

Appendix D
**Air Quality Calculations and
Greenhouse Gas (GHG)
Emissions Reduction Plan
Consistency Determination**

CalEEMod Inputs for Preliminary Run

REVIEW/COMMENT LEGEND:

Data from Project Description	CalEEMod data
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Project Information

County	Sutter
Utility Company (select)	Statewide Average
Start Date of Construction	15-Apr-22
Operational Year	2022

Construction Schedule

Construction Phase	From	To	Number of Workdays	days/phase
Project Construction - Phase 1	4/16/2022	5/26/2022	29	40
Project Construction - Phase 2	5/26/2022	6/20/2022	18	25
Project Construction - Phase 3	6/20/2022	9/18/2022	65	90
Project Construction - Phase 4	9/18/2022	10/31/2022	31	43
Project Construction - Phase 5	10/31/2022	10/31/2022	1	0
Total Number of Workdays			144	

Construction Equipment and Activity by Phase - BATCH PLANT VERSION

Phase 1: MOB / DEMO - Weir energy basin demo / EXCAV new basin

Equipment List from Project Description	Equivalent Equipment in CalEEMod	Number of Equipment used	Avg Operation (hrs/day)	Number of Work Days in the construction phase equipment is used	Equipment size (hp)	Load Factor
Excavator	Excavators	3	10	29	158	0.38
Bulldozer	Rubber Tired Dozers	1	10	29	247	0.4
Loader	Off-Highway Tractors	2	10	29	350	0.37
Water Truck	Off-Highway Trucks	2	10	29	402	0.38
Other Equipment (e.g., chain saw)	Concrete/Industrial Saws	1	10	29	5	0.73
Compressor	Air Compressors	2	10	29	78	0.48
Forklift	Forklifts	1	10	29	89	0.2
Dump/Haul Truck	Off-Highway Trucks	4	10	29	402	0.38
Pickup Truck	Off-Highway Trucks	2	10	29	200	0.38

Construction Vehicle Trips by Phase 1

Construction Phase	Construction workers/day	One-way worker trips/day	Haul truck trips/day (Off-haul)	Haul truck trips/day (fill)	One-Way Construction Material delivery trips/day	one-way haul trips/phase
Project Construction - Phase 1	30	60	2	0	17.0	116

Phase 2: REHAB Weir (grout)

Equipment List from Project Description	Equivalent Equipment in CalEEMod	Equipment used	Avg Operation (hrs/day)	Days in the construction phase	Equipment size (hp)	Load Factor
Excavator	Excavators	1	4	18	158	0.38
Tractor/Loader/Backhoe	Tractors/Loaders/Backhoes	2	10	18	97	0.37
Water Truck	Off-Highway Trucks	2	10	18	402	0.38
Other Equipment (e.g., chain saw)	Concrete/Industrial Saws	1	10	18	81	0.73
Compressor	Air Compressors	2	10	18	78	0.48
Generator	Generator Sets	1	10	18	84	0.74
Concrete Mixing Truck	Off-Highway Trucks	1	10	18	402	0.38
Concrete Pumping Truck	Off-Highway Trucks	1	10	18	402	0.38
Forklift	Forklifts	1	10	18	89	0.2
Dump/Haul Truck	Off-Highway Trucks	1	4	18	402	0.38
Grout Plant	Other Construction Equipment	1	10	18	172	0.42
Pickup Truck	Off-Highway Trucks	4	10	18	402	0.38

Construction Vehicle Trips by Phase 2

Construction Phase	Construction workers/day	One-way worker trips/day	Haul truck trips/day (Off-haul)	Haul truck trips/day (fill)	One-Way Construction Material delivery trips/day	one-way haul trips/phase
Project Construction - Phase 2	20	40	0	0	16.0	0

Construction Equipment and Activity by Phase - HAUL-IN VERSION

Phase 1: Weir energy basin demo and new basin excavation

Equipment List from Project Description	Equivalent Equipment in CalEEMod	Number of Equipment used	Avg Operation (hrs/day)	Number of Work Days in the construction phase equipment is used	Equipment size (hp)	Load Factor
Excavator	Excavators	3	10	29	158	0.38
Bulldozer	Rubber Tired Dozers	1	10	29	247	0.4
Tractor/Loader/Backhoe	Off-Highway Tractors	2	10	29	350	0.37
Water Truck	Off-Highway Trucks	2	10	29	402	0.38
Other Equipment (e.g., chain saw)	Concrete/Industrial Saws	1	10	29	5	0.73
Compressor	Air Compressors	2	10	29	78	0.48
Forklift	Forklifts	1	10	29	89	0.2
Dump/Haul Truck	Off-Highway Trucks	4	10	29	402	0.38
Pickup Truck	Off-Highway Trucks	2	10	29	200	0.38

Construction Vehicle Trips by Phase 1

Construction Phase	Construction workers/day	One-way worker trips/day	Haul truck trips/day (Off-haul)	Haul truck trips/day (fill)	One-Way Construction Material delivery trips/day	one-way haul trips/phase
Project Construction - Phase 1	30	60	0	0	17.0	0

Phase 2: REHAB Weir (grout)

Equipment List from Project Description	Equivalent Equipment in CalEEMod	Equipment used	Avg Operation (hrs/day)	Days in the construction phase	Equipment size (hp)	Load Factor
Excavator	Excavators	1	4	18	158	0.38
Tractor/Loader/Backhoe	Tractors/Loaders/Backhoes	2	10	18	97	0.37
Water Truck	Off-Highway Trucks	2	10	18	402	0.38
Other Equipment (e.g., chain saw)	Concrete/Industrial Saws	1	10	18	81	0.73
Compressor	Air Compressors	2	10	18	78	0.48
Generator	Generator Sets	1	10	18	84	0.74
Concrete Mixing Truck	Off-Highway Trucks	1	10	18	402	0.38
Concrete Pumping Truck	Off-Highway Trucks	1	10	18	402	0.38
Forklift	Forklifts	1	10	18	89	0.2
Dump/Haul Truck	Off-Highway Trucks	1	4	18	402	0.38
Grout Plant	Other Construction Equipment	1	10	18	172	0.42
Pickup Truck	Off-Highway Trucks	4	10	18	402	0.38

Construction Vehicle Trips by Phase 2

Construction Phase	Construction workers/day	One-way worker trips/day	Haul truck trips/day (Off-haul)	Haul truck trips/day (fill)	One-Way Construction Material delivery trips/day	one-way haul trips/phase
Project Construction - Phase 2	20	40	0	0	18.0	0

Phase 3: CONSTRUCT Basin, Weir & Channel						
Equipment List from Project Description	Equivalent Equipment in CalEEMod	Number of Equipment used	Avg Operation (hrs/day)	Number of Work Days in the construction phase equipment is used	Equipment size (hp)	Load Factor
Excavator	Excavators	1	8	65	158	0.38
Grader and Roller	Graders	2	4	65	187	0.41
Tractor/Loader/Backhoe	Tractors/Loaders/Backhoes	2	10	65	97	0.37
Water Truck	Off-Highway Trucks	2	10	65	402	0.38
Compressor	Air Compressors	1	10	65	78	0.48
Generator	Generator Sets	1	10	65	84	0.74
Dewatering Pump	Pumps	2	4	65	84	0.74
Concrete Mixing Truck	Off-Highway Trucks	4	10	65	402	0.38
Concrete Pumping Truck	Off-Highway Trucks	1	10	65	402	0.38
Concrete Batch Plant	Other Construction Equipment	1	10	65	600	0.56
Forklift	Forklifts	2	10	65	89	0.2
Dump/Haul Truck	Off-Highway Trucks	2	10	65	402	0.38
Pickup Truck	Off-Highway Trucks	4	10	65	402	0.38

Construction Vehicle Trips by Phase 3						
Construction Phase	Construction workers/day	One-way worker trips/day	Haul truck trips/day (Off-haul)	Haul truck trips/day (fill)	One-Way Construction Material delivery trips/day	one-way haul trips/phase
Project Construction - Phase 3	50	100	0	0	14.0	0

