Appendix B – Air Quality/Greenhouse Gas Emissions/Energy Data

Lake Gregory Sediment Management Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Lake Gregory Sediment Management
Construction Start Date	9/3/2024
Operational Year	2024
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.80
Precipitation (days)	8.40
Location	24171 Lake Dr, Crestline, CA 92325, USA
County	San Bernardino-South Coast
City	Unincorporated
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5149
EDFZ	10
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.21

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

City Park	84.0	Acre	84.0	0.00	0.00	0.00	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.20	1.01	7.40	10.6	0.01	0.34	0.26	0.60	0.31	0.06	0.37	—	1,657	1,657	0.07	0.02	1.15	1,666
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	13.9	10.8	89.6	99.6	0.28	3.55	4.45	8.01	3.22	1.03	4.26	—	34,355	34,355	2.05	1.74	0.64	34,927
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.28	1.78	14.7	16.3	0.05	0.58	0.73	1.31	0.53	0.17	0.70	—	5,635	5,635	0.34	0.29	1.75	5,731
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.42	0.32	2.69	2.97	0.01	0.11	0.13	0.24	0.10	0.03	0.13	—	933	933	0.06	0.05	0.29	949

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	1.20	1.01	7.40	10.6	0.01	0.34	0.26	0.60	0.31	0.06	0.37	—	1,657	1,657	0.07	0.02	1.15	1,666
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	13.9	10.8	89.6	99.6	0.28	3.55	4.45	8.01	3.22	1.03	4.26	—	34,355	34,355	2.05	1.74	0.64	34,927
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	2.28	1.78	14.7	16.3	0.05	0.58	0.73	1.31	0.53	0.17	0.70	—	5,635	5,635	0.34	0.29	1.75	5,731
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.42	0.32	2.69	2.97	0.01	0.11	0.13	0.24	0.10	0.03	0.13	—	933	933	0.06	0.05	0.29	949

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Area	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Water	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Waste	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3. Construction Emissions Details

3.1. Temporary Inflatable Cofferdam Installation (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.08	0.90	7.30	8.94	0.01	0.34	—	0.34	0.31	—	0.31	—	1,369	1,369	0.06	0.01	—	1,374
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.10	0.12	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	18.8	18.8	< 0.005	< 0.005	—	18.8
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.11	3.11	< 0.005	< 0.005	—	3.12
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.10	1.69	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	288	288	0.01	0.01	1.15	292
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.67	3.67	< 0.005	< 0.005	0.01	3.72
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.61	0.61	< 0.005	< 0.005	< 0.005	0.62
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Dewatering/Clearing&Grubbing (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.08	0.90	7.30	8.94	0.01	0.34	—	0.34	0.31	—	0.31	—	1,369	1,369	0.06	0.01	—	1,374
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.10	0.12	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	18.8	18.8	< 0.005	< 0.005	—	18.8

Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.11	3.11	< 0.005	< 0.005	—	3.12
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.10	1.69	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	288	288	0.01	0.01	1.15	292
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.67	3.67	< 0.005	< 0.005	0.01	3.72
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.61	0.61	< 0.005	< 0.005	< 0.005	0.62
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Scarify and Dry/Dewater (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.08	0.90	7.30	8.94	0.01	0.34	—	0.34	0.31	—	0.31	—	1,369	1,369	0.06	0.01	—	1,374
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.10	0.12	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	18.8	18.8	< 0.005	< 0.005	—	18.8
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.11	3.11	< 0.005	< 0.005	—	3.12

Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.10	1.69	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	288	288	0.01	0.01	1.15	292
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.67	3.67	< 0.005	< 0.005	0.01	3.72
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.61	0.61	< 0.005	< 0.005	< 0.005	0.62
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Clearing and Grubbing (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.08	0.90	7.30	8.94	0.01	0.34	—	0.34	0.31	—	0.31	—	1,369	1,369	0.06	0.01	—	1,374
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.10	0.12	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	18.8	18.8	< 0.005	< 0.005	—	18.8
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.11	3.11	< 0.005	< 0.005	—	3.12
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.10	1.69	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	288	288	0.01	0.01	1.15	292
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.67	3.67	< 0.005	< 0.005	0.01	3.72
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.61	0.61	< 0.005	< 0.005	< 0.005	0.62
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Grading (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	11.4	9.58	72.0	80.0	0.21	3.13	—	3.13	2.88	—	2.88	—	22,740	22,740	0.92	0.18	—	22,818

Dust From Material Movement	—	—	—	—	—	—	0.84	0.84	—	0.09	0.09	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.87	1.57	11.8	13.1	0.03	0.51	—	0.51	0.47	—	0.47	—	3,738	3,738	0.15	0.03	—	3,751
Dust From Material Movement	—	—	—	—	—	—	0.14	0.14	—	0.02	0.02	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.34	0.29	2.16	2.40	0.01	0.09	—	0.09	0.09	—	0.09	—	619	619	0.03	0.01	—	621
Dust From Material Movement	—	—	—	—	—	—	0.03	0.03	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.41	0.37	0.43	4.79	0.00	0.00	0.98	0.98	0.00	0.23	0.23	—	990	990	0.05	0.04	0.11	1,002
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	1.23	0.19	12.0	6.47	0.06	0.18	2.46	2.64	0.12	0.67	0.79	—	9,362	9,362	1.03	1.51	0.51	9,837

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.07	0.83	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	165	165	0.01	0.01	0.31	167
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.20	0.03	1.99	1.06	0.01	0.03	0.40	0.43	0.02	0.11	0.13	—	1,539	1,539	0.17	0.25	1.39	1,618
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.15	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	27.3	27.3	< 0.005	< 0.005	0.05	27.7
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.04	0.01	0.36	0.19	< 0.005	0.01	0.07	0.08	< 0.005	0.02	0.02	—	255	255	0.03	0.04	0.23	268

3.11. Stormdrain Improvements (2024) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.75	0.63	5.21	7.53	0.01	0.25	—	0.25	0.23	—	0.23	—	1,099	1,099	0.04	0.01	—	1,103
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.43	0.62	< 0.005	0.02	—	0.02	0.02	—	0.02	—	90.3	90.3	< 0.005	< 0.005	—	90.7
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.01	0.01	0.08	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.0	15.0	< 0.005	< 0.005	—	15.0
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.07	0.80	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	165	165	0.01	0.01	0.02	167
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	13.7	13.7	< 0.005	< 0.005	0.03	13.9
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.28	2.28	< 0.005	< 0.005	< 0.005	2.31
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	—	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
City Park	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Temporary Inflatable Cofferdam Installation	Site Preparation	9/2/2024	9/6/2024	5.00	5.00	—
Dewatering/Clearing&Grubbing	Site Preparation	9/9/2024	9/13/2024	5.00	5.00	—
Scarify and Dry/Dewater	Site Preparation	9/16/2024	9/20/2024	5.00	5.00	—
Clearing and Grubbing	Site Preparation	9/23/2024	9/27/2024	5.00	5.00	—
Grading	Grading	10/1/2024	12/23/2024	5.00	60.0	—
Stormdrain Improvements	Trenching	11/12/2024	12/23/2024	5.00	30.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Temporary Inflatable Cofferdam Installation	Pumps	Diesel	Average	4.00	8.00	11.0	0.74
Temporary Inflatable Cofferdam Installation	Sweepers/Scrubbers	Diesel	Average	1.00	8.00	36.0	0.46
Temporary Inflatable Cofferdam Installation	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Dewatering/Clearing&Grubbing	Pumps	Diesel	Average	4.00	8.00	11.0	0.74
Dewatering/Clearing&Grubbing	Sweepers/Scrubbers	Diesel	Average	1.00	8.00	36.0	0.46
Dewatering/Clearing&Grubbing	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37

Scarify and Dry/Dewater	Pumps	Diesel	Average	4.00	8.00	11.0	0.74
Scarify and Dry/Dewater	Sweepers/Scrubbers	Diesel	Average	1.00	8.00	36.0	0.46
Scarify and Dry/Dewater	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Clearing and Grubbing	Pumps	Diesel	Average	4.00	8.00	11.0	0.74
Clearing and Grubbing	Sweepers/Scrubbers	Diesel	Average	1.00	8.00	36.0	0.46
Clearing and Grubbing	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Grading	Cement and Mortar Mixers	Diesel	Average	1.00	8.00	10.0	0.56
Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	6.00	8.00	148	0.41
Grading	Off-Highway Trucks	Diesel	Average	12.0	8.00	376	0.38
Grading	Rollers	Diesel	Average	1.00	8.00	36.0	0.38
Grading	Rubber Tired Loaders	Diesel	Average	3.00	8.00	150	0.36
Grading	Skid Steer Loaders	Diesel	Average	2.00	8.00	71.0	0.37
Grading	Sweepers/Scrubbers	Diesel	Average	1.00	8.00	36.0	0.46
Grading	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37
Stormdrain Improvements	Cement and Mortar Mixers	Diesel	Average	1.00	8.00	10.0	0.56
Stormdrain Improvements	Sweepers/Scrubbers	Diesel	Average	1.00	8.00	36.0	0.46
Stormdrain Improvements	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	84.0	0.37

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Temporary Inflatable Cofferdam Installation	—	—	—	—
Temporary Inflatable Cofferdam Installation	Worker	20.0	18.5	LDA,LDT1,LDT2
Temporary Inflatable Cofferdam Installation	Vendor	—	10.2	HHDT,MHDT
Temporary Inflatable Cofferdam Installation	Hauling	0.00	20.0	HHDT
Temporary Inflatable Cofferdam Installation	Onsite truck	—	—	HHDT
Dewatering/Clearing&Grubbing	—	—	—	—
Dewatering/Clearing&Grubbing	Worker	20.0	18.5	LDA,LDT1,LDT2
Dewatering/Clearing&Grubbing	Vendor	—	10.2	HHDT,MHDT
Dewatering/Clearing&Grubbing	Hauling	0.00	20.0	HHDT
Dewatering/Clearing&Grubbing	Onsite truck	—	—	HHDT
Scarify and Dry/Dewater	—	—	—	—
Scarify and Dry/Dewater	Worker	20.0	18.5	LDA,LDT1,LDT2
Scarify and Dry/Dewater	Vendor	—	10.2	HHDT,MHDT
Scarify and Dry/Dewater	Hauling	0.00	20.0	HHDT
Scarify and Dry/Dewater	Onsite truck	—	—	HHDT
Clearing and Grubbing	—	—	—	—
Clearing and Grubbing	Worker	20.0	18.5	LDA,LDT1,LDT2
Clearing and Grubbing	Vendor	—	10.2	HHDT,MHDT
Clearing and Grubbing	Hauling	0.00	20.0	HHDT
Clearing and Grubbing	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	75.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT

Grading	Hauling	133	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Stormdrain Improvements	—	—	—	—
Stormdrain Improvements	Worker	12.5	18.5	LDA,LDT1,LDT2
Stormdrain Improvements	Vendor	—	10.2	HHDT,MHDT
Stormdrain Improvements	Hauling	0.00	20.0	HHDT
Stormdrain Improvements	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Water unpaved roads twice daily	55%	55%
Limit vehicle speeds on unpaved roads to 25 mph	44%	44%

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Temporary Inflatable Cofferdam Installation	—	—	0.00	0.00	—
Dewatering/Clearing&Grubbing	—	—	0.00	0.00	—
Scarify and Dry/Dewater	—	—	0.00	0.00	—

Clearing and Grubbing	—	—	0.00	0.00	—
Grading	4,312	59,496	180	0.00	—

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	3	74%	74%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
City Park	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	532	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
City Park	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	0.00	0.00	—

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
City Park	0.00	532	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
City Park	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
City Park	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
City Park	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
City Park	Stand-alone retail refrigerators and freezers	R-134a	1,430	0.04	1.00	0.00	1.00

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	28.8	annual days of extreme heat

Extreme Precipitation	13.8	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	38.0	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	100
AQ-PM	42.0
AQ-DPM	11.6
Drinking Water	38.2
Lead Risk Housing	73.0
Pesticides	0.00

Toxic Releases	46.7
Traffic	1.26
Effect Indicators	—
CleanUp Sites	5.64
Groundwater	0.00
Haz Waste Facilities/Generators	1.80
Impaired Water Bodies	23.9
Solid Waste	55.5
Sensitive Population	—
Asthma	90.5
Cardio-vascular	98.3
Low Birth Weights	33.0
Socioeconomic Factor Indicators	—
Education	32.6
Housing	70.2
Linguistic	0.00
Poverty	55.7
Unemployment	25.2

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	26.35698704
Employed	4.914667009
Median HI	26.62645964
Education	—

Bachelor's or higher	31.19466188
High school enrollment	2.438085461
Preschool enrollment	55.49852432
Transportation	—
Auto Access	71.35891184
Active commuting	79.25060952
Social	—
2-parent households	23.23880405
Voting	68.26639292
Neighborhood	—
Alcohol availability	43.10278455
Park access	81.35506224
Retail density	30.05261132
Supermarket access	56.52508662
Tree canopy	94.75170024
Housing	—
Homeownership	65.25086616
Housing habitability	80.70062877
Low-inc homeowner severe housing cost burden	48.76170923
Low-inc renter severe housing cost burden	78.59617606
Uncrowded housing	66.9190299
Health Outcomes	—
Insured adults	34.04337226
Arthritis	0.0
Asthma ER Admissions	5.1
High Blood Pressure	0.0
Cancer (excluding skin)	0.0

Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	19.7
Cognitively Disabled	21.0
Physically Disabled	22.7
Heart Attack ER Admissions	5.5
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	94.3
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	99.3
SLR Inundation Area	0.0
Children	53.3
Elderly	15.4
English Speaking	72.3
Foreign-born	5.9
Outdoor Workers	51.2
Climate Change Adaptive Capacity	—

Impervious Surface Cover	96.9
Traffic Density	1.9
Traffic Access	23.0
Other Indices	—
Hardship	62.6
Other Decision Support	—
2016 Voting	76.2

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	43.0
Healthy Places Index Score for Project Location (b)	23.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification

Construction: Construction Phases	Per questionnaire
Construction: Off-Road Equipment	Per questionnaire
Operations: Vehicle Data	No operational emissions
Operations: Solid Waste	No operational emissions
Construction: Dust From Material Movement	Soil import/export during grading phase

Lake Gregory Regional Park Sitewide Sediment Management Project **Energy Calculations**

Construction On-Site (Off-Road) Fuel Consumption

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor	Fuel Consumption Rate (gallon/hour)[1]	Duration (total hours/day)	# days	Total Fuel Consumption (gallon)
Temporary Inflatable Cofferdam Installation	Pumps	4	8	11	0.74	0.33	32	5	52.10
Temporary Inflatable Cofferdam Installation	Sweepers/Scrubbers	1	8	36	0.46	0.66	8	5	26.50
Temporary Inflatable Cofferdam Installation	Tractors/Loaders/Backhoes	3	8	84	0.37	1.24	24	5	149.18
Dewatering/Clearing&Grubbing	Pumps	4	8	11	0.74	0.33	32	5	52.10
Dewatering/Clearing&Grubbing	Sweepers/Scrubbers	1	8	36	0.46	0.66	8	5	26.50
Dewatering/Clearing&Grubbing	Tractors/Loaders/Backhoes	3	8	84	0.37	1.24	24	5	149.18
Scarify and Dry/Dewater	Pumps	4	8	11	0.74	0.33	32	5	52.10
Scarify and Dry/Dewater	Sweepers/Scrubbers	1	8	36	0.46	0.66	8	5	26.50
Scarify and Dry/Dewater	Tractors/Loaders/Backhoes	3	8	84	0.37	1.24	24	5	149.18
Clearing and Grubbing	Pumps	4	8	11	0.74	0.33	32	5	52.10
Clearing and Grubbing	Sweepers/Scrubbers	1	8	36	0.46	0.66	8	5	26.50
Clearing and Grubbing	Tractors/Loaders/Backhoes	3	8	84	0.37	1.24	24	5	149.18
Grading	Cement and Mortar Mixers	1	8	10	0.56	0.22	8	60	107.52
Grading	Excavators	1	8	36	0.38	0.55	8	60	262.66
Grading	Graders	6	8	148	0.41	2.43	48	60	6,990.34
Grading	Off-Highway Trucks	12	8	376	0.38	5.72	96	60	32,919.55
Grading	Rollers	1	8	36	0.38	0.55	8	60	262.66
Grading	Rubber Tired Loaders	3	8	150	0.36	2.16	24	60	3,110.40
Grading	Skid Steer Loaders	2	8	71	0.37	1.05	16	60	1,008.77
Grading	Sweepers/Scrubbers	1	8	36	0.46	0.66	8	60	317.95
Grading	Tractors/Loaders/Backhoes	3	8	84	0.37	1.24	24	60	1,790.21
Stormdrain Improvements	Cement and Mortar Mixers	1	8	10	0.56	0.22	8	30	53.76
Stormdrain Improvements	Sweepers/Scrubbers	1	8	36	0.46	0.66	8	30	158.98
Stormdrain Improvements	Tractors/Loaders/Backhoes	3	8	84	0.37	1.24	24	30	895.10
							Total Construction Off-Road Fuel Consumption (gallon)		***48,788.99***
							Countywide Off-Road Fuel Consumption (2024) (gallon)[2]		***18,336,278.40***
							Percentage Increase Countywide		***0.2661%***

Notes:

1. Fuel Consumption Rate = Horsepower x Load Factor x Fuel Consumption Factor

   Where:

   Fuel Consumption Factor for a diesel engine is 0.04 gallons per horsepower per hour (gal/hp/hr) and a gasoline engine is 0.06 gal/hp/hr.

2. Countywide operational fuel consumption, off-road construction equipment diesel fuel consumption, and on-road fuel consumption are from CARB EMFAC2021.

Source: Refer to CalEEMod outputs for assumptions used in this analysis.

Lake Gregory Regional Park Sitewide Sediment Management Project **Energy Calculations**

Constrution Mobile (On-Road) Fuel Consumption

WORKER TRIPS

Phase	Phase Length (# days)	# Worker Trips	Worker Trip Length	Total VMT	Fuel Consumption Factor (Miles/Gallon/Day)[1]	Total Fuel Consumption (gallon)
Temporary Inflatable Cofferdam Installati	5	20	18.5	1,850		74.29
Dewatering/Clearing&Grubbing	5	20	18.5	1,850		74.29
Scarify and Dry/Dewater	5	20	18.5	1,850	**24.90284233**	74.29
Clearing and Grubbing	5	20	18.5	1,850		74.29
Grading	60	75	18.5	83,250		3,342.99
Stormdrain Improvements	30	12.5	18.5	6,938		278.58
					Worker Trips Total	*3,918.73*

VENDOR TRIPS

Phase	Phase Length (# days)	# Vendor Trips	Vendor Trip Length	Total VMT	Fuel Consumption Factor (Miles/Gallon/Day)[1]	Total Fuel Consumption (gallon)
Temporary Inflatable Cofferdam Installati	5	0	10.2	0		0.00
Dewatering/Clearing&Grubbing	5	0	10.2	0		0.00
Scarify and Dry/Dewater	5	0	10.2	0	**8.343886151**	0.00
Clearing and Grubbing	5	0	10.2	0		0.00
Grading	60	0	10.2	0		0.00
Stormdrain Improvements	30	0	10.2	0		0.00
					Vendor Trips Total	*0.00*

HAULING TRIPS

Phase	Phase Length (# days)	# Hauling Trips	Hauling Trip Length	Total VMT	Fuel Consumption Factor (Miles/Gallon/Day)[1]	Total Fuel Consumption (gallon)
Temporary Inflatable Cofferdam Installati	5	0	20	0		0.00
Dewatering/Clearing&Grubbing	5	0	20	0		0.00
Scarify and Dry/Dewater	5	0	20	0	**8.343886151**	0.00
Clearing and Grubbing	5	0	20	0		0.00
Grading	60	133	20	159,600		19,127.78
Stormdrain Improvements	30	0	20	0		0.00
					Hauling Trips Total	*19,127.78*
					Total Construction On-Road (Automotive) Fuel Consumption (gallon)	***23,046.51***
					Countywide On-Road Fuel Consumption (2024) (gallon) [1]	***1,127,753,071***
					Percentage Increase Countywide	***0.0020%***

Notes:

1. Countywide operational fuel consumption, off-road construction equipment diesel fuel consumption, and on-road fuel consumption are from CARB EMFAC2021.

Source: Refer to CalEEMod outputs for assumptions used in this analysis.

Appendix C – Biological Resources Assessment

Biological Resources Technical Report

Lake Gregory Regional Park

Sitewide Sediment Management Project

Crestline, California

March 4, 2024

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APPENDICES

1.0 INTRODUCTION

1.1 Background and Purpose

This report contains the findings of Michael Baker International's (Michael Baker) biological resources assessment for the approximately 132-acre Lake Gregory Regional Park Sitewide Sediment Management Project (project or project site) located in the unincorporated community of Crestline, San Bernardino County (County), California. The 132-acre project site includes Lake Gregory, all inlets and outlets, all proposed project features, and an approximate 100-foot buffer to ensure a comprehensive analysis was conducted. Michael Baker biologists conducted a literature review and field surveys in 2023 to characterize existing site conditions and assess the potential for special-status biological resources to occur within the project site that could pose a constraint to implementation of the proposed project. The submittal of this report is intended to satisfy the biological resource needs of the CEQA process. The County of San Bernardino, Department of Public Works-Special Districts is requesting administrative and discretionary action to approve the implementation of a sediment management project.

1.2 Project Description

The proposed project includes both the construction of improvements and routine maintenance elements. The construction of various improvements is necessary to improve recreational features and infrastructure supporting Lake Gregory Regional Park, primarily for water quality, recreational purposes, and public safety.

The construction of improvements includes the following actions:

- Improvement to the Swim Beach area including dredging, regrading, and placement of a permanent in-water barrier.
- Improvements to South Beach including dredging and regrading.
- Improvement to the majority of lake inlet locations along the lake perimeter with the addition of headwall structures and rip rap at some locations.
- Re-construction and enhancement of an ephemeral channel (San Moritz Channel Basins).

