DOCKETED	
Docket Number:	25-OPT-01
Project Title:	Viracocha Hill Battery Energy Storage System Project
TN #:	264231
Document Title:	Volume 2, 25-OPT-01 Viracocha Hill BESS AB-205 Opt-In Application Appendices
Description:	Volume 2, 25-OPT-01 Viracocha Hill BESS AB-205 Opt-In Application Appendices
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Organization:	Jacobs
Submitter Role:	Applicant Consultant
Submission Date:	6/13/2025 1:42:57 PM
Docketed Date:	6/13/2025

Volume 2

Viracocha Hill Battery Energy Storage System AB-205 Opt-In Application- Submittal Package #2

Submitted by:

Reclaimed Wind LLC

June 2025

Technical Assistance by:

Jacobs

Revision: 0

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Volume 2 Appendix Matrix

As the Viracocha BESS Opt-In Application has been separated into two separate submittals (Submittal 1 February 14, 2025, TN# 261781 and Submittal 2 to be submitted June 13, 2025) an appendix matrix has been provided below. The matrix lists all appendices submitted in both submittal 1 and submittal 2 as well as identifying those appendices that have been updated between the two submittals.

Appendix #	Appendix Name	Status
1A	Property Owner's List	Docketed under request for confidential designation
1B	List of Preparers	Docketed 2/14/25, TN# 261769 Updated in Submittal Package #2, Volume 2
1C	Agency Contacts	Docketed 2/14/25, TN# 261773 Updated in Submittal Package #2, Volume 2
1D	Permits	Docketed 2/14/25, TN# 261772 Updated in Submittal Package #2, Volume 2
2A	Engineering Design	Docketed 2/14/25, TN# 261771
3A	Modification Request Report	Docketed under request for confidential designation
4A	Community Benefit Plan	Provided in Submittal Package #2, Volume 2
4B	Labor Certification	Provided in Submittal Package #2, Volume 2
5.1A	Construction and Operations Emission Calculations	Provided in Submittal Package #2, Volume 2
5.1B	CalEEMod Output Files	Provided in Submittal Package #2, Volume 2
5.2A	Aquatic Resources Delineation Report	Provided in Submittal Package #2, Volume 2
5.2B	Special-status Species and Potential to Occur in BSA	Provided in Submittal Package #2, Volume 2
5.2C	Wildlife Observed	Provided in Submittal Package #2, Volume 2
5.3A	Cultural Resources Technical Report	Docketed under request for confidential designation
5.4A (Part A)	Geotechnical Investigation Report - Part A	Docketed 2/14/25, TN# 261768
5.4A (Part B)	Geotechnical Investigation Report - Part B	Docketed 2/14/25, TN# 261774
5.4A (Part C)	Geotechnical Investigation Report - Part C	Docketed 2/14/25, TN# 261775
5.4B	Geotechnical Supplemental Memo	Docketed 2/14/25, TN# 261777
5.8A	Paleontological Locality Records	Docketed under request for confidential designation
5.9A	Diesel Particulate Matter Construction Emissions	Provided in Submittal Package #2, Volume 2
5.10A	Environmental Justice	Provided in Submittal Package #2, Volume 2
5.10B	Records of Conversation	Provided in Submittal Package #2, Volume 2
5.14A	Phase I ESA	Docketed 2/14/25, TN# 261779
5.15A	Hydrology & Hydraulics Report	Docketed 2/14/25, TN#261770

Appendix 1A - Property Owner's List

Appendix 1A, Property Owner's List has been docketed under request for confidential designation.

Appendix 1B - List of Preparers

Appendix 1B, List of Preparers was previously docketed on February 14, 2025, TN# 261769 and has been updated as part of Submittal Package #2, Volume 2.

Appendix 1C – Agency Contacts

Appendix 1C, Agency Contacts was previously docketed on February 14, 2025, TN# 261773 and has been updated as part of Submittal Package #2, Volume 2.

Appendix 1D – Permits

Appendix 1D, Permits was previously docketed on February 14, 2025, TN# 261772 and has been updated as part of Submittal Package #2, Volume 2.

Appendix 2A – Engineering Design

Appendix 2A, Engineering Design was docketed February 14, 2025, TN# 261771 and is not included in this submittal package. A copy of this appendix may be found online at https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=25-OPT-01.

Appendix 3A – Modification Request Report

Appendix 3A, Modification Request Report has been docketed under request for confidential designation.

Appendix 4A - Community Benefit Plan

Community Benefit Agreement Strategy

A Community Benefit Agreement (CBA) is a contract between community benefit groups and a developer to codify agreed to measures the developer will implement. The community benefit groups are comprised of neighborhood associations, faith-based organizations, environmental groups and other stakeholders that represent the interests of residents potentially impacted by proposed developments. CBAs define measurable, local benefits provided to a community. CBAs are legally enforceable contracts that stipulate community benefits and are the direct result of substantial community input (DOE 2017).

Reclaimed Wind, LLC (Reclaimed Wind) values the communities in which we are located. Being a member of the local community requires meaningful engagement to understand the needs of the community. As such, our team is dedicated to developing and implementing a CBA that supports the needs of the local community. The objective is to have a positive influence in our Alameda County community.

Anticipated Timeline

The Viracocha Hill Battery Energy Storage System (BESS) Project (25-OPT-01) CBA efforts will begin in September 2025 when the project team initiates meetings with the community organizations to discuss the local and regional needs of residents in the project area. This effort will include:

- Identifying neighborhood associations, faith-based organizations, environmental groups and other stakeholders (community representatives).
- Engaging community representatives and communicating project benefits to develop/open transparent communication.
- Developing an external/internal team of Reclaimed Wind and community representatives with aligned goals for creating a framework for the CBA with a schedule for implementation.
- Conduct state and local government briefings.
- Providing community representatives with information on the BESS project.

Reclaimed Wind expects to complete the above measures by March 2026, when legally binding agreements with community organizations will begin to be executed. To satisfy AB 205's opt-in requirements and to be in compliance with Public Resources Code Section 25545.10, an executed CBA will be submitted no later than 45 days after completeness review. Reclaimed Wind will provide updates on its progress with the CBAs as they progress.

Areas of Focus

Reclaimed Wind's CBA will include creating a broad coalition with a wide cross-section of community representatives in the project area with the goal of establishing measurable commitments with concise schedules of deliverables and clear reporting of any public agreements.

Below is a list of potential target organizations Reclaimed Wind may engage with on CBA discussions.

- Tri-City Health
- Northern California Land Trust
- Catholic Charities of the East Bay
- First Five Alameda County
- Alameda Family Services Head Start
- Tri-Valley Haven Food Pantry
- Open Heart Kitchen
- Alameda Unified School District
- Livermore Valley Joint Unified School District

References

U.S. Department of Energy, Office of Minority Business and Economic Development. Guide to Advancing Opportunities for Community Benefits through Energy Project Development. August 1, 2017.

Appendix 4B - Labor Certification

Eric Knight
Manager, Siting & Environmental Office
California Energy Commission
715 P Street
Sacramento, CA 95814

Subject: Viracocha Hill Battery Energy Storage System (BESS) Project (25-OPT-01)
Labor Certification

Dear Mr. Knight:

In connection with its Opt-In Application for Certification of the Viracocha Hill Battery Energy Storage System (BESS) Project (25-OPT-01) in Alameda County, California (the Project), Reclaimed Wind, LLC certifies that it will comply with the prevailing wage and workforce requirements set forth in Assembly Bill 205 (AB 205), including that: (1) all construction workers employed on the Project will be paid at least the general prevailing rate of per diem wages or apprenticeship wages, as applicable, in accordance with Public Resources Code section 25545.3.3, and (2) a skilled and trained workforce will be used to perform all construction work on the Project, in accordance with Public Resources Code section 25545.3.5.

Specifically, Reclaimed Wind, LLC certifies that as to the Project only (and only as consistent with AB 205 and the California Labor Code, including its definitions):

1. Prevailing Wages:
    a. The prevailing wage requirement of AB 205 will be included in all contracts for the performance of all construction work.
    b. All contractors and subcontractors will be required to pay to all construction workers employed in the construction of the Project at least the general prevailing rate of per diem wages or the applicable apprentice prevailing rate, as applicable.
    c. All contractors and subcontractors performing construction work on the Project will be required to employ apprentices at no less than the ratio required in Labor Code section 1777.5.
    d. All contractors and subcontractors performing construction work will maintain and verify payroll records pursuant to Labor Code section 1776, make those records available for inspection and copying as provided therein, and furnish those payroll records to the Labor Commissioner pursuant to Labor Code section 1771.4.
    e. The obligation of the contractors and subcontractors to pay prevailing wages and employ apprentices may be enforced by the Labor Commissioner through the issuance of a civil wage and penalty assessment pursuant to Labor Code section 1741, which may be reviewed pursuant to Labor Code section 1742, within 18 months after the completion of

the Project, or by an underpaid worker through an administrative complaint or civil action, or by a joint labor-management committee through a civil action under Labor Code section 1771.2. If a civil wage and penalty assessment is issued, the contractor, subcontractor, and surety on a bond or bonds issued to secure the payment of wages covered by the assessment will be liable for liquidated damages pursuant to Labor Code section 1742.1.

f. Alternatively, all contractors and subcontractors performing construction work on the Project may be subject to a project labor agreement. If the Project is subject to a project labor agreement, then sections 1.d and 1.e, above, do not apply. The project labor agreement would include the following:
    i. Provisions requiring payment of prevailing wages to all construction workers employed in the construction of the Project and for enforcement of that obligation through an arbitration procedure.
    ii. Targeted hiring provisions, including a targeted hiring plan, on a craft-by-craft basis to address job access for local, disadvantaged, or underrepresented workers, as defined by a relevant local agency.
    iii. Apprenticeship utilization provisions that commit all parties to increasing the share of work performed by state-registered apprentices above the state-mandated minimum ratio required in Labor Code section 1777.5.
    iv. Apprenticeship utilization provisions that commit all parties to hiring and retaining a certain percentage of state-registered apprentices that have completed the Multi-Craft Core pre-apprenticeship training curriculum referenced in Unemployment Insurance Code section 14005(t).

2. Skilled and Trained Workforce:
    a. All contracts for the performance of work will require that every contractor and subcontractor at every tier will individually use a skilled and trained workforce to construct the Project.
    b. Every contractor and subcontractor will be required to use a skilled and trained workforce to construct the Project.
    c. Contractors and subcontractors that fail to use a skilled and trained workforce will be subject to the penalties provided in Public Contract Code section 2603. Penalties for a contractor's or subcontractor's failure to comply with the requirement to use a skilled and trained workforce may be assessed by the Labor Commissioner within 18 months of completion of the Project using the same procedures for issuance of civil wage and penalty assessments pursuant to Public Contract Code section 2603. Penalties shall be paid to the State Public Works Enforcement Fund.
    d. Reclaimed Wind, LLC will retain records, including copies of monthly reports, that demonstrate compliance with Chapter 2.9 (commencing with section 2600) of Part 1 of Division 2 of the Public Contract Code while the Project or contract is being performed and for 3 years after completion of the Project or contract. Reclaimed Wind, LLC will submit these records immediately upon request by the California Energy Commission (Commission). When submitted to the Commission, these records shall be a public record under the California Public Records Act (Part 1 [commencing with section 7920] of Division 10 of Title 1 of the Government Code) and shall be open to public inspection.

e. Alternatively, all contractors and subcontractors performing work on the Project may be subject to a project labor agreement. If the Project is subject to a project labor agreement, then sections 2.c and 2.d, above, do not apply. The project labor agreement would include the following:
    i. Provisions requiring compliance with the skilled and trained workforce requirement and for enforcement of that obligation through an arbitration procedure.
    ii. Targeted hiring provisions, including a targeted hiring plan, on a craft-by-craft basis to address job access for local, disadvantaged, or underrepresented workers, as defined by a local agency.
    iii. Apprenticeship utilization provisions that commit all parties to increasing the share of work performed by state-registered apprentices above the state-mandated minimum ratio required in Labor Code section 1777.5.
    iv. Apprenticeship utilization provisions that commit all parties to hiring and retaining a certain percentage of state-registered apprentices that have completed the Multi-Craft Core pre-apprenticeship training curriculum referenced in Unemployment Insurance Code section 14005(t).

We look forward to working with the Commission regarding the Opt-In Application for Certification of the Viracocha Hill Battery Energy Storage System Project.

Sincerely,

SIEIRA MUCIENTES ANTONIO ARTURO - 50826695F

Firmado digitalmente por SIEIRA MUCIENTES ANTONIO ARTURO - 50826695F
Fecha: 2025.06.09 09:41:19 +02'00'

Antonio Arturo Sieira Mucientes
Chief Executive Officer

Appendix 5.1A - Construction and Operations Emission Calculations

Appendix 5.1A

CalEEMod Emissions Summary

Average Daily Construction Emissions Summary								
Year	**ROG**	**NO_x**	**CO**	**SO_2**	**PM_{10} (Exhaust Emissions)**	**PM_{10} [2] (Fugitive Dust Emissions)**	**$PM_{2.5}$ (Exhaust Emissions)**	**$PM_{2.5}$ [2] (Fugitive Dust Emissions)**
2026	0.95	10.28	10.01	0.03	0.34	278	0.30	28.2
2027	0.25	2.65	3.74	0.01	0.06	216	0.05	21.6
2056 [3]	0.46	4.09	6.48	0.02	0.08	201	0.07	20.1
Average Daily	**0.95**	**10.28**	**10.01**	**0.03**	**0.34**	**278**	**0.30**	**28.2**
BAAQMD Thresholds of Significance (Project Level)[1]	**54**	**54**	**NA**	**NA**	**82**	**BMP**	**54**	**BMP**
Exceeds Thresholds?	**No**	**No**	**NA**	**NA**	**No**	**NA**	**No**	**NA**
Annual Construction Emissions Summary								
Year	**ROG**	**NO_x**	**CO**	**SO_2**	**PM_{10} (Exhaust Emissions)**	**PM_{10} [2] (Fugitive Dust Emissions)**	**$PM_{2.5}$ (Exhaust Emissions)**	**$PM_{2.5}$ [2] (Fugitive Dust Emissions)**
2026	0.17	1.88	1.83	0.00	0.06	50.68	0.06	5.15
2027	0.05	0.48	0.68	0.00	0.01	39.43	0.01	3.95
2056 [3]	0.08	0.75	1.18	0.00	0.01	36.70	0.01	3.68
Maximum Annual	**0.17**	**1.88**	**1.83**	**0.005**	**0.062**	**50.68**	**0.06**	**5.15**

Note(s):

1) BAAQMD Thresholds of Significance per Table 3-1 of the CEQA Guidelines Chapter 3 Thresholds. https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa-guidelines-2022/ceqa-guidelines-chapter-3-thresholds_final_v2-pdf.pdf?la=en

2) PM10/PM2.5 (fugitive dust) is also recognized to impact local communities. The Air District strongly recommends implementing all feasible fugitive dust management practices especially when construction projects are located near sensitive communities, including schools, residential areas, or other sensitive land uses. These measures are detailed in Chapter 5, Section 5.2.2 Construction-Related Criteria Air Pollutant Emissions.

3) The 2056 Demolition phase off-road equipment emission factors use the 2050 CalEEMod defaults, as 2050 is the latest year available.

NA = Not applicable or no thresholds

Greenhouse Gas (GHG) Construction Emissions Summary (Metric Tons)	
Year	**CO2e**
2026	638
2027	276
2056 [1]	408
Total	**1,322**

Note(s):

1) The 2056 Demolition phase off-road equipment emission factors use the 2050 CalEEMod defaults, as 2050 is the latest year available.