Phase 4: CONSTRUCT: Revetment, Gates, Controls, Mech/Elect/Instruments						
Equipment List from Project Description	Equivalent Equipment in CalEEMod	Number of Equipment used	Avg Operation (hrs/day)	Number of Work Days in the construction phase equipment is used	Equipment size (hp)	Load Factor
Excavator	Excavators	2	12	31	158	0.38
Crane	Crane	1	2	31	231	0.29
Tractor/Loader/Backhoe	Tractors/Loaders/Backhoes	3	12	31	97	0.37
Water Truck	Off-Highway Trucks	2	12	31	402	0.38
Other Equipment (e.g., chain saw)	Concrete/Industrial Saws	1	12	31	81	0.73
Compressor	Air Compressors	2	12	31	78	0.48
Generator	Generator Sets	1	12	31	84	0.74
Forklift	Forklifts	2	12	31	89	0.2
Dump/Haul Truck	Off-Highway Trucks	2	12	31	402	0.38
Grouting rig (for rock grouting)	Other Construction Equipment	1	12	31	172	0.42
Pickup Truck	Off-Highway Trucks	2	12	31	402	0.38

Construction Vehicle Trips by Phase 4						
Construction Phase	Construction workers/day	One-way worker trips/day	Haul truck trips/day (Off-haul)	Haul truck trips/day (fill)	One-Way Construction Material delivery trips/day	one-way haul trips/phase
Project Construction - Phase 4	25	50		0	21.0	0

DEFAULTS	
Worker trip length	10.8 miles
Vendor (material delivery) trip length	12 miles
Hauling trip length	20 miles

Phase 3: CONSTRUCT Basin, Weir & Channel						
Equipment List from Project Description	Equivalent Equipment in CalEEMod	Number of Equipment used	Avg Operation (hrs/day)	Number of Work Days in the construction phase equipment is used	Equipment size (hp)	Load Factor
Excavator	Excavators	3	12	65	158	0.38
Grader and Roller	Graders	3	12	65	187	0.41
Tractor/Loader/Backhoe	Tractors/Loaders/Backhoes	3	12	65	97	0.37
Water Truck	Off-Highway Trucks	4	12	65	402	0.38
Compressor	Air Compressors	6	12	65	78	0.48
Generator	Generator Sets	5	12	65	84	0.74
Dewatering Pump	Pumps	5	12	65	84	0.74
Concrete Mixing Truck	Off-Highway Trucks	5	12	65	402	0.38
Concrete Pumping Truck	Off-Highway Trucks	2	12	65	402	0.38
no batch plant in this version						
Forklift	Forklifts	2	12	65	89	0.2
Dump/Haul Truck	Off-Highway Trucks	2	12	65	402	0.38
Pickup Truck	Off-Highway Trucks	2	12	65	402	0.38

Construction Vehicle Trips by Phase 3						
Construction Phase	Construction workers/day	One-way worker trips/day	Haul truck trips/day (Off-haul)	Haul truck trips/day (fill)	One-Way Construction Material delivery trips/day	one-way haul trips/phase
Project Construction - Phase 3	34	68	0	0	18.0	0

Phase 4: CONSTRUCT: Revetment, Gates, Controls, Mech/Elect/Instruments						
Equipment List from Project Description	Equivalent Equipment in CalEEMod	Number of Equipment used	Avg Operation (hrs/day)	Number of Work Days in the construction phase equipment is used	Equipment size (hp)	Load Factor
Excavator	Excavators	2	12	31	158	0.38
Crane	Crane	1	2	31	231	0.29
Tractor/Loader/Backhoe	Tractors/Loaders/Backhoes	3	12	31	97	0.37
Water Truck	Off-Highway Trucks	2	12	31	402	0.38
Other Equipment (e.g., chain saw)	Concrete/Industrial Saws	1	12	31	81	0.73
Compressor	Air Compressors	2	12	31	78	0.48
Generator	Generator Sets	1	12	31	84	0.74
Forklift	Forklifts	2	12	31	89	0.2
Dump/Haul Truck	Off-Highway Trucks	2	12	31	402	0.38
Grout Plant	Other Construction Equipment	1	12	31	172	0.42
Pickup Truck	Off-Highway Trucks	2	12	31	402	0.38

Construction Vehicle Trips by Phase 4						
Construction Phase	Construction workers/day	One-way worker trips/day	Haul truck trips/day (Off-haul)	Haul truck trips/day (fill)	One-Way Construction Material delivery trips/day	one-way haul trips/phase
Project Construction - Phase 4	25	50		0	21.0	0

Construction Emissions - Criteria Air Pollutants (based on CalEEMod output)

Scenario	No. Construction workdays	Tons over Construction Period				Average Pounds per day			
		ROG	NOx	PM-10	PM-2.5	ROG	NOx	PM-10	PM-2.5
Concrete Batch Plant Option - Uncontrolled	144	0.70	5.61	0.28	0.23	9.7	77.9	3.9	3.1
Concrete Batch Plant Option - All Tier 4 Final	144	0.21	0.96	0.08	0.04	2.9	13.4	1.1	0.6
Concrete Batch Plant PM Emissions	144	--	--	0.14	0.02	-	--	1.9	0.3
Total Concrete Batch Plant Option with Tier 4 Final						2.9	13.4	3.1	0.8
Concrete Haul-in Option - Uncontrolled	144	1.11	9.18	0.43	0.38	15.4	127.5	6.0	5.3
Concrete Haul-in Option - All Tier 4 Final	144	0.30	1.39	0.09	0.05	4.1	19.3	1.2	0.7
Significance Thresholds						25	25	80	None

Construction Emissions - GHG as CO₂e (from CalEEMod output)

	Batch Plant Option	Haul-in Option
Total CO ₂ (metric tons)	1434	2166
Life of project (years)	30	30
Ave. annual emissions (metric tons/year)	47.8	72.2

Onsite Concrete Batch Plant Emissions

Concrete demand for construction 13300 cubic yards/year
 1 cubic yard of concrete = 2.03 tons
 Concrete demand 26999 tons/year

Source	Material Weight (tons/year)	Emission Factors (lbs/ton)		Emissions (lbs/year)	
		PM-10	PM-2.5	PM-10	PM-2.5
Aggregate transfer	12513.82648	0.0033	0.0005	41.295627	6.256913
Sand transfer	9581.632288	0.00099	0.00015	9.485816	1.437245
Cement unloading	3294.524827	0.00034	0.00005	1.1201384	0.164726
Cement supplement unloading	489.8173368	0.0049	0.0007	2.400105	0.342872
Weigh hopper loading	26999	0.0028	0.0004	75.5972	10.7996
Mixer loading (central mix)	26999	0.0055	0.0008	148.4945	21.5992
Active & inactive storage piles				2.35990	0.35736
TOTAL				280.75329	40.95791

Composition of concrete (based on AP-42)

Material	lbs/cubic yard	Ratio of total
Coarse aggregate	1865	0.463492221
Sand	1428	0.354888414
Cement	491	0.122023957
Cement supplement	73	0.018142055
Water	166.8	0.041453353
Total (concrete)	4023.8	1

Emissions from Storage Piles - Criteria Pollutants

Average Wind Speed 5 (mph)
 Moisture Content of Storage Piles 5 (%)
 Maximum Throughput Rate 375.9 (tons/hr)

Emission Factors:

According to AP-42, Chapter 13.2.4 - Aggregate Handling and Storage Piles, the PM/PM₁₀ emission factors for storage piles can be estimated from the following equation:

$$E_f = (0.0032 \times (U/5)^{1.3} \times k) / (M/2)^{1.4} \quad \text{where:}$$

E_f = Emission Factor (lbs/ton)
 k = Particle size multiplier = 1 for PM and 0.35 for PM₁₀
 U = Mean wind speed (mph) = 2.2 from CalEEMod
 M = Moisture content (%) = 5.0

PM Emission Factor = 0.0003 lbs/ton process
 PM10 Emission Factor = 0.0001 lbs/ton process
 PM2.5 Emission Factor = 0.0000 lbs/ton process

	Pollutant						
	PM	PM ₁₀	PM _{2.5}	SO ₂	NO _x	CO	VOC
Emission Factor (lbs/ton)	0.0009	0.00031	0.00005	0.00	0.00	0.00	0.00
Emissions (lbs/year)	6.7426	2.35990	0.35736	0	0	0	0

Methodology

Uncontrolled PM/PM₁₀ (tons/yr) = Maximum Throughput Rate (tons/hr) x Emission Factor (lbs/ton) x 8,760 hr/yr x 1 ton/2,000 lbs

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Sutter County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	1.00	1000sqft	1.00	1,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	61
Climate Zone	3			Operational Year	2022
Utility Company	Statewide Average				
CO2 Intensity (lb/MW hr)	1001.57	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

