

MacArthur Lake Stormwater Capture Project

Draft Environmental Impact Report

Appendix B | Air Quality/Greenhouse Gas Calculations



Prepared for
City of Los Angeles



Prepared by



Appendix B

Air Quality/Greenhouse Gas Calculations

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Peak Day Emissions Summary (Regional)

Task #	Construction Task	ROG	NOx	CO	SO2	Fugitive	Exhaust	PM10	Fugitive	Exhaust	PM2.5	lookup rows
						PM10	PM10	Total	PM2.5	PM2.5	Total	
1	Diversion Structure	1.2	10.1	16.9	<0.1	0.2	0.5	0.7	0.1	0.5	0.5	77
2	Drain Line Upgrade	1.4	11.9	18.9	<0.1	0.3	0.6	0.9	0.1	0.6	0.6	82
3	Baffle Box/CDS Structure	1.2	10.2	16.8	<0.1	0.2	0.5	0.7	0.1	0.5	0.5	81
4	Pump Station	1.6	13.7	19.9	<0.1	0.3	0.7	1.0	0.1	0.6	0.7	86
5	Actuated Valve and Meter Vaults	1.3	11.0	18.9	<0.1	0.2	0.5	0.8	0.1	0.5	0.6	81
6	Treatment Structures	1.4	12.9	16.0	<0.1	2.4	0.6	3.0	1.2	0.6	1.8	76
7	Pipeline	1.2	9.6	16.9	<0.1	0.2	0.5	0.7	0.1	0.4	0.5	81
8	Electrical ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
9	Existing Equipment Upgrades ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
10	Wetlands	1.6	14.9	16.9	<0.1	2.9	0.7	3.6	1.5	0.6	2.2	69
Project Maximum		1.6	14.9	19.9	<0.1	2.9	0.7	3.6	1.5	0.6	2.2	

1. equipment and workers would not be duplicated between tasks; since electrical & existing site improvements would overlap all other tasks and require minimal equipment, no additional modeling is necessary

Peak Day Emissions Summary (Localized)

Task #	Construction Task	ROG	NOx	CO	SO2	Fugitive	Exhaust	PM10	Fugitive	Exhaust	PM2.5	lookup rows
						PM10	PM10	Total	PM2.5	PM2.5	Total	
1	Excavation & Installation	1.1	9.2	15.0	<0.1	<0.1	0.5	0.5	<0.1	0.4	0.4	254
1	Paving	0.1	0.8	1.3	<0.1	n/a	<0.1	<0.1	n/a	<0.1	<0.1	196
2	Excavation & Installation	1.2	10.9	16.9	<0.1	<0.1	0.6	0.6	<0.1	0.5	0.5	201
2	Paving	0.1	0.8	1.3	<0.1	n/a	<0.1	<0.1	n/a	<0.1	<0.1	259
3	Excavation & Installation	1.1	9.2	14.9	<0.1	<0.1	0.5	0.5	<0.1	0.4	0.4	200
3	Paving	0.1	0.8	1.3	<0.1	n/a	<0.1	<0.1	n/a	<0.1	<0.1	258
4	Excavation & Installation - 2023	1.4	12.8	17.8	<0.1	<0.1	0.6	0.6	<0.1	0.6	0.6	206
4	Excavation & Installation - 2024	1.3	11.9	17.8	<0.1	<0.1	0.6	0.6	<0.1	0.5	0.5	264
4	Paving - 2023	0.1	0.8	1.3	<0.1	n/a	<0.1	<0.1	n/a	<0.1	<0.1	322
4	Paving - 2024	0.1	0.7	1.3	<0.1	n/a	<0.1	<0.1	n/a	<0.1	<0.1	380
5	Excavation & Installation	1.2	10.1	16.9	<0.1	<0.1	0.5	0.5	<0.1	0.5	0.5	200
5	Paving	0.1	0.7	1.3	<0.1	n/a	<0.1	<0.1	n/a	<0.1	<0.1	258
6	Excavation & Installation	1.4	12.6	15.4	<0.1	2.2	0.6	2.8	1.1	0.6	1.7	192
7	Excavation & Installation	1.0	8.5	14.9	<0.1	<0.1	0.4	0.4	<0.1	0.4	0.4	200
7	Paving	0.1	0.7	1.3	<0.1	n/a	<0.1	<0.1	n/a	<0.1	<0.1	258
8	Electrical ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
9	Existing Equipment Upgrades ¹	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
10	Excavation & Installation	1.6	14.5	16.3	<0.1	2.7	0.7	3.4	1.5	0.6	2.1	185
Project Maximum		1.6	14.5	19.0	<0.1	2.7	0.7	3.4	1.5	0.6	2.1	

1. equipment and workers would not be duplicated between tasks; since electrical & existing site improvements would overlap all other tasks and require minimal equipment, no additional modeling is necessary

<u>Greenhouse Gas Emissions Summary (Total Project Construction)</u>							Task	Project	
Task #	Construction Task	Start Date	End Date	Duration (days)	Overlapping ²		CO2e (MT/yr)	CO2e (MT/day)	CO2e (MT/yr)
1	Diversion Structure	6/29/2023	9/25/2023	63	57	90%	76	1.21	7
2	Drain Line Upgrade	6/29/2023	8/31/2023	46	0	0%	63	1.37	63
3	Baffle Box/CDS Structure	9/11/2023	10/30/2023	36	5	14%	44	1.22	38
4	Pump Station-2023	10/24/2023	12/31/2023	49	0	0%	73	1.49	73
4	Pump Station-2024	1/1/2024	2/12/2024	31	5	16%	46	1.49	39
5	Actuated Valve and Meter Vaults	2/6/2024	4/17/2024	52	0	0%	70	1.35	70
6	Treatment Structures	4/11/2024	6/20/2024	51	5	10%	66	1.29	59
7	Pipeline	6/14/2024	9/6/2024	61	15	25%	77	1.26	58
8	Electrical ¹	7/10/2023	11/5/2024	347	347	100%	n/a	n/a	n/a
9	Existing Equipment Upgrades ¹	8/26/2024	11/5/2024	52	52	100%	n/a	n/a	n/a
10	Wetlands	8/26/2024	11/27/2024	68	0	0%	96	1.41	96
Project Total (accounting for Construction Task overlap) ³							503		503
Amortized Construction Emissions ⁴							17		check: TRUE

1. equipment and workers would not be duplicated between tasks; since electrical & existing site improvements would overlap all other tasks and require minimal equipment, no additional modeling is necessary
2. the count of days which overlap another construction task which has greater daily CO2e emissions
3. where construction tasks overlap, only the greatest portion of CO2e emissions are assumed due to the sharing of equipment and workers between tasks
4. construction emissions are amortized over a presumed project lifetime of 30-years for analysis with operational emissions

LASAN - MacArthur Lake Stormwater Capture Project - Diversion Structure - Los Angeles-South Coast County, Annual

LASAN - **MacArthur Lake Stormwater Capture Project** - Diversion Structure
Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	0.23	1000sqft	0.01	225.00	0

1.2 Other Project Characteristics

Urbanization Climate	Urban 11	Wind Speed (m/s)	2.2	Precipitation Freq Operational	33 2025
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Utility

CO2 Intensity (lb/MWhr)	0	CH4 Intensity (lb/MWhr)	0	N2O Intensity	0
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1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Diversion Structure

Construction Phase - Diversion Structure

Off-road Equipment - n/a

Off-road Equipment - Other Material Handling Equipment represents Water and Concrete Trucks; Other General Construction Equipment represents Pickup Truck

Grading - Material Exported represents both imported and exported materials.

Trips and VMT - n/a

Construction Off-road Equipment Mitigation - Watering Required by SCAQMD Rule 403

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	1.00	63.00
tblConstructionPhase	NumDays	5.00	63.00
tblConstructionPhase	PhaseEndDate	7/5/2023	9/25/2023
tblGrading	MaterialExported	0.00	141.00
tblLandUse	LandUseSquareFeet	230.00	225.00
tblOffRoadEquipment	HorsePower	187.00	0.00
tblOffRoadEquipment	LoadFactor	0.41	0.00
tblOffRoadEquipment	LoadFactor	0.36	0.36
tblOffRoadEquipment	OffRoadEquipmentType		Graders
tblOffRoadEquipment	OffRoadEquipmentType		Other Material Handling
tblOffRoadEquipment	OffRoadEquipmentType		Other Construction
tblOffRoadEquipment	OffRoadEquipmentType		Paving Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Concrete/Industrial Saws
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00

2.0 Emissions Summary

2.1 Overall Construction

Year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
2023	0.0381	0.3199	0.5309	8.6000e-04	6.5700e-03	0.0163	0.0228	1.7500e-03	0.0151	0.0169	0.0000	75.5183	75.5183	0.0203	2.9000e-04	76.1142
Maximum	0.0381	0.3199	0.5309	8.6000e-04	6.5700e-03	0.0163	0.0228	1.7500e-03	0.0151	0.0169	0.0000	75.5183	75.5183	0.0203	2.9000e-04	76.1142

3.0 Construction Detail

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Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days	Num Days	Phase Description
1	Paving	Paving	6/29/2023	9/25/2023	5	63	
2	Excavation & Installation	Site Preparation	6/29/2023	9/25/2023	5	63	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.01

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Excavation & Installation	Graders	0	0.00	0	0.00
Excavation & Installation	Other Material Handling	2	6.00	168	0.40
Excavation & Installation	Other Construction Equipment	1	4.00	172	0.42
Paving	Paving Equipment	1	4.00	132	0.36
Excavation & Installation	Concrete/Industrial Saws	1	4.00	81	0.73
Excavation & Installation	Excavators	1	8.00	158	0.38
Excavation & Installation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment	Worker Trip Number	Vendor Trip	Hauling Trip	Worker Trip Length	Vendor Trip Length	Hauling Trip	Worker Vehicle Class	Vendor Vehicle	Hauling Vehicle
Excavation & Paving	6	15.00	1.00	18.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
	1	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Paving - 2023

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	2.6500e-003	0.0249	0.0397	6.0000e-005	1.2100e-003	1.2100e-003	2.4200e-003	1.1100e-003	1.1100e-003	2.2200e-003	0.0000	5.5595	5.5595	1.8000e-003	0.0000	5.6044
Paving	1.0000e-005				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	2.6600e-003	0.0249	0.0397	6.0000e-005	1.2100e-003	1.2100e-003	2.4200e-003	1.1100e-003	1.1100e-003	2.2200e-003	0.0000	5.5595	5.5595	1.8000e-003	0.0000	5.6044

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	3.0000e-004	2.4000e-004	3.2200e-003	1.0000e-005	1.0400e-003	1.0000e-003	2.0400e-003	2.8000e-004	1.0000e-003	2.8000e-004	0.0000	0.8243	0.8243	2.0000e-005	2.0000e-005	0.8312
Total	3.0000e-004	2.4000e-004	3.2200e-003	1.0000e-005	1.0400e-003	1.0000e-003	2.0400e-003	2.8000e-004	1.0000e-003	2.8000e-004	0.0000	0.8243	0.8243	2.0000e-005	2.0000e-005	0.8312

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3.3 Excavation & Installation - 2023

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0336	0.2911	0.4711	7.3000e-004		0.0150	0.0150		0.0140	0.0140	0.0000	63.9155	63.9155	0.0184	0.0000	64.3742
Total	0.0336	0.2911	0.4711	7.3000e-004	0.0000	0.0150	0.0150	0.0000	0.0140	0.0140	0.0000	63.9155	63.9155	0.0184	0.0000	64.3742

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	1.2400e-003	3.2000e-004	1.0000e-005	1.5000e-003	1.0000e-005	1.6000e-003	4.0000e-005	1.0000e-005	5.0000e-003	0.0000	0.5249	0.5249	3.0000e-004	8.0000e-005	0.5505
Vendor	4.0000e-005	1.2700e-003	4.8000e-004	1.0000e-005	2.0000e-003	1.0000e-005	2.0000e-003	6.0000e-005	1.0000e-005	6.0000e-003	0.0000	0.5727	0.5727	2.0000e-004	8.0000e-005	0.5978
Worker	1.5000e-003	1.1900e-002	0.0161	4.0000e-005	5.1800e-003	3.0000e-005	5.2100e-003	1.3800e-005	3.0000e-005	1.4000e-003	0.0000	4.1214	4.1214	1.1000e-004	1.1000e-004	4.1561
Total	1.5600e-003	3.7000e-003	0.0169	6.0000e-005	5.5300e-003	5.0000e-005	5.5700e-003	1.4800e-005	5.0000e-005	1.5100e-003	0.0000	5.2190	5.2190	1.6000e-004	2.7000e-004	5.3044

LASAN - MacArthur Lake Stormwater Capture Project - Diversion Structure - Los Angeles-South Coast County, Summer

LASAN - **MacArthur Lake Stormwater Capture Project** - Diversion Structure
Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	0.23	1000sqft	0.01	225.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq	33
Climate	11			Operational Year	2025

Utility

CO2 Intensity (lb/MWhr)	0	CH4 Intensity (lb/MWhr)	0	N2O Intensity (lb/MWhr)	0
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1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Diversion Structure

Construction Phase - Diversion Structure

Off-road Equipment - n/a

Off-road Equipment - Other Material Handling Equipment represents Water and Concrete Trucks; Other General Construction Equipment represents Pickup Truck

Grading - Material Exported represents both imported and exported materials.

