

APPENDIX B
CalEEMod Results

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Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Annual

Joby Aviation Manufacturing Facility Project
Monterey Bay Unified APCD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Manufacturing	580.00	1000sqft	13.31	580,000.00	0
Parking Lot	521.00	1000sqft	11.96	521,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.8	Precipitation Freq (Days)	53
Climate Zone	4			Operational Year	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	290	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

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Project Characteristics - PG&E 2020 Rate = 290

Land Use -

Construction Phase - Adjusted construction schedule per Initial Study Project Description

Off-road Equipment - 59 hours of crushing total

Grading - 25.3 acres of grading

Energy Use -

Water And Wastewater - 100% aerobic, estimated annual water use provided by client

Operational Off-Road Equipment - 2 Forklifts running for one hour a day for 200 days per client operational information

Stationary Sources - Emergency Generators and Fire Pumps -

Sequestration - planting 158 trees of various species, see Landscape Plan in Initial Study

Construction Off-road Equipment Mitigation -

Energy Mitigation - Accounting for updated standards

Water Mitigation - Consistent with state requirements

Waste Mitigation - 50% waste diverted consistent with state requirements.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	440.00	346.00
tblConstructionPhase	NumDays	45.00	36.00
tblConstructionPhase	NumDays	35.00	28.00
tblConstructionPhase	NumDays	20.00	40.00
tblConstructionPhase	PhaseEndDate	1/18/2022	8/12/2021
tblConstructionPhase	PhaseEndDate	5/12/2020	4/15/2020
tblConstructionPhase	PhaseEndDate	3/8/2022	9/21/2021
tblConstructionPhase	PhaseEndDate	3/10/2020	2/25/2020
tblConstructionPhase	PhaseStartDate	5/13/2020	4/16/2020
tblConstructionPhase	PhaseStartDate	3/11/2020	2/26/2020
tblConstructionPhase	PhaseStartDate	1/19/2022	8/13/2021

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Annual

tblConstructionPhase	PhaseStartDate	2/12/2020	1/1/2020
tblGrading	AcresOfGrading	90.00	25.30
tblOffRoadEquipment	HorsePower	85.00	510.00
tblOffRoadEquipment	OffRoadEquipmentType		Crushing/Proc. Equipment
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	200.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	1.00
tblOperationalOffRoadEquipment	OperLoadFactor	0.20	0.20
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	2.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblSequestration	NumberOfNewTrees	0.00	158.00
tblStationaryGeneratorsPumpsEF	CH4_EF	0.07	0.07
tblStationaryGeneratorsPumpsEF	CO_EF	5.97	5.97
tblStationaryGeneratorsPumpsEF	NOX_EF	5.32	5.32
tblStationaryGeneratorsPumpsEF	PM10_EF	0.60	0.60
tblStationaryGeneratorsPumpsEF	PM2_5_EF	0.60	0.60
tblStationaryGeneratorsPumpsEF	ROG_EF	2.2480e-003	2.2477e-003
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	10.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblTripsAndVMT	WorkerTripNumber	20.00	18.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	IndoorWaterUseRate	134,125,000.00	4,861,696.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2020	3-31-2020	1.6733	1.6733
2	4-1-2020	6-30-2020	1.5958	1.5958
3	7-1-2020	9-30-2020	1.5764	1.5764
4	10-1-2020	12-31-2020	1.6039	1.6039
5	1-1-2021	3-31-2021	1.4243	1.4243
6	4-1-2021	6-30-2021	1.4173	1.4173
7	7-1-2021	9-30-2021	0.8897	0.8897
		Highest	1.6733	1.6733

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Annual

2.2 Overall Operational
Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.7143	1.3000e-004	0.0141	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0273	0.0273	7.0000e-005	0.0000	0.0291
Energy	0.0825	0.7500	0.6300	4.5000e-003		0.0570	0.0570		0.0570	0.0570	0.0000	1,470.6647	1,470.6647	0.0811	0.0285	1,481.1854
Mobile	0.7618	4.0083	9.1192	0.0260	1.9287	0.0271	1.9558	0.5180	0.0255	0.5435	0.0000	2,385.6258	2,385.6258	0.1275	0.0000	2,388.8129
Offroad	3.2500e-003	0.0296	0.0293	4.0000e-005		2.1000e-003	2.1000e-003		1.9300e-003	1.9300e-003	0.0000	3.3741	3.3741	1.0900e-003	0.0000	3.4014
Stationary	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	145.9911	0.0000	145.9911	8.6278	0.0000	361.6868
Water						0.0000	0.0000		0.0000	0.0000	1.7201	3.4604	5.1805	6.2700e-003	3.8100e-003	6.4732
Total	3.5618	4.7881	9.7927	0.0305	1.9287	0.0863	2.0150	0.5180	0.0844	0.6025	147.7112	3,863.1523	4,010.8634	8.8438	0.0323	4,241.5888

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Annual

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	2.7143	1.3000e-004	0.0141	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0273	0.0273	7.0000e-005	0.0000	0.0291
Energy	0.0671	0.6099	0.5123	3.6600e-003		0.0464	0.0464		0.0464	0.0464	0.0000	1,289.9247	1,289.9247	0.0753	0.0251	1,299.2945
Mobile	0.7618	4.0083	9.1192	0.0260	1.9287	0.0271	1.9558	0.5180	0.0255	0.5435	0.0000	2,385.6258	2,385.6258	0.1275	0.0000	2,388.8129
Offroad	3.2500e-003	0.0296	0.0293	4.0000e-005		2.1000e-003	2.1000e-003		1.9300e-003	1.9300e-003	0.0000	3.3741	3.3741	1.0900e-003	0.0000	3.4014
Stationary	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	72.9956	0.0000	72.9956	4.3139	0.0000	180.8434
Water						0.0000	0.0000		0.0000	0.0000	1.3761	2.7683	4.1444	5.0100e-003	3.0500e-003	5.1786
Total	3.5464	4.6480	9.6750	0.0297	1.9287	0.0756	2.0043	0.5180	0.0738	0.5918	74.3716	3,681.7202	3,756.0918	4.5229	0.0282	3,877.5599

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.43	2.93	1.20	2.75	0.00	12.35	0.53	0.00	12.61	1.77	49.65	4.70	6.35	48.86	12.81	8.58

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2.3 Vegetation

Vegetation

	CO2e
Category	MT
New Trees	111.8640
Total	111.8640

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2020	2/25/2020	5	40	
2	Grading	Grading	2/26/2020	4/15/2020	5	36	
3	Building Construction	Building Construction	4/16/2020	8/12/2021	5	346	
4	Paving	Paving	8/13/2021	9/21/2021	5	28	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 25.3

Acres of Paving: 11.96

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

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Annual

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Crushing/Proc. Equipment	1	1.48	510	0.78
Grading	Excavators	2	8.00	158	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Paving Equipment	2	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	8	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	462.00	180.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Annual

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3613	0.0000	0.3613	0.1986	0.0000	0.1986	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0888	0.8958	0.4581	8.9000e-004		0.0456	0.0456		0.0421	0.0421	0.0000	80.1995	80.1995	0.0222	0.0000	80.7547
Total	0.0888	0.8958	0.4581	8.9000e-004	0.3613	0.0456	0.4069	0.1986	0.0421	0.2407	0.0000	80.1995	80.1995	0.0222	0.0000	80.7547

