	1	8.00	221	0.50
Merced NWR Weirs	Cranes	1	8.00	231	0.29
Merced NWR Weirs	Excavators	1	8.00	158	0.38
Merced NWR Weirs	Generator Sets	1	8.00	84	0.74
Merced NWR Weirs	Off-Highway Trucks	2	8.00	402	0.38
Merced NWR Weirs	Off-Highway Trucks	1	8.00	402	0.38

Eastside Bypass Project - Merced County, Summer

Merced NWR Weirs	Pumps	1	8.00	84	0.74
Merced NWR Weirs	Rubber Tired Dozers	1	8.00	247	0.40

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
Levee Improvements-April	0	0.00	0.00	14.00	0.00	7.00	20.00	LD_Mix	HDT_Mix	MHDT
Levee Improvements-April	0	19.00	0.00	0.00	20.00	7.00	0.00	LD_Mix	HDT_Mix	MHDT
Levee Improvements-April	0	0.00	0.00	4.00	0.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT
Levee Improvements-May	0	0.00	0.00	31.00	0.00	7.00	60.00	LD_Mix	HDT_Mix	HHDT
Levee Improvements-May	0	0.00	0.00	2.00	0.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT
Fish Passage on ESBCS-May	0	0.00	0.00	2.00	0.00	7.00	17.00	LD_Mix	HDT_Mix	HHDT
Fish Passage on ESBCS-May	0	0.00	0.00	410.00	0.00	7.00	65.00	LD_Mix	HDT_Mix	HHDT
Fish Passage on ESBCS-May	0	0.00	0.00	3.00	0.00	7.00	120.00	LD_Mix	HDT_Mix	HHDT
Fish Passage on ESBCS-May	0	0.00	0.00	7.00	0.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT
Levee Improvements-June	0	0.00	0.00	3.00	0.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT
Fish Passage on ESBCS-June	0	0.00	0.00	6.00	0.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT
Levee Improvements-July	0	0.00	0.00	3.00	0.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT
Fish Passage on ESBCS-July	0	0.00	0.00	7.00	0.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT
Levee Improvements-Aug	0	0.00	0.00	4.00	0.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT
Levee Improvements-Sept	0	0.00	0.00	3.00	0.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT
McNamara Road Crossing-Sept	0	0.00	0.00	2.00	7.00	7.00	17.00	LD_Mix	HDT_Mix	HHDT
McNamara Road Crossing-Sept	0	0.00	0.00	11.00	0.00	7.00	13.00	LD_Mix	HDT_Mix	HHDT
McNamara Road Crossing-Sept	0	0.00	0.00	25.00	0.00	7.00	13.00	LD_Mix	HDT_Mix	HHDT
McNamara Road Crossing-Sept	0	0.00	0.00	15.00	0.00	7.00	13.00	LD_Mix	HDT_Mix	HHDT
McNamara Road Crossing-Sept	0	0.00	0.00	5.00	0.00	7.00	13.00	LD_Mix	HDT_Mix	HHDT
McNamara Road Crossing-Sept	0	0.00	0.00	2.00	0.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT

Eastside Bypass Project - Merced County, Summer

Levee Improvements-Oct	0	0.00	0.00	3.00	0.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT
McNamara Road Crossing-Oct	0	0.00	0.00	3.00	0.00	7.00	20.00	LD_Mix	HDT_Mix	MHDT
McNamara Road Crossing-Oct	0	0.00	0.00	1.00	0.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT
Levee Improvements-Nov	0	0.00	0.00	3.00	0.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT
Levee Improvements-Nov	0	0.00	0.00	14.00	0.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT
Levee Improvements-Dec	0	0.00	0.00	3.00	0.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT
Merced NWR Weirs	0	8.00	0.00	0.00	20.00	7.00	0.00	LD_Mix	HDT_Mix	MHDT
Merced NWR Weirs	0	0.00	0.00	14.00	0.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT
Merced NWR Weirs	0	0.00	0.00	2.00	0.00	7.00	17.00	LD_Mix	HDT_Mix	HHDT
Merced NWR Weirs	0	0.00	0.00	1.00	0.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT
Merced NWR Weirs	0	0.00	0.00	16.00	0.00	7.00	20.00	LD_Mix	HDT_Mix	MHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Levee Improvements-April - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.8318	0.0000	1.8318	0.1978	0.0000	0.1978			0.0000			0.0000
Total					1.8318	0.0000	1.8318	0.1978	0.0000	0.1978			0.0000			0.0000

Eastside Bypass Project - Merced County, Summer

3.2 Levee Improvements-April - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	9.8500e-003	0.1642	0.0528	4.8000e-004	0.0156	2.7300e-003	0.0184	4.6000e-003	2.6100e-003	7.2100e-003		50.5362	50.5362	1.7500e-003		50.5799
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1652	0.1122	1.4235	3.1500e-003	0.2889	2.1600e-003	0.2910	0.0766	1.9900e-003	0.0786		313.5524	313.5524	0.0113		313.8351
Total	0.1751	0.2764	1.4762	3.6300e-003	0.3045	4.8900e-003	0.3094	0.0812	4.6000e-003	0.0858		364.0886	364.0886	0.0131		364.4150

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7144	0.0000	0.7144	0.0771	0.0000	0.0771			0.0000			0.0000
Total					0.7144	0.0000	0.7144	0.0771	0.0000	0.0771			0.0000			0.0000

Eastside Bypass Project - Merced County, Summer

3.2 Levee Improvements-April - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	9.8500e-003	0.1642	0.0528	4.8000e-004	0.0156	2.7300e-003	0.0184	4.6000e-003	2.6100e-003	7.2100e-003		50.5362	50.5362	1.7500e-003		50.5799
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1652	0.1122	1.4235	3.1500e-003	0.2889	2.1600e-003	0.2910	0.0766	1.9900e-003	0.0786		313.5524	313.5524	0.0113		313.8351
Total	0.1751	0.2764	1.4762	3.6300e-003	0.3045	4.8900e-003	0.3094	0.0812	4.6000e-003	0.0858		364.0886	364.0886	0.0131		364.4150

3.3 Levee Improvements-May - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2433	24.0904	9.9597	0.0280		1.0120	1.0120		0.9310	0.9310		2,771.9656	2,771.9656	0.8770		2,793.8911
Total	2.2433	24.0904	9.9597	0.0280		1.0120	1.0120		0.9310	0.9310		2,771.9656	2,771.9656	0.8770		2,793.8911

Eastside Bypass Project - Merced County, Summer

3.3 Levee Improvements-May - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0312	0.9527	0.1554	3.1300e-003	0.0732	4.7000e-003	0.0779	0.0201	4.5000e-003	0.0246		328.2651	328.2651	0.0100		328.5158
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	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	0.0312	0.9527	0.1554	3.1300e-003	0.0732	4.7000e-003	0.0779	0.0201	4.5000e-003	0.0246		328.2651	328.2651	0.0100		328.5158

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2433	24.0904	9.9597	0.0280		1.0120	1.0120		0.9310	0.9310	0.0000	2,771.9656	2,771.9656	0.8770		2,793.8911
Total	2.2433	24.0904	9.9597	0.0280		1.0120	1.0120		0.9310	0.9310	0.0000	2,771.9656	2,771.9656	0.8770		2,793.8911

Eastside Bypass Project - Merced County, Summer

3.3 Levee Improvements-May - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0312	0.9527	0.1554	3.1300e-003	0.0732	4.7000e-003	0.0779	0.0201	4.5000e-003	0.0246		328.2651	328.2651	0.0100		328.5158
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	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	0.0312	0.9527	0.1554	3.1300e-003	0.0732	4.7000e-003	0.0779	0.0201	4.5000e-003	0.0246		328.2651	328.2651	0.0100		328.5158

3.4 Fish Passage on ESBCS-May - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9706	9.8715	7.2600	0.0184		0.3908	0.3908		0.3595	0.3595		1,818.8571	1,818.8571	0.5755		1,833.2438
Total	0.9706	9.8715	7.2600	0.0184		0.3908	0.3908		0.3595	0.3595		1,818.8571	1,818.8571	0.5755		1,833.2438

Eastside Bypass Project - Merced County, Summer

3.4 Fish Passage on ESBCS-May - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.4411	13.3794	2.2028	0.0445	1.0469	0.0671	1.1140	0.2882	0.0642	0.3523		4,662.445 2	4,662.445 2	0.1317		4,665.737 1
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	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	0.4411	13.3794	2.2028	0.0445	1.0469	0.0671	1.1140	0.2882	0.0642	0.3523		4,662.445 2	4,662.445 2	0.1317		4,665.737 1

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9706	9.8715	7.2600	0.0184		0.3908	0.3908		0.3595	0.3595	0.0000	1,818.857 1	1,818.857 1	0.5755		1,833.243 8
Total	0.9706	9.8715	7.2600	0.0184		0.3908	0.3908		0.3595	0.3595	0.0000	1,818.857 1	1,818.857 1	0.5755		1,833.243 8

Eastside Bypass Project - Merced County, Summer

3.4 Fish Passage on ESBCS-May - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.4411	13.3794	2.2028	0.0445	1.0469	0.0671	1.1140	0.2882	0.0642	0.3523		4,662.445 2	4,662.445 2	0.1317		4,665.737 1
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	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	0.4411	13.3794	2.2028	0.0445	1.0469	0.0671	1.1140	0.2882	0.0642	0.3523		4,662.445 2	4,662.445 2	0.1317		4,665.737 1

3.5 Levee Improvements-June - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.7354	39.3255	23.7461	0.0567		1.6615	1.6615		1.5285	1.5285		5,613.073 8	5,613.073 8	1.7759		5,657.471 8
Total	3.7354	39.3255	23.7461	0.0567		1.6615	1.6615		1.5285	1.5285		5,613.073 8	5,613.073 8	1.7759		5,657.471 8

Eastside Bypass Project - Merced County, Summer

3.5 Levee Improvements-June - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.1800e-003	0.0399	5.6800e-003	1.1000e-004	2.5700e-003	1.6000e-004	2.7300e-003	7.0000e-004	1.5000e-004	8.5000e-004		11.7002	11.7002	7.8000e-004		11.7197
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	1.1800e-003	0.0399	5.6800e-003	1.1000e-004	2.5700e-003	1.6000e-004	2.7300e-003	7.0000e-004	1.5000e-004	8.5000e-004		11.7002	11.7002	7.8000e-004		11.7197

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.7354	39.3255	23.7461	0.0567		1.6615	1.6615		1.5285	1.5285	0.0000	5,613.0738	5,613.0738	1.7759		5,657.4717
Total	3.7354	39.3255	23.7461	0.0567		1.6615	1.6615		1.5285	1.5285	0.0000	5,613.0738	5,613.0738	1.7759		5,657.4717

Eastside Bypass Project - Merced County, Summer

3.5 Levee Improvements-June - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Hauling	1.1800e-003	0.0399	5.6800e-003	1.1000e-004	2.5700e-003	1.6000e-004	2.7300e-003	7.0000e-004	1.5000e-004	8.5000e-004		11.7002	11.7002	7.8000e-004			11.7197
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Total	1.1800e-003	0.0399	5.6800e-003	1.1000e-004	2.5700e-003	1.6000e-004	2.7300e-003	7.0000e-004	1.5000e-004	8.5000e-004		11.7002	11.7002	7.8000e-004			11.7197

3.6 Fish Passage on ESBCS-June - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Category	lb/day										lb/day						
Off-Road	5.5581	57.6656	35.7176	0.0821		2.6408	2.6408		2.4857	2.4857		8,040.2803	8,040.2803	2.0753			8,092.1623
Total	5.5581	57.6656	35.7176	0.0821		2.6408	2.6408		2.4857	2.4857		8,040.2803	8,040.2803	2.0753			8,092.1623

Eastside Bypass Project - Merced County, Summer

3.6 Fish Passage on ESBCS-June - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.3600e-003	0.0798	0.0114	2.2000e-004	5.1400e-003	3.1000e-004	5.4500e-003	1.4000e-003	3.0000e-004	1.7000e-003		23.4005	23.4005	1.5600e-003		23.4394
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	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	2.3600e-003	0.0798	0.0114	2.2000e-004	5.1400e-003	3.1000e-004	5.4500e-003	1.4000e-003	3.0000e-004	1.7000e-003		23.4005	23.4005	1.5600e-003		23.4394

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	5.5581	57.6656	35.7176	0.0821		2.6408	2.6408		2.4857	2.4857	0.0000	8,040.2803	8,040.2803	2.0753		8,092.1623
Total	5.5581	57.6656	35.7176	0.0821		2.6408	2.6408		2.4857	2.4857	0.0000	8,040.2803	8,040.2803	2.0753		8,092.1623