Trips and VMT - n/a

Construction Off-road Equipment Mitigation - Watering Required by SCAQMD Rule 403

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	1.00	63.00
tblConstructionPhase	NumDays	5.00	63.00
tblConstructionPhase	PhaseEndDate	7/5/2023	9/25/2023
tblGrading	MaterialExported	0.00	141.00
tblLandUse	LandUseSquareFeet	230.00	225.00
tblOffRoadEquipment	HorsePower	187.00	0.00
tblOffRoadEquipment	LoadFactor	0.41	0.00
tblOffRoadEquipment	LoadFactor	0.36	0.36
tblOffRoadEquipment	OffRoadEquipmentType		Graders
tblOffRoadEquipment	OffRoadEquipmentType		Other Material Handling
tblOffRoadEquipment	OffRoadEquipmentType		Other Construction Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Paving Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Concrete/Industrial Saws
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
	lb/day											lb/day				
2023	1.2107	10.1466	16.8922	0.0273	0.2127	0.5158	0.7285	0.0566	0.4797	0.5363	0.0000	2,649.61	2,649.61	0.7113	9.9500e-003	2,670.3605
Maximum	1.2107	10.1466	16.8922	0.0273	0.2127	0.5158	0.7285	0.0566	0.4797	0.5363	0.0000	2,649.6134	2,649.6134	0.7113	9.9500e-003	2,670.3605

3.0 Construction Detail

CalEEMod Version: CalEEMod.2020.4.0

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Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days	Num Days	Phase Description
1	Paving	Paving	6/29/2023	9/25/2023	5	63	
2	Excavation & Installation	Site Preparation	6/29/2023	9/25/2023	5	63	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.01

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Excavation & Installation	Graders	0	0.00	0	0.00
Excavation & Installation	Other Material Handling	2	6.00	168	0.40
Excavation & Installation	Other Construction Equipment	1	4.00	172	0.42
Paving	Paving Equipment	1	4.00	132	0.36
Excavation & Installation	Concrete/Industrial Saws	1	4.00	81	0.73
Excavation & Installation	Excavators	1	8.00	158	0.38
Excavation & Installation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle	Hauling Vehicle
Excavation & Paving	6	15.00	1.00	18.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
	1	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Paving - 2023

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Off-Road	0.0842	0.7906	1.2610	2.0100e-003		0.0384	0.0384		0.0354	0.0354	0.0000	194.549	194.549	0.0629		196.122
Paving	4.2000e-004					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.0846	0.7906	1.2610	2.0100e-003		0.0384	0.0384		0.0354	0.0354	0.0000	194.549	194.549	0.0629		196.122

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
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
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
Worker	9.6000e-003	6.6900e-003	0.1084	3.0000e-004	0.0335	2.0000e-004	0.0337	8.8900e-003	1.9000e-004	9.0800e-003		30.0023	30.0023	7.6000e-004	6.9000e-004	30.2275
Total	9.6000e-003	6.6900e-003	0.1084	3.0000e-004	0.0335	2.0000e-004	0.0337	8.8900e-003	1.9000e-004	9.0800e-003		30.0023	30.0023	7.6000e-004	6.9000e-004	30.2275

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3.3 Excavation & Installation - 2023

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					1.1000e-004	0.0000	1.1000e-004	2.0000e-005	0.0000	2.0000e-005			0.0000			0.0000
Off-Road	1.0667	9.2402	14.9559	0.0232		0.4757	0.4757		0.4428	0.4428	0.0000	2,236.669	2,236.669	0.6421		2,252.7145
Total	1.0667	9.2402	14.9559	0.0232	1.1000e-004	0.4757	0.4758	2.0000e-005	0.4428	0.4428	0.0000	2,236.669	2,236.669	0.6421		2,252.7145

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	6.2000e-004	0.0373	9.9500e-003	1.7000e-004	5.0000e-003	2.4000e-003	5.2400e-003	1.3700e-003	2.2000e-003	1.6000e-003			18.3617	18.3617	1.0100e-003	2.9200e-003	19.2559
Vendor	1.1500e-003	0.0384	0.0149	1.9000e-004	6.4100e-003	1.9000e-003	6.6000e-003	1.8400e-003	1.8000e-003	2.0300e-003			20.0283	20.0283	6.7000e-003	2.8800e-003	20.9031
Worker	0.0480	0.0335	0.5421	1.4800e-003	0.1677	1.0100e-003	0.1687	0.0445	9.3000e-004	0.0454			150.0113	150.0113	3.7800e-003	3.4600e-003	151.1375
Total	0.0498	0.1091	0.5669	1.8400e-003	0.1791	1.4400e-003	0.1805	0.0477	1.3300e-003	0.0490			188.4013	188.4013	5.4600e-003	9.2600e-003	191.2966

LASAN - MacArthur Lake Stormwater Capture Project - Drain Line Upgrade - Los Angeles-South Coast County, Annual
 LASAN - **MacArthur Lake Stormwater Capture Project** - Drain Line Upgrade
 Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	0.39	1000sqft	0.01	385.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq	33
Climate	11			Operational	2025

Utility

CO2 Intensity (lb/MWhr)	0	CH4 Intensity (lb/MWhr)	0	N2O Intensity	0
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1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Drain Line Upgrade

Construction Phase - Drain Line Upgrade

Off-road Equipment - n/a

Off-road Equipment - Other Material Handling Equipment represents Water and Concrete Trucks; Other General Construction Equipment represents Pickup Truck

Grading - Material Exported represents both imported and exported materials.

Trips and VMT - n/a

Construction Off-road Equipment Mitigation - Watering Required by SCAQMD Rule 403

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	46.00
tblConstructionPhase	NumDays	1.00	46.00
tblConstructionPhase	PhaseEndDate	12/11/2023	8/31/2023
tblConstructionPhase	PhaseEndDate	7/13/2023	8/31/2023
tblConstructionPhase	PhaseStartDate	12/5/2023	6/29/2023
tblConstructionPhase	PhaseStartDate	7/13/2023	6/29/2023
tblGrading	MaterialExported	0.00	271.00
tblGrading	MaterialSiltContent	6.90	4.30
tblGrading	MeanVehicleSpeed	7.10	40.00
tblOffRoadEquipment	HorsePower	187.00	0.00
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.42	0.42
tblOffRoadEquipment	LoadFactor	0.40	0.40
tblOffRoadEquipment	LoadFactor	0.41	0.00
tblOffRoadEquipment	OffRoadEquipmentType		Paving Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Concrete/Industrial Saws
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Other Construction
tblOffRoadEquipment	OffRoadEquipmentType		Other Material Handling
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00

2.0 Emissions Summary

2.1 Overall Construction

Year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
2023	0.0319	0.2734	0.4347	7.1000e-004	5.7400e-002	0.0139	0.0196	1.5300e-002	0.0129	0.0144	0.0000	62.3575	62.3575	0.0168	3.3000e-004	62.8759

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Maximum	0.0319	0.2734	0.4347	7.1000e-004	5.7400e-003	0.0139	0.0196	1.5300e-003	0.0129	0.0144	0.0000	62.3575	62.3575	0.0168	3.3000e-004	62.8759
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3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days	Num Days	Phase Description
1	Excavation & Installation	Site Preparation	6/29/2023	8/31/2023	5	46	
2	Paving	Paving	6/29/2023	8/31/2023	5	46	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.01

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Paving	Paving Equipment	1	4.00	132	0.36
Excavation & Installation	Concrete/Industrial Saws	1	4.00	81	0.73
Excavation & Installation	Excavators	1	8.00	158	0.38
Excavation & Installation	Other Construction Equipment	2	4.00	172	0.42
Excavation & Installation	Other Material Handling	2	6.00	168	0.40
Excavation & Installation	Graders	0	0.00	0	0.00
Excavation & Installation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment	Worker Trip Number	Vendor Trip	Hauling Trip	Worker Trip Length	Vendor Trip Length	Hauling Trip	Worker Vehicle Class	Vendor Vehicle	Hauling Vehicle
Excavation &		7	18.00	1.00	34.00	14.70	6.90	20.00;LD_Mix	HDT_Mix	HHDT
Paving		1	3.00	0.00	0.00	14.70	6.90	20.00;LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Excavation & Installation - 2023

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Fugitive					1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0284	0.2505	0.3879	6.0000e-004		0.0129	0.0129		0.0120	0.0120	0.0000	52.6195	52.6195	0.0153	0.0000	53.0026
Total	0.0284	0.2505	0.3879	6.0000e-004	1.0000e-005	0.0129	0.0129	0.0000	0.0120	0.0120	0.0000	52.6195	52.6195	0.0153	0.0000	53.0026

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Hauling	4.0000e-005	2.3400e-003	6.0000e-004	1.0000e-005	2.9000e-004	1.0000e-005	3.1000e-004	8.0000e-005	1.0000e-005	9.0000e-005	0.0000	0.9916	0.9916	5.0000e-005	1.6000e-004	1.0399

LASAN - MacArthur Lake Stormwater Capture Project - Drain Line Upgrade - Los Angeles-South Coast County, Annual

Vendor	3.0000e-005	9.3000e-004	3.5000e-004	0.0000	1.4000e-004	0.0000	1.5000e-004	4.0000e-005	0.0000	5.0000e-005	0.0000	0.4182	0.4182	1.0000e-004	6.0000e-005	0.4365
Worker	1.3100e-003	1.0400e-003	0.0141	4.0000e-005	4.5400e-003	3.0000e-005	4.5600e-003	1.2000e-005	3.0000e-005	1.2300e-003	0.0000	3.6111	3.6111	1.0000e-004	9.0000e-005	3.6415
Total	1.3800e-003	4.3100e-003	0.0151	5.0000e-005	4.9700e-003	4.0000e-005	5.0200e-003	1.3200e-005	4.0000e-005	1.3700e-003	0.0000	5.0208	5.0208	1.6000e-004	3.1000e-004	5.1178

3.3 Paving - 2023

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	1.9600e-003	0.0184	0.0294	5.0000e-005		9.0000e-004	9.0000e-004		8.2000e-004	8.2000e-004	0.0000	4.1153	4.1153	1.3300e-003	0.0000	4.1486
Paving	1.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.9700e-003	0.0184	0.0294	5.0000e-005		9.0000e-004	9.0000e-004		8.2000e-004	8.2000e-004	0.0000	4.1153	4.1153	1.3300e-003	0.0000	4.1486

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	2.2000e-004	1.7000e-004	2.3500e-003	1.0000e-005	7.6000e-004	0.0000	7.6000e-004	2.0000e-004	0.0000	2.1000e-004	0.0000	0.6019	0.6019	2.0000e-005	2.0000e-005	0.6069
Total	2.2000e-004	1.7000e-004	2.3500e-003	1.0000e-005	7.6000e-004	0.0000	7.6000e-004	2.0000e-004	0.0000	2.1000e-004	0.0000	0.6019	0.6019	2.0000e-005	2.0000e-005	0.6069

LASAN - MacArthur Lake Stormwater Capture Project - Drain Line Upgrade - Los Angeles-South Coast County, Summer

LASAN - **MacArthur Lake Stormwater Capture Project** - Drain Line Upgrade
Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	0.39	1000sqft	0.01	385.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq	33
Climate	11			Operational Year	2025

Utility

CO2 Intensity (lb/MWhr)	0	CH4 Intensity (lb/MWhr)	0	N2O Intensity (lb/MWhr)	0
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1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Drain Line Upgrade

Construction Phase - Drain Line Upgrade

Off-road Equipment - n/a

Off-road Equipment - Other Material Handling Equipment represents Water and Concrete Trucks; Other General Construction Equipment represents Pickup Truck

Grading - Material Exported represents both imported and exported materials.