Average Daily Operations Emissions Summary						
Category	**ROG**	**NO_x**	**CO**	**SO_2**	**PM_{10} Total**	**$PM_{2.5}$ Total**
Average Daily Emissions (lb/day)	0.491	1.642	9.114	0.018	0.073	0.073
BAAQMD Thresholds of Significance (Project Level)[1]	54	54	NA	NA	82	54
Exceeds Thresholds?	No	No	NA	NA	No	No
Annual Operations Emissions Summary						
Category	**ROG**	**NO_x**	**CO**	**SO_2**	**PM_{10} Total**	**$PM_{2.5}$ Total**
Annual Emissions (ton/year)	0.012	0.041	0.228	0.0005	0.002	0.002
BAAQMD Thresholds of Significance (Project Level)[1]	10	10	NA	NA	15	10
Exceeds Thresholds?	No	No	NA	NA	No	No

Note(s):

1) BAAQMD Thresholds of Significance per Table 3-1 of the CEQA Guidelines Chapter 3 Thresholds. https://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa-guidelines-2022/ceqa-guidelines-chapter-3-thresholds_final_v2-pdf.pdf?la=en

Annual Operations Emissions Summary		
Year	**CO2e (MT/year)**	**CO2e (ton/year)**
Annual Emissions (metric ton/year)	41.61	45.86
Annual SF6 Leak (metric ton/year)	35.33	38.94
Refrigerant Leak (R-134a)	TBD	TBD
Total	**76.94**	**84.81**

Appendix 5.1A

CalEEMod Emissions Modeling Results Summary

Construction Emissions by Year, Unmitigated

Year	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO_2	CH_4	N_2O	Refrigerants	CO_2e
Daily - Summer (Max)	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day
2026	4.382	3.357	36.291	33.175	0.087	1.315	707	708	1.182	73.388	74.570	11,433	0.623	1.021	14.580	11,767
2027	0.648	0.443	4.761	7.359	0.017	0.102	442	442	0.085	44.253	44.338	3,110	0.161	0.338	6.486	3,221
2050	1.619	1.328	9.922	15.514	0.052	0.219	471	471	0.204	47.179	47.338	6,211	0.224	0.330	0.335	6,305
Daily - Winter (Max)	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day
2026	2.915	2.287	23.402	23.373	0.059	0.838	575	575	0.754	57.559	57.829	8,093	0.380	0.613	0.279	8,286
2027	1.574	1.224	10.172	15.514	0.030	0.304	785	785	0.270	78.589	78.860	5,491	0.241	0.392	0.265	5,614
2050	1.624	1.324	10.469	15.280	0.055	0.226	463	464	0.210	46.409	46.619	6,524	0.232	0.353	0.009	6,635
Average Daily lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day
2026	1.257	0.953	10.277	10.006	0.026	0.340	278	278	0.303	28.195	28.499	3,743	0.197	0.343	2.476	3,852
2027	0.362	0.254	2.645	3.740	0.009	0.059	216	216	0.050	21.630	21.681	1,613	0.084	0.165	1.448	1,666
2050	0.571	0.463	4.087	6.480	0.020	0.075	201	201	0.070	20.139	20.210	2,416	0.084	0.153	0.067	2,464
Annual ton/year	ton/year	ton/year	ton/year	ton/year	ton/year	ton/year	ton/year	ton/year	ton/year	ton/year	ton/year	MT/year	MT/year	MT/year	MT/year	MT/year
2026	0.229	0.174	1.876	1.826	0.005	0.062	51	51	0.055	5.146	5.201	620	0.033	0.057	0.410	638
2027	0.066	0.046	0.483	0.683	0.002	0.011	39	39	0.009	3.948	3.957	267	0.014	0.027	0.240	276
2050	0.104	0.084	0.746	1.183	0.004	0.014	37	37	0.013	3.675	3.688	400	0.014	0.025	0.011	408

Operation Emissions

Un/Mit.	TOG	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	CO_2	CH_4	N_2O	Refrigerants	CO_2e
Daily - Summer (Max)	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day
	0.493	0.493	1.646	9.155	0.018	0.073	1.976	2.049	0.073	0.198	0.271	1,842	0.074	0.014	0.044	1,848
Daily, Winter (Max)	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day
	0.493	0.493	1.646	9.148	0.018	0.073	1.976	2.049	0.073	0.198	0.271	1,841	0.074	0.015	0.001	1,847
Average Daily (Max)	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day
	0.065	0.065	0.226	1.252	0.003	0.010	0.129	0.139	0.010	0.013	0.023	251	0.010	0.002	0.001	252
Annual (Max)	ton/year	ton/year	ton/year	ton/year	ton/year	ton/year	ton/year	ton/year	ton/year	ton/year	ton/year	MT/year	MT/year	MT/year	MT/year	MT/year
	0.012	0.012	0.041	0.229	0.000	0.002	0.024	0.025	0.002	0.002	0.004	41.62	0.002	0.000	0.000	41.76

Note(s):

TOG = total organic gases

ROG = reactive organic gases

NOx = nitrogen oxide

CO = carbon monoxide

SO2 = sulfur dioxide

PM10E = particulate matter with diameter of 10 microns or less from exhaust

PM10D = particulate matter with diameter of 10 microns or less from fugitive dust

PM10T = particulate matter with diameter of 10 microns or less total

PM2.5E = particulate matter with diameter of 2.5 microns or less from exhaust

PM2.5D = particulate matter with diameter of 2.5 microns or less from fugitive dust

PM2.5T = particulate matter with diameter of 2.5 microns or less total

CO2 = carbon dioxide

CH4 = methane

N2O = nitrous oxide

CO2e = carbon dioxide equivalent

Appendix 5.1A

CalEEMod Modeling - Construction Schedule

Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase
Month 1	Site Preparation	6/1/2026	6/30/2026	6	26
Month 2	Grading	7/1/2026	7/31/2026	6	27
Month 3	Building Construction	8/1/2026	8/31/2026	6	26
Month 4	Building Construction	9/1/2026	9/30/2026	6	26
Month 5	Building Construction	10/1/2026	10/31/2026	6	27
Month 6	Building Construction	11/1/2026	11/30/2026	6	25
Month 7	Building Construction	12/1/2026	12/31/2026	6	27
Month 8	Building Construction	1/1/2027	1/31/2027	6	26
Month 9	Building Construction	2/1/2027	2/28/2027	6	24
Month 10	Building Construction	3/01/2027	3/31/2027	6	27
Month 11	Building Construction	4/01/2027	4/30/2027	6	26
Month 12	Building Construction	5/01/2027	5/31/2027	6	26
Month 13	Building Construction	6/01/2027	6/30/2027	6	26
Month 14	Building Construction	7/01/2027	7/31/2027	6	27
Month 361	Demolition	2/01/2050	2/28/2050	6	24
Month 362	Demolition	3/01/2050	3/31/2050	6	27
Month 363	Demolition	4/01/2050	4/30/2050	6	26
Month 364	Demolition	5/01/2050	5/31/2050	6	26
Month 365	Demolition	6/01/2050	6/30/2050	6	26
Month 366	Demolition	7/1/2050	7/31/2050	6	26
Month 367	Demolition	8/1/2050	8/31/2050	6	27

Appendix 5.1A

CalEEMod Construction Off-Road Equipment Usage

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Month 1	Rubber Tired Dozers	Diesel	Average	2	10	367	0.4
Month 1	Tractors/Loaders/Backhoes	Diesel	Average	1	10	84	0.37
Month 1	Graders	Diesel	Average	1	10	148	0.41
Month 1	Plate Compactors	Diesel	Average	1	10	8	0.43
Month 2	Rubber Tired Dozers	Diesel	Average	2	10	367	0.4
Month 2	Tractors/Loaders/Backhoes	Diesel	Average	1	10	84	0.37
Month 2	Forklifts	Diesel	Average	1	10	82	0.2
Month 2	Graders	Diesel	Average	1	10	148	0.41
Month 2	Plate Compactors	Diesel	Average	1	10	8	0.43
Month 3	Excavators	Diesel	Average	2	10	36	0.38
Month 3	Forklifts	Diesel	Average	1	10	82	0.2
Month 3	Plate Compactors	Diesel	Average	1	10	8	0.43
Month 4	Excavators	Diesel	Average	2	10	36	0.38
Month 4	Forklifts	Diesel	Average	1	10	82	0.2
Month 4	Plate Compactors	Diesel	Average	1	10	8	0.43
Month 5	Excavators	Diesel	Average	1	10	36	0.38
Month 5	Rubber Tired Dozers	Diesel	Average	1	10	367	0.4
Month 5	Tractors/Loaders/Backhoes	Diesel	Average	1	10	84	0.37
Month 5	Forklifts	Diesel	Average	1	10	82	0.2
Month 5	Plate Compactors	Diesel	Average	1	10	8	0.43
Month 6	Rubber Tired Dozers	Diesel	Average	1	10	367	0.4
Month 6	Tractors/Loaders/Backhoes	Diesel	Average	1	10	84	0.37
Month 6	Forklifts	Diesel	Average	2	10	82	0.2
Month 6	Plate Compactors	Diesel	Average	1	10	8	0.43
Month 6	Cranes	Diesel	Average	1	10	367	0.29
Month 7	Forklifts	Diesel	Average	2	10	82	0.2
Month 7	Cranes	Diesel	Average	1	10	367	0.29
Month 8	Forklifts	Diesel	Average	3	10	82	0.2
Month 8	Cranes	Diesel	Average	1	10	367	0.29
Month 9	Forklifts	Diesel	Average	3	10	82	0.2
Month 10	Forklifts	Diesel	Average	2	10	82	0.2
Month 11	Forklifts	Diesel	Average	2	10	82	0.2
Month 12	Forklifts	Diesel	Average	1	10	82	0.2
Month 13	Forklifts	Diesel	Average	1	10	82	0.2
Month 14	Forklifts	Diesel	Average	1	10	82	0.2
Month 361	Excavators	Diesel	Average	1	10	36	0.38
Month 361	Rubber Tired Dozers	Diesel	Average	1	10	367	0.4
Month 361	Tractors/Loaders/Backhoes	Diesel	Average	1	10	84	0.37
Month 361	Forklifts	Diesel	Average	2	10	82	0.2
Month 362	Excavators	Diesel	Average	1	10	36	0.38
Month 362	Rubber Tired Dozers	Diesel	Average	1	10	367	0.4
Month 362	Tractors/Loaders/Backhoes	Diesel	Average	1	10	84	0.37
Month 362	Forklifts	Diesel	Average	2	10	82	0.2
Month 362	Cranes	Diesel	Average	1	10	367	0.29
Month 363	Excavators	Diesel	Average	1	10	36	0.38
Month 363	Rubber Tired Dozers	Diesel	Average	1	10	367	0.4
Month 363	Tractors/Loaders/Backhoes	Diesel	Average	1	10	84	0.37

Month 363	Forklifts	Diesel	Average	2	10	82	0.2
Month 363	Cranes	Diesel	Average	1	10	367	0.29
Month 364	Excavators	Diesel	Average	1	10	36	0.38
Month 364	Rubber Tired Dozers	Diesel	Average	1	10	367	0.4
Month 364	Tractors/Loaders/Backhoes	Diesel	Average	1	10	84	0.37
Month 364	Forklifts	Diesel	Average	2	10	82	0.2
Month 365	Excavators	Diesel	Average	1	10	36	0.38
Month 365	Tractors/Loaders/Backhoes	Diesel	Average	1	10	84	0.37
Month 365	Forklifts	Diesel	Average	2	10	82	0.2
Month 366	Excavators	Diesel	Average	1	10	36	0.38
Month 366	Tractors/Loaders/Backhoes	Diesel	Average	1	10	84	0.37
Month 366	Forklifts	Diesel	Average	2	10	82	0.2
Month 366	Graders	Diesel	Average	1	10	148	0.41
Month 367	Excavators	Diesel	Average	1	10	36	0.38
Month 367	Tractors/Loaders/Backhoes	Diesel	Average	1	10	84	0.37
Month 367	Forklifts	Diesel	Average	2	10	82	0.2
Month 367	Graders	Diesel	Average	1	10	148	0.41

Appendix 5.1A

CalEEMod Construction Vehicles

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Month 1				
Month 1	Worker	36	17.5	LDA,LDT1,LDT2
Month 1	Vendor	0	0	HHDT,MHDT
Month 1	Hauling	8.6	30	HHDT
Month 1	Onsite truck	250	5	HHDT
Month 2				
Month 2	Worker	46	17.5	LDA,LDT1,LDT2
Month 2	Vendor	0	0	HHDT,MHDT
Month 2	Hauling	14.5	30	HHDT
Month 2	Onsite truck	250	5	HHDT
Month 3				
Month 3	Worker	56	17.5	LDA,LDT1,LDT2
Month 3	Vendor	0	0	HHDT,MHDT
Month 3	Hauling	10.5	30	HHDT
Month 3	Onsite truck	160	5	HHDT
Month 4				
Month 4	Worker	76	17.5	LDA,LDT1,LDT2
Month 4	Vendor	0	0	HHDT,MHDT
Month 4	Hauling	10.5	30	HHDT
Month 4	Onsite truck	160	5	HHDT
Month 5				
Month 5	Worker	96	17.5	LDA,LDT1,LDT2
Month 5	Vendor	0	0	HHDT,MHDT
Month 5	Hauling	4.6	30	HHDT
Month 5	Onsite truck	90	5	HHDT
Month 6				
Month 6	Worker	76	17.5	LDA,LDT1,LDT2
Month 6	Vendor	0	0	HHDT,MHDT
Month 6	Hauling	14.5	36.2896552	HHDT
Month 6	Onsite truck	90	5	HHDT
Month 7				
Month 7	Worker	96	17.5	LDA,LDT1,LDT2
Month 7	Vendor	0	0	HHDT,MHDT
Month 7	Hauling	8.6	35.3023256	HHDT
Month 7	Onsite truck	90	5	HHDT
Month 8				

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Month 8	Worker	156	17.5	LDA,LDT1,LDT2
Month 8	Vendor	0	0	HHDT,MHDT
Month 8	Hauling	2.6	30	HHDT
Month 8	Onsite truck	90	5	HHDT
Month 9				
Month 9	Worker	156	17.5	LDA,LDT1,LDT2
Month 9	Vendor	0	0	HHDT,MHDT
Month 9	Hauling	2.6	30	HHDT
Month 9	Onsite truck	90	5	HHDT
Month 10				
Month 10	Worker	96	17.5	LDA,LDT1,LDT2
Month 10	Vendor	0	0	HHDT,MHDT
Month 10	Hauling	2.6	30	HHDT
Month 10	Onsite truck	90	4	HHDT
Month 11				
Month 11	Worker	68	17.5	LDA,LDT1,LDT2
Month 11	Vendor	0	0	HHDT,MHDT
Month 11	Hauling	2.6	30	HHDT
Month 11	Onsite truck	90	5	HHDT
Month 12				
Month 12	Worker	24	17.5	LDA,LDT1,LDT2
Month 12	Vendor	0	0	HHDT,MHDT
Month 12	Hauling	2.6	30	HHDT
Month 12	Onsite truck	90	5	HHDT
Month 13				
Month 13	Worker	24	17.5	LDA,LDT1,LDT2
Month 13	Vendor	0	0	HHDT,MHDT
Month 13	Hauling	0.6	30	HHDT
Month 13	Onsite truck	90	5	HHDT
Month 14				
Month 14	Worker	24	17.5	LDA,LDT1,LDT2
Month 14	Vendor	0	0	HHDT,MHDT
Month 14	Hauling	2.6	30	HHDT
Month 14	Onsite truck	90	5	HHDT
Month 361				
Month 361	Worker	48	17.5	LDA,LDT1,LDT2
Month 361	Vendor	0	0	HHDT,MHDT
Month 361	Hauling	4	41.4	HHDT
Month 361	Onsite truck	90	5	HHDT
Month 362				

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Month 362	Worker	68	17.5	LDA,LDT1,LDT2
Month 362	Vendor	0	0	HHDT,MHDT
Month 362	Hauling	8	41.4	HHDT
Month 362	Onsite truck	90	5	HHDT
Month 363				
Month 363	Worker	68	17.5	LDA,LDT1,LDT2
Month 363	Vendor	0	0	HHDT,MHDT
Month 363	Hauling	6	30	HHDT
Month 363	Onsite truck	90	5	HHDT
Month 364				
Month 364	Worker	68	17.5	LDA,LDT1,LDT2
Month 364	Vendor	0	0	HHDT,MHDT
Month 364	Hauling	10	30	HHDT
Month 364	Onsite truck	90	5	HHDT
Month 365				
Month 365	Worker	68	17.5	LDA,LDT1,LDT2
Month 365	Vendor	0	0	HHDT,MHDT
Month 365	Hauling	10	30	HHDT
Month 365	Onsite truck	90	5	HHDT
Month 366				
Month 366	Worker	68	17.5	LDA,LDT1,LDT2
Month 366	Vendor	0	0	HHDT,MHDT
Month 366	Hauling	10	30	HHDT
Month 366	Onsite truck	90	5	HHDT
Month 367				
Month 367	Worker	48	17.5	LDA,LDT1,LDT2
Month 367	Vendor	0	0	HHDT,MHDT
Month 367	Hauling	4	30	HHDT
Month 367	Onsite truck	90	5	HHDT

Note(s):

Project-specific information.

Appendix 5.1A

CalEEMod Construction Dust Control Strategies

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

Dust Mitigation - Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61	61
Water Demolished Area	2	36	36

Dust Mitigation - Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (Ton of Debris)
Month 1	0	73,000	0	0
Month 2	132,000	73,000	10.65	0
Month 361	0	0	0	0
Month 362	0	0	0	0
Month 363	0	0	0	7.5
Month 364	0	0	0	22.5
Month 365	0	0	0	22.5
Month 366	0	0	0	37.5
Month 367	0	0	0	15

Appendix 5.1A

User Defined Emissions for Operation of Diesel Emergency Generator and Fire Pump

Equipment Type	TOG	ROG	NOx	CO	SO_2	PM10T	PM2.5T	CO_2	CH_4	N_2O	Refrigerants	CO_2e
Daily, Summer (Max)	**lb/day**	**lb/day**	**lb/day**	**lb/day**	**lb/day**	**lb/day**	**lb/day**	**lb/day**	**lb/day**	**lb/day**	**lb/day**	**lb/day**
Tier 4 Emergency Generator	0.414	0.414	1.477	7.681	0.015	0.065	0.065	1,541	0.062	0.012	0	1,546
Tier 4 Fire Pump	0.077	0.077	0.165	1.433	0.003	0.008	0.008	288	0.012	0.002	0	288
Total	0.491	0.491	1.642	9.114	0.018	0.073	0.073	1,829	0.074	0.014	0	1,835
Daily, Winter (Max)	**lb/day**	**lb/day**	**lb/day**	**lb/day**	**lb/day**	**lb/day**	**lb/day**	**lb/day**	**lb/day**	**lb/day**	**lb/day**	**lb/day**
Tier 4 Emergency Generator	0.414	0.414	1.477	7.681	0.015	0.065	0.065	1,541	0.062	0.012	0	1,546
Tier 4 Fire Pump	0.077	0.077	0.165	1.433	0.003	0.008	0.008	288	0.012	0.002	0	288
Total	0.491	0.491	1.642	9.114	0.018	0.073	0.073	1,829	0.074	0.014	0	1,835
Annual	**ton/year**	**ton/year**	**ton/year**	**ton/year**	**ton/year**	**ton/year**	**ton/year**	**MT/year**	**MT/year**	**MT/year**	**MT/year**	**MT/year**
Tier 4 Emergency Generator	0.010	0.010	0.037	0.192	0.000	0.002	0.002	34.95	0.001	0.000	0	35.07
Tier 4 Fire Pump	0.002	0.002	0.004	0.036	0.000	0.000	0.000	6.52	0.000	0.000	0	6.54
Total	0.012	0.012	0.041	0.228	0.000	0.002	0.002	41.47	0.002	0.000	0	41.61

Note(s):

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

Appendix 5.1A

Stationary Source Emission Calculations - Operations

Emergency Engine Inputs

Emergency engine horsepower (hp)	1,340 hp
Hours per day	1
Hours per year	50

Emergency Generator	ROG	NO_x	CO	SO_2	PM_{10}	$PM_{2.5}$
Tier 4 Emission Factors (g/hp-hr)	1.400E-01	5.000E-01	2.600E+00	5.000E-03	2.200E-02	2.200E-02
Emergency Engine Emissions (lb/day)	4.136E-01	1.477E+00	7.681E+00	1.477E-02	6.499E-02	6.499E-02
Emergency Engine Emissions (ton/year)	1.034E-02	3.693E-02	1.920E-01	3.693E-04	1.625E-03	1.625E-03

Emergency Generator	CO2	CH4	N2O	CO2e
Tier 4 Emission Factors (g/hp-hr)	522	2.10E-02	4.00E-03	523
Emergency Engine Emissions (lb/day)	1,541	6.20E-02	1.18E-02	1,546
Emergency Engine Emissions (metric ton/year)	34.95	1.41E-03	2.68E-04	35

GWP:

CO2	CH4	N2O
1	25	298

Notes:

ROG Nox, CO, PM10/PM2.5 emissions are Tier 4 standards

SO2 and GHG emission factors are from CalEEMod 2022.1 Appendix G: Default Data Tables (Table G-40).

https://www.caleemod.com/user-guide.