Eastside Bypass Project - Merced County, Summer

3.6 Fish Passage on ESBCS-June - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.3600e-003	0.0798	0.0114	2.2000e-004	5.1400e-003	3.1000e-004	5.4500e-003	1.4000e-003	3.0000e-004	1.7000e-003		23.4005	23.4005	1.5600e-003		23.4394
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	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	2.3600e-003	0.0798	0.0114	2.2000e-004	5.1400e-003	3.1000e-004	5.4500e-003	1.4000e-003	3.0000e-004	1.7000e-003		23.4005	23.4005	1.5600e-003		23.4394

3.7 Levee Improvements-July - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.4486	48.1460	27.4914	0.0660		2.0199	2.0199		1.8584	1.8584		6,530.3847	6,530.3847	2.0661		6,582.0383
Total	4.4486	48.1460	27.4914	0.0660		2.0199	2.0199		1.8584	1.8584		6,530.3847	6,530.3847	2.0661		6,582.0383

Eastside Bypass Project - Merced County, Summer

3.7 Levee Improvements-July - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.1800e-003	0.0399	5.6800e-003	1.1000e-004	2.3100e-003	1.6000e-004	2.4700e-003	6.4000e-004	1.5000e-004	7.9000e-004		11.7002	11.7002	7.8000e-004		11.7197
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	1.1800e-003	0.0399	5.6800e-003	1.1000e-004	2.3100e-003	1.6000e-004	2.4700e-003	6.4000e-004	1.5000e-004	7.9000e-004		11.7002	11.7002	7.8000e-004		11.7197

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.4486	48.1460	27.4914	0.0660		2.0199	2.0199		1.8584	1.8584	0.0000	6,530.3847	6,530.3847	2.0661		6,582.0383
Total	4.4486	48.1460	27.4914	0.0660		2.0199	2.0199		1.8584	1.8584	0.0000	6,530.3847	6,530.3847	2.0661		6,582.0383

Eastside Bypass Project - Merced County, Summer

3.7 Levee Improvements-July - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.1800e-003	0.0399	5.6800e-003	1.1000e-004	2.3100e-003	1.6000e-004	2.4700e-003	6.4000e-004	1.5000e-004	7.9000e-004		11.7002	11.7002	7.8000e-004		11.7197
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	1.1800e-003	0.0399	5.6800e-003	1.1000e-004	2.3100e-003	1.6000e-004	2.4700e-003	6.4000e-004	1.5000e-004	7.9000e-004		11.7002	11.7002	7.8000e-004		11.7197

3.8 Fish Passage on ESBCS-July - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	5.5581	57.6656	35.7176	0.0821		2.6408	2.6408		2.4857	2.4857		8,040.2803	8,040.2803	2.0753		8,092.1623
Total	5.5581	57.6656	35.7176	0.0821		2.6408	2.6408		2.4857	2.4857		8,040.2803	8,040.2803	2.0753		8,092.1623

Eastside Bypass Project - Merced County, Summer

3.8 Fish Passage on ESBCS-July - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.7500e-003	0.0931	0.0133	2.6000e-004	5.4000e-003	3.6000e-004	5.7600e-003	1.4900e-003	3.5000e-004	1.8300e-003		27.3005	27.3005	1.8200e-003		27.3460
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	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	2.7500e-003	0.0931	0.0133	2.6000e-004	5.4000e-003	3.6000e-004	5.7600e-003	1.4900e-003	3.5000e-004	1.8300e-003		27.3005	27.3005	1.8200e-003		27.3460

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	5.5581	57.6656	35.7176	0.0821		2.6408	2.6408		2.4857	2.4857	0.0000	8,040.2803	8,040.2803	2.0753		8,092.1623
Total	5.5581	57.6656	35.7176	0.0821		2.6408	2.6408		2.4857	2.4857	0.0000	8,040.2803	8,040.2803	2.0753		8,092.1623

Eastside Bypass Project - Merced County, Summer

3.8 Fish Passage on ESBCS-July - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.7500e-003	0.0931	0.0133	2.6000e-004	5.4000e-003	3.6000e-004	5.7600e-003	1.4900e-003	3.5000e-004	1.8300e-003		27.3005	27.3005	1.8200e-003		27.3460
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	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	2.7500e-003	0.0931	0.0133	2.6000e-004	5.4000e-003	3.6000e-004	5.7600e-003	1.4900e-003	3.5000e-004	1.8300e-003		27.3005	27.3005	1.8200e-003		27.3460

3.9 Levee Improvements-Aug - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.4319	26.2966	19.4390	0.0406		1.1553	1.1553		1.0628	1.0628		4,018.1029	4,018.1029	1.2713		4,049.8850
Total	2.4319	26.2966	19.4390	0.0406		1.1553	1.1553		1.0628	1.0628		4,018.1029	4,018.1029	1.2713		4,049.8850

Eastside Bypass Project - Merced County, Summer

3.9 Levee Improvements-Aug - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.5700e-003	0.0532	7.5700e-003	1.5000e-004	3.1900e-003	2.1000e-004	3.4000e-003	8.7000e-004	2.0000e-004	1.0700e-003		15.6003	15.6003	1.0400e-003		15.6263
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	1.5700e-003	0.0532	7.5700e-003	1.5000e-004	3.1900e-003	2.1000e-004	3.4000e-003	8.7000e-004	2.0000e-004	1.0700e-003		15.6003	15.6003	1.0400e-003		15.6263

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.4319	26.2966	19.4390	0.0406		1.1553	1.1553		1.0628	1.0628	0.0000	4,018.1029	4,018.1029	1.2713		4,049.8850
Total	2.4319	26.2966	19.4390	0.0406		1.1553	1.1553		1.0628	1.0628	0.0000	4,018.1029	4,018.1029	1.2713		4,049.8850

Eastside Bypass Project - Merced County, Summer

3.9 Levee Improvements-Aug - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.5700e-003	0.0532	7.5700e-003	1.5000e-004	3.1900e-003	2.1000e-004	3.4000e-003	8.7000e-004	2.0000e-004	1.0700e-003		15.6003	15.6003	1.0400e-003		15.6263
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	1.5700e-003	0.0532	7.5700e-003	1.5000e-004	3.1900e-003	2.1000e-004	3.4000e-003	8.7000e-004	2.0000e-004	1.0700e-003		15.6003	15.6003	1.0400e-003		15.6263

3.10 Levee Improvements-Sept - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1712	23.6147	16.1758	0.0354		1.0259	1.0259		0.9439	0.9439		3,506.9773	3,506.9773	1.1096		3,534.7166
Total	2.1712	23.6147	16.1758	0.0354		1.0259	1.0259		0.9439	0.9439		3,506.9773	3,506.9773	1.1096		3,534.7166

Eastside Bypass Project - Merced County, Summer

3.10 Levee Improvements-Sept - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.1800e-003	0.0399	5.6800e-003	1.1000e-004	2.4800e-003	1.6000e-004	2.6300e-003	6.8000e-004	1.5000e-004	8.3000e-004		11.7002	11.7002	7.8000e-004		11.7197
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	1.1800e-003	0.0399	5.6800e-003	1.1000e-004	2.4800e-003	1.6000e-004	2.6300e-003	6.8000e-004	1.5000e-004	8.3000e-004		11.7002	11.7002	7.8000e-004		11.7197

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1712	23.6147	16.1758	0.0354		1.0259	1.0259		0.9439	0.9439	0.0000	3,506.9773	3,506.9773	1.1096		3,534.7166
Total	2.1712	23.6147	16.1758	0.0354		1.0259	1.0259		0.9439	0.9439	0.0000	3,506.9773	3,506.9773	1.1096		3,534.7166

Eastside Bypass Project - Merced County, Summer

3.10 Levee Improvements-Sept - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.1800e-003	0.0399	5.6800e-003	1.1000e-004	2.4800e-003	1.6000e-004	2.6300e-003	6.8000e-004	1.5000e-004	8.3000e-004		11.7002	11.7002	7.8000e-004		11.7197
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	1.1800e-003	0.0399	5.6800e-003	1.1000e-004	2.4800e-003	1.6000e-004	2.6300e-003	6.8000e-004	1.5000e-004	8.3000e-004		11.7002	11.7002	7.8000e-004		11.7197

3.11 McNamara Road Crossing-Sept - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	5.8145	60.4632	33.5320	0.0882		2.5622	2.5622		2.3753	2.3753		8,708.0727	8,708.0727	2.5975		8,773.0099
Total	5.8145	60.4632	33.5320	0.0882		2.5622	2.5622		2.3753	2.3753		8,708.0727	8,708.0727	2.5975		8,773.0099

Eastside Bypass Project - Merced County, Summer

3.11 McNamara Road Crossing-Sept - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0178	0.6328	0.0838	1.6200e-003	0.0331	2.1500e-003	0.0353	9.0600e-003	2.0500e-003	0.0111		169.9514	169.9514	0.0151		170.3291
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	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	0.0178	0.6328	0.0838	1.6200e-003	0.0331	2.1500e-003	0.0353	9.0600e-003	2.0500e-003	0.0111		169.9514	169.9514	0.0151		170.3291

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	5.8145	60.4632	33.5320	0.0882		2.5622	2.5622		2.3753	2.3753	0.0000	8,708.0727	8,708.0727	2.5975		8,773.0099
Total	5.8145	60.4632	33.5320	0.0882		2.5622	2.5622		2.3753	2.3753	0.0000	8,708.0727	8,708.0727	2.5975		8,773.0099

Eastside Bypass Project - Merced County, Summer

3.11 McNamara Road Crossing-Sept - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0178	0.6328	0.0838	1.6200e-003	0.0331	2.1500e-003	0.0353	9.0600e-003	2.0500e-003	0.0111		169.9514	169.9514	0.0151		170.3291
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	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	0.0178	0.6328	0.0838	1.6200e-003	0.0331	2.1500e-003	0.0353	9.0600e-003	2.0500e-003	0.0111		169.9514	169.9514	0.0151		170.3291

3.12 Levee Improvements-Oct - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7133	8.8205	3.7453	9.2600e-003		0.3585	0.3585		0.3298	0.3298		917.3109	917.3109	0.2902		924.5666
Total	0.7133	8.8205	3.7453	9.2600e-003		0.3585	0.3585		0.3298	0.3298		917.3109	917.3109	0.2902		924.5666

Eastside Bypass Project - Merced County, Summer

3.12 Levee Improvements-Oct - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.1300e-003	0.0382	5.4300e-003	1.1000e-004	2.2900e-003	1.5000e-004	2.4400e-003	6.3000e-004	1.4000e-004	7.7000e-004		11.1915	11.1915	7.4000e-004		11.2102
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	1.1300e-003	0.0382	5.4300e-003	1.1000e-004	2.2900e-003	1.5000e-004	2.4400e-003	6.3000e-004	1.4000e-004	7.7000e-004		11.1915	11.1915	7.4000e-004		11.2102

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7133	8.8205	3.7453	9.2600e-003		0.3585	0.3585		0.3298	0.3298	0.0000	917.3109	917.3109	0.2902		924.5666
Total	0.7133	8.8205	3.7453	9.2600e-003		0.3585	0.3585		0.3298	0.3298	0.0000	917.3109	917.3109	0.2902		924.5666

Eastside Bypass Project - Merced County, Summer

3.12 Levee Improvements-Oct - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.1300e-003	0.0382	5.4300e-003	1.1000e-004	2.2900e-003	1.5000e-004	2.4400e-003	6.3000e-004	1.4000e-004	7.7000e-004		11.1915	11.1915	7.4000e-004		11.2102
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	1.1300e-003	0.0382	5.4300e-003	1.1000e-004	2.2900e-003	1.5000e-004	2.4400e-003	6.3000e-004	1.4000e-004	7.7000e-004		11.1915	11.1915	7.4000e-004		11.2102

3.13 McNamara Road Crossing-Oct - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.8892	51.2023	30.7002	0.0832		2.0773	2.0773		1.9292	1.9292		8,208.7446	8,208.7446	2.4395		8,269.7322
Total	4.8892	51.2023	30.7002	0.0832		2.0773	2.0773		1.9292	1.9292		8,208.7446	8,208.7446	2.4395		8,269.7322

Eastside Bypass Project - Merced County, Summer

3.13 McNamara Road Crossing-Oct - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.0700e-003	0.0355	0.0111	1.0000e-004	3.3100e-003	5.7000e-004	3.8800e-003	9.7000e-004	5.4000e-004	1.5200e-003		10.8913	10.8913	3.9000e-004		10.9011
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	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	2.0700e-003	0.0355	0.0111	1.0000e-004	3.3100e-003	5.7000e-004	3.8800e-003	9.7000e-004	5.4000e-004	1.5200e-003		10.8913	10.8913	3.9000e-004		10.9011