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Annual

3.2 Site Preparation - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	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	1.5600e-003	1.4300e-003	0.0128	3.0000e-005	2.8600e-003	2.0000e-005	2.8900e-003	7.6000e-004	2.0000e-005	7.8000e-004	0.0000	2.6595	2.6595	1.1000e-004	0.0000	2.6622
Total	1.5600e-003	1.4300e-003	0.0128	3.0000e-005	2.8600e-003	2.0000e-005	2.8900e-003	7.6000e-004	2.0000e-005	7.8000e-004	0.0000	2.6595	2.6595	1.1000e-004	0.0000	2.6622

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1626	0.0000	0.1626	0.0894	0.0000	0.0894	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0888	0.8958	0.4581	8.9000e-004		0.0456	0.0456		0.0421	0.0421	0.0000	80.1994	80.1994	0.0222	0.0000	80.7546
Total	0.0888	0.8958	0.4581	8.9000e-004	0.1626	0.0456	0.2082	0.0894	0.0421	0.1314	0.0000	80.1994	80.1994	0.0222	0.0000	80.7546

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Annual

3.2 Site Preparation - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	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	1.5600e-003	1.4300e-003	0.0128	3.0000e-005	2.8600e-003	2.0000e-005	2.8900e-003	7.6000e-004	2.0000e-005	7.8000e-004	0.0000	2.6595	2.6595	1.1000e-004	0.0000	2.6622
Total	1.5600e-003	1.4300e-003	0.0128	3.0000e-005	2.8600e-003	2.0000e-005	2.8900e-003	7.6000e-004	2.0000e-005	7.8000e-004	0.0000	2.6595	2.6595	1.1000e-004	0.0000	2.6622

3.3 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1218	0.0000	0.1218	0.0610	0.0000	0.0610	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0801	0.9036	0.5753	1.1200e-003		0.0391	0.0391		0.0360	0.0360	0.0000	98.0717	98.0717	0.0317	0.0000	98.8647
Total	0.0801	0.9036	0.5753	1.1200e-003	0.1218	0.0391	0.1609	0.0610	0.0360	0.0970	0.0000	98.0717	98.0717	0.0317	0.0000	98.8647

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Annual

3.3 Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	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	1.5600e-003	1.4300e-003	0.0128	3.0000e-005	2.8600e-003	2.0000e-005	2.8900e-003	7.6000e-004	2.0000e-005	7.8000e-004	0.0000	2.6595	2.6595	1.1000e-004	0.0000	2.6622
Total	1.5600e-003	1.4300e-003	0.0128	3.0000e-005	2.8600e-003	2.0000e-005	2.8900e-003	7.6000e-004	2.0000e-005	7.8000e-004	0.0000	2.6595	2.6595	1.1000e-004	0.0000	2.6622

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0548	0.0000	0.0548	0.0275	0.0000	0.0275	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0801	0.9036	0.5753	1.1200e-003		0.0391	0.0391		0.0360	0.0360	0.0000	98.0716	98.0716	0.0317	0.0000	98.8646
Total	0.0801	0.9036	0.5753	1.1200e-003	0.0548	0.0391	0.0940	0.0275	0.0360	0.0635	0.0000	98.0716	98.0716	0.0317	0.0000	98.8646

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Annual

3.3 Grading - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	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	1.5600e-003	1.4300e-003	0.0128	3.0000e-005	2.8600e-003	2.0000e-005	2.8900e-003	7.6000e-004	2.0000e-005	7.8000e-004	0.0000	2.6595	2.6595	1.1000e-004	0.0000	2.6622
Total	1.5600e-003	1.4300e-003	0.0128	3.0000e-005	2.8600e-003	2.0000e-005	2.8900e-003	7.6000e-004	2.0000e-005	7.8000e-004	0.0000	2.6595	2.6595	1.1000e-004	0.0000	2.6622

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1972	1.7843	1.5669	2.5000e-003		0.1039	0.1039		0.0977	0.0977	0.0000	215.3973	215.3973	0.0526	0.0000	216.7110
Total	0.1972	1.7843	1.5669	2.5000e-003		0.1039	0.1039		0.0977	0.0977	0.0000	215.3973	215.3973	0.0526	0.0000	216.7110

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Annual

3.4 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	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	0.0755	2.0940	0.5344	4.8000e-003	0.1104	0.0118	0.1222	0.0319	0.0113	0.0432	0.0000	457.3409	457.3409	0.0247	0.0000	457.9592
Worker	0.1865	0.1704	1.5270	3.5200e-003	0.3418	2.9400e-003	0.3448	0.0909	2.7100e-003	0.0936	0.0000	317.4062	317.4062	0.0132	0.0000	317.7370
Total	0.2620	2.2644	2.0614	8.3200e-003	0.4522	0.0147	0.4669	0.1228	0.0140	0.1368	0.0000	774.7471	774.7471	0.0380	0.0000	775.6962

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1972	1.7843	1.5669	2.5000e-003		0.1039	0.1039		0.0977	0.0977	0.0000	215.3970	215.3970	0.0526	0.0000	216.7108
Total	0.1972	1.7843	1.5669	2.5000e-003		0.1039	0.1039		0.0977	0.0977	0.0000	215.3970	215.3970	0.0526	0.0000	216.7108

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Annual

3.4 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	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	0.0755	2.0940	0.5344	4.8000e-003	0.1104	0.0118	0.1222	0.0319	0.0113	0.0432	0.0000	457.3409	457.3409	0.0247	0.0000	457.9592
Worker	0.1865	0.1704	1.5270	3.5200e-003	0.3418	2.9400e-003	0.3448	0.0909	2.7100e-003	0.0936	0.0000	317.4062	317.4062	0.0132	0.0000	317.7370
Total	0.2620	2.2644	2.0614	8.3200e-003	0.4522	0.0147	0.4669	0.1228	0.0140	0.1368	0.0000	774.7471	774.7471	0.0380	0.0000	775.6962

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1521	1.3946	1.3260	2.1500e-003		0.0767	0.0767		0.0721	0.0721	0.0000	185.3098	185.3098	0.0447	0.0000	186.4275
Total	0.1521	1.3946	1.3260	2.1500e-003		0.0767	0.0767		0.0721	0.0721	0.0000	185.3098	185.3098	0.0447	0.0000	186.4275

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Annual

3.4 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0532	1.6425	0.3992	4.0900e-003	0.0950	4.9900e-003	0.1000	0.0275	4.7700e-003	0.0322	0.0000	390.0124	390.0124	0.0206	0.0000	390.5267
Worker	0.1484	0.1309	1.1958	2.9300e-003	0.2940	2.4500e-003	0.2965	0.0782	2.2600e-003	0.0804	0.0000	264.4884	264.4884	0.0102	0.0000	264.7428
Total	0.2016	1.7734	1.5950	7.0200e-003	0.3890	7.4400e-003	0.3965	0.1056	7.0300e-003	0.1127	0.0000	654.5007	654.5007	0.0308	0.0000	655.2695

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1521	1.3946	1.3260	2.1500e-003		0.0767	0.0767		0.0721	0.0721	0.0000	185.3096	185.3096	0.0447	0.0000	186.4273
Total	0.1521	1.3946	1.3260	2.1500e-003		0.0767	0.0767		0.0721	0.0721	0.0000	185.3096	185.3096	0.0447	0.0000	186.4273