Fire Pump Engine Inputs

Fire pump engine horsepower (hp)	250 hp
Hours per day	1
Hours per year	50

Fire Pump	ROG	NO_x	CO	SO_2	PM_{10}	$PM_{2.5}$
Tier 4 Emission Factors (g/hp-hr)	1.40E-01	3.00E-01	2.60E+00	5.00E-03	1.50E-02	1.50E-02
Fire Pump Engine Emissions (lb/day)	7.72E-02	1.65E-01	1.43E+00	2.76E-03	8.27E-03	8.27E-03
Fire Pump Engine Emissions (ton/year)	1.93E-03	4.13E-03	3.58E-02	6.89E-05	2.07E-04	2.07E-04

Fire Pump	CO2	CH4	N2O	CO2e
Tier 4 Emission Factors (g/hp-hr)	522	2.10E-02	4.00E-03	523
Fire Pump Engine Emissions (lb/day)	288	1.16E-02	2.20E-03	288
Fire Pump Emissions (metric ton/year)	6.52	2.63E-04	5.00E-05	7

GWP:

CO2	CH4	N2O
1	25	298

Note(s):

ROG NOx, CO, PM10/PM2.5 emissions are Tier 4 standards

SO2 and GHG emission factors are from CalEEMod 2022.1 Appendix G: Default Data Tables (Table G-40). https://www.caleemod.com/user-guide.

Total Emissions from Stationary Sources

	ROG	NO_x	CO	SO_2	PM_{10}	$PM_{2.5}$
Total Emissions (lb/day)	4.91E-01	1.64E+00	9.11E+00	1.75E-02	7.33E-02	7.33E-02
Total Emissions (ton/year)	1.23E-02	4.11E-02	2.28E-01	4.38E-04	1.83E-03	1.83E-03

Total Emissions from Stationary Sources

	CO2e
Total Emissions (lb/day)	1,835
Total Emissions (metric tons/year)	41.61
Total Emissions (tpy)	45.86

Appendix 5.1A

SF_6 Emissions - Operations

Project Data [a]			Calculation Factors		Annual Emissions			
Project Electric Breakers [a]	Number of breakers	Total SF_6 (lbs)	Annual Leak Rate [b]	SF_6 GWP [c]	Annual SF_6 Emissions (lbs/year)	Annual SF_6 Emissions (metric tons/year)	CO_2e (metric tons/year)	CO_2e (tons/year)
230 kV[d]	5	341.6	1.0%	22,800	3.42	0.002	35.33	38.94
				Total	3.42	0.002	35.33	38.94

Note(s):

[a] Electrical breakers include 1 Generator Circuit Breaker and four 4-kilovolt Transmission Breakers. It's assumed that the 34.5 kilovolt Transmission Breakers will use vacuum technology instead of SF6

[b] Assumed based on SF6 Leak Rates from the Regulation for Reducing Sulfur Hexafluoride Emissions from Gas Insulated Switchgear Sections 95390 to 95359, title 17, California Code of Regulations

[c] GWP = Global Warming Potential; Value from *Climate Change 2007, The Physical Science Basis, Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change* (IPCC, 2007).

[d] This assumes equipment will be procured and installed prior to 2027 (i.e. phase out date for 230kV breaker with less than 63kA in accordance with Final Regulation). If a different size breaker is needed or construction dates extend past 2027, the type and size of equipment will need to be reassessed at that time and emission values may change

SF_6 = sulfur hexafluoride

kV = kilovolt(s)

GWP = global warming potential

CO_2e = carbon dioxide equivalent

Appendix 5.1A

CalEEMod Operations Information

Operational Mobile Sources (Unmitigated)

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Total all Land Uses	0.1	0	0	26	17.5	0	0	455

Note(s):

VMT = vehicle miles traveled

Operational Energy Consumption (Unmitigated)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
General Light Industry	TBD	204	0.033	0.004	0

Note(s):

kwh = kilowatt hour

kBTU = kilo British Thermal Units

CO2 = carbon dixoide

CH4 = methane

N2O = nitrous oxide

Appendix 5.1B - CalEEMod Output Files

Viracocha BESS v2 Custom Report

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8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Viracocha BESS v2
Construction Start Date	6/1/2026
Operational Year	2027
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.00
Precipitation (days)	30.0
Location	37.768854, -121.621488
County	Alameda
City	—
Air District	Bay Area AQMD
Air Basin	San Francisco Bay Area
TAZ	1892
EDFZ	1
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.29

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
General Light Industry	0.00	1000sqft	15.0	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.	4.38	3.36	36.3	33.2	0.09	1.31	707	708	1.18	73.4	74.6	—	11,433	11,433	0.62	1.02	14.6	11,767
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.91	2.29	23.4	23.4	0.06	0.84	785	785	0.75	78.6	78.9	—	8,093	8,093	0.38	0.61	0.28	8,286
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.26	0.95	10.3	10.0	0.03	0.34	278	278	0.30	28.2	28.5	—	3,743	3,743	0.20	0.34	2.48	3,852
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.23	0.17	1.88	1.83	< 0.005	0.06	50.7	50.7	0.06	5.15	5.20	—	620	620	0.03	0.06	0.41	638

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	4.38	3.36	36.3	33.2	0.09	1.31	707	708	1.18	73.4	74.6	—	11,433	11,433	0.62	1.02	14.6	11,767

2027	0.65	0.44	4.76	7.36	0.02	0.10	442	442	0.08	44.3	44.3	—	3,110	3,110	0.16	0.34	6.49	3,221
2050	1.62	1.33	9.92	15.5	0.05	0.22	471	471	0.20	47.2	47.3	—	6,211	6,211	0.22	0.33	0.34	6,305
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	2.91	2.29	23.4	23.4	0.06	0.84	575	575	0.75	57.6	57.8	—	8,093	8,093	0.38	0.61	0.28	8,286
2027	1.57	1.22	10.2	15.5	0.03	0.30	785	785	0.27	78.6	78.9	—	5,491	5,491	0.24	0.39	0.26	5,614
2050	1.62	1.32	10.5	15.3	0.06	0.23	463	464	0.21	46.4	46.6	—	6,524	6,524	0.23	0.35	0.01	6,635
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	1.26	0.95	10.3	10.0	0.03	0.34	278	278	0.30	28.2	28.5	—	3,743	3,743	0.20	0.34	2.48	3,852
2027	0.36	0.25	2.65	3.74	0.01	0.06	216	216	0.05	21.6	21.7	—	1,613	1,613	0.08	0.17	1.45	1,666
2050	0.57	0.46	4.09	6.48	0.02	0.08	201	201	0.07	20.1	20.2	—	2,416	2,416	0.08	0.15	0.07	2,464
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.23	0.17	1.88	1.83	< 0.005	0.06	50.7	50.7	0.06	5.15	5.20	—	620	620	0.03	0.06	0.41	638
2027	0.07	0.05	0.48	0.68	< 0.005	0.01	39.4	39.4	0.01	3.95	3.96	—	267	267	0.01	0.03	0.24	276
2050	0.10	0.08	0.75	1.18	< 0.005	0.01	36.7	36.7	0.01	3.68	3.69	—	400	400	0.01	0.03	0.01	408

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.	0.49	0.49	1.65	9.16	0.02	0.07	1.98	2.05	0.07	0.20	0.27	0.00	1,842	1,842	0.07	0.01	0.04	1,848
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.49	0.49	1.65	9.15	0.02	0.07	1.98	2.05	0.07	0.20	0.27	0.00	1,841	1,841	0.07	0.01	< 0.005	1,847

Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.07	0.07	0.23	1.25	< 0.005	0.01	0.13	0.14	0.01	0.01	0.02	0.00	251	251	0.01	< 0.005	< 0.005	252
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.01	0.01	0.04	0.23	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	< 0.005	0.00	41.6	41.6	< 0.005	< 0.005	< 0.005	41.8

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	< 0.005	< 0.005	< 0.005	0.04	< 0.005	< 0.005	1.98	1.98	< 0.005	0.20	0.20	—	13.3	13.3	< 0.005	< 0.005	0.04	13.5
Area	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
User-Defined	0.49	0.49	1.64	9.11	0.02	0.07	—	0.07	0.07	—	0.07	—	1,829	1,829	0.07	0.01	—	1,835
Total	0.49	0.49	1.65	9.16	0.02	0.07	1.98	2.05	0.07	0.20	0.27	0.00	1,842	1,842	0.07	0.01	0.04	1,848
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	< 0.005	< 0.005	< 0.005	0.03	< 0.005	< 0.005	1.98	1.98	< 0.005	0.20	0.20	—	12.5	12.5	< 0.005	< 0.005	< 0.005	12.7
Area	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

User-Defined	0.49	0.49	1.64	9.11	0.02	0.07	—	0.07	0.07	—	0.07	—	1,829	1,829	0.07	0.01	—	1,835
Total	0.49	0.49	1.65	9.15	0.02	0.07	1.98	2.05	0.07	0.20	0.27	0.00	1,841	1,841	0.07	0.01	< 0.005	1,847
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.13	0.13	< 0.005	0.01	0.01	—	0.91	0.91	< 0.005	< 0.005	< 0.005	0.92
Area	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
User-Defined	0.07	0.07	0.23	1.25	< 0.005	0.01	—	0.01	0.01	—	0.01	—	250	250	0.01	< 0.005	—	251
Total	0.07	0.07	0.23	1.25	< 0.005	0.01	0.13	0.14	0.01	0.01	0.02	0.00	251	251	0.01	< 0.005	< 0.005	252
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	0.15	0.15	< 0.005	< 0.005	< 0.005	0.15
Area	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
User-Defined	0.01	0.01	0.04	0.23	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	41.5	41.5	< 0.005	< 0.005	—	41.6
Total	0.01	0.01	0.04	0.23	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	< 0.005	0.00	41.6	41.6	< 0.005	< 0.005	< 0.005	41.8

3. Construction Emissions Details

3.1. Month 361 (2050) - 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	1.06	0.89	5.89	9.92	0.02	0.14	—	0.14	0.13	—	0.13	—	2,644	2,644	0.11	0.02	—	2,653
Demolition	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.13	0.07	2.26	1.22	0.01	0.02	167	167	0.02	16.7	16.7	—	1,197	1,197	0.05	0.19	< 0.005	1,255
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.06	0.39	0.65	< 0.005	0.01	—	0.01	0.01	—	0.01	—	174	174	0.01	< 0.005	—	174
Demolition	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.01	< 0.005	0.14	0.08	< 0.005	< 0.005	10.1	10.1	< 0.005	1.01	1.01	—	78.6	78.6	< 0.005	0.01	< 0.005	82.4
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.07	0.12	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	28.8	28.8	< 0.005	< 0.005	—	28.9
Demolition	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	1.84	1.84	< 0.005	0.18	0.18	—	13.0	13.0	< 0.005	< 0.005	< 0.005	13.6
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.06	1.01	0.00	0.00	187	187	0.00	18.7	18.7	—	459	459	< 0.005	< 0.005	< 0.005	460
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	0.02	0.01	0.44	0.11	< 0.005	0.01	15.7	15.7	0.01	1.59	1.60	—	397	397	0.01	0.06	< 0.005	416
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.07	0.00	0.00	11.3	11.3	0.00	1.13	1.13	—	30.4	30.4	< 0.005	< 0.005	< 0.005	30.5
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	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.95	0.95	< 0.005	0.10	0.10	—	26.1	26.1	< 0.005	< 0.005	< 0.005	27.4
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	2.06	2.06	0.00	0.21	0.21	—	5.03	5.03	< 0.005	< 0.005	< 0.005	5.05
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	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.17	0.17	< 0.005	0.02	0.02	—	4.32	4.32	< 0.005	< 0.005	< 0.005	4.53

3.3. Month 362 (2050) - 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	1.39	1.16	7.25	12.4	0.04	0.19	—	0.19	0.18	—	0.18	—	3,882	3,882	0.16	0.03	—	3,896
Demolition	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—

Onsite truck	0.13	0.07	2.26	1.22	0.01	0.02	167	167	0.02	16.7	16.7	—	1,197	1,197	0.05	0.19	< 0.005	1,255
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.09	0.54	0.92	< 0.005	0.01	—	0.01	0.01	—	0.01	—	287	287	0.01	< 0.005	—	288
Demolition	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.01	0.01	0.16	0.09	< 0.005	< 0.005	11.3	11.3	< 0.005	1.13	1.14	—	88.4	88.4	< 0.005	0.01	0.01	92.7
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.10	0.17	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	47.5	47.5	< 0.005	< 0.005	—	47.7
Demolition	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	2.07	2.07	< 0.005	0.21	0.21	—	14.6	14.6	< 0.005	< 0.005	< 0.005	15.3
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.08	1.42	0.00	0.00	265	265	0.00	26.5	26.5	—	651	651	0.01	< 0.005	< 0.005	652
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	0.03	0.01	0.88	0.22	0.01	0.01	31.4	31.4	0.01	3.18	3.20	—	794	794	0.02	0.13	< 0.005	832
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	18.0	18.0	0.00	1.80	1.80	—	48.5	48.5	< 0.005	< 0.005	< 0.005	48.6
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	< 0.005	< 0.005	0.06	0.02	< 0.005	< 0.005	2.13	2.13	< 0.005	0.22	0.22	—	58.7	58.7	< 0.005	0.01	< 0.005	61.6
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	3.28	3.28	0.00	0.33	0.33	—	8.02	8.02	< 0.005	< 0.005	< 0.005	8.04
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	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.39	0.39	< 0.005	0.04	0.04	—	9.72	9.72	< 0.005	< 0.005	< 0.005	10.2

3.5. Month 363 (2050) - 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	1.39	1.16	7.25	12.4	0.04	0.19	—	0.19	0.18	—	0.18	—	3,882	3,882	0.16	0.03	—	3,896
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.13	0.08	2.12	1.19	0.01	0.02	167	167	0.02	16.7	16.7	—	1,193	1,193	0.05	0.19	0.16	1,252
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.08	0.52	0.88	< 0.005	0.01	—	0.01	0.01	—	0.01	—	277	277	0.01	< 0.005	—	277
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.01	0.01	0.16	0.09	< 0.005	< 0.005	10.9	10.9	< 0.005	1.09	1.09	—	85.1	85.1	< 0.005	0.01	< 0.005	89.3

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.09	0.16	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	45.8	45.8	< 0.005	< 0.005	—	45.9
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	1.99	1.99	< 0.005	0.20	0.20	—	14.1	14.1	< 0.005	< 0.005	< 0.005	14.8
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.07	1.77	0.00	0.00	265	265	0.00	26.5	26.5	—	702	702	< 0.005	< 0.005	0.07	703
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	0.02	0.01	0.48	0.14	< 0.005	0.01	23.5	23.5	0.01	2.37	2.38	—	434	434	0.01	0.07	0.06	455
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	17.3	17.3	0.00	1.74	1.74	—	46.7	46.7	< 0.005	< 0.005	< 0.005	46.8
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	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	1.54	1.54	< 0.005	0.16	0.16	—	30.9	30.9	< 0.005	< 0.005	< 0.005	32.4
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	3.16	3.16	0.00	0.32	0.32	—	7.73	7.73	< 0.005	< 0.005	< 0.005	7.74
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	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.28	0.28	< 0.005	0.03	0.03	—	5.12	5.12	< 0.005	< 0.005	< 0.005	5.36