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.8892	51.2023	30.7002	0.0832		2.0773	2.0773		1.9292	1.9292	0.0000	8,208.7446	8,208.7446	2.4395		8,269.7322
Total	4.8892	51.2023	30.7002	0.0832		2.0773	2.0773		1.9292	1.9292	0.0000	8,208.7446	8,208.7446	2.4395		8,269.7322

Eastside Bypass Project - Merced County, Summer

3.13 McNamara Road Crossing-Oct - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	2.0700e-003	0.0355	0.0111	1.0000e-004	3.3100e-003	5.7000e-004	3.8800e-003	9.7000e-004	5.4000e-004	1.5200e-003		10.8913	10.8913	3.9000e-004		10.9011
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	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	2.0700e-003	0.0355	0.0111	1.0000e-004	3.3100e-003	5.7000e-004	3.8800e-003	9.7000e-004	5.4000e-004	1.5200e-003		10.8913	10.8913	3.9000e-004		10.9011

3.14 Levee Improvements-Nov - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7133	8.8205	3.7453	9.2600e-003		0.3585	0.3585		0.3298	0.3298		917.3109	917.3109	0.2902		924.5666
Total	0.7133	8.8205	3.7453	9.2600e-003		0.3585	0.3585		0.3298	0.3298		917.3109	917.3109	0.2902		924.5666

Eastside Bypass Project - Merced County, Summer

3.14 Levee Improvements-Nov - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.0100e-003	0.2368	0.0337	6.6000e-004	0.0142	9.2000e-004	0.0151	3.8900e-003	8.8000e-004	4.7800e-003		69.4585	69.4585	4.6200e-003		69.5741
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	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	7.0100e-003	0.2368	0.0337	6.6000e-004	0.0142	9.2000e-004	0.0151	3.8900e-003	8.8000e-004	4.7800e-003		69.4585	69.4585	4.6200e-003		69.5741

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7133	8.8205	3.7453	9.2600e-003		0.3585	0.3585		0.3298	0.3298	0.0000	917.3109	917.3109	0.2902		924.5666
Total	0.7133	8.8205	3.7453	9.2600e-003		0.3585	0.3585		0.3298	0.3298	0.0000	917.3109	917.3109	0.2902		924.5666

Eastside Bypass Project - Merced County, Summer

3.14 Levee Improvements-Nov - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.0100e-003	0.2368	0.0337	6.6000e-004	0.0142	9.2000e-004	0.0151	3.8900e-003	8.8000e-004	4.7800e-003		69.4585	69.4585	4.6200e-003		69.5741
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	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	7.0100e-003	0.2368	0.0337	6.6000e-004	0.0142	9.2000e-004	0.0151	3.8900e-003	8.8000e-004	4.7800e-003		69.4585	69.4585	4.6200e-003		69.5741

3.15 Levee Improvements-Dec - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.1800e-003	0.0399	5.6800e-003	1.1000e-004	2.3900e-003	1.6000e-004	2.5500e-003	6.6000e-004	1.5000e-004	8.0000e-004		11.7002	11.7002	7.8000e-004		11.7197
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	1.1800e-003	0.0399	5.6800e-003	1.1000e-004	2.3900e-003	1.6000e-004	2.5500e-003	6.6000e-004	1.5000e-004	8.0000e-004		11.7002	11.7002	7.8000e-004		11.7197

Eastside Bypass Project - Merced County, Summer

3.15 Levee Improvements-Dec - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.1800e-003	0.0399	5.6800e-003	1.1000e-004	2.3900e-003	1.6000e-004	2.5500e-003	6.6000e-004	1.5000e-004	8.0000e-004		11.7002	11.7002	7.8000e-004		11.7197
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	1.1800e-003	0.0399	5.6800e-003	1.1000e-004	2.3900e-003	1.6000e-004	2.5500e-003	6.6000e-004	1.5000e-004	8.0000e-004		11.7002	11.7002	7.8000e-004		11.7197

3.16 Merced NWR Weirs - 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	lb/day										lb/day					
Off-Road	4.8669	48.6345	30.4939	0.0816		2.0901	2.0901		1.9552	1.9552		7,877.9926	7,877.9926	2.2173		7,933.4239
Total	4.8669	48.6345	30.4939	0.0816		2.0901	2.0901		1.9552	1.9552		7,877.9926	7,877.9926	2.2173		7,933.4239

Eastside Bypass Project - Merced County, Summer

3.16 Merced NWR Weirs - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	3.2100e-003	0.0780	0.0176	2.5000e-004	6.8800e-003	6.3000e-004	7.5100e-003	1.9800e-003	6.0000e-004	2.5800e-003		26.0841	26.0841	1.2200e-003		26.1145
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0630	0.0415	0.5327	1.2900e-003	0.1216	8.7000e-004	0.1225	0.0323	8.1000e-004	0.0331		127.9808	127.9808	4.1300e-003		128.0841
Total	0.0662	0.1196	0.5504	1.5400e-003	0.1285	1.5000e-003	0.1300	0.0342	1.4100e-003	0.0356		154.0649	154.0649	5.3500e-003		154.1986

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	4.8669	48.6345	30.4939	0.0816		2.0901	2.0901		1.9552	1.9552	0.0000	7,877.9926	7,877.9926	2.2173		7,933.4239
Total	4.8669	48.6345	30.4939	0.0816		2.0901	2.0901		1.9552	1.9552	0.0000	7,877.9926	7,877.9926	2.2173		7,933.4239

Eastside Bypass Project - Merced County, Summer

3.16 Merced NWR Weirs - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	3.2100e-003	0.0780	0.0176	2.5000e-004	6.8800e-003	6.3000e-004	7.5100e-003	1.9800e-003	6.0000e-004	2.5800e-003		26.0841	26.0841	1.2200e-003		26.1145
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0630	0.0415	0.5327	1.2900e-003	0.1216	8.7000e-004	0.1225	0.0323	8.1000e-004	0.0331		127.9808	127.9808	4.1300e-003		128.0841
Total	0.0662	0.1196	0.5504	1.5400e-003	0.1285	1.5000e-003	0.1300	0.0342	1.4100e-003	0.0356		154.0649	154.0649	5.3500e-003		154.1986

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Eastside Bypass Project - Merced County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.0000	0.0000	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

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
User Defined Commercial	0.00	0.00	0.00		
User Defined Residential	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
Other Asphalt Surfaces	10.00	5.00	7.00	0.00	0.00	0.00	0	0	0
User Defined Commercial	10.00	5.00	7.00	0.00	0.00	0.00	0	0	0
User Defined Residential	10.00	5.00	7.00	46.00	13.00	41.00	0	0	0

4.4 Fleet Mix

Eastside Bypass Project - Merced County, Summer

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Commercial	0.484945	0.031816	0.154973	0.120992	0.021332	0.005119	0.015709	0.151573	0.002377	0.002347	0.006486	0.001616	0.000714
Other Asphalt Surfaces	0.484945	0.031816	0.154973	0.120992	0.021332	0.005119	0.015709	0.151573	0.002377	0.002347	0.006486	0.001616	0.000714
User Defined Residential	0.484945	0.031816	0.154973	0.120992	0.021332	0.005119	0.015709	0.151573	0.002377	0.002347	0.006486	0.001616	0.000714

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Eastside Bypass Project - Merced County, Summer

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
User Defined Commercial	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
User Defined Residential	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
User Defined Commercial	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
User Defined Residential	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

Eastside Bypass Project - Merced County, Summer

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	lb/day										lb/day					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	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

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Eastside Bypass Project - Merced County, Summer

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

Eastside Bypass Project - Merced County, Annual

Eastside Bypass Project
Merced County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Commercial	0.00	User Defined Unit	0.00	0.00	0
Other Asphalt Surfaces	0.00	Acre	0.00	0.00	0
User Defined Residential	0.00	Dwelling Unit	0.00	0.00	0

1.2 Other Project Characteristics

Urbanization	Rural	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	49
Climate Zone	3			Operational Year	2020
Utility Company					
CO2 Intensity (lb/MWhr)	0	CH4 Intensity (lb/MWhr)	0	N2O Intensity (lb/MWhr)	0

1.3 User Entered Comments & Non-Default Data

Project Characteristics - operational 2020

Land Use -

Construction Phase - Daily data

Off-road Equipment -

Off-road Equipment - from project description

Off-road Equipment - from project description

Off-road Equipment - from project description

Off-road Equipment - from project description

Eastside Bypass Project - Merced County, Annual

Off-road Equipment - from project description

Off-road Equipment -

Off-road Equipment - from project description

Off-road Equipment -

Off-road Equipment - from project description

Off-road Equipment - from project description

Off-road Equipment - from project description

Off-road Equipment - from project description

Off-road Equipment - from project description

Trips and VMT - Inputs derived from material volumes and construction schedule

On-road Fugitive Dust - Adjust worker % paved to 100

Grading - 31 acres staging area + 7 acres for reaches

Vehicle Trips -

Vehicle Emission Factors -

Vehicle Emission Factors -

Vehicle Emission Factors -

Road Dust - Imposed speed limit for non-paved roads

Area Coating -

Landscape Equipment -

Energy Use - default

Water And Wastewater -

Construction Off-road Equipment Mitigation - No mitigation.

Area Mitigation - Default

Fleet Mix -

Off-road Equipment - from project description

Off-road Equipment - from project description

Eastside Bypass Project - Merced County, Annual

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00

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tblOffRoadEquipment	PhaseName	McNamara Road Crossing-Sept
tblOffRoadEquipment	PhaseName	McNamara Road Crossing-Oct
tblOffRoadEquipment	PhaseName	Merced NWR Weirs
tblOffRoadEquipment	PhaseName	Fish Passage on ESBCS-May
tblOffRoadEquipment	PhaseName	Levee Improvements-June
tblOffRoadEquipment	PhaseName	Levee Improvements-June
tblOffRoadEquipment	PhaseName	Fish Passage on ESBCS-June
tblOffRoadEquipment	PhaseName	Fish Passage on ESBCS-June
tblOffRoadEquipment	PhaseName	Levee Improvements-July
tblOffRoadEquipment	PhaseName	Levee Improvements-July
tblOffRoadEquipment	PhaseName	Fish Passage on ESBCS-July
tblOffRoadEquipment	PhaseName	Fish Passage on ESBCS-July
tblOffRoadEquipment	PhaseName	Levee Improvements-Aug
tblOffRoadEquipment	PhaseName	Levee Improvements-Aug
tblOffRoadEquipment	PhaseName	Levee Improvements-Sept
tblOffRoadEquipment	PhaseName	McNamara Road Crossing-Sept
tblOffRoadEquipment	PhaseName	McNamara Road Crossing-Oct
tblOffRoadEquipment	PhaseName	Merced NWR Weirs
tblOffRoadEquipment	PhaseName	Fish Passage on ESBCS-June
tblOffRoadEquipment	PhaseName	Fish Passage on ESBCS-July
tblOffRoadEquipment	PhaseName	Levee Improvements-Oct
tblOffRoadEquipment	PhaseName	McNamara Road Crossing-Oct
tblOffRoadEquipment	PhaseName	Levee Improvements-Nov
tblOffRoadEquipment	PhaseName	Levee Improvements-July
tblOffRoadEquipment	PhaseName	Levee Improvements-Aug
tblOffRoadEquipment	PhaseName	Levee Improvements-Sept
tblOffRoadEquipment	PhaseName	McNamara Road Crossing-Sept