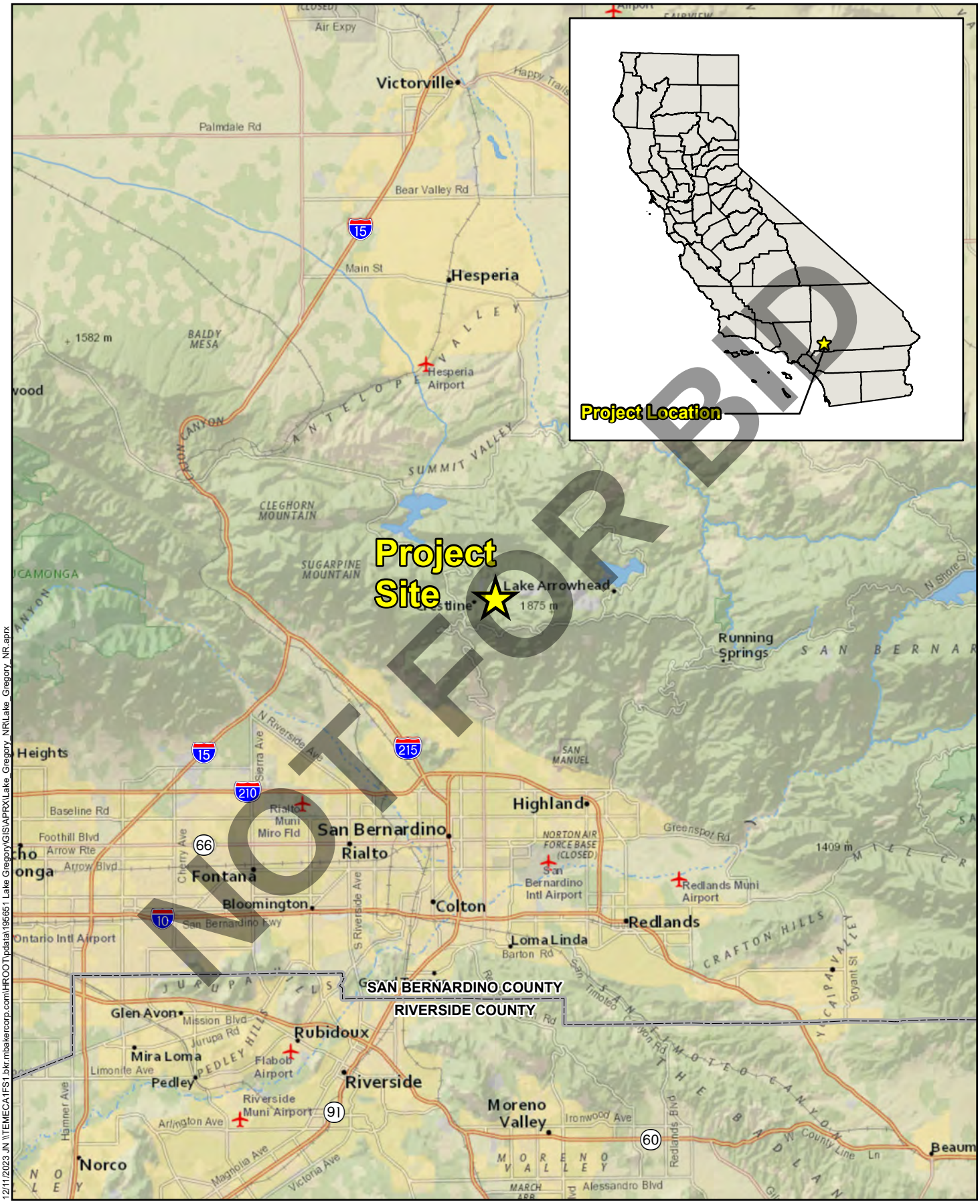
Maintenance includes the following actions:

- On-going sediment management and removal of existing and future sediment accumulation.
- Routine maintenance of Lake Gregory, San Moritz Channel Basins, and Library Basin, including Lake Gregory beach grading, lake and basin structural repairs and debris/trash removal, inlet/outlet repairs, access road and appurtenant structure repairs, slope repairs, maintenance of lake water surface/water quality operational standards, and vector control.

1.3 Project Site Location

Lake Gregory is located at 24171 Lake Drive in the unincorporated community of Crestline, San Bernardino County, California (Figure 1, *Regional Vicinity*). Specifically, the project site is within Section 23 of

Township 2 South, Range 4 West of the U.S. Geological Survey's (USGS) San Bernardino North, California 7.5-minute topographic quadrangle, east of Highway 138 and north of Highway 18 (Figure 2, *Project Vicinity*). The project site is generally bounded by Lake Drive to the north and San Moritz Drive to the south (Figure 3, *Project Site*).



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LAKE GREGORY SITEWIDE SEDIMENT MANAGEMENT PROJECT
BIOLOGICAL RESOURCES ASSESSMENT

Regional Vicinity

Michael Baker INTERNATIONAL

0 2.5 5 Miles

Source: ArcGIS Online, 2018

Figure 1

12/11/2023 JN \\TEMECA1FS1.bkr.mbakercorp.com\HROOT\pdata\195651 Lake Gregory\GIS\APRX\Lake_Gregory_NR\Lake_Gregory_NR.aprx

Legend

Project Site

Michael Baker INTERNATIONAL

Source: USGS 7.5-Minute topographic quadrangle maps: *Harrison Mountain, Lake Arrowhead, San Bernardino North, and Silverwood Lake, California (2021)*

LAKE GREGORY SITEWIDE SEDIMENT MANAGEMENT PROJECT
BIOLOGICAL RESOURCES ASSESSMENT

Project Vicinity

Figure 2

12/11/2023 JN \\TEMECA1FS1.bkr.mbakercorp.com\HROOT\pdata\195651 Lake Gregory\GIS\APRX\Lake_Gregory_NR\Lake_Gregory_NR.aprx

Legend

Project Site

Reference Point

Michael Baker INTERNATIONAL

0 290 580 Feet

Source: Nearmap (09/2023)

LAKE GREGORY SITEWIDE SEDIMENT MANAGEMENT PROJECT
BIOLOGICAL RESOURCES ASSESSMENT

Project Site

Figure 3

2.0 METHODS

2.1 Literature Review

Prior to conducting the field surveys, Michael Baker conducted a literature review and records search to determine which special-status biological resources potentially occur on or within the vicinity of the project site. This effort helped to develop a baseline from which to inventory the existing biological resources and evaluate the suitability of the project site to support special-status biological resources.

Special-status plant and wildlife occurrence records obtained during the literature review from the USGS Cajon, Devore, Harrison Mountain, Lake Arrowhead, San Bernardino North, and Silverwood Lake, California 7.5-minute quadrangle maps were identified through a query of the California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database RareFind 5 (CNDDB, CDFW 2023a), California Native Plant Society's (CNPS) Inventory of Rare and Endangered Plants of California (CIRP, CNPS 2023), Calflora database (Calflora 2023), and for the project region the U.S. Fish and Wildlife Service's (USFWS) online Information for Planning and Consultation environmental review tool (IPaC, USFWS 2023a).

The current regulatory/conservation status of special-status plant and wildlife species was verified through lists and resources provided by CDFW, specifically the Special Animals List (CDFW 2023b), State and Federally Listed Endangered and Threatened Animals of California (CDFW 2023c), Special Vascular Plants, Bryophytes, and Lichens List (CDFW 2023d), and State and Federally Listed Endangered, Threatened, and Rare Plants of California (CDFW 2023e). USFWS-designated Critical Habitat for species listed under the federal Endangered Species Act (FESA) was reviewed online via the Critical Habitat Mapper (USFWS 2023b).

Standard field guides, texts, and other sources were used, for example species accounts provided by The Sibley Guide to Birds (Sibley 2014) and Cornell Lab of Ornithology's eBird Database (eBird 2023) for birds. In addition, Michael Baker reviewed available reports, survey results, and literature detailing the biological resources previously observed on or within the vicinity of the project site to understand existing site conditions, confirm previous species observations, and note the extent of any disturbances that have occurred in the project site that would otherwise limit the distribution of special-status biological resources. A report by Dudek summarizing results of a database search and field survey conducted in April 2019 was reviewed and is referenced in further sections of this report (Dudek 2019). Biological reports previously prepared by Michael Baker for projects in the general area of the unincorporated community of Crestline were also reviewed. Standard field guides and texts were reviewed for specific habitat requirements of special-status and non-special-status biological resources. Aerial photography was also reviewed prior to the field survey to locate potential natural corridors and linkages that may support wildlife movement through the area.

On-site and adjoining soils were researched prior to conducting the habitat assessment using the United States Department of Agriculture (USDA) Custom Soil Resource Report for San Bernardino National Forest

Area, California (USDA 2023). In addition, a review of the local geological conditions and historical aerial photographs (Google, Inc. 2023) was conducted to assess the ecological changes and disturbances that may have occurred within the project site, as well as the probability of local wetland presence through the National Wetlands Inventory Mapper (USFWS 2023c).

The References section at the end of this document provides a complete list of technical references that were reviewed by Michael Baker.

2.2 Field Investigations

Michael Baker biologists Anna Jullie and John Parent conducted a biological field survey/habitat assessment on September 20, 2023, to document existing conditions and assess the potential for special-status biological resources to occur within or adjacent to the boundaries of the project site. The field survey was conducted in accordance with applicable protocols and in a way to maximize the detectability of special-status species that may be present within the project site during the time of the survey. No limitations or restrictions on direct access to the project site were encountered by Michael Baker during the field survey. Parcels surrounding the project site were scanned with binoculars from public rights-of-way. Table 1, *Survey Dates, Timing, Surveyors, and Weather Conditions*, provides a summary of the survey details.

Table 1: Survey Dates, Timing, Surveyors, and Weather Conditions

Date	Purpose	Surveyors*	Time (start/end)	Temperature (°F) (start/end)	Wind Speed (mph) (start/end)
September 20, 2023	General biological survey and habitat assessment	AJ, JP	0800 / 1200	53 partly cloudy / 61 partly cloudy	1-3 / 0
October 12, 2023	Aquatic Resources Delineation	JP, SA	0800 / 1300	48 clear / 72 clear	0 / 1-2

*AP=Anna Jullie, JP=John Parent, SA=Stephen Anderson

2.2.1 Vegetation Community and Land Cover Mapping

Vegetation communities preliminarily identified on aerial photographs during the literature review were verified in the field by walking meandering transects throughout the project site. Naturally vegetated areas typically have a higher potential to support special-status plant and wildlife species than areas that are highly disturbed or developed, which have lower quality and/or reduced amounts of suitable habitat for plants and wildlife. Plant and wildlife species observed during the field survey conducted by Michael Baker across the project site, as well as dominant plant species within each vegetation community, were recorded in a field notebook. In addition, site characteristics such as soil condition, topography, hydrology, anthropogenic disturbances, indicator species, and the overall condition of on-site vegetation communities were recorded.

Vegetation communities occurring within the project site were delineated on an aerial photograph during the field survey and later digitized using the ArcMap Geographic Information System (GIS) software to quantify the area of each vegetation community in acres. Vegetation communities and land cover types occurring within the project site were classified in accordance with descriptions provided in the Manual of California Vegetation (Sawyer et al. 2009).

2.2.2 General Plant Inventory

Plant species observed during the field survey were identified by visual characteristics and morphology in the field and recorded in a field notebook. Unfamiliar plants were photographed in the field and later identified in the laboratory using taxonomic guides. Plant nomenclature used in this report follows the Jepson Manual: Vascular Plants of California, Second Edition (Baldwin et al. 2012). In this report, scientific names are provided immediately following common names of plant species (first reference only). Plant species detected are included in Appendix A, *Plant and Wildlife Species Observed List*.

2.2.3 Special-Status Plant Surveys

Sixty-four special-status plant species were identified within the region during reviews of the CNDDB, CIRP, and IPaC. Each species' special-status ranking, preferred habitats, and potential to occur within the project site are detailed in Appendix B, *Potentially Occurring Special-Status Biological Resources*. Of the 64 species reported in the region, 31 have a low potential to occur due to the presence of coniferous forest and limited riparian habitat. However, due to current land use and ongoing anthropogenic disturbance within the project site, the potential is limited. Focused special-status plant surveys were not conducted because the visit dates are outside of the blooming period of most of the species.

2.2.4 General Wildlife Inventory

Wildlife species detected during the field survey by sight, calls, tracks, scat, or other types of evidence were recorded in a field notebook. Field guides used to assist with identification of species during the habitat assessment included The Sibley Guide to Birds (Sibley 2014) for birds, A Field Guide to Western Reptiles and Amphibians (Stebbins 2003) for herpetofauna, and A Field Guide to Mammals of North America (Reid 2006). Although common names of wildlife species are well standardized, scientific names are provided immediately following common names of wildlife species in this report (first reference only). To the extent possible, nomenclature of birds follows the most recent annual supplement of the American Ornithological Society's Checklist of North American Birds (Chesser et al. 2023), nomenclature of amphibians and reptiles follows Scientific and Standard English Names of Amphibians and Reptiles of North America North of Mexico, with Comments Regarding Confidence in Our Understanding (Crother 2017), and nomenclature for mammals follows the Bats of the United States and Canada (Harvey et al. 2011) and Revised Checklist of North American Mammals North of Mexico (Bradley et al. 2014). When not available in the references listed above, habitat and other life history attributes were obtained from Terrestrial Mammal Species of Special Concern in California (Bolster 1998) for mammals and NatureServe Explorer (NatureServe 2023) for all taxonomic groups.

2.2.5 Special-Status Wildlife Surveys

Fifty-one special-status wildlife species were identified during reviews of the CNDDB and IPaC. Each species' special-status ranking, preferred habitats, and potential to occur within the project site are provided in Appendix B, *Potentially Occurring Special-Status Biological Resources*. The literature review and habitat assessment conducted did not result in the need to conduct focused surveys for special-status wildlife species. Wildlife species detected were recorded in field notes and provided in Appendix A, *Plant and Wildlife Species Observed List*.

2.2.6 Aquatic Resources Delineation

There are three key agencies that regulate activities within inland streams, wetlands, and riparian areas in California. The U.S. Army Corps of Engineers (USACE) Regulatory Branch regulates discharge of dredged or fill material into "waters of the United States" pursuant to Section 404 of the federal Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act. Of the state agencies, the Regional Water Quality Control Board (RWQCB) regulates discharge to surface waters pursuant to Section 401 of the CWA and Section 13263 of the California Porter-Cologne Water Quality Control Act, and CDFW regulates alterations to streambed and associated vegetation communities under Section 1600 et seq. of the California Fish and Game Code (CFGC).

Michael Baker qualified wetland delineators John Parent and Stephen Anderson conducted an aquatic resources delineation for the proposed project on October 12, 2023, to identify and map the extent of waters of the U.S. (WoUS), including potential wetlands, and waters of the State (WoS) within the boundaries of the project site. During the field delineation, Michael Baker utilized the methods outlined in the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, Version 2.0 (USACE 2008) to document the presence and extent of jurisdictional features that would fall under the regulatory authority of the USACE, RWQCB, and CDFW. The results of Michael Baker's jurisdictional delineation are provided within the Lake Gregory Regional Park Sitewide Sediment Management Project Aquatics Resources Delineation Report (Michael Baker 2024), prepared under separate cover, and are summarized in Section 3.6.5 of this report.

2.2.7 Survey Limitations

As stated previously in Section 2.2.3, surveys conducted by Michael Baker to support this report and analysis were conducted in September and October, which is outside of the blooming period of special-status plant species potentially occurring within the project site.

2.3 Regional Connectivity/Wildlife Movement

The analysis of wildlife movement corridors associated with the project site and its immediate vicinity is based on information compiled from the literature, analysis of aerial photographs and topographic maps, and direct observations made in the field during survey work. The relationship of the study area to large open space areas in the immediate vicinity was also evaluated in terms of connectivity and habitat linkages. Relative to corridor issues, the discussions in this report are intended to focus on wildlife movement associated with the project site and immediate vicinity.

The focus of this analysis is to determine if the alteration of current land use on the project site will have significant impacts to regional wildlife movement. This study did not include a field component (e.g., the use of track plates, camera stations, scent stations, or snares). Instead, notation was made during site visits of the locations of animal sign to determine the species potentially utilizing the project site. The results of the literature review and site visits were used to draw conclusions about the wildlife potentially utilizing the project site and vicinity.

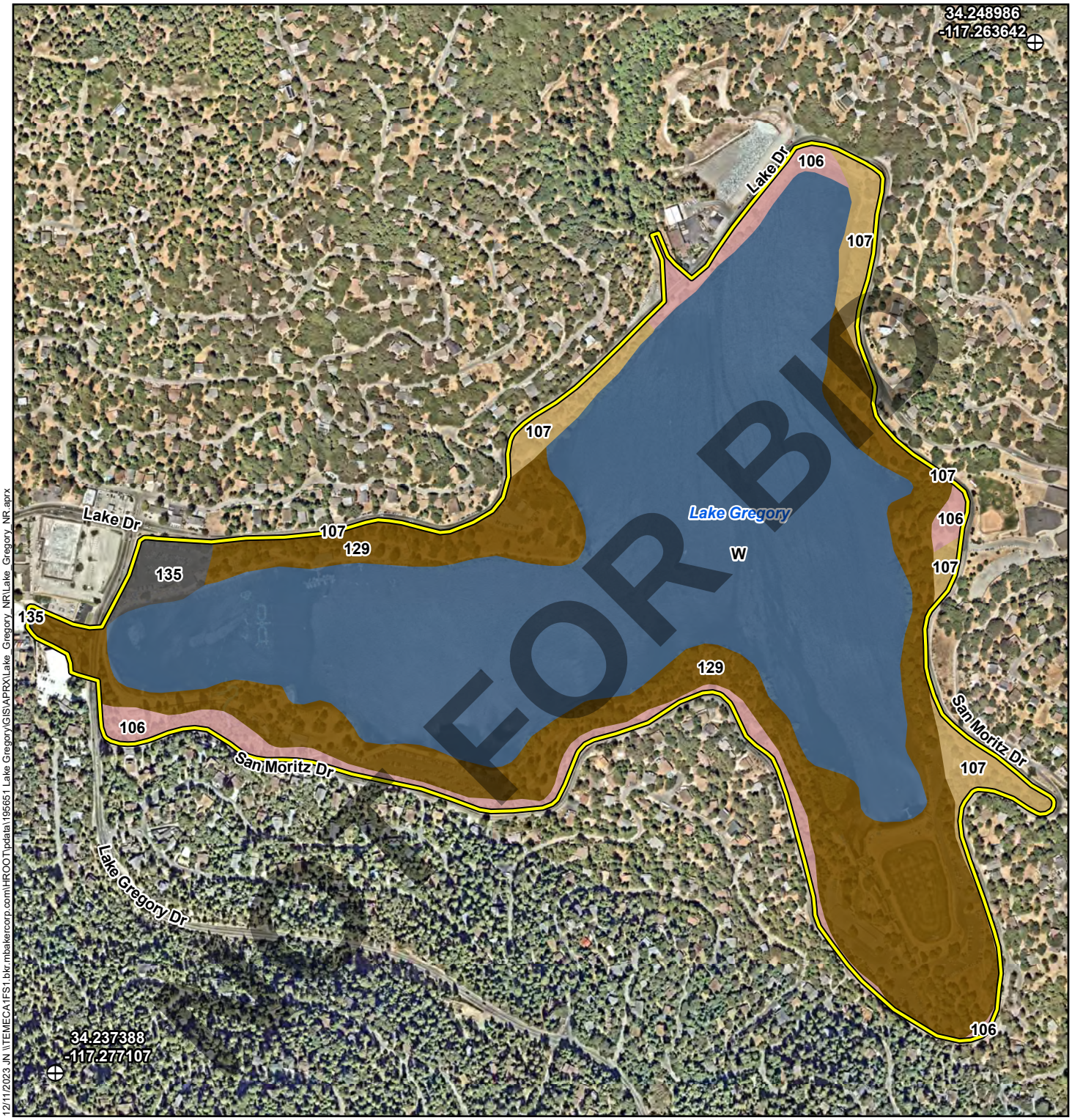
3.0 RESULTS

3.1 Characteristics of the Site and Surrounding Area

The project site is located within the unincorporated community of Crestline in San Bernardino County, north of San Moritz Drive, east of Lake Gregory Drive, south of Lake Drive, and west of San Moritz Way. The project site is approximately 132 acres and is mainly comprised of open water (Lake Gregory), urban developed areas, ornamental non-natural habitat types, and a disturbed mixed conifer natural vegetation community. Based on a review of Google Earth historical aerial imagery, with the exception of fluctuating lake levels, there has been no substantial change within the project site since 1994 (Google, Inc. 2023). Representative photographs taken throughout the project site are included in Appendix C, *Site Photographs*. Land uses surrounding the project site in all directions consist of urban developed residences and commercial businesses, with undisturbed mixed coniferous forest further to the north and east of the project site.

3.2 Topography and Soils

The project site is concave, sloping downward from all directions towards the lake surface. On-site elevation ranges from approximately 4,520 to 4,800 feet above mean sea level (amsl). According to the Custom Soil Resource Report for San Bernardino National Forest Area, California (USDA 2023), the project site is underlain by Cedarpines-Stargazer-Urban land complex soils (107), Grunney-Shayroad complex soils (129), and water. The Cedarpines-Stargazer soil complex is well drained with a soil profile of cobbly sandy loam or cobbly sand soils. The Grunney-Shayroad soil complex is poorly drained with a soil profile of sandy loam soils. Refer to Figure 4, *USDA Soils*, for a depiction of soil units within the project site.