Trips and VMT - n/a

Construction Off-road Equipment Mitigation - Watering Required by SCAQMD Rule 403

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	46.00
tblConstructionPhase	NumDays	1.00	46.00
tblConstructionPhase	PhaseEndDate	12/11/2023	8/31/2023
tblConstructionPhase	PhaseEndDate	7/13/2023	8/31/2023
tblConstructionPhase	PhaseStartDate	12/5/2023	6/29/2023
tblConstructionPhase	PhaseStartDate	7/13/2023	6/29/2023
tblGrading	MaterialExported	0.00	271.00
tblGrading	MaterialSiltContent	6.90	4.30
tblGrading	MeanVehicleSpeed	7.10	40.00
tblOffRoadEquipment	HorsePower	187.00	0.00
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.42	0.42
tblOffRoadEquipment	LoadFactor	0.40	0.40
tblOffRoadEquipment	LoadFactor	0.41	0.00
tblOffRoadEquipment	OffRoadEquipmentType		Paving Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Concrete/Industrial Saws
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Other Construction Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Other Material Handling
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
lb/day											lb/day					
2023	1.3894	11.8754	18.9413	0.0309	0.2544	0.6028	0.8572	0.0677	0.5598	0.6274	0.0000	2,996.6	2,996.6	0.8068	0.0153	3,021.3

CalEEMod Version: CalEEMod.2020.4.0

Date: 1/27/2022 8:29 AM

LASAN - MacArthur Lake Stormwater Capture Project - Drain Line Upgrade - Los Angeles-South Coast County, Summer

Maximum	1.3894	11.8754	18.9413	0.0309	0.2544	0.6028	0.8572	0.0677	0.5598	0.6274	0.0000	2,996.6	2,996.6	0.8068	0.0153	3,021.3
												542	542			734

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days	Num Days	Phase Description
1	Excavation & Installation	Site Preparation	6/29/2023	8/31/2023	5	46	
2	Paving	Paving	6/29/2023	8/31/2023	5	46	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.01

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Paving	Paving Equipment	1	4.00	132	0.36
Excavation & Installation	Concrete/Industrial Saws	1	4.00	81	0.73
Excavation & Installation	Excavators	1	8.00	158	0.38
Excavation & Installation	Other Construction Equipment	2	4.00	172	0.42
Excavation & Installation	Other Material Handling	2	6.00	168	0.40
Excavation & Installation	Graders	0	0.00	0	0.00
Excavation & Installation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle	Hauling Vehicle
Excavation &	7	18.00	1.00	34.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	1	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Excavation & Installation - 2023

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					3.0000e-004	0.0000	3.0000e-004	5.0000e-005	0.0000	5.0000e-005			0.0000			0.0000
Off-Road	1.2335	10.8923	16.8634	0.0261		0.5616	0.5616		0.5218	0.5218	0.0000	2,521.87	2,521.87	0.7344		2,540.2
Total	1.2335	10.8923	16.8634	0.0261	3.0000e-004	0.5616	0.5619	5.0000e-005	0.5218	0.5219	0.0000	2,521.87	2,521.87	0.7344		2,540.2

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Hauling	1.6000e-003	0.0965	0.0257	4.3000e-004	0.0129	6.1000e-004	0.0136	3.5500e-003	5.8000e-003	4.1300e-003		47.5010	47.5010	2.6200e-003	7.5400e-003	49.8143

LASAN - MacArthur Lake Stormwater Capture Project - Drain Line Upgrade - Los Angeles-South Coast County, Summer

Vendor	1.1500e-003	0.0384	0.0149	1.9000e-003	6.4100e-003	1.9000e-003	6.6000e-003	1.8400e-003	1.8000e-003	2.0300e-003		20.0283	20.0283	6.7000e-003	2.8800e-003	20.9031
Worker	0.0576	0.0402	0.6505	1.7800e-003	0.2012	1.2100e-003	0.2024	0.0534	1.1100e-003	0.0545		180.013	180.013	4.5400e-003	4.1500e-003	181.365
Total	0.0604	0.1750	0.6911	2.4000e-003	0.2206	2.0100e-003	0.2226	0.0588	1.8700e-003	0.0606		247.5428	247.5428	7.8300e-003	0.0146	252.0824

3.3 Paving - 2023

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	0.0854	0.8015	1.2784	2.0400e-003		0.0390	0.0390		0.0359	0.0359	0.0000	197.233	197.233	0.0638		198.828
Paving	5.7000e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.0859	0.8015	1.2784	2.0400e-003		0.0390	0.0390		0.0359	0.0359	0.0000	197.2335	197.2335	0.0638		198.8283

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	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
Worker	9.6000e-003	6.6900e-003	0.1084	3.0000e-004	0.0335	2.0000e-004	0.0337	8.8900e-003	1.9000e-004	9.0800e-003		30.0023	30.0023	7.6000e-004	6.9000e-004	30.2275
Total	9.6000e-003	6.6900e-003	0.1084	3.0000e-004	0.0335	2.0000e-004	0.0337	8.8900e-003	1.9000e-004	9.0800e-003		30.0023	30.0023	7.6000e-004	6.9000e-004	30.2275

LASAN - MacArthur Lake Stormwater Capture Project - Baffle Box/CDS Structure - Los Angeles-South Coast County, Annual

LASAN - **MacArthur Lake Stormwater Capture Project** - Baffle Box/CDS Structure
Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	0.23	1000sqft	0.01	225.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq	33
Climate	11			Operational	2025

Utility

CO2 Intensity (lb/MWhr)	0	CH4 Intensity (lb/MWhr)	0	N2O Intensity	0
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1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Baffle Box/CDS Structure

Construction Phase - Baffle Box/CDS Structure

Off-road Equipment - n/a

Off-road Equipment - Other Material Handling Equipment represents Water and Concrete Trucks; Other General Construction Equipment represents Pickup Truck

Grading - Material Exported represents both imported and exported materials.

Trips and VMT - n/a

Construction Off-road Equipment Mitigation - Watering Required by SCAQMD Rule 403

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	36.00
tblConstructionPhase	NumDays	1.00	36.00
tblConstructionPhase	PhaseEndDate	2/21/2024	10/30/2023
tblConstructionPhase	PhaseEndDate	9/25/2023	10/30/2023
tblConstructionPhase	PhaseStartDate	2/15/2024	9/11/2023
tblConstructionPhase	PhaseStartDate	9/23/2023	9/11/2023
tblGrading	MaterialExported	0.00	250.00
tblOffRoadEquipment	HorsePower	187.00	0.00
tblOffRoadEquipment	LoadFactor	0.36	0.36
tblOffRoadEquipment	LoadFactor	0.40	0.40
tblOffRoadEquipment	LoadFactor	0.42	0.42
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.41	0.00
tblOffRoadEquipment	OffRoadEquipmentType		Paving Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Other Material Handling
tblOffRoadEquipment	OffRoadEquipmentType		Other Construction
tblOffRoadEquipment	OffRoadEquipmentType		Concrete/Industrial Saws
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00

2.0 Emissions Summary

2.1 Overall Construction

Year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
2023	0.0217	0.1834	0.3025	4.9000e-004	3.9400e-002	9.2500e-003	0.0132	1.0500e-003	8.6000e-003	9.6500e-003	0.0000	43.5836	43.5836	0.0116	2.6000e-004	43.9522

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Maximum	0.0217	0.1834	0.3025	4.9000e-004	3.9400e-003	9.2500e-003	0.0132	1.0500e-003	8.6000e-003	9.6500e-003	0.0000	43.5836	43.5836	0.0116	2.6000e-004	43.9522
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3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days	Num Days	Phase Description
1	Excavation & Installation	Site Preparation	9/11/2023	10/30/2023	5	36	
2	Paving	Paving	9/11/2023	10/30/2023	5	36	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.01

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Paving	Paving Equipment	1	4.00	132	0.36
Excavation & Installation	Other Material Handling	2	6.00	168	0.40
Excavation & Installation	Other Construction Equipment	1	4.00	172	0.42
Excavation & Installation	Concrete/Industrial Saws	1	4.00	81	0.73
Excavation & Installation	Excavators	1	8.00	158	0.38
Excavation & Installation	Graders	0	0.00	0	0.00
Excavation & Installation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment	Worker Trip Number	Vendor Trip	Hauling Trip	Worker Trip Length	Vendor Trip Length	Hauling Trip	Worker Vehicle Class	Vendor Vehicle	Hauling Vehicle
Excavation &	6	15.00	1.00	31.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	1	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Excavation & Installation - 2023

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Fugitive					1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0191	0.1655	0.2679	4.2000e-004	8.5200e-003	8.5200e-003	0.0000	7.9300e-003	7.9300e-003	0.0000	36.3494	36.3494	0.0104	0.0000	0.0000	36.6101
Total	0.0191	0.1655	0.2679	4.2000e-004	1.0000e-005	8.5200e-003	8.5300e-003	0.0000	7.9300e-003	7.9300e-003	0.0000	36.3494	36.3494	0.0104	0.0000	36.6101

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Hauling	3.0000e-005	2.1300e-003	5.4000e-004	1.0000e-005	2.7000e-004	1.0000e-005	2.8000e-004	7.0000e-005	1.0000e-005	9.0000e-005	0.0000	0.9041	0.9041	5.0000e-005	1.4000e-004	0.9481

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Vendor	2.0000e-005	7.3000e-004	2.7000e-004	0.0000	1.1000e-004	0.0000	1.2000e-004	3.0000e-005	0.0000	4.0000e-005	0.0000	0.3273	0.3273	1.0000e-005	5.0000e-005	0.3416
Worker	8.6000e-005	6.8000e-004	9.2000e-004	3.0000e-005	2.9600e-004	2.0000e-005	2.9800e-004	7.9000e-005	2.0000e-005	8.0000e-005	0.0000	2.3551	2.3551	6.0000e-005	6.0000e-005	2.3749
Total	9.1000e-004	3.5400e-003	0.0100	4.0000e-005	3.3400e-003	3.0000e-005	3.3800e-003	8.9000e-004	3.0000e-005	9.3000e-004	0.0000	3.5864	3.5864	1.2000e-004	2.5000e-004	3.6646

3.3 Paving - 2023

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	1.5200e-003	0.0142	0.0227	4.0000e-005		6.9000e-004	6.9000e-004		6.4000e-004	6.4000e-004	0.0000	3.1769	3.1769	1.0300e-003	0.0000	3.2025
Paving	1.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.5300e-003	0.0142	0.0227	4.0000e-005		6.9000e-004	6.9000e-004		6.4000e-004	6.4000e-004	0.0000	3.1769	3.1769	1.0300e-003	0.0000	3.2025

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	1.7000e-004	1.4000e-004	1.8400e-003	1.0000e-005	5.9000e-004	0.0000	6.0000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4710	0.4710	1.0000e-005	1.0000e-005	0.4750
Total	1.7000e-004	1.4000e-004	1.8400e-003	1.0000e-005	5.9000e-004	0.0000	6.0000e-004	1.6000e-004	0.0000	1.6000e-004	0.0000	0.4710	0.4710	1.0000e-005	1.0000e-005	0.4750

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LASAN - **MacArthur Lake Stormwater Capture Project** - Baffle Box/CDS Structure
Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	0.23	1000sqft	0.01	225.00	0

1.2 Other Project Characteristics

Urbanizatio	Urban	Wind Speed (m/s)	2.2	Precipitation Freq	33
Climate	11			Operational Year	2025

Utility

CO2 Intensity	0	CH4 Intensity	0	N2O Intensity	0
(lb/MWahr)		(lb/MWahr)		(lb/MWahr)	

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Baffle Box/CDS Structure

Construction Phase - Baffle Box/CDS Structure

Off-road Equipment - n/a

Off-road Equipment - Other Material Handling Equipment represents Water and Concrete Trucks; Other General Construction Equipment represents Pickup Truck

Grading - Material Exported represents both imported and exported materials.

Trips and VMT - n/a

Construction Off-road Equipment Mitigation - Watering Required by SCAQMD Rule 403

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	36.00
tblConstructionPhase	NumDays	1.00	36.00
tblConstructionPhase	PhaseEndDate	2/21/2024	10/30/2023
tblConstructionPhase	PhaseEndDate	9/25/2023	10/30/2023
tblConstructionPhase	PhaseStartDate	2/15/2024	9/11/2023
tblConstructionPhase	PhaseStartDate	9/23/2023	9/11/2023
tblGrading	MaterialExported	0.00	250.00
tblOffRoadEquipment	HorsePower	187.00	0.00
tblOffRoadEquipment	LoadFactor	0.36	0.36
tblOffRoadEquipment	LoadFactor	0.40	0.40
tblOffRoadEquipment	LoadFactor	0.42	0.42
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.41	0.00
tblOffRoadEquipment	OffRoadEquipmentType		Paving Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Other Material Handling
tblOffRoadEquipment	OffRoadEquipmentType		Other Construction Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Concrete/Industrial Saws
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
2023	1.2068	10.1736	16.8404	0.0275	0.2230	0.5137	0.7367	0.0594	0.4778	0.5371	0.0000	2,675.9	2,675.9	0.7099	0.0158	2,698.4

LASAN - MacArthur Lake Stormwater Capture Project - Baffle Box/CDS Structure - Los Angeles-South Coast County, Summer

Maximum	1.2068	10.1736	16.8404	0.0275	0.2230	0.5137	0.7367	0.0594	0.4778	0.5371	0.0000	2,675.9519	2,675.9519	0.7099	0.0158	2,698.4138
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3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days	Num Days	Phase Description
1	Excavation & Installation	Site Preparation	9/11/2023	10/30/2023	5	36	
2	Paving	Paving	9/11/2023	10/30/2023	5	36	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.01

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Paving	Paving Equipment	1	4.00	132	0.36
Excavation & Installation	Other Material Handling	2	6.00	168	0.40
Excavation & Installation	Other Construction Equipment	1	4.00	172	0.42
Excavation & Installation	Concrete/Industrial Saws	1	4.00	81	0.73
Excavation & Installation	Excavators	1	8.00	158	0.38
Excavation & Installation	Graders	0	0.00	0	0.00
Excavation & Installation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle	Hauling Vehicle
Excavation &	6	15.00	1.00	31.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	1	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Excavation & Installation - 2023