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Annual

3.4 Building Construction - 2021

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	0.0532	1.6425	0.3992	4.0900e-003	0.0950	4.9900e-003	0.1000	0.0275	4.7700e-003	0.0322	0.0000	390.0124	390.0124	0.0206	0.0000	390.5267
Worker	0.1484	0.1309	1.1958	2.9300e-003	0.2940	2.4500e-003	0.2965	0.0782	2.2600e-003	0.0804	0.0000	264.4884	264.4884	0.0102	0.0000	264.7428
Total	0.2016	1.7734	1.5950	7.0200e-003	0.3890	7.4400e-003	0.3965	0.1056	7.0300e-003	0.1127	0.0000	654.5007	654.5007	0.0308	0.0000	655.2695

3.5 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0176	0.1809	0.2052	3.2000e-004		9.4900e-003	9.4900e-003		8.7300e-003	8.7300e-003	0.0000	28.0329	28.0329	9.0700e-003	0.0000	28.2595
Paving	0.0157					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0333	0.1809	0.2052	3.2000e-004		9.4900e-003	9.4900e-003		8.7300e-003	8.7300e-003	0.0000	28.0329	28.0329	9.0700e-003	0.0000	28.2595

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Annual

3.5 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	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	8.4000e-004	7.4000e-004	6.7900e-003	2.0000e-005	1.6700e-003	1.0000e-005	1.6800e-003	4.4000e-004	1.0000e-005	4.6000e-004	0.0000	1.5028	1.5028	6.0000e-005	0.0000	1.5042
Total	8.4000e-004	7.4000e-004	6.7900e-003	2.0000e-005	1.6700e-003	1.0000e-005	1.6800e-003	4.4000e-004	1.0000e-005	4.6000e-004	0.0000	1.5028	1.5028	6.0000e-005	0.0000	1.5042

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0176	0.1809	0.2052	3.2000e-004		9.4900e-003	9.4900e-003		8.7300e-003	8.7300e-003	0.0000	28.0328	28.0328	9.0700e-003	0.0000	28.2595
Paving	0.0157					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0333	0.1809	0.2052	3.2000e-004		9.4900e-003	9.4900e-003		8.7300e-003	8.7300e-003	0.0000	28.0328	28.0328	9.0700e-003	0.0000	28.2595

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Annual

3.5 Paving - 2021

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	8.4000e-004	7.4000e-004	6.7900e-003	2.0000e-005	1.6700e-003	1.0000e-005	1.6800e-003	4.4000e-004	1.0000e-005	4.6000e-004	0.0000	1.5028	1.5028	6.0000e-005	0.0000	1.5042
Total	8.4000e-004	7.4000e-004	6.7900e-003	2.0000e-005	1.6700e-003	1.0000e-005	1.6800e-003	4.4000e-004	1.0000e-005	4.6000e-004	0.0000	1.5028	1.5028	6.0000e-005	0.0000	1.5042

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.7618	4.0083	9.1192	0.0260	1.9287	0.0271	1.9558	0.5180	0.0255	0.5435	0.0000	2,385.6258	2,385.6258	0.1275	0.0000	2,388.8129
Unmitigated	0.7618	4.0083	9.1192	0.0260	1.9287	0.0271	1.9558	0.5180	0.0255	0.5435	0.0000	2,385.6258	2,385.6258	0.1275	0.0000	2,388.8129

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Manufacturing	2,215.60	864.20	359.60	5,130,749	5,130,749
Parking Lot	0.00	0.00	0.00		
Total	2,215.60	864.20	359.60	5,130,749	5,130,749

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Manufacturing	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Manufacturing	0.538577	0.029539	0.200691	0.130346	0.023427	0.005544	0.018258	0.038656	0.003068	0.002679	0.007152	0.001102	0.000959
Parking Lot	0.538577	0.029539	0.200691	0.130346	0.023427	0.005544	0.018258	0.038656	0.003068	0.002679	0.007152	0.001102	0.000959

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Annual

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	625.9482	625.9482	0.0626	0.0130	631.3723
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	654.1770	654.1770	0.0654	0.0135	659.8458
NaturalGas Mitigated	0.0671	0.6099	0.5123	3.6600e-003		0.0464	0.0464		0.0464	0.0464	0.0000	663.9765	663.9765	0.0127	0.0122	667.9222
NaturalGas Unmitigated	0.0825	0.7500	0.6300	4.5000e-003		0.0570	0.0570		0.0570	0.0570	0.0000	816.4876	816.4876	0.0157	0.0150	821.3396

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Annual

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Manufacturing	1.53004e+007	0.0825	0.7500	0.6300	4.5000e-003		0.0570	0.0570		0.0570	0.0570	0.0000	816.4876	816.4876	0.0157	0.0150	821.3396
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0825	0.7500	0.6300	4.5000e-003		0.0570	0.0570		0.0570	0.0570	0.0000	816.4876	816.4876	0.0157	0.0150	821.3396

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Manufacturing	1.24425e+007	0.0671	0.6099	0.5123	3.6600e-003		0.0464	0.0464		0.0464	0.0464	0.0000	663.9765	663.9765	0.0127	0.0122	667.9222
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0671	0.6099	0.5123	3.6600e-003		0.0464	0.0464		0.0464	0.0464	0.0000	663.9765	663.9765	0.0127	0.0122	667.9222

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Annual

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Manufacturing	4.7908e+006	630.1904	0.0630	0.0130	635.6513
Parking Lot	182350	23.9866	2.4000e-003	5.0000e-004	24.1945
Total		654.1770	0.0654	0.0135	659.8458

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Manufacturing	4.5762e+006	601.9615	0.0602	0.0125	607.1778
Parking Lot	182350	23.9866	2.4000e-003	5.0000e-004	24.1945
Total		625.9482	0.0626	0.0130	631.3723

6.0 Area Detail

6.1 Mitigation Measures Area

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	2.7143	1.3000e-004	0.0141	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0273	0.0273	7.0000e-005	0.0000	0.0291
Unmitigated	2.7143	1.3000e-004	0.0141	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0273	0.0273	7.0000e-005	0.0000	0.0291

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.4141					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.2989					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.3200e-003	1.3000e-004	0.0141	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0273	0.0273	7.0000e-005	0.0000	0.0291
Total	2.7143	1.3000e-004	0.0141	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0273	0.0273	7.0000e-005	0.0000	0.0291

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Annual

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.4141					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.2989					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.3200e-003	1.3000e-004	0.0141	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0273	0.0273	7.0000e-005	0.0000	0.0291
Total	2.7143	1.3000e-004	0.0141	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.0273	0.0273	7.0000e-005	0.0000	0.0291

7.0 Water Detail

7.1 Mitigation Measures Water

- Apply Water Conservation Strategy
- Install Low Flow Bathroom Faucet
- Install Low Flow Kitchen Faucet
- Install Low Flow Toilet
- Install Low Flow Shower

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	4.1444	5.0100e-003	3.0500e-003	5.1786
Unmitigated	5.1805	6.2700e-003	3.8100e-003	6.4732

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Manufacturing	4.8617 / 0	5.1805	6.2700e-003	3.8100e-003	6.4732
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		5.1805	6.2700e-003	3.8100e-003	6.4732

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Annual

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Manufacturing	3.88936 / 0	4.1444	5.0100e-003	3.0500e-003	5.1786
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		4.1444	5.0100e-003	3.0500e-003	5.1786