12/11/2023 JN \\TEMECA1FS1.bkr.mbakercorp.com\HROOT\pdata\195651 Lake Gregory\GIS\APRX\Lake_Gregory_NR\Lake_Gregory_NR.aprx

Legend

- Project Site
- Reference Point
- 106 Cedarpines-Stargazer-Urban land complex, 15 to 30 percent slopes
- 107 Cedarpines-Stargazer-Urban land complex, 30 to 50 percent slopes
- 129 Grunney-Shayroad complex, 4 to 9 percent slopes
- 135 Urban land
- W Water areas

Michael Baker INTERNATIONAL

0 290 580 Feet

Source: Nearmap (09/2023), USDA (09/2019)

LAKE GREGORY SITEWIDE SEDIMENT MANAGEMENT PROJECT
BIOLOGICAL RESOURCES ASSESSMENT

USDA Soils

Figure 4

3.3 Vegetation Communities and Land Cover Types

Two natural vegetation communities, disturbed mixed conifer forest *Pinus ponderosa-Calocedrus decurrens* alliance and red willow thicket (*Salix laevigata*) alliance, were observed and mapped within the boundaries of the project site. In addition, the project site contains six land cover types classified as disturbed/non-natural. These vegetation communities and land cover types are depicted on Figure 5, *Vegetation Communities and Land Cover Types*, summarized in Table 2*, Vegetation Communities and Land Cover Type*s, and described in further detail below. The discussion of each native vegetation community provides a typical description of the vegetation community in the first paragraph and a description of the vegetation community specific to the project site in the second paragraph. Refer to Appendix A, *Plant and Wildlife Species Observed List*, for a complete list of plant species observed within the project site during the field surveys conducted by Michael Baker.

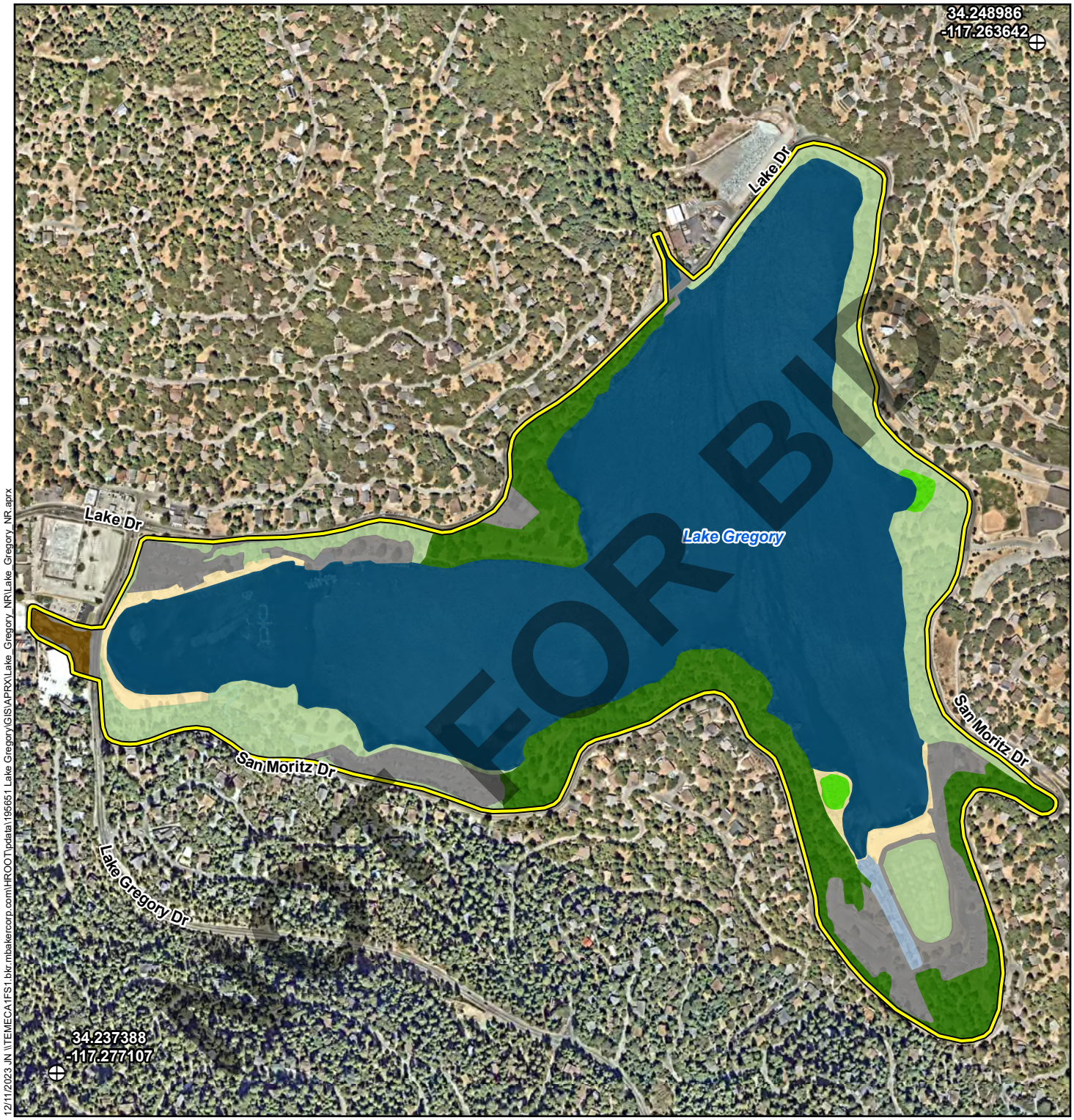
Table 2: Vegetation Communities and Land Cover Types

Vegetation Community/Land Cover Type	Acres
Disturbed Mixed Conifer Forest *Pinus ponderosa-Calocedrus decurrens* Alliance	17.59
Red Willow Thicket *Salix laevigata* Association	0.58
Beach	2.47
Non-vegetated channel/Floodway	0.62
Open Water	80.13
Ornamental	18.77
Urban/Developed	10.83
Detention Basin	0.67
Total	**131.66**

3.3.1 Disturbed Mixed Conifer Forest (*Pinus ponderosa-Calocedrus decurrens*) Alliance

Mixed conifer forest (*Pinus ponderosa-Calocedrus decurrens*) alliance is co-dominated by ponderosa pine (*Pinus ponderosa*) and incense cedar (*Calocedrus decurrens*) in the tree stratum. The tree canopy is typically intermittent with a sparse to intermittent shrub layer and variable herbaceous layer. This alliance is usually found along slopes, terraces, stream benches, and ridges. Associated species typically include Jeffrey pine (*Pinus jeffreyi*), sugar pine (*Pinus lambertiana*), and bigcone douglas fir (*Pseudotsuga macrocarpa*) (Sawyer et al. 2009).

This alliance occurs along the southeastern side and middle section of the northern shore of Lake Gregory. This community is disturbed due to its intersection with residential development and proximity to the recreational park associated with Lake Gregory. Pedestrian trails and structures are located beneath the tree canopy. Species observed in this vegetation community include Ponderosa pine, Jeffrey pine, deer brush (*Ceanothus integerrimus*), white alder (*Alnus rhombifolia*), and incense cedar. Plant species identified during field surveys conducted by Michael Baker across the project site are included in Appendix A, *Plant and Wildlife Species Observed List*.



Legend

- Project Site
- Reference Point
- Red Willow Thicket (0.58 acre)
- Mixed Conifer (17.59 acres)
- Beach (2.47 acres)
- Detention Basin (0.67 acre)
- Non-Vegetated Channel/Floodway (0.62 acre)
- Open Water (80.13 acres)
- Ornamental (18.77 acres)
- Developed (10.83 acres)

Michael Baker INTERNATIONAL

0 290 580 Feet

Source: Nearmap (09/2023)

LAKE GREGORY SITEWIDE SEDIMENT MANAGEMENT PROJECT
BIOLOGICAL RESOURCES ASSESSMENT

Vegetation Communities and Other Land Uses

Figure 5

3.3.2 Red Willow Thicket (*Salix laevigata*) Association

Red willow thicket (*Salix laevigata*) association (CaCode 61.205.01) is dominated or co-dominated by red willow (*Salix laevigata*). This alliance is found along ditches, floodplains, lake edges, and low gradient depositions along streams and has an open to continuous canopy less than 66 feet (20 meters) with a variable herbaceous layer. Associated species may include box elder (*Acer negundo*), white alder, California sycamore (*Platanus racemosa*), Fremont cottonwood (*Populus fremontii*), California live oak (*Quercus agrifolia*), and various willows (*Salix exigua*, *S. gooddingii*, *S. laevigata*, and *S. lasiolepis*) (Sawyer et al. 2009). This vegetation community has a global and state rarity ranking of 3 and is considered vulnerable to extirpation or extinction (CDFW 2018).

This association occurs in a small patch on the southeast side of Lake Gregory, a stand within the San Moritz Channel delta, and a wetland area along the eastern shore. The stand is fairly monotypic red willow with an understory comprised of native and non-native herbaceous vegetation including Douglas' sagewort (*Artemisia douglasiana*), barley (*Hordeum* sp.), and rabbitsfoot grass (*Polypogon monspeliensis*).

3.3.3 Beach

This land cover type is described by Oberbauer et al. (2008) and includes sandy and/or cobbly areas along coastal strands, lagoons, or lakes that are mainly unvegetated; however, upper portions may be sparsely populated with herbaceous species. This land cover type occurs along the western and southeastern shoreline of Lake Gregory. No vegetation occurs in these areas.

3.3.4 Non-vegetated Channel/Floodway

The non-vegetated channel/floodway land cover is described by Oberbauer et al. (2008) as floodway features that are permanently unvegetated due to the variability in flow. These features are typically located on the sandy, gravelly, or rocky fringe of waterways or other flood control features.

This land cover type occurs in the southeastern portion of the project site (Houston Creek South Debris Basin and San Moritz Channel). Combined, these features appear to convey surface water flow from the Houston Creek south fork culvert outlet towards Lake Gregory.

3.3.5 Open Water

Open water consists of standing water with no emergent vegetation. This land cover type represents the surface water extent of Lake Gregory (based on September 2023 aerial imagery) and likely fluctuates throughout the year.

3.3.6 Detention Basin

The detention basin land cover consists of a routinely maintained flood control basin. This land cover occurs on the western side of Lake Gregory (Library Basin). Portions of this feature contain standing water and dead emergent vegetation. Google Earth imagery depicts a dense riparian canopy cover within the detention basin during years in which annual maintenance in the form of vegetation removal is not conducted.

3.3.7 Ornamental

The ornamental land cover type consists of areas that support landscaping plantings. This land cover occurs in the project site where landscape plantings have been installed as part of the park recreational areas, developments, and/or roadway and parking lot landscaping. Occasional native species are located within these ornamental areas and include pine, cedar, and alder.

3.3.8 Urban/Developed

Urban/developed lands are described by Oberbauer et al. (2008) as areas that have been constructed on or disturbed so severely that native vegetation is no longer supported. Developed land includes areas with permanent or semi-permanent structures, pavement or hardscape, landscaped areas, and areas with a large amount of debris or other materials (Oberbauer et al. 2008).

This land cover occurs along the northwestern, southern, and southeastern shores of Lake Gregory and the perimeter of the project site. These urban/developed areas consist of parking lots, sidewalks, and roads.

3.4 Floral Diversity

Floral diversity is limited within the project site due to the large amount of surface water and disturbed land cover types. A total of 23 plant species was recorded within the project site including 19 native species (83%) and four (17%) non-native species. A complete list of plant species observed within the project site is included in Appendix A, *Plant and Wildlife Species Observed List*.

3.5 Wildlife Diversity

Similar to the discussion of floral diversity, wildlife diversity is also limited based on the anthropogenic land uses and disturbance within the project site. A total of 19 wildlife species were observed during site visits. All are native species except for the honeybee (*Apis* mellifera) and red-eared slider (*Trachemys scripta elegans*). The complete list of wildlife species observed within the project site is included in Appendix A, *Plant and Wildlife Species Observed List*.

3.5.1 Insects

One insect species, western honeybee, was observed during the October 2023 field survey visiting flowering plants.

3.5.2 Fish

No fish species were observed during the field surveys. However, suitable habitat to support populations of fish were observed within the project site in both Lake Gregory and Houston Creek. This aquatic habitat is suitable for a number of fish species such as trout (*Oncorhynchus mykiss*), bluegill (*Lepomis macrochirus*), carp (*Cyprinus carpio*), channel catfish (*Ictalurus punctatus*), and largemouth bass (*Micropterus salmoides*). The lake is regularly stocked with catfish in June, July, and August and with rainbow trout in October and November (The Lake Gregory Company 2023).

3.5.3 Amphibians

No amphibians were observed during the field surveys. Suitable habitat to support populations of amphibians were observed within the project site and associated with most of the drainage inlets and debris basins. This habitat is suitable for a number of amphibian species such as Baja California treefrog (*Pseudacris hypochondriaca hypochondriaca*), American bullfrog (*Lithobates catesbeianus*), garden slender salamander (*Batrachoseps major major*), and ensatina (*Ensatina eschscholtzii*).

3.5.4 Reptiles

One reptile species, the non-native red-eared slider, was observed during the field surveys. Habitat within the project site is suitable for a number of other common reptilian species known from the region, such as alligator lizard (*Elgaria multicarinata webbii*), coast horned lizard (*Phrynosoma blainvillii*), western fence lizard (*Sceloporus occidentalis longipes*), western side-blotched lizard (*Uta stansburiana elegans*), and ring-necked snake (*Diadophis punctatus amabilis*).

3.5.5 Birds

Sixteen bird species were observed within or adjacent to the project site and included common species such as American coot (*Fulica americana*), mallard (*Anas platyrhynchos*), Cooper's hawk (*Accipiter cooperii*), double-crested cormorant (*Phalacrocorax auritus*), and northern mockingbird (*Mimus polyglottos*).

Nesting birds are protected pursuant to the federal Migratory Bird Treaty Act (MBTA) of 1918 and the CFGC. No active bird nests or birds displaying nesting behaviors were observed within the project site during the field surveys. Disturbed mixed conifer forest *Pinus ponderosa-Calocedrus decurrens* alliance within the project site provides suitable nesting opportunities for a variety of resident and migratory bird species. The bald eagle (*Haliaeetus leucocephalus*), state Fully Protected (FP) species, is known to occur within the project site. This species is discussed further in Section 3.6.2.

3.5.6 Mammals

California ground squirrel (*Otospermophilus beecheyi*), western grey squirrel (*Sciurus griseus*), Botta's pocket gopher (*Thomomys bottae*), and domestic dog (*Canis lupus familiaris*) were the only species directly observed during the field surveys. The project site has the potential to support a variety of mammalian species; however, most mammalian species in the region are nocturnal and are difficult to observe during a diurnal habitat assessment. Other common mammalian species that may occur within the project site include coyote (*Canis latrans*), Virginia opossum (*Didelphis virginiana*), desert cottontail (*Sylvilagus audubonii*), and several chipmunk species (*Neotamias* sp.).

3.6 Special-Status/Regulated Resources

The CNDDB, CIRP, Calflora, and iPaC were queried for reported locations of special-status plant and wildlife species and natural vegetation communities on and in the vicinity of the project site. The habitat assessment was conducted to assess and evaluate existing conditions of the habitats within the boundaries of the project site to determine if the existing vegetation communities, at the time of the field

surveys, have the potential to provide suitable habitat for special-status plant and wildlife species. Additionally, the potential for special-status species to occur within the project site were determined based on the reported locations in the CNDDB, CIRP, and Calflora databases using the following guidelines:

- **Present:** the species was observed or detected within the project site during the field surveys.
- **High:** Recent occurrence records (within 20 years) indicate that the species has been known to occur on or within one mile of the project site and the site is within the normal expected range of this species. Intact, suitable habitat preferred by this species occurs within the project site and/or there is viable landscape connectivity to a local known extant population(s) or sighting(s).
- **Moderate:** Recent occurrence records (within 20 years) indicate that the species has been known to occur within one mile of the project site and the site is within the normal expected range of this species. There is suitable habitat within the project site, but the site is ecologically isolated from any local known extant populations or sightings.
- **Low:** Recent occurrence records (within 20 years) indicate that the species has been known to occur within five miles of the project site, but the site is outside of the normal expected range of the species and/or there is poor quality or marginal habitat within the project site.
- **Not Expected:** There are no occurrence records of the species occurring within five miles of the project site, there is no suitable habitat within the project site, and/or the project site is outside of the known or expected range for the species.

Special-status biological resources identified during the literature review and their potential to occur within the project site or vicinity are presented in Appendix Table C-1: Potentially Occurring Special-Status Biological Resources, provided in Appendix B, *Potentially Occurring Special-Status Biological Resources*.

3.6.1 Special-Status Plant Species

Sixty-four regional special-status plant species were identified during the literature review. Each species' special-status ranking, preferred habitats, and potential to occur within the project site are provided in Appendix B, *Potentially Occurring Special-Status Biological Resources*. Due to the lack of suitable habitat and the site's elevation range, 33 special-status plants are not expected to occur on the project site. Coniferous forest and limited riparian habitats within the project site could support the following 31 species; however, due to ongoing land uses and anthropogenic disturbances, they were ascribed a low potential for occurrence:

- Parish's oxytheca (*Acanthoscyphus parishii* var. *parishii*)
- Palmer's mariposa lily (*Calochortus palmeri* var. *palmeri*)
- Plummer's mariposa lily (*Calochortus plummerae*)
- San Bernardino Mountains owl's-clover (*Castilleja lasiorhyncha*)
- Mojave paintbrush (*Castilleja plagiotoma*)
- Tulare cryptantha (*Cryptantha incana*)
- Mojave tarplant (*Deinandra mohavensis*)
- Johnston's monkeyflower (*Diplacus johnstonii*)
- southern Sierra woolly sunflower (*Eriophyllum lanatum* var. *obovatum*)
- pine green-gentian (*Frasera neglecta*)

- Johnston's bedstraw (*Galium johnstonii*)
- urn-flowered alumroot (*Heuchera caespitosa*)
- Parry's sunflower (*Hulsea vestita* ssp. *parryi*)
- Silver-haired ivesia (*Ivesia argyrocoma* var. *argyrocoma*)
- ocellated Humboldt lily (*Lilium humboldtii* ssp. *ocellatum*)
- lemon lily (*Lilium parryi*)
- Mojave monardella (*Monardella exilis*)
- Hall's monardella (*Monardella macrantha* ssp. *hallii*)
- rock monardella (*Monardella saxicola*)
- California muhly (*Muhlenbergia californica*)
- golden-rayed pentachaeta (*Pentachaeta aurea* ssp. *aurea*)
- Parish's yampah (*Perideridia parishii* ssp. *parishii*)
- Transverse Range phacelia (*Phacelia exilis*)
- Mojave phacelia (*Phacelia mohavensis*)
- southern mountains skullcap (*Scutellaria bolanderi* ssp. *austromontana*)
- salt spring checkerbloom (*Sidalcea neomexicana*)
- chickweed oxytheca (*Sidotheca caryophylloides*)
- Laguna Mountains jewelflower (*Streptanthus bernardinus*)
- southern jewelflower (*Streptanthus campestris*)
- San Bernardino aster (*Symphyotrichum defoliatum*)
- Greata's aster (*Symphyotrichum greatae*)

Mojave tarplant (state endangered) is the only federal or state listed species with a low potential to occur. The remaining species have varying CRPRs ranging from 1B.2, Plants rare, threatened, or endangered in California and elsewhere; moderately threatened in California (20-80% occurrences threatened/moderate degree and immediacy of threat) to 4.3, Watch List: Plants of limited distribution; not very threatened in California (<20% of occurrences threatened/low degree and immediacy of threat or no current threats known).

3.6.2 Special-Status Wildlife Species

Fifty-one special-status wildlife species were identified during the literature review. Each species' special-status ranking, preferred habitats, and potential to occur within the project site are provided in Appendix B, *Potentially Occurring Special-Status Biological Resources*.

Five special-status wildlife species have a moderate to high potential to occur within the project site and are described further below; western mastiff bat [*Eumops perotis californicus*; Species of Special Concern (SSC)], San Bernardino flying squirrel (*Glaucomys oregonensis californicus*; SSC), bald eagle [*Haliaetus leucocephalus*; State Fully Protected (FP)], osprey (*Pandion haliaetus*; CDFW Watch List), and yellow warbler (*Setophaga petechia*; SSC).

Western Mastiff bat: Listed as a California SSC, this species is found between central Mexico across the southwestern United States including west Texas, New Mexico, southwest Arizona, southern Nevada, and California. Primarily a cliff-dwelling species, it generally roosts under exfoliating rock slabs, and very

occasionally in buildings. Roosts are generally high above the ground, usually allowing a clear vertical drop of at least three meters below the entrance for flight. In California, it is most frequently encountered in broad open areas. Its foraging habitat includes dry desert washes, flood plains, chaparral, oak woodland, open ponderosa pine forest, grassland, and agricultural areas (NatureServe 2023).

Three CNDDB records for this species were identified within the vicinity of the project site during the literature review. The most recent record (Occurrence Number 133) is from 1992 and is approximately eight miles southeast of the project site (CDFW 2023a). This species was not observed during field surveys; however, surveys were conducted during the day when this species is not expected to be active. Though suitable roosting habitat for this species was determined to be absent from the project survey area, open ponderosa pine forest has the potential to support foraging habitat.

San Bernardino flying squirrel: Listed as a California SSC, this species is found historically from three populations within the forests of the San Gabriel, San Bernardino, and San Jacinto Mountains within southern California. Flying squirrels are nocturnal and secretive, though easily distinguished from other arboreal squirrels by the presence of a furred patagium connecting the fore and hind limbs (Bolster 1998).

Six CNDDB records for this species were identified within the vicinity of the project site during the literature review. The most recent record (Occurrence Number 354) for this species is from 2005 and is approximately 0.5 mile east of the project site (CDFW 2023a). Eight locations of community science observations (86 observations between 2014 and 2023) in the neighborhoods surrounding Lake Gregory are reported on iNaturalist (2023). This species was not observed; however, during field surveys. Suitable habitat for this species was determined to be present within the project survey area in the form of mixed conifer forests.

Bald Eagle: The bald eagle is a State of California Fully Protected species and ranges across most of North America. This species is locally common and a yearlong resident of southern California. It is typically found near large water bodies such as seacoasts, estuaries, and inland lakes. This species generally nests in the canopy of tall confers, though they have been known to nest on the ground, on cellphone towers, and electrical poles.