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					3.5000e-004	0.0000	3.5000e-004	5.0000e-005	0.0000	5.0000e-005			0.0000			0.0000
Off-Road	1.0612	9.1922	14.8840	0.0231		0.4731	0.4731		0.4404	0.4404	0.0000	2,226.0209	2,226.0209	0.6387		2,241.9885
Total	1.0612	9.1922	14.8840	0.0231	3.5000e-004	0.4731	0.4735	5.0000e-005	0.4404	0.4405	0.0000	2,226.0209	2,226.0209	0.6387		2,241.9885

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Hauling	1.8700e-003	0.1124	0.0300	5.0000e-004	0.0151	7.1000e-004	0.0158	4.1300e-003	6.8000e-004	4.8100e-003		55.3402	55.3402	3.0500e-003	8.7900e-003	58.0352

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LASAN - MacArthur Lake Stormwater Capture Project - Baffle Box/CDS Structure - Los Angeles-South Coast County, Summer

Vendor	1.1500e-003	0.0384	0.0149	1.9000e-003	6.4100e-003	1.9000e-003	6.6000e-003	1.8400e-003	1.8000e-003	2.0300e-003		20.0283	20.0283	6.7000e-003	2.8800e-003	20.9031
Worker	0.0480	0.0335	0.5421	1.4800e-003	0.1677	1.0100e-003	0.1687	0.0445	9.3000e-004	0.0454		150.0113	150.0113	3.7800e-003	3.4600e-003	151.1375
Total	0.0510	0.1842	0.5870	2.1700e-003	0.1891	1.9100e-003	0.1911	0.0504	1.7900e-003	0.0522		225.3797	225.3797	7.5000e-003	0.0151	230.0759

3.3 Paving - 2023

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	0.0842	0.7906	1.2610	2.0100e-003		0.0384	0.0384		0.0354	0.0354	0.0000	194.5490	194.5490	0.0629		196.1220
Paving	7.3000e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.0849	0.7906	1.2610	2.0100e-003		0.0384	0.0384		0.0354	0.0354	0.0000	194.5490	194.5490	0.0629		196.1220

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	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
Worker	9.6000e-003	6.6900e-003	0.1084	3.0000e-004	0.0335	2.0000e-004	0.0337	8.8900e-003	1.9000e-004	9.0800e-003		30.0023	30.0023	7.6000e-004	6.9000e-004	30.2275
Total	9.6000e-003	6.6900e-003	0.1084	3.0000e-004	0.0335	2.0000e-004	0.0337	8.8900e-003	1.9000e-004	9.0800e-003		30.0023	30.0023	7.6000e-004	6.9000e-004	30.2275

LASAN - MacArthur Lake Stormwater Capture Project - Pump Station - Los Angeles-South Coast County, Annual

LASAN - **MacArthur Lake Stormwater Capture Project** - Pump Station
Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	0.23	1000sqft	0.01	225.00	0

1.2 Other Project Characteristics

Urbanization Climate	Urban 11	Wind Speed (m/s)	2.2	Precipitation Freq Operational	33 2025
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Utility

CO2 Intensity (lb/MW hr)	0	CH4 Intensity (lb/MW hr)	0	N2O Intensity	0
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1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Pump Station

Construction Phase - Pump Station

Off-road Equipment - n/a

Off-road Equipment - Other Material Handling Equipment represents Water and Concrete Trucks; Other General Construction Equipment represents Pickup Trucks

Grading - Material Exported represents both imported and exported materials.

Trips and VMT - n/a

Construction Off-road Equipment Mitigation - Watering Required by SCAQMD Rule 403

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	80.00
tblConstructionPhase	NumDays	1.00	80.00
tblConstructionPhase	PhaseEndDate	4/4/2024	2/12/2024
tblConstructionPhase	PhaseEndDate	11/7/2023	2/12/2024
tblConstructionPhase	PhaseStartDate	3/29/2024	10/24/2023
tblConstructionPhase	PhaseStartDate	11/7/2023	10/24/2023
tblGrading	MaterialExported	0.00	308.00
tblOffRoadEquipment	HorsePower	187.00	0.00
tblOffRoadEquipment	LoadFactor	0.36	0.36
tblOffRoadEquipment	LoadFactor	0.40	0.40
tblOffRoadEquipment	LoadFactor	0.42	0.42
tblOffRoadEquipment	LoadFactor	0.29	0.29
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.41	0.00
tblOffRoadEquipment	OffRoadEquipmentType		Paving Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Other Material Handling
tblOffRoadEquipment	OffRoadEquipmentType		Other Construction
tblOffRoadEquipment	OffRoadEquipmentType		Concrete/Industrial Saws
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblTripsAndVMT	HaulingTripNumber	39.00	38.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00

2.0 Emissions Summary

2.1 Overall Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
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LASAN - MacArthur Lake Stormwater Capture Project - Pump Station - Los Angeles-South Coast County, Annual

Year	tons/yr										MT/yr					
2023	0.0384	0.3367	0.4864	8.2000e-004	6.5400e-003	0.0167	0.0232	1.7400e-003	0.0155	0.0172	0.0000	72.5841	72.5841	0.0199	3.0000e-004	73.1709
2024	0.0231	0.1977	0.3070	5.2000e-004	4.1400e-003	9.6100e-003	0.0137	1.1000e-003	8.9100e-003	0.0100	0.0000	45.8269	45.8269	0.0126	1.8000e-004	46.1957
Maximum	0.0384	0.3367	0.4864	8.2000e-004	6.5400e-003	0.0167	0.0232	1.7400e-003	0.0155	0.0172	0.0000	72.5841	72.5841	0.0199	3.0000e-004	73.1709

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days	Num Days	Phase Description
1	Excavation & Installation	Site Preparation	10/24/2023	2/12/2024	5	80	
2	Paving	Paving	10/24/2023	2/12/2024	5	80	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.01

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Paving	Paving Equipment	1	4.00	132	0.36
Excavation & Installation	Other Material Handling	2	6.00	168	0.40
Excavation & Installation	Other Construction Equipment	2	4.00	172	0.42
Excavation & Installation	Concrete/Industrial Saws	1	4.00	81	0.73
Excavation & Installation	Cranes	1	4.00	231	0.29
Excavation & Installation	Excavators	1	8.00	158	0.38
Excavation & Installation	Graders	0	0.00	0	0.00
Excavation & Installation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment	Worker Trip Number	Vendor Trip	Hauling Trip	Worker Trip Length	Vendor Trip Length	Hauling Trip	Worker Vehicle Class	Vendor Vehicle	Hauling Vehicle
Excavation & Installation		8	20.00	1.00	38.00	14.70	6.90	20.00	LD_Mix	HDT_Mix
Paving		1	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Excavation & Installation - 2023

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Fugitive					1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0345	0.3133	0.4355	7.1000e-004	1.0000e-005	0.0157	0.0157	0.0146	0.0146	0.0146	0.0000	62.2207	62.2207	0.0183	0.0000	62.6786
Total	0.0345	0.3133	0.4355	7.1000e-004	1.0000e-005	0.0157	0.0157	0.0000	0.0146	0.0146	0.0000	62.2207	62.2207	0.0183	0.0000	62.6786

Mitigated Construction Off-Site

LASAN - MacArthur Lake Stormwater Capture Project - Pump Station - Los Angeles-South Coast 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					
Hauling	2.0000e-003	1.6000e-003	4.1000e-004	1.0000e-005	2.0000e-003	1.0000e-005	2.1000e-003	5.0000e-003	1.0000e-005	6.0000e-003	0.0000	0.6788	0.6788	4.0000e-004	1.1000e-004	0.7118
Vendor	3.0000e-003	9.9000e-004	3.7000e-004	0.0000	1.5000e-003	0.0000	1.6000e-003	4.0000e-003	0.0000	5.0000e-003	0.0000	0.4455	0.4455	1.0000e-004	6.0000e-005	0.4649
Worker	1.5500e-003	1.2300e-003	0.0167	5.0000e-005	5.3700e-003	3.0000e-005	5.4000e-003	1.4300e-003	3.0000e-005	1.4600e-003	0.0000	4.2740	4.2740	1.1000e-004	1.1000e-004	4.3100
Total	1.6000e-003	3.8200e-003	0.0175	6.0000e-005	5.7200e-003	4.0000e-005	5.7700e-003	1.5200e-003	4.0000e-005	1.5700e-003	0.0000	5.3982	5.3982	1.6000e-004	2.8000e-004	5.4868

3.2 Excavation & Installation - 2024

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					1.0000e-005	0.0000	1.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0208	0.1838	0.2756	4.5000e-004		9.0200e-003	9.0200e-003		8.3700e-003	8.3700e-003	0.0000	39.3687	39.3687	0.0116	0.0000	39.6583
Total	0.0208	0.1838	0.2756	4.5000e-004	1.0000e-005	9.0200e-003	9.0300e-003	0.0000	8.3700e-003	8.3700e-003	0.0000	39.3687	39.3687	0.0116	0.0000	39.6583

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-003	1.0200e-003	2.6000e-004	0.0000	1.3000e-003	1.0000e-005	1.3000e-003	3.0000e-003	1.0000e-005	4.0000e-003	0.0000	0.4234	0.4234	2.0000e-004	7.0000e-005	0.4440
Vendor	2.0000e-003	6.3000e-004	2.3000e-004	0.0000	1.0000e-003	0.0000	1.0000e-003	3.0000e-003	0.0000	3.0000e-003	0.0000	0.2776	0.2776	1.0000e-004	4.0000e-005	0.2898
Worker	9.2000e-004	7.0000e-004	9.8200e-004	3.0000e-005	3.4000e-003	2.0000e-005	3.4200e-003	9.0000e-004	2.0000e-005	9.2000e-004	0.0000	2.6275	2.6275	7.0000e-005	7.0000e-005	2.6486
Total	9.6000e-004	2.3500e-003	0.0103	3.0000e-005	3.6300e-003	3.0000e-005	3.6500e-003	9.6000e-004	3.0000e-005	9.9000e-004	0.0000	3.3285	3.3285	1.0000e-004	1.8000e-004	3.3824

3.3 Paving - 2023

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	2.0600e-003	0.0194	0.0309	5.0000e-005		9.4000e-004	9.4000e-004		8.7000e-004	8.7000e-004	0.0000	4.3241	4.3241	1.4000e-003	0.0000	4.3590
Paving	1.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	2.0700e-003	0.0194	0.0309	5.0000e-005		9.4000e-004	9.4000e-004		8.7000e-004	8.7000e-004	0.0000	4.3241	4.3241	1.4000e-003	0.0000	4.3590

Mitigated Construction Off-Site

LASAN - MacArthur Lake Stormwater Capture Project - Pump Station - Los Angeles-South Coast 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						
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	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	0.0000
Worker	2.3000e-004	1.9000e-004	2.5000e-003	1.0000e-005	8.1000e-004	0.0000	8.1000e-004	2.1000e-004	0.0000	2.2000e-004	0.0000	0.6411	0.6411	2.0000e-005	2.0000e-005	0.6465	
Total	2.3000e-004	1.9000e-004	2.5000e-003	1.0000e-005	8.1000e-004	0.0000	8.1000e-004	2.1000e-004	0.0000	2.2000e-004	0.0000	0.6411	0.6411	2.0000e-005	2.0000e-005	0.6465	

3.3 Paving - 2024

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	1.2600e-003	0.0114	0.0197	3.0000e-005		5.5000e-004	5.5000e-004		5.1000e-004	5.1000e-004	0.0000	2.7356	2.7356	8.8000e-004	0.0000	2.7577	
Paving	1.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	1.2700e-003	0.0114	0.0197	3.0000e-005		5.5000e-004	5.5000e-004		5.1000e-004	5.1000e-004	0.0000	2.7356	2.7356	8.8000e-004	0.0000	2.7577	

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	1.4000e-004	1.0000e-004	1.4700e-003	0.0000	5.1000e-004	0.0000	5.1000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.3941	0.3941	1.0000e-005	1.0000e-005	0.3973
Total	1.4000e-004	1.0000e-004	1.4700e-003	0.0000	5.1000e-004	0.0000	5.1000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.3941	0.3941	1.0000e-005	1.0000e-005	0.3973

LASAN - MacArthur Lake Stormwater Capture Project - Pump Station - Los Angeles-South Coast County, Summer

LASAN - **MacArthur Lake Stormwater Capture Project** - Pump Station
Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	0.23	1000sqft	0.01	225.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq	33
Climate	11			Operational Year	2025

Utility

CO2 Intensity (lb/MWhr)	0	CH4 Intensity (lb/MWhr)	0	N2O Intensity (lb/MWhr)	0
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1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Pump Station

Construction Phase - Pump Station

Off-road Equipment - n/a

Off-road Equipment - Other Material Handling Equipment represents Water and Concrete Trucks; Other General Construction Equipment represents Pickup Trucks

Grading - Material Exported represents both imported and exported materials.