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Annual

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	72.9956	4.3139	0.0000	180.8434
Unmitigated	145.9911	8.6278	0.0000	361.6868

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Manufacturing	719.2	145.9911	8.6278	0.0000	361.6868
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		145.9911	8.6278	0.0000	361.6868

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Annual

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Manufacturing	359.6	72.9956	4.3139	0.0000	180.8434
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		72.9956	4.3139	0.0000	180.8434

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Forklifts	2	1.00	200	89	0.20	Diesel

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Annual

UnMitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Forklifts	3.2500e-003	0.0296	0.0293	4.0000e-005		2.1000e-003	2.1000e-003		1.9300e-003	1.9300e-003	0.0000	3.3741	3.3741	1.0900e-003	0.0000	3.4014
Total	3.2500e-003	0.0296	0.0293	4.0000e-005		2.1000e-003	2.1000e-003		1.9300e-003	1.9300e-003	0.0000	3.3741	3.3741	1.0900e-003	0.0000	3.4014

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	0	10	0	0.73	Diesel

Boilers

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

User Defined Equipment

Equipment Type	Number
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Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Annual

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (0 - 11 HP)	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

11.0 Vegetation

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	111.8640	0.0000	0.0000	111.8640

11.2 Net New Trees

Species Class

	Number of Trees	Total CO2	CH4	N2O	CO2e
		MT			
Miscellaneous	158	111.8640	0.0000	0.0000	111.8640
Total		111.8640	0.0000	0.0000	111.8640

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Summer

Joby Aviation Manufacturing Facility Project
Monterey Bay Unified APCD Air District, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Manufacturing	580.00	1000sqft	13.31	580,000.00	0
Parking Lot	521.00	1000sqft	11.96	521,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.8	Precipitation Freq (Days)	53
Climate Zone	4			Operational Year	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	290	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Summer

Project Characteristics - PG&E 2020 Rate = 290

Land Use -

Construction Phase - Adjusted construction schedule per Initial Study Project Description

Off-road Equipment - 59 hours of crushing total

Grading - 25.3 acres of grading

Energy Use -

Water And Wastewater - 100% aerobic, estimated annual water use provided by client

Operational Off-Road Equipment - 2 Forklifts running for one hour a day for 200 days per client operational information

Stationary Sources - Emergency Generators and Fire Pumps -

Sequestration - planting 158 trees of various species, see Landscape Plan in Initial Study

Construction Off-road Equipment Mitigation -

Energy Mitigation - Accounting for updated standards

Water Mitigation - Consistent with state requirements

Waste Mitigation - 50% waste diverted consistent with state requirements.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	440.00	346.00
tblConstructionPhase	NumDays	45.00	36.00
tblConstructionPhase	NumDays	35.00	28.00
tblConstructionPhase	NumDays	20.00	40.00
tblConstructionPhase	PhaseEndDate	1/18/2022	8/12/2021
tblConstructionPhase	PhaseEndDate	5/12/2020	4/15/2020
tblConstructionPhase	PhaseEndDate	3/8/2022	9/21/2021
tblConstructionPhase	PhaseEndDate	3/10/2020	2/25/2020
tblConstructionPhase	PhaseStartDate	5/13/2020	4/16/2020
tblConstructionPhase	PhaseStartDate	3/11/2020	2/26/2020
tblConstructionPhase	PhaseStartDate	1/19/2022	8/13/2021

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Summer

tblConstructionPhase	PhaseStartDate	2/12/2020	1/1/2020
tblGrading	AcresOfGrading	90.00	25.30
tblOffRoadEquipment	HorsePower	85.00	510.00
tblOffRoadEquipment	OffRoadEquipmentType		Crushing/Proc. Equipment
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	200.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	1.00
tblOperationalOffRoadEquipment	OperLoadFactor	0.20	0.20
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	2.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblSequestration	NumberOfNewTrees	0.00	158.00
tblStationaryGeneratorsPumpsEF	CH4_EF	0.07	0.07
tblStationaryGeneratorsPumpsEF	CO_EF	5.97	5.97
tblStationaryGeneratorsPumpsEF	NOX_EF	5.32	5.32
tblStationaryGeneratorsPumpsEF	PM10_EF	0.60	0.60
tblStationaryGeneratorsPumpsEF	PM2_5_EF	0.60	0.60
tblStationaryGeneratorsPumpsEF	ROG_EF	2.2480e-003	2.2477e-003
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	10.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblTripsAndVMT	WorkerTripNumber	20.00	18.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	IndoorWaterUseRate	134,125,000.00	4,861,696.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Summer

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	14.8762	1.0400e-003	0.1129	1.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004		0.2410	0.2410	6.4000e-004		0.2570
Energy	0.4521	4.1097	3.4522	0.0247		0.3123	0.3123		0.3123	0.3123		4,931.6358	4,931.6358	0.0945	0.0904	4,960.9420
Mobile	5.6446	26.7211	64.1084	0.1883	13.7868	0.1868	13.9736	3.6932	0.1755	3.8686		19,035.7843	19,035.7843	0.9759		19,060.1812
Offroad	0.0325	0.2963	0.2934	3.8000e-004		0.0210	0.0210		0.0194	0.0194		37.1928	37.1928	0.0120		37.4935
Stationary	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	21.0053	31.1281	67.9668	0.2133	13.7868	0.5206	14.3074	3.6932	0.5076	4.2007		24,004.8538	24,004.8538	1.0831	0.0904	24,058.8737

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Summer

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	14.8762	1.0400e-003	0.1129	1.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004		0.2410	0.2410	6.4000e-004		0.2570
Energy	0.3676	3.3421	2.8073	0.0201		0.2540	0.2540		0.2540	0.2540		4,010.4593	4,010.4593	0.0769	0.0735	4,034.2915
Mobile	5.6446	26.7211	64.1084	0.1883	13.7868	0.1868	13.9736	3.6932	0.1755	3.8686		19,035.7843	19,035.7843	0.9759		19,060.1812
Offroad	0.0325	0.2963	0.2934	3.8000e-004		0.0210	0.0210		0.0194	0.0194		37.1928	37.1928	0.0120		37.4935
Stationary	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	20.9209	30.3605	67.3220	0.2087	13.7868	0.4623	14.2491	3.6932	0.4492	4.1424		23,083.6773	23,083.6773	1.0654	0.0735	23,132.2231

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.40	2.47	0.95	2.16	0.00	11.21	0.41	0.00	11.49	1.39	0.00	3.84	3.84	1.63	18.67	3.85

3.0 Construction Detail

Construction Phase

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Summer

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2020	2/25/2020	5	40	
2	Grading	Grading	2/26/2020	4/15/2020	5	36	
3	Building Construction	Building Construction	4/16/2020	8/12/2021	5	346	
4	Paving	Paving	8/13/2021	9/21/2021	5	28	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 25.3

Acres of Paving: 11.96

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

OffRoad Equipment

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Crushing/Proc. Equipment	1	1.48	510	0.78
Grading	Excavators	2	8.00	158	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Paving Equipment	2	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	8	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	462.00	180.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Summer

Water Exposed Area

3.2 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.4400	44.7910	22.9068	0.0445		2.2789	2.2789		2.1031	2.1031		4,420.2380	4,420.2380	1.2242		4,450.8424
Total	4.4400	44.7910	22.9068	0.0445	18.0663	2.2789	20.3452	9.9307	2.1031	12.0338		4,420.2380	4,420.2380	1.2242		4,450.8424