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Project Characteristics -

Land Use - Assumed

Construction Phase - Project schedule provided

Off-road Equipment - Phase not included

Off-road Equipment - Project specific construction equipment

Off-road Equipment - Phase not included

Off-road Equipment - Phase not included

Trips and VMT - Project specific data

Construction Off-road Equipment Mitigation - tier 4 Final equipment for mitigation

Off-road Equipment - Project data

Off-road Equipment - Project data

Off-road Equipment - Project data

Off-road Equipment - Project data

Architectural Coating - No architectural coatings

Vehicle Trips - No operational emissions

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	500.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	1,500.00	0.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00

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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	36.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	5.00	0.00
tblConstructionPhase	NumDays	100.00	65.00
tblConstructionPhase	NumDays	100.00	31.00
tblConstructionPhase	NumDays	10.00	29.00
tblConstructionPhase	NumDays	2.00	0.00
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tblConstructionPhase	NumDays	1.00	18.00
tblConstructionPhase	PhaseEndDate	2/21/2023	2/14/2023
tblConstructionPhase	PhaseEndDate	9/20/2022	9/18/2022

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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	6.00	2.00
tblOffRoadEquipment	UsageHours	6.00	10.00
tblOffRoadEquipment	UsageHours	6.00	12.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	12.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
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tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	6.00	10.00

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tblOffRoadEquipment	UsageHours	6.00	12.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	7.00	0.00
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tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblTripsAndVMT	VendorTripLength	7.30	12.00
tblTripsAndVMT	VendorTripLength	7.30	12.00
tblTripsAndVMT	VendorTripLength	7.30	12.00
tblTripsAndVMT	VendorTripLength	7.30	12.00
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tblTripsAndVMT	VendorTripNumber	0.00	14.00
tblTripsAndVMT	VendorTripNumber	0.00	21.00
tblTripsAndVMT	WorkerTripNumber	45.00	60.00
tblTripsAndVMT	WorkerTripNumber	45.00	40.00
tblTripsAndVMT	WorkerTripNumber	0.00	100.00
tblTripsAndVMT	WorkerTripNumber	0.00	50.00
tblVehicleTrips	ST_TR	1.32	0.00
tblVehicleTrips	SU_TR	0.68	0.00
tblVehicleTrips	WD_TR	6.97	0.00

2.0 Emissions Summary

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	4-15-2022	7-14-2022	2.6206	0.4869
2	7-15-2022	10-14-2022	3.2134	0.5968
3	10-15-2022	1-14-2023	0.5175	0.0940
		Highest	3.2134	0.5968

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	5.0700e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	1.1000e-004	1.0200e-003	8.6000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	5.1207	5.1207	1.4000e-004	4.0000e-005	5.1373
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	0.2517	0.0000	0.2517	0.0149	0.0000	0.6236
Water						0.0000	0.0000		0.0000	0.0000	0.0734	0.5685	0.6418	7.5500e-003	1.8000e-004	0.8847
Total	5.1800e-003	1.0200e-003	8.7000e-004	1.0000e-005	0.0000	8.0000e-005	8.0000e-005	0.0000	8.0000e-005	8.0000e-005	0.3251	5.6892	6.0142	0.0226	2.2000e-004	6.6456

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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	5.0700e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	1.1000e-004	1.0200e-003	8.6000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	5.1207	5.1207	1.4000e-004	4.0000e-005	5.1373
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	0.2517	0.0000	0.2517	0.0149	0.0000	0.6236
Water						0.0000	0.0000		0.0000	0.0000	0.0734	0.5685	0.6418	7.5500e-003	1.8000e-004	0.8847
Total	5.1800e-003	1.0200e-003	8.7000e-004	1.0000e-005	0.0000	8.0000e-005	8.0000e-005	0.0000	8.0000e-005	8.0000e-005	0.3251	5.6892	6.0142	0.0226	2.2000e-004	6.6456

	ROG	NOx	CO	SO2	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	1.0 MOB / DEMO - Weir energy basin demo / EXCAV new basin	Demolition	4/16/2022	5/26/2022	5	29	
2	2.0 REHAB Weir (grout)	Site Preparation	5/26/2022	6/20/2022	5	18	
3	Grading	Grading	4/30/2022	4/29/2022	5	0	
4	3.0 CONSTRUCT Basin, Weir & Channel	Building Construction	6/20/2022	9/18/2022	5	65	
5	4.0 CONSTRUCT: Revetment, Gates, Controls, Mech/Elect/Instruments	Building Construction	9/18/2022	10/31/2022	5	31	
6	Paving	Paving	2/8/2023	2/7/2023	5	0	
7	Architectural Coating	Architectural Coating	2/15/2023	2/14/2023	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0.75

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
1.0 MOB / DEMO - Weir energy basin demo / EXCAV new basin	Air Compressors	2	10.00	78	0.48
1.0 MOB / DEMO - Weir energy basin demo / EXCAV new basin	Concrete/Industrial Saws	1	10.00	5	0.73
1.0 MOB / DEMO - Weir energy basin demo / EXCAV new basin	Excavators	3	10.00	158	0.38
1.0 MOB / DEMO - Weir energy basin demo / EXCAV new basin	Forklifts	1	10.00	89	0.20
1.0 MOB / DEMO - Weir energy basin demo / EXCAV new basin	Off-Highway Tractors	2	10.00	350	0.44
1.0 MOB / DEMO - Weir energy basin demo / EXCAV new basin	Off-Highway Trucks	2	10.00	402	0.38
1.0 MOB / DEMO - Weir energy basin demo / EXCAV new basin	Off-Highway Trucks	4	10.00	402	0.38

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1.0 MOB / DEMO - Weir energy basin demo / EXCAV new basin	Off-Highway Trucks	2	10.00	200	0.38
1.0 MOB / DEMO - Weir energy basin demo / EXCAV new basin	Rubber Tired Dozers	1	10.00	247	0.40
1.0 MOB / DEMO - Weir energy basin demo / EXCAV new basin	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Grading	Graders	0	0.00	187	0.41
Grading	Rubber Tired Dozers	0	0.00	247	0.40
Grading	Tractors/Loaders/Backhoes	0	0.00	97	0.37
2.0 REHAB Weir (grout)	Air Compressors	2	10.00	78	0.48
2.0 REHAB Weir (grout)	Concrete/Industrial Saws	1	10.00	81	0.73
2.0 REHAB Weir (grout)	Excavators	1	4.00	158	0.38
2.0 REHAB Weir (grout)	Forklifts	1	10.00	89	0.20
2.0 REHAB Weir (grout)	Generator Sets	1	10.00	84	0.74
2.0 REHAB Weir (grout)	Graders	0	0.00	187	0.41
2.0 REHAB Weir (grout)	Off-Highway Trucks	8	10.00	402	0.38
2.0 REHAB Weir (grout)	Off-Highway Trucks	1	4.00	402	0.38
2.0 REHAB Weir (grout)	Other Construction Equipment	1	10.00	172	0.42
2.0 REHAB Weir (grout)	Rubber Tired Dozers	0	0.00	247	0.40
2.0 REHAB Weir (grout)	Tractors/Loaders/Backhoes	2	10.00	97	0.37
3.0 CONSTRUCT Basin, Weir & Channel	Air Compressors	1	10.00	78	0.48
3.0 CONSTRUCT Basin, Weir & Channel	Cranes	0	0.00	231	0.29
3.0 CONSTRUCT Basin, Weir & Channel	Excavators	1	8.00	158	0.38
3.0 CONSTRUCT Basin, Weir & Channel	Forklifts	2	10.00	89	0.20
3.0 CONSTRUCT Basin, Weir & Channel	Generator Sets	1	10.00	84	0.74
3.0 CONSTRUCT Basin, Weir & Channel	Graders	2	4.00	187	0.41
3.0 CONSTRUCT Basin, Weir & Channel	Off-Highway Trucks	13	10.00	402	0.38
3.0 CONSTRUCT Basin, Weir & Channel	Other Construction Equipment	1	10.00	600	0.42