Five CNDDB records for this species were identified during the literature review. The most recent record (Occurrence Number 354) for this species is from 2006 and is approximately one mile east of the project site (CDFW 2023a). In addition, many observations are reported by community scientists around the perimeter of Lake Gregory, five observations (2011-2022) on iNaturalist (2023) and 35 records (2011-2023) on eBird (2023). This species was not observed during field surveys but is expected to be a regular visitor. Though minimal suitable nesting habitat for this species was determined to be present within the project survey area, suitable foraging, and roosting habitat in the form of open water and mixed conifer forest is found within the project site.

Osprey: Osprey is a CDFW Watch List and U.S. Forest Service Sensitive species. This species is typically found in and around saltwater habitats, such as bays and estuaries, in California but they are also known to occur near inland lakes and rivers. They prefer to nest on tall, isolated trees, poles, and towers.

This species was not observed during field surveys; however, 66 community science observations are reported on eBird from 2009 to 2023 (eBird 2023) and two records from 2017 and 2022 are reported on iNaturalist (2023). Therefore, this species is expected to be a regular visitor, and due to the number of trees in the area, also has the potential to nest in the vicinity of the project site.

Yellow Warbler: A California SSC, this species is present in California from April through September and generally nests in riparian areas dominated by willows, cottonwoods, California sycamore (*Platanus racemosa*), or alder or in mature chaparral. It may also use oaks, conifers, and urban areas near stream courses.

Two CNDDB records for this species were identified during the literature review. The most recent record (Occurrence Number 101) is from 2015 and is approximately three miles south of the project site (CDFW 2023a). In addition, 17 records of Yellow Warbler sightings are reported on eBird between 2013 and 2023 (eBird 2023). This species was not observed during field surveys but is expected to be a regular summer and migrating visitor. Both suitable nesting and foraging habitat for this species is present within the project site.

3.6.3 Sensitive Natural Communities

Special-status vegetation communities include those listed as sensitive natural communities within the CNDDB or by CDFW (CDFW 2023f), and aquatic features that fall under the jurisdiction of state and/or federal regulatory agencies (see Section 3.6.5). Special-status communities also include USFWS-designated Critical Habitat (see Section 3.6.4) and other native vegetation communities that support special-status plant and wildlife species.

The literature review determined that three special-status vegetation communities occur in vicinity of the project site vicinity, southern mixed riparian forest, southern sycamore alder riparian woodland, and Riversidean alluvial fan sage scrub. None of these sensitive natural communities occur on the project site.

Two native vegetation communities occur on-site, disturbed mixed conifer forest and red willow thicket. Red willow thicket (CaCode 61.205.01) is considered a CDFW sensitive natural community (CDFW 2023f) and CDFW riparian habitat.

3.6.4 Critical Habitat

Under the definition included in the FESA, designated Critical Habitat refers to specific areas within the geographical range of a species that were occupied at the time it was listed and that contain the physical or biological features that are essential to the survival and eventual recovery of that species. Areas of Critical Habitat may require special management considerations or protection, regardless of whether the species is still extant in the area. Areas that were not known to be occupied at the time a species was listed can also be designated as Critical Habitat if they contain one or more of the physical or biological features that are essential to that species' conservation and if the occupied areas are inadequate to ensure the species' recovery. If a project may result in take or adverse modification to a species' designated Critical Habitat and the project has a federal nexus, the project proponent may be required to

provide suitable mitigation. Projects with a federal nexus include those that occur on federal lands, require federal permits (e.g., CWA Section 404 permit), or receive any federal oversight or funding. If there is a federal nexus, then the federal agency that is responsible for providing funds or permits would be required to consult with the USFWS pursuant to the FESA.

The project site is located within approximately 1.5 miles of USFWS-designated Critical Habitat for the federally listed southwestern willow flycatcher (*Empidonax traillii extimus*) as illustrated in Figure 6, *Critical Habitat*. Based on the results of the field surveys no suitable habitat for the southwestern willow flycatcher occurs within the project site and therefore the species is not expected to occur within the project site.

3.6.5 Jurisdictional Aquatic Resources

As described in the Aquatic Resources Delineation Report (Michael Baker 2024), Lake Gregory, Library Basin, San Moritz Channel Basins, Aquatic Feature-1 (AF-1), and 20 of the 34 Inlet locations around the lake fall under the regulatory authority of the USACE, RWQCB, and CDFW. Jurisdictional features are shown in Figure 7, *USACE/RWQCB Jurisdictional Map*, and Figure 8, *CDFW Jurisdictional Map*.

The results of the aquatic resources delineation determined the presence of 78.85 acres of non-wetland and 0.53 acre of wetland waters of the US and waters of the State under the jurisdiction of the USACE and RWQCB, respectively. CDFW jurisdiction includes 77.98 acres of lake, 1.78 acres (2,437 linear feet) of streambed, and 0.29 acre of riparian habitat. Table 3, *Aquatic Resource Jurisdictional Limits Within the Project Site*, provides the details of the jurisdictional features included in the delineation.

Table 3: Aquatic Resource Jurisdictional Limits Within the Project Site

Jurisdictional Aquatic Resource*	Inlet Notes	USACE/RWQCB Non-wetland Waters (acres/feet)	USACE/RWQCB Wetland Waters (acres/feet)	CDFW Lake (acres/feet)	CDFW Streambed (acres/feet)	CDFW Riparian (acres)
Lake Gregory		77.98 (N/A)	0.00 (0)	77.98 (N/A)	0.00 (0)	0.29
Library Basin		0.00 (0)	0.41 (235)	0.00 (0)	0.41 (235)	0.00
San Moritz Channel		0.79 (993)	0.00 (0)	0.00 (0)	1.18 (993)	0.00
Inlet 1		0.0002 (5)	0.00 (0)	0.00 (0)	0.0002 (5)	0.00
Inlet 2	Not observed, assumed direct connection to Lake	N/A	N/A	N/A	N/A	N/A
Inlet 3	Not observed, assumed direct connection to Lake	N/A	N/A	N/A	N/A	N/A
Inlet 4		0.004 (83)	0.00 (0)	0.00 (0)	0.003 (83)	0.00
Inlet 5		0.003 (48)	0.00 (0)	0.00 (0)	0.003 (48)	0.00
Inlet 6		0.005 (70)	0.00 (0)	0.00 (0)	0.004 (70)	0.00

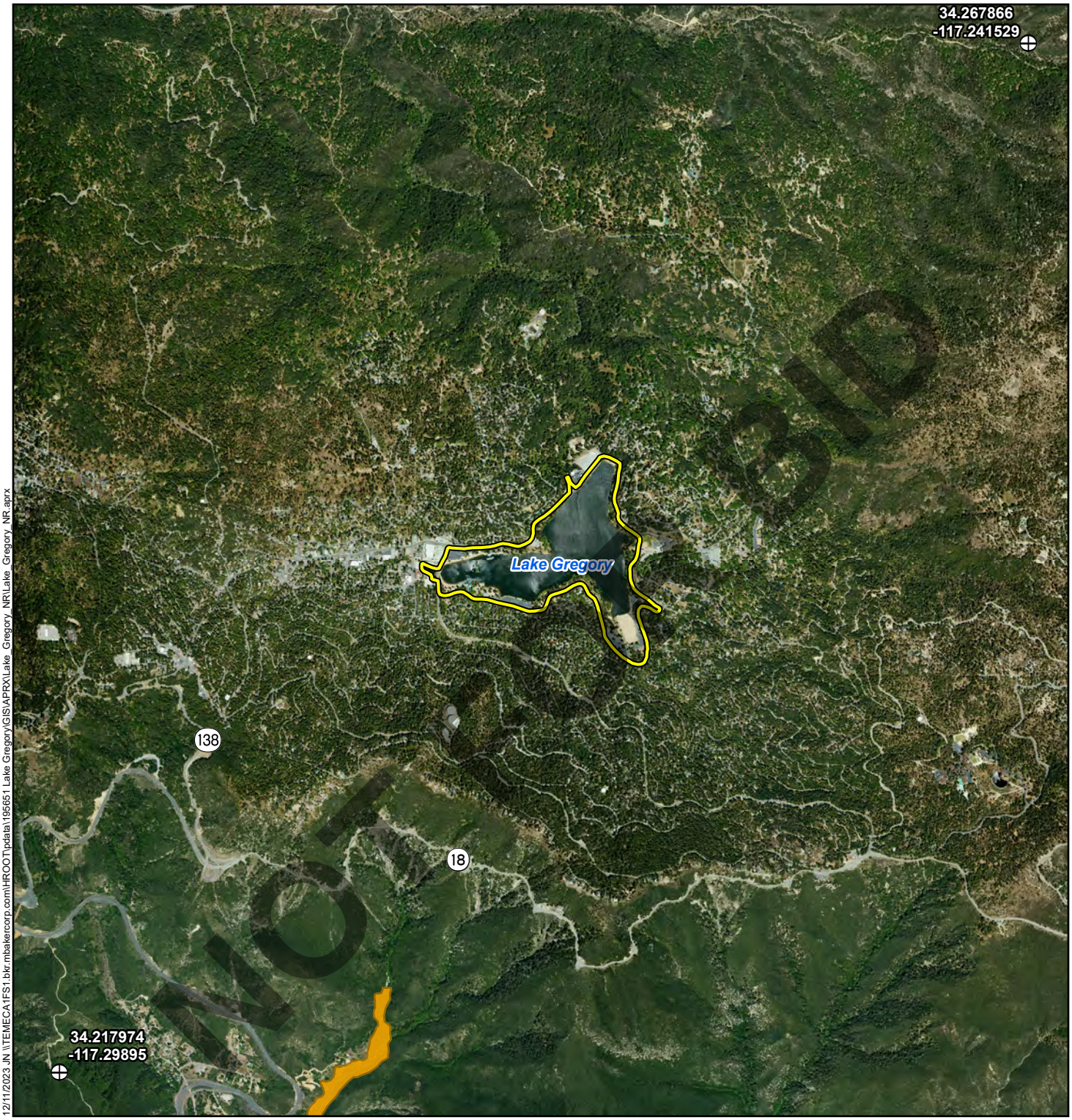
Jurisdictional Aquatic Resource*	Inlet Notes	USACE/RWQCB Non-wetland Waters (acres/feet)	USACE/RWQCB Wetland Waters (acres/feet)	CDFW Lake (acres/feet)	CDFW Streambed (acres/feet)	CDFW Riparian (acres)
Inlet 7	Observed, included with San Moritz Channel	N/A	N/A	N/A	N/A	N/A
Inlet 8		0.039 (344)	0.00 (0)	0.00 (0)	0.039 (344)	0.00
Inlet 9a		0.002 (47)	0.00 (0)	0.00 (0)	0.002 (47)	0.00
Inlet 9b	Not observed, assumed direct connection to Lake	N/A	N/A	N/A	N/A	N/A
Inlet 10		0.002 (75)	0.00 (0)	0.00 (0)	0.002 (75)	0.00
Inlet 11		0.002 (19)	0.12 (109)	0.00 (0)	0.115 (109)	0.00
Inlet 12		0.005 (103)	0.00 (0)	0.00 (0)	0.005 (103)	0.00
Inlet 13		0.006 (125)	0.00 (0)	0.00 (0)	0.006 (125)	0.00
Inlet 14		0.002 (44)	0.00 (0)	0.00 (0)	0.002 (44)	0.00
Inlet 15	Observed, not jurisdictional	0.00(0)	0.00 (0)	0.00 (0)	0.00(0)	0.00
Inlet 16		0.002 (36)	0.00 (0)	0.00 (0)	0.002 (36)	0.00
Inlet 17	Not observed, assumed direct connection to Lake	N/A	N/A	N/A	N/A	N/A
Inlet 18	Not observed, assumed direct connection to Lake	N/A	N/A	N/A	N/A	N/A
Inlet 19	Not observed, assumed direct connection to Lake	N/A	N/A	N/A	N/A	N/A
Inlet 20	Not observed, assumed direct connection to Lake	N/A	N/A	N/A	N/A	N/A
Inlet 21		0.005 (29)	0.00 (0)	0.00 (0)	0.005 (29)	0.00
Inlet 22	Observed, not jurisdictional	0.00(0)	0.00 (0)	0.00 (0)	0.00(0)	0.00
Inlet 23		0.0001 (5)	0.00 (0)	0.00 (0)	0.0001 (5)	0.00
Inlet 24		0.0006 (9)	0.00 (0)	0.00 (0)	0.0006 (9)	0.00
Inlet 25		0.0008 (18)	0.00 (0)	0.00 (0)	0.0008 (18)	0.00
Inlet 26	Not observed, underground, outlets to #25	N/A	N/A	N/A	N/A	N/A
Inlet 27	Not observed, underground, outlets to #25	N/A	N/A	N/A	N/A	N/A
Inlet 28		0.0004 (10)	0.00 (0)	0.00 (0)	0.0004 (10)	0.00
Inlet 29		0.0004 (8)	0.00 (0)	0.00 (0)	0.0004 (8)	0.00

Jurisdictional Aquatic Resource*	Inlet Notes	USACE/RWQCB Non-wetland Waters (acres/feet)	USACE/RWQCB Wetland Waters (acres/feet)	CDFW Lake (acres/feet)	CDFW Streambed (acres/feet)	CDFW Riparian (acres)
Inlet 30		0.00009 (4)	0.00 (0)	0.00 (0)	0.00009 (4)	0.00
Inlet 31	Not observed, assumed direct connection to Lake	N/A	N/A	N/A	N/A	N/A
Inlet 32	Not observed, assumed direct connection to Lake	N/A	N/A	N/A	N/A	N/A
Inlet 33	Observed, outlets directly into Lake, not jurisdictional	0.00(0)	0.00 (0)	0.00 (0)	0.00(0)	0.00
AF-1		0.002 (37)	0.00 (0)	0.00 (0)	0.002 (37)	0.00
Total		**78.85 (2,112)**	**0.53 (344)**	**77.98**	**1.78 (2,437)**	**0.29**

3.7 Regional Connectivity/Wildlife Movement

Wildlife corridors and linkages are key features for wildlife movement between habitat patches. Wildlife corridors are generally defined as those areas that provide opportunities for individuals or local populations to conduct seasonal migrations, permanent dispersals, or daily commutes, while linkages refer to broader areas that provide movement opportunities for multiple keystone/focal species or allow for propagation of ecological processes (e.g., for movement of pollinators), often between areas of conserved land.

Regional wildlife movement within the project site is not expected as the project site is surrounded by residential development. Areas surrounding the project site likely function as open habitat but do not function as movement corridors. It is likely that Lake Gregory and the surrounding habitat functions as a migratory stopover for bird species. The project site also supports dispersal of smaller terrestrial species, such as reptiles and small mammals, across the localized area.



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Legend

- Project Site
- Reference Point
- Southwestern Willow Flycatcher (*Empidonax traillii extimus*)

Michael Baker INTERNATIONAL

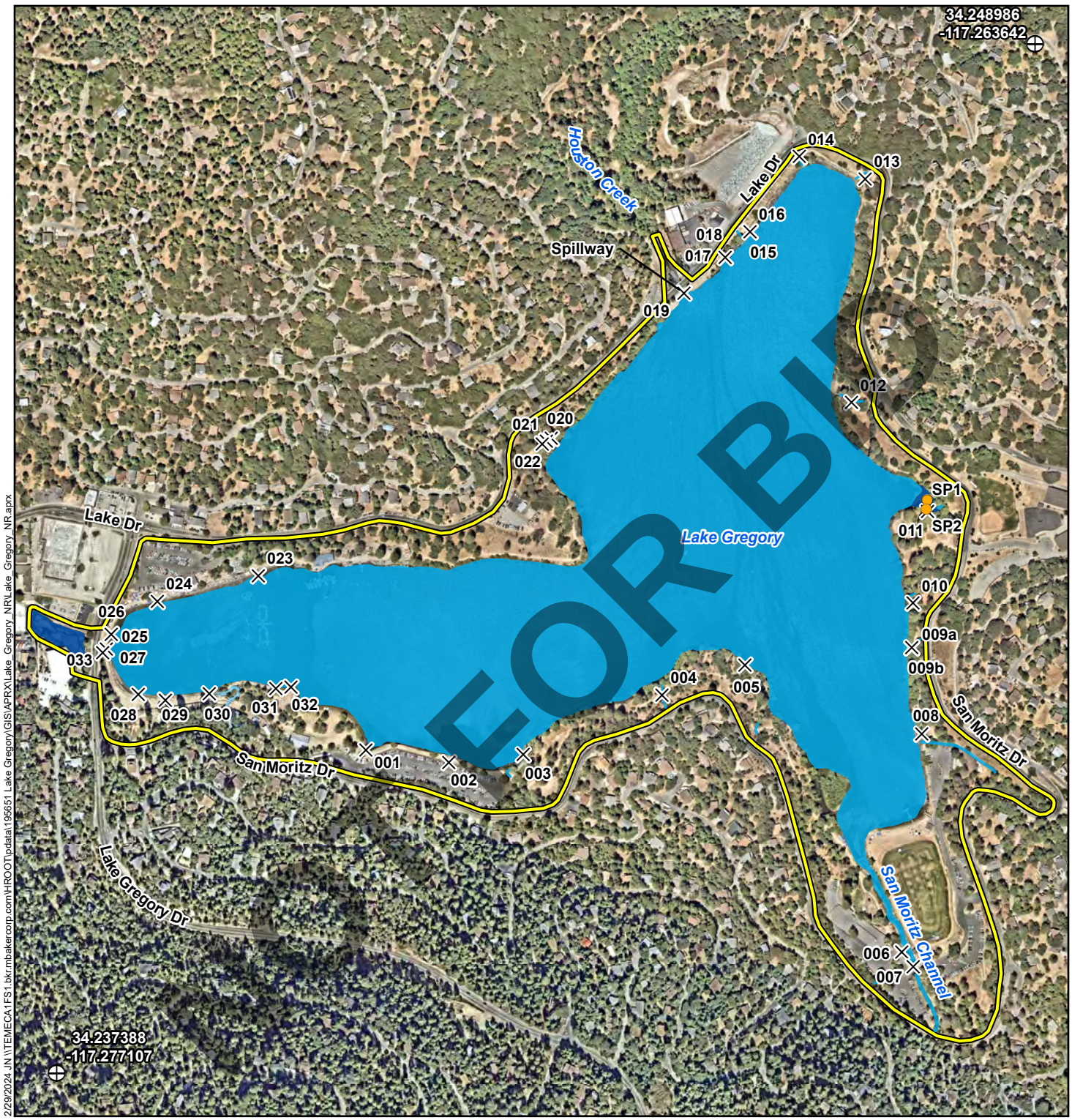
0 1,250 2,500 Feet

Source: NAIP (2022), USFWS (11/2023)

LAKE GREGORY SITEWIDE SEDIMENT MANAGEMENT PROJECT
BIOLOGICAL RESOURCES ASSESSMENT

Critical Habitat

Figure 6



2/29/2024 JN \\TEMECA1FS1.bkr.mbakercorp.com\HROOT\pdata\195651 Lake Gregory\GIS\APRX\Lake_Gregory_NR\Lake_Gregory_NR.aprx

Legend

- Project Site
- Reference Point
- Wetland Waters of the U.S. (0.53 acre)
- Non-Wetland Waters of the U.S. (78.85 acres)
- Soil Pit
- Inlet Location

Michael Baker INTERNATIONAL

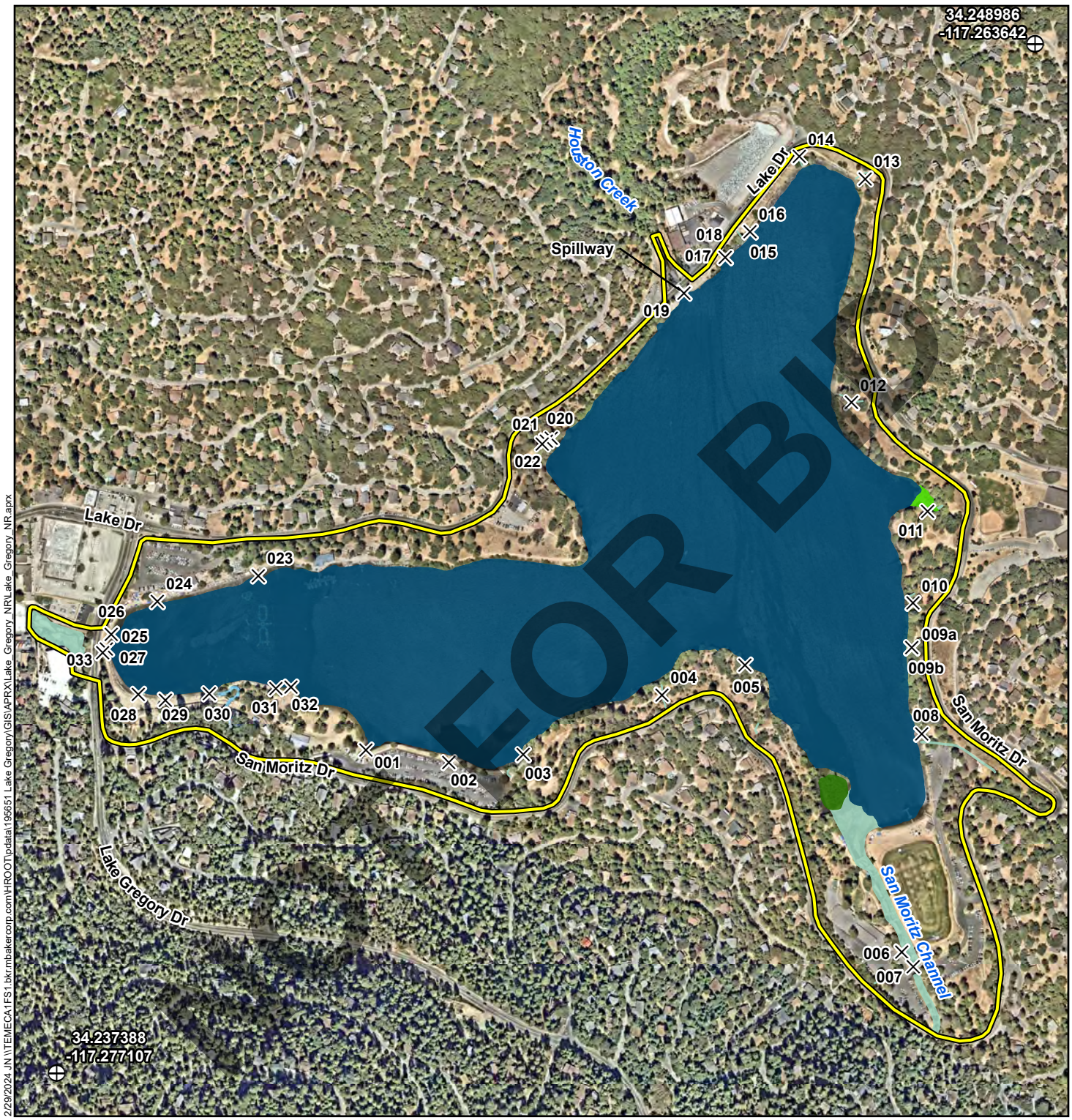
0 290 580 Feet

Source: Nearmap (09/2023)

LAKE GREGORY SITEWIDE SEDIMENT MANAGEMENT PROJECT
BIOLOGICAL RESOURCES ASSESSMENT

USACE/RWQCB Jurisdictional Map

Figure 7



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Legend

- Project Site
- Reference Point
- Associated Riparian Vegetation (0.29 acre)
- Vegetated Streambed (0.11 acre)
- Non-Vegetated Streambed (1.67 acres)
- CDFW Lake (77.98 acres)
- Inlet Location

Michael Baker INTERNATIONAL

0 290 580 Feet

Source: Nearmap (09/2023)

LAKE GREGORY SITEWIDE SEDIMENT MANAGEMENT PROJECT
BIOLOGICAL RESOURCES ASSESSMENT

CDFW Jurisdictional Map

Figure 8

4.0 PROJECT IMPACTS

4.1 Definition of Impacts

4.1.1 Direct Impacts

Direct impacts are those that involve the loss, modification, or disturbance of plant communities, which in turn, directly affect the flora and fauna of those habitats. Direct impacts also include the destruction of individual plants or animals, which may also directly affect regional population numbers of a species or result in the physical isolation of populations thereby reducing genetic diversity and population stability.