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tbloffRoadEquipment	PhaseName	McNamara Road Crossing-Sept
tbloffRoadEquipment	PhaseName	McNamara Road Crossing-Oct
tbloffRoadEquipment	PhaseName	McNamara Road Crossing-Oct
tbloffRoadEquipment	PhaseName	Merced NWR Weirs
tbloffRoadEquipment	PhaseName	Merced NWR Weirs
tbloffRoadEquipment	PhaseName	Levee Improvements-May
tbloffRoadEquipment	PhaseName	Fish Passage on ESBCS-May
tbloffRoadEquipment	PhaseName	Levee Improvements-June
tbloffRoadEquipment	PhaseName	Levee Improvements-June
tbloffRoadEquipment	PhaseName	Fish Passage on ESBCS-June
tbloffRoadEquipment	PhaseName	Levee Improvements-July
tbloffRoadEquipment	PhaseName	Levee Improvements-July
tbloffRoadEquipment	PhaseName	Fish Passage on ESBCS-July
tbloffRoadEquipment	PhaseName	Levee Improvements-Aug
tbloffRoadEquipment	PhaseName	Levee Improvements-Sept
tbloffRoadEquipment	PhaseName	Merced NWR Weirs
tbloffRoadEquipment	PhaseName	Fish Passage on ESBCS-June
tbloffRoadEquipment	PhaseName	Fish Passage on ESBCS-July
tbloffRoadEquipment	PhaseName	Levee Improvements-Oct
tbloffRoadEquipment	PhaseName	McNamara Road Crossing-Oct
tbloffRoadEquipment	PhaseName	Levee Improvements-Nov
tbloffRoadEquipment	PhaseName	Fish Passage on ESBCS-June
tbloffRoadEquipment	PhaseName	Levee Improvements-July
tbloffRoadEquipment	PhaseName	Fish Passage on ESBCS-July
tbloffRoadEquipment	PhaseName	Levee Improvements-Aug
tbloffRoadEquipment	PhaseName	Levee Improvements-Sept
tbloffRoadEquipment	PhaseName	McNamara Road Crossing-Sept

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tblOffRoadEquipment	PhaseName		Merced NWR Weirs
tblOffRoadEquipment	PhaseName		Levee Improvements-May
tblOffRoadEquipment	PhaseName		Levee Improvements-June
tblOffRoadEquipment	PhaseName		Fish Passage on ESBCS-June
tblOffRoadEquipment	PhaseName		Levee Improvements-July
tblOffRoadEquipment	PhaseName		Fish Passage on ESBCS-July
tblOffRoadEquipment	PhaseName		McNamara Road Crossing-Sept
tblOffRoadEquipment	PhaseName		McNamara Road Crossing-Oct
tblOffRoadEquipment	PhaseName		Levee Improvements-May
tblOffRoadEquipment	PhaseName		Levee Improvements-June
tblOffRoadEquipment	PhaseName		Fish Passage on ESBCS-June
tblOffRoadEquipment	PhaseName		Fish Passage on ESBCS-June
tblOffRoadEquipment	PhaseName		Levee Improvements-July
tblOffRoadEquipment	PhaseName		Fish Passage on ESBCS-July
tblOffRoadEquipment	PhaseName		Fish Passage on ESBCS-July
tblOffRoadEquipment	UsageHours	4.00	8.00
tblOffRoadEquipment	UsageHours	4.00	8.00
tblOffRoadEquipment	UsageHours	4.00	8.00
tblOffRoadEquipment	UsageHours	4.00	8.00
tblProjectCharacteristics	OperationalYear	2018	2020
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblRoadDust	MeanVehicleSpeed	40	15
tblWoodstoves	WoodstoveWoodMass	3,019.20	4,558.40

2.0 Emissions Summary

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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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

	ROG	NOx	CO	SO2	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

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Levee Improvements-April	Building Construction	4/1/2019	4/30/2019	5	22	
2	Levee Improvements-May	Building Construction	5/1/2019	5/31/2019	5	22	
3	Fish Passage on ESBCS-May	Building Construction	5/1/2019	5/31/2019	5	22	
4	Levee Improvements-June	Building Construction	6/1/2019	6/30/2019	5	22	
5	Fish Passage on ESBCS-June	Building Construction	6/1/2019	6/30/2019	5	22	
6	Levee Improvements-July	Building Construction	7/1/2019	7/31/2019	5	22	
7	Fish Passage on ESBCS-July	Building Construction	7/1/2019	7/31/2019	5	22	
8	Levee Improvements-Aug	Building Construction	8/1/2019	8/31/2019	5	22	
9	Levee Improvements-Sept	Building Construction	9/1/2019	9/30/2019	5	22	
10	McNamara Road Crossing-Sept	Building Construction	9/1/2019	9/30/2019	5	22	
11	Levee Improvements-Oct	Building Construction	10/1/2019	10/31/2019	5	23	
12	McNamara Road Crossing-Oct	Building Construction	10/1/2019	10/31/2019	5	23	
13	Levee Improvements-Nov	Building Construction	11/1/2019	11/30/2019	5	21	
14	Levee Improvements-Dec	Building Construction	12/1/2019	12/31/2019	5	22	
15	Merced NWR Weirs	Building Construction	4/1/2020	7/31/2020	5	88	

Acres of Grading (Site Preparation Phase): 0

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 – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Levee Improvements-May	Off-Highway Trucks	1	8.00	402	0.38

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Levee Improvements-May	Rubber Tired Dozers	1	8.00	247	0.40
Levee Improvements-May	Rubber Tired Loaders	1	8.00	203	0.36
Fish Passage on ESBCS-May	Excavators	1	8.00	158	0.38
Fish Passage on ESBCS-May	Off-Highway Trucks	1	8.00	402	0.38
Levee Improvements-June	Excavators	2	8.00	158	0.38
Levee Improvements-June	Excavators	1	8.00	158	0.38
Levee Improvements-June	Off-Highway Trucks	1	8.00	402	0.38
Levee Improvements-June	Off-Highway Trucks	1	8.00	402	0.38
Levee Improvements-June	Rubber Tired Dozers	1	8.00	247	0.40
Levee Improvements-June	Rubber Tired Loaders	1	8.00	203	0.36
Fish Passage on ESBCS-June	Bore/Drill Rigs	1	8.00	221	0.50
Fish Passage on ESBCS-June	Cranes	1	8.00	231	0.29
Fish Passage on ESBCS-June	Excavators	1	8.00	158	0.38
Fish Passage on ESBCS-June	Excavators	1	8.00	158	0.38
Fish Passage on ESBCS-June	Generator Sets	1	8.00	84	0.74
Fish Passage on ESBCS-June	Off-Highway Trucks	1	8.00	402	0.38
Fish Passage on ESBCS-June	Pumps	2	8.00	84	0.74
Fish Passage on ESBCS-June	Rollers	1	8.00	80	0.38
Fish Passage on ESBCS-June	Rubber Tired Dozers	1	8.00	247	0.40
Fish Passage on ESBCS-June	Rubber Tired Loaders	1	8.00	203	0.36
Fish Passage on ESBCS-June	Rubber Tired Loaders	1	8.00	203	0.36
Levee Improvements-July	Excavators	2	8.00	158	0.38
Levee Improvements-July	Excavators	1	8.00	158	0.38
Levee Improvements-July	Graders	1	8.00	187	0.41
Levee Improvements-July	Off-Highway Trucks	1	8.00	402	0.38
Levee Improvements-July	Off-Highway Trucks	1	8.00	402	0.38
Levee Improvements-July	Rollers	1	8.00	80	0.38

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Levee Improvements-July	Rubber Tired Dozers	1	8.00	247	0.40
Levee Improvements-July	Rubber Tired Loaders	1	8.00	203	0.36
Fish Passage on ESBCS-July	Bore/Drill Rigs	1	8.00	221	0.50
Fish Passage on ESBCS-July	Cranes	1	8.00	231	0.29
Fish Passage on ESBCS-July	Excavators	1	8.00	158	0.38
Fish Passage on ESBCS-July	Excavators	1	8.00	158	0.38
Fish Passage on ESBCS-July	Generator Sets	1	8.00	84	0.74
Fish Passage on ESBCS-July	Off-Highway Trucks	1	8.00	402	0.38
Fish Passage on ESBCS-July	Pumps	2	8.00	84	0.74
Fish Passage on ESBCS-July	Rollers	1	8.00	80	0.38
Fish Passage on ESBCS-July	Rubber Tired Dozers	1	8.00	247	0.40
Fish Passage on ESBCS-July	Rubber Tired Loaders	1	8.00	203	0.36
Fish Passage on ESBCS-July	Rubber Tired Loaders	1	8.00	203	0.36
Levee Improvements-Aug	Excavators	2	8.00	158	0.38
Levee Improvements-Aug	Excavators	1	8.00	158	0.38
Levee Improvements-Aug	Graders	1	8.00	187	0.41
Levee Improvements-Aug	Off-Highway Trucks	1	8.00	402	0.38
Levee Improvements-Aug	Rollers	2	8.00	80	0.38
Levee Improvements-Sept	Excavators	2	8.00	158	0.38
Levee Improvements-Sept	Graders	1	8.00	187	0.41
Levee Improvements-Sept	Off-Highway Trucks	1	8.00	402	0.38
Levee Improvements-Sept	Rollers	2	8.00	80	0.38
McNamara Road Crossing-Sept	Cranes	1	8.00	231	0.29
McNamara Road Crossing-Sept	Excavators	1	8.00	158	0.38
McNamara Road Crossing-Sept	Generator Sets	1	8.00	84	0.74
McNamara Road Crossing-Sept	Off-Highway Trucks	3	8.00	402	0.38
McNamara Road Crossing-Sept	Off-Highway Trucks	1	8.00	402	0.38

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McNamara Road Crossing-Sept	Rubber Tired Dozers	1	8.00	247	0.40
McNamara Road Crossing-Sept	Rubber Tired Loaders	1	8.00	203	0.36
McNamara Road Crossing-Sept	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Levee Improvements-Oct	Graders	1	8.00	187	0.41
Levee Improvements-Oct	Rollers	1	8.00	80	0.38
McNamara Road Crossing-Oct	Excavators	1	8.00	158	0.38
McNamara Road Crossing-Oct	Generator Sets	1	8.00	84	0.74
McNamara Road Crossing-Oct	Graders	1	8.00	187	0.41
McNamara Road Crossing-Oct	Off-Highway Trucks	3	8.00	402	0.38
McNamara Road Crossing-Oct	Off-Highway Trucks	1	8.00	402	0.38
McNamara Road Crossing-Oct	Rollers	1	8.00	80	0.38
McNamara Road Crossing-Oct	Rubber Tired Loaders	1	8.00	203	0.36
McNamara Road Crossing-Oct	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Levee Improvements-Nov	Graders	1	8.00	187	0.41
Levee Improvements-Nov	Rollers	1	8.00	80	0.38
Merced NWR Weirs	Bore/Drill Rigs	1	8.00	221	0.50
Merced NWR Weirs	Cranes	1	8.00	231	0.29
Merced NWR Weirs	Excavators	1	8.00	158	0.38
Merced NWR Weirs	Generator Sets	1	8.00	84	0.74
Merced NWR Weirs	Off-Highway Trucks	2	8.00	402	0.38
Merced NWR Weirs	Off-Highway Trucks	1	8.00	402	0.38
Merced NWR Weirs	Pumps	1	8.00	84	0.74
Merced NWR Weirs	Rubber Tired Dozers	1	8.00	247	0.40

Trips and VMT

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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
Levee Improvements-April	0	0.00	0.00	14.00	0.00	7.00	20.00	LD_Mix	HDT_Mix	MHDT
Levee Improvements-April	0	19.00	0.00	0.00	20.00	7.00	0.00	LD_Mix	HDT_Mix	MHDT
Levee Improvements-April	0	0.00	0.00	4.00	0.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT
Levee Improvements-May	0	0.00	0.00	31.00	0.00	7.00	60.00	LD_Mix	HDT_Mix	HHDT
Levee Improvements-May	0	0.00	0.00	2.00	0.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT
Fish Passage on ESRCS-May	0	0.00	0.00	2.00	0.00	7.00	17.00	LD_Mix	HDT_Mix	HHDT
Fish Passage on ESRCS-May	0	0.00	0.00	410.00	0.00	7.00	65.00	LD_Mix	HDT_Mix	HHDT
Fish Passage on ESRCS-May	0	0.00	0.00	3.00	0.00	7.00	120.00	LD_Mix	HDT_Mix	HHDT
Fish Passage on ESRCS-May	0	0.00	0.00	7.00	0.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT
Levee Improvements-June	0	0.00	0.00	3.00	0.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT
Fish Passage on ESRCS-June	0	0.00	0.00	6.00	0.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT
Levee Improvements-July	0	0.00	0.00	3.00	0.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT
Fish Passage on ESRCS-July	0	0.00	0.00	7.00	0.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT
Levee Improvements-Aug	0	0.00	0.00	4.00	0.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT
Levee Improvements-Sept	0	0.00	0.00	3.00	0.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT
McNamara Road Crossing-Sept	0	0.00	0.00	2.00	7.00	7.00	17.00	LD_Mix	HDT_Mix	HHDT
McNamara Road Crossing-Sept	0	0.00	0.00	11.00	0.00	7.00	13.00	LD_Mix	HDT_Mix	HHDT
McNamara Road Crossing-Sept	0	0.00	0.00	25.00	0.00	7.00	13.00	LD_Mix	HDT_Mix	HHDT
McNamara Road Crossing-Sept	0	0.00	0.00	15.00	0.00	7.00	13.00	LD_Mix	HDT_Mix	HHDT
McNamara Road Crossing-Sept	0	0.00	0.00	5.00	0.00	7.00	13.00	LD_Mix	HDT_Mix	HHDT
McNamara Road Crossing-Sept	0	0.00	0.00	2.00	0.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT
Levee Improvements-Oct	0	0.00	0.00	3.00	0.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT
McNamara Road Crossing-Oct	0	0.00	0.00	3.00	0.00	7.00	20.00	LD_Mix	HDT_Mix	MHDT
McNamara Road Crossing-Oct	0	0.00	0.00	1.00	0.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT
Levee Improvements-Nov	0	0.00	0.00	3.00	0.00	7.00	20.00	LD_Mix	HDT_Mix	HHDT