3.7. Month 364 (2050) - 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	1.06	0.89	5.89	9.92	0.02	0.14	—	0.14	0.13	—	0.13	—	2,644	2,644	0.11	0.02	—	2,653
Demolition	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.13	0.08	2.12	1.19	0.01	0.02	167	167	0.02	16.7	16.7	—	1,193	1,193	0.05	0.19	0.16	1,252
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.06	0.42	0.71	< 0.005	0.01	—	0.01	0.01	—	0.01	—	188	188	0.01	< 0.005	—	189
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.01	0.01	0.16	0.09	< 0.005	< 0.005	10.9	10.9	< 0.005	1.09	1.09	—	85.1	85.1	< 0.005	0.01	< 0.005	89.3
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.08	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	31.2	31.2	< 0.005	< 0.005	—	31.3
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	1.99	1.99	< 0.005	0.20	0.20	—	14.1	14.1	< 0.005	< 0.005	< 0.005	14.8
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.07	1.77	0.00	0.00	265	265	0.00	26.5	26.5	—	702	702	< 0.005	< 0.005	0.07	703
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	0.03	0.01	0.79	0.23	0.01	0.01	39.1	39.1	0.01	3.95	3.96	—	723	723	0.02	0.11	0.10	758
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	17.3	17.3	0.00	1.74	1.74	—	46.7	46.7	< 0.005	< 0.005	< 0.005	46.8
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	< 0.005	< 0.005	0.06	0.02	< 0.005	< 0.005	2.56	2.56	< 0.005	0.26	0.26	—	51.5	51.5	< 0.005	0.01	< 0.005	54.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	3.16	3.16	0.00	0.32	0.32	—	7.73	7.73	< 0.005	< 0.005	< 0.005	7.74
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	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.47	0.47	< 0.005	0.05	0.05	—	8.53	8.53	< 0.005	< 0.005	< 0.005	8.94

3.9. Month 365 (2050) - 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	0.35	0.29	2.96	6.19	0.01	0.03	—	0.03	0.02	—	0.02	—	921	921	0.04	0.01	—	924
Demolition	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—

Onsite truck	0.13	0.08	2.12	1.19	0.01	0.02	167	167	0.02	16.7	16.7	—	1,193	1,193	0.05	0.19	0.16	1,252
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.21	0.44	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	65.6	65.6	< 0.005	< 0.005	—	65.8
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.01	0.01	0.16	0.09	< 0.005	< 0.005	10.9	10.9	< 0.005	1.09	1.09	—	85.1	85.1	< 0.005	0.01	< 0.005	89.3
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.04	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	10.9	10.9	< 0.005	< 0.005	—	10.9
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	1.99	1.99	< 0.005	0.20	0.20	—	14.1	14.1	< 0.005	< 0.005	< 0.005	14.8
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.07	1.77	0.00	0.00	265	265	0.00	26.5	26.5	—	702	702	< 0.005	< 0.005	0.07	703
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	0.03	0.01	0.79	0.23	0.01	0.01	39.1	39.1	0.01	3.95	3.96	—	723	723	0.02	0.11	0.10	758
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	17.3	17.3	0.00	1.74	1.74	—	46.7	46.7	< 0.005	< 0.005	< 0.005	46.8
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	< 0.005	< 0.005	0.06	0.02	< 0.005	< 0.005	2.56	2.56	< 0.005	0.26	0.26	—	51.5	51.5	< 0.005	0.01	< 0.005	54.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	3.16	3.16	0.00	0.32	0.32	—	7.73	7.73	< 0.005	< 0.005	< 0.005	7.74
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	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.47	0.47	< 0.005	0.05	0.05	—	8.53	8.53	< 0.005	< 0.005	< 0.005	8.94

3.11. Month 366 (2050) - 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	0.61	0.51	3.88	10.6	0.02	0.08	—	0.08	0.07	—	0.07	—	1,632	1,632	0.07	0.01	—	1,637
Demolition	—	—	—	—	—	—	0.02	0.02	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.13	0.08	2.12	1.19	0.01	0.02	167	167	0.02	16.7	16.7	—	1,193	1,193	0.05	0.19	0.16	1,252
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.04	0.04	0.28	0.76	< 0.005	0.01	—	0.01	0.01	—	0.01	—	116	116	< 0.005	< 0.005	—	117
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.01	0.01	0.16	0.09	< 0.005	< 0.005	10.9	10.9	< 0.005	1.09	1.09	—	85.1	85.1	< 0.005	0.01	< 0.005	89.3
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	19.2	19.2	< 0.005	< 0.005	—	19.3
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	1.99	1.99	< 0.005	0.20	0.20	—	14.1	14.1	< 0.005	< 0.005	< 0.005	14.8
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.08	0.07	1.77	0.00	0.00	265	265	0.00	26.5	26.5	—	702	702	< 0.005	< 0.005	0.07	703
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	0.03	0.01	0.79	0.23	0.01	0.01	39.1	39.1	0.01	3.95	3.96	—	723	723	0.02	0.11	0.10	758
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.10	0.00	0.00	17.3	17.3	0.00	1.74	1.74	—	46.7	46.7	< 0.005	< 0.005	< 0.005	46.8
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	< 0.005	< 0.005	0.06	0.02	< 0.005	< 0.005	2.56	2.56	< 0.005	0.26	0.26	—	51.5	51.5	< 0.005	0.01	< 0.005	54.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	3.16	3.16	0.00	0.32	0.32	—	7.73	7.73	< 0.005	< 0.005	< 0.005	7.74

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	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.47	0.47	< 0.005	0.05	0.05	—	8.53	8.53	< 0.005	< 0.005	< 0.005	8.94

3.13. Month 367 (2050) - 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	0.61	0.51	3.88	10.6	0.02	0.08	—	0.08	0.07	—	0.07	—	1,632	1,632	0.07	0.01	—	1,637
Demolition	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.13	0.08	2.12	1.19	0.01	0.02	167	167	0.02	16.7	16.7	—	1,193	1,193	0.05	0.19	0.16	1,252
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.29	0.79	< 0.005	0.01	—	0.01	0.01	—	0.01	—	121	121	< 0.005	< 0.005	—	121
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	0.01	0.01	0.16	0.09	< 0.005	< 0.005	11.3	11.3	< 0.005	1.13	1.14	—	88.4	88.4	< 0.005	0.01	0.01	92.7
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipm	0.01	0.01	0.05	0.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	20.0	20.0	< 0.005	< 0.005	—	20.1
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	2.07	2.07	< 0.005	0.21	0.21	—	14.6	14.6	< 0.005	< 0.005	< 0.005	15.3
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.05	1.25	0.00	0.00	187	187	0.00	18.7	18.7	—	495	495	< 0.005	< 0.005	0.05	496
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	0.01	0.01	0.32	0.09	< 0.005	0.01	15.6	15.7	0.01	1.58	1.58	—	289	289	0.01	0.05	0.04	303
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.07	0.00	0.00	12.7	12.7	0.00	1.27	1.27	—	34.2	34.2	< 0.005	< 0.005	< 0.005	34.3
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	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	1.06	1.06	< 0.005	0.11	0.11	—	21.4	21.4	< 0.005	< 0.005	< 0.005	22.4
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	2.32	2.32	0.00	0.23	0.23	—	5.66	5.66	< 0.005	< 0.005	< 0.005	5.68
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	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.19	0.19	< 0.005	0.02	0.02	—	3.54	3.54	< 0.005	< 0.005	< 0.005	3.71

3.15. Month 1 (2026) - 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	3.42	2.87	25.8	24.8	0.04	1.16	—	1.16	1.07	—	1.07	—	4,563	4,563	0.19	0.04	—	4,579
Dust From Material Movement	—	—	—	—	—	—	6.72	6.72	—	3.32	3.32	—	—	—	—	—	—	—
Onsite truck	0.59	0.23	7.78	4.06	0.03	0.08	464	464	0.06	46.4	46.4	—	4,614	4,614	0.35	0.73	9.22	4,849
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	0.20	1.84	1.77	< 0.005	0.08	—	0.08	0.08	—	0.08	—	325	325	0.01	< 0.005	—	326
Dust From Material Movement	—	—	—	—	—	—	0.48	0.48	—	0.24	0.24	—	—	—	—	—	—	—
Onsite truck	0.04	0.02	0.57	0.29	< 0.005	0.01	30.3	30.3	< 0.005	3.03	3.04	—	329	329	0.02	0.05	0.28	345
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.04	0.34	0.32	< 0.005	0.02	—	0.02	0.01	—	0.01	—	53.8	53.8	< 0.005	< 0.005	—	54.0
Dust From Material Movement	—	—	—	—	—	—	0.09	0.09	—	0.04	0.04	—	—	—	—	—	—	—

Onsite truck	0.01	< 0.005	0.10	0.05	< 0.005	< 0.005	5.54	5.54	< 0.005	0.55	0.55	—	54.5	54.5	< 0.005	0.01	0.05	57.2
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.11	0.10	1.83	0.00	0.00	140	140	0.00	14.0	14.0	—	454	454	0.01	0.02	1.68	461
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	0.06	0.02	1.00	0.38	0.01	0.02	33.6	33.7	0.01	3.40	3.41	—	881	881	0.05	0.14	1.90	925
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.11	0.00	0.00	9.17	9.17	0.00	0.92	0.92	—	30.2	30.2	< 0.005	< 0.005	0.05	30.6
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	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	2.20	2.20	< 0.005	0.22	0.22	—	62.7	62.7	< 0.005	0.01	0.06	65.8
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	1.67	1.67	0.00	0.17	0.17	—	5.00	5.00	< 0.005	< 0.005	0.01	5.07
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	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.40	0.40	< 0.005	0.04	0.04	—	10.4	10.4	< 0.005	< 0.005	0.01	10.9

3.17. Month 2 (2026) - 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	3.52	2.96	26.7	26.1	0.04	1.20	—	1.20	1.11	—	1.11	—	4,754	4,754	0.19	0.04	—	4,770
Dust From Material Movement	—	—	—	—	—	—	6.84	6.84	—	3.34	3.34	—	—	—	—	—	—	—
Onsite truck	0.59	0.23	7.78	4.06	0.03	0.08	464	464	0.06	46.4	46.4	—	4,614	4,614	0.35	0.73	9.22	4,849
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.26	0.22	1.97	1.93	< 0.005	0.09	—	0.09	0.08	—	0.08	—	352	352	0.01	< 0.005	—	353
Dust From Material Movement	—	—	—	—	—	—	0.51	0.51	—	0.25	0.25	—	—	—	—	—	—	—
Onsite truck	0.04	0.02	0.59	0.30	< 0.005	0.01	31.5	31.5	< 0.005	3.15	3.15	—	342	342	0.03	0.05	0.29	359
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.36	0.35	< 0.005	0.02	—	0.02	0.01	—	0.01	—	58.2	58.2	< 0.005	< 0.005	—	58.4
Dust From Material Movement	—	—	—	—	—	—	0.09	0.09	—	0.05	0.05	—	—	—	—	—	—	—
Onsite truck	0.01	< 0.005	0.11	0.06	< 0.005	< 0.005	5.75	5.75	< 0.005	0.57	0.58	—	56.6	56.6	< 0.005	0.01	0.05	59.4
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.16	0.14	0.13	2.34	0.00	0.00	179	179	0.00	17.9	17.9	—	581	581	0.01	0.02	2.15	589
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	0.11	0.03	1.68	0.64	0.01	0.03	56.7	56.7	0.02	5.73	5.75	—	1,485	1,485	0.08	0.23	3.21	1,560
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.14	0.00	0.00	12.2	12.2	0.00	1.22	1.22	—	40.1	40.1	< 0.005	< 0.005	0.07	40.6
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	0.01	< 0.005	0.13	0.05	< 0.005	< 0.005	3.85	3.85	< 0.005	0.39	0.39	—	110	110	0.01	0.02	0.10	115
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	2.22	2.22	0.00	0.22	0.22	—	6.64	6.64	< 0.005	< 0.005	0.01	6.73
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	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.70	0.70	< 0.005	0.07	0.07	—	18.2	18.2	< 0.005	< 0.005	0.02	19.1

3.19. Month 3 (2026) - 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	0.44	0.37	3.22	4.10	0.01	0.11	—	0.11	0.10	—	0.10	—	588	588	0.02	< 0.005	—	590
Onsite truck	0.38	0.14	4.98	2.60	0.02	0.05	297	297	0.04	29.7	29.7	—	2,953	2,953	0.22	0.47	5.90	3,103

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.23	0.29	< 0.005	0.01	—	0.01	0.01	—	0.01	—	41.9	41.9	< 0.005	< 0.005	—	42.0
Onsite truck	0.03	0.01	0.37	0.19	< 0.005	< 0.005	19.4	19.4	< 0.005	1.94	1.94	—	211	211	0.02	0.03	0.18	221
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	< 0.005	0.04	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.93	6.93	< 0.005	< 0.005	—	6.96
Onsite truck	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	3.54	3.54	< 0.005	0.35	0.35	—	34.9	34.9	< 0.005	0.01	0.03	36.6
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.20	0.17	0.16	2.85	0.00	0.00	218	218	0.00	21.9	21.9	—	707	707	0.01	0.03	2.62	717
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	0.08	0.02	1.22	0.47	0.01	0.02	41.1	41.1	0.01	4.15	4.16	—	1,075	1,075	0.06	0.17	2.32	1,129
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.17	0.00	0.00	14.3	14.3	0.00	1.43	1.43	—	47.0	47.0	< 0.005	< 0.005	0.08	47.6
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	0.01	< 0.005	0.09	0.03	< 0.005	< 0.005	2.69	2.69	< 0.005	0.27	0.27	—	76.6	76.6	< 0.005	0.01	0.07	80.4
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	2.60	2.60	0.00	0.26	0.26	—	7.78	7.78	< 0.005	< 0.005	0.01	7.89
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	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.49	0.49	< 0.005	0.05	0.05	—	12.7	12.7	< 0.005	< 0.005	0.01	13.3

3.21. Month 4 (2026) - 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	0.44	0.37	3.22	4.10	0.01	0.11	—	0.11	0.10	—	0.10	—	588	588	0.02	< 0.005	—	590
Onsite truck	0.38	0.14	4.98	2.60	0.02	0.05	297	297	0.04	29.7	29.7	—	2,953	2,953	0.22	0.47	5.90	3,103
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.23	0.29	< 0.005	0.01	—	0.01	0.01	—	0.01	—	41.9	41.9	< 0.005	< 0.005	—	42.0
Onsite truck	0.03	0.01	0.37	0.19	< 0.005	< 0.005	19.4	19.4	< 0.005	1.94	1.94	—	211	211	0.02	0.03	0.18	221
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	< 0.005	0.04	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.93	6.93	< 0.005	< 0.005	—	6.96

Onsite truck	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	3.54	3.54	< 0.005	0.35	0.35	—	34.9	34.9	< 0.005	0.01	0.03	36.6
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.27	0.24	0.22	3.87	0.00	0.00	296	296	0.00	29.7	29.7	—	959	959	0.01	0.03	3.55	973
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	0.08	0.02	1.22	0.47	0.01	0.02	41.1	41.1	0.01	4.15	4.16	—	1,075	1,075	0.06	0.17	2.32	1,129
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.23	0.00	0.00	19.4	19.4	0.00	1.94	1.94	—	63.8	63.8	< 0.005	< 0.005	0.11	64.6
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	0.01	< 0.005	0.09	0.03	< 0.005	< 0.005	2.69	2.69	< 0.005	0.27	0.27	—	76.6	76.6	< 0.005	0.01	0.07	80.4
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	3.53	3.53	0.00	0.35	0.35	—	10.6	10.6	< 0.005	< 0.005	0.02	10.7
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	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.49	0.49	< 0.005	0.05	0.05	—	12.7	12.7	< 0.005	< 0.005	0.01	13.3

3.23. Month 5 (2026) - 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-Roa Equipment	1.81	1.52	13.9	14.0	0.02	0.59	—	0.59	0.54	—	0.54	—	2,497	2,497	0.10	0.02	—	2,506
Architectural Coatings	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.20	0.08	2.96	1.49	0.01	0.03	167	167	0.02	16.7	16.7	—	1,664	1,664	0.12	0.26	0.09	1,746
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	1.03	1.04	< 0.005	0.04	—	0.04	0.04	—	0.04	—	185	185	0.01	< 0.005	—	185
Architectural Coatings	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.02	0.01	0.21	0.11	< 0.005	< 0.005	11.3	11.3	< 0.005	1.13	1.14	—	123	123	0.01	0.02	0.11	129
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.19	0.19	< 0.005	0.01	—	0.01	0.01	—	0.01	—	30.6	30.6	< 0.005	< 0.005	—	30.7
Architectural Coatings	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	2.07	2.07	< 0.005	0.21	0.21	—	20.4	20.4	< 0.005	< 0.005	0.02	21.4
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.33	0.29	0.37	4.08	0.00	0.00	374	374	0.00	37.5	37.5	—	1,123	1,123	0.02	0.05	0.12	1,137
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	0.03	0.01	0.56	0.21	< 0.005	0.01	18.0	18.0	0.01	1.82	1.82	—	471	471	0.02	0.07	0.03	494
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.30	0.00	0.00	25.4	25.4	0.00	2.54	2.54	—	83.7	83.7	< 0.005	< 0.005	0.14	84.8
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	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	1.22	1.22	< 0.005	0.12	0.12	—	34.8	34.8	< 0.005	0.01	0.03	36.6
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	4.64	4.64	0.00	0.46	0.46	—	13.9	13.9	< 0.005	< 0.005	0.02	14.0
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	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	0.22	0.22	< 0.005	0.02	0.02	—	5.77	5.77	< 0.005	< 0.005	0.01	6.05

3.25. Month 6 (2026) - 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	2.32	1.95	18.0	17.9	0.03	0.77	—	0.77	0.71	—	0.71	—	3,748	3,748	0.15	0.03	—	3,761
Onsite truck	0.20	0.08	2.96	1.49	0.01	0.03	167	167	0.02	16.7	16.7	—	1,664	1,664	0.12	0.26	0.09	1,746