Direct impacts can be permanent or temporary in nature. Permanent direct impacts typically refer to 100% permanent loss of a biological resource. It is also often referred to as the "project footprint" and refers to the area where vegetation clearing, grubbing, or mass grading occurs. It may include brush management zones or fuel modification zones.

Direct temporary impacts typically refer to short-term removal of a biological resource where the resource is expected to fully recover its function upon completion of the project. Examples of temporary disturbance may include slope remediation sites, construction access roads, staging areas, stockpiles, mowing, dredging, etc. Such sites would not have permanent structures.

4.1.2 Indirect Impacts

Indirect impacts pertain to those impacts that result in a change to the physical environment, but which is not immediately related to a project. Indirect (or secondary) impacts are those that are reasonably foreseeable and caused by a project but occur at a different time or place. Indirect impacts can occur at the urban/wildland interface of projects, to biological resources located downstream from projects, and other off-site areas where the effects of the project may be experienced by plants and wildlife. Examples of indirect impacts include the effects of increases in ambient levels of noise or light; predation by domestic pets; competition with exotic plants and animals; introduction of toxics, including pesticides; and other human disturbances such as hiking, off-road vehicle use, unauthorized dumping, etc. Indirect impacts are often attributed to the subsequent day-to-day activities associated with project build-out, such as increased noise, the use of artificial light sources, and invasive ornamental plantings that may encroach into native areas. Indirect effects may be both short-term and long-term in their duration. These impacts are commonly referred to as "edge effects" and may result in a slow replacement of native plants by non-native invasives, as well as changes in the behavioral patterns of wildlife and reduced wildlife diversity and abundance in habitats adjacent to project sites.

4.2 Thresholds of Significance

The environmental impacts relative to biological resources are assessed using impact significance threshold criteria, which mirror the policy statement contained in CEQA, Section 21001(c) of the California Public Resources Code. Accordingly, the State Legislature has established it to be the policy of the State to:

> "Prevent the elimination of fish or wildlife species due to man's activities, ensure that fish and wildlife populations do not drop below self-perpetuating levels, and preserve for future generations representations of all plant and animal communities..."

Determining whether a project may have a significant effect, or impact, plays a critical role in the CEQA process. According to CEQA, Section 15064.7, Thresholds of Significance, each public agency is encouraged to develop and adopt (by ordinance, resolution, rule, or regulation) thresholds of significance that the agency uses in the determination of the significance of environmental effects. A threshold of significance is an identifiable quantitative, qualitative or performance level of a particular environmental effect, non-compliance with which means the effect will normally be determined to be significant by the agency and compliance with which means the effect normally will be determined to be less than significant. In the development of thresholds of significance for impacts to biological resources CEQA provides guidance primarily in Section 15065, Mandatory Findings of Significance, and the CEQA Guidelines, Appendix G, Environmental Checklist Form. Section 15065(a) states that a project may have a significant effect where:

> "The project has the potential to substantially degrade the quality of the environment; substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; substantially reduce the number or restrict the range of an endangered, rare, or threatened species; ..."

Appendix G of the CEQA Guidelines is more specific in addressing biological resources and encompasses a broader range of resources to be considered, including candidate, sensitive, or special status species; riparian habitat or other sensitive natural communities; federally protected wetlands; fish and wildlife movement corridors; local policies or ordinances protecting biological resources; and, adopted HCPs. This is done in the form of a checklist of questions to be answered during the Initial Study leading to the preparation of the appropriate environmental documentation for a project. Because these questions are derived from standards in other laws, regulations, and other commonly used thresholds, it is reasonable to use these standards as a basis for defining significance thresholds. Therefore, for the purpose of this analysis, impacts to biological resources are considered potentially significant (before considering offsetting mitigation measures) if one or more of the following conditions would result from implementation of the proposed project.

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?
- Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

For the purposes of this impact analysis the following definitions apply:

- "Substantial adverse effect" means loss or harm of a magnitude which, based on current scientific data and knowledge would: (1) substantially reduce population numbers of a listed, candidate, sensitive, rare, or otherwise special status species; (2) substantially reduce the distribution of a sensitive natural community/habitat type; or (3) eliminate or substantially impair the functions and values of a biological resource (e.g., streams, wetlands, or woodlands) in a geographical area defined by interrelated biological components and systems. In the case of this analysis the prescribed geographical area is considered to be the region including the San Bernardino Mountains.
- "Conflict" means contradiction of a magnitude, which based on foreseeable circumstances would preclude or prevent substantial compliance.
- "Rare" means: (1) that the species exists in such small numbers throughout all or a significant portion of its range that it may become endangered if its environment worsens; or (2) the species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and may be considered "threatened" as that term is used in the FESA.

4.3 Proposed Project

4.3.1 Project Summary

As described previously in Section 1.2 and shown in Figure 9, *Project Impacts*, the proposed project includes two elements. The first element is the construction of improvements and will result in permanent impacts to 1) install an in-water barrier at Swim Beach for sediment management and 2) improve inlets at 22 locations around the lake perimeter; and temporary impacts to 1) regrade the slope of Swim Beach, 2) reconstruct and enhance the San Moritz Channel Basins, and 3) dredge and regrade the South Beach area.

The second element of the proposed project includes future ongoing maintenance after the construction of improvements. Ongoing maintenance will result in temporary impacts to Lake Gregory, San Moritz Channel Basins, and Library Basin for periodic sediment management activities, grooming Swim Beach, and other repairs and maintenance as described previously (see Section 1.2). All ongoing maintenance activities will be conducted in accordance with a Lake Gregory Operations and Maintenance (O&M) Manual (JS&TM 2023).

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Legend

- Project Site
- Reference Point
- Grading/Dredging (Temporary Impacts)
- Cutoff Wall (Permanent Impact)
- Inlets/Rip Rap (Permanent Impacts)

Michael Baker INTERNATIONAL

0 290 580 Feet

Source: Nearmap (09/2023)

LAKE GREGORY SITEWIDE SEDIMENT MANAGEMENT PROJECT
BIOLOGICAL RESOURCES ASSESSMENT

Project Impacts

Figure 9

4.3.2 Project Design Features

Prior to project implementation, a qualified biologist will be present to flag the extent of the habitat at the San Moritz Channel Basins red willow thicket. Construction fencing will be erected based on the flagging locations to minimize temporary impacts to red willow thicket habitat.

4.4 Standard Conditions

As part of the proposed project's review and approval, a number of performance criteria and standard conditions must be met. Among these are those that relate to federal and state regulating agencies for impacts to wetlands, riparian habitats, and stream courses.

4.4.1 Federal Clean Water Act, Section 404

The USACE regulates discharges of dredged or fill materials into WoUS and wetlands pursuant to Section 404 of the CWA and Section 10 of the Rivers and Harbors Act. Based on the results of the Aquatic Resources Delineation and determination of USACE jurisdictional wetland and non-wetland WoUS within the project site, the USACE will require Section 404 permit prior to project implementation.

4.4.2 Federal Clean Water Act, Section 401

The mission of the California RWQCB is to develop and enforce water quality objectives and implement plans that will best protect the beneficial uses of the State's waters, recognizing local differences in climate, topography, geology, and hydrology. Section 401 of the CWA requires that:

> "…any applicant for a Federal permit for activities that involve a discharge to waters of the State, shall provide the Federal permitting agency a certification from the State in which the discharge is proposed that states that the discharge will comply with the applicable provisions under the Federal Clean Water Act."

Based on the results of the Aquatic Resources Delineation and determination of RWQCB jurisdictional features within the project site, the RWQCB will require Section 401 Water Quality Certification prior to project implementation.

4.4.3 State of California Fish and Game Code, Section 1602

Section 1602 of the CFGC requires any entity (e.g., person, state or local government agency, or public utility) who proposes a project that will substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake, it must first notify the CDFW of the proposed project. During this notification process, the CDFW will review the proposed project as it affects streambed habitats within the project site. CDFW may then place conditions on the Section 1602 clearance to avoid, minimize, and mitigate the potentially significant adverse impacts within CDFW jurisdictional limits.

4.4.4 County of San Bernardino Development Code, Plant Protection and Management

Chapter 88.01, Plant Protection and Management, of the San Bernardino County Development Code regulates the removal of mountain forest and valley trees (§ 88.01.070), riparian vegetation (§ 88.01.080), and Bald Eagle perch trees (88.01.050), and provides guidelines to protect trees from insects and disease (§ 88.01.090).

Section 88.01.070 defines native trees as "A living, native tree with a six inch or greater stem diameter or 19 inches in circumference measured four and one-half feet above natural grade level." Removal of native trees require a Tree or Plant Removal Permit issued in compliance with § 88.01.050. The proposed project will not remove any "native trees" during project activities.

Section 88.01.080 regulates riparian vegetation and is intended to augment and coordinate with the responsibilities of the California Department of Fish and Wildlife. Regulated Riparian Plants include:

1. "*Vegetation Described*. The removal of vegetation within 200 feet of the bank of a stream, or in an area indicated as a protected riparian area on an overlay map or Specific Plan, shall require approval of a Tree or Plant Removal Permit in compliance with § 88.01.050 (Tree or Plant Removal Permits) and shall be subject to environmental review.
2. *Streams*. For the purposes of this Section, streams include those shown on United States Geological Survey Quadrangle topographic maps as perennial or intermittent, blue or brown lines (solid or dashed), and river wash areas." Lake Gregory outlets to Houston Creek, which is shown as a USGS blueline stream.

Preconstruction inspections shall be required to verify the presence of riparian vegetation. Conditions of approval for removal of riparian vegetation may be imposed in addition to, and in combination with, any condition imposed in compliance with § 88.01.050 (Tree or Plant Removal Permits). Additionally, a bald eagle perch tree will not be removed unless an adequate substitution is provided.

4.5 Impact Analysis

4.5.1 Impact BIO-1: Special-Status Species

Will the proposed project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

4.5.1.1 Impacts to Special-Status Plant Species

No special-status plant species were observed within the project site during 2023 surveys. Thirty-one special-status plant species have the potential to occur due to the presence of coniferous and limited

riparian habitat. However, the potential is very low due to current land use and ongoing anthropogenic disturbance in the coniferous forest understory. Regardless, potentially significant direct impacts resulting from construction activities to install improvements associated with the drainage inlets in upland areas could occur to special-status plant species if activities occur in suitable habitat. Potentially significant temporary indirect impacts may occur during construction within or near suitable habitat in the form of dust and increased human activity.

4.5.1.2 Impacts to Special Status Wildlife Species

Five special-status wildlife species have a moderate to high potential to occur within the project site, western mastiff bat, San Bernardino flying squirrel, bald eagle, osprey, and yellow warbler. The proposed project is not expected to have any permanent impacts to these species. Indirect temporary impacts due to the partial dewatering of Lake Gregory will decrease the amount of foraging habitat for western mastiff bat, bald eagle, and osprey. This temporary indirect impact is expected to be less than significant due to the large size of the lake in comparison with the small proposed dewatered area at swim beach. Indirect temporary impacts may occur to nesting birds due to increased noise levels during construction and dredging activities and are considered potentially significant.

4.5.2 Impact BIO-2: Special-Status Natural Communities

Will the proposed project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

LESS THAN SIGNIFICANT

The 132-acre project site is dominated by open water (Lake Gregory). Native vegetation communities total 18.17 acres and include disturbed mixed conifer forest (17.59 acres) and red willow thicket (0.58 acre). The remaining vegetation communities and land cover types are unvegetated or dominated by non-native vegetation. A total of 0.231 acre of permanent and 15.205 acres of temporary impacts are anticipated as shown in Table 4, *Impacts to Natural Communities and Land Cover Types*, and Figure 10, *Impacts to Vegetation Community and Land Cover Types*.

Table 4: Impacts to Natural Communities and Land Cover Types

Vegetation Community/Land Cover Type	Existing Extent (acres)	Permanent Impacts (sq ft)	Permanent Impacts (acres)	Temporary Impacts (sq ft)	Temporary Impacts (acres)
Disturbed Mixed Conifer Forest *Pinus ponderosa-Calocedrus decurrens* Alliance	17.59	1,394.88	0.032	1,712.24	0.039
Red Willow Thicket *Salix laevigata* Alliance	0.58	0.00	0.00	2,859.96	0.066
Beach	2.47	173.63	0.004	71,757.67	1.647
Non-vegetated channel/Floodway	0.62	104.73	0.002	50.12	0.001
Open Water	80.13	4,012.90	0.092	572,787.25	13.149

Vegetation Community/Land Cover Type	Existing Extent (acres)	Permanent Impacts (sq ft)	Permanent Impacts (acres)	Temporary Impacts (sq ft)	Temporary Impacts (acres)
Ornamental	18.77	4,382.05	0.101	8,174.58	0.188
Urban/Developed	10.83	0.00	0.00	5,027.12	0.115
Detention Basin	0.67	0.00	0.00	0.00	0.00
Total	**131.66**	**10,068.18**	**0.231**	**662,368.93**	**15.20510.79**

The 0.58 acre of red willow thicket is considered riparian habitat and a sensitive natural community. No permanent impacts will occur to this natural community; however, there will be 0.066 acre of temporary direct impacts in the southeast portion of the project site associated with the dredging of South Basin. This indirect temporary impact would be considered less than significant.

4.5.3 Impact BIO-3: Wetlands

Will the proposed project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

NO IMPACT

As documented in the Aquatic Resources Delineation Report (Michael Baker 2024), 0.53 acre of wetland USACE Waters of the US and RWQCB wetland Waters of the State occur within the project site. The 0.53 acre consists of Library Basin in the western portion of the project site (0.41 acre) and Inlet 11 in the eastern portion of the project site (0.12 acre). Neither of these areas will be permanently or temporarily impacted by the proposed project as shown in Figure 11, *Impacts to Aquatic Resources*. Therefore, no impacts to wetlands will occur.

Non-wetland Jurisdictional Aquatic Resources

As shown in Table 5, *Impacts to Non-Wetland Jurisdictional Aquatic Resources*, and Figure 11, *Impacts to Aquatic Resources*, approximately 0.067 acre (2,895.60 square feet) of USACE non-wetland Waters of the US and RWQCB non-wetland Waters of the State and 0.067 acre (2,937.98 square feet) of CDFW jurisdictional lake and non-vegetated streambed will be permanently impacted by the proposed project. Temporary impacts include 12.47 acres (543,200.22 square feet) of USACE non-wetland Waters of the US and RWQCB non-wetland Waters of the State and 12.58 acres (548,047.22 square feet) of CDFW lake, non-vegetated streambed, and associated riparian habitat. Temporary impacts to the 0.066 acre (2,859.96 square feet) of CDFW associated riparian habitat were discussed previously in Section 4.5.2, *Impacts to Special-Status Natural Communities*, and determined to be less than significant.

Table 5: Impacts to Non-Wetland Jurisdictional Aquatic Resources

Jurisdictional Aquatic Resource	USACE/RWQCB Permanent Impacts [acres (sq ft)]	USACE/RWQCB Temporary Impacts [acres (sq ft)]	CDFW Permanent Impacts [acres (sq ft)]	CDFW Temporary Impacts [acres (sq ft)]
Lake Gregory	0.063 (2,725.74)*	11.93 (519,463.42)**	0.063 (2,725.74)*	11.99 (522,323.37)**
San Moritz Channel	0.0 (0.0)	0.54 (23,588.31)	0.0 (0.0)	0.59 (25,575.36)
Inlet 1	0.0002 (9.07)	0.0 (0.0)	0.0002 (9.07)	0.0 (0.0)
Inlet 6	0.0014 (62.35)	0.0 (0.0)	0.0024 (104.733)	0.0 (0.0)
Inlet 8	0.0 (0.0)	0.0024 (106.07)	0.0 (0.0)	0.0024 (106.07)
Inlet 9a	0.0005 (23.28)	0.0 (0.0)	0.0005 (23.28)	0.0 (0.0)
Inlet 13	0.0007 (29.74)	0.0 (0.0)	0.0007 (29.74)	0.0 (0.0)
Inlet 23	0.0 (0.0)	0.0001 (5.05)	0.0 (0.0)	0.0001 (5.05)
Inlet 24	0.0002 (7.31)	0.0004 (18.71)	0.0002 (7.31)	0.0004 (18.71)
Inlet 25	0.0 (0.0)	0.0004 (18.26)	0.0 (0.0)	0.0004 (18.26)
Inlet 28	0.0004 (19.17)	0.0 (0.0)	0.0004 (19.17)	0.0 (0.0)
Inlet 29	0.0004 (15.48)	0.0 (0.0)	0.0004 (15.48)	0.0 (0.0)
Inlet 30	0.0001 (3.46)	0.00001 (0.40)	0.0001 (3.46)	0.00001 (0.40)
Total	**0.067 (2,895.60)**	**12.47 (543,200.22)**	**0.067 (2,937.98)**	**12.58 (548,047.22)**

*Includes in-water barrier, inlet locations 005 and 032, and portions of inlet locations 013 and 028.

**Includes grading at Swim Beach and dredging at South Beach and South Lake.

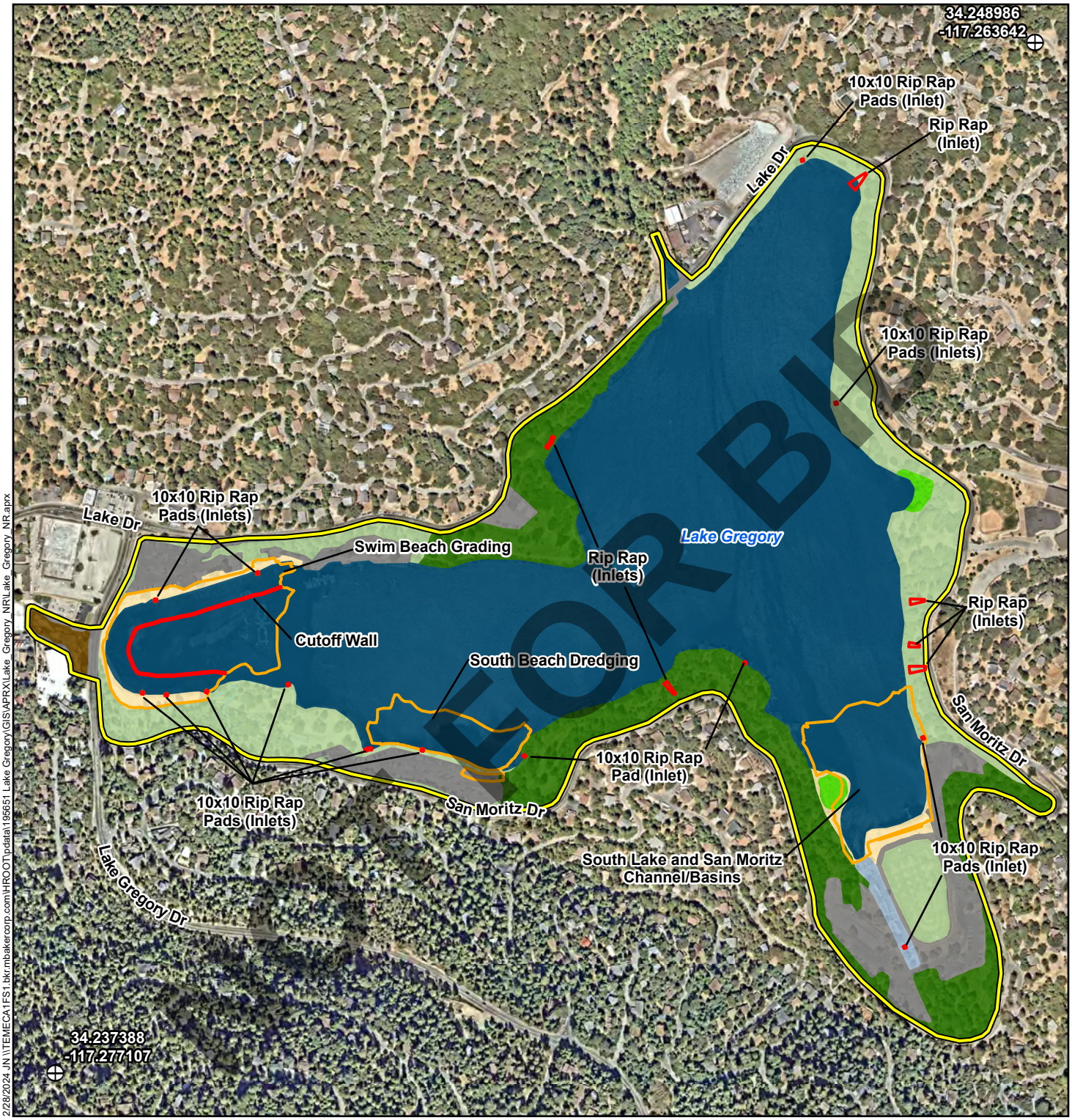
Impacts to non-wetland jurisdictional aquatic resources will require a Section 404 permit from the USACE, a Section 401 Water Quality Certification (WQC) from the RWQCB, and a CDFW Lake and Streambed Alteration Agreement prior to impacts occurring within each agency's jurisdiction (see Mitigation Measure BIO-3 in Section 5.0). Agencies may also impose mitigation measures to ensure no net loss of function and values.