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3.2 Levee Improvements-April - 2019

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	1.1000e-004	1.8700e-003	5.9000e-004	1.0000e-005	1.7000e-004	3.0000e-005	2.0000e-004	5.0000e-005	3.0000e-005	8.0000e-005	0.0000	0.5027	0.5027	2.0000e-005	0.0000	0.5031
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6700e-003	1.3300e-003	0.0133	3.0000e-005	3.0800e-003	2.0000e-005	3.1100e-003	8.2000e-004	2.0000e-005	8.4000e-004	0.0000	2.8590	2.8590	1.0000e-004	0.0000	2.8615
Total	1.7800e-003	3.2000e-003	0.0139	4.0000e-005	3.2500e-003	5.0000e-005	3.3100e-003	8.7000e-004	5.0000e-005	9.2000e-004	0.0000	3.3617	3.3617	1.2000e-004	0.0000	3.3647

3.3 Levee Improvements-May - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0258	0.2770	0.1145	3.2000e-004		0.0116	0.0116		0.0107	0.0107	0.0000	28.9189	28.9189	9.1500e-003	0.0000	29.1476
Total	0.0258	0.2770	0.1145	3.2000e-004		0.0116	0.0116		0.0107	0.0107	0.0000	28.9189	28.9189	9.1500e-003	0.0000	29.1476

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3.3 Levee Improvements-May - 2019

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	3.6000e-004	0.0114	1.8200e-003	4.0000e-005	8.2000e-004	5.0000e-005	8.7000e-004	2.3000e-004	5.0000e-005	2.8000e-004	0.0000	3.4120	3.4120	1.1000e-004	0.0000	3.4148
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	3.6000e-004	0.0114	1.8200e-003	4.0000e-005	8.2000e-004	5.0000e-005	8.7000e-004	2.3000e-004	5.0000e-005	2.8000e-004	0.0000	3.4120	3.4120	1.1000e-004	0.0000	3.4148

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0258	0.2770	0.1145	3.2000e-004		0.0116	0.0116		0.0107	0.0107	0.0000	28.9188	28.9188	9.1500e-003	0.0000	29.1476
Total	0.0258	0.2770	0.1145	3.2000e-004		0.0116	0.0116		0.0107	0.0107	0.0000	28.9188	28.9188	9.1500e-003	0.0000	29.1476

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3.3 Levee Improvements-May - 2019

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	3.6000e-004	0.0114	1.8200e-003	4.0000e-005	8.2000e-004	5.0000e-005	8.7000e-004	2.3000e-004	5.0000e-005	2.8000e-004	0.0000	3.4120	3.4120	1.1000e-004	0.0000	3.4148
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	3.6000e-004	0.0114	1.8200e-003	4.0000e-005	8.2000e-004	5.0000e-005	8.7000e-004	2.3000e-004	5.0000e-005	2.8000e-004	0.0000	3.4120	3.4120	1.1000e-004	0.0000	3.4148

3.4 Fish Passage on ESBCS-May - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0112	0.1135	0.0835	2.1000e-004		4.4900e-003	4.4900e-003		4.1300e-003	4.1300e-003	0.0000	18.9755	18.9755	6.0000e-003	0.0000	19.1255
Total	0.0112	0.1135	0.0835	2.1000e-004		4.4900e-003	4.4900e-003		4.1300e-003	4.1300e-003	0.0000	18.9755	18.9755	6.0000e-003	0.0000	19.1255

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3.4 Fish Passage on ESBCS-May - 2019

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	5.1000e-003	0.1596	0.0257	5.1000e-004	0.0117	7.7000e-004	0.0125	3.2400e-003	7.4000e-004	3.9800e-003	0.0000	48.4798	48.4798	1.4300e-003	0.0000	48.5157
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	5.1000e-003	0.1596	0.0257	5.1000e-004	0.0117	7.7000e-004	0.0125	3.2400e-003	7.4000e-004	3.9800e-003	0.0000	48.4798	48.4798	1.4300e-003	0.0000	48.5157

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0112	0.1135	0.0835	2.1000e-004		4.4900e-003	4.4900e-003		4.1300e-003	4.1300e-003	0.0000	18.9754	18.9754	6.0000e-003	0.0000	19.1255
Total	0.0112	0.1135	0.0835	2.1000e-004		4.4900e-003	4.4900e-003		4.1300e-003	4.1300e-003	0.0000	18.9754	18.9754	6.0000e-003	0.0000	19.1255

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3.4 Fish Passage on ESBCS-May - 2019

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	5.1000e-003	0.1596	0.0257	5.1000e-004	0.0117	7.7000e-004	0.0125	3.2400e-003	7.4000e-004	3.9800e-003	0.0000	48.4798	48.4798	1.4300e-003	0.0000	48.5157
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	5.1000e-003	0.1596	0.0257	5.1000e-004	0.0117	7.7000e-004	0.0125	3.2400e-003	7.4000e-004	3.9800e-003	0.0000	48.4798	48.4798	1.4300e-003	0.0000	48.5157

3.5 Levee Improvements-June - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0374	0.3933	0.2375	5.7000e-004		0.0166	0.0166		0.0153	0.0153	0.0000	50.9210	50.9210	0.0161	0.0000	51.3237
Total	0.0374	0.3933	0.2375	5.7000e-004		0.0166	0.0166		0.0153	0.0153	0.0000	50.9210	50.9210	0.0161	0.0000	51.3237

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3.5 Levee Improvements-June - 2019

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	1.0000e-005	4.1000e-004	6.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1051	0.1051	1.0000e-005	0.0000	0.1053
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.0000e-005	4.1000e-004	6.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1051	0.1051	1.0000e-005	0.0000	0.1053

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0374	0.3933	0.2375	5.7000e-004		0.0166	0.0166		0.0153	0.0153	0.0000	50.9209	50.9209	0.0161	0.0000	51.3237
Total	0.0374	0.3933	0.2375	5.7000e-004		0.0166	0.0166		0.0153	0.0153	0.0000	50.9209	50.9209	0.0161	0.0000	51.3237

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3.5 Levee Improvements-June - 2019

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	1.0000e-005	4.1000e-004	6.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1051	0.1051	1.0000e-005	0.0000	0.1053
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.0000e-005	4.1000e-004	6.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1051	0.1051	1.0000e-005	0.0000	0.1053

3.6 Fish Passage on ESBCS-June - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0556	0.5767	0.3572	8.2000e-004		0.0264	0.0264		0.0249	0.0249	0.0000	72.9402	72.9402	0.0188	0.0000	73.4109
Total	0.0556	0.5767	0.3572	8.2000e-004		0.0264	0.0264		0.0249	0.0249	0.0000	72.9402	72.9402	0.0188	0.0000	73.4109

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3.6 Fish Passage on ESBCS-June - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-005	8.2000e-004	1.2000e-004	0.0000	5.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	2.0000e-005	0.0000	0.2103	0.2103	1.0000e-005	0.0000	0.2107
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	2.0000e-005	8.2000e-004	1.2000e-004	0.0000	5.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	2.0000e-005	0.0000	0.2103	0.2103	1.0000e-005	0.0000	0.2107

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0556	0.5767	0.3572	8.2000e-004		0.0264	0.0264		0.0249	0.0249	0.0000	72.9401	72.9401	0.0188	0.0000	73.4108
Total	0.0556	0.5767	0.3572	8.2000e-004		0.0264	0.0264		0.0249	0.0249	0.0000	72.9401	72.9401	0.0188	0.0000	73.4108

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3.6 Fish Passage on ESBCS-June - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-005	8.2000e-004	1.2000e-004	0.0000	5.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	2.0000e-005	0.0000	0.2103	0.2103	1.0000e-005	0.0000	0.2107
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	2.0000e-005	8.2000e-004	1.2000e-004	0.0000	5.0000e-005	0.0000	5.0000e-005	1.0000e-005	0.0000	2.0000e-005	0.0000	0.2103	0.2103	1.0000e-005	0.0000	0.2107

3.7 Levee Improvements-July - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0512	0.5537	0.3162	7.6000e-004		0.0232	0.0232		0.0214	0.0214	0.0000	68.1291	68.1291	0.0216	0.0000	68.6679
Total	0.0512	0.5537	0.3162	7.6000e-004		0.0232	0.0232		0.0214	0.0214	0.0000	68.1291	68.1291	0.0216	0.0000	68.6679

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3.7 Levee Improvements-July - 2019

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	1.0000e-005	4.7000e-004	7.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1209	0.1209	1.0000e-005	0.0000	0.1211
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.0000e-005	4.7000e-004	7.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1209	0.1209	1.0000e-005	0.0000	0.1211

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0512	0.5537	0.3162	7.6000e-004		0.0232	0.0232		0.0214	0.0214	0.0000	68.1290	68.1290	0.0216	0.0000	68.6679
Total	0.0512	0.5537	0.3162	7.6000e-004		0.0232	0.0232		0.0214	0.0214	0.0000	68.1290	68.1290	0.0216	0.0000	68.6679

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3.7 Levee Improvements-July - 2019

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	1.0000e-005	4.7000e-004	7.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1209	0.1209	1.0000e-005	0.0000	0.1211
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.0000e-005	4.7000e-004	7.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1209	0.1209	1.0000e-005	0.0000	0.1211

3.8 Fish Passage on ESBCS-July - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0639	0.6632	0.4108	9.4000e-004		0.0304	0.0304		0.0286	0.0286	0.0000	83.8812	83.8812	0.0217	0.0000	84.4225
Total	0.0639	0.6632	0.4108	9.4000e-004		0.0304	0.0304		0.0286	0.0286	0.0000	83.8812	83.8812	0.0217	0.0000	84.4225

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3.8 Fish Passage on ESBCS-July - 2019

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	1.1000e-003	1.6000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.2821	0.2821	2.0000e-005	0.0000	0.2826
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	3.0000e-005	1.1000e-003	1.6000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.2821	0.2821	2.0000e-005	0.0000	0.2826

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0639	0.6632	0.4108	9.4000e-004		0.0304	0.0304		0.0286	0.0286	0.0000	83.8811	83.8811	0.0217	0.0000	84.4224
Total	0.0639	0.6632	0.4108	9.4000e-004		0.0304	0.0304		0.0286	0.0286	0.0000	83.8811	83.8811	0.0217	0.0000	84.4224

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3.8 Fish Passage on ESBCS-July - 2019

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	1.1000e-003	1.6000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.2821	0.2821	2.0000e-005	0.0000	0.2826
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	3.0000e-005	1.1000e-003	1.6000e-004	0.0000	6.0000e-005	0.0000	6.0000e-005	2.0000e-005	0.0000	2.0000e-005	0.0000	0.2821	0.2821	2.0000e-005	0.0000	0.2826

3.9 Levee Improvements-Aug - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0268	0.2893	0.2138	4.5000e-004		0.0127	0.0127		0.0117	0.0117	0.0000	40.0968	40.0968	0.0127	0.0000	40.4139
Total	0.0268	0.2893	0.2138	4.5000e-004		0.0127	0.0127		0.0117	0.0117	0.0000	40.0968	40.0968	0.0127	0.0000	40.4139

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3.9 Levee Improvements-Aug - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-005	6.0000e-004	9.0000e-005	0.0000	3.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1542	0.1542	1.0000e-005	0.0000	0.1545
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	2.0000e-005	6.0000e-004	9.0000e-005	0.0000	3.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1542	0.1542	1.0000e-005	0.0000	0.1545

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0268	0.2893	0.2138	4.5000e-004		0.0127	0.0127		0.0117	0.0117	0.0000	40.0967	40.0967	0.0127	0.0000	40.4139
Total	0.0268	0.2893	0.2138	4.5000e-004		0.0127	0.0127		0.0117	0.0117	0.0000	40.0967	40.0967	0.0127	0.0000	40.4139