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.16	0.13	1.24	1.23	< 0.005	0.05	—	0.05	0.05	—	0.05	—	257	257	0.01	< 0.005	—	258
Onsite truck	0.01	0.01	0.20	0.10	< 0.005	< 0.005	10.5	10.5	< 0.005	1.05	1.05	—	114	114	0.01	0.02	0.10	120
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.23	0.22	< 0.005	0.01	—	0.01	0.01	—	0.01	—	42.5	42.5	< 0.005	< 0.005	—	42.7
Onsite truck	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	1.92	1.92	< 0.005	0.19	0.19	—	18.9	18.9	< 0.005	< 0.005	0.02	19.8
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.26	0.23	0.29	3.23	0.00	0.00	296	296	0.00	29.7	29.7	—	889	889	0.02	0.04	0.09	901
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	0.12	0.03	2.11	0.75	0.01	0.03	56.8	56.8	0.02	5.75	5.77	—	1,791	1,791	0.09	0.28	0.10	1,878
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.22	0.00	0.00	18.6	18.6	0.00	1.86	1.86	—	61.3	61.3	< 0.005	< 0.005	0.11	62.2
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	0.01	< 0.005	0.14	0.05	< 0.005	< 0.005	3.57	3.58	< 0.005	0.36	0.36	—	123	123	0.01	0.02	0.11	129
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	3.40	3.40	0.00	0.34	0.34	—	10.2	10.2	< 0.005	< 0.005	0.02	10.3
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	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.65	0.65	< 0.005	0.07	0.07	—	20.3	20.3	< 0.005	< 0.005	0.02	21.3

3.27. Month 7 (2026) - 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	0.76	0.64	6.00	6.43	0.01	0.26	—	0.26	0.24	—	0.24	—	1,619	1,619	0.07	0.01	—	1,624
Onsite truck	0.20	0.08	2.96	1.49	0.01	0.03	167	167	0.02	16.7	16.7	—	1,664	1,664	0.12	0.26	0.09	1,746
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.44	0.48	< 0.005	0.02	—	0.02	0.02	—	0.02	—	120	120	< 0.005	< 0.005	—	120
Onsite truck	0.02	0.01	0.21	0.11	< 0.005	< 0.005	11.3	11.3	< 0.005	1.13	1.14	—	123	123	0.01	0.02	0.11	129
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.08	0.09	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	19.8	19.8	< 0.005	< 0.005	—	19.9
Onsite truck	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	2.07	2.07	< 0.005	0.21	0.21	—	20.4	20.4	< 0.005	< 0.005	0.02	21.4
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.33	0.29	0.37	4.08	0.00	0.00	374	374	0.00	37.5	37.5	—	1,123	1,123	0.02	0.05	0.12	1,137
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	0.07	0.02	1.22	0.44	0.01	0.02	33.7	33.7	0.01	3.41	3.42	—	1,034	1,034	0.05	0.16	0.06	1,084
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.30	0.00	0.00	25.4	25.4	0.00	2.54	2.54	—	83.7	83.7	< 0.005	< 0.005	0.14	84.8
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	0.01	< 0.005	0.09	0.03	< 0.005	< 0.005	2.29	2.29	< 0.005	0.23	0.23	—	76.5	76.5	< 0.005	0.01	0.07	80.2
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	4.64	4.64	0.00	0.46	0.46	—	13.9	13.9	< 0.005	< 0.005	0.02	14.0
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	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.42	0.42	< 0.005	0.04	0.04	—	12.7	12.7	< 0.005	< 0.005	0.01	13.3

3.29. Month 8 (2027) - 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	0.84	0.70	6.44	7.69	0.02	0.27	—	0.27	0.25	—	0.25	—	1,809	1,809	0.07	0.01	—	1,816
Onsite truck	0.19	0.06	2.90	1.47	0.01	0.03	167	167	0.02	16.7	16.7	—	1,629	1,629	0.12	0.26	0.08	1,710

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.46	0.55	< 0.005	0.02	—	0.02	0.02	—	0.02	—	129	129	0.01	< 0.005	—	129
Onsite truck	0.01	< 0.005	0.20	0.10	< 0.005	< 0.005	10.9	10.9	< 0.005	1.09	1.09	—	116	116	0.01	0.02	0.09	122
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.08	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	21.3	21.3	< 0.005	< 0.005	—	21.4
Onsite truck	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	1.99	1.99	< 0.005	0.20	0.20	—	19.2	19.2	< 0.005	< 0.005	0.02	20.2
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.53	0.45	0.53	6.24	0.00	0.00	608	608	0.00	60.9	60.9	—	1,792	1,792	0.03	0.07	0.17	1,815
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	0.02	< 0.005	0.31	0.11	< 0.005	0.01	10.2	10.2	< 0.005	1.03	1.03	—	261	261	0.01	0.04	0.01	273
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.03	0.03	0.44	0.00	0.00	39.7	39.7	0.00	3.98	3.98	—	129	129	< 0.005	0.01	0.20	130
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	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.67	0.67	< 0.005	0.07	0.07	—	18.6	18.6	< 0.005	< 0.005	0.02	19.5
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.08	0.00	0.00	7.25	7.25	0.00	0.73	0.73	—	21.3	21.3	< 0.005	< 0.005	0.03	21.6
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	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.12	0.12	< 0.005	0.01	0.01	—	3.07	3.07	< 0.005	< 0.005	< 0.005	3.23

3.31. Month 9 (2027) - 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	0.29	0.25	2.33	3.87	0.01	0.10	—	0.10	0.09	—	0.09	—	572	572	0.02	< 0.005	—	574
Onsite truck	0.19	0.06	2.90	1.47	0.01	0.03	167	167	0.02	16.7	16.7	—	1,629	1,629	0.12	0.26	0.08	1,710
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.15	0.25	< 0.005	0.01	—	0.01	0.01	—	0.01	—	37.6	37.6	< 0.005	< 0.005	—	37.7
Onsite truck	0.01	< 0.005	0.19	0.10	< 0.005	< 0.005	10.1	10.1	< 0.005	1.01	1.01	—	107	107	0.01	0.02	0.09	112
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.03	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.22	6.22	< 0.005	< 0.005	—	6.25
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	1.84	1.84	< 0.005	0.18	0.18	—	17.7	17.7	< 0.005	< 0.005	0.01	18.6
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.53	0.45	0.53	6.24	0.00	0.00	608	608	0.00	60.9	60.9	—	1,792	1,792	0.03	0.07	0.17	1,815
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	0.02	< 0.005	0.31	0.11	< 0.005	0.01	10.2	10.2	< 0.005	1.03	1.03	—	261	261	0.01	0.04	0.01	273
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.03	0.03	0.40	0.00	0.00	36.7	36.7	0.00	3.67	3.67	—	119	119	< 0.005	< 0.005	0.19	120
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	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.61	0.61	< 0.005	0.06	0.06	—	17.1	17.1	< 0.005	< 0.005	0.02	18.0
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	6.70	6.70	0.00	0.67	0.67	—	19.6	19.6	< 0.005	< 0.005	0.03	19.9
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	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.11	0.11	< 0.005	0.01	0.01	—	2.84	2.84	< 0.005	< 0.005	< 0.005	2.98

3.33. Month 10 (2027) - 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	0.20	0.17	1.56	2.58	< 0.005	0.07	—	0.07	0.06	—	0.06	—	381	381	0.02	< 0.005	—	382
Onsite truck	0.18	0.06	2.59	1.37	0.01	0.02	134	134	0.02	13.4	13.4	—	1,333	1,333	0.11	0.21	0.06	1,400

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.12	0.19	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	28.2	28.2	< 0.005	< 0.005	—	28.3
Onsite truck	0.01	< 0.005	0.19	0.10	< 0.005	< 0.005	9.07	9.07	< 0.005	0.91	0.91	—	98.5	98.5	0.01	0.02	0.08	103
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.67	4.67	< 0.005	< 0.005	—	4.68
Onsite truck	< 0.005	< 0.005	0.03	0.02	< 0.005	< 0.005	1.66	1.66	< 0.005	0.17	0.17	—	16.3	16.3	< 0.005	< 0.005	0.01	17.1
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.32	0.28	0.33	3.84	0.00	0.00	374	374	0.00	37.5	37.5	—	1,103	1,103	0.02	0.05	0.11	1,117
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	0.02	< 0.005	0.31	0.11	< 0.005	0.01	10.2	10.2	< 0.005	1.03	1.03	—	261	261	0.01	0.04	0.01	273
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.28	0.00	0.00	25.4	25.4	0.00	2.54	2.54	—	82.1	82.1	< 0.005	< 0.005	0.13	83.2
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	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.69	0.69	< 0.005	0.07	0.07	—	19.3	19.3	< 0.005	< 0.005	0.02	20.2
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	4.64	4.64	0.00	0.46	0.46	—	13.6	13.6	< 0.005	< 0.005	0.02	13.8
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	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.13	0.13	< 0.005	0.01	0.01	—	3.19	3.19	< 0.005	< 0.005	< 0.005	3.35

3.35. Month 11 (2027) - 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	0.20	0.17	1.56	2.58	< 0.005	0.07	—	0.07	0.06	—	0.06	—	381	381	0.02	< 0.005	—	382
Onsite truck	0.20	0.07	2.74	1.44	0.01	0.03	167	167	0.02	16.7	16.7	—	1,626	1,626	0.12	0.26	3.08	1,710
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.11	0.18	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	27.1	27.1	< 0.005	< 0.005	—	27.2
Onsite truck	0.01	< 0.005	0.20	0.10	< 0.005	< 0.005	10.9	10.9	< 0.005	1.09	1.09	—	116	116	0.01	0.02	0.09	122
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.49	4.49	< 0.005	< 0.005	—	4.51
Onsite truck	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	1.99	1.99	< 0.005	0.20	0.20	—	19.2	19.2	< 0.005	< 0.005	0.02	20.2
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.23	0.20	0.17	3.23	0.00	0.00	265	265	0.00	26.5	26.5	—	842	842	0.01	0.03	2.87	855
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	0.02	< 0.005	0.29	0.11	< 0.005	0.01	10.2	10.2	< 0.005	1.03	1.03	—	260	260	0.01	0.04	0.53	274
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.01	0.19	0.00	0.00	17.3	17.3	0.00	1.74	1.74	—	56.0	56.0	< 0.005	< 0.005	0.09	56.8
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	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.67	0.67	< 0.005	0.07	0.07	—	18.6	18.6	< 0.005	< 0.005	0.02	19.5
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	3.16	3.16	0.00	0.32	0.32	—	9.27	9.27	< 0.005	< 0.005	0.01	9.40
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	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.12	0.12	< 0.005	0.01	0.01	—	3.07	3.07	< 0.005	< 0.005	< 0.005	3.23

3.37. Month 12 (2027) - 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	0.10	0.08	0.78	1.29	< 0.005	0.03	—	0.03	0.03	—	0.03	—	191	191	0.01	< 0.005	—	191
Onsite truck	0.20	0.07	2.74	1.44	0.01	0.03	167	167	0.02	16.7	16.7	—	1,626	1,626	0.12	0.26	3.08	1,710
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.09	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.6	13.6	< 0.005	< 0.005	—	13.6
Onsite truck	0.01	< 0.005	0.20	0.10	< 0.005	< 0.005	10.9	10.9	< 0.005	1.09	1.09	—	116	116	0.01	0.02	0.09	122
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.25	2.25	< 0.005	< 0.005	—	2.26
Onsite truck	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	1.99	1.99	< 0.005	0.20	0.20	—	19.2	19.2	< 0.005	< 0.005	0.02	20.2
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.06	1.14	0.00	0.00	93.5	93.5	0.00	9.36	9.36	—	297	297	< 0.005	0.01	1.01	302
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	0.02	< 0.005	0.29	0.11	< 0.005	0.01	10.2	10.2	< 0.005	1.03	1.03	—	260	260	0.01	0.04	0.53	274
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.01	0.07	0.00	0.00	6.11	6.11	0.00	0.61	0.61	—	19.8	19.8	< 0.005	< 0.005	0.03	20.0
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	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.67	0.67	< 0.005	0.07	0.07	—	18.6	18.6	< 0.005	< 0.005	0.02	19.5
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	1.12	1.12	0.00	0.11	0.11	—	3.27	3.27	< 0.005	< 0.005	0.01	3.32
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	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.12	0.12	< 0.005	0.01	0.01	—	3.07	3.07	< 0.005	< 0.005	< 0.005	3.23

3.39. Month 13 (2027) - 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	0.10	0.08	0.78	1.29	< 0.005	0.03	—	0.03	0.03	—	0.03	—	191	191	0.01	< 0.005	—	191
Onsite truck	0.20	0.07	2.74	1.44	0.01	0.03	167	167	0.02	16.7	16.7	—	1,626	1,626	0.12	0.26	3.08	1,710
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.09	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.6	13.6	< 0.005	< 0.005	—	13.6
Onsite truck	0.01	< 0.005	0.20	0.10	< 0.005	< 0.005	10.9	10.9	< 0.005	1.09	1.09	—	116	116	0.01	0.02	0.09	122
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.25	2.25	< 0.005	< 0.005	—	2.26
Onsite truck	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	1.99	1.99	< 0.005	0.20	0.20	—	19.2	19.2	< 0.005	< 0.005	0.02	20.2
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.08	0.07	0.06	1.14	0.00	0.00	93.5	93.5	0.00	9.36	9.36	—	297	297	< 0.005	0.01	1.01	302
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	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	2.35	2.35	< 0.005	0.24	0.24	—	60.1	60.1	< 0.005	0.01	0.12	63.2
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.01	0.07	0.00	0.00	6.11	6.11	0.00	0.61	0.61	—	19.8	19.8	< 0.005	< 0.005	0.03	20.0
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	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.15	0.15	< 0.005	0.02	0.02	—	4.28	4.28	< 0.005	< 0.005	< 0.005	4.50
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	1.12	1.12	0.00	0.11	0.11	—	3.27	3.27	< 0.005	< 0.005	0.01	3.32
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	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.03	0.03	< 0.005	< 0.005	< 0.005	—	0.71	0.71	< 0.005	< 0.005	< 0.005	0.74

3.41. Month 14 (2027) - 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	0.10	0.08	0.78	1.29	< 0.005	0.03	—	0.03	0.03	—	0.03	—	191	191	0.01	< 0.005	—	191
Onsite truck	0.20	0.07	2.74	1.44	0.01	0.03	167	167	0.02	16.7	16.7	—	1,626	1,626	0.12	0.26	3.08	1,710
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	14.1	14.1	< 0.005	< 0.005	—	14.1
Onsite truck	0.01	0.01	0.21	0.11	< 0.005	< 0.005	11.3	11.3	< 0.005	1.13	1.14	—	120	120	0.01	0.02	0.10	126
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.33	2.33	< 0.005	< 0.005	—	2.34
Onsite truck	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	2.07	2.07	< 0.005	0.21	0.21	—	19.9	19.9	< 0.005	< 0.005	0.02	20.9
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.06	1.14	0.00	0.00	93.5	93.5	0.00	9.36	9.36	—	297	297	< 0.005	0.01	1.01	302
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	0.02	< 0.005	0.29	0.11	< 0.005	0.01	10.2	10.2	< 0.005	1.03	1.03	—	260	260	0.01	0.04	0.53	274
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.07	0.00	0.00	6.35	6.35	0.00	0.64	0.64	—	20.5	20.5	< 0.005	< 0.005	0.03	20.8
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	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.69	0.69	< 0.005	0.07	0.07	—	19.3	19.3	< 0.005	< 0.005	0.02	20.2
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	1.16	1.16	0.00	0.12	0.12	—	3.40	3.40	< 0.005	< 0.005	0.01	3.45
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	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.13	0.13	< 0.005	0.01	0.01	—	3.19	3.19	< 0.005	< 0.005	< 0.005	3.35

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Mobile source emissions results are presented in Sections 2.6. No further detailed breakdown of emissions is available.