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3.0 CONSTRUCT Basin, Weir & Channel	Pumps	2	4.00	84	0.74
3.0 CONSTRUCT Basin, Weir & Channel	Tractors/Loaders/Backhoes	2	10.00	97	0.37
3.0 CONSTRUCT Basin, Weir & Channel	Welders	0	0.00	46	0.45
4.0 CONSTRUCT: Revetment, Gates, Controls, Mech/Elect/Instruments	Air Compressors	2	12.00	78	0.48
4.0 CONSTRUCT: Revetment, Gates, Controls, Mech/Elect/Instruments	Concrete/Industrial Saws	1	12.00	81	0.73
4.0 CONSTRUCT: Revetment, Gates, Controls, Mech/Elect/Instruments	Cranes	1	2.00	231	0.29
4.0 CONSTRUCT: Revetment, Gates, Controls, Mech/Elect/Instruments	Excavators	2	12.00	158	0.38
4.0 CONSTRUCT: Revetment, Gates, Controls, Mech/Elect/Instruments	Forklifts	2	12.00	89	0.20
4.0 CONSTRUCT: Revetment, Gates, Controls, Mech/Elect/Instruments	Generator Sets	1	12.00	84	0.74
4.0 CONSTRUCT: Revetment, Gates, Controls, Mech/Elect/Instruments	Off-Highway Trucks	6	12.00	402	0.38
4.0 CONSTRUCT: Revetment, Gates, Controls, Mech/Elect/Instruments	Other Construction Equipment	1	12.00	172	0.42
4.0 CONSTRUCT: Revetment, Gates, Controls, Mech/Elect/Instruments	Tractors/Loaders/Backhoes	3	12.00	97	0.37
4.0 CONSTRUCT: Revetment, Gates, Controls, Mech/Elect/Instruments	Welders	0	0.00	46	0.45
Paving	Cement and Mortar Mixers	0	0.00	9	0.56
Paving	Pavers	0	0.00	130	0.42
Paving	Paving Equipment	0	0.00	132	0.36
Paving	Rollers	0	0.00	80	0.38
Paving	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Architectural Coating	Air Compressors	0	0.00	78	0.48

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
1.0 MOB / DEMO - Weir energy basin demo	18	60.00	17.00	0.00	10.80	12.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
2.0 REHAB Weir (grout)	18	40.00	16.00	0.00	10.80	12.00	20.00	LD_Mix	HDT_Mix	HHDT
3.0 CONSTRUCT Basin, Weir & Channel	25	100.00	14.00	0.00	10.80	12.00	20.00	LD_Mix	HDT_Mix	HHDT
4.0 CONSTRUCT: Revetment, Gates, Co	19	50.00	21.00	0.00	10.80	12.00	20.00	LD_Mix	HDT_Mix	HHDT
Paving	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

3.2 1.0 MOB / DEMO - Weir energy basin demo / EXCAV new basin - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1060	0.8583	0.7779	2.2800e-003		0.0364	0.0364		0.0338	0.0338	0.0000	199.9190	199.9190	0.0615	0.0000	201.4557
Total	0.1060	0.8583	0.7779	2.2800e-003		0.0364	0.0364		0.0338	0.0338	0.0000	199.9190	199.9190	0.0615	0.0000	201.4557

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**3.2 1.0 MOB / DEMO - Weir energy basin demo / EXCAV new basin
- 2022**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0100e-003	0.0322	5.7900e-003	1.1000e-004	2.6600e-003	1.0000e-004	2.7600e-003	7.7000e-004	9.0000e-005	8.6000e-004	0.0000	9.9805	9.9805	5.8000e-004	0.0000	9.9952
Worker	2.6900e-003	1.9900e-003	0.0199	6.0000e-005	6.8900e-003	4.0000e-005	6.9300e-003	1.8300e-003	4.0000e-005	1.8700e-003	0.0000	5.2756	5.2756	1.3000e-004	0.0000	5.2789
Total	3.7000e-003	0.0342	0.0257	1.7000e-004	9.5500e-003	1.4000e-004	9.6900e-003	2.6000e-003	1.3000e-004	2.7300e-003	0.0000	15.2561	15.2561	7.1000e-004	0.0000	15.2741

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	0.0276	0.1197	1.1436	2.2800e-003		3.6800e-003	3.6800e-003		3.6800e-003	3.6800e-003	0.0000	199.9187	199.9187	0.0615	0.0000	201.4555
Total	0.0276	0.1197	1.1436	2.2800e-003		3.6800e-003	3.6800e-003		3.6800e-003	3.6800e-003	0.0000	199.9187	199.9187	0.0615	0.0000	201.4555

Tisdale Weir - Batch Plant Option-rev - Sutter County, Annual

3.2 1.0 MOB / DEMO - Weir energy basin demo / EXCAV new basin - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0100e-003	0.0322	5.7900e-003	1.1000e-004	2.6600e-003	1.0000e-004	2.7600e-003	7.7000e-004	9.0000e-005	8.6000e-004	0.0000	9.9805	9.9805	5.8000e-004	0.0000	9.9952
Worker	2.6900e-003	1.9900e-003	0.0199	6.0000e-005	6.8900e-003	4.0000e-005	6.9300e-003	1.8300e-003	4.0000e-005	1.8700e-003	0.0000	5.2756	5.2756	1.3000e-004	0.0000	5.2789
Total	3.7000e-003	0.0342	0.0257	1.7000e-004	9.5500e-003	1.4000e-004	9.6900e-003	2.6000e-003	1.3000e-004	2.7300e-003	0.0000	15.2561	15.2561	7.1000e-004	0.0000	15.2741

3.3 2.0 REHAB Weir (grout) - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0739	0.5865	0.5776	1.6600e-003		0.0250	0.0250		0.0235	0.0235	0.0000	145.5203	145.5203	0.0417	0.0000	146.5629
Total	0.0739	0.5865	0.5776	1.6600e-003	2.7000e-004	0.0250	0.0253	3.0000e-005	0.0235	0.0235	0.0000	145.5203	145.5203	0.0417	0.0000	146.5629

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3.3 2.0 REHAB Weir (grout) - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.9000e-004	0.0188	3.3800e-003	6.0000e-005	1.5500e-003	6.0000e-005	1.6100e-003	4.5000e-004	5.0000e-005	5.0000e-004	0.0000	5.8304	5.8304	3.4000e-004	0.0000	5.8390
Worker	1.1100e-003	8.2000e-004	8.2300e-003	2.0000e-005	2.8500e-003	2.0000e-005	2.8700e-003	7.6000e-004	2.0000e-005	7.7000e-004	0.0000	2.1830	2.1830	5.0000e-005	0.0000	2.1844
Total	1.7000e-003	0.0196	0.0116	8.0000e-005	4.4000e-003	8.0000e-005	4.4800e-003	1.2100e-003	7.0000e-005	1.2700e-003	0.0000	8.0134	8.0134	3.9000e-004	0.0000	8.0233

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0198	0.0859	0.8406	1.6600e-003		2.6400e-003	2.6400e-003		2.6400e-003	2.6400e-003	0.0000	145.5201	145.5201	0.0417	0.0000	146.5628
Total	0.0198	0.0859	0.8406	1.6600e-003	2.7000e-004	2.6400e-003	2.9100e-003	3.0000e-005	2.6400e-003	2.6700e-003	0.0000	145.5201	145.5201	0.0417	0.0000	146.5628

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3.4 Grading - 2022

Mitigated Construction Off-Site

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

3.5 3.0 CONSTRUCT Basin, Weir & Channel - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3577	2.8620	2.5800	8.3800e-003		0.1138	0.1138		0.1059	0.1059	0.0000	734.6961	734.6961	0.2227	0.0000	740.2637
Total	0.3577	2.8620	2.5800	8.3800e-003		0.1138	0.1138		0.1059	0.1059	0.0000	734.6961	734.6961	0.2227	0.0000	740.2637

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3.5 3.0 CONSTRUCT Basin, Weir & Channel - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.8600e-003	0.0595	0.0107	1.9000e-004	4.9100e-003	1.8000e-004	5.0900e-003	1.4200e-003	1.7000e-004	1.5900e-003	0.0000	18.4225	18.4225	1.0800e-003	0.0000	18.4495
Worker	0.0101	7.4400e-003	0.0743	2.2000e-004	0.0257	1.5000e-004	0.0259	6.8400e-003	1.4000e-004	6.9800e-003	0.0000	19.7078	19.7078	4.9000e-004	0.0000	19.7201
Total	0.0119	0.0669	0.0850	4.1000e-004	0.0306	3.3000e-004	0.0310	8.2600e-003	3.1000e-004	8.5700e-003	0.0000	38.1303	38.1303	1.5700e-003	0.0000	38.1696