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3.9 Levee Improvements-Aug - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-005	6.0000e-004	9.0000e-005	0.0000	3.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1542	0.1542	1.0000e-005	0.0000	0.1545
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	2.0000e-005	6.0000e-004	9.0000e-005	0.0000	3.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1542	0.1542	1.0000e-005	0.0000	0.1545

3.10 Levee Improvements-Sept - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0228	0.2480	0.1699	3.7000e-004		0.0108	0.0108		9.9100e-003	9.9100e-003	0.0000	33.4055	33.4055	0.0106	0.0000	33.6697
Total	0.0228	0.2480	0.1699	3.7000e-004		0.0108	0.0108		9.9100e-003	9.9100e-003	0.0000	33.4055	33.4055	0.0106	0.0000	33.6697

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3.10 Levee Improvements-Sept - 2019

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	1.0000e-005	4.3000e-004	6.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1104	0.1104	1.0000e-005	0.0000	0.1106
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.0000e-005	4.3000e-004	6.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1104	0.1104	1.0000e-005	0.0000	0.1106

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0228	0.2480	0.1699	3.7000e-004		0.0108	0.0108		9.9100e-003	9.9100e-003	0.0000	33.4055	33.4055	0.0106	0.0000	33.6697
Total	0.0228	0.2480	0.1699	3.7000e-004		0.0108	0.0108		9.9100e-003	9.9100e-003	0.0000	33.4055	33.4055	0.0106	0.0000	33.6697

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3.10 Levee Improvements-Sept - 2019

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	1.0000e-005	4.3000e-004	6.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1104	0.1104	1.0000e-005	0.0000	0.1106
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.0000e-005	4.3000e-004	6.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1104	0.1104	1.0000e-005	0.0000	0.1106

3.11 McNamara Road Crossing-Sept - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0611	0.6349	0.3521	9.3000e-004		0.0269	0.0269		0.0249	0.0249	0.0000	82.9482	82.9482	0.0247	0.0000	83.5668
Total	0.0611	0.6349	0.3521	9.3000e-004		0.0269	0.0269		0.0249	0.0249	0.0000	82.9482	82.9482	0.0247	0.0000	83.5668

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3.11 McNamara Road Crossing-Sept - 2019

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	1.9000e-004	6.7600e-003	9.5000e-004	2.0000e-005	3.4000e-004	2.0000e-005	3.6000e-004	9.0000e-005	2.0000e-005	1.1000e-004	0.0000	1.5979	1.5979	1.5000e-004	0.0000	1.6017
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.9000e-004	6.7600e-003	9.5000e-004	2.0000e-005	3.4000e-004	2.0000e-005	3.6000e-004	9.0000e-005	2.0000e-005	1.1000e-004	0.0000	1.5979	1.5979	1.5000e-004	0.0000	1.6017

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0611	0.6349	0.3521	9.3000e-004		0.0269	0.0269		0.0249	0.0249	0.0000	82.9481	82.9481	0.0247	0.0000	83.5667
Total	0.0611	0.6349	0.3521	9.3000e-004		0.0269	0.0269		0.0249	0.0249	0.0000	82.9481	82.9481	0.0247	0.0000	83.5667

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3.11 McNamara Road Crossing-Sept - 2019

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	1.9000e-004	6.7600e-003	9.5000e-004	2.0000e-005	3.4000e-004	2.0000e-005	3.6000e-004	9.0000e-005	2.0000e-005	1.1000e-004	0.0000	1.5979	1.5979	1.5000e-004	0.0000	1.6017
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.9000e-004	6.7600e-003	9.5000e-004	2.0000e-005	3.4000e-004	2.0000e-005	3.6000e-004	9.0000e-005	2.0000e-005	1.1000e-004	0.0000	1.5979	1.5979	1.5000e-004	0.0000	1.6017

3.12 Levee Improvements-Oct - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.2000e-003	0.1014	0.0431	1.1000e-004		4.1200e-003	4.1200e-003		3.7900e-003	3.7900e-003	0.0000	9.5700	9.5700	3.0300e-003	0.0000	9.6457
Total	8.2000e-003	0.1014	0.0431	1.1000e-004		4.1200e-003	4.1200e-003		3.7900e-003	3.7900e-003	0.0000	9.5700	9.5700	3.0300e-003	0.0000	9.6457

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3.12 Levee Improvements-Oct - 2019

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	1.0000e-005	4.5000e-004	7.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1157	0.1157	1.0000e-005	0.0000	0.1159
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.0000e-005	4.5000e-004	7.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1157	0.1157	1.0000e-005	0.0000	0.1159

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.2000e-003	0.1014	0.0431	1.1000e-004		4.1200e-003	4.1200e-003		3.7900e-003	3.7900e-003	0.0000	9.5700	9.5700	3.0300e-003	0.0000	9.6456
Total	8.2000e-003	0.1014	0.0431	1.1000e-004		4.1200e-003	4.1200e-003		3.7900e-003	3.7900e-003	0.0000	9.5700	9.5700	3.0300e-003	0.0000	9.6456

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3.12 Levee Improvements-Oct - 2019

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	1.0000e-005	4.5000e-004	7.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1157	0.1157	1.0000e-005	0.0000	0.1159
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.0000e-005	4.5000e-004	7.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1157	0.1157	1.0000e-005	0.0000	0.1159

3.13 McNamara Road Crossing-Oct - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0562	0.5888	0.3531	9.6000e-004		0.0239	0.0239		0.0222	0.0222	0.0000	85.6388	85.6388	0.0255	0.0000	86.2750
Total	0.0562	0.5888	0.3531	9.6000e-004		0.0239	0.0239		0.0222	0.0222	0.0000	85.6388	85.6388	0.0255	0.0000	86.2750

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3.13 McNamara Road Crossing-Oct - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-005	4.2000e-004	1.3000e-004	0.0000	4.0000e-005	1.0000e-005	4.0000e-005	1.0000e-005	1.0000e-005	2.0000e-005	0.0000	0.1132	0.1132	0.0000	0.0000	0.1133
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	2.0000e-005	4.2000e-004	1.3000e-004	0.0000	4.0000e-005	1.0000e-005	4.0000e-005	1.0000e-005	1.0000e-005	2.0000e-005	0.0000	0.1132	0.1132	0.0000	0.0000	0.1133

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0562	0.5888	0.3531	9.6000e-004		0.0239	0.0239		0.0222	0.0222	0.0000	85.6387	85.6387	0.0255	0.0000	86.2749
Total	0.0562	0.5888	0.3531	9.6000e-004		0.0239	0.0239		0.0222	0.0222	0.0000	85.6387	85.6387	0.0255	0.0000	86.2749

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3.13 McNamara Road Crossing-Oct - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	2.0000e-005	4.2000e-004	1.3000e-004	0.0000	4.0000e-005	1.0000e-005	4.0000e-005	1.0000e-005	1.0000e-005	2.0000e-005	0.0000	0.1132	0.1132	0.0000	0.0000	0.1133
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	2.0000e-005	4.2000e-004	1.3000e-004	0.0000	4.0000e-005	1.0000e-005	4.0000e-005	1.0000e-005	1.0000e-005	2.0000e-005	0.0000	0.1132	0.1132	0.0000	0.0000	0.1133

3.14 Levee Improvements-Nov - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.4900e-003	0.0926	0.0393	1.0000e-004		3.7600e-003	3.7600e-003		3.4600e-003	3.4600e-003	0.0000	8.7378	8.7378	2.7600e-003	0.0000	8.8069
Total	7.4900e-003	0.0926	0.0393	1.0000e-004		3.7600e-003	3.7600e-003		3.4600e-003	3.4600e-003	0.0000	8.7378	8.7378	2.7600e-003	0.0000	8.8069

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3.14 Levee Improvements-Nov - 2019

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	7.0000e-005	2.5400e-003	3.7000e-004	1.0000e-005	1.5000e-004	1.0000e-005	1.6000e-004	4.0000e-005	1.0000e-005	5.0000e-005	0.0000	0.6554	0.6554	5.0000e-005	0.0000	0.6566
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	7.0000e-005	2.5400e-003	3.7000e-004	1.0000e-005	1.5000e-004	1.0000e-005	1.6000e-004	4.0000e-005	1.0000e-005	5.0000e-005	0.0000	0.6554	0.6554	5.0000e-005	0.0000	0.6566

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.4900e-003	0.0926	0.0393	1.0000e-004		3.7600e-003	3.7600e-003		3.4600e-003	3.4600e-003	0.0000	8.7378	8.7378	2.7600e-003	0.0000	8.8069
Total	7.4900e-003	0.0926	0.0393	1.0000e-004		3.7600e-003	3.7600e-003		3.4600e-003	3.4600e-003	0.0000	8.7378	8.7378	2.7600e-003	0.0000	8.8069

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3.14 Levee Improvements-Nov - 2019

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	7.0000e-005	2.5400e-003	3.7000e-004	1.0000e-005	1.5000e-004	1.0000e-005	1.6000e-004	4.0000e-005	1.0000e-005	5.0000e-005	0.0000	0.6554	0.6554	5.0000e-005	0.0000	0.6566
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	7.0000e-005	2.5400e-003	3.7000e-004	1.0000e-005	1.5000e-004	1.0000e-005	1.6000e-004	4.0000e-005	1.0000e-005	5.0000e-005	0.0000	0.6554	0.6554	5.0000e-005	0.0000	0.6566

3.15 Levee Improvements-Dec - 2019

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	1.0000e-005	4.5000e-004	7.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1157	0.1157	1.0000e-005	0.0000	0.1159
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.0000e-005	4.5000e-004	7.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1157	0.1157	1.0000e-005	0.0000	0.1159

Eastside Bypass Project - Merced County, Annual

3.15 Levee Improvements-Dec - 2019

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	1.0000e-005	4.5000e-004	7.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1157	0.1157	1.0000e-005	0.0000	0.1159
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.0000e-005	4.5000e-004	7.0000e-005	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1157	0.1157	1.0000e-005	0.0000	0.1159

3.16 Merced NWR Weirs - 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					
Off-Road	0.2142	2.1399	1.3417	3.5900e-003		0.0920	0.0920		0.0860	0.0860	0.0000	314.4590	314.4590	0.0885	0.0000	316.6716
Total	0.2142	2.1399	1.3417	3.5900e-003		0.0920	0.0920		0.0860	0.0860	0.0000	314.4590	314.4590	0.0885	0.0000	316.6716

Eastside Bypass Project - Merced County, Annual

3.16 Merced NWR Weirs - 2020

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	1.4000e-004	3.5300e-003	8.0000e-004	1.0000e-005	3.0000e-004	3.0000e-005	3.2000e-004	9.0000e-005	3.0000e-005	1.1000e-004	0.0000	1.0348	1.0348	5.0000e-005	0.0000	1.0361
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5400e-003	1.9700e-003	0.0198	5.0000e-005	5.2000e-003	4.0000e-005	5.2300e-003	1.3800e-003	4.0000e-005	1.4200e-003	0.0000	4.6673	4.6673	1.5000e-004	0.0000	4.6709
Total	2.6800e-003	5.5000e-003	0.0206	6.0000e-005	5.5000e-003	7.0000e-005	5.5500e-003	1.4700e-003	7.0000e-005	1.5300e-003	0.0000	5.7021	5.7021	2.0000e-004	0.0000	5.7070

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2142	2.1399	1.3417	3.5900e-003		0.0920	0.0920		0.0860	0.0860	0.0000	314.4586	314.4586	0.0885	0.0000	316.6712
Total	0.2142	2.1399	1.3417	3.5900e-003		0.0920	0.0920		0.0860	0.0860	0.0000	314.4586	314.4586	0.0885	0.0000	316.6712

Eastside Bypass Project - Merced County, Annual

3.16 Merced NWR Weirs - 2020

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	1.4000e-004	3.5300e-003	8.0000e-004	1.0000e-005	3.0000e-004	3.0000e-005	3.2000e-004	9.0000e-005	3.0000e-005	1.1000e-004	0.0000	1.0348	1.0348	5.0000e-005	0.0000	1.0361
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.5400e-003	1.9700e-003	0.0198	5.0000e-005	5.2000e-003	4.0000e-005	5.2300e-003	1.3800e-003	4.0000e-005	1.4200e-003	0.0000	4.6673	4.6673	1.5000e-004	0.0000	4.6709
Total	2.6800e-003	5.5000e-003	0.0206	6.0000e-005	5.5000e-003	7.0000e-005	5.5500e-003	1.4700e-003	7.0000e-005	1.5300e-003	0.0000	5.7021	5.7021	2.0000e-004	0.0000	5.7070