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	—	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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.00	0.00	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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.00	0.00	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	0.00	0.00	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	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
General Light Industry	—	—	—	—	—	—	—	—	—	—	—	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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tier 4 Emergency Generator	0.41	0.41	1.48	7.68	0.01	0.07	—	0.07	0.07	—	0.07	—	1,541	1,541	0.06	0.01	—	1,546
Tier 4 Fire Pump	0.08	0.08	0.17	1.43	< 0.005	0.01	—	0.01	0.01	—	0.01	—	288	288	0.01	< 0.005	—	288
Total	0.49	0.49	1.64	9.11	0.02	0.07	—	0.07	0.07	—	0.07	—	1,829	1,829	0.07	0.01	—	1,835
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tier 4 Emergency Generator	0.41	0.41	1.48	7.68	0.01	0.07	—	0.07	0.07	—	0.07	—	1,541	1,541	0.06	0.01	—	1,546
Tier 4 Fire Pump	0.08	0.08	0.17	1.43	< 0.005	0.01	—	0.01	0.01	—	0.01	—	288	288	0.01	< 0.005	—	288
Total	0.49	0.49	1.64	9.11	0.02	0.07	—	0.07	0.07	—	0.07	—	1,829	1,829	0.07	0.01	—	1,835
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tier 4 Emergency Generator	0.01	0.01	0.04	0.19	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	34.9	34.9	< 0.005	< 0.005	—	35.1

Tier 4 Fire Pump	< 0.005	< 0.005	< 0.005	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.52	6.52	< 0.005	< 0.005	—	6.54
Total	0.01	0.01	0.04	0.23	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	41.5	41.5	< 0.005	< 0.005	—	41.6

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
Month 361	Demolition	2/01/2050	2/28/2050	6.00	24.0	—
Month 362	Demolition	3/01/2050	3/31/2050	6.00	27.0	—
Month 363	Demolition	4/01/2050	4/30/2050	6.00	26.0	—
Month 364	Demolition	5/01/2050	5/31/2050	6.00	26.0	—
Month 365	Demolition	6/01/2050	6/30/2050	6.00	26.0	—
Month 366	Demolition	7/1/2050	7/31/2050	6.00	26.0	—
Month 367	Demolition	8/1/2050	8/31/2050	6.00	27.0	—
Month 1	Site Preparation	6/1/2026	6/30/2026	6.00	26.0	—
Month 2	Grading	7/1/2026	7/31/2026	6.00	27.0	—
Month 3	Building Construction	8/1/2026	8/31/2026	6.00	26.0	—
Month 4	Building Construction	9/1/2026	9/30/2026	6.00	26.0	—
Month 5	Building Construction	10/1/2026	10/31/2026	6.00	27.0	—
Month 6	Building Construction	11/1/2026	11/30/2026	6.00	25.0	—
Month 7	Building Construction	12/1/2026	12/31/2026	6.00	27.0	—

Month 8	Building Construction	1/1/2027	1/31/2027	6.00	26.0	—
Month 9	Building Construction	2/1/2027	2/28/2027	6.00	24.0	—
Month 10	Building Construction	3/01/2027	3/31/2027	6.00	27.0	—
Month 11	Building Construction	4/01/2027	4/30/2027	6.00	26.0	—
Month 12	Building Construction	5/01/2027	5/31/2027	6.00	26.0	—
Month 13	Building Construction	6/01/2027	6/30/2027	6.00	26.0	—
Month 14	Building Construction	7/01/2027	7/31/2027	6.00	27.0	—

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
Month 361	Excavators	Diesel	Average	1.00	10.0	36.0	0.38
Month 361	Rubber Tired Dozers	Diesel	Average	1.00	10.0	367	0.40
Month 361	Tractors/Loaders/Backhoes	Diesel	Average	1.00	10.0	84.0	0.37
Month 361	Forklifts	Diesel	Average	2.00	10.0	82.0	0.20
Month 362	Excavators	Diesel	Average	1.00	10.0	36.0	0.38
Month 362	Rubber Tired Dozers	Diesel	Average	1.00	10.0	367	0.40
Month 362	Tractors/Loaders/Backhoes	Diesel	Average	1.00	10.0	84.0	0.37
Month 362	Forklifts	Diesel	Average	2.00	10.0	82.0	0.20
Month 362	Cranes	Diesel	Average	1.00	10.0	367	0.29
Month 363	Excavators	Diesel	Average	1.00	10.0	36.0	0.38
Month 363	Rubber Tired Dozers	Diesel	Average	1.00	10.0	367	0.40
Month 363	Tractors/Loaders/Backhoes	Diesel	Average	1.00	10.0	84.0	0.37
Month 363	Forklifts	Diesel	Average	2.00	10.0	82.0	0.20
Month 363	Cranes	Diesel	Average	1.00	10.0	367	0.29

Month 364	Excavators	Diesel	Average	1.00	10.0	36.0	0.38
Month 364	Rubber Tired Dozers	Diesel	Average	1.00	10.0	367	0.40
Month 364	Tractors/Loaders/Backhoes	Diesel	Average	1.00	10.0	84.0	0.37
Month 364	Forklifts	Diesel	Average	2.00	10.0	82.0	0.20
Month 365	Excavators	Diesel	Average	1.00	10.0	36.0	0.38
Month 365	Tractors/Loaders/Backhoes	Diesel	Average	1.00	10.0	84.0	0.37
Month 365	Forklifts	Diesel	Average	2.00	10.0	82.0	0.20
Month 366	Excavators	Diesel	Average	1.00	10.0	36.0	0.38
Month 366	Tractors/Loaders/Backhoes	Diesel	Average	1.00	10.0	84.0	0.37
Month 366	Forklifts	Diesel	Average	2.00	10.0	82.0	0.20
Month 366	Graders	Diesel	Average	1.00	10.0	148	0.41
Month 367	Excavators	Diesel	Average	1.00	10.0	36.0	0.38
Month 367	Tractors/Loaders/Backhoes	Diesel	Average	1.00	10.0	84.0	0.37
Month 367	Forklifts	Diesel	Average	2.00	10.0	82.0	0.20
Month 367	Graders	Diesel	Average	1.00	10.0	148	0.41
Month 1	Rubber Tired Dozers	Diesel	Average	2.00	10.0	367	0.40
Month 1	Tractors/Loaders/Backhoes	Diesel	Average	1.00	10.0	84.0	0.37
Month 1	Graders	Diesel	Average	1.00	10.0	148	0.41
Month 1	Plate Compactors	Diesel	Average	1.00	10.0	8.00	0.43
Month 2	Rubber Tired Dozers	Diesel	Average	2.00	10.0	367	0.40
Month 2	Tractors/Loaders/Backhoes	Diesel	Average	1.00	10.0	84.0	0.37
Month 2	Forklifts	Diesel	Average	1.00	10.0	82.0	0.20
Month 2	Graders	Diesel	Average	1.00	10.0	148	0.41
Month 2	Plate Compactors	Diesel	Average	1.00	10.0	8.00	0.43
Month 3	Excavators	Diesel	Average	2.00	10.0	36.0	0.38

Month 3	Forklifts	Diesel	Average	1.00	10.0	82.0	0.20
Month 3	Plate Compactors	Diesel	Average	1.00	10.0	8.00	0.43
Month 4	Excavators	Diesel	Average	2.00	10.0	36.0	0.38
Month 4	Forklifts	Diesel	Average	1.00	10.0	82.0	0.20
Month 4	Plate Compactors	Diesel	Average	1.00	10.0	8.00	0.43
Month 5	Excavators	Diesel	Average	1.00	10.0	36.0	0.38
Month 5	Rubber Tired Dozers	Diesel	Average	1.00	10.0	367	0.40
Month 5	Tractors/Loaders/Backhoes	Diesel	Average	1.00	10.0	84.0	0.37
Month 5	Forklifts	Diesel	Average	1.00	10.0	82.0	0.20
Month 5	Plate Compactors	Diesel	Average	1.00	10.0	8.00	0.43
Month 6	Rubber Tired Dozers	Diesel	Average	1.00	10.0	367	0.40
Month 6	Tractors/Loaders/Backhoes	Diesel	Average	1.00	10.0	84.0	0.37
Month 6	Forklifts	Diesel	Average	2.00	10.0	82.0	0.20
Month 6	Plate Compactors	Diesel	Average	1.00	10.0	8.00	0.43
Month 6	Cranes	Diesel	Average	1.00	10.0	367	0.29
Month 7	Forklifts	Diesel	Average	2.00	10.0	82.0	0.20
Month 7	Cranes	Diesel	Average	1.00	10.0	367	0.29
Month 8	Forklifts	Diesel	Average	3.00	10.0	82.0	0.20
Month 8	Cranes	Diesel	Average	1.00	10.0	367	0.29
Month 9	Forklifts	Diesel	Average	3.00	10.0	82.0	0.20
Month 10	Forklifts	Diesel	Average	2.00	10.0	82.0	0.20
Month 11	Forklifts	Diesel	Average	2.00	10.0	82.0	0.20
Month 12	Forklifts	Diesel	Average	1.00	10.0	82.0	0.20
Month 13	Forklifts	Diesel	Average	1.00	10.0	82.0	0.20
Month 14	Forklifts	Diesel	Average	1.00	10.0	82.0	0.20

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Month 1	—	—	—	—
Month 1	Worker	36.0	17.5	LDA,LDT1,LDT2
Month 1	Vendor	0.00	0.00	HHDT,MHDT
Month 1	Hauling	8.60	30.0	HHDT
Month 1	Onsite truck	250	5.00	HHDT
Month 2	—	—	—	—
Month 2	Worker	46.0	17.5	LDA,LDT1,LDT2
Month 2	Vendor	0.00	0.00	HHDT,MHDT
Month 2	Hauling	14.5	30.0	HHDT
Month 2	Onsite truck	250	5.00	HHDT
Month 3	—	—	—	—
Month 3	Worker	56.0	17.5	LDA,LDT1,LDT2
Month 3	Vendor	0.00	0.00	HHDT,MHDT
Month 3	Hauling	10.5	30.0	HHDT
Month 3	Onsite truck	160	5.00	HHDT
Month 4	—	—	—	—
Month 4	Worker	76.0	17.5	LDA,LDT1,LDT2
Month 4	Vendor	0.00	0.00	HHDT,MHDT
Month 4	Hauling	10.5	30.0	HHDT
Month 4	Onsite truck	160	5.00	HHDT
Month 5	—	—	—	—
Month 5	Worker	96.0	17.5	LDA,LDT1,LDT2
Month 5	Vendor	0.00	0.00	HHDT,MHDT
Month 5	Hauling	4.60	30.0	HHDT
Month 5	Onsite truck	90.0	5.00	HHDT
Month 6	—	—	—	—

Month 6	Worker	76.0	17.5	LDA,LDT1,LDT2
Month 6	Vendor	0.00	0.00	HHDT,MHDT
Month 6	Hauling	14.5	36.3	HHDT
Month 6	Onsite truck	90.0	5.00	HHDT
Month 7	—	—	—	—
Month 7	Worker	96.0	17.5	LDA,LDT1,LDT2
Month 7	Vendor	0.00	0.00	HHDT,MHDT
Month 7	Hauling	8.60	35.3	HHDT
Month 7	Onsite truck	90.0	5.00	HHDT
Month 8	—	—	—	—
Month 8	Worker	156	17.5	LDA,LDT1,LDT2
Month 8	Vendor	0.00	0.00	HHDT,MHDT
Month 8	Hauling	2.60	30.0	HHDT
Month 8	Onsite truck	90.0	5.00	HHDT
Month 9	—	—	—	—
Month 9	Worker	156	17.5	LDA,LDT1,LDT2
Month 9	Vendor	0.00	0.00	HHDT,MHDT
Month 9	Hauling	2.60	30.0	HHDT
Month 9	Onsite truck	90.0	5.00	HHDT
Month 10	—	—	—	—
Month 10	Worker	96.0	17.5	LDA,LDT1,LDT2
Month 10	Vendor	0.00	0.00	HHDT,MHDT
Month 10	Hauling	2.60	30.0	HHDT
Month 10	Onsite truck	90.0	4.00	HHDT
Month 11	—	—	—	—
Month 11	Worker	68.0	17.5	LDA,LDT1,LDT2
Month 11	Vendor	0.00	0.00	HHDT,MHDT
Month 11	Hauling	2.60	30.0	HHDT

Month 11	Onsite truck	90.0	5.00	HHDT
Month 12	—	—	—	—
Month 12	Worker	24.0	17.5	LDA,LDT1,LDT2
Month 12	Vendor	0.00	0.00	HHDT,MHDT
Month 12	Hauling	2.60	30.0	HHDT
Month 12	Onsite truck	90.0	5.00	HHDT
Month 13	—	—	—	—
Month 13	Worker	24.0	17.5	LDA,LDT1,LDT2
Month 13	Vendor	0.00	0.00	HHDT,MHDT
Month 13	Hauling	0.60	30.0	HHDT
Month 13	Onsite truck	90.0	5.00	HHDT
Month 14	—	—	—	—
Month 14	Worker	24.0	17.5	LDA,LDT1,LDT2
Month 14	Vendor	0.00	0.00	HHDT,MHDT
Month 14	Hauling	2.60	30.0	HHDT
Month 14	Onsite truck	90.0	5.00	HHDT
Month 361	—	—	—	—
Month 361	Worker	48.0	17.5	LDA,LDT1,LDT2
Month 361	Vendor	0.00	0.00	HHDT,MHDT
Month 361	Hauling	4.00	41.4	HHDT
Month 361	Onsite truck	90.0	5.00	HHDT
Month 362	—	—	—	—
Month 362	Worker	68.0	17.5	LDA,LDT1,LDT2
Month 362	Vendor	0.00	0.00	HHDT,MHDT
Month 362	Hauling	8.00	41.4	HHDT
Month 362	Onsite truck	90.0	5.00	HHDT
Month 363	—	—	—	—
Month 363	Worker	68.0	17.5	LDA,LDT1,LDT2

Month 363	Vendor	0.00	0.00	HHDT,MHDT
Month 363	Hauling	6.00	30.0	HHDT
Month 363	Onsite truck	90.0	5.00	HHDT
Month 364	—	—	—	—
Month 364	Worker	68.0	17.5	LDA,LDT1,LDT2
Month 364	Vendor	0.00	0.00	HHDT,MHDT
Month 364	Hauling	10.0	30.0	HHDT
Month 364	Onsite truck	90.0	5.00	HHDT
Month 365	—	—	—	—
Month 365	Worker	68.0	17.5	LDA,LDT1,LDT2
Month 365	Vendor	0.00	0.00	HHDT,MHDT
Month 365	Hauling	10.0	30.0	HHDT
Month 365	Onsite truck	90.0	5.00	HHDT
Month 366	—	—	—	—
Month 366	Worker	68.0	17.5	LDA,LDT1,LDT2
Month 366	Vendor	0.00	0.00	HHDT,MHDT
Month 366	Hauling	10.0	30.0	HHDT
Month 366	Onsite truck	90.0	5.00	HHDT
Month 367	—	—	—	—
Month 367	Worker	48.0	17.5	LDA,LDT1,LDT2
Month 367	Vendor	0.00	0.00	HHDT,MHDT
Month 367	Hauling	4.00	30.0	HHDT
Month 367	Onsite truck	90.0	5.00	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)
Month 5	0.00	0.00	0.00	0.00	—

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (Ton of Debris)	Acres Paved (acres)
Month 361	0.00	0.00	0.00	0.00	—
Month 362	0.00	0.00	0.00	0.00	—
Month 363	0.00	0.00	0.00	7.50	—
Month 364	0.00	0.00	0.00	22.5	—
Month 365	0.00	0.00	0.00	22.5	—
Month 366	0.00	0.00	0.00	37.5	—
Month 367	0.00	0.00	0.00	15.0	—
Month 1	0.00	73,000	0.00	0.00	—
Month 2	132,000	73,000	10.7	0.00	—

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
General Light Industry	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
2026	0.00	204	0.03	< 0.005
2027	0.00	204	0.03	< 0.005
2050	0.00	204	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
Total all Land Uses	0.10	0.00	0.00	26.0	17.5	0.00	0.00	455

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	0.00

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)
General Light Industry	0.00	204	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)
General Light Industry	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
General Light Industry	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

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
Tier 4 Emergency Generator	Diesel
Tier 4 Fire Pump	Diesel

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)

8. User Changes to Default Data

Screen	Justification
Characteristics: Project Details	N/A
Land Use	Project area was set equal to the size of the Viracocha BESS site.
Construction: Construction Phases	Project specific information.
Construction: Off-Road Equipment	Project-specific information.
Construction: Off-Road Equipment EF	The 2056 Demolition phase off-road equipment emission factors use the 2050 CalEEMod defaults, as 2050 is the latest year available.
Construction: Dust From Material Movement	Project-specific information.
Construction: Trips and VMT	Project-specific information.
Construction: On-Road Fugitive Dust	Project-specific information.
Operations: Road Dust	Project-Specific information.
Operations: Emergency Generators and Fire Pumps	Project-specific information.
Construction: Demolition	Project-specific information.
Operations: Consumer Products	Project-specific information.
Operations: Landscape Equipment	Project-specific information.
Operations: Solid Waste	Project-specific information.
Operations: Refrigerants	Project-specific information.

Operations: Generators + Pumps EF	—

Appendix 5.2A - Aquatic Resources Delineation Report

Aquatic Resources Delineation Report

Document No.: 250414155103_64daf262
Version: 2

Reclaimed Wind LLC

Viracocha Hill Battery Energy Storage System Project
June 10, 2025

Aquatic Resources Delineation Report

Client Name:	Reclaimed Wind LLC		
Project Name:	Viracocha Hill Battery Energy Storage System Project		
Project No.:	D3824100		
Document No.:	250414155103_64daf262	**Project Manager:**	Sarah Madams
Version:	2	**Prepared By:**	Pim Laulikitnont-Lee
Date:	June 10, 2025	**File Name:**	

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Summary

Reclaimed Wind LLC proposes to construct, own, and operate the up to 362.8-megawatt-per-hour, 90.7-megawatt Viracocha Hill Battery Energy Storage System Project (Project) in Alameda County, California.

This report presents the methods and results of an aquatic resources delineation for a 103.31-acre study area that encompasses the footprint of the planned Project. This delineation was conducted in accordance with the *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory 1987), the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Arid West Region (Version 2.0)* (USACE 2008) and the *National Ordinary High Water Mark Field Delineation Manual for Rivers and Streams* (*Final Version*) (USACE 2025a). The study area contained 1.78 acres of wetlands and 0.31 acre of non-wetland waters.

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Acronyms and Abbreviations

°F	degree(s) Fahrenheit
BESS	Battery Energy Storage System
HUC	Hydrologic Unit Code
I-80	Interstate 80
MW-hr	megawatt per hour
NHD	National Hydrography Dataset
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
OHWM	ordinary high water mark
PEM	Palustrine emergent wetland
Project	Viracocha Hill Battery Energy Storage System Project
PUB	Palustrine, Unconsolidated Bottom
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WRCC	Western Regional Climate Center

1. Introduction

Reclaimed Wind LLC proposes to construct, own, and operate the up to 362.8-megawatt-per-hour (MW-hr), 90.7 MW Viracocha Hill Battery Energy Storage System Project (Project) in Alameda County, California, adjacent to the proposed Sand Hill Wind Repower Project (Figure 1). The Project includes a fenced Battery Energy Storage System (BESS) yard, improvements to an existing access road, a new road to access the BESS yard from the improved service road, and generation-tie line.

This report presents the methods and results of an aquatic resources delineation for a 103.31-acre study area that encompasses the footprint of the proposed Project (Figure 2). This section provides an overview of the proposed Project. Section 2 provides the environmental setting. Section 3 provides the survey methods, and Section 4 provides results. Section 5 provides references for materials cited in this report.