Trips and VMT - n/a

Construction Off-road Equipment Mitigation - Watering Required by SCAQMD Rule 403

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	80.00
tblConstructionPhase	NumDays	1.00	80.00
tblConstructionPhase	PhaseEndDate	4/4/2024	2/12/2024
tblConstructionPhase	PhaseEndDate	11/7/2023	2/12/2024
tblConstructionPhase	PhaseStartDate	3/29/2024	10/24/2023
tblConstructionPhase	PhaseStartDate	11/7/2023	10/24/2023
tblGrading	MaterialExported	0.00	308.00
tblOffRoadEquipment	HorsePower	187.00	0.00
tblOffRoadEquipment	LoadFactor	0.36	0.36
tblOffRoadEquipment	LoadFactor	0.40	0.40
tblOffRoadEquipment	LoadFactor	0.42	0.42
tblOffRoadEquipment	LoadFactor	0.29	0.29
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.41	0.00
tblOffRoadEquipment	OffRoadEquipmentType		Paving Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Other Material Handling
tblOffRoadEquipment	OffRoadEquipmentType		Other Construction Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Concrete/Industrial Saws
tblOffRoadEquipment	OffRoadEquipmentType		Cranes
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblTripsAndVMT	HaulingTripNumber	39.00	38.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
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LASAN - MacArthur Lake Stormwater Capture Project - Pump Station - Los Angeles-South Coast County, Summer

Year	lb/day										lb/day					
	2023	1.5684	13.7297	19.8982	0.0337	0.2720	0.6813	0.9534	0.0723	0.6320	0.7043	0.0000	3,274.5	3,274.5	0.8952	0.0130
2024	1.4929	12.7449	19.8525	0.0337	0.2720	0.6197	0.8917	0.0723	0.5746	0.6469	0.0000	3,267.6	3,267.6	0.8943	0.0126	3,293.7
Maximum	1.5684	13.7297	19.8982	0.0337	0.2720	0.6813	0.9534	0.0723	0.6320	0.7043	0.0000	3,274.5	3,274.5	0.8952	0.0130	3,300.8

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days	Num Days	Phase Description
1	Excavation & Installation	Site Preparation	10/24/2023	2/12/2024	5	80	
2	Paving	Paving	10/24/2023	2/12/2024	5	80	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.01

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Paving	Paving Equipment	1	4.00	132	0.36
Excavation & Installation	Other Material Handling	2	6.00	168	0.40
Excavation & Installation	Other Construction Equipment	2	4.00	172	0.42
Excavation & Installation	Concrete/Industrial Saws	1	4.00	81	0.73
Excavation & Installation	Cranes	1	4.00	231	0.29
Excavation & Installation	Excavators	1	8.00	158	0.38
Excavation & Installation	Graders	0	0.00	0	0.00
Excavation & Installation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle	Hauling Vehicle
Excavation &	8	20.00	1.00	38.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	1	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Excavation & Installation - 2023

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Fugitive Dust					2.0000e-004	0.0000	2.0000e-004	3.0000e-005	0.0000	3.0000e-005			0.0000			0.0000
Off-Road	1.4081	12.7875	17.7746	0.0290		0.6408	0.6408		0.5946	0.5946	0.0000	2,799.4	2,799.4	0.8242		2,820.0
Total	1.4081	12.7875	17.7746	0.0290	2.0000e-004	0.6408	0.6410	3.0000e-005	0.5946	0.5947	0.0000	2,799.4	2,799.4	0.8242		2,820.0

Mitigated Construction Off-Site

LASAN - MacArthur Lake Stormwater Capture Project - Pump Station - Los Angeles-South Coast 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						
Hauling	1.0300e-003	0.0620	0.0165	2.8000e-003	8.3100e-003	3.9000e-003	8.7100e-003	2.2800e-003	3.7000e-003	2.6500e-003			30.5264	30.5264	1.6800e-003	4.8500e-003	32.0130
Vendor	1.1500e-003	0.0384	0.0149	1.9000e-003	6.4100e-003	1.9000e-003	6.6000e-003	1.8400e-003	1.8000e-003	2.0300e-003			20.0283	20.0283	6.7000e-003	2.8800e-003	20.9031
Worker	0.0640	0.0446	0.7228	1.9800e-003	0.2236	1.3400e-003	0.2249	0.0593	1.2400e-003	0.0605			200.015	200.015	5.0400e-003	4.6200e-003	201.516
Total	0.0662	0.1450	0.7542	2.4500e-003	0.2383	1.9200e-003	0.2402	0.0634	1.7900e-003	0.0652			250.5697	250.5697	7.3900e-003	0.0124	254.4328

3.2 Excavation & Installation - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.0000e-004	0.0000	2.0000e-004	3.0000e-005	0.0000	3.0000e-005			0.0000			0.0000
Off-Road	1.3406	11.8607	17.7813	0.0290		0.5820	0.5820		0.5399	0.5399	0.0000		2,799.7820	2,799.7820	0.8238	2,820.3757
Total	1.3406	11.8607	17.7813	0.0290	2.0000e-004	0.5820	0.5822	3.0000e-005	0.5399	0.5399	0.0000		2,799.7820	2,799.7820	0.8238	2,820.3757

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	1.0200e-003	0.0621	0.0168	2.7000e-003	8.3100e-003	3.9000e-003	8.7100e-003	2.2800e-003	3.8000e-003	2.6600e-003			30.0941	30.0941	1.7000e-003	4.7800e-003	31.5612
Vendor	1.1200e-003	0.0385	0.0146	1.8000e-003	6.4100e-003	1.9000e-003	6.6000e-003	1.8400e-003	1.9000e-003	2.0300e-003			19.7275	19.7275	6.7000e-003	2.8400e-003	20.5904
Worker	0.0596	0.0398	0.6717	1.9200e-003	0.2236	1.2900e-003	0.2248	0.0593	1.1900e-003	0.0605			194.346	194.346	4.5600e-003	4.2900e-003	195.739
Total	0.0618	0.1404	0.7030	2.3700e-003	0.2383	1.8700e-003	0.2402	0.0634	1.7600e-003	0.0652			244.1676	244.1676	6.9300e-003	0.0119	247.8909

3.3 Paving - 2023

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	0.0842	0.7906	1.2610	2.0100e-003		0.0384	0.0384		0.0354	0.0354	0.0000		194.5490	194.5490	0.0629	196.1220
Paving	3.3000e-004					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.0845	0.7906	1.2610	2.0100e-003		0.0384	0.0384		0.0354	0.0354	0.0000		194.5490	194.5490	0.0629	196.1220

Mitigated Construction Off-Site

LASAN - MacArthur Lake Stormwater Capture Project - Pump Station - Los Angeles-South Coast 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					
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
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
Worker	9.6000e-003	6.6900e-003	0.1084	3.0000e-004	0.0335	2.0000e-004	0.0337	8.8900e-003	1.9000e-004	9.0800e-003		30.0023	30.0023	7.6000e-004	6.9000e-004	30.2275
Total	9.6000e-003	6.6900e-003	0.1084	3.0000e-004	0.0335	2.0000e-004	0.0337	8.8900e-003	1.9000e-004	9.0800e-003		30.0023	30.0023	7.6000e-004	6.9000e-004	30.2275

3.3 Paving - 2024

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	0.0813	0.7379	1.2674	2.0100e-003		0.0356	0.0356		0.0328	0.0328	0.0000	194.5483	194.5483	0.0629		196.1213
Paving	3.3000e-004					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.0816	0.7379	1.2674	2.0100e-003		0.0356	0.0356		0.0328	0.0328	0.0000	194.5483	194.5483	0.0629		196.1213

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	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
Worker	8.9400e-003	5.9700e-003	0.1008	2.9000e-004	0.0335	1.9000e-004	0.0337	8.8900e-003	1.8000e-004	9.0700e-003		29.1519	29.1519	6.8000e-004	6.4000e-004	29.3609
Total	8.9400e-003	5.9700e-003	0.1008	2.9000e-004	0.0335	1.9000e-004	0.0337	8.8900e-003	1.8000e-004	9.0700e-003		29.1519	29.1519	6.8000e-004	6.4000e-004	29.3609

LASAN - MacArthur Lake Stormwater Capture Project - Actuated Valve and Meter Vaults - Los Angeles-South Coast County, Annual

LASAN - **MacArthur Lake Stormwater Capture Project** - Actuated Valve and Meter Vaults
Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	0.45	1000sqft	0.01	450.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq	33
Climate	11			Operational	2025

Utility

CO2 Intensity (lb/MWhr)	0	CH4 Intensity (lb/MWhr)	0	N2O Intensity	0
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1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Actuated Valve and Meter Vaults

Construction Phase - Actuated Valve and Meter Vaults

Off-road Equipment - n/a

Off-road Equipment - Other Material Handling Equipment represents Water and Concrete Trucks; Other General Construction Equipment represents Pickup Truck

Grading - Material Exported represents both imported and exported materials.

Trips and VMT - n/a

Construction Off-road Equipment Mitigation - Watering Required by SCAQMD Rule 403

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	52.00
tblConstructionPhase	NumDays	1.00	52.00
tblConstructionPhase	PhaseEndDate	7/18/2024	4/17/2024
tblConstructionPhase	PhaseEndDate	2/20/2024	4/17/2024
tblConstructionPhase	PhaseStartDate	7/12/2024	2/6/2024
tblConstructionPhase	PhaseStartDate	2/20/2024	2/6/2024
tblGrading	MaterialExported	0.00	142.00
tblOffRoadEquipment	HorsePower	187.00	0.00
tblOffRoadEquipment	LoadFactor	0.36	0.36
tblOffRoadEquipment	LoadFactor	0.40	0.40
tblOffRoadEquipment	LoadFactor	0.42	0.42
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.41	0.00
tblOffRoadEquipment	OffRoadEquipmentType		Paving Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Other Material Handling
tblOffRoadEquipment	OffRoadEquipmentType		Other Construction
tblOffRoadEquipment	OffRoadEquipmentType		Concrete/Industrial Saws
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00

2.0 Emissions Summary

2.1 Overall Construction

Year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
2024	0.0344	0.2858	0.4904	7.9000e-004	6.3100e-002	0.0142	0.0205	1.6800e-003	0.0132	0.0149	0.0000	69.6905	69.6905	0.0190	2.6000e-004	70.2432

LASAN - MacArthur Lake Stormwater Capture Project - Actuated Valve and Meter Vaults - Los Angeles-South Coast County, Annual

Maximum	0.0344	0.2858	0.4904	7.9000e-004	6.3100e-003	0.0142	0.0205	1.6800e-003	0.0132	0.0149	0.0000	69.6905	69.6905	0.0190	2.6000e-004	70.2432
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3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days	Num Days	Phase Description
1	Excavation & Installation	Site Preparation	2/6/2024	4/17/2024	5	52	
2	Paving	Paving	2/6/2024	4/17/2024	5	52	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.01

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Paving	Paving Equipment	1	4.00	132	0.36
Excavation & Installation	Other Material Handling	2	6.00	168	0.40
Excavation & Installation	Other Construction Equipment	2	4.00	172	0.42
Excavation & Installation	Concrete/Industrial Saws	1	4.00	81	0.73
Excavation & Installation	Excavators	1	8.00	158	0.38
Excavation & Installation	Graders	0	0.00	0	0.00
Excavation & Installation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment	Worker Trip Number	Vendor Trip	Hauling Trip	Worker Trip Length	Vendor Trip Length	Hauling Trip	Worker Vehicle Class	Vendor Vehicle	Hauling Vehicle
Excavation &		7	18.00	1.00	18.00	14.70	6.90	20.00;LD_Mix	HDT_Mix	HHDT
Paving		1	3.00	0.00	0.00	14.70	6.90	20.00;LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Excavation & Installation - 2024

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					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0306	0.2631	0.4394	6.8000e-004		0.0133	0.0133		0.0123	0.0123	0.0000	59.4908	59.4908	0.0173	0.0000	59.9236
Total	0.0306	0.2631	0.4394	6.8000e-004	0.0000	0.0133	0.0133	0.0000	0.0123	0.0123	0.0000	59.4908	59.4908	0.0173	0.0000	59.9236

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	1.2400e-003	3.2000e-004	1.0000e-005	1.5000e-004	1.0000e-003	1.6000e-003	4.0000e-005	1.0000e-003	5.0000e-003	0.0000	0.5175	0.5175	3.0000e-005	8.0000e-005	0.5427

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Vendor	3.0000e-003	1.0500e-003	3.8000e-004	0.0000	1.6000e-004	1.0000e-005	1.7000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.4657	0.4657	2.0000e-004	7.0000e-005	0.4860
Worker	1.3900e-003	1.0500e-003	0.0148	4.0000e-005	5.1300e-004	3.0000e-005	5.1600e-004	1.3600e-005	3.0000e-005	1.3900e-003	0.0000	3.9667	3.9667	1.0000e-004	1.0000e-005	3.9986
Total	1.4400e-003	3.3400e-003	0.0155	5.0000e-005	5.4400e-004	5.0000e-005	5.4900e-004	1.4500e-005	4.0000e-005	1.4900e-003	0.0000	4.9498	4.9498	1.5000e-004	2.5000e-005	5.0273

3.3 Paving - 2024

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	2.1100e-003	0.0192	0.0330	5.0000e-005		9.3000e-004	9.3000e-004		8.5000e-004	8.5000e-004	0.0000	4.5888	4.5888	1.4800e-003	0.0000	4.6259
Paving	1.0000e-005					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	2.1200e-003	0.0192	0.0330	5.0000e-005		9.3000e-004	9.3000e-004		8.5000e-004	8.5000e-004	0.0000	4.5888	4.5888	1.4800e-003	0.0000	4.6259

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	2.3000e-004	1.8000e-004	2.4700e-003	1.0000e-005	8.5000e-004	1.0000e-005	8.6000e-004	2.3000e-004	0.0000	2.3000e-004	0.0000	0.6611	0.6611	2.0000e-005	2.0000e-005	0.6664
Total	2.3000e-004	1.8000e-004	2.4700e-003	1.0000e-005	8.5000e-004	1.0000e-005	8.6000e-004	2.3000e-004	0.0000	2.3000e-004	0.0000	0.6611	0.6611	2.0000e-005	2.0000e-005	0.6664

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LASAN - MacArthur Lake Stormwater Capture Project - Actuated Valve and Meter Vaults - Los Angeles-South Coast County, Summer

LASAN - **MacArthur Lake Stormwater Capture Project** - Actuated Valve and Meter Vaults
Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	0.45	1000sqft	0.01	450.00	0

1.2 Other Project Characteristics

Urbanization Urban Wind Speed (m/s) 2.2 Precipitation Freq 33
Climate 11 Operational Year 2025

Utility

CO2 Intensity 0 CH4 Intensity 0 N2O Intensity 0
(lb/MWhr) (lb/MWhr) (lb/MWhr)

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Actuated Valve and Meter Vaults

Construction Phase - Actuated Valve and Meter Vaults

Off-road Equipment - n/a

Off-road Equipment - Other Material Handling Equipment represents Water and Concrete Trucks; Other General Construction Equipment represents Pickup Truck

Grading - Material Exported represents both imported and exported materials.