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	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
Worker	0.0786	0.0625	0.6700	1.5600e-003	0.1479	1.2300e-003	0.1491	0.0392	1.1300e-003	0.0404		155.2456	155.2456	6.4100e-003		155.4057
Total	0.0786	0.0625	0.6700	1.5600e-003	0.1479	1.2300e-003	0.1491	0.0392	1.1300e-003	0.0404		155.2456	155.2456	6.4100e-003		155.4057

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Summer

3.2 Site Preparation - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.1298	0.0000	8.1298	4.4688	0.0000	4.4688			0.0000			0.0000
Off-Road	4.4400	44.7910	22.9068	0.0445		2.2789	2.2789		2.1031	2.1031	0.0000	4,420.2380	4,420.2380	1.2242		4,450.8424
Total	4.4400	44.7910	22.9068	0.0445	8.1298	2.2789	10.4087	4.4688	2.1031	6.5719	0.0000	4,420.2380	4,420.2380	1.2242		4,450.8424

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
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0786	0.0625	0.6700	1.5600e-003	0.1479	1.2300e-003	0.1491	0.0392	1.1300e-003	0.0404		155.2456	155.2456	6.4100e-003		155.4057
Total	0.0786	0.0625	0.6700	1.5600e-003	0.1479	1.2300e-003	0.1491	0.0392	1.1300e-003	0.0404		155.2456	155.2456	6.4100e-003		155.4057

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Summer

3.3 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.7674	0.0000	6.7674	3.3907	0.0000	3.3907			0.0000			0.0000
Off-Road	4.4501	50.1975	31.9583	0.0620		2.1739	2.1739		2.0000	2.0000		6,005.865 3	6,005.865 3	1.9424		6,054.425 7
Total	4.4501	50.1975	31.9583	0.0620	6.7674	2.1739	8.9413	3.3907	2.0000	5.3907		6,005.865 3	6,005.865 3	1.9424		6,054.425 7

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	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
Worker	0.0874	0.0694	0.7445	1.7300e-003	0.1643	1.3700e-003	0.1657	0.0436	1.2600e-003	0.0448		172.4951	172.4951	7.1200e-003		172.6730
Total	0.0874	0.0694	0.7445	1.7300e-003	0.1643	1.3700e-003	0.1657	0.0436	1.2600e-003	0.0448		172.4951	172.4951	7.1200e-003		172.6730

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Summer

3.3 Grading - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.0453	0.0000	3.0453	1.5258	0.0000	1.5258			0.0000			0.0000
Off-Road	4.4501	50.1975	31.9583	0.0620		2.1739	2.1739		2.0000	2.0000	0.0000	6,005.8653	6,005.8653	1.9424		6,054.4257
Total	4.4501	50.1975	31.9583	0.0620	3.0453	2.1739	5.2192	1.5258	2.0000	3.5258	0.0000	6,005.8653	6,005.8653	1.9424		6,054.4257

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
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0874	0.0694	0.7445	1.7300e-003	0.1643	1.3700e-003	0.1657	0.0436	1.2600e-003	0.0448		172.4951	172.4951	7.1200e-003		172.6730
Total	0.0874	0.0694	0.7445	1.7300e-003	0.1643	1.3700e-003	0.1657	0.0436	1.2600e-003	0.0448		172.4951	172.4951	7.1200e-003		172.6730

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Summer

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.063 1	2,553.063 1	0.6229		2,568.634 5
Total	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.063 1	2,553.063 1	0.6229		2,568.634 5

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	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	0.7932	22.2561	5.3619	0.0523	1.2186	0.1252	1.3438	0.3508	0.1198	0.4706		5,492.836 2	5,492.836 2	0.2799		5,499.833 2
Worker	2.0179	1.6041	17.1972	0.0401	3.7952	0.0316	3.8268	1.0067	0.0291	1.0358		3,984.635 8	3,984.635 8	0.1644		3,988.745 9
Total	2.8111	23.8602	22.5591	0.0924	5.0138	0.1568	5.1706	1.3575	0.1489	1.5064		9,477.472 0	9,477.472 0	0.4443		9,488.579 1

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Summer

3.4 Building Construction - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.063 1	2,553.063 1	0.6229		2,568.634 5
Total	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.063 1	2,553.063 1	0.6229		2,568.634 5

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
Vendor	0.7932	22.2561	5.3619	0.0523	1.2186	0.1252	1.3438	0.3508	0.1198	0.4706		5,492.836 2	5,492.836 2	0.2799		5,499.833 2
Worker	2.0179	1.6041	17.1972	0.0401	3.7952	0.0316	3.8268	1.0067	0.0291	1.0358		3,984.635 8	3,984.635 8	0.1644		3,988.745 9
Total	2.8111	23.8602	22.5591	0.0924	5.0138	0.1568	5.1706	1.3575	0.1489	1.5064		9,477.472 0	9,477.472 0	0.4443		9,488.579 1

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Summer

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	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	0.6476	20.3303	4.6362	0.0519	1.2187	0.0611	1.2798	0.3508	0.0585	0.4093		5,445.8598	5,445.8598	0.2702		5,452.6151
Worker	1.8666	1.4323	15.6902	0.0388	3.7952	0.0306	3.8259	1.0067	0.0283	1.0349		3,859.8979	3,859.8979	0.1472		3,863.5778
Total	2.5142	21.7626	20.3264	0.0907	5.0139	0.0918	5.1057	1.3575	0.0867	1.4442		9,305.7577	9,305.7577	0.4174		9,316.1928

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Summer

3.4 Building Construction - 2021

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	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643

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
Vendor	0.6476	20.3303	4.6362	0.0519	1.2187	0.0611	1.2798	0.3508	0.0585	0.4093		5,445.8598	5,445.8598	0.2702		5,452.6151
Worker	1.8666	1.4323	15.6902	0.0388	3.7952	0.0306	3.8259	1.0067	0.0283	1.0349		3,859.8979	3,859.8979	0.1472		3,863.5778
Total	2.5142	21.7626	20.3264	0.0907	5.0139	0.0918	5.1057	1.3575	0.0867	1.4442		9,305.7577	9,305.7577	0.4174		9,316.1928

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Summer

3.5 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235		2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	1.1191					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	2.3747	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235		2,207.2109	2,207.2109	0.7139		2,225.0573

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	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
Worker	0.0606	0.0465	0.5094	1.2600e-003	0.1232	9.9000e-004	0.1242	0.0327	9.2000e-004	0.0336		125.3214	125.3214	4.7800e-003		125.4408
Total	0.0606	0.0465	0.5094	1.2600e-003	0.1232	9.9000e-004	0.1242	0.0327	9.2000e-004	0.0336		125.3214	125.3214	4.7800e-003		125.4408

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Summer

3.5 Paving - 2021

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	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235	0.0000	2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	1.1191					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	2.3747	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235	0.0000	2,207.2109	2,207.2109	0.7139		2,225.0573

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
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0606	0.0465	0.5094	1.2600e-003	0.1232	9.9000e-004	0.1242	0.0327	9.2000e-004	0.0336		125.3214	125.3214	4.7800e-003		125.4408
Total	0.0606	0.0465	0.5094	1.2600e-003	0.1232	9.9000e-004	0.1242	0.0327	9.2000e-004	0.0336		125.3214	125.3214	4.7800e-003		125.4408