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1.1 Project Location

Table 1-1 provides the location information for the study area.

Table 1-1. Location Information

Nearest Named Waterbody	Bethany Reservoir
Watershed HUC and Name	Clifton Court Forebay (180400030604)
Central Latitude and Longitude	37.768042, -121.618651
Township, Range, Section	Township 2S, Range 3E, Section 11
USGS Quadrangles	Clifton Court Forebay
County Assessor Parcel Numbers	99B-7300-1-5
Street Address	14698 Altamont Pass Road, Tracy, CA 95391
Directions	From the USACE San Francisco District office, travel east on Interstate 80 (I-80) across the Bay Bridge for 6.8 miles, then merge onto I-580 east for 37.4 miles before exiting on the North Greenville Road/Altamont Pass Road exit (Exit 57). Continue east on Drive to Altamont Pass Road for 6.8 miles. The Project is on the left on Altamont Pass Road, near the approximate address of 14698 Altamont Pass Road. Please notify Reclaimed Wind LLC of access requests.

HUC = Hydrologic Unit Code
USACE = U.S. Army Corps of Engineers
USGS = U.S. Geological Survey

1.2 Project Objectives

The primary purpose of the Project is to assist the State of California in meeting the goal of all electricity in California to come from renewable and zero carbon resources by 2045, as required under Senate Bill 100 (2018). To achieve this goal, new power supplies and power storage is needed to meet this requirement. The Project would help balance electricity generation from renewable sources by storing excess generation from emissions-free power sources and delivering it back to the grid when demand exceeds real-time generation supply. The Project objectives are as follows:

1. Construct and operate an approximately 362.8-MW-hr, 90.7 MW BESS facility to support the state's renewable energy goals.
2. Develop a BESS facility that minimizes significant environmental impacts of Project development through the use of existing infrastructure, existing real property interests and rights-of-way, Project design measures, and feasible mitigation measures.
3. Develop a BESS facility near a utility grid-connected substation with existing capacity available for interconnection.

4. Develop an eligible energy storage facility that can assist community choice aggregators, investor-owned utilities, and publicly owned utilities in meeting their California Renewables Portfolio Standard requirements.
5. Develop a Community Benefits Plan that ensures the proposed Project benefits the local community and contributes to a clean and equitable economy for construction materials.
6. Create new, high-paying construction jobs and skilled trades and professional roles in Alameda County, California.

2. Environmental Setting

This section outlines the environmental setting.

2.1 Regional Setting

The study area is within the Eastern Hills Level IV Ecoregion of the Central California Foothills and Coastal Mountains Level III Ecoregion. The Eastern Hills ecoregion includes low, steep mountains, and foothills on the eastern side of the Diablo Range, including the Panoche, Ciervo, and Kettleman Hills, and Avenal Ridge at the southern end. The predominant vegetation is needlegrass (*Nassella sp.*) and annual grasslands. There is some blue oak (*Quercus douglasii*) on north-facing slopes in the wetter areas and some chamise (*Adenostoma fasciculatum*) on shallow soils. Valley oak (*Quercus lobata*) occurs in the valleys along the San Andreas Fault zone (Griffith et al. 2016).

2.2 Study Area Setting

The following sections describe the topography, climate, hydrology, soils, and habitat types associated with the study area.

2.2.1 Topography

The study area as a whole is situated in rolling rolls that are gently to moderately sloped, with the natural gradient sloping downward from north to south. Elevations in the study area ranges from approximately 300 to 490 feet above mean sea level. Slopes in the study area range from 0 percent to greater than 45 percent.

2.2.2 Climate

Regionally, the climate is hot and subhumid to arid. Mean annual temperatures range from 50 degrees Fahrenheit (°F) to 60°F in (Miles and Goudey 1998). Based on climate records from the Tracy Pumping Plant (049001) weather station located approximately 2.4 miles northeast of the study area, average monthly temperatures range from a low of 36.7°F in January to a high of 89°F in July. Average annual precipitation is 14.18 inches, with most of the rainfall occurring from November to March, and minimal rainfall from April through October (WRCC 2025).

2.2.3 Hydrology

The study area is located within the Clifton Court Forebay (Hydrologic Unit Code 180400030604). The hydrology of aquatic resources in the study area is primarily influenced precipitation and seasonal runoff.

Field work for the aquatic resource delineation was conducted on March 18, 2025. The U.S. Army Corps of Engineers' (USACE's) Antecedent Precipitation Tool (USACE 2025b) was used

to define precipitation conditions over the time period preceding the surveys. The wetness condition in the months preceding the March 2025 survey was "normal" with severe drought conditions according to the Palmer Drought Severity Index (USACE 2025b). Appendix A provides results of the Antecedent Precipitation Tool query.

2.2.4 Soils

Two soils have been mapped by the Natural Resources Conservation Service (NRCS) within the study area (NRCS 2025a and 2025b). Both soil series mapped have hydric rating (NRCS 2025c) Soil series mapped within the study area are summarized in Table 2-1 and shown on Figure 3.

Table 2-1. Soil Series Mapped Within the Study Area

Type/ Series	Texture	Landscape Position and Parent Material	Drainage and Permeability	NRCS Hydric Rating
Altamont	Rocky clay	The Altamont series consists of deep, well-drained soils that formed in material weathered from fine-grained sandstone and shale. These soils are on gently sloping to very steep uplands.	Well-drained; runoff is medium to very high; permeability is slow	Yes
San Ysidro	Loam	The San Ysidro series consists of very deep, moderately well-drained soils that formed in alluvium from sedimentary rocks. San Ysidro soils are on fan remnants and stream terraces and have slopes of 0 to 9 percent.	Moderately well-drained; runoff is slow to medium; permeability is very slow	Yes

Sources: NRCS 2025a, 2025b, 2025c

2.2.5 National Wetlands Inventory

Figure 4 shows aquatic resources in the study area identified by the National Wetlands Inventory (NWI) (USFWS 2025) and the National Hydrography Dataset (NHD) (USGS 2025a). The NWI identifies four Palustrine, Emergent, Persistent (PEM1) wetlands on the eastern portion of the study area. The NWI also identifies an unnamed drainage in the northwesternmost corner of the study area as Riverine, Intermittent, Streambed, Seasonally Flooded (R4SBC).

2.2.6 Land Cover and Vegetation Communities

Land cover in the study area consists predominantly of annual grassland and developed areas. Land cover types observed within the study area include annual grassland, developed areas, palustrine emergent wetlands, and stock ponds. Section 4 discusses conditions associated with aquatic resources.

2.2.6.1 Annual Grassland

Annual grassland is the dominant vegetation community within the study area and is present on terraces, hillsides, and fillslopes. This community is dominated by:

- Slender wild oat (*Avena barbata*)
- Soft chess (*Bromus hordeaceus*)
- Mediterranean barley (*Hordeum marinum*)
- Italian rye grass (*Festuca perennis*)

Common forbs include:

- Redstem filaree (*Erodium cicutarium*)
- Turkey-mullein (*Croton setiger*)
- Clovers (*Trifolium spp.*)
- Fiddleneck (*Amsinckia menziesii*)
- Shortpod mustard (*Hirschfeldia incana*)
- Italian thistle (*Carduus pycnocephalus*)
- Hairy vetch (*Vicia villosa*)

2.2.6.2 Developed

Other areas within the study area include developed areas associated with existing roadways, a substation, and windfarm infrastructures.

2.2.6.3 Palustrine Emergent Wetlands

Palustrine emergent wetlands occur on the eastern portion of the study area in low-lying depressional areas. This community is dominated by hydrophytic vegetation, including Italian rye grass, Mediterranean barley, and salt grass (*Distichlis spicata).* Section 4 discusses conditions associated with aquatic resources.

2.2.6.4 Stock Pond

One stock pond occurs in the eastern portion of the study area. Stock ponds in the Altamont Pass area are small permanent or seasonal bodies of water that have been constructed for the purposes of retaining runoff water for livestock use. The surface area of these features varies widely depending on the time of year.

3. Methods

A routine aquatic resources delineation was conducted in accordance with the following guidance:

- *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory 1987)
- *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Version 2.0) (USACE 2008)
- *National Ordinary High Water Mark Field Delineation Manual for Rivers and Streams* (Final Version) (USACE 2025a)
- *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State* (State Water Resources Control Board 2019).

3.1 Desktop Review

Resources relevant to site conditions and aquatic resources were collected and reviewed as part of the delineation. The following materials were included in this data review:

- NRCS soil maps and descriptions (NRCS 2025a)
- NHD maps (USGS 2025a)
- NWI maps (USFWS 2025)
- U.S. Geological Survey (USGS) topographic maps from multiple years (USGS 2025b)
- Historic aerial imagery

3.2 Field Data Collection

Jacobs wetland scientists Greg Davis and Pim Laulikitnont-Lee collected the field data on March 18, 2025.

Wetland sample points were established in locations where hydrophytic vegetation was dominant and the landform indicated the potential for wetlands to occur (for example, closed depressions). At wetland sample points, vegetation species within a certain radius of each sample point were identified by stratum as follow: 30-foot by 30-foot plot size for tree stratum, 15-foot by 15-foot plot size for sapling/shrub stratum, 5-foot by 5-foot plot size for herb stratum, and 30-foot by 30-foot plot size for woody vine stratum. The soil profile was examined to a depth of approximately 12 inches. Soil color was described using a Munsell Soil Color Chart (Munsell 2009). Redoximorphic features were noted and characterized where present. Each sampling location was examined for evidence of wetland hydrology. The wetland indicator status of each vegetation species is based on the National Wetland Plant List, Arid West Region, version 3.6 (USACE 2023).

Riverine aquatic resources in the study area were delineated based on guidance from the *National Ordinary High Water Mark Field Delineation Manual for Rivers and Streams* (*Final Version*) (USACE 2025a).

The locations of sample points and representative boundaries of aquatic resources were mapped in ArcGIS Field Maps using an Apple iOS device paired with a Trimble DA2 receiver using the Trimble Catalyst global navigation satellite system positioning service that provided 1-meter horizontal accuracy or better.

3.3 Desktop Analysis

Field data were imported into ESRI ArcGIS software for developing aquatic resource maps. High-resolution aerial photographs and topographic data (USGS 2025b) were used to refine the boundaries of aquatic resources in conjunction with the field-collected data.

4. Results

This section provided the results of the aquatic resource delineation. Figure 5 shows the aquatic resources delineated in the study area, and Table 4-1 lists the aquatic resource. Appendix B provides delineation data forms. Appendix C provides representative photographs.

Table 4-1. Aquatic Resources in the Study Area

Aquatic Resource ID	Cowardin Code[a]	Latitude	Longitude	Area (Acres)
Wetlands				
WET-1	PEM1	37.769509	-121.614696	0.50
WET-2	PEM1	37.768848	-121.614490	0.01
WET-3	PEM1	37.767535	-121.613930	0.51
WET-4	PEM1	37.768071	-121.613432	0.76
			Total Wetlands	**1.78**
Other Waters				
PND-1	PUB	37.768724	-121.612904	0.31
			Total Other Waters	**0.31**

[a] Cowardin et al. 1979

ID = identifier
NA = not applicable
PUB = Palustrine, Unconsolidated Bottom

4.1 Wetlands

Four PEM wetlands were delineated within the study area, encompassing approximately 1.78 acres (Figure 5). The Cowardin classification assigned to these wetlands is Palustrine, Emergent, Persistent (PEM1) (Cowardin et al. 1979).

All four wetlands (WET-1, WET-2, WET-3, and WET-4) were delineated in the eastern portion of the study area in low-lying depressional areas dominated by hydrophytic vegetation, including Italian rye grass, Mediterranean barley, and salt grass. Redox dark surface was the hydric soil indicator present at all four wetlands. The wetland hydrology indicators present include surface soil cracks and saturation. A culvert provides hydrologic connection between WET-3 and WET-4. A total of 1.78 acres of wetlands were delineated within the study area.

4.2 Other Waters

One pond (PND-1) was delineated on the eastern portion of the study area (Figure 5). This feature is a stock pond that is associated with WET-4. The pond was unvegetated and contained water during the March 2025 survey. A total of 0.31 acre of other waters was delineated in the

study area. The Cowardin classification assigned to these waters is Palustrine, Unconsolidated Bottom (PUB) (Cowardin et al. 1979).

4.3 Other Areas Investigated

Several sample points were established in areas within the study area that were dominated by hydrophytic vegetation or showed indicators of wetland hydrology. Several sample points were also established in areas where the NHD and/or NWI mapped aquatic resources.

A sample point (SP-1) was established on the hillslope in the northwestern corner of the study area where the NHD shows a flow line passing through the study area (Figure 4, Figure 5, and Photo 4 in Appendix C). No ordinary high water mark (OHWM) indicators or wetland indicators were observed in the area. Therefore, no aquatic resources were delineated in this area.

Sample point (SP-2) was established within a broad swale and topographic low point on the landscape that is associated with a NHD flow line (Figure 4, Figure 5, and Photo 6 in Appendix C). No OHWM indicators or wetland indicators were observed in the area. Therefore, no aquatic resources were delineated in this area.

Sample point (SP-3) was established immediately downslope of a culvert outlet that is situated within a vegetated, constructed ditch (Figure 5 and Photo 8 in Appendix C). Although the area was dominated by facultative wetland vegetation, the area lacked indicators of wetland hydrology, hydric soils, and indicators of OHWM. Therefore, no aquatic resources were delineated in this area.

Sample point SP-4 was established in a small depression located immediately downslope of a culvert outlet (Figure 5 and Photo 9 in Appendix C). While hydrophytic vegetation and wetland hydrology were present, this feature lacks hydric soils and OHWM indicators. Therefore, no aquatic resources were delineated in this area.

Sample point SP-5 was established in a ponded area located immediately downslope of a culvert outlet (Figure 5 and Photo 12 in Appendix C). While hydrophytic vegetation and wetland hydrology were present, this feature lacked hydric soils and OHWM indicators. The area was heavily compacted from cattle and is subject to saturation and inundation at the surface, but not in the subsurface. Therefore, no aquatic resources were delineated in this area.

5. References

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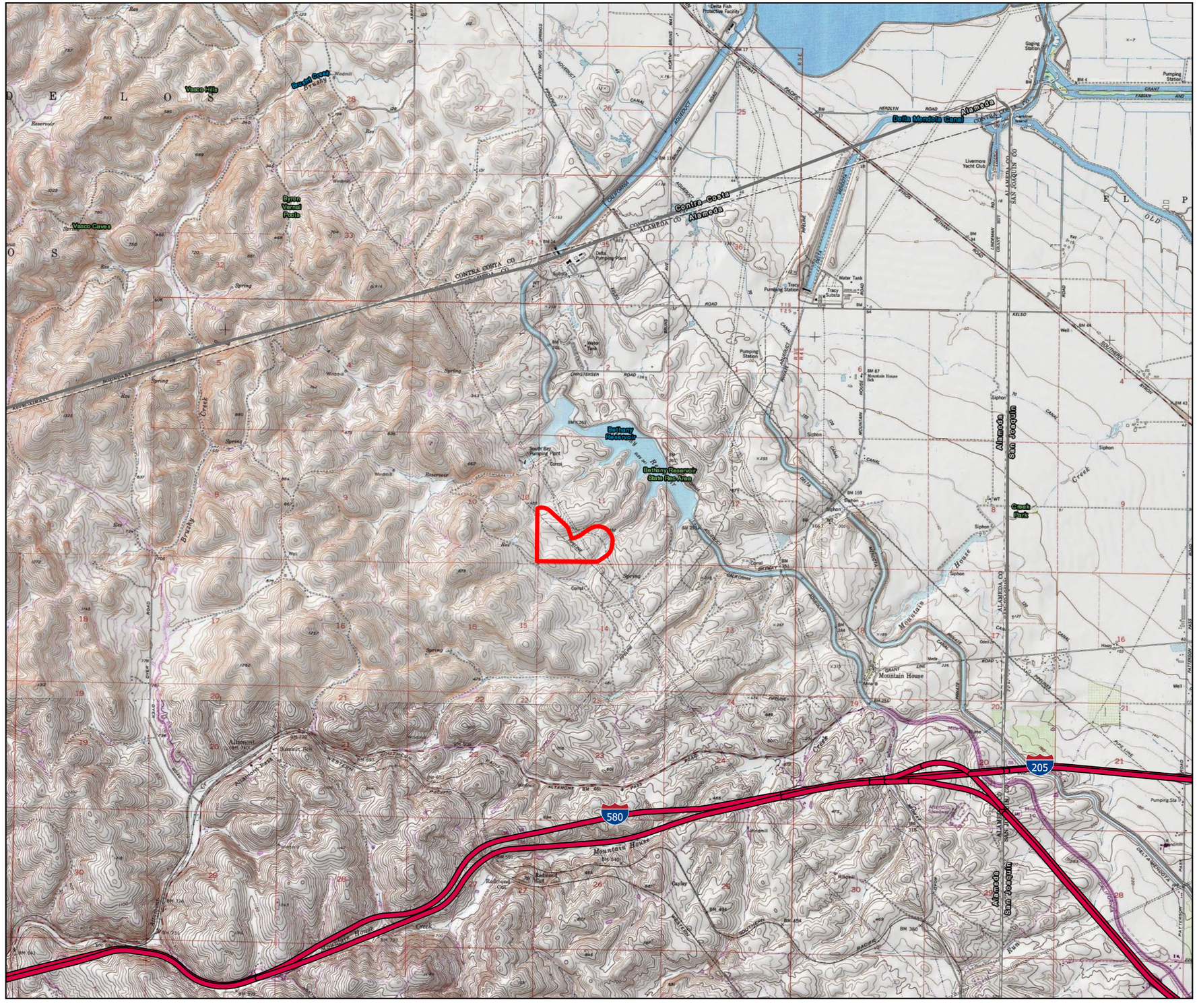
Figures