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Eastside Bypass Project - Merced 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	0.0000	0.0000	0.0000	0.0000	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
Other Asphalt Surfaces	0.00	0.00	0.00		
User Defined Commercial	0.00	0.00	0.00		
User Defined Residential	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
Other Asphalt Surfaces	10.00	5.00	7.00	0.00	0.00	0.00	0	0	0
User Defined Commercial	10.00	5.00	7.00	0.00	0.00	0.00	0	0	0
User Defined Residential	10.00	5.00	7.00	46.00	13.00	41.00	0	0	0

4.4 Fleet Mix

Eastside Bypass Project - Merced County, Annual

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
User Defined Commercial	0	0.0000	0.0000	0.0000	0.0000
User Defined Residential	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			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
User Defined Commercial	0	0.0000	0.0000	0.0000	0.0000
User Defined Residential	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

6.0 Area Detail

Eastside Bypass Project - Merced 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	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	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

7.0 Water Detail

7.1 Mitigation Measures Water

Eastside Bypass Project - Merced County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
User Defined Commercial	0 / 0	0.0000	0.0000	0.0000	0.0000
User Defined Residential	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Eastside Bypass Project - Merced County, Annual

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
User Defined Commercial	0 / 0	0.0000	0.0000	0.0000	0.0000
User Defined Residential	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

8.0 Waste Detail

8.1 Mitigation Measures Waste

Eastside Bypass Project - Merced County, Annual

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
User Defined Commercial	0	0.0000	0.0000	0.0000	0.0000
User Defined Residential	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

Eastside Bypass Project - Merced County, Annual

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
User Defined Commercial	0	0.0000	0.0000	0.0000	0.0000
User Defined Residential	0	0.0000	0.0000	0.0000	0.0000
Total		0.0000	0.0000	0.0000	0.0000

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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Eastside Bypass Project - Merced County, Annual

11.0 Vegetation

**Eastside Bypass Project
Fugitive Dust Emissions**

$$EF_0 = k \times (0.0032) \times ((U/5)^{1.3}) / ((M/2)^{1.4})$$

Variable	Amount	Units	Source
EF (PM ₁₀)	0.020	lb/ton	CalEEMod Appendix A
EF (PM _{2.5})	0.003	lb/ton	CalEEMod Appendix A
K (PM ₁₀)	0.35	factor	CalEEMod Appendix A
K (PM _{2.5})	0.053	factor	CalEEMod Appendix A
U (mean wind speed)	2.2	miles/hr	CalEEMod Appendix A
M (moisture content)	12%	percent	CalEEMod Appendix A
Aggregate Base Density	1.8	tons/cy	
Excavated Soil density (cover and subgrade)	1.3	tons/cy	

$$E \text{ (lbs)} = EF \text{ (lb/ton)} \times TP \text{ (tons)}$$

	Work Days	Total Materials Moved (cy)	Total Materials Moved (tons)	Daily Materials Moved (tons/day)	Unmitigated		Mitigated	
					Daily PM ₁₀ (lbs/day)	Daily PM _{2.5} (lbs/day)	Daily PM ₁₀ (lbs/day)	Daily PM _{2.5} (lbs/day)
Year 2019								
Levee- cutoff wall trench	198	30,556	39,723	201	3.97	0.60	1.83	0.28
Eastside Bypass - construct top layer of the ramp	66	8,214	14,785	224	4.43	0.67	2.04	0.31
Dan McNamara Road- aggregate base density	44	110	198	5	0.09	0.01	0.04	0.01
Notes:	<ul style="list-style-type: none"> - Waste assumed higher moisture/minimal emissions - Cover Removal/Stockpile addressed in "grading" in CalEEMod 							
Basic Construction Measure	0.54	percent reduction						

**Appendix B. Biological Resources – Vegetation and
Wildlife Appendix**

B.1 CNDDDB and CNPS Lists



Plant List

Inventory of Rare and Endangered Plants

11 matches found. [Click on scientific name for details](#)

Search Criteria

California Rare Plant Rank is one of [1A, 1B, 2A, 2B], Found in Quads 3712025 3712026 and 3712015;

[Modify Search Criteria](#)
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Scientific Name	Common Name	Family	Lifeform	Blooming Period	CA Rare Plant Rank	State Rank	Global Rank
Atriplex cordulata var. cordulata	heartscale	Chenopodiaceae	annual herb	Apr-Oct	1B.2	S2	G3T2
Atriplex minuscula	lesser saltscale	Chenopodiaceae	annual herb	May-Oct	1B.1	S2	G2
Atriplex persistens	vernal pool smallscale	Chenopodiaceae	annual herb	Jun,Aug,Sep,Oct	1B.2	S2	G2
Atriplex subtilis	subtle orache	Chenopodiaceae	annual herb	Jun,Aug,Sep (Oct)	1B.2	S1	G1
Delphinium recurvatum	recurved larkspur	Ranunculaceae	perennial herb	Mar-Jun	1B.2	S2?	G2?
Eryngium racemosum	Delta button-celery	Apiaceae	annual / perennial herb	Jun-Oct	1B.1	S1	G1
Euphorbia hooveri	Hoover's spurge	Euphorbiaceae	annual herb	Jul-Sep(Oct)	1B.2	S1	G1
Navarretia prostrata	prostrate vernal pool navarretia	Polemoniaceae	annual herb	Apr-Jul	1B.1	S2	G2
Neostapfia colusana	Colusa grass	Poaceae	annual herb	May-Aug	1B.1	S1	G1
Sagittaria sanfordii	Sanford's arrowhead	Alismataceae	perennial rhizomatous herb (emergent)	May-Oct(Nov)	1B.2	S3	G3
Trichocomnis wrightii var. wrightii	Wright's trichocoronis	Asteraceae	annual herb	May-Sep	2B.1	S1	G4T3

Suggested Citation

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CALIFORNIA DEPARTMENT OF
FISH and WILDLIFE *RareFind*

Query Summary:
 Quad IS (Turner Ranch (3712026) OR Sandy Mush (3712025) OR Santa Rita Bridge (3712015))
 AND Federal Listing Status IS (Endangered OR Proposed Endangered OR Proposed Threatened OR Candidate) OR State Listing Status IS (Endangered OR Threatened OR Rare OR Candidate Endangered OR Candidate Threatened)

CNDDB Element Query Results

Scientific Name	Common Name	Taxonomic Group	Element Code	Total Occs	Returned Occs	Federal Status	State Status	Global Rank	State Rank	CA Rare Plant Rank	Other Status	Habitats
Agelaius tricolor	tricolored blackbird	Birds	ABPBXB0020	951	10	None	Candidate Endangered	G2G3	S1S2	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_EN-Endangered, NABCI_RWL-Red Watch List, USFWS_BCC-Birds of Conservation Concern	Freshwater marsh, Marsh & swamp, Swamp, Wetland
Ambystoma californiense	California tiger salamander	Amphibians	AAAAA01180	1156	5	Threatened	Threatened	G2G3	S2S3	null	CDFW_WVL-Watch List, IUCN_VU-Vulnerable	Cismontane woodland, Meadow & seep, Riparian woodland, Valley & foothill grassland, Vernal pool, Wetland
Branchinecta conserrvatio	Conservancy fairy shrimp	Crustaceans	ICBRA03010	43	2	Endangered	None	G2	S2	null	IUCN_EN-Endangered	Valley & foothill grassland, Vernal pool, Wetland
Buteo swainsoni	Swainson's hawk	Birds	ABNKC19070	2428	12	None	Threatened	G5	S3	null	BLM_S-Sensitive, IUCN_LC-Least Concern, USFWS_BCC-Birds of Conservation Concern	Great Basin grassland, Riparian forest, Riparian woodland, Valley & foothill grassland
Eryngium racemosum	Delta button-celery	Diots	PDAPKZDS0	26	4	None	Endangered	G1	S1	1B.1	null	Riparian scrub, Wetland
Gambelia sika	blunt-nosed leopard lizard	Reptiles	ARACF07010	317	1	Endangered	Endangered	G1	S1	null	CDFW_FP-Fully Protected, IUCN_EN-Endangered	Chenopod scrub
Lepidurus packardii	vernal pool tadpole shrimp	Crustaceans	ICBRA10010	320	3	Endangered	None	G4	S3S4	null	IUCN_EN-Endangered	Valley & foothill grassland, Vernal pool, Wetland
Neostapfia colusana	Colusa grass	Monocots	PMPDA4C010	62	2	Threatened	Endangered	G1	S1	1B.1	null	Vernal pool, Wetland
Thamnophis gigas	giant gartersnake	Reptiles	ARADB36150	363	1	Threatened	Threatened	G2	S2	null	IUCN_VU-Vulnerable	Marsh & swamp, Riparian scrub, Wetland

Vulpes macrotis mutica	San Joaquin kit fox	Mammals	AMAJA03041	982	4	Endangered	Threatened	G4T2	S2	null	null	Chenopod scrub, Valley & foothill grassland
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CALIFORNIA DEPARTMENT OF
FISH and WILDLIFE RareFind

Query Summary:
 Quad 1S (Turner Ranch (3712026) OR Sandy Mush (3712025) OR Santa Rita Bridge (3712015))
 AND CA Rare Plant Rank 1S (1A OR 1B OR 1B.1 OR 1B.2 OR 1B.3 OR 2A OR 2B OR 2B.1 OR 2B.2 OR 2B.3)

CNDDB Element Query Results

Scientific Name	Common Name	Taxonomic Group	Element Code	Total Occs	Returned Occs	Federal Status	State Status	Global Rank	State Rank	CA Rare Plant Rank	Other Status	Habitats
<i>Atriplex cordulata</i> var. <i>cordulata</i>	heart scale	Dicots	PDCHE040B0	66	4	None	None	G3T2	S2	1B.2	BLM_S-Sensitive	Chenopod scrub, Meadow & seep, Valley & foothill grassland
<i>Atriplex minuscula</i>	lesser salt scale	Dicots	PDCHE042M0	37	1	None	None	G2	S2	1B.1	null	Alkali playa, Chenopod scrub, Valley & foothill grassland
<i>Atriplex persistens</i>	vernal pool small scale	Dicots	PDCHE042P0	41	3	None	None	G2	S2	1B.2	null	Vernal pool, Wetland
<i>Atriplex subtilis</i>	subtle orache	Dicots	PDCHE042T0	24	2	None	None	G1	S1	1B.2	BLM_S-Sensitive	Valley & foothill grassland
<i>Delphinium recurvatum</i>	recurved larkspur	Dicots	PDRAN0B1J0	100	1	None	None	G2?	S2?	1B.2	BLM_S-Sensitive	Chenopod scrub, Cismontane woodland, Valley & foothill grassland
<i>Eryngium racemosum</i>	Delta button-celery	Dicots	PDAPI0Z0S0	26	4	None	Endangered	G1	S1	1B.1	null	Riparian scrub, Wetland
<i>Euphorbia hooveri</i>	Hoover's spurge	Dicots	PDEUP0D150	29	1	Threatened	None	G1	S1	1B.2	null	Vernal pool, Wetland
<i>Navarretia prostrata</i>	prostrate vernal pool navarretia	Dicots	PDPLM0C0Q0	60	1	None	None	G2	S2	1B.1	null	Coastal scrub, Meadow & seep, Valley & foothill grassland, Vernal pool, Wetland
<i>Neostapfia oolusana</i>	Colusa grass	Monocots	PMPDA4C010	62	2	Threatened	Endangered	G1	S1	1B.1	null	Vernal pool, Wetland
<i>Sagittaria sanfordii</i>	Sanford's arrowhead	Monocots	PMAL0040Q0	93	1	None	None	G3	S3	1B.2	BLM_S-Sensitive	Marsh & swamp, Wetland
<i>Trichocoronis wrightii</i> var. <i>wrightii</i>	Wright's trichocoronis	Dicots	PDAST9F031	9	1	None	None	G4T3	S1	2B.1	null	Marsh & swamp, Meadow & seep, Riparian forest, Vernal pool, Wetland

CALIFORNIA DEPARTMENT OF
FISH and WILDLIFE RareFind

Query Summary:
 Quad IS (Turner Ranch (37 12026) OR Sandy Mush (37 12025) OR Santa Rita Bridge (37 12015))
 AND Other Status CONTAINS (CDFW_FP-Fully Protected OR CDFW_SSC-Species of Special Concern)