Trips and VMT - n/a

Construction Off-road Equipment Mitigation - Watering Required by SCAQMD Rule 403

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	52.00
tblConstructionPhase	NumDays	1.00	52.00
tblConstructionPhase	PhaseEndDate	7/18/2024	4/17/2024
tblConstructionPhase	PhaseEndDate	2/20/2024	4/17/2024
tblConstructionPhase	PhaseStartDate	7/12/2024	2/6/2024
tblConstructionPhase	PhaseStartDate	2/20/2024	2/6/2024
tblGrading	MaterialExported	0.00	142.00
tblOffRoadEquipment	HorsePower	187.00	0.00
tblOffRoadEquipment	LoadFactor	0.36	0.36
tblOffRoadEquipment	LoadFactor	0.40	0.40
tblOffRoadEquipment	LoadFactor	0.42	0.42
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.41	0.00
tblOffRoadEquipment	OffRoadEquipmentType		Paving Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Other Material Handling
tblOffRoadEquipment	OffRoadEquipmentType		Other Construction Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Concrete/Industrial Saws
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
2024	1.3220	10.9834	18.8993	0.0305	0.2473	0.5470	0.7944	0.0658	0.5077	0.5735	0.0000	2,962.4	2,962.4	0.8036	0.0108	2,985.7

LASAN - MacArthur Lake Stormwater Capture Project - Actuated Valve and Meter Vaults - Los Angeles-South Coast County, Summer

Maximum	1.3220	10.9834	18.8993	0.0305	0.2473	0.5470	0.7944	0.0658	0.5077	0.5735	0.0000	2,962.4789	2,962.4789	0.8036	0.0108	2,985.7962
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3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days	Num Days	Phase Description
1	Excavation & Installation	Site Preparation	2/6/2024	4/17/2024	5	52	
2	Paving	Paving	2/6/2024	4/17/2024	5	52	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.01

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Paving	Paving Equipment	1	4.00	132	0.36
Excavation & Installation	Other Material Handling	2	6.00	168	0.40
Excavation & Installation	Other Construction Equipment	2	4.00	172	0.42
Excavation & Installation	Concrete/Industrial Saws	1	4.00	81	0.73
Excavation & Installation	Excavators	1	8.00	158	0.38
Excavation & Installation	Graders	0	0.00	0	0.00
Excavation & Installation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle	Hauling Vehicle
Excavation &	7	18.00	1.00	18.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	1	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Excavation & Installation - 2024

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					1.4000e-004	0.0000	1.4000e-004	2.0000e-005	0.0000	2.0000e-005			0.0000			0.0000
Off-Road	1.1758	10.1200	16.8998	0.0261		0.5096	0.5096		0.4732	0.4732	0.0000	2,522.2089	2,522.2089	0.7340		2,540.5583
Total	1.1758	10.1200	16.8998	0.0261	1.4000e-004	0.5096	0.5097	2.0000e-005	0.4732	0.4732	0.0000	2,522.2089	2,522.2089	0.7340		2,540.5583

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Hauling	7.5000e-004	0.0453	0.0123	2.0000e-004	6.0600e-003	2.9000e-004	6.3500e-003	1.6600e-003	2.7000e-004	1.9400e-003			21.9309	21.9309	1.2400e-003	3.4800e-003

LASAN - MacArthur Lake Stormwater Capture Project - Actuated Valve and Meter Vaults - Los Angeles-South Coast County, Summer

Vendor	1.1200e-003	0.0385	0.0146	1.8000e-003	6.4100e-003	1.9000e-003	6.6000e-003	1.8400e-003	1.9000e-003	2.0300e-003		19.7275	19.7275	6.7000e-003	2.8400e-003	20.5904
Worker	0.0537	0.0358	0.6045	1.7300e-003	0.2012	1.1600e-003	0.2024	0.0534	1.0700e-003	0.0544		174.9114	174.9114	4.1100e-003	3.8600e-003	176.165
Total	0.0555	0.1196	0.6313	2.1100e-003	0.2137	1.6400e-003	0.2153	0.0569	1.5300e-003	0.0584		216.5698	216.5698	6.0200e-003	0.0102	219.7558

3.3 Paving - 2024

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	0.0813	0.7379	1.2674	2.0100e-003		0.0356	0.0356		0.0328	0.0328	0.0000	194.548	194.548	0.0629		196.1213
Paving	5.0000e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.0818	0.7379	1.2674	2.0100e-003		0.0356	0.0356		0.0328	0.0328	0.0000	194.5483	194.5483	0.0629		196.1213

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	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
Worker	8.9400e-003	5.9700e-003	0.1008	2.9000e-004	0.0335	1.9000e-004	0.0337	8.8900e-003	1.8000e-004	9.0700e-003		29.1519	29.1519	6.8000e-004	6.4000e-004	29.3609
Total	8.9400e-003	5.9700e-003	0.1008	2.9000e-004	0.0335	1.9000e-004	0.0337	8.8900e-003	1.8000e-004	9.0700e-003		29.1519	29.1519	6.8000e-004	6.4000e-004	29.3609

LASAN - MacArthur Lake Stormwater Capture Project - Treatment Structures - Los Angeles-South Coast County, Annual

LASAN - **MacArthur Lake Stormwater Capture Project** - Treatment Structures
Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	0.05	Acre	0.05	1,999.99	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq	33
Climate	11			Operational	2024

Utility

CO2 Intensity (lb/MWhr)	0	CH4 Intensity (lb/MWhr)	0	N2O Intensity	0
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1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Treatment Structures

Construction Phase - Treatment Structures

Off-road Equipment - Other Material Handling Equipment represents Water and Concrete Trucks; Other General Construction Equipment represents Pickup Truck

Grading - Material Exported represents both imported and exported materials.

Trips and VMT - n/a

Construction Off-road Equipment Mitigation - Watering Required by SCAQMD Rule 403

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	1.00	51.00
tblConstructionPhase	PhaseEndDate	4/25/2024	6/20/2024
tblConstructionPhase	PhaseStartDate	4/25/2024	4/11/2024
tblGrading	MaterialExported	0.00	741.00
tblOffRoadEquipment	HorsePower	187.00	0.00
tblOffRoadEquipment	LoadFactor	0.41	0.00
tblOffRoadEquipment	LoadFactor	0.40	0.40
tblOffRoadEquipment	LoadFactor	0.42	0.42
tblOffRoadEquipment	LoadFactor	0.40	0.40
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	OffRoadEquipmentType		Other Material Handling
tblOffRoadEquipment	OffRoadEquipmentType		Other Construction
tblOffRoadEquipment	OffRoadEquipmentType		Rubber Tired Dozers
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00

2.0 Emissions Summary

2.1 Overall Construction

Year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
2024	0.0362	0.3298	0.4071	7.4000e-04	0.0616	0.0156	0.0772	0.0304	0.0144	0.0448	0.0000	65.1997	65.1997	0.0193	5.7000e-04	65.8517
Maximum	0.0362	0.3298	0.4071	7.4000e-04	0.0616	0.0156	0.0772	0.0304	0.0144	0.0448	0.0000	65.1997	65.1997	0.0193	5.7000e-04	65.8517

3.0 Construction Detail

Construction Phase

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LASAN - MacArthur Lake Stormwater Capture Project - Treatment Structures - Los Angeles-South Coast County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days	Num Days	Phase Description
1	Excavation & Installation	Site Preparation	4/11/2024	6/20/2024	5	51	

Acres of Grading (Site Preparation Phase): 19.13

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Excavation & Installation	Other Material Handling	2	6.00	168	0.40
Excavation & Installation	Other Construction Equipment	1	4.00	172	0.42
Excavation & Installation	Rubber Tired Dozers	1	6.00	247	0.40
Excavation & Installation	Excavators	1	8.00	158	0.38
Excavation & Installation	Graders	0	0.00	0	0.00
Excavation & Installation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment	Worker Trip Number	Vendor Trip	Hauling Trip	Worker Trip Length	Vendor Trip Length	Hauling Trip	Worker Vehicle Class	Vendor Vehicle	Hauling Vehicle
Excavation &		6	15.00	1.00	93.00	14.70	6.90	20.00:LD_Mix	HDT_Mix	HHTD

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Excavation & Installation - 2024

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					0.0564	0.0000	0.0564	0.0290	0.0000	0.0290	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0349	0.3215	0.3930	6.7000e-004		0.0156	0.0156		0.0143	0.0143	0.0000	58.8272	58.8272	0.0190	0.0000	59.3028
Total	0.0349	0.3215	0.3930	6.7000e-004	0.0564	0.0156	0.0720	0.0290	0.0143	0.0433	0.0000	58.8272	58.8272	0.0190	0.0000	59.3028

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-003	6.4100e-003	1.6600e-003	3.0000e-005	8.0000e-003	4.0000e-005	8.4000e-003	2.2000e-003	4.0000e-005	2.6000e-003	0.0000	2.6738	2.6738	1.5000e-004	4.2000e-005	2.8042
Vendor	3.0000e-003	1.0300e-002	3.8000e-003	0.0000	1.6000e-003	0.0000	1.7000e-003	5.0000e-003	0.0000	5.0000e-003	0.0000	0.4567	0.4567	2.0000e-004	7.0000e-005	0.4767
Worker	1.1300e-003	8.6000e-003	0.0121	4.0000e-005	4.1900e-003	2.0000e-005	4.2200e-003	1.1100e-003	2.0000e-005	1.1400e-003	0.0000	3.2420	3.2420	8.0000e-004	8.0000e-005	3.2681
Total	1.2600e-003	8.3000e-003	0.0142	7.0000e-005	5.1500e-003	6.0000e-005	5.2300e-003	1.3800e-003	6.0000e-005	1.4500e-003	0.0000	6.3725	6.3725	2.5000e-004	5.7000e-005	6.5489

LASAN - MacArthur Lake Stormwater Capture Project - Treatment Structures - Los Angeles-South Coast County, Summer

LASAN - **MacArthur Lake Stormwater Capture Project** - Treatment Structures
Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	0.05	Acre	0.05	1,999.99	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq	33
Climate	11			Operational Year	2024

Utility

CO2 Intensity (lb/MWhr)	0	CH4 Intensity (lb/MWhr)	0	N2O Intensity (lb/MWhr)	0
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1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Treatment Structures

Construction Phase - Treatment Structures

Off-road Equipment - Other Material Handling Equipment represents Water and Concrete Trucks; Other General Construction Equipment represents Pickup Truck

Grading - Material Exported represents both imported and exported materials.