Legend

Aquatic Resources Study Area (103.31 acres)

Source:
1) ESRI Aerial Images

N

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Miles

Figure 1
Project Location
Viracocha Hill BESS Project
Alameda County, California

Jacobs

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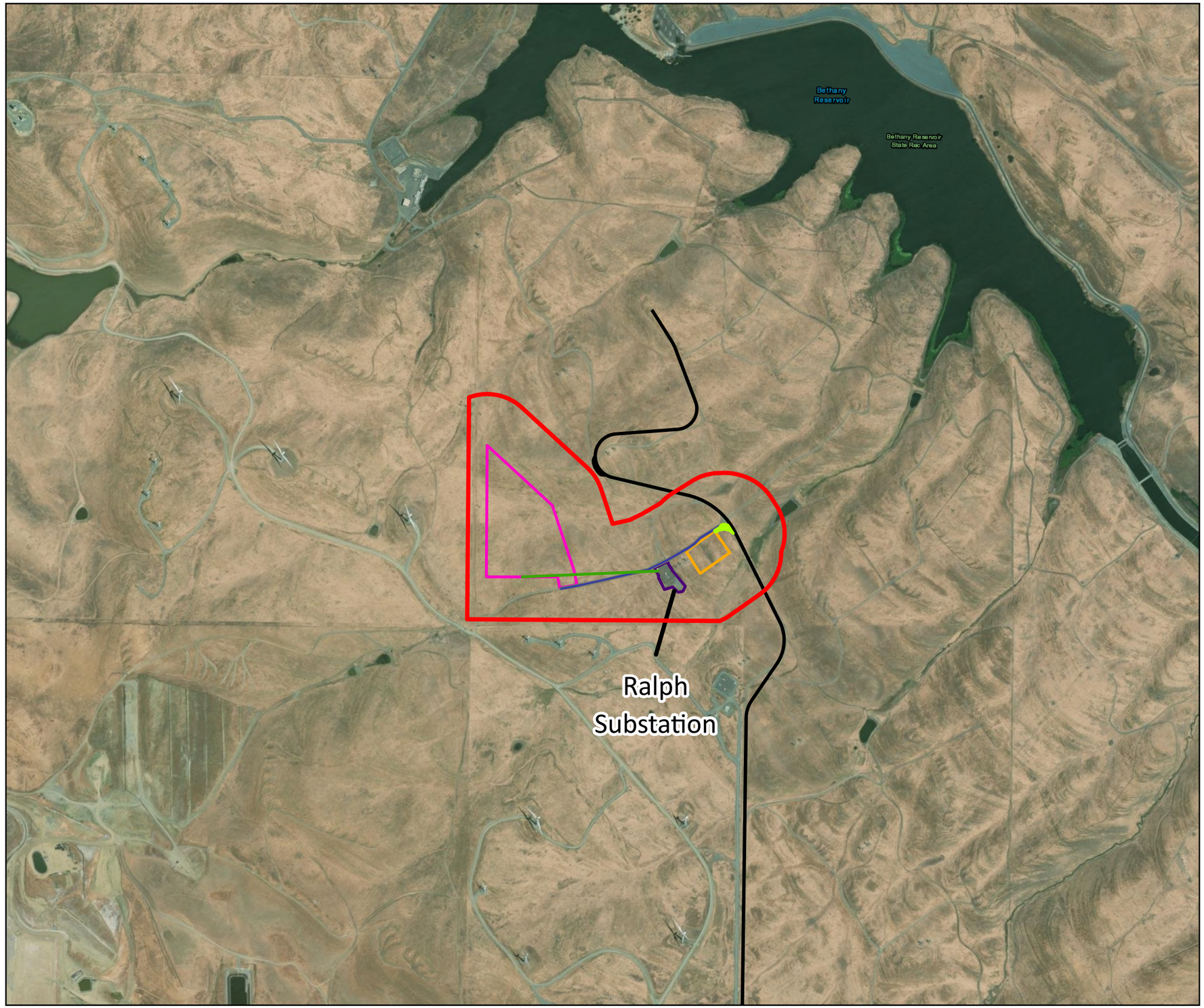

Legend

- Aquatic Resources Study Area (103.31 acres)
- Proposed 230-kV Gen-Tie
- Proposed Access Road Widening Area
- Proposed Improvements to Existing Access Road
- Proposed Alternate Substation Area
- Ralph Substation
- Proposed Viracocha BESS Equipment Yard
- Wind Farm Road (No Improvements)

Source:
1) ESRI Aerial Images

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Figure 2
Project Components
Viracocha Hill BESS Project
Alameda County, California

Jacobs

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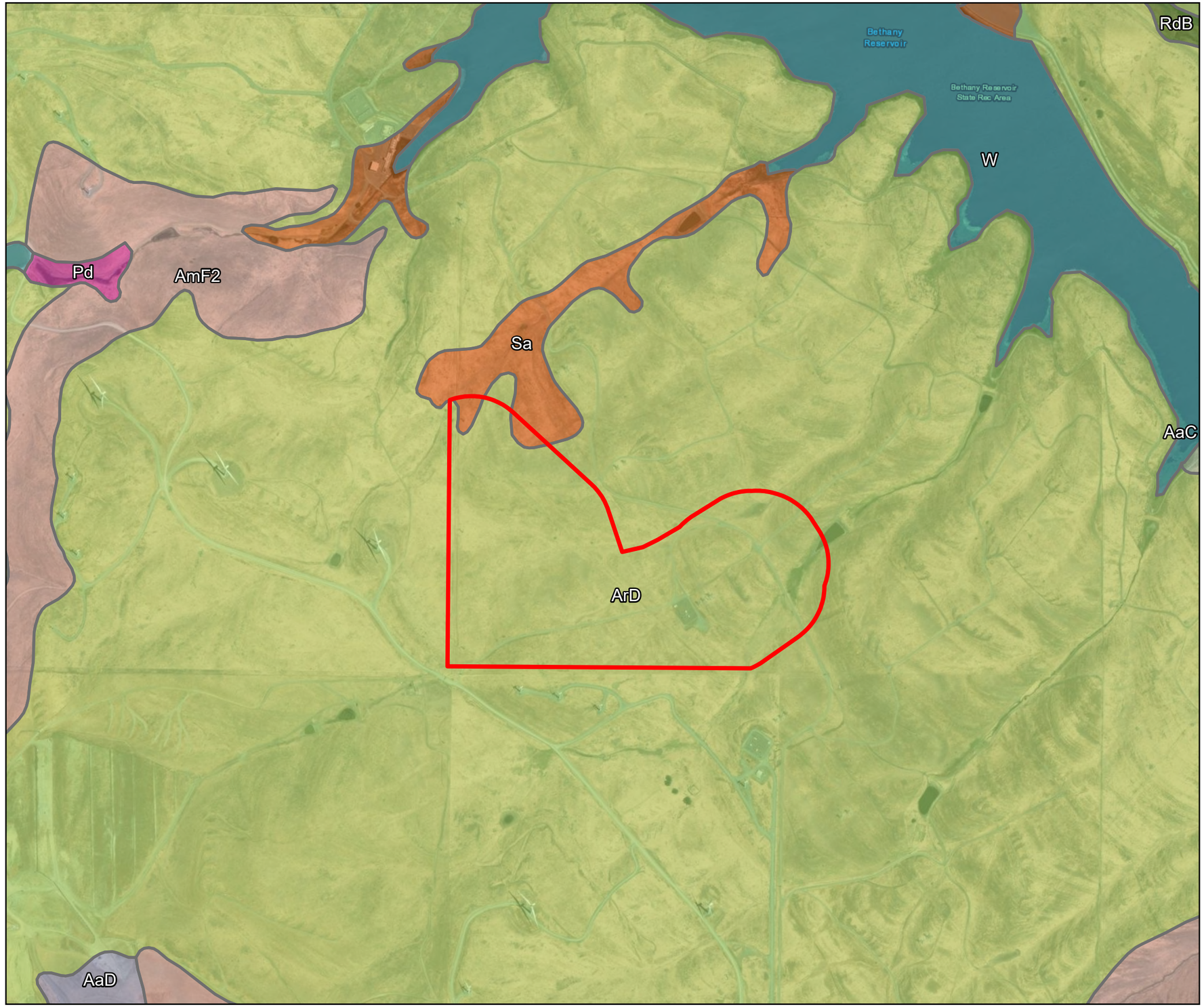

Legend

Aquatic Resources Study Area (103.31 acres)

Soil Map Unit and Description

- AaC - Altamont clay, 3 to 15 percent slopes
- AaD - Altamont clay, 15 to 30 percent slopes, MLRA 15
- AmF2 - Altamont clay, moderately deep, 45 to 75 percent slopes, eroded
- ArD - Altamont rocky clay, moderately deep, 7 to 30 percent slopes
- Pd - Pescadero clay loam, 0 to 6 percent slopes, MLRA 14
- RdB - Rincon clay loam, 3 to 7 percent slopes
- Sa - San Ysidro loam, 0 to 2 percent slopes, MLRA 14
- W - Water

Source:
1) ESRI Aerial Images

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Figure 3
NRCS Soil Map Units
Viracocha Hill BESS Project
Alameda County, California

Jacobs

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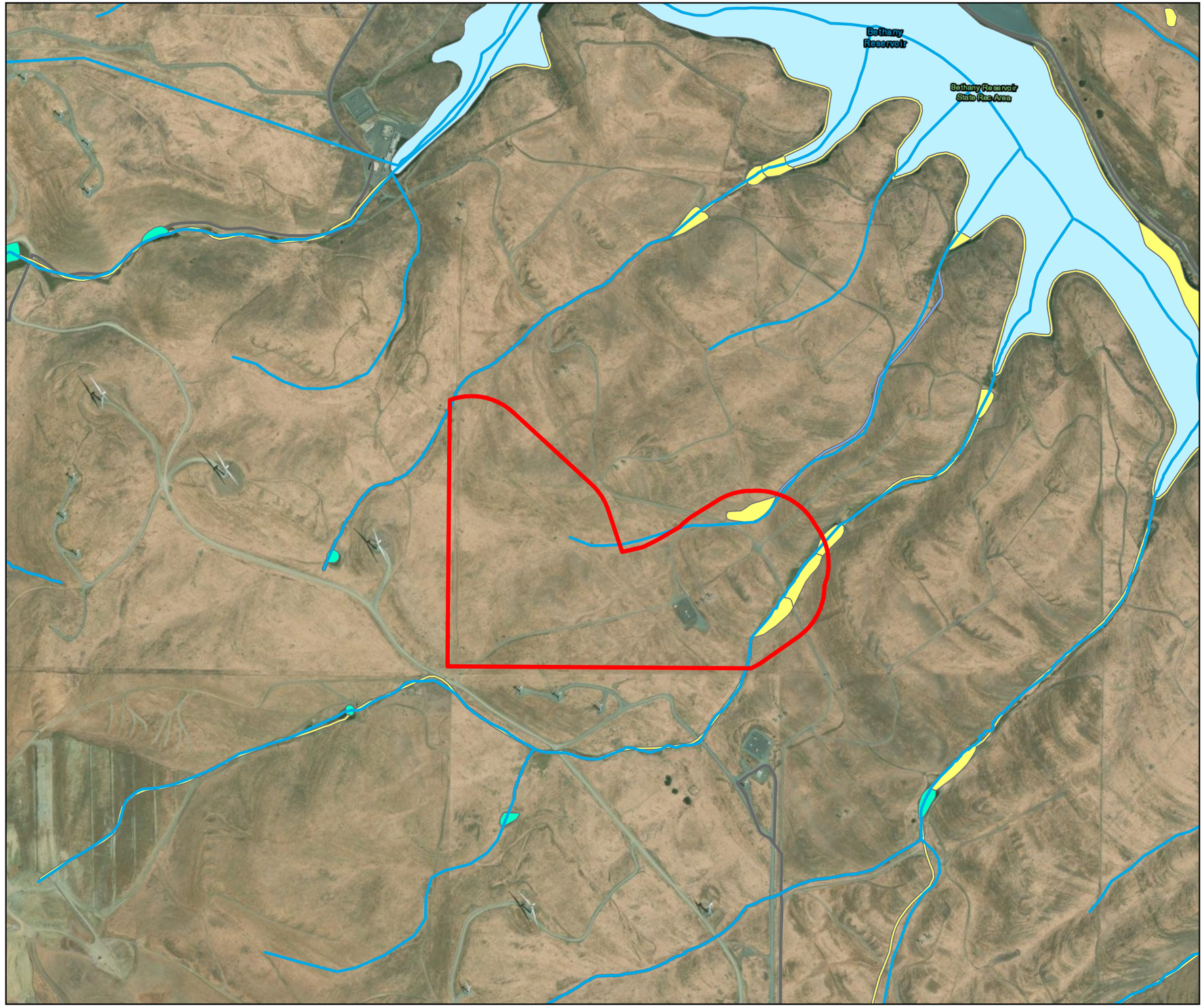

Legend

Aquatic Resources Study Area (103.31 acres)

NHD Flowline

Stream

NWI Wetlands

- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Riverine

Source:
1) ESRI Aerial Images

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Figure 4
National Wetlands Inventory and National Hydrography Dataset Flowlines
Viracocha Hill BESS Project
Alameda County, California

Jacobs

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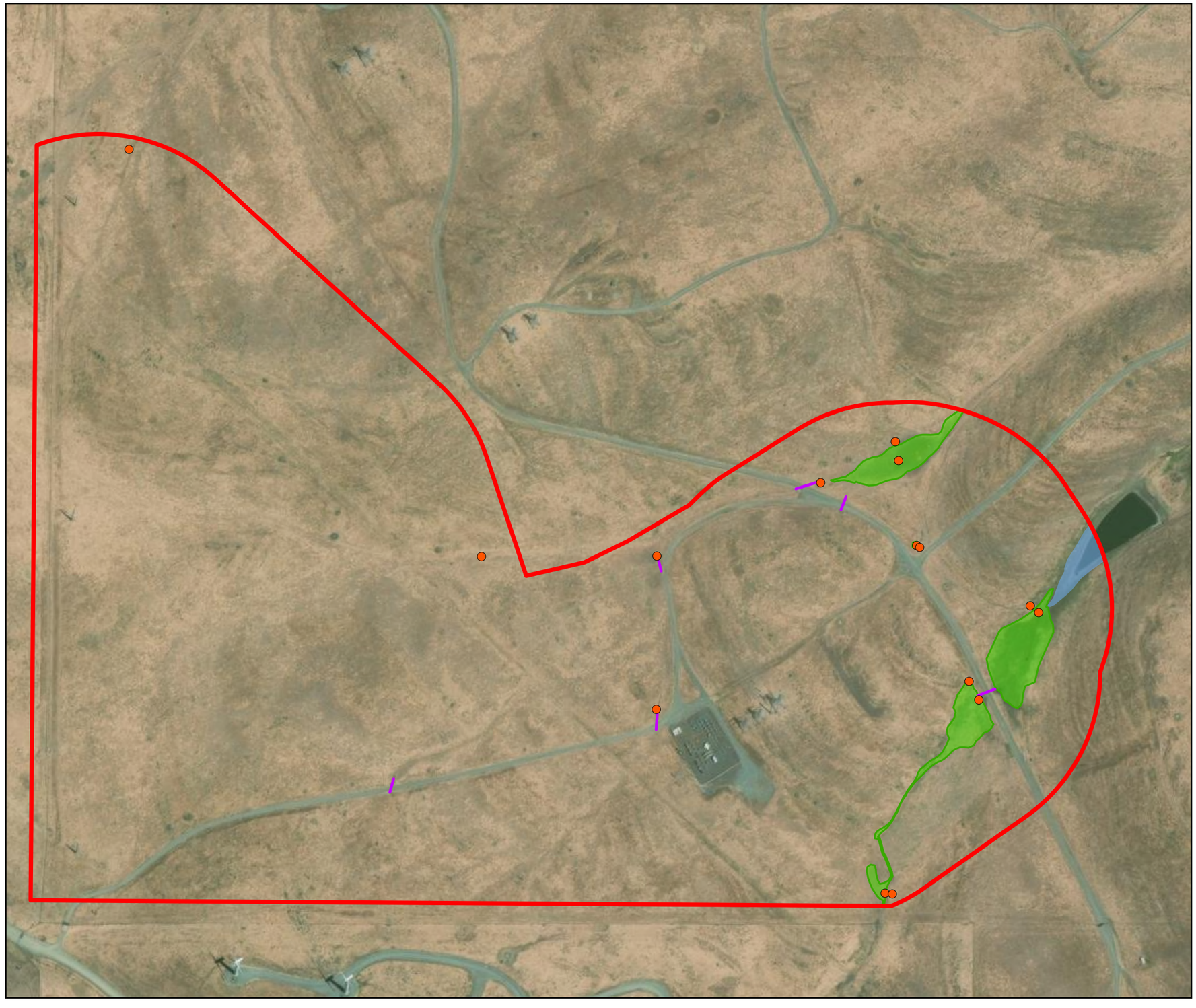

Legend

- Aquatic Resources Study Area (103.31 acres)
- Sample Point
- Culvert

Aquatic Resources

- Wetland (WET)
- Other Waters

Aquatic Resources Delineation conducted on 3/18/2025 by Greg Davis and Pim Laulikitnont-Lee

Source:
1) ESRI Aerial Images

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Feet

Figure 5
Aquatic Resources Delineation Overview Map
Viracocha Hill BESS Project
Alameda County, California

Jacobs

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