4.5.4 Impact BIO-4: Wildlife Movement and Migratory Species

Will the proposed project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

As discussed in Section 3.7, the project site does not function as a wildlife movement corridor. It is likely; however, that Lake Gregory and the surrounding habitat functions as a migratory stopover for bird species. Indirect temporary impacts may occur to nesting birds due to increased noise levels during construction and dredging activities and are considered potentially significant.



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Legend

- Project Site
- Reference Point
- Red Willow Thicket (0.58 acre)
- Mixed Conifer (17.59 acres)
- Beach (2.47 acres)
- Detention Basin (0.67 acre)
- Non-Vegetated Channel/Floodway (0.62 acre)
- Open Water (80.13 acres)
- Ornamental (18.77 acres)
- Developed (10.83 acres)
- Temporary Impacts
- Permanent Impacts

Michael Baker INTERNATIONAL

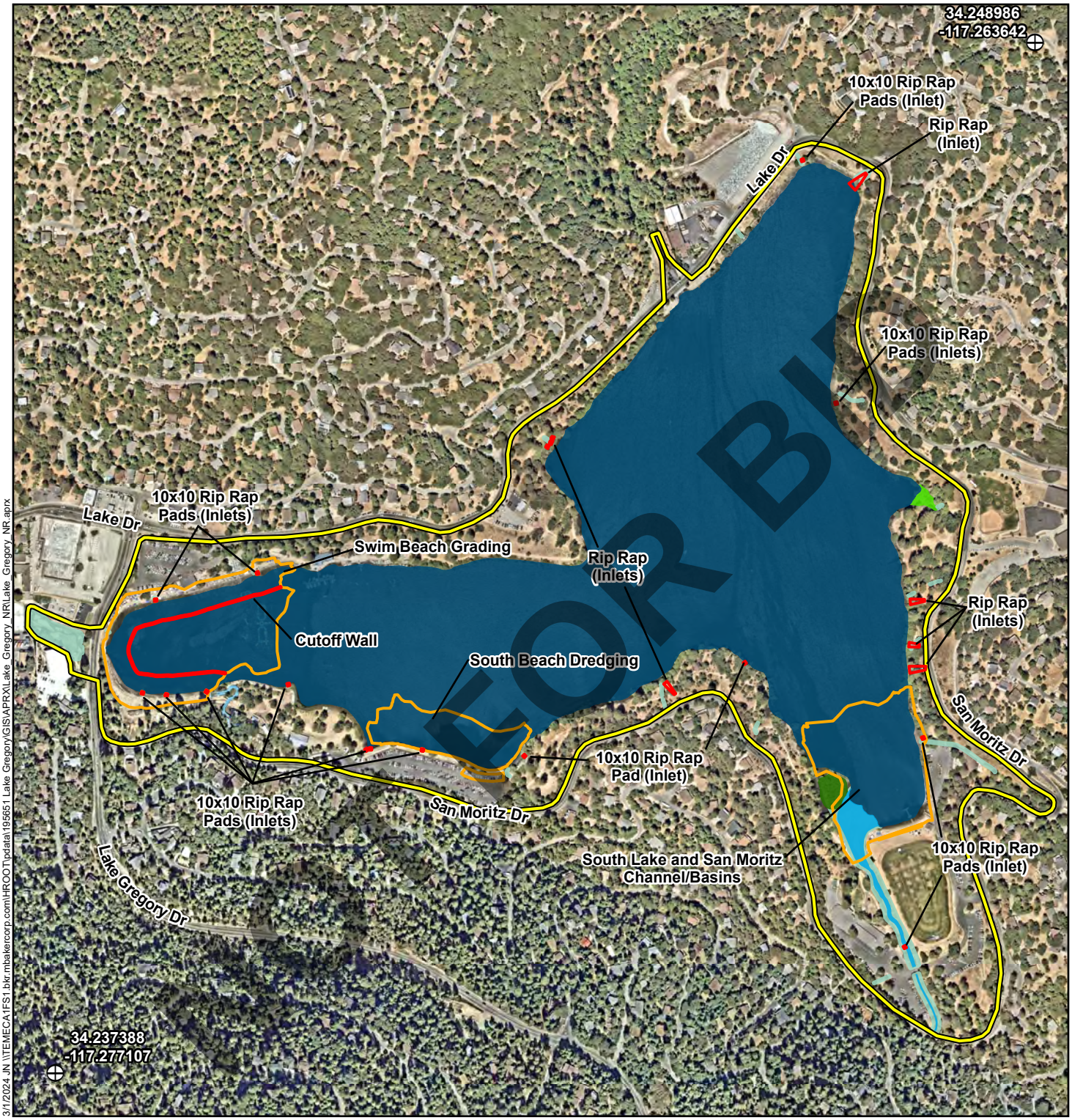
0 290 580 Feet

Source: Nearmap (09/2023)

LAKE GREGORY SITEWIDE SEDIMENT MANAGEMENT PROJECT
BIOLOGICAL RESOURCES ASSESSMENT

Impacts to Vegetation Communities

Figure 10



3/1/2024 JN \\TEMECA1FS1.bkr.mbakercorp.com\HROOT\pdata\195651 Lake Gregory\GIS\APRX\Lake_Gregory_NR\Lake_Gregory_NR.aprx

Legend

- Project Site
- Reference Point
- Associated Riparian Vegetation
- Vegetated Streambed, Wetland Waters of the U.S./State
- Non-Vegetated Streambed, Non-Wetland Waters of the U.S./State
- CDFW Lake, Non-Wetland Waters of the U.S./State
- Non-Wetland Waters of the U.S./State
- Temporary Impacts
- Permanent Impacts

Michael Baker INTERNATIONAL

0 290 580 Feet

Source: Nearmap (09/2023)

LAKE GREGORY SITEWIDE SEDIMENT MANAGEMENT PROJECT
BIOLOGICAL RESOURCES ASSESSMENT

Impacts to Aquatic Resources

Figure 11

4.5.5 Impact BIO-5: Consistency with Local Policies and Ordinances

Will the proposed project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

NO IMPACT

The project site supports trees that are regulated under the San Bernardino County Development Code, Chapter 88.01, Plant Protection and Management, specifically section 88.01.070 mountain forest and valley trees, 88.01.080 riparian vegetation, and 88.01.050 bald eagle perch trees (88.01.050). The proposed project will not remove any regulated trees; therefore, will not conflict with this local policy.

Temporary impacts to riparian vegetation are discussed in Section 4.5.2, *Impacts to Special-Status Natural Communities*. Indirect impacts (i.e., temporary noise impacts during construction) to bald eagle are discussed above in Section 4.5.1, *Impacts to Special-Status Species*.

4.5.6 Impact BIO-6: Consistency with an Adopted Habitat Conservation Plan

Will the proposed project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

NO IMPACT

The project site is not within or subject to the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Therefore, no impact would occur.

5.0 MITIGATION MEASURES

The mitigation measures described above in Section 4.0 are summarized below. Implementation of these measures are required to avoid the potential for direct or indirect impacts to special-status plants, nesting birds, and non-wetland jurisdictional aquatic features.

Impact BIO-1: Special Status Species

Mitigation Measure BIO-1: Prior to the construction of project improvements (e.g., Swim Beach in-water barrier, inlet improvements, San Moritz Channel Basins reconstruction/enhancement), a pre-construction survey will be conducted within the appropriate blooming period(s) to ensure no special status plant species are present or will be impacted within the proposed impact areas. If no special-status plant species are found during the pre-construction survey, no further mitigation is required and there will be no impact to special-status plant species.

If populations of special-status plants are found during the pre-construction survey and they are located within permanent or temporary impact areas, avoidance measures will be explored to protect the special-status plant population(s). If avoidance is not possible, measures to minimize impacts will include on-site restoration and detailed in the Lake Gregory Habitat Mitigation and Monitoring Plan (in preparation) in consultation with CDFW to reduce impacts to less than significant.

If special-status species are found during the pre-construction survey and would be impacted during future ongoing maintenance activities, mitigation for these impacts would also be addressed in the Lake Gregory Habitat Mitigation and Monitoring Plan (in preparation).

Mitigation Measure BIO-2: Prior to commencing project activities (including construction of improvements and future maintenance) during the nesting season (December 15-September 15), a designated qualified biologist shall survey the project site and a biologically defensible buffer distance for both diurnal and nocturnal nesting birds. Surveys shall be conducted by the designated qualified biologist at the appropriate time(s) of day, no more than three business days prior to commencement of project activities. If an active bird nest is located, the designated qualified biologist shall implement and monitor specific avoidance and minimization measures as specified in a CDFW-approved Nesting Bird Plan (NBP, Dudek 2020). The NBP includes project specific avoidance and minimization measures to ensure that impacts to nesting birds do not occur and that the project complies with all applicable laws related to nesting birds and birds of prey. The NBP also includes monitoring protocols; survey timing and duration; the creation, maintenance, and submittal of a bird nesting log to CDFW; and project-specific avoidance and minimization measures. Avoidance measures include project phasing and timing, monitoring of project-related noise, sound walls, and buffers.

Impact BIO-3: Wetlands

Mitigation Measure BIO-3: Prior to grading or other disturbance within the project site, the proposed impacts to federal and state regulated non-wetland waters shall be subject to the regulations set forth by

the USACE, RWQCB, and CDFW. Any alteration to jurisdictional aquatic features will require a permit from the USACE pursuant to Section 404 of the Clean Water Act, Water Quality Certification from the RWQCB under Section 401 of the Clean Water Act and the state Porter-Cologne Water Quality Control Act, and a Lake and Streambed Alteration Agreement with the CDFW under Section 1602 of the State Fish and Game Code. An evaluation of mitigation alternatives shall include consideration of avoidance and/or on-site or off-site mitigation.

The CDFW may require mitigation for all unavoidable impacts. This is anticipated to include on or off-site replacement, or in-lieu compensation, of RWQCB "waters of the State" and CDFW jurisdictional streambed at a ratio no less than 1:1. No construction within the project site shall occur until mitigation for jurisdictional areas has been formalized, approved, and implemented to the satisfaction of USACE, RWQCB, and CDFW such that impacts are reduced to a less than significant level. If substantial changes to the site plan result, a revised site plan shall be submitted to the Planning Department for review and approval.

6.0 UNAVOIDABLE SIGNIFICANT IMPACTS

The proposed project, inclusive of project design features and mitigation measures, will mitigate all potentially significant adverse impacts to special-status plant and wildlife species and jurisdictional aquatic resources.

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ATTACHMENT A

PLANT AND WILDLIFE SPECIES OBSERVED LIST

Table A-1: Plant Species Observed

*Scientific Name**	Common Name	Cal-IPC Rating
Plants		
Alnus rhombifolia	white alder	
Artemisia douglasiana	mugwort	
Baccharis salicifolia	mule fat	
*Bromus tectorum**	cheatgrass	High
Calocedrus decurrens	incense cedar	
Ceanothus integerrimus	deer brush	
Cornus nuttallii	Pacific dogwood	
*Erodium cicutarium**	redstem filaree	
Heterotheca grandiflora	telegraph weed	
Hordeum sp.	hordeum	Moderate
Juncus acutus	spiny rush	
Oenothera elata ssp. hookeri	evening primrose	
Phoradendron leucarpum	oak mistletoe	
Pinus jeffreyi	Jeffrey pine	
Pinus ponderosa	Ponderosa pine	
Polypogon monspeliensis	rabbitsfoot grass	
Populus fremontii	Fremont cottonwood	
Quercus chrysolepis	canyon live oak	
Quercus kelloggii	California black oak	
Salix exigua	sandbar willow	
Salix gooddingii	Gooding's black willow	
Salix laevigata	red willow	
Salix lasiolepis	arroyo willow	
*Sisymbrium irio**	london rocket	Limited
*Taraxacum officinale**	common dandelion	

* Non-native species

** **California Invasive Plant Council (Cal-IPC) Ratings**

High These species have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are

conducive to moderate to high rates of dispersal and establishment. Most are widely distributed ecologically.

Moderate — These species have substantial and apparent—but generally not severe—ecological impacts on physical processes, plant and animal communities, and vegetation structure. Their reproductive biology and other attributes are conducive to moderate to high rates of dispersal, though establishment is generally dependent upon ecological disturbance. Ecological amplitude and distribution may range from limited to widespread.

Limited — These species are invasive, but their ecological impacts are minor on a statewide level or there was not enough information to justify a higher score. Their reproductive biology and other attributes result in low to moderate rates of invasiveness. Ecological amplitude and distribution are generally limited, but these species may be locally persistent and problematic.

Table A-2: Wildlife Species Observed

*Scientific Name**	Common Name	Special-Status Rank**
Amphibians		
Trachemys scripta elegans	red-eared slider	
Birds		
Anas platyrhynchos	mallard	
Aphelocoma californica	California scrub-jay	
Corvus brachyrhynchos	American crow	
Colaptes auratus	northern flicker	
Cyanocitta stelleri	Stellar's jay	
Euphagus cyanocephalus	Brewer's blackbird	
Fulica americana	American coot	
Junco hyemalis	dark-eyed junco	
Melanerpes formicivorus	acorn woodpecker	
Mimus polyglottos	northern mockingbird	
Nannopterum auritum	double-crested cormorant	
Pipilo maculatus	spotted towhee	
Podilymbus podiceps	pied-billed grebe	
Psaltriparus minimus	bushtit	
Sayornis nigricans	black phoebe	
Insects		
*Apis mellifera**	western honey bee	
Mammals		
Sciurus griseus	western grey squirrel	
Thomomys bottae	Botta's pocket gopher	
*Canis familiaris**	domestic dog	

* Non-native species

** **Special-Status Rank**

U.S. Fish and Wildlife Service

FE Endangered – any species which is in danger of extinction throughout all or a significant portion of its range.

California Department of Fish and Wildlife

SE Endangered – any native species or subspecies of bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range

due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease.

SSC Species of Special Concern – any species, subspecies, or distinct population of fish, amphibian, reptile, bird, or mammal native to California that currently satisfies one or more of the following criteria:

- is extirpated from California or, in the case of birds, in its primary seasonal or breeding role;
- is listed as Federally-, but not State-, threatened or endangered; meets the State definition of threatened or endangered but has not formally been listed.
- is experiencing, or formerly experienced, serious (noncyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for State threatened or endangered status; or
- has naturally small populations exhibiting high susceptibility to risk from any factor(s), that if realized, could lead to declines that would qualify it for State threatened or endangered status.

ATTACHMENT B

POTENTIALLY OCCURRING SPECIAL-STATUS BIOLOGICAL RESOURCES

Table B-1: Potentially Occurring Special-Status Plant Species

Scientific Name	Common Name	Status (Federal/State/CRPR/Other)	Habitats/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur in Study Area
Acanthoscyphus parishii var. parishii	Parish's oxytheca	None/None/4.2/None	Chaparral, Lower montane coniferous forest; Gravelly (sometimes), Sandy (sometimes)/annual herb/June–Sep/4005–8530	Low potential to occur. Coniferous forest habitat is present within the study area; however, due to a high level of anthropogenic disturbance the potential for this species to occur is limited.
Allium howellii var. clokeyi	Mt. Pinos onion	None/None/1B.3/None	Great Basin scrub, Meadows and seeps, Pinyon and juniper woodland/perennial bulbiferous herb/Apr–June/4265–6070	Not expected to occur. No suitable habitat is present.
Allium parishii	Parish's onion	None/None/4.3/None	Joshua tree "woodland," Mojavean desert scrub, Pinyon and juniper woodland; Rocky/perennial bulbiferous herb/Apr–May/2955–5695	Not expected to occur. No suitable habitat is present.
Ambrosia monogyra	singlewhorl burrobrush	None/None/2B.2/None	Chaparral, Sonoran desert scrub; Sandy/perennial shrub/Aug–Nov/35–1640	Not expected to occur. The study area is outside of the species' known elevation range.
Arenaria paludicola	marsh sandwort	FE/SE/1B.1/None	Marshes and swamps; Openings, Sandy/perennial stoloniferous herb/May–Aug/10–560	Not expected to occur. The study area is outside of the species' known elevation range and there is no suitable habitat present.
Asclepias nyctaginifolia	Mojave milkweed	None/None/2B.1/None	Mojavean desert scrub, Pinyon and juniper woodland/perennial herb/May–June/2870–5580	Not expected to occur. No suitable habitat is present.
Berberis nevinii	Nevin's barberry	FE/SE/1B.1/None	Chaparral, Cismontane woodland, Coastal scrub, Riparian scrub; Gravelly (sometimes), Sandy (sometimes)/perennial evergreen shrub/(Feb)Mar–June/230–2705	Not expected to occur. The study area is outside of the species' known elevation range.
Brodiaea filifolia	thread-leaved brodiaea	FT/SE/1B.1/None	Chaparral, Cismontane woodland, Coastal scrub, Playas, Valley and foothill grassland, Vernal pools; Clay (often)/perennial bulbiferous herb/Mar–June/80–3675	Not expected to occur. The study area is outside of the species' known elevation range and there is no suitable habitat present.
Calochortus palmeri var. palmeri	Palmer's mariposa-lily	None/None/1B.2/None	Chaparral, Lower montane coniferous forest, Meadows and seeps; Mesic/perennial bulbiferous herb/Apr–July/2330–7840	Low potential to occur. Suitable habitat for this species is present within the study area; however, due to a high level of anthropogenic disturbance, the potential for this species to occur is limited.
Calochortus plummerae	Plummer's mariposa-lily	None/None/4.2/None	Chaparral, Cismontane woodland, Coastal scrub, Lower montane coniferous forest, Valley and foothill grassland; Granitic, Rocky/perennial bulbiferous herb/May–July/330–5580	Low potential to occur. Suitable habitat for this species is present within the study area; however, due to a high level of anthropogenic disturbance, the potential for this species to occur is limited.
Canbya candida	white pygmy-poppy	None/None/4.2/None	Joshua tree "woodland," Mojavean desert scrub, Pinyon and juniper woodland; Granitic, Gravelly, Sandy/annual herb/Mar–June/1970–4790	Not expected to occur. The study area is outside of the species' known elevation range and there is no suitable habitat present.
Castilleja lasiorhyncha	San Bernardino Mountains owl's-clover	None/None/1B.2/None	Chaparral, Meadows and seeps, Pebble (Pavement) plain, Riparian woodland, Upper montane coniferous forest; Mesic/annual herb (hemiparasitic)/May–Aug/4265–7840	Low potential to occur. Suitable habitat for this species is present within the study area; however, due to a high level of anthropogenic disturbance, the potential for this species to occur is limited.

Scientific Name	Common Name	Status (Federal/State/CRPR/Other)	Habitats/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur in Study Area
Castilleja plagiotoma	Mojave paintbrush	None/None/4.3/None	Great Basin scrub, Joshua tree "woodland," Lower montane coniferous forest, Pinyon and juniper woodland/perennial herb (hemiparasitic)/Apr–June/985–8205	Low potential to occur. Coniferous forest habitat is present within the study area; however, due to a high level of anthropogenic disturbance the potential for this species to occur is limited.
Centromadia pungens ssp. laevis	smooth tarplant	None/None/1B.1/None	Chenopod scrub, Meadows and seeps, Playas, Riparian woodland, Valley and foothill grassland; Alkaline/annual herb/Apr–Sep/0–2100	Not expected to occur. The study area is outside of the species' known elevation range and there is no suitable habitat present.
Chloropyron maritimum ssp. maritimum	salt marsh bird's-beak	FE/SE/1B.2/None	Coastal dunes, Marshes and swamps/annual herb (hemiparasitic)/May–Oct(Nov)/0–100	Not expected to occur. The study area is outside of the species' known elevation range and there is no suitable habitat present.
Chorizanthe parryi var. parryi	Parry's spineflower	None/None/1B.1/None	Chaparral, Cismontane woodland, Coastal scrub, Valley and foothill grassland; Openings, Rocky (sometimes), Sandy (sometimes)/annual herb/Apr–June/900–4005	Not expected to occur. The study area is outside of the species' known elevation range and there is no suitable habitat present.
Chorizanthe xanti var. leucotheca	white-bracted spineflower	None/None/1B.2/None	Coastal scrub, Mojavean desert scrub, Pinyon and juniper woodland; Gravelly (sometimes), Sandy (sometimes)/annual herb/Apr–June/985–3935	Not expected to occur. The study area is outside of the species' known elevation range and there is no suitable habitat present.
Cryptantha incana	Tulare cryptantha	None/None/1B.3/None	Lower montane coniferous forest/annual herb/June–Aug/4690–7055	Low potential to occur. Suitable habitat for this species is present within the study area; however, due to a high level of anthropogenic disturbance, the potential for this species to occur is limited.
Deinandra mohavensis	Mojave tarplant	None/SE/1B.3/None	Chaparral, Coastal scrub, Riparian scrub; Mesic/annual herb/(Jan–May)June–Oct/2100–5250	Low potential to occur. Minimal riparian habitat for this species is present within the study area; however, due to a high level of anthropogenic disturbance, the potential for this species to occur is limited.
Diplacus johnstonii	Johnston's monkeyflower	None/None/4.3/None	Lower montane coniferous forest/annual herb/May–Aug/3200–9580	Low potential to occur. Suitable habitat for this species is present within the study area; however, due to a high level of anthropogenic disturbance, the potential for this species to occur is limited.
Dodecahema leptoceras	slender-horned spineflower	FE/SE/1B.1/None	Chaparral, Cismontane woodland, Coastal scrub; Sandy/annual herb/Apr–June/655–2495	Not expected to occur. The study area is outside of the species' known elevation range and there is no suitable habitat present.
Dudleya abramsii ssp. affinis	San Bernardino Mountains dudleya	None/None/1B.2/None	Pebble (Pavement) plain, Pinyon and juniper woodland, Upper montane coniferous forest; Carbonate (sometimes), Granitic (sometimes)/perennial herb/Apr–July/4100–8530	Not expected to occur. Although coniferous forest is present, the understory has a high level of anthropogenic disturbance and does not support the appropriate soils for this species.
Eremothera boothii ssp. boothii	Booth's evening-primrose	None/None/2B.3/None	Joshua tree "woodland," Pinyon and juniper woodland/annual herb/Apr–Sep/2675–7875	Not expected to occur. No suitable habitat is present.