Trips and VMT - n/a

Construction Off-road Equipment Mitigation - Watering Required by SCAQMD Rule 403

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	1.00	51.00
tblConstructionPhase	PhaseEndDate	4/25/2024	6/20/2024
tblConstructionPhase	PhaseStartDate	4/25/2024	4/11/2024
tblGrading	MaterialExported	0.00	741.00
tblOffRoadEquipment	HorsePower	187.00	0.00
tblOffRoadEquipment	LoadFactor	0.41	0.00
tblOffRoadEquipment	LoadFactor	0.40	0.40
tblOffRoadEquipment	LoadFactor	0.42	0.42
tblOffRoadEquipment	LoadFactor	0.40	0.40
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	OffRoadEquipmentType		Other Material Handling
tblOffRoadEquipment	OffRoadEquipmentType		Other Construction Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Rubber Tired Dozers
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
2024	1.4202	12.9148	15.9940	0.0289	2.4182	0.6131	3.0313	1.1917	0.5641	1.7558	0.0000	2,823.9968	2,823.9968	0.8331	0.0244	2,852.0981
Maximum	1.4202	12.9148	15.9940	0.0289	2.4182	0.6131	3.0313	1.1917	0.5641	1.7558	0.0000	2,823.9968	2,823.9968	0.8331	0.0244	2,852.0981

3.0 Construction Detail

Construction Phase

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Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days	Num Days	Phase Description
1	Excavation & Installation	Site Preparation	4/11/2024	6/20/2024	5	51	

Acres of Grading (Site Preparation Phase): 19.13

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 –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Excavation & Installation	Other Material Handling	2	6.00	168	0.40
Excavation & Installation	Other Construction Equipment	1	4.00	172	0.42
Excavation & Installation	Rubber Tired Dozers	1	6.00	247	0.40
Excavation & Installation	Excavators	1	8.00	158	0.38
Excavation & Installation	Graders	0	0.00	0	0.00
Excavation & Installation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle	Hauling Vehicle
Excavation &	6	15.00	1.00	93.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Excavation & Installation - 2024

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Fugitive Dust					2.2122	0.0000	2.2122	1.1366	0.0000	1.1366			0.0000			0.0000
Off-Road	1.3704	12.6079	15.4111	0.0263		0.6104	0.6104		0.5616	0.5616	0.0000	2,542.9	2,542.9	0.8225		2,563.5
Total	1.3704	12.6079	15.4111	0.0263	2.2122	0.6104	2.8226	1.1366	0.5616	1.6982	0.0000	2,542.9	2,542.9	0.8225		2,563.5

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
Hauling	3.9300e-002	0.2386	0.0646	1.0500e-002	0.0319	1.5100e-002	0.0334	8.7500e-003	1.4500e-002	0.0102		115.5314	115.5314	6.5200e-003	0.0184	121.1636
Vendor	1.1200e-002	0.0385	0.0146	1.8000e-002	6.4100e-003	1.9000e-002	6.6000e-003	1.8400e-002	1.9000e-002	2.0300e-002		19.7275	19.7275	6.7000e-003	2.8400e-003	20.5904
Worker	0.0447	0.0299	0.5037	1.4400e-002	0.1677	9.7000e-002	0.1686	0.0445	8.9000e-002	0.0454		145.759	145.759	3.4200e-003	3.2200e-003	146.804
Total	0.0498	0.3069	0.5829	2.6700e-003	0.2060	2.6700e-003	0.2087	0.0551	2.5300e-003	0.0576		281.018	281.018	0.0106	0.0244	288.55

LASAN - MacArthur Lake Stormwater Capture Project - Pipeline - Los Angeles-South Coast County, Annual

LASAN - **MacArthur Lake Stormwater Capture Project** - Pipeline
Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	9.13	1000sqft	0.21	9,125.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq	33
Climate	11			Operational	2025

Utility

CO2 Intensity (lb/MWhr)	0	CH4 Intensity (lb/MWhr)	0	N2O Intensity	0
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1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Pipeline

Construction Phase - Pipeline

Off-road Equipment - n/a

Off-road Equipment - Other Material Handling Equipment represents Water and Concrete Trucks; Other General Construction Equipment represents Pickup Truck

Grading - Pipeline

Trips and VMT - n/a

Construction Off-road Equipment Mitigation - Watering Required by SCAQMD Rule 403

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	61.00
tblConstructionPhase	NumDays	1.00	61.00
tblConstructionPhase	PhaseEndDate	11/26/2024	9/6/2024
tblConstructionPhase	PhaseEndDate	6/28/2024	9/6/2024
tblConstructionPhase	PhaseStartDate	11/20/2024	6/14/2024
tblConstructionPhase	PhaseStartDate	6/28/2024	6/14/2024
tblGrading	MaterialExported	0.00	1,014.00
tblOffRoadEquipment	HorsePower	187.00	0.00
tblOffRoadEquipment	LoadFactor	0.36	0.36
tblOffRoadEquipment	LoadFactor	0.40	0.40
tblOffRoadEquipment	LoadFactor	0.42	0.42
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.41	0.00
tblOffRoadEquipment	OffRoadEquipmentType		Paving Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Other Material Handling
tblOffRoadEquipment	OffRoadEquipmentType		Other Construction
tblOffRoadEquipment	OffRoadEquipmentType		Concrete/Industrial Saws
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00

2.0 Emissions Summary

2.1 Overall Construction

Year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
2024	0.0354	0.2940	0.5137	8.6000e-004	7.3300e-002	0.0142	0.0216	1.9600e-003	0.0132	0.0152	0.0000	75.8352	75.8352	0.0197	7.7000e-004	76.5596

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Maximum	0.0354	0.2940	0.5137	8.6000e-004	7.3300e-003	0.0142	0.0216	1.9600e-003	0.0132	0.0152	0.0000	75.8352	75.8352	0.0197	7.7000e-004	76.5596
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3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/14/2024	9/6/2024	5	61	
2	Paving	Paving	6/14/2024	9/6/2024	5	61	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.21

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Paving	Paving Equipment	1	4.00	132	0.36
Site Preparation	Other Material Handling	2	6.00	168	0.40
Site Preparation	Other Construction Equipment	1	4.00	172	0.42
Site Preparation	Concrete/Industrial Saws	1	4.00	81	0.73
Site Preparation	Excavators	1	8.00	158	0.38
Site Preparation	Graders	0	0.00	0	0.00
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment	Worker Trip Number	Vendor Trip	Hauling Trip	Worker Trip Length	Vendor Trip Length	Hauling Trip	Worker Vehicle Class	Vendor Vehicle	Hauling Vehicle
Site Preparation	6	15.00	1.00	127.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	1	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 2024

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Fugitive					3.0000e-005	0.0000	3.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0309	0.2602	0.4549	7.0000e-004	0.0130	0.0130	0.0121	0.0121	0.0000	61.6015	61.6015	0.0177	0.0000	62.0430		
Total	0.0309	0.2602	0.4549	7.0000e-004	3.0000e-005	0.0130	0.0131	0.0000	0.0121	0.0121	0.0000	61.6015	61.6015	0.0177	0.0000	62.0430

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Hauling	1.3000e-004	8.7500e-003	2.2600e-003	4.0000e-005	1.0900e-005	5.0000e-005	1.1500e-005	3.0000e-005	5.0000e-005	3.5000e-005	0.0000	3.6513	3.6513	2.1000e-004	5.8000e-004	3.8293

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Vendor	3.0000e-003	1.2300e-003	4.5000e-004	1.0000e-005	1.9000e-004	1.0000e-005	2.0000e-003	6.0000e-003	1.0000e-005	6.0000e-005	0.0000	0.5462	0.5462	2.0000e-004	8.0000e-005	0.5702
Worker	1.3500e-003	1.0300e-003	0.0145	4.0000e-005	5.0100e-004	3.0000e-005	5.0400e-003	1.3300e-003	3.0000e-005	1.3600e-003	0.0000	3.8777	3.8777	1.0000e-004	1.0000e-005	3.9089
Total	1.5100e-003	0.0110	0.0172	9.0000e-005	6.2900e-003	9.0000e-005	6.3900e-003	1.6900e-003	9.0000e-005	1.7700e-003	0.0000	8.0753	8.0753	3.3000e-004	7.6000e-004	8.3084

3.3 Paving - 2024

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	2.4800e-003	0.0225	0.0387	6.0000e-005		1.0900e-003	1.0900e-003		1.0000e-003	1.0000e-003	0.0000	5.3830	5.3830	1.7400e-003	0.0000	5.4265
Paving	2.8000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	2.7600e-003	0.0225	0.0387	6.0000e-005		1.0900e-003	1.0900e-003		1.0000e-003	1.0000e-003	0.0000	5.3830	5.3830	1.7400e-003	0.0000	5.4265

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	2.7000e-004	2.1000e-004	2.9000e-003	1.0000e-005	1.0000e-003	1.0000e-005	1.0100e-003	2.7000e-004	1.0000e-005	2.7000e-004	0.0000	0.7755	0.7755	2.0000e-005	2.0000e-005	0.7818
Total	2.7000e-004	2.1000e-004	2.9000e-003	1.0000e-005	1.0000e-003	1.0000e-005	1.0100e-003	2.7000e-004	1.0000e-005	2.7000e-004	0.0000	0.7755	0.7755	2.0000e-005	2.0000e-005	0.7818

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LASAN - MacArthur Lake Stormwater Capture Project - Pipeline - Los Angeles-South Coast County, Summer

LASAN - **MacArthur Lake Stormwater Capture Project** - Pipeline
Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	9.13	1000sqft	0.21	9,125.00	0

1.2 Other Project Characteristics

Urbanizatio	Urban	Wind Speed (m/s)	2.2	Precipitation Freq	33
Climate	11			Operational Year	2025

Utility

CO2 Intensity	0	CH4 Intensity	0	N2O Intensity	0
(lb/MW hr)		(lb/MW hr)		(lb/MW hr)	

1.3 User Entered Comments & Non-Default Data

- Project Characteristics -
- Land Use - Pipeline
- Construction Phase - Pipeline
- Off-road Equipment - n/a
- Off-road Equipment - Other Material Handling Equipment represents Water and Concrete Trucks; Other General Construction Equipment represents Pickup Truck
- Grading - Pipeline
- Trips and VMT - n/a
- Construction Off-road Equipment Mitigation - Watering Required by SCAQMD Rule 403

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	61.00
tblConstructionPhase	NumDays	1.00	61.00
tblConstructionPhase	PhaseEndDate	11/26/2024	9/6/2024
tblConstructionPhase	PhaseEndDate	6/28/2024	9/6/2024
tblConstructionPhase	PhaseStartDate	11/20/2024	6/14/2024
tblConstructionPhase	PhaseStartDate	6/28/2024	6/14/2024
tblGrading	MaterialExported	0.00	1,014.00
tblOffRoadEquipment	HorsePower	187.00	0.00
tblOffRoadEquipment	LoadFactor	0.36	0.36
tblOffRoadEquipment	LoadFactor	0.40	0.40
tblOffRoadEquipment	LoadFactor	0.42	0.42
tblOffRoadEquipment	LoadFactor	0.38	0.38
tblOffRoadEquipment	LoadFactor	0.41	0.00
tblOffRoadEquipment	OffRoadEquipmentType		Paving Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Other Material Handling
tblOffRoadEquipment	OffRoadEquipmentType		Other Construction Equipment
tblOffRoadEquipment	OffRoadEquipmentType		Concrete/Industrial Saws
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
2024	1.1612	9.6166	16.8756	0.0282	0.2449	0.4664	0.7112	0.0653	0.4335	0.4989	0.0000	2,747.4	2,747.4	0.7134	0.0277	2,773.5

LASAN - MacArthur Lake Stormwater Capture Project - Pipeline - Los Angeles-South Coast County, Summer

Maximum	1.1612	9.6166	16.8756	0.0282	0.2449	0.4664	0.7112	0.0653	0.4335	0.4989	0.0000	2,747.4	2,747.4	0.7134	0.0277	2,773.5
												549	549			324

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days	Num Days	Phase Description
1	Site Preparation	Site Preparation	6/14/2024	9/6/2024	5	61	
2	Paving	Paving	6/14/2024	9/6/2024	5	61	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.21

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Paving	Paving Equipment	1	4.00	132	0.36
Site Preparation	Other Material Handling	2	6.00	168	0.40
Site Preparation	Other Construction Equipment	1	4.00	172	0.42
Site Preparation	Concrete/Industrial Saws	1	4.00	81	0.73
Site Preparation	Excavators	1	8.00	158	0.38
Site Preparation	Graders	0	0.00	0	0.00
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle	Hauling Vehicle
Site Preparation	6	15.00	1.00	127.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	1	3.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 2024

Mitigated Construction On-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Fugitive Dust					8.5000e-004	0.0000	8.5000e-004	1.3000e-004	0.0000	1.3000e-004			0.0000			0.0000
Off-Road	1.0116	8.5321	14.9154	0.0231		0.4276	0.4276		0.3979	0.3979	0.0000	2,226.3	2,226.3	0.6383		2,242.3
Total	1.0116	8.5321	14.9154	0.0231	8.5000e-004	0.4276	0.4285	1.3000e-004	0.3979	0.3980	0.0000	2,226.3	2,226.3	0.6383		2,242.3

Mitigated Construction Off-Site

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Hauling	4.4900e-003	0.2724	0.0738	1.2000e-003	0.0364	1.7300e-003	0.0382	9.9900e-003	1.6500e-003	0.0116		131.905	131.905	7.4400e-003	0.0210	138.335

LASAN - MacArthur Lake Stormwater Capture Project - Pipeline - Los Angeles-South Coast County, Summer