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	0.1011	0.4382	4.0349	8.3800e-003		0.0135	0.0135		0.0135	0.0135	0.0000	734.6953	734.6953	0.2227	0.0000	740.2628
Total	0.1011	0.4382	4.0349	8.3800e-003		0.0135	0.0135		0.0135	0.0135	0.0000	734.6953	734.6953	0.2227	0.0000	740.2628

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3.5 3.0 CONSTRUCT Basin, Weir & Channel - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.8600e-003	0.0595	0.0107	1.9000e-004	4.9100e-003	1.8000e-004	5.0900e-003	1.4200e-003	1.7000e-004	1.5900e-003	0.0000	18.4225	18.4225	1.0800e-003	0.0000	18.4495
Worker	0.0101	7.4400e-003	0.0743	2.2000e-004	0.0257	1.5000e-004	0.0259	6.8400e-003	1.4000e-004	6.9800e-003	0.0000	19.7078	19.7078	4.9000e-004	0.0000	19.7201
Total	0.0119	0.0669	0.0850	4.1000e-004	0.0306	3.3000e-004	0.0310	8.2600e-003	3.1000e-004	8.5700e-003	0.0000	38.1303	38.1303	1.5700e-003	0.0000	38.1696

3.6 4.0 CONSTRUCT: Revetment, Gates, Controls, Mech/Elect/Instruments - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1388	1.1339	1.2136	3.0200e-003		0.0512	0.0512		0.0480	0.0480	0.0000	264.3132	264.3132	0.0744	0.0000	266.1734
Total	0.1388	1.1339	1.2136	3.0200e-003		0.0512	0.0512		0.0480	0.0480	0.0000	264.3132	264.3132	0.0744	0.0000	266.1734

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**3.6 4.0 CONSTRUCT: Revetment, Gates, Controls,
Mech/Elect/Instruments - 2022**
Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.3300e-003	0.0425	7.6500e-003	1.4000e-004	3.5100e-003	1.3000e-004	3.6400e-003	1.0200e-003	1.2000e-004	1.1400e-003	0.0000	13.1792	13.1792	7.7000e-004	0.0000	13.1985
Worker	2.4000e-003	1.7700e-003	0.0177	5.0000e-005	6.1400e-003	4.0000e-005	6.1700e-003	1.6300e-003	3.0000e-005	1.6600e-003	0.0000	4.6996	4.6996	1.2000e-004	0.0000	4.7025
Total	3.7300e-003	0.0443	0.0254	1.9000e-004	9.6500e-003	1.7000e-004	9.8100e-003	2.6500e-003	1.5000e-004	2.8000e-003	0.0000	17.8787	17.8787	8.9000e-004	0.0000	17.9010

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	0.0359	0.1556	1.6437	3.0200e-003		4.7900e-003	4.7900e-003		4.7900e-003	4.7900e-003	0.0000	264.3129	264.3129	0.0744	0.0000	266.1731
Total	0.0359	0.1556	1.6437	3.0200e-003		4.7900e-003	4.7900e-003		4.7900e-003	4.7900e-003	0.0000	264.3129	264.3129	0.0744	0.0000	266.1731

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3.8 Architectural Coating - 2023

Mitigated Construction Off-Site

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
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
General Light Industry	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
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.512796	0.026606	0.165464	0.111626	0.028005	0.006057	0.029203	0.113670	0.000830	0.000443	0.003492	0.001021	0.000787

5.0 Energy Detail

Historical Energy Use: N

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5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	4.0070	4.0070	1.2000e-004	2.0000e-005	4.0170
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	4.0070	4.0070	1.2000e-004	2.0000e-005	4.0170
NaturalGas Mitigated	1.1000e-004	1.0200e-003	8.6000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.1137	1.1137	2.0000e-005	2.0000e-005	1.1203
NaturalGas Unmitigated	1.1000e-004	1.0200e-003	8.6000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.1137	1.1137	2.0000e-005	2.0000e-005	1.1203

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	20870	1.1000e-004	1.0200e-003	8.6000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.1137	1.1137	2.0000e-005	2.0000e-005	1.1203
Total		1.1000e-004	1.0200e-003	8.6000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.1137	1.1137	2.0000e-005	2.0000e-005	1.1203

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5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	20870	1.1000e-004	1.0200e-003	8.6000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.1137	1.1137	2.0000e-005	2.0000e-005	1.1203
Total		1.1000e-004	1.0200e-003	8.6000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.1137	1.1137	2.0000e-005	2.0000e-005	1.1203

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	8820	4.0070	1.2000e-004	2.0000e-005	4.0170
Total		4.0070	1.2000e-004	2.0000e-005	4.0170

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5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	8820	4.0070	1.2000e-004	2.0000e-005	4.0170
Total		4.0070	1.2000e-004	2.0000e-005	4.0170

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	5.0700e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Unmitigated	5.0700e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

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6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.1600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.9100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	5.0700e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.1600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.9100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	5.0700e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

7.0 Water Detail

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7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.6418	7.5500e-003	1.8000e-004	0.8847
Unmitigated	0.6418	7.5500e-003	1.8000e-004	0.8847

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0.23125 / 0	0.6418	7.5500e-003	1.8000e-004	0.8847
Total		0.6418	7.5500e-003	1.8000e-004	0.8847

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7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0.23125 / 0	0.6418	7.5500e-003	1.8000e-004	0.8847
Total		0.6418	7.5500e-003	1.8000e-004	0.8847

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.2517	0.0149	0.0000	0.6236
Unmitigated	0.2517	0.0149	0.0000	0.6236

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8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	1.24	0.2517	0.0149	0.0000	0.6236
Total		0.2517	0.0149	0.0000	0.6236

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	1.24	0.2517	0.0149	0.0000	0.6236
Total		0.2517	0.0149	0.0000	0.6236

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
----------------	--------	-----------	------------	-------------	-------------	-----------

Boilers

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

User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

Tisdale Weir - Concrete haul-in Option-rev - Sutter County, Annual

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Light Industry	1.00	1000sqft	1.00	1,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	61
Climate Zone	3			Operational Year	2022
Utility Company	Statewide Average				
CO2 Intensity (lb/MW hr)	1001.57	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

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Project Characteristics -

Land Use - Assumed

Construction Phase - Project schedule

Off-road Equipment - Project data

Off-road Equipment - Project data

Off-road Equipment - Project data

Off-road Equipment - Phase not included

Off-road Equipment - Construction equipment provided

Off-road Equipment - Phase not included

Off-road Equipment - Phase not included

Trips and VMT - Project specific data

Architectural Coating - No architectural coatings phase

Vehicle Trips - Operational emissions not estimated

Construction Off-road Equipment Mitigation - Tier 4 Final equipment used for mitigation

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	500.00	0.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	1,500.00	0.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	12.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	6.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	7.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	38.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00

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tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	10.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	5.00	0.00
tblConstructionPhase	NumDays	100.00	65.00
tblConstructionPhase	NumDays	100.00	31.00
tblConstructionPhase	NumDays	10.00	29.00
tblConstructionPhase	NumDays	2.00	0.00
tblConstructionPhase	NumDays	5.00	0.00
tblConstructionPhase	NumDays	1.00	18.00
tblGrading	AcresOfGrading	0.00	0.75
tblGrading	AcresOfGrading	0.00	0.50
tblLandUse	LotAcreage	0.02	1.00
tblOffRoadEquipment	HorsePower	81.00	5.00
tblOffRoadEquipment	HorsePower	97.00	350.00

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tblOffRoadEquipment	HorsePower	402.00	200.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	5.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	3.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	6.00	2.00

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tblOffRoadEquipment	UsageHours	6.00	12.00
tblOffRoadEquipment	UsageHours	6.00	12.00
tblOffRoadEquipment	UsageHours	8.00	12.00
tblOffRoadEquipment	UsageHours	8.00	12.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	6.00	12.00
tblOffRoadEquipment	UsageHours	6.00	12.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	7.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	10.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblTripsAndVMT	VendorTripLength	7.30	12.00
tblTripsAndVMT	VendorTripLength	7.30	12.00
tblTripsAndVMT	VendorTripLength	7.30	12.00
tblTripsAndVMT	VendorTripLength	7.30	12.00
tblTripsAndVMT	VendorTripNumber	0.00	17.00
tblTripsAndVMT	VendorTripNumber	0.00	18.00
tblTripsAndVMT	VendorTripNumber	0.00	18.00