Scientific Name	Common Name	Status (Federal/State/CRPR/Other)	Habitats/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur in Study Area
Eriastrum densifolium ssp. sanctorum	Santa Ana River woollystar	FE/SE/1B.1/None	Chaparral, Coastal scrub; Gravelly (sometimes), Sandy (sometimes)/perennial herb/Apr–Sep/300–2000	Not expected to occur. The study area is outside of the species' known elevation range and there is no suitable habitat present.
Erigeron parishii	Parish's daisy	FT/None/1B.1/None	Mojavean desert scrub, Pinyon and juniper woodland; Carbonate (usually), Granitic (sometimes)/perennial herb/May–Aug/2625–6560	Not expected to occur. No suitable habitat is present.
Eriophyllum lanatum var. obovatum	southern Sierra woolly sunflower	None/None/4.3/None	Lower montane coniferous forest, Upper montane coniferous forest; Loam, Sandy/perennial herb/June–July/3655–8205	Low potential to occur. Coniferous forest and riparian habitat is present within the study area; however, due to a high level of anthropogenic disturbance the potential for this species to occur is limited.
Fimbristylis thermalis	hot springs fimbristylis	None/None/2B.2/None	Meadows and seeps/perennial rhizomatous herb/July–Sep/360–4395	Not expected to occur. The study area is outside of the species' known elevation range and there is no suitable habitat present.
Frasera neglecta	pine green-gentian	None/None/4.3/None	Lower montane coniferous forest, Pinyon and juniper woodland, Upper montane coniferous forest/perennial herb/May–July/4595–8205	Low potential to occur. Coniferous forest and riparian habitat is present within the study area; however, due to a high level of anthropogenic disturbance the potential for this species to occur is limited.
Galium johnstonii	Johnston's bedstraw	None/None/4.3/None	Chaparral, Lower montane coniferous forest, Pinyon and juniper woodland, Riparian woodland/perennial herb/June–July/4005–7545	Low potential to occur. Coniferous forest and riparian habitat is present within the study area; however, due to a high level of anthropogenic disturbance the potential for this species to occur is limited.
Heuchera caespitosa	urn-flowered alumroot	None/None/4.3/None	Cismontane woodland, Lower montane coniferous forest, Riparian forest, Upper montane coniferous forest; Rocky/perennial rhizomatous herb/May–Aug/3790–8695	Low potential to occur. Coniferous forest is present within the study area; however, due to a high level of anthropogenic disturbance the potential for this species to occur is limited.
Heuchera parishii	Parish's alumroot	None/None/1B.3/None	Alpine boulder and rock field, Lower montane coniferous forest, Subalpine coniferous forest, Upper montane coniferous forest; Carbonate (sometimes), Rocky/perennial rhizomatous herb/June–Aug/4920–12470	Not expected to occur. The study area is outside of the species' known elevation range.
Horkelia cuneata var. puberula	mesa horkelia	None/None/1B.1/None	Chaparral, Cismontane woodland, Coastal scrub; Gravelly (sometimes), Sandy (sometimes)/perennial herb/Feb–July(Sep)/230–2660	Not expected to occur. The study area is outside of the species' known elevation range and there is no suitable habitat present.
Hulsea vestita ssp. parryi	Parry's sunflower	None/None/4.3/None	Lower montane coniferous forest, Pinyon and juniper woodland, Upper montane coniferous forest; Carbonate (sometimes), Granitic (sometimes), Openings, Rocky/perennial herb/Apr–Aug/4495–9500	Low potential to occur. Coniferous forest is present within the study area; however, due to a high level of anthropogenic disturbance the potential for this species to occur is limited.
Imperata brevifolia	California satintail	None/None/2B.1/None	Chaparral, Coastal scrub, Meadows and seeps, Mojavean desert scrub, Riparian scrub; Mesic/perennial rhizomatous herb/Sep–May/0–3985	Not expected to occur. The study area is outside of the species' known elevation range.

Scientific Name	Common Name	Status (Federal/State/CRPR/Other)	Habitats/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur in Study Area
Ivesia argyrocoma var. argyrocoma	silver-haired ivesia	None/None/1B.2/None	Meadows and seeps, Pebble (Pavement) plain, Upper montane coniferous forest/perennial herb/June–Aug/4800–9710	Low potential to occur. The study area is at and below the low elevation range for this species, and although coniferous forest is present, the understory is highly disturbed by ongoing anthropogenic activities. Therefore, the potential for this species to occur within the study area is quite limited.
Lilium humboldtii ssp. ocellatum	ocellated Humboldt lily	None/None/4.2/None	Chaparral, Cismontane woodland, Coastal scrub, Lower montane coniferous forest, Riparian woodland; Openings/perennial bulbiferous herb/Mar–July(Aug)/100–5905	Low potential to occur. Coniferous forest and riparian habitat is present within the study area; however, due to a high level of anthropogenic disturbance the potential for this species to occur is limited.
Lilium parryi	lemon lily	None/None/1B.2/None	Lower montane coniferous forest, Meadows and seeps, Riparian forest, Upper montane coniferous forest; Mesic/perennial bulbiferous herb/July–Aug/4005–9005	Low potential to occur. Coniferous forest and riparian habitat is present within the study area; however, due to a high level of anthropogenic disturbance the potential for this species to occur is limited.
Lycium parishii	Parish's desert-thorn	None/None/2B.3/None	Coastal scrub, Sonoran desert scrub/perennial shrub/Mar–Apr/445–3280	Not expected to occur. The study area is outside of the species' known elevation range and there is no suitable habitat present.
Malacothamnus parishii	Parish's bush-mallow	None/None/1A/None	Chaparral, Coastal scrub/perennial deciduous shrub/June–July/1000–1495	Not expected to occur. The study area is outside of the species' known elevation range and there is no suitable habitat present.
Monardella exilis	Mojave monardella	None/None/4.2/None	Chenopod scrub, desert dunes, Great Basin scrub, Joshua tree "woodland," lower montane coniferous forest, Mojavean desert scrub, pinyon and juniper woodland; sandy/annual herb/Apr–Sep/1970–6725	Low potential to occur. Coniferous forest habitat is present within the study area; however, due to a high level of anthropogenic disturbance the potential for this species to occur is limited.
Monardella macrantha ssp. hallii	Hall's monardella	None/None/1B.3/None	Broadleafed upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest, Valley and foothill grassland/perennial rhizomatous herb/June–Oct/2395–7200	Low potential to occur. Coniferous forest habitat is present within the study area; however, due to a high level of anthropogenic disturbance the potential for this species to occur is limited.
Monardella saxicola	rock monardella	None/None/4.2/None	Chaparral, Closed-cone coniferous forest, Lower montane coniferous forest; Rocky, Serpentinite (usually)/perennial rhizomatous herb/June–Sep/1640–5905	Low potential to occur. Coniferous forest habitat is present within the study area; however, due to a high level of anthropogenic disturbance the potential for this species to occur is limited.
Muhlenbergia californica	California muhly	None/None/4.3/None	Chaparral, Coastal scrub, Lower montane coniferous forest, Meadows and seeps; Mesic, Seeps, Streambanks/perennial rhizomatous herb/June–Sep/330–6560	Low potential to occur. Coniferous forest habitat is present within the study area; however, due to a high level of anthropogenic disturbance the potential for this species to occur is limited.
Nemacladus gracilis	slender nemacladus	None/None/4.3/None	Cismontane woodland, Valley and foothill grassland; Gravelly (sometimes), Sandy (sometimes)/annual herb/Mar–May/395–6235	Not expected to occur. No suitable habitat is present.

Scientific Name	Common Name	Status (Federal/State/CRPR/Other)	Habitats/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur in Study Area
Opuntia basilaris var. brachyclada	short-joint beavertail	None/None/1B.2/None	Chaparral, Joshua tree "woodland," Mojavean desert scrub, Pinyon and juniper woodland/perennial stem/Apr–June(Aug)/1395–5905	Not expected to occur. No suitable habitat is present.
Pediomelum castoreum	Beaver Dam breadroot	None/None/1B.2/None	Joshua tree "woodland," Mojavean desert scrub; Roadsides, Sandy, Washes/perennial herb/Apr–May/2000–5005	Not expected to occur. No suitable habitat is present.
Pelazoneuron puberulum var. sonorense	Sonoran maiden fern	None/None/2B.2/None	Meadows and seeps/perennial rhizomatous herb/Jan–Sep/165–2000	Not expected to occur. The study area is outside of the species' known elevation range and there is no suitable habitat present.
Pentachaeta aurea ssp. aurea	golden-rayed pentachaeta	None/None/4.2/None	Chaparral, Cismontane woodland, Coastal scrub, Lower montane coniferous forest, Riparian woodland, Valley and foothill grassland/annual herb/Mar–July/260–6070	Low potential to occur. Coniferous forest habitat is present within the study area; however, due to a high level of anthropogenic disturbance the potential for this species to occur is limited.
Perideridia parishii ssp. parishii	Parish's yampah	None/None/2B.2/None	Lower montane coniferous forest, Meadows and seeps, Upper montane coniferous forest/perennial herb/June–Aug/4805–9845	Low potential to occur. The study area is at and below the low elevation range for this species, and although coniferous forest is present, the understory is highly disturbed by ongoing anthropogenic activities. Therefore, the potential for this species to occur within the study area is quite limited.
Phacelia exilis	Transverse Range phacelia	None/None/4.3/None	Lower montane coniferous forest, Meadows and seeps, Pebble (Pavement) plain, Upper montane coniferous forest; Gravelly (sometimes), Sandy (sometimes)/annual herb/May–Aug/3610–8860	Low potential to occur. Coniferous forest habitat is present within the study area; however, due to a high level of anthropogenic disturbance the potential for this species to occur is limited.
Phacelia mohavensis	Mojave phacelia	None/None/4.3/None	Cismontane woodland, Lower montane coniferous forest, Meadows and seeps, Pinyon and juniper woodland; Gravelly (sometimes), Sandy (sometimes)/annual herb/Apr–Aug/4595–8205	Low potential to occur. Coniferous forest habitat is present within the study area; however, due to a high level of anthropogenic disturbance the potential for this species to occur is limited.
Piperia leptopetala	narrow-petaled rein orchid	None/None/4.3/None	Cismontane woodland, Lower montane coniferous forest, Upper montane coniferous forest/perennial herb/May–July/1245–7300	Low potential to occur. Coniferous forest habitat is present within the study area; however, due to a high level of anthropogenic disturbance the potential for this species to occur is limited.
Saltugilia latimeri	Latimer's woodland-gilia	None/None/1B.2/None	Chaparral, Mojavean desert scrub, Pinyon and juniper woodland; Granitic (often), Rocky (sometimes), Sandy (sometimes), Washes (sometimes)/annual herb/Mar–June/1310–6235	Not expected to occur. No suitable habitat is present.
Schoenus nigricans	black bog-rush	None/None/2B.2/None	Marshes and swamps/perennial herb/Aug–Sep/490–6560	Not expected to occur. No suitable habitat is present.
Scutellaria bolanderi ssp. austromontana	southern mountains skullcap	None/None/1B.2/None	Chaparral, Cismontane woodland, Lower montane coniferous forest; Mesic/perennial rhizomatous herb/June–Aug/1395–6560	Low potential to occur. Coniferous forest habitat is present within the study area; however, due to a high level of anthropogenic disturbance the potential for this species to occur is limited.

Scientific Name	Common Name	Status (Federal/State/CRPR/Other)	Habitats/ Life Form/ Blooming Period/ Elevation Range (feet)	Potential to Occur in Study Area
Senecio astephanus	San Gabriel ragwort	None/None/4.3/None	Chaparral, Coastal bluff scrub; Rocky, Slopes/perennial herb/May–July/1310–4920	Not expected to occur. No suitable habitat is present.
Sidalcea malviflora ssp. dolosa	Bear Valley checkerbloom	None/None/1B.2/None	Lower montane coniferous forest, Meadows and seeps, Riparian woodland, Upper montane coniferous forest/perennial herb/May–Aug/4905–8810	Not expected to occur. The study area is outside of the species' known elevation range.
Sidalcea neomexicana	salt spring checkerbloom	None/None/2B.2/None	Chaparral, Coastal scrub, Lower montane coniferous forest, Mojavean desert scrub, Playas; Alkaline, Mesic/perennial herb/Mar–June/50–5020	Low potential to occur. Coniferous forest habitat is present within the study area; however, due to a high level of anthropogenic disturbance the potential for this species to occur is limited.
Sidotheca caryophylloides	chickweed oxytheca	None/None/4.3/None	Lower montane coniferous forest/annual herb/July–Sep(Oct)/3655–8530	Low potential to occur. Coniferous forest habitat is present within the study area; however, due to a high level of anthropogenic disturbance the potential for this species to occur is limited.
Streptanthus bernardinus	Laguna Mountains jewelflower	None/None/4.3/None	Chaparral, Lower montane coniferous forest/perennial herb/May–Aug/2200–8205	Low potential to occur. Coniferous forest habitat is present within the study area; however, due to a high level of anthropogenic disturbance the potential for this species to occur is limited.
Streptanthus campestris	southern jewelflower	None/None/1B.3/None	Chaparral, Lower montane coniferous forest, Pinyon and juniper woodland; Rocky/perennial herb/(Apr)May–July/2955–7545	Low potential to occur. Coniferous forest habitat is present within the study area; however, due to a high level of anthropogenic disturbance the potential for this species to occur is limited.
Symphyotrichum defoliatum	San Bernardino aster	None/None/1B.2/None	Cismontane woodland, Coastal scrub, Lower montane coniferous forest, Marshes and swamps, Meadows and seeps, Valley and foothill grassland; Streambanks/perennial rhizomatous herb/July–Nov/5–6695	Low potential to occur. Coniferous forest habitat is present within the study area; however, due to a high level of anthropogenic disturbance the potential for this species to occur is limited.
Symphyotrichum greatae	Greata's aster	None/None/1B.3/None	Broadleafed upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest, Riparian woodland; Mesic/perennial rhizomatous herb/June–Oct/985–6595	Low potential to occur. Coniferous forest habitat is present within the study area; however, due to a high level of anthropogenic disturbance the potential for this species to occur is limited.
Syntrichopappus lemmonii	Lemmon's syntrichopappus	None/None/4.3/None	Chaparral, Joshua tree "woodland," Pinyon and juniper woodland; Gravelly (sometimes), Sandy (sometimes)/annual herb/Apr–May(June)/1640–6005	Not expected to occur. No suitable habitat is present.

Status Legend:

Federal

FE: Federally listed as endangered
FT: Federally listed as threatened
FC: Federal Candidate for listing
DL: Delisted

State

SE: State listed as endangered
ST: State listed as threatened
SC: State Candidate for listing
SR: State Rare

California Rare Plant Rank (CRPR)

CRPR 1A: Plants presumed extirpated in California and either rare or extinct elsewhere
CRPR 1B: Plants rare, threatened, or endangered in California and elsewhere
CRPR 2A: Plants presumed extirpated in California but common elsewhere
CRPR 2B: Plants rare, threatened, or endangered in California but more common elsewhere
CRPR 3: Review List: Plants about which more information is needed
CRPR 4: Watch List: Plants of limited distribution
.1 Seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat)
.2 Moderately threatened in California (20–80% occurrences threatened / moderate degree and immediacy of threat)
.3 Not very threatened in California (<20% of occurrences threatened / low degree and immediacy of threat or no current threats known)"

Table B-2: Potentially Occurring Special-Status Wildlife Species

Scientific Name	Common Name	Status (Federal/State/Other)	Habitats	Potential to Occur in Study Area
Bombus crotchii	Crotch bumble bee	None/None/None	Open grassland and scrub communities supporting suitable floral resources.	Not expected to occur. No suitable habitat is present.
Bombus morrisoni	Morrison's bumble bee	None/None/None	Open dry scrub	Not expected to occur. No suitable habitat is present.
Bombus pensylvanicus	American bumble bee	None/None/IUCN_VU-Vulnerable	Coastal prairie | Great Basin grassland | Valley & foothill grassland	Not expected to occur. No suitable habitat is present.
Euchloe hyantis andrewsi	Andrew's marble butterfly	None/None/None	Yellow pine forest; host plants are Laguna Mountains jewel-flower (*Streptanthus bernardinus*) and Holboell's rockcress [*Boechera pinetorum* (*Arabis holboellii* var. *pinetorum*)]	Low potential to occur. Coniferous forest occurs within the project site, but is disturbed due to urbanization and ongoing anthropogenic activities.
Euphydryas editha quino	quino checkerspot butterfly	FE/None/None	Annual forblands, grassland, open coastal scrub and chaparral; often soils with cryptogamic crusts and fine-textured clay; host plants include Plantago erecta, Antirrhinum coulterianum, and Plantago patagonica (Silverado Occurrence Complex)	Not expected to occur. No suitable habitat is present.
Helminthoglypta taylori	westfork shoulderband	None/None/None	Vicinity of the Mojave River	Not expected to occur. The project site is outside of the known range of the species.
Neolarra alba	white cuckoo bee	None/None/None	Known only from 6 historical localities in Southern California; has not been collected since 1946	Not expected to occur. The only known location is from lower elevations in 1946 (CDFW 2023a).
Palaeoxenus dohrni	Dohrn's elegant eucnemid beetle	None/None/None	Mountainous forests with incense cedar, ponderosa pine, and sugar pine	Moderate potential to occur within the coniferous forest habitat. Reported in the CNDDB in 2018 approximately 1.8 miles northeast of Lake Gregory.
Catostomus santaanae	Santa Ana sucker	FT/None/AFS_TH-Threatened | IUCN_VU-Vulnerable	Small, shallow, cool, clear streams less than 7 meters (23 feet) in width and a few centimeters to more than a meter (1.5 inches to more than 3 feet) in depth; substrates are generally coarse gravel, rubble, and boulder	Not expected to occur. No suitable habitat is present.
Rhinichthys osculus ssp. 8	Santa Ana speckled dace	None/SSC/AFS_TH-Threatened | CDFW_SSC-Species of Special Concern | USFS_S-Sensitive	Headwaters of the Santa Ana and San Gabriel Rivers; may be extirpated from the Los Angeles River system	Not expected to occur. No suitable habitat is present.
Siphateles bicolor mohavensis	Mohave tui chub	FE/FP, SE/AFS_EN-Endangered | CDFW_FP-Fully Protected	Lacustrine ponds or pools; 4 feet min water depth; freshwater flow; mineralized and alkaline environment; habitat for aquatic invertebrate prey and egg attachment substrate; Ruppia maritima preferred for egg attachment and thermal refuge in summer months	Not expected to occur. No suitable habitat is present.