Vendor	1.1200e-003	0.0385	0.0146	1.8000e-003	6.4100e-003	1.9000e-003	6.6000e-003	1.8400e-003	1.9000e-003	2.0300e-003		19.7275	19.7275	6.7000e-003	2.8400e-003	20.5904
Worker	0.0447	0.0299	0.5037	1.4400e-003	0.1677	9.7000e-004	0.1686	0.0445	8.9000e-004	0.0454		145.759	145.759	3.4200e-003	3.2200e-003	146.804
Total	0.0503	0.3407	0.5921	2.8200e-003	0.2105	2.8900e-003	0.2134	0.0563	2.7300e-003	0.0590		297.3920	297.3920	0.0115	0.0270	305.7302

3.3 Paving - 2024

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	0.0813	0.7379	1.2674	2.0100e-003		0.0356	0.0356		0.0328	0.0328	0.0000	194.548	194.548	0.0629		196.1213
Paving	9.0200e-003					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.0903	0.7379	1.2674	2.0100e-003		0.0356	0.0356		0.0328	0.0328	0.0000	194.5483	194.5483	0.0629		196.1213

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	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
Worker	8.9400e-003	5.9700e-003	0.1008	2.9000e-004	0.0335	1.9000e-004	0.0337	8.8900e-003	1.8000e-004	9.0700e-003		29.1519	29.1519	6.8000e-004	6.4000e-004	29.3609
Total	8.9400e-003	5.9700e-003	0.1008	2.9000e-004	0.0335	1.9000e-004	0.0337	8.8900e-003	1.8000e-004	9.0700e-003		29.1519	29.1519	6.8000e-004	6.4000e-004	29.3609

LASAN - MacArthur Lake Stormwater Capture Project - Wetlands - Los Angeles-South Coast County, Annual

LASAN - **MacArthur Lake Stormwater Capture Project** - Wetlands
Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	0.54	Acre	0.54	23,499.91	0

1.2 Other Project Characteristics

Urbanization Climate	Urban 11	Wind Speed (m/s)	2.2	Precipitation Freq Operational	33 2025
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Utility

CO2 Intensity (lb/MWhr)	0	CH4 Intensity (lb/MWhr)	0	N2O Intensity	0
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1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Wetlands

Construction Phase - Wetlands

Off-road Equipment - Other Material Handling Equipment represents Water and Concrete Trucks; Other General Construction Equipment represents Pickup Truck

Trips and VMT - n/a

Grading - Wetlands

Construction Off-road Equipment Mitigation - Watering Required by SCAQMD Rule 403

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	1.00	68.00
tblGrading	AcresOfGrading	34.00	0.00
tblGrading	MaterialExported	0.00	1,332.00
tblLandUse	LandUseSquareFeet	23,522.40	23,499.91
tblOffRoadEquipment	HorsePower	187.00	0.00
tblOffRoadEquipment	LoadFactor	0.41	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblTripsAndVMT	HaulingTripNumber	145.00	167.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00

2.0 Emissions Summary

2.1 Overall Construction

Year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
2024	0.0546	0.5069	0.5736	1.0700e-003	0.0994	0.0238	0.1232	0.0526	0.0219	0.0745	0.0000	95.0990	95.0990	0.0280	9.6000e-004	96.0847
Maximum	0.0546	0.5069	0.5736	1.0700e-003	0.0994	0.0238	0.1232	0.0526	0.0219	0.0745	0.0000	95.0990	95.0990	0.0280	9.6000e-004	96.0847

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days	Num Days	Phase Description
1	Wetlands Installation	Site Preparation	8/26/2024	11/27/2024	5	68	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

LASAN - MacArthur Lake Stormwater Capture Project - Wetlands - Los Angeles-South Coast County, Annual

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Wetlands Installation	Excavators	1	8.00	158	0.38
Wetlands Installation	Graders	0	0.00	0	0.00
Wetlands Installation	Other Construction Equipment	1	4.00	172	0.42
Wetlands Installation	Other Material Handling	2	6.00	168	0.40
Wetlands Installation	Rubber Tired Dozers	1	8.00	247	0.40
Wetlands Installation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment	Worker Trip Number	Vendor Trip	Hauling Trip	Worker Trip Length	Vendor Trip Length	Hauling Trip	Worker Vehicle Class	Vendor Vehicle	Hauling Vehicle
Wetlands	6	15.00	1.00	167.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Wetlands Installation - 2024

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					0.0922	0.0000	0.0922	0.0507	0.0000	0.0507	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0529	0.4929	0.5540	9.7000e-04		0.0237	0.0237		0.0218	0.0218	0.0000	85.3661	85.3661	0.0276	0.0000	86.0563
Total	0.0529	0.4929	0.5540	9.7000e-04	0.0922	0.0237	0.1158	0.0507	0.0218	0.0724	0.0000	85.3661	85.3661	0.0276	0.0000	86.0563

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	1.7000e-03	0.0115	2.9800e-03	5.0000e-04	1.4400e-03	7.0000e-03	1.5100e-03	3.9000e-03	7.0000e-03	4.6000e-03	0.0000	4.8014	4.8014	2.7000e-03	7.6000e-03	5.0354
Vendor	4.0000e-05	1.3700e-03	5.0000e-04	1.0000e-05	2.1000e-03	1.0000e-03	2.2000e-03	6.0000e-04	1.0000e-03	7.0000e-04	0.0000	0.6089	0.6089	2.0000e-03	9.0000e-03	0.6356
Worker	1.5100e-03	1.1500e-03	0.0162	5.0000e-05	5.5900e-03	3.0000e-03	5.6200e-03	1.4800e-03	3.0000e-03	1.5100e-03	0.0000	4.3227	4.3227	1.1000e-03	1.1000e-03	4.3574
Total	1.7200e-03	0.0140	0.0196	1.1000e-04	7.2400e-03	1.1000e-03	7.3500e-03	1.9300e-03	1.1000e-03	2.0400e-03	0.0000	9.7329	9.7329	4.0000e-03	9.6000e-03	10.0284

LASAN - MacArthur Lake Stormwater Capture Project - Wetlands - Los Angeles-South Coast County, Summer

LASAN - **MacArthur Lake Stormwater Capture Project** - Wetlands
Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
City Park	0.54	Acre	0.54	23,499.91	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq	33
Climate	11			Operational Year	2025

Utility

CO2 Intensity	0	CH4 Intensity	0	N2O Intensity	0
(lb/MWhr)		(lb/MWhr)		(lb/MWhr)	

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Wetlands

Construction Phase - Wetlands

Off-road Equipment - Other Material Handling Equipment represents Water and Concrete Trucks; Other General Construction Equipment represents Pickup Truck

Trips and VMT - n/a

Grading - Wetlands

Construction Off-road Equipment Mitigation - Watering Required by SCAQMD Rule 403

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	1.00	68.00
tblGrading	AcresOfGrading	34.00	0.00
tblGrading	MaterialExported	0.00	1,332.00
tblLandUse	LandUseSquareFeet	23,522.40	23,499.91
tblOffRoadEquipment	HorsePower	187.00	0.00
tblOffRoadEquipment	LoadFactor	0.41	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblTripsAndVMT	HaulingTripNumber	145.00	167.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Year	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
2024	1.6067	14.8871	16.8989	0.0316	2.9280	0.6991	3.6271	1.5479	0.6433	2.1911	0.0000	3,088.732	3,088.732	0.9080	0.0308	3,120.6032
Maximum	1.6067	14.8871	16.8989	0.0316	2.9280	0.6991	3.6271	1.5479	0.6433	2.1911	0.0000	3,088.732	3,088.732	0.9080	0.0308	3,120.6032

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days	Num Days	Phase Description
1	Wetlands Installation	Site Preparation	8/26/2024	11/27/2024	5	68	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

LASAN - MacArthur Lake Stormwater Capture Project - Wetlands - Los Angeles-South Coast County, Summer

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Wetlands Installation	Excavators	1	8.00	158	0.38
Wetlands Installation	Graders	0	0.00	0	0.00
Wetlands Installation	Other Construction Equipment	1	4.00	172	0.42
Wetlands Installation	Other Material Handling	2	6.00	168	0.40
Wetlands Installation	Rubber Tired Dozers	1	8.00	247	0.40
Wetlands Installation	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle	Hauling Vehicle
Wetlands	6	15.00	1.00	167.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Wetlands Installation - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio-CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.7109	0.0000	2.7109	1.4898	0.0000	1.4898			0.0000			0.0000
Off-Road	1.5555	14.4974	16.2935	0.0286		0.6959	0.6959		0.6403	0.6403	0.0000	2,767.6	2,767.6	0.8951		2,790.0
Total	1.5555	14.4974	16.2935	0.0286	2.7109	0.6959	3.4069	1.4898	0.6403	2.1300	0.0000	2,767.6	2,767.6	0.8951		2,790.0
												505	505			284

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	5.2900e-002	0.3213	0.0871	1.4100e-003	0.0430	2.0400e-003	0.0450	0.0118	1.9500e-003	0.0137		155.594	155.594	8.7800e-003	0.0247	163.180
Vendor	1.1200e-002	0.0385	0.0146	1.8000e-003	6.4100e-003	1.9000e-003	6.6000e-003	1.8400e-003	1.9000e-003	2.0300e-003		19.7275	19.7275	6.7000e-003	2.8400e-003	20.5904
Worker	0.0447	0.0299	0.5037	1.4400e-003	0.1677	9.7000e-003	0.1686	0.0445	8.9000e-003	0.0454		145.759	145.759	3.4200e-003	3.2200e-003	146.804
Total	0.0511	0.3896	0.6053	3.0300e-003	0.2171	3.2000e-003	0.2203	0.0581	3.0300e-003	0.0611		321.081	321.081	0.0129	0.0308	330.57
												7	7			49

Annual GHG Emissions

Emission Source	Operations	Operations Unit	Annual Electricity Demand (kWh/yr)	Carbon Intensity	Carbon Intensity Unit	CO2e Emissions (metric tons)	Carbon Intensity Source
<i>50 hp pump</i>	<i>360</i>	<i>hours/year</i>	<i>13,423</i>	--	--	--	--
<i>50 hp pump</i>	<i>240</i>	<i>hours/year</i>	<i>8,948</i>	--	--	--	--
<i>7.5 hp pump</i>	<i>365</i>	<i>hours/year</i>	<i>2,041</i>	--	--	--	--
<i>5.0 hp pump</i>	<i>8760</i>	<i>hours/year</i>	<i>32,662</i>	--	--	--	--
Pumps ¹	--	--	57,074	579.00	lb CO2e/MWh	14.99	LADWP 2020 Power Content Label
Maintenance	76	vehicle trips/year	n/a	6.89	lb CO2e/trip	0.24	EMFAC2017 Emission Factors for Medium Duty Vehicles
Activities ²							
Amortized	n/a	n/a	n/a	n/a	n/a	16.78	
Construction ³							
Total	n/a	n/a	n/a	n/a	n/a	32.01	

1. One 5-horsepower recirculation pump would operate continuously as part of the project. Three additional pumps would operate periodically. Two 50-horsepower pumps would operate during wet weather rain flows (approximately 20 rain events per year). One of those pumps would operate approximately 75 percent of the time during rain events (approximately 360 hours/year). The other would operate approximately 50 percent of the time during rain events (approximately 240 hours per year). A third 7.5-horsepower pump would operate during dry weather flows, operating approximately 1 hour/day (approximately 365 hours/year).

2. For purposes of this analysis, it was conservatively estimated that maintenance activities would be required up to 38 days per year, including inspection/cleaning of the pretreatment unit after every storm (average number of storms is 20 per year), periodic inspection/cleaning of the stormwater treatment unit, quarterly wetlands cleaning, and separate biannual inspection and cleaning of subgrade pumping equipment. Each day of maintenance would require two vehicle trips.

3. Construction emissions are amortized over a 30-year presumed project lifetime and are added to operational emissions to determine total project impacts.

Source: EMFAC2017 (v1.0.3) Emissions Inventory

Region Type: Sub-Area

Region: Los Angeles (SC)

Calendar Year: 2023

Season: Annual

Vehicle Classification: EMFAC2011 Categories

Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

<https://arb.ca.gov/emfac/emissions-inventory/73f49040616d359f21d46e2dbb64c7c966ce20b2>

Fourth Assessment Report (AR4) Global Warming Potentials (GWP)

CO2	CH4	N2O
1	25	298

Region	Calendar Year	Vehicle Category	Model Year	Speed	Fuel	Population	VMT	Trips	CO2_TOTEX	CH4_TOTEX	N2O_TOTEX	CO2e_TOTAL	CO2e/trip
Los Angeles (SC)	2023	MDV	Aggregate	Aggregate	Gasoline	9.32E+05	3.23E+07	4.33E+06	1.49E+04	5.72E-01	4.40E-01	1.51E+04	3.49E-03
Los Angeles (SC)	2023	MDV	Aggregate	Aggregate	Diesel	2.13E+04	8.23E+05	1.04E+05	3.34E+02	6.14E-04	5.25E-02	3.50E+02	3.35E-03
Los Angeles (SC)	2023	MDV	Aggregate	Aggregate	Electricity	1.04E+04	3.42E+05	5.29E+04	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Los Angeles (SC)	2023	MDV	Aggregate	Aggregate	Aggregate	--	--	--	--	--	--	14567.9159	0.00344749