4.0 Operational Detail - Mobile

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Summer

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	5.6446	26.7211	64.1084	0.1883	13.7868	0.1868	13.9736	3.6932	0.1755	3.8686		19,035.78 43	19,035.78 43	0.9759		19,060.18 12
Unmitigated	5.6446	26.7211	64.1084	0.1883	13.7868	0.1868	13.9736	3.6932	0.1755	3.8686		19,035.78 43	19,035.78 43	0.9759		19,060.18 12

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Manufacturing	2,215.60	864.20	359.60	5,130,749	5,130,749
Parking Lot	0.00	0.00	0.00		
Total	2,215.60	864.20	359.60	5,130,749	5,130,749

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Manufacturing	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Summer

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Manufacturing	0.538577	0.029539	0.200691	0.130346	0.023427	0.005544	0.018258	0.038656	0.003068	0.002679	0.007152	0.001102	0.000959
Parking Lot	0.538577	0.029539	0.200691	0.130346	0.023427	0.005544	0.018258	0.038656	0.003068	0.002679	0.007152	0.001102	0.000959

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.3676	3.3421	2.8073	0.0201		0.2540	0.2540		0.2540	0.2540		4,010.4593	4,010.4593	0.0769	0.0735	4,034.2915
NaturalGas Unmitigated	0.4521	4.1097	3.4522	0.0247		0.3123	0.3123		0.3123	0.3123		4,931.6358	4,931.6358	0.0945	0.0904	4,960.9420

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Summer

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Manufacturing	41918.9	0.4521	4.1097	3.4522	0.0247		0.3123	0.3123		0.3123	0.3123		4,931.6358	4,931.6358	0.0945	0.0904	4,960.9420
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.4521	4.1097	3.4522	0.0247		0.3123	0.3123		0.3123	0.3123		4,931.6358	4,931.6358	0.0945	0.0904	4,960.9420

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Manufacturing	34.0889	0.3676	3.3421	2.8073	0.0201		0.2540	0.2540		0.2540	0.2540		4,010.4593	4,010.4593	0.0769	0.0735	4,034.2915
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.3676	3.3421	2.8073	0.0201		0.2540	0.2540		0.2540	0.2540		4,010.4593	4,010.4593	0.0769	0.0735	4,034.2915

6.0 Area Detail

6.1 Mitigation Measures Area

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	14.8762	1.0400e-003	0.1129	1.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004		0.2410	0.2410	6.4000e-004		0.2570
Unmitigated	14.8762	1.0400e-003	0.1129	1.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004		0.2410	0.2410	6.4000e-004		0.2570

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.2691					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	12.5965					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0105	1.0400e-003	0.1129	1.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004		0.2410	0.2410	6.4000e-004		0.2570
Total	14.8762	1.0400e-003	0.1129	1.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004		0.2410	0.2410	6.4000e-004		0.2570

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Summer

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.2691					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	12.5965					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0105	1.0400e-003	0.1129	1.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004		0.2410	0.2410	6.4000e-004		0.2570
Total	14.8762	1.0400e-003	0.1129	1.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004		0.2410	0.2410	6.4000e-004		0.2570

7.0 Water Detail

7.1 Mitigation Measures Water

- Apply Water Conservation Strategy
- Install Low Flow Bathroom Faucet
- Install Low Flow Kitchen Faucet
- Install Low Flow Toilet
- Install Low Flow Shower

8.0 Waste Detail

8.1 Mitigation Measures Waste

- Institute Recycling and Composting Services

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Summer

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Forklifts	2	1.00	200	89	0.20	Diesel

UnMitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	lb/day										lb/day					
Forklifts	0.0325	0.2963	0.2934	3.8000e-004		0.0210	0.0210		0.0194	0.0194		37.1928	37.1928	0.0120		37.4935
Total	0.0325	0.2963	0.2934	3.8000e-004		0.0210	0.0210		0.0194	0.0194		37.1928	37.1928	0.0120		37.4935

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	0	10	0	0.73	Diesel

Boilers

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

Equipment Type	Number
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Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Summer

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e	
Equipment Type	lb/day										lb/day						
Emergency Generator - Diesel (0 - 11 HP)	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000			0.0000
Total	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000			0.0000

11.0 Vegetation

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Winter

Joby Aviation Manufacturing Facility Project
Monterey Bay Unified APCD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Manufacturing	580.00	1000sqft	13.31	580,000.00	0
Parking Lot	521.00	1000sqft	11.96	521,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.8	Precipitation Freq (Days)	53
Climate Zone	4			Operational Year	2021
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	290	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Winter

Project Characteristics - PG&E 2020 Rate = 290

Land Use -

Construction Phase - Adjusted construction schedule per Initial Study Project Description

Off-road Equipment - 59 hours of crushing total

Grading - 25.3 acres of grading

Energy Use -

Water And Wastewater - 100% aerobic, estimated annual water use provided by client

Operational Off-Road Equipment - 2 Forklifts running for one hour a day for 200 days per client operational information

Stationary Sources - Emergency Generators and Fire Pumps -

Sequestration - planting 158 trees of various species, see Landscape Plan in Initial Study

Construction Off-road Equipment Mitigation -

Energy Mitigation - Accounting for updated standards

Water Mitigation - Consistent with state requirements

Waste Mitigation - 50% waste diverted consistent with state requirements.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	440.00	346.00
tblConstructionPhase	NumDays	45.00	36.00
tblConstructionPhase	NumDays	35.00	28.00
tblConstructionPhase	NumDays	20.00	40.00
tblConstructionPhase	PhaseEndDate	1/18/2022	8/12/2021
tblConstructionPhase	PhaseEndDate	5/12/2020	4/15/2020
tblConstructionPhase	PhaseEndDate	3/8/2022	9/21/2021
tblConstructionPhase	PhaseEndDate	3/10/2020	2/25/2020
tblConstructionPhase	PhaseStartDate	5/13/2020	4/16/2020
tblConstructionPhase	PhaseStartDate	3/11/2020	2/26/2020
tblConstructionPhase	PhaseStartDate	1/19/2022	8/13/2021

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Winter

tblConstructionPhase	PhaseStartDate	2/12/2020	1/1/2020
tblGrading	AcresOfGrading	90.00	25.30
tblOffRoadEquipment	HorsePower	85.00	510.00
tblOffRoadEquipment	OffRoadEquipmentType		Crushing/Proc. Equipment
tblOperationalOffRoadEquipment	OperDaysPerYear	260.00	200.00
tblOperationalOffRoadEquipment	OperHoursPerDay	8.00	1.00
tblOperationalOffRoadEquipment	OperLoadFactor	0.20	0.20
tblOperationalOffRoadEquipment	OperOffRoadEquipmentNumber	0.00	2.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	290
tblSequestration	NumberOfNewTrees	0.00	158.00
tblStationaryGeneratorsPumpsEF	CH4_EF	0.07	0.07
tblStationaryGeneratorsPumpsEF	CO_EF	5.97	5.97
tblStationaryGeneratorsPumpsEF	NOX_EF	5.32	5.32
tblStationaryGeneratorsPumpsEF	PM10_EF	0.60	0.60
tblStationaryGeneratorsPumpsEF	PM2_5_EF	0.60	0.60
tblStationaryGeneratorsPumpsEF	ROG_EF	2.2480e-003	2.2477e-003
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	10.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblTripsAndVMT	WorkerTripNumber	20.00	18.00
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	IndoorWaterUseRate	134,125,000.00	4,861,696.00
tblWater	SepticTankPercent	10.33	0.00

2.0 Emissions Summary

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Winter

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	14.8762	1.0400e-003	0.1129	1.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004		0.2410	0.2410	6.4000e-004		0.2570
Energy	0.4521	4.1097	3.4522	0.0247		0.3123	0.3123		0.3123	0.3123		4,931.6358	4,931.6358	0.0945	0.0904	4,960.9420
Mobile	5.3048	28.3721	66.7964	0.1789	13.7868	0.1894	13.9762	3.6932	0.1780	3.8711		18,085.8313	18,085.8313	1.0017		18,110.8739
Offroad	0.0325	0.2963	0.2934	3.8000e-004		0.0210	0.0210		0.0194	0.0194		37.1928	37.1928	0.0120		37.4935
Stationary	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	20.6655	32.7791	70.6548	0.2040	13.7868	0.5232	14.3100	3.6932	0.5100	4.2032		23,054.9008	23,054.9008	1.1089	0.0904	23,109.5664

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Winter

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	14.8762	1.0400e-003	0.1129	1.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004		0.2410	0.2410	6.4000e-004		0.2570
Energy	0.3676	3.3421	2.8073	0.0201		0.2540	0.2540		0.2540	0.2540		4,010.4593	4,010.4593	0.0769	0.0735	4,034.2915
Mobile	5.3048	28.3721	66.7964	0.1789	13.7868	0.1894	13.9762	3.6932	0.1780	3.8711		18,085.8313	18,085.8313	1.0017		18,110.8739
Offroad	0.0325	0.2963	0.2934	3.8000e-004		0.0210	0.0210		0.0194	0.0194		37.1928	37.1928	0.0120		37.4935
Stationary	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	20.5811	32.0115	70.0099	0.1993	13.7868	0.4649	14.2517	3.6932	0.4517	4.1449		22,133.7243	22,133.7243	1.0913	0.0735	22,182.9158

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.41	2.34	0.91	2.26	0.00	11.15	0.41	0.00	11.44	1.39	0.00	4.00	4.00	1.59	18.67	4.01

3.0 Construction Detail

Construction Phase

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Winter

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2020	2/25/2020	5	40	
2	Grading	Grading	2/26/2020	4/15/2020	5	36	
3	Building Construction	Building Construction	4/16/2020	8/12/2021	5	346	
4	Paving	Paving	8/13/2021	9/21/2021	5	28	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 25.3

Acres of Paving: 11.96

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

OffRoad Equipment

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Crushing/Proc. Equipment	1	1.48	510	0.78
Grading	Excavators	2	8.00	158	0.38
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Paving Equipment	2	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	8	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	462.00	180.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Winter

Water Exposed Area

3.2 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	4.4400	44.7910	22.9068	0.0445		2.2789	2.2789		2.1031	2.1031		4,420.2380	4,420.2380	1.2242		4,450.8424
Total	4.4400	44.7910	22.9068	0.0445	18.0663	2.2789	20.3452	9.9307	2.1031	12.0338		4,420.2380	4,420.2380	1.2242		4,450.8424

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	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
Worker	0.0860	0.0785	0.6664	1.4700e-003	0.1479	1.2300e-003	0.1491	0.0392	1.1300e-003	0.0404		145.8918	145.8918	6.1500e-003		146.0456
Total	0.0860	0.0785	0.6664	1.4700e-003	0.1479	1.2300e-003	0.1491	0.0392	1.1300e-003	0.0404		145.8918	145.8918	6.1500e-003		146.0456

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Winter

3.2 Site Preparation - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.1298	0.0000	8.1298	4.4688	0.0000	4.4688			0.0000			0.0000
Off-Road	4.4400	44.7910	22.9068	0.0445		2.2789	2.2789		2.1031	2.1031	0.0000	4,420.2380	4,420.2380	1.2242		4,450.8424
Total	4.4400	44.7910	22.9068	0.0445	8.1298	2.2789	10.4087	4.4688	2.1031	6.5719	0.0000	4,420.2380	4,420.2380	1.2242		4,450.8424

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
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0860	0.0785	0.6664	1.4700e-003	0.1479	1.2300e-003	0.1491	0.0392	1.1300e-003	0.0404		145.8918	145.8918	6.1500e-003		146.0456
Total	0.0860	0.0785	0.6664	1.4700e-003	0.1479	1.2300e-003	0.1491	0.0392	1.1300e-003	0.0404		145.8918	145.8918	6.1500e-003		146.0456

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Winter

3.3 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.7674	0.0000	6.7674	3.3907	0.0000	3.3907			0.0000			0.0000
Off-Road	4.4501	50.1975	31.9583	0.0620		2.1739	2.1739		2.0000	2.0000		6,005.8653	6,005.8653	1.9424		6,054.4257
Total	4.4501	50.1975	31.9583	0.0620	6.7674	2.1739	8.9413	3.3907	2.0000	5.3907		6,005.8653	6,005.8653	1.9424		6,054.4257

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	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
Worker	0.0956	0.0872	0.7405	1.6300e-003	0.1643	1.3700e-003	0.1657	0.0436	1.2600e-003	0.0448		162.1020	162.1020	6.8300e-003		162.2729
Total	0.0956	0.0872	0.7405	1.6300e-003	0.1643	1.3700e-003	0.1657	0.0436	1.2600e-003	0.0448		162.1020	162.1020	6.8300e-003		162.2729

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Winter

3.3 Grading - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.0453	0.0000	3.0453	1.5258	0.0000	1.5258			0.0000			0.0000
Off-Road	4.4501	50.1975	31.9583	0.0620		2.1739	2.1739		2.0000	2.0000	0.0000	6,005.8653	6,005.8653	1.9424		6,054.4257
Total	4.4501	50.1975	31.9583	0.0620	3.0453	2.1739	5.2192	1.5258	2.0000	3.5258	0.0000	6,005.8653	6,005.8653	1.9424		6,054.4257

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
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0956	0.0872	0.7405	1.6300e-003	0.1643	1.3700e-003	0.1657	0.0436	1.2600e-003	0.0448		162.1020	162.1020	6.8300e-003		162.2729
Total	0.0956	0.0872	0.7405	1.6300e-003	0.1643	1.3700e-003	0.1657	0.0436	1.2600e-003	0.0448		162.1020	162.1020	6.8300e-003		162.2729

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Winter

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.063 1	2,553.063 1	0.6229		2,568.634 5
Total	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.063 1	2,553.063 1	0.6229		2,568.634 5

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	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	0.8407	22.4451	6.2197	0.0507	1.2186	0.1284	1.3471	0.3508	0.1229	0.4737		5,321.389 6	5,321.389 6	0.3101		5,329.142 5
Worker	2.2079	2.0141	17.1054	0.0377	3.7952	0.0316	3.8268	1.0067	0.0291	1.0358		3,744.557 2	3,744.557 2	0.1578		3,748.503 1
Total	3.0486	24.4591	23.3251	0.0884	5.0138	0.1600	5.1739	1.3575	0.1520	1.5095		9,065.946 8	9,065.946 8	0.4680		9,077.645 7

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Winter

3.4 Building Construction - 2020

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.063 1	2,553.063 1	0.6229		2,568.634 5
Total	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.063 1	2,553.063 1	0.6229		2,568.634 5

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
Vendor	0.8407	22.4451	6.2197	0.0507	1.2186	0.1284	1.3471	0.3508	0.1229	0.4737		5,321.389 6	5,321.389 6	0.3101		5,329.142 5
Worker	2.2079	2.0141	17.1054	0.0377	3.7952	0.0316	3.8268	1.0067	0.0291	1.0358		3,744.557 2	3,744.557 2	0.1578		3,748.503 1
Total	3.0486	24.4591	23.3251	0.0884	5.0138	0.1600	5.1739	1.3575	0.1520	1.5095		9,065.946 8	9,065.946 8	0.4680		9,077.645 7

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Winter

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	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	0.6914	20.4475	5.4241	0.0503	1.2187	0.0640	1.2827	0.3508	0.0612	0.4121		5,274.7410	5,274.7410	0.3006		5,282.2556
Worker	2.0417	1.7980	15.5510	0.0365	3.7952	0.0306	3.8259	1.0067	0.0283	1.0349		3,627.3024	3,627.3024	0.1409		3,630.8251
Total	2.7331	22.2456	20.9751	0.0867	5.0139	0.0947	5.1086	1.3575	0.0895	1.4470		8,902.0434	8,902.0434	0.4415		8,913.0807

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Winter

3.4 Building Construction - 2021

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	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643

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
Vendor	0.6914	20.4475	5.4241	0.0503	1.2187	0.0640	1.2827	0.3508	0.0612	0.4121		5,274.7410	5,274.7410	0.3006		5,282.2556
Worker	2.0417	1.7980	15.5510	0.0365	3.7952	0.0306	3.8259	1.0067	0.0283	1.0349		3,627.3024	3,627.3024	0.1409		3,630.8251
Total	2.7331	22.2456	20.9751	0.0867	5.0139	0.0947	5.1086	1.3575	0.0895	1.4470		8,902.0434	8,902.0434	0.4415		8,913.0807

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Winter

3.5 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235		2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	1.1191					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	2.3747	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235		2,207.2109	2,207.2109	0.7139		2,225.0573

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	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
Worker	0.0663	0.0584	0.5049	1.1800e-003	0.1232	9.9000e-004	0.1242	0.0327	9.2000e-004	0.0336		117.7696	117.7696	4.5700e-003		117.8839
Total	0.0663	0.0584	0.5049	1.1800e-003	0.1232	9.9000e-004	0.1242	0.0327	9.2000e-004	0.0336		117.7696	117.7696	4.5700e-003		117.8839

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Winter

3.5 Paving - 2021

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	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235	0.0000	2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	1.1191					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	2.3747	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235	0.0000	2,207.2109	2,207.2109	0.7139		2,225.0573

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
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0663	0.0584	0.5049	1.1800e-003	0.1232	9.9000e-004	0.1242	0.0327	9.2000e-004	0.0336		117.7696	117.7696	4.5700e-003		117.8839
Total	0.0663	0.0584	0.5049	1.1800e-003	0.1232	9.9000e-004	0.1242	0.0327	9.2000e-004	0.0336		117.7696	117.7696	4.5700e-003		117.8839

4.0 Operational Detail - Mobile

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Winter

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	5.3048	28.3721	66.7964	0.1789	13.7868	0.1894	13.9762	3.6932	0.1780	3.8711		18,085.83 13	18,085.83 13	1.0017		18,110.873 9
Unmitigated	5.3048	28.3721	66.7964	0.1789	13.7868	0.1894	13.9762	3.6932	0.1780	3.8711		18,085.83 13	18,085.83 13	1.0017		18,110.873 9

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Manufacturing	2,215.60	864.20	359.60	5,130,749	5,130,749
Parking Lot	0.00	0.00	0.00		
Total	2,215.60	864.20	359.60	5,130,749	5,130,749

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Manufacturing	9.50	7.30	7.30	59.00	28.00	13.00	92	5	3
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Winter

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Manufacturing	0.538577	0.029539	0.200691	0.130346	0.023427	0.005544	0.018258	0.038656	0.003068	0.002679	0.007152	0.001102	0.000959
Parking Lot	0.538577	0.029539	0.200691	0.130346	0.023427	0.005544	0.018258	0.038656	0.003068	0.002679	0.007152	0.001102	0.000959

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.3676	3.3421	2.8073	0.0201		0.2540	0.2540		0.2540	0.2540		4,010.4593	4,010.4593	0.0769	0.0735	4,034.2915
NaturalGas Unmitigated	0.4521	4.1097	3.4522	0.0247		0.3123	0.3123		0.3123	0.3123		4,931.6358	4,931.6358	0.0945	0.0904	4,960.9420

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Winter

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Manufacturing	41918.9	0.4521	4.1097	3.4522	0.0247		0.3123	0.3123		0.3123	0.3123		4,931.6358	4,931.6358	0.0945	0.0904	4,960.9420
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.4521	4.1097	3.4522	0.0247		0.3123	0.3123		0.3123	0.3123		4,931.6358	4,931.6358	0.0945	0.0904	4,960.9420

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Manufacturing	34.0889	0.3676	3.3421	2.8073	0.0201		0.2540	0.2540		0.2540	0.2540		4,010.4593	4,010.4593	0.0769	0.0735	4,034.2915
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.3676	3.3421	2.8073	0.0201		0.2540	0.2540		0.2540	0.2540		4,010.4593	4,010.4593	0.0769	0.0735	4,034.2915

6.0 Area Detail

6.1 Mitigation Measures Area

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	14.8762	1.0400e-003	0.1129	1.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004		0.2410	0.2410	6.4000e-004		0.2570
Unmitigated	14.8762	1.0400e-003	0.1129	1.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004		0.2410	0.2410	6.4000e-004		0.2570

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.2691					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	12.5965					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0105	1.0400e-003	0.1129	1.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004		0.2410	0.2410	6.4000e-004		0.2570
Total	14.8762	1.0400e-003	0.1129	1.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004		0.2410	0.2410	6.4000e-004		0.2570

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Winter

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.2691					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	12.5965					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0105	1.0400e-003	0.1129	1.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004		0.2410	0.2410	6.4000e-004		0.2570
Total	14.8762	1.0400e-003	0.1129	1.0000e-005		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004		0.2410	0.2410	6.4000e-004		0.2570

7.0 Water Detail

7.1 Mitigation Measures Water

- Apply Water Conservation Strategy
- Install Low Flow Bathroom Faucet
- Install Low Flow Kitchen Faucet
- Install Low Flow Toilet
- Install Low Flow Shower

8.0 Waste Detail

8.1 Mitigation Measures Waste

- Institute Recycling and Composting Services

Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Winter

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
Forklifts	2	1.00	200	89	0.20	Diesel

UnMitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	lb/day										lb/day					
Forklifts	0.0325	0.2963	0.2934	3.8000e-004		0.0210	0.0210		0.0194	0.0194		37.1928	37.1928	0.0120		37.4935
Total	0.0325	0.2963	0.2934	3.8000e-004		0.0210	0.0210		0.0194	0.0194		37.1928	37.1928	0.0120		37.4935

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	0	10	0	0.73	Diesel

Boilers

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

Equipment Type	Number
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Joby Aviation Manufacturing Facility Project - Monterey Bay Unified APCD Air District, Winter

10.1 Stationary Sources

Unmitigated/Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Equipment Type	lb/day										lb/day					
Emergency Generator - Diesel (0 - 11 HP)	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

11.0 Vegetation