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tblTripsAndVMT	VendorTripNumber	0.00	21.00
tblTripsAndVMT	WorkerTripNumber	45.00	60.00
tblTripsAndVMT	WorkerTripNumber	45.00	40.00
tblTripsAndVMT	WorkerTripNumber	0.00	68.00
tblTripsAndVMT	WorkerTripNumber	0.00	50.00
tblVehicleTrips	ST_TR	1.32	0.00
tblVehicleTrips	SU_TR	0.68	0.00
tblVehicleTrips	WD_TR	6.97	0.00

2.0 Emissions Summary

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	4-15-2022	7-14-2022	3.8138	0.6501
2	7-15-2022	10-14-2022	6.0042	0.9504
3	10-15-2022	1-14-2023	0.5175	0.0940
		Highest	6.0042	0.9504

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	5.0700e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	1.1000e-004	1.0200e-003	8.6000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	5.1207	5.1207	1.4000e-004	4.0000e-005	5.1373
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	0.2517	0.0000	0.2517	0.0149	0.0000	0.6236
Water						0.0000	0.0000		0.0000	0.0000	0.0734	0.5685	0.6418	7.5500e-003	1.8000e-004	0.8847
Total	5.1800e-003	1.0200e-003	8.7000e-004	1.0000e-005	0.0000	8.0000e-005	8.0000e-005	0.0000	8.0000e-005	8.0000e-005	0.3251	5.6892	6.0142	0.0226	2.2000e-004	6.6456

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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	5.0700e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Energy	1.1000e-004	1.0200e-003	8.6000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	5.1207	5.1207	1.4000e-004	4.0000e-005	5.1373
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	0.2517	0.0000	0.2517	0.0149	0.0000	0.6236
Water						0.0000	0.0000		0.0000	0.0000	0.0734	0.5685	0.6418	7.5500e-003	1.8000e-004	0.8847
Total	5.1800e-003	1.0200e-003	8.7000e-004	1.0000e-005	0.0000	8.0000e-005	8.0000e-005	0.0000	8.0000e-005	8.0000e-005	0.3251	5.6892	6.0142	0.0226	2.2000e-004	6.6456

	ROG	NOx	CO	SO2	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	1.0 Weir energy basin demo and new basin excavation	Demolition	4/16/2022	5/26/2022	5	29	
2	Grading	Grading	4/30/2022	4/29/2022	5	0	
3	2.0 REHAB Weir (grout)	Site Preparation	5/26/2022	6/20/2022	5	18	
4	3.0 CONSTRUCT Basin, Weir & Channel	Building Construction	6/20/2022	9/18/2022	5	65	
5	4.0 CONSTRUCT: Revetment, Gates, Controls, Mech/Elect/Instruments	Building Construction	9/18/2022	10/31/2022	5	31	
6	Paving	Paving	2/8/2023	2/7/2023	5	0	
7	Architectural Coating	Architectural Coating	2/15/2023	2/14/2023	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0.75

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
1.0 Weir energy basin demo and new basin excavation	Air Compressors	2	10.00	78	0.48
1.0 Weir energy basin demo and new basin excavation	Concrete/Industrial Saws	1	10.00	5	0.73
1.0 Weir energy basin demo and new basin excavation	Excavators	3	10.00	158	0.38
1.0 Weir energy basin demo and new basin excavation	Forklifts	1	10.00	89	0.20
1.0 Weir energy basin demo and new basin excavation	Off-Highway Trucks	6	10.00	402	0.38
1.0 Weir energy basin demo and new basin excavation	Off-Highway Trucks	2	10.00	200	0.38
1.0 Weir energy basin demo and new basin excavation	Rubber Tired Dozers	1	10.00	247	0.40

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1.0 Weir energy basin demo and new basin excavation	Tractors/Loaders/Backhoes	2	10.00	350	0.37
2.0 REHAB Weir (grout)	Air Compressors	2	10.00	78	0.48
2.0 REHAB Weir (grout)	Concrete/Industrial Saws	1	10.00	81	0.73
2.0 REHAB Weir (grout)	Excavators	1	4.00	158	0.38
2.0 REHAB Weir (grout)	Forklifts	1	10.00	89	0.20
2.0 REHAB Weir (grout)	Generator Sets	1	10.00	84	0.74
2.0 REHAB Weir (grout)	Graders	0	0.00	187	0.41
2.0 REHAB Weir (grout)	Off-Highway Trucks	8	10.00	402	0.38
2.0 REHAB Weir (grout)	Off-Highway Trucks	1	4.00	402	0.38
2.0 REHAB Weir (grout)	Other Construction Equipment	1	10.00	172	0.42
2.0 REHAB Weir (grout)	Rubber Tired Dozers	0	0.00	247	0.40
2.0 REHAB Weir (grout)	Tractors/Loaders/Backhoes	2	10.00	97	0.37
Grading	Graders	0	0.00	187	0.41
Grading	Rubber Tired Dozers	0	0.00	247	0.40
Grading	Tractors/Loaders/Backhoes	0	0.00	97	0.37
3.0 CONSTRUCT Basin, Weir & Channel	Air Compressors	6	12.00	78	0.48
3.0 CONSTRUCT Basin, Weir & Channel	Cranes	0	0.00	231	0.29
3.0 CONSTRUCT Basin, Weir & Channel	Excavators	3	12.00	158	0.38
3.0 CONSTRUCT Basin, Weir & Channel	Forklifts	2	12.00	89	0.20
3.0 CONSTRUCT Basin, Weir & Channel	Generator Sets	5	12.00	84	0.74
3.0 CONSTRUCT Basin, Weir & Channel	Graders	3	12.00	187	0.41
3.0 CONSTRUCT Basin, Weir & Channel	Off-Highway Trucks	15	12.00	402	0.38
3.0 CONSTRUCT Basin, Weir & Channel	Pumps	5	12.00	84	0.74
3.0 CONSTRUCT Basin, Weir & Channel	Tractors/Loaders/Backhoes	3	12.00	97	0.37
3.0 CONSTRUCT Basin, Weir & Channel	Welders	0	0.00	46	0.45

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4.0 CONSTRUCT: Revetment, Gates, Controls, Mech/Elect/Instruments	Air Compressors	2	12.00	78	0.48
4.0 CONSTRUCT: Revetment, Gates, Controls, Mech/Elect/Instruments	Concrete/Industrial Saws	1	12.00	81	0.73
4.0 CONSTRUCT: Revetment, Gates, Controls, Mech/Elect/Instruments	Cranes	1	2.00	231	0.29
4.0 CONSTRUCT: Revetment, Gates, Controls, Mech/Elect/Instruments	Excavators	2	12.00	158	0.38
4.0 CONSTRUCT: Revetment, Gates, Controls, Mech/Elect/Instruments	Forklifts	2	12.00	89	0.20
4.0 CONSTRUCT: Revetment, Gates, Controls, Mech/Elect/Instruments	Generator Sets	1	12.00	84	0.74
4.0 CONSTRUCT: Revetment, Gates, Controls, Mech/Elect/Instruments	Off-Highway Trucks	6	12.00	402	0.38
4.0 CONSTRUCT: Revetment, Gates, Controls, Mech/Elect/Instruments	Other Construction Equipment	1	12.00	172	0.42
4.0 CONSTRUCT: Revetment, Gates, Controls, Mech/Elect/Instruments	Tractors/Loaders/Backhoes	3	12.00	97	0.37
4.0 CONSTRUCT: Revetment, Gates, Controls, Mech/Elect/Instruments	Welders	0	0.00	46	0.45
Paving	Cement and Mortar Mixers	0	0.00	9	0.56
Paving	Pavers	0	0.00	130	0.42
Paving	Paving Equipment	0	0.00	132	0.36
Paving	Rollers	0	0.00	80	0.38
Paving	Tractors/Loaders/Backhoes	0	0.00	97	0.37
Architectural Coating	Air Compressors	0	0.00	78	0.48

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
1.0 Weir energy basin demo and new basin excavation	18	60.00	17.00	0.00	10.80	12.00	20.00	LD_Mix	HDT_Mix	HHDT
2.0 REHAB Weir (grout)	18	40.00	18.00	0.00	10.80	12.00	20.00	LD_Mix	HDT_Mix	HHDT
Grading	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
3.0 CONSTRUCT Basin Weir & Channel	42	68.00	18.00	0.00	10.80	12.00	20.00	LD_Mix	HDT_Mix	HHDT
4.0 CONSTRUCT: Revetment Gates Co	19	50.00	21.00	0.00	10.80	12.00	20.00	LD_Mix	HDT_Mix	HHDT
Paving	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	0	0.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

3.2 1.0 Weir energy basin demo and new basin excavation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1193	0.9773	0.8839	2.6800e-003		0.0408	0.0408		0.0379	0.0379	0.0000	235.1648	235.1648	0.0729	0.0000	236.9865
Total	0.1193	0.9773	0.8839	2.6800e-003		0.0408	0.0408		0.0379	0.0379	0.0000	235.1648	235.1648	0.0729	0.0000	236.9865

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3.2 1.0 Weir energy basin demo and new basin excavation - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.0100e-003	0.0322	5.7900e-003	1.1000e-004	2.6600e-003	1.0000e-004	2.7600e-003	7.7000e-004	9.0000e-005	8.6000e-004	0.0000	9.9805	9.9805	5.8000e-004	0.0000	9.9952
Worker	2.6900e-003	1.9900e-003	0.0199	6.0000e-005	6.8900e-003	4.0000e-005	6.9300e-003	1.8300e-003	4.0000e-005	1.8700e-003	0.0000	5.2756	5.2756	1.3000e-004	0.0000	5.2789
Total	3.7000e-003	0.0342	0.0257	1.7000e-004	9.5500e-003	1.4000e-004	9.6900e-003	2.6000e-003	1.3000e-004	2.7300e-003	0.0000	15.2561	15.2561	7.1000e-004	0.0000	15.2741

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	0.0326	0.1412	1.3258	2.6800e-003		4.3500e-003	4.3500e-003		4.3500e-003	4.3500e-003	0.0000	235.1645	235.1645	0.0729	0.0000	236.9862
Total	0.0326	0.1412	1.3258	2.6800e-003		4.3500e-003	4.3500e-003		4.3500e-003	4.3500e-003	0.0000	235.1645	235.1645	0.0729	0.0000	236.9862

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3.3 Grading - 2022

Mitigated Construction Off-Site

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

3.4 2.0 REHAB Weir (grout) - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0739	0.5865	0.5776	1.6600e-003		0.0250	0.0250		0.0235	0.0235	0.0000	145.5203	145.5203	0.0417	0.0000	146.5629
Total	0.0739	0.5865	0.5776	1.6600e-003	2.7000e-004	0.0250	0.0253	3.0000e-005	0.0235	0.0235	0.0000	145.5203	145.5203	0.0417	0.0000	146.5629

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3.4 2.0 REHAB Weir (grout) - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.6000e-004	0.0212	3.8100e-003	7.0000e-005	1.7500e-003	6.0000e-005	1.8100e-003	5.1000e-004	6.0000e-005	5.7000e-004	0.0000	6.5592	6.5592	3.8000e-004	0.0000	6.5688
Worker	1.1100e-003	8.2000e-004	8.2300e-003	2.0000e-005	2.8500e-003	2.0000e-005	2.8700e-003	7.6000e-004	2.0000e-005	7.7000e-004	0.0000	2.1830	2.1830	5.0000e-005	0.0000	2.1844
Total	1.7700e-003	0.0220	0.0120	9.0000e-005	4.6000e-003	8.0000e-005	4.6800e-003	1.2700e-003	8.0000e-005	1.3400e-003	0.0000	8.7422	8.7422	4.3000e-004	0.0000	8.7532

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.7000e-004	0.0000	2.7000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0198	0.0859	0.8406	1.6600e-003		2.6400e-003	2.6400e-003		2.6400e-003	2.6400e-003	0.0000	145.5201	145.5201	0.0417	0.0000	146.5628
Total	0.0198	0.0859	0.8406	1.6600e-003	2.7000e-004	2.6400e-003	2.9100e-003	3.0000e-005	2.6400e-003	2.6700e-003	0.0000	145.5201	145.5201	0.0417	0.0000	146.5628

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3.4 2.0 REHAB Weir (grout) - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	6.6000e-004	0.0212	3.8100e-003	7.0000e-005	1.7500e-003	6.0000e-005	1.8100e-003	5.1000e-004	6.0000e-005	5.7000e-004	0.0000	6.5592	6.5592	3.8000e-004	0.0000	6.5688
Worker	1.1100e-003	8.2000e-004	8.2300e-003	2.0000e-005	2.8500e-003	2.0000e-005	2.8700e-003	7.6000e-004	2.0000e-005	7.7000e-004	0.0000	2.1830	2.1830	5.0000e-005	0.0000	2.1844
Total	1.7700e-003	0.0220	0.0120	9.0000e-005	4.6000e-003	8.0000e-005	4.6800e-003	1.2700e-003	8.0000e-005	1.3400e-003	0.0000	8.7422	8.7422	4.3000e-004	0.0000	8.7532

3.5 3.0 CONSTRUCT Basin, Weir & Channel - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.7579	6.2985	6.1367	0.0164		0.2694	0.2694		0.2563	0.2563	0.0000	1,428.0499	1,428.0499	0.3606	0.0000	1,437.0649
Total	0.7579	6.2985	6.1367	0.0164		0.2694	0.2694		0.2563	0.2563	0.0000	1,428.0499	1,428.0499	0.3606	0.0000	1,437.0649

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3.5 3.0 CONSTRUCT Basin, Weir & Channel - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.3900e-003	0.0764	0.0137	2.5000e-004	6.3100e-003	2.3000e-004	6.5400e-003	1.8300e-003	2.2000e-004	2.0400e-003	0.0000	23.6860	23.6860	1.3900e-003	0.0000	23.7207
Worker	6.8300e-003	5.0600e-003	0.0505	1.5000e-004	0.0175	1.0000e-004	0.0176	4.6500e-003	9.0000e-005	4.7500e-003	0.0000	13.4013	13.4013	3.4000e-004	0.0000	13.4097
Total	9.2200e-003	0.0815	0.0643	4.0000e-004	0.0238	3.3000e-004	0.0241	6.4800e-003	3.1000e-004	6.7900e-003	0.0000	37.0873	37.0873	1.7300e-003	0.0000	37.1304

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	0.1904	0.8251	8.4903	0.0164		0.0254	0.0254		0.0254	0.0254	0.0000	1,428.0482	1,428.0482	0.3606	0.0000	1,437.0632
Total	0.1904	0.8251	8.4903	0.0164		0.0254	0.0254		0.0254	0.0254	0.0000	1,428.0482	1,428.0482	0.3606	0.0000	1,437.0632

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3.5 3.0 CONSTRUCT Basin, Weir & Channel - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.3900e-003	0.0764	0.0137	2.5000e-004	6.3100e-003	2.3000e-004	6.5400e-003	1.8300e-003	2.2000e-004	2.0400e-003	0.0000	23.6860	23.6860	1.3900e-003	0.0000	23.7207
Worker	6.8300e-003	5.0600e-003	0.0505	1.5000e-004	0.0175	1.0000e-004	0.0176	4.6500e-003	9.0000e-005	4.7500e-003	0.0000	13.4013	13.4013	3.4000e-004	0.0000	13.4097
Total	9.2200e-003	0.0815	0.0643	4.0000e-004	0.0238	3.3000e-004	0.0241	6.4800e-003	3.1000e-004	6.7900e-003	0.0000	37.0873	37.0873	1.7300e-003	0.0000	37.1304

3.6 4.0 CONSTRUCT: Revetment, Gates, Controls, Mech/Elect/Instruments - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1388	1.1339	1.2136	3.0200e-003		0.0512	0.0512		0.0480	0.0480	0.0000	264.3132	264.3132	0.0744	0.0000	266.1734
Total	0.1388	1.1339	1.2136	3.0200e-003		0.0512	0.0512		0.0480	0.0480	0.0000	264.3132	264.3132	0.0744	0.0000	266.1734

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**3.6 4.0 CONSTRUCT: Revetment, Gates, Controls,
Mech/Elect/Instruments - 2022**
Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.3300e-003	0.0425	7.6500e-003	1.4000e-004	3.5100e-003	1.3000e-004	3.6400e-003	1.0200e-003	1.2000e-004	1.1400e-003	0.0000	13.1792	13.1792	7.7000e-004	0.0000	13.1985
Worker	2.4000e-003	1.7700e-003	0.0177	5.0000e-005	6.1400e-003	4.0000e-005	6.1700e-003	1.6300e-003	3.0000e-005	1.6600e-003	0.0000	4.6996	4.6996	1.2000e-004	0.0000	4.7025
Total	3.7300e-003	0.0443	0.0254	1.9000e-004	9.6500e-003	1.7000e-004	9.8100e-003	2.6500e-003	1.5000e-004	2.8000e-003	0.0000	17.8787	17.8787	8.9000e-004	0.0000	17.9010

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	0.0359	0.1556	1.6437	3.0200e-003		4.7900e-003	4.7900e-003		4.7900e-003	4.7900e-003	0.0000	264.3129	264.3129	0.0744	0.0000	266.1731
Total	0.0359	0.1556	1.6437	3.0200e-003		4.7900e-003	4.7900e-003		4.7900e-003	4.7900e-003	0.0000	264.3129	264.3129	0.0744	0.0000	266.1731

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3.8 Architectural Coating - 2023

Mitigated Construction Off-Site

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
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
General Light Industry	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
General Light Industry	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Light Industry	0.512796	0.026606	0.165464	0.111626	0.028005	0.006057	0.029203	0.113670	0.000830	0.000443	0.003492	0.001021	0.000787

5.0 Energy Detail

Historical Energy Use: N

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5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	4.0070	4.0070	1.2000e-004	2.0000e-005	4.0170
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	4.0070	4.0070	1.2000e-004	2.0000e-005	4.0170
NaturalGas Mitigated	1.1000e-004	1.0200e-003	8.6000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.1137	1.1137	2.0000e-005	2.0000e-005	1.1203
NaturalGas Unmitigated	1.1000e-004	1.0200e-003	8.6000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.1137	1.1137	2.0000e-005	2.0000e-005	1.1203

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	20870	1.1000e-004	1.0200e-003	8.6000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.1137	1.1137	2.0000e-005	2.0000e-005	1.1203
Total		1.1000e-004	1.0200e-003	8.6000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.1137	1.1137	2.0000e-005	2.0000e-005	1.1203

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5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Light Industry	20870	1.1000e-004	1.0200e-003	8.6000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.1137	1.1137	2.0000e-005	2.0000e-005	1.1203
Total		1.1000e-004	1.0200e-003	8.6000e-004	1.0000e-005		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	1.1137	1.1137	2.0000e-005	2.0000e-005	1.1203

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	8820	4.0070	1.2000e-004	2.0000e-005	4.0170
Total		4.0070	1.2000e-004	2.0000e-005	4.0170

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5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Light Industry	8820	4.0070	1.2000e-004	2.0000e-005	4.0170
Total		4.0070	1.2000e-004	2.0000e-005	4.0170

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	5.0700e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Unmitigated	5.0700e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

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6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.1600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.9100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	5.0700e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.1600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	3.9100e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0000	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005
Total	5.0700e-003	0.0000	1.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.0000e-005	2.0000e-005	0.0000	0.0000	2.0000e-005

7.0 Water Detail

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7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.6418	7.5500e-003	1.8000e-004	0.8847
Unmitigated	0.6418	7.5500e-003	1.8000e-004	0.8847

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0.23125 / 0	0.6418	7.5500e-003	1.8000e-004	0.8847
Total		0.6418	7.5500e-003	1.8000e-004	0.8847

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7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Light Industry	0.23125 / 0	0.6418	7.5500e-003	1.8000e-004	0.8847
Total		0.6418	7.5500e-003	1.8000e-004	0.8847

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.2517	0.0149	0.0000	0.6236
Unmitigated	0.2517	0.0149	0.0000	0.6236

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8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	1.24	0.2517	0.0149	0.0000	0.6236
Total		0.2517	0.0149	0.0000	0.6236

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Light Industry	1.24	0.2517	0.0149	0.0000	0.6236
Total		0.2517	0.0149	0.0000	0.6236

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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11.0 Vegetation

Greenhouse Gas(GHG) Emissions Reduction Plan Consistency Determination

For Projects Using Contractors or Other Outside Labor

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

Additional Guidance on filling out this form can be found at:

http://dwrclimatechange.water.ca.gov/guidance_resources.cfm

The DWR Greenhouse Gas Emissions Reduction Plan can be accessed at:

<https://water.ca.gov/Programs/All-Programs/Climate-Change-Program/Climate-Action-Plan>

Project Name:	Tisdale Weir Rehabilitation and Fish Passage Project
Environmental Document Type:	Environmental Impact Report
Manager's Name:	Jeff Schuette
Manager's E-mail:	Jeff.Schuette@water.ca.gov
Division:	Division of Flood Management
Office, Branch, or Field Division:	Flood Maintenance Office

Short Project Description:

The Proposed Project consists of rehabilitation and reconstruction of the Tisdale Weir, installation and operation of fish passage facilities, and associated project site improvements. Weir rehabilitation and reconstruction would consist of repairing the weir crest and reconstructing the two abutments and the energy dissipation basin. The fish passage facilities would include reconstruction of a fish collection basin; installation of a notch, an operable gate (for flow regulation), attendant facilities; and construction of a channel connecting the notch in the weir to the Sacramento River.

Project GHG Emissions Summary:

Total Construction Emissions	2166	mtCO ₂ e
Maximum Annual Construction Emissions	2166	mtCO ₂ e

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

Extraordinary Construction Project Determination:

Do total project construction emissions exceed 25,000 mtCO₂e for the entire construction phase or exceed 12,500 mtCO₂e in any single year of construction?

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

Certificate Of Completion

Envelope Id: EFE660FE695E4E7588D0FD1DA0A45FC2	Status: Completed
Subject: Please DocuSign: (TWRFP) Greenhouse Gas Emmisions Reduction Plan CD_Form 9785c.pdf	
Source Envelope:	
Document Pages: 2	Signatures: 2
Certificate Pages: 2	Initials: 0
AutoNav: Enabled	Envelope Originator:
Envelopeld Stamping: Enabled	Stephanie Ponce
Time Zone: (UTC-08:00) Pacific Time (US & Canada)	1416 9th Street
	Sacramento, CA 95814
	Stephanie.Ponce@water.ca.gov
	IP Address: 67.187.135.92

Record Tracking

Status: Original	Holder: Stephanie Ponce	Location: DocuSign
7/6/2020 1:24:44 PM	Stephanie.Ponce@water.ca.gov	
Security Appliance Status: Connected	Pool: StateLocal	
Storage Appliance Status: Connected	Pool: Department of Water Resources	Location: DocuSign

Signer Events

Signature	Timestamp
Jeff Schuette Jeff.Schuette@water.ca.gov Department of Water Resources Security Level: Email, Account Authentication (None)	Sent: 7/6/2020 2:11:24 PM Viewed: 7/7/2020 11:46:53 AM Signed: 7/7/2020 11:49:23 AM Freeform Signing
Signature Adoption: Pre-selected Style Using IP Address: 73.192.205.24	

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Not Offered via DocuSign

Jennifer Morales Jennifer.Morales@water.ca.gov Department of Water Resources Security Level: Email, Account Authentication (None)	<i>Jennifer Morales</i> Signature Adoption: Pre-selected Style Using IP Address: 98.239.88.180	Sent: 7/7/2020 11:49:25 AM Resent: 7/10/2020 11:15:51 AM Viewed: 7/17/2020 2:16:38 PM Signed: 7/17/2020 2:17:29 PM Freeform Signing
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Electronic Record and Signature Disclosure:
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In Person Signer Events	Signature	Timestamp
Editor Delivery Events	Status	Timestamp
Agent Delivery Events	Status	Timestamp
Intermediary Delivery Events	Status	Timestamp
Certified Delivery Events	Status	Timestamp
Carbon Copy Events	Status	Timestamp
Witness Events	Signature	Timestamp
Notary Events	Signature	Timestamp
Envelope Summary Events	Status	Timestamps
Envelope Sent	Hashed/Encrypted	7/10/2020 11:15:51 AM

Envelope Summary Events	Status	Timestamps
Certified Delivered	Security Checked	7/17/2020 2:16:38 PM
Signing Complete	Security Checked	7/17/2020 2:17:29 PM
Completed	Security Checked	7/17/2020 2:17:29 PM

Payment Events	Status	Timestamps
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