CNDD8 Element Query Results

Scientific Name	Common Name	Taxonomic Group	Element Code	Total Occs	Returned Occs	Federal Status	State Status	Global Rank	State Rank	CA Rare Plant Rank	Other Status	Habitats
Agelaius tricolor	tricolored blackbird	Birds	ABPBXB0020	951	10	None	Candidate Endangered	G263	S1S2	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_EN-Endangered, NABCI_RWL-Red Watch List, USFWS_BCC-Birds of Conservation Concern	Freshwater marsh, Marsh & swamp, Swamp, Wetland
Athene cucularia	burrowing owl	Birds	ABNSB10010	1941	1	None	None	G4	S3	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern, USFWS_BCC-Birds of Conservation Concern	Coastal prairie, Coastal scrub, Great Basin grassland, Great Basin scrub, Mojavean desert scrub, Sonoran deserts scrub, Valley & foothill grassland
Gambelia sila	blunt-nosed leopard lizard	Reptiles	ARACF07010	317	1	Endangered	Endangered	G1	S1	null	CDFW_FP-Fully Protected, IUCN_EN-Endangered	Chenopod scrub
Lithobates pipiens	northern leopard frog	Amphibians	AAABH01170	22	1	None	None	G5	S2	null	CDFW_SSC-Species of Special Concern, IUCN_LC-Least Concern	Freshwater marsh, Great Basin flowing waters, Great Basin standing waters, Marsh & swamp, Wetland
Mylopharodon conocephalus	hardhead	Fish	AF CJB25010	32	1	None	None	G3	S3	null	CDFW_SSC-Species of Special Concern, USFS_S-Sensitive	Klamath/North coast flowing waters, Sacramento/San Joaquin flowing waters
Spea hammondi	western spadefoot	Amphibians	AAABF02020	454	2	None	None	G3	S3	null	BLM_S-Sensitive, CDFW_SSC-Species of Special Concern, IUCN_NT-Near Threatened	Cismontane woodland, Coastal scrub, Valley & foothill grassland, Vernal pool, Wetland

B.2 Sacramento Fish and Wildlife Office Federal Endangered and Threatened Species List

IPaC**U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Fresno, Madera and Merced counties, California



Local office

Sacramento Fish And Wildlife Office

☎ (916) 414-6600

📠 (916) 414-6713

Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species

1 are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service.

1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
Fresno Kangaroo Rat <i>Dipodomys nitratoides exilis</i> There is a final critical habitat designated for this species. Your location is outside the designated critical habitat. https://ecos.fws.gov/ecp/species/5150	Endangered
San Joaquin Kit Fox <i>Vulpes macrotis mutica</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/2873	Endangered

Birds

NAME	STATUS
Yellow-billed Cuckoo <i>Coccyzus americanus</i> There is a proposed critical habitat for this species. Your location is outside the proposed critical habitat. https://ecos.fws.gov/ecp/species/3911	Threatened

Reptiles

NAME	STATUS
Blunt-nosed Leopard Lizard <i>Gambelia silus</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/625	Endangered
Giant Garter Snake <i>Thamnophis gigas</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/4482	Threatened

Amphibians

NAME	STATUS
California Red-legged Frog <i>Rana draytonii</i> There is a final <u>critical habitat</u> designated for this species. Your location is outside the designated critical habitat. https://ecos.fws.gov/ecp/species/2891	Threatened
California Tiger Salamander <i>Ambystoma californiense</i> There is a final <u>critical habitat</u> designated for this species. Your location is outside the designated critical habitat. https://ecos.fws.gov/ecp/species/2076	Threatened

Fishes

NAME	STATUS
Delta Smelt <i>Hypomesus transpacificus</i> There is a final <u>critical habitat</u> designated for this species. Your location is outside the designated critical habitat. https://ecos.fws.gov/ecp/species/321	Threatened
Steelhead <i>Oncorhynchus (=Salmo) mykiss</i> There is a final <u>critical habitat</u> designated for this species. Your location is outside the designated critical habitat. https://ecos.fws.gov/ecp/species/1007	Threatened

Insects

NAME	STATUS
Valley Elderberry Longhorn Beetle <i>Desmocerus californicus dimorphus</i> There is a final <u>critical habitat</u> designated for this species. Your location is outside the designated critical habitat. https://ecos.fws.gov/ecp/species/7850	Threatened

Crustaceans

NAME	STATUS
Vernal Pool Fairy Shrimp <i>Branchinecta lynchi</i> There is a final <u>critical habitat</u> designated for this species. Your location is outside the designated critical habitat. https://ecos.fws.gov/ecp/species/498	Threatened
Vernal Pool Tadpole Shrimp <i>Lepidurus packardii</i> There is a final <u>critical habitat</u> designated for this species. Your location is outside the designated critical habitat. https://ecos.fws.gov/ecp/species/2246	Endangered

Flowering Plants

NAME	STATUS
Palmate-bracted Bird's Beak <i>Cordylanthus palmatus</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/1616	Endangered

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act

[1](#) and the Bald and Golden Eagle Protection Act².

Any activity that results in the take (to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct) of migratory birds or eagles is prohibited unless authorized by the U.S. Fish and Wildlife Service

4. There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured.

Any person or organization who plans or conducts activities that may result in the take of migratory birds is responsible for complying with the appropriate regulations and implementing appropriate conservation measures.

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Conservation measures for birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Year-round bird occurrence data <http://www.birdscanada.org/birdmon/default/datasummaries.jsp>

The migratory birds species listed below are species of particular conservation concern (e.g. [Birds of Conservation Concern](#)) that may be potentially affected by activities in this location. It is not a list of every bird species you may find in this location, nor a guarantee that all of the bird species on this list will be found on or near this location. Although it is important to try to avoid and minimize impacts to all birds, special attention should be made to avoid and minimize impacts to birds of priority concern. To view available data on other bird species that may occur in your project area, please visit the [AKN Histogram Tools](#) and [Other Bird Data Resources](#). To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

NAME	SEASON(S)
Allen's Hummingbird <i>Selasphorus sasin</i> https://ecos.fws.gov/ecp/species/9637	Migrating
Bald Eagle <i>Haliaeetus leucocephalus</i> https://ecos.fws.gov/ecp/species/1626	Wintering

Black Rail <i>Laterallus jamaicensis</i> https://ecos.fws.gov/ecp/species/7717	Breeding
Burrowing Owl <i>Athene cunicularia</i> https://ecos.fws.gov/ecp/species/9737	Year-round
Calliope Hummingbird <i>Stellula calliope</i> https://ecos.fws.gov/ecp/species/9526	Migrating
Costa's Hummingbird <i>Calypte costae</i> https://ecos.fws.gov/ecp/species/9470	Year-round
Fox Sparrow <i>Passerella iliaca</i>	Wintering
Lesser Yellowlegs <i>Tringa flavipes</i> https://ecos.fws.gov/ecp/species/9679	Wintering
Lewis's Woodpecker <i>Melanerpes lewis</i> https://ecos.fws.gov/ecp/species/9408	Wintering
Loggerhead Shrike <i>Lanius ludovicianus</i> https://ecos.fws.gov/ecp/species/8833	Year-round
Long-billed Curlew <i>Numenius americanus</i> https://ecos.fws.gov/ecp/species/5511	Wintering
Marbled Godwit <i>Limosa fedoa</i> https://ecos.fws.gov/ecp/species/9481	Wintering
Mountain Plover <i>Charadrius montanus</i> https://ecos.fws.gov/ecp/species/3638	Wintering
Nuttall's Woodpecker <i>Picoides nuttallii</i> https://ecos.fws.gov/ecp/species/9410	Year-round

Oak Titmouse <i>Baeolophus inornatus</i> https://ecos.fws.gov/ecp/species/9656	Year-round
Peregrine Falcon <i>Falco peregrinus</i> https://ecos.fws.gov/ecp/species/8831	Wintering
Rufous Hummingbird <i>elasphorus rufus</i> https://ecos.fws.gov/ecp/species/8002	Migrating
Short-eared Owl <i>Asio flammeus</i> https://ecos.fws.gov/ecp/species/9295	Wintering
Swainson's Hawk <i>Buteo swainsoni</i> https://ecos.fws.gov/ecp/species/1098	Breeding
Tricolored Blackbird <i>Agelaius tricolor</i> https://ecos.fws.gov/ecp/species/3910	Year-round
Western Grebe <i>aechmophorus occidentalis</i> https://ecos.fws.gov/ecp/species/6743	Wintering
Yellow-billed Magpie <i>Pica nuttalli</i> https://ecos.fws.gov/ecp/species/9726	Year-round

What does IPaC use to generate the list of migratory bird species potentially occurring in my specified location?

Landbirds:

Migratory birds that are displayed on the IPaC species list are based on ranges in the latest edition of the National Geographic Guide, Birds of North America (6th Edition, 2011 by Jon L. Dunn, and Jonathan Alderfer). Although these ranges are coarse in nature, a number of U.S. Fish and Wildlife Service migratory bird biologists agree that these maps are some of the best range maps to date. These ranges were clipped to a specific Bird Conservation Region (BCR) or USFWS Region/Regions, if it was indicated in the 2008 list of Birds of Conservation Concern (BCC) that a species was a BCC species only in a particular Region/Regions. Additional modifications have been made to some ranges based on more local or refined range information and/or information provided by U.S. Fish and Wildlife Service biologists with species expertise. All migratory birds that show in areas on land in IPaC are those that appear in the 2008 Birds of Conservation Concern report.

Atlantic Seabirds:

Ranges in IPaC for birds off the Atlantic coast are derived from species distribution models developed by the National Oceanic and Atmospheric Association (NOAA) National Centers for Coastal Ocean Science (NCCOS) using the best available seabird survey data for the offshore Atlantic Coastal region to date. NOAA/NCCOS assisted USFWS in developing seasonal species ranges from their models for specific use in IPaC. Some of these birds are not BCC species but were of interest for inclusion because they may occur in high abundance off the coast at different times throughout the year, which potentially makes them more susceptible to certain types of development and activities taking place in that area. For more refined details about the abundance and richness of bird species within your project area off the Atlantic Coast, see the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other types of taxa that may be helpful in your project review.

About the NOAA/NCCOS models: the models were developed as part of the NOAA/NCCOS project: [Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#). The models resulting from this project are being used in a number of decision-support/mapping products in order to help guide decision-making on activities off the Atlantic Coast with the goal of reducing impacts to migratory birds. One such product is the [Northeast Ocean Data Portal](#), which can be used to explore details about the relative occurrence and abundance of bird species in a particular area off the Atlantic Coast.

All migratory bird range maps within IPaC are continuously being updated as new and better information becomes available.

Can I get additional information about the levels of occurrence in my project area of specific birds or groups of birds listed in IPaC?

Landbirds:

The [Avian Knowledge Network \(AKN\)](#) provides a tool currently called the "Histogram Tool", which draws from the data within the AKN (latest survey, point count, citizen science datasets) to create a view of relative abundance of species within a particular location over the course of the year. The results of the tool depict the frequency of detection of a species in survey events, averaged between multiple datasets within AKN in a particular week of the year. You may access the histogram tools through the [Migratory Bird Programs AKN Histogram Tools](#) webpage.

The tool is currently available for 4 regions (California, Northeast U.S., Southeast U.S. and Midwest), which encompasses the following 32 states: Alabama, Arkansas, California, Connecticut, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, Tennessee, Vermont, Virginia, West Virginia, and Wisconsin.

In the near future, there are plans to expand this tool nationwide within the AKN, and allow the graphs produced to appear with the list of trust resources generated by IPaC, providing you with an additional level of detail about the level of occurrence of the species of particular concern potentially occurring in your project area throughout the course of the year.

Atlantic Seabirds:

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA/NOAA's [Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project](#) webpage.

Facilities

Wildlife refuges

Any activity proposed on [National Wildlife Refuge](#) lands must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGES AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

This location overlaps the following wetlands:

FRESHWATER EMERGENT WETLAND

[PEMKI](#)
[PEMKAx](#)
[PEMKIx](#)
[PEMKC](#)
[PEMKCx](#)
[PEMKA](#)
[PEMA](#)
[PEMC](#)
[PEMIx](#)
[PEMI](#)
[PEMKx](#)
[PEMCx](#)
[PEMFx](#)
[PEMCh](#)

FRESHWATER FORESTED/SHRUB WETLAND

[PSSA](#)
[PSSAUSA](#)

FRESHWATER POND

[PUBE](#)
[PUBFx](#)
[PUBKx](#)

OTHER

[PUSAx](#)

RIVERINE

[R2UBE](#)
[R4USAx](#)
[R4USC](#)
[R4USKC](#)

A full description for each wetland code can be found at the National Wetlands Inventory website: <https://ecos.fws.gov/ipac/wetlands/decoder>

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible

hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.