Scientific Name	Common Name	Status (Federal/State/Other)	Habitats	Potential to Occur in Study Area
Anaxyrus californicus	arroyo toad	FE/SSC/CDFW_SSC-Species of Special Concern | IUCN_EN-Endangered	Semi-arid areas near washes, sandy riverbanks, riparian areas, palm oasis, Joshua tree, mixed chaparral and sagebrush; stream channels for breeding (typically third order); adjacent stream terraces and uplands for foraging and wintering	Not expected to occur. No suitable habitat is present.
Batrachoseps gabrieli	San Gabriel slender salamander	None/None/IUCN_DD-Data Deficient | USFS_S-Sensitive	Talus slopes in forested areas, often near streams	Not expected to occur. No suitable habitat is present.
Rana draytonii	California red-legged frog	FT, BCC/SSC/CDFW_SSC-Species of Special Concern | IUCN_VU-Vulnerable	Lowland streams, wetlands, riparian woodlands, livestock ponds; dense, shrubby or emergent vegetation associated with deep, still or slow-moving water; uses adjacent uplands	Not expected to occur. The project site is outside of the known range of the species.
Rana muscosa	mountain yellow-legged frog	FE/SE, WL/CDFW_WL-Watch List | IUCN_EN-Endangered | USFS_S-Sensitive	Lakes, ponds, meadow streams, isolated pools, and open riverbanks; rocky canyons in narrow canyons and in chaparral	Not expected to occur. No suitable habitat is present.
Spea hammondii	western spadefoot	None/SSC/BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_NT-Near Threatened	Primarily grassland and vernal pools, but also in ephemeral wetlands that persist at least 3 weeks in chaparral, coastal scrub, valley–foothill woodlands, pastures, and other agriculture	Not expected to occur. No suitable habitat is present.
Anniella stebbinsi	southern California legless lizard	None/SSC/CDFW_SSC-Species of Special Concern | USFS_S-Sensitive	Coastal dunes, stabilized dunes, beaches, dry washes, valley–foothill, chaparral, and scrubs; pine, oak, and riparian woodlands; associated with sparse vegetation and moist sandy or loose, loamy soils	Not expected to occur. No suitable habitat is present.
Arizona elegans occidentalis	California glossy snake	None/SSC/CDFW_SSC-Species of Special Concern	Arid scrub, rocky washes, grasslands, chaparral, open areas with loose soil	Not expected to occur. No suitable habitat is present.
Aspidoscelis hyperythra	orange-throated whiptail	None/WL/CDFW_WL-Watch List | IUCN_LC-Least Concern | USFS_S-Sensitive	Low-elevation coastal scrub, chaparral, and valley–foothill hardwood	Not expected to occur. No suitable habitat is present.
Aspidoscelis tigris stejnegeri	San Diegan tiger whiptail	None/SSC/CDFW_SSC-Species of Special Concern	Hot and dry areas with sparse foliage, including chaparral, woodland, and riparian areas.	Not expected to occur. No suitable habitat is present.
Charina umbratica	southern rubber boa	None/ST/USFS_S-Sensitive	Montane oak–conifer and mixed-conifer forests, montane chaparral, wet meadows; usually in vicinity of streams or wet meadows	Low potential to occur. The study area contains scattered pines and cedar trees that could support this species; however, the site lacks suitable streams or wet meadows and is located in an urbanized area.
Diadophis punctatus modestus	San Bernardino ring-necked snake	None/None/USFS_S-Sensitive	Moist habitats including wet meadows, rocky hillsides, gardens, farmland grassland, chaparral, mixed-conifer forest, and woodland	Low potential to occur due to the disturbed understory within the coniferous forest habitat.

Scientific Name	Common Name	Status (Federal/State/Other)	Habitats	Potential to Occur in Study Area
Emys marmorata	western pond turtle	None/SSC/BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_VU-Vulnerable | USFS_S-Sensitive	Slow-moving permanent or intermittent streams, ponds, small lakes, and reservoirs with emergent basking sites; adjacent uplands used for nesting and during winter	Low potential to occur. Lake Gregory provides suitable permanent waters and sandy banks/beaches for basking; however, the current known occurrences of this species from the Mojave River watershed are in Summit Valley, downstream of Silverwood Lake (approximately six miles northwest of Lake Gregory, CDFW 2023a).
Phrynosoma blainvillii	Blainville's horned lizard	None/SSC/BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern	Open areas of sandy soil in valleys, foothills, and semi-arid mountains including coastal scrub, chaparral, valley–foothill hardwood, conifer, riparian, pine–cypress, juniper, and annual grassland habitats	Not expected to occur. Loose, fine sandy soils preferred by this species are not present within the project site.
Thamnophis hammondii	two-striped gartersnake	None/SSC/CDFW_SSC-Species of Special Concern	Streams, creeks, pools, streams with rocky beds, ponds, lakes, vernal pools	Low potential to occur. Suitable habitat is located within the project area; however, the project is located in an urbanized and disturbed area.
Aimophila ruficeps canescens	southern California rufous-crowned sparrow	None/WL/CDFW_WL-Watch List	Nests and forages in open coastal scrub and chaparral with low cover of scattered scrub interspersed with rocky and grassy patches	Not expected to occur. No suitable habitat is present.
Artemisiospiza belli belli	Bell's sage sparrow	None/WL/CDFW_WL-Watch List	Nests and forages in coastal scrub and dry chaparral; typically in large, unfragmented patches dominated by chamise; nests in more dense patches but uses more open habitat in winter	Not expected to occur. No suitable habitat is present.
Asio otus	long-eared owl	None/SSC/CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern | USFWS_BCC-Birds of Conservation Concern	Nests in riparian habitat, live oak thickets, other dense stands of trees, edges of coniferous forest; forages in nearby open habitats	Not expected to occur. No suitable habitat is present.
Athene cunicularia	burrowing owl	None/SSC/BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern | USFWS_BCC-Birds of Conservation Concern	Nests and forages in grassland, open scrub, and agriculture, particularly with ground squirrel burrows	Not expected to occur. No suitable habitat is present.
Coccyzus americanus occidentalis	western yellow-billed cuckoo	FT/SE/BLM_S-Sensitive | NABCI_RWL-Red Watch List | USFS_S-Sensitive	Nests in dense, wide riparian woodlands and forest with well-developed understories	Not expected to occur. No suitable habitat is present.
Empidonax traillii extimus	southwestern willow flycatcher	FE/SE/NABCI_RWL-Red Watch List	Nests in dense riparian habitats along streams, reservoirs, or wetlands; uses variety of riparian and shrubland habitats during migration	Not expected to occur. No suitable habitat is present.

Scientific Name	Common Name	Status (Federal/State/Other)	Habitats	Potential to Occur in Study Area
Eremophila alpestris actia	California horned lark	None/WL/CDFW_WL-Watch List | IUCN_LC-Least Concern	This subspecies of horned lark occurs on the state's southern and central coastal slope and in the San Joaquin Valley. Nests and forages in grasslands, disturbed lands, agriculture, and beaches.	Not expected to occur. No suitable habitat is present.
Falco columbarius	merlin	None/WL/CDFW_WL-Watch List | IUCN_LC-Least Concern	Forages in semi-open areas, including coastline, grassland, agriculture, savanna, woodland, lakes, and wetlands	Low potential to occur. There is suitable foraging habitat for this species within the project site; however, this species is not expected to nest within the project site.
Haliaeetus leucocephalus	bald eagle	FPD/FP, SE/BLM_S-Sensitive | CDF_S-Sensitive | CDFW_FP-Fully Protected | IUCN_LC-Least Concern | USFS_S-Sensitive	Nests in forested areas adjacent to large bodies of water, including seacoasts, rivers, swamps, large lakes; winters near large bodies of water in lowlands and mountains	High potential to occur. This species is likely to forage within the project site; however, there is a low potential to nest. This species has been documented within the project site during previous surveys within the project area, and several records of this species have been recently documented around Lake Gregory (eBird, iNaturalist).
Pandion haliaetus	osprey	None/WL/CDF_S-Sensitive | CDFW_WL-Watch List | IUCN_LC-Least Concern	Large waters (lakes, reservoirs, rivers) supporting fish; usually near forest habitats, but widely observed along the coast	High potential to occur. This species is likely to forage within the project site; however, there is a low potential to nest. This species has been documented within the project site during previous surveys within the project area, and several records of this species have been recently documented around Lake Gregory (eBird, iNaturalist).
Polioptila californica californica	coastal California gnatcatcher	FT, BCC/SSC/CDFW_SSC-Species of Special Concern | NABCI_YWL-Yellow Watch List	Nests and forages in various sage scrub communities, often dominated by California sagebrush and buckwheat; generally avoids nesting in areas with a slope of greater than 40%; majority of nesting at less than 1,000 feet above mean sea level	Not expected to occur. No suitable habitat is present.
Setophaga petechia	yellow warbler	None/SSC/CDFW_SSC-Species of Special Concern	Nests and forages in riparian and oak woodlands, montane chaparral, open ponderosa pine, and mixed-conifer habitats	High potential to occur. Several records of this species have been recently documented (eBird, iNaturalist).
Vireo bellii pusillus	least Bell's vireo	FE/SE/BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern | NABCI_YWL-Yellow Watch List | USFS_S-Sensitive	Nests and forages in low, dense riparian thickets along water or along dry parts of intermittent streams; forages in riparian and adjacent shrubland late in nesting season	Not expected to occur. Suitable foraging and nesting habitats preferred by this species are not present within the project site.
Chaetodipus fallax fallax	northwestern San Diego pocket mouse	None/SSC/CDFW_SSC-Species of Special Concern	Coastal scrub, mixed chaparral, sagebrush, desert wash, desert scrub, desert succulent shrub, pinyon–juniper, and annual grassland	Not expected to occur. No suitable habitat is present.

Scientific Name	Common Name	Status (Federal/State/Other)	Habitats	Potential to Occur in Study Area
Chaetodipus fallax pallidus	pallid San Diego pocket mouse	None/SSC/CDFW_SSC-Species of Special Concern	Desert wash, desert scrub, desert succulent scrub, and pinyon–juniper woodland	Not expected to occur. No suitable habitat is present.
Dasypterus xanthinus	western yellow bat	None/SSC/None	Valley–foothill riparian, desert riparian, desert wash, and palm oasis habitats; below 2,000 feet above mean sea level; roosts in riparian and palms	Not expected to occur. No suitable habitat is present.
Dipodomys merriami parvus	San Bernardino kangaroo rat	FE/SSC, SCE/CDFW_SSC-Species of Special Concern	Sparse scrub habitat, alluvial scrub/coastal scrub habitats on gravelly and sandy soils near river and stream terraces	Not expected to occur. No suitable habitat is present.
Eumops perotis californicus	western mastiff bat	None/SSC/BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | WBWG_H-High Priority	Chaparral, coastal and desert scrub, coniferous and deciduous forest and woodland; roosts in crevices in rocky canyons and cliffs where the canyon or cliff is vertical or nearly vertical, trees, and tunnels	Moderate potential to occur. This species is not expected to roost within the project site due to the lack of exfoliating rock slabs and buildings, but may forage over the site if roosting in the general vicinity.
Glaucomys oregonensis californicus	San Bernardino flying squirrel	None/SSC/CDFW_SSC-Species of Special Concern | USFS_S-Sensitive	Coniferous and deciduous forests, including riparian forests	High potential to occur. The study area contains coniferous forest habitat that could be suitable for this species. Several recent records are documented on iNaturalist.
Lepus californicus bennettii	San Diego black-tailed jackrabbit	BCC/SSC/None	Arid habitats with open ground; grasslands, coastal scrub, agriculture, disturbed areas, and rangelands	Not expected to occur. No suitable habitat is present.
Neotamias speciosus speciosus	lodgepole chipmunk	None/None/None	Open-canopy forests of mixed conifer; Jeffrey, lodgepole, and limber pine, and occasionally in chaparral. Elevational range in the southern California mountains is 6400-10900 ft.	Not expected to occur. The project site is outside of the elevational range of this species.
Neotoma lepida intermedia	San Diego desert woodrat	None/SSC/CDFW_SSC-Species of Special Concern	Coastal scrub, desert scrub, chaparral, cacti, rocky areas	Not expected to occur. No suitable habitat is present.
Nyctinomops femorosaccus	pocketed free-tailed bat	None/SSC/CDFW_SSC-Species of Special Concern | IUCN_LC-Least Concern | WBWG_M-Medium Priority	Pinyon–juniper woodlands, desert scrub, desert succulent shrub, desert riparian, desert wash, alkali desert scrub, Joshua tree, and palm oases; roosts in high cliffs or rock outcrops with drop-offs, caverns, and buildings	Not expected to occur. No suitable habitat is present.
Perognathus alticola alticola	white-eared pocket mouse	None/SSC/BLM_S-Sensitive | CDFW_SSC-Species of Special Concern | IUCN_EN-Endangered | USFS_S-Sensitive	Arid ponderosa pine communities	Not expected to occur. The study area contains scattered pine trees that could be suitable for this species; however, the study area is urbanized without sufficient understory vegetation to support this species.
Perognathus longimembris brevinasus	Los Angeles pocket mouse	None/SSC/CDFW_SSC-Species of Special Concern	Lower-elevation grassland, alluvial sage scrub, and coastal scrub	Not expected to occur. No suitable habitat is present.
Taxidea taxus	American badger	None/SSC/IUCN_VU-Vulnerable	Dry, open, treeless areas; grasslands, coastal scrub, agriculture, and pastures, especially with friable soils	Not expected to occur. No suitable habitat is present.

Status Legend:

Federal

FE: Federally listed as endangered
FT: Federally listed as threatened
FPE: Federally proposed for listing as endangered
PFT: Federally proposed for listing as threatened
FC: Federal candidate species (former Category 1 candidates)
FPD: Federally proposed for delisting
BCC: U.S. Fish and Wildlife Service Bird of Conservation Concern
BLM: Bureau of Land Management Sensitive Species
USFS: U.S. Forest Service Sensitive Species
DL: Delisted

State

SE: State listed as endangered
ST: State listed as threatened
SCE: State candidate for listing as endangered
SCT: State candidate for listing as threatened
SCD: State candidate for delisting
SSC: California Species of Special Concern
FP: California Fully Protected Species
WL: California Watch List Species
CDF: California Department of Forestry Sensitive Species

ATTACHMENT C

SITE PHOTOGRAPHS

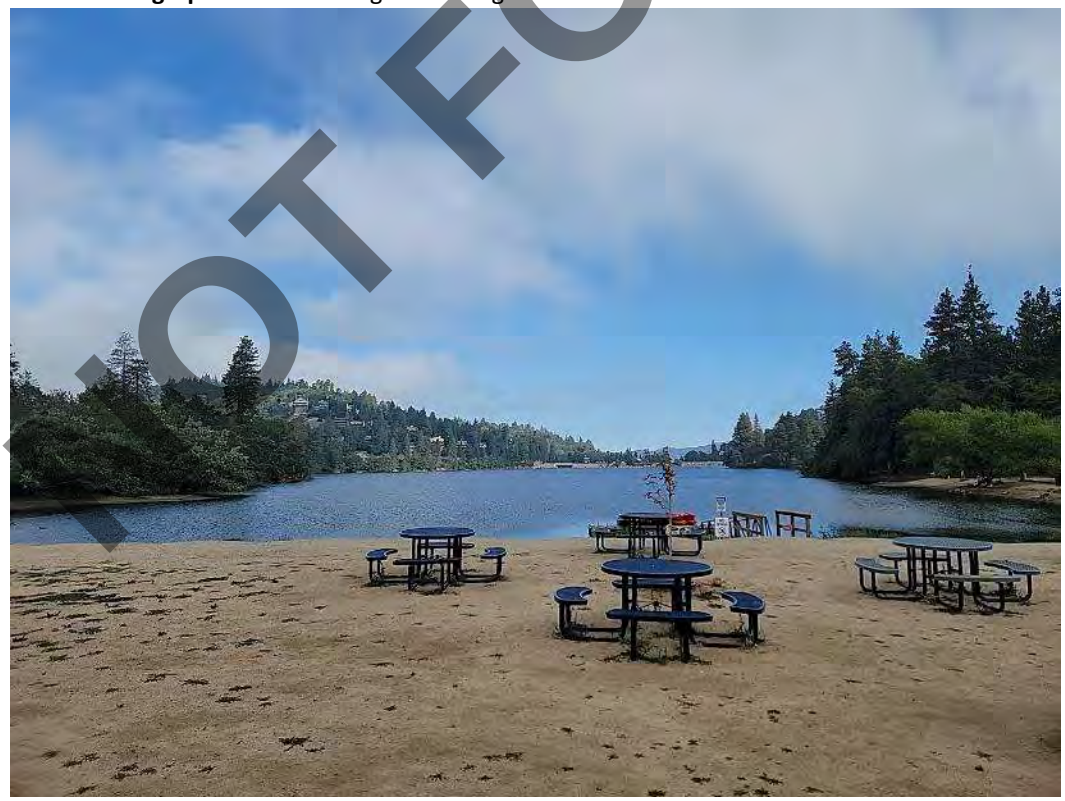
Photograph 1: Looking northwest towards the swim beach from the southern parking lot shore.

Photograph 2. Typical inlet found around the perimeter of the project site.

Photograph 3: View facing towards Lake Gregory depicting the typical conditions along the flow path from one of the inlets that surround Lake Gregory.

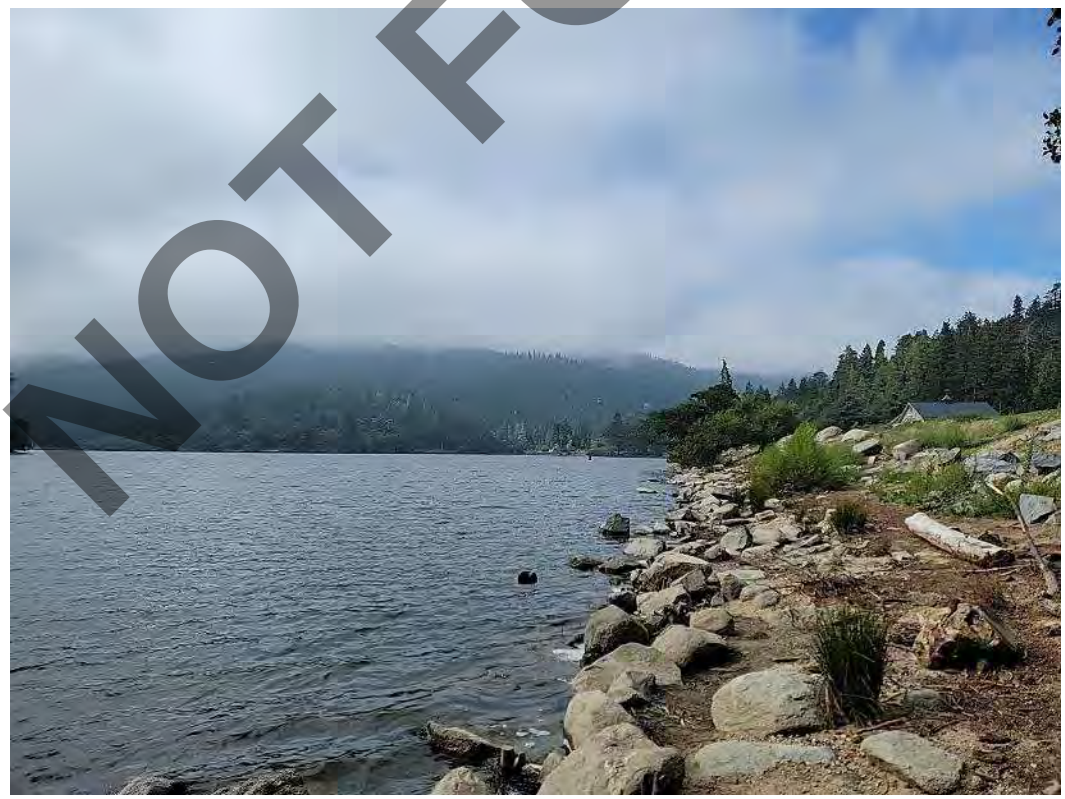
Photograph 4: North facing view of Lake Gregory from the north end of the San Moritz Channel.

Photograph 5: South facing view along the San Moritz Channel from the north end.



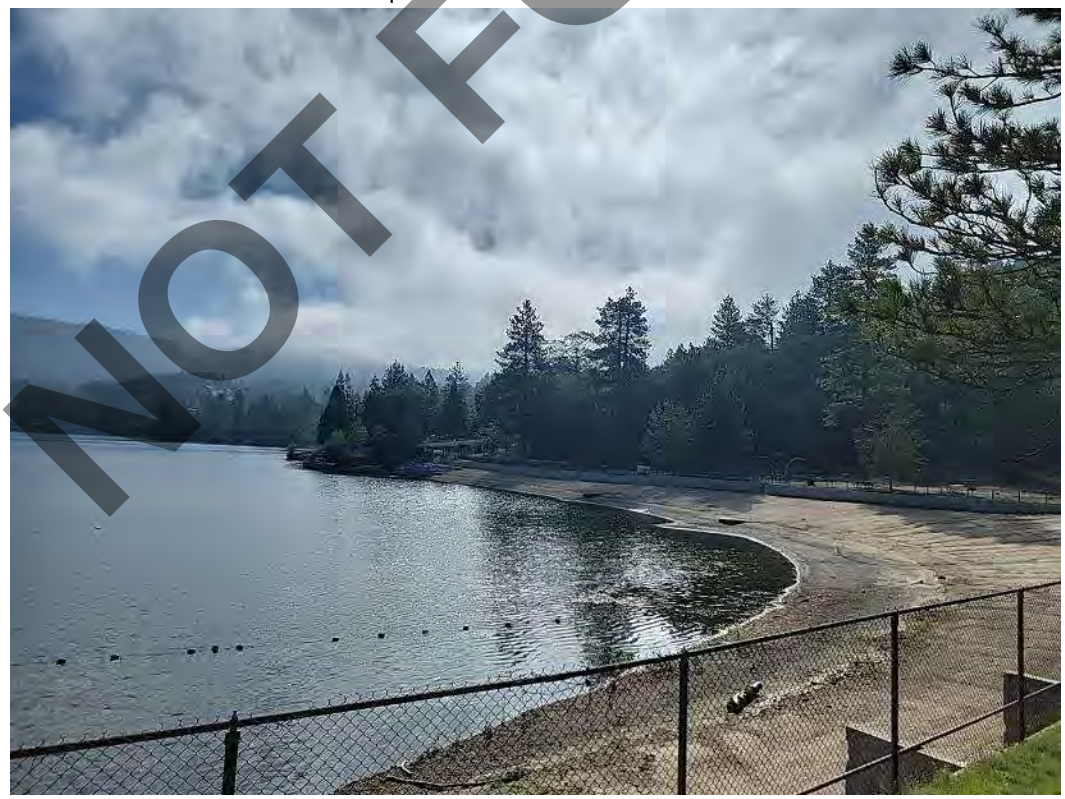
Photograph 6: Standing on the southern shore of Lake Gregory looking to the north and across the South Basin.

Photograph 7: Standing on the southern shore of Lake Gregory looking to the west and across the South Basin and towards the mouth of the San Moritz Channel.



Photograph 8: Standing along the northern shore of Lake Gregory looking to the west depicting the typical conditions along the northern shore.

Photograph 9: Standing on the western shore of the Lake Gregory looking to the northeast towards the northern portion of the Swim Beach.



Photograph 10: Standing on the western shore of the Lake Gregory looking to the southeast towards the southern portion of the Swim Beach.

Photograph 11: View looking to the east across the Library Basin to the immediate west of Lake Gregory in the western portion of the project site.

Photograph 12: View of the sediment storage area, Camp Switzerland, in the northern portion of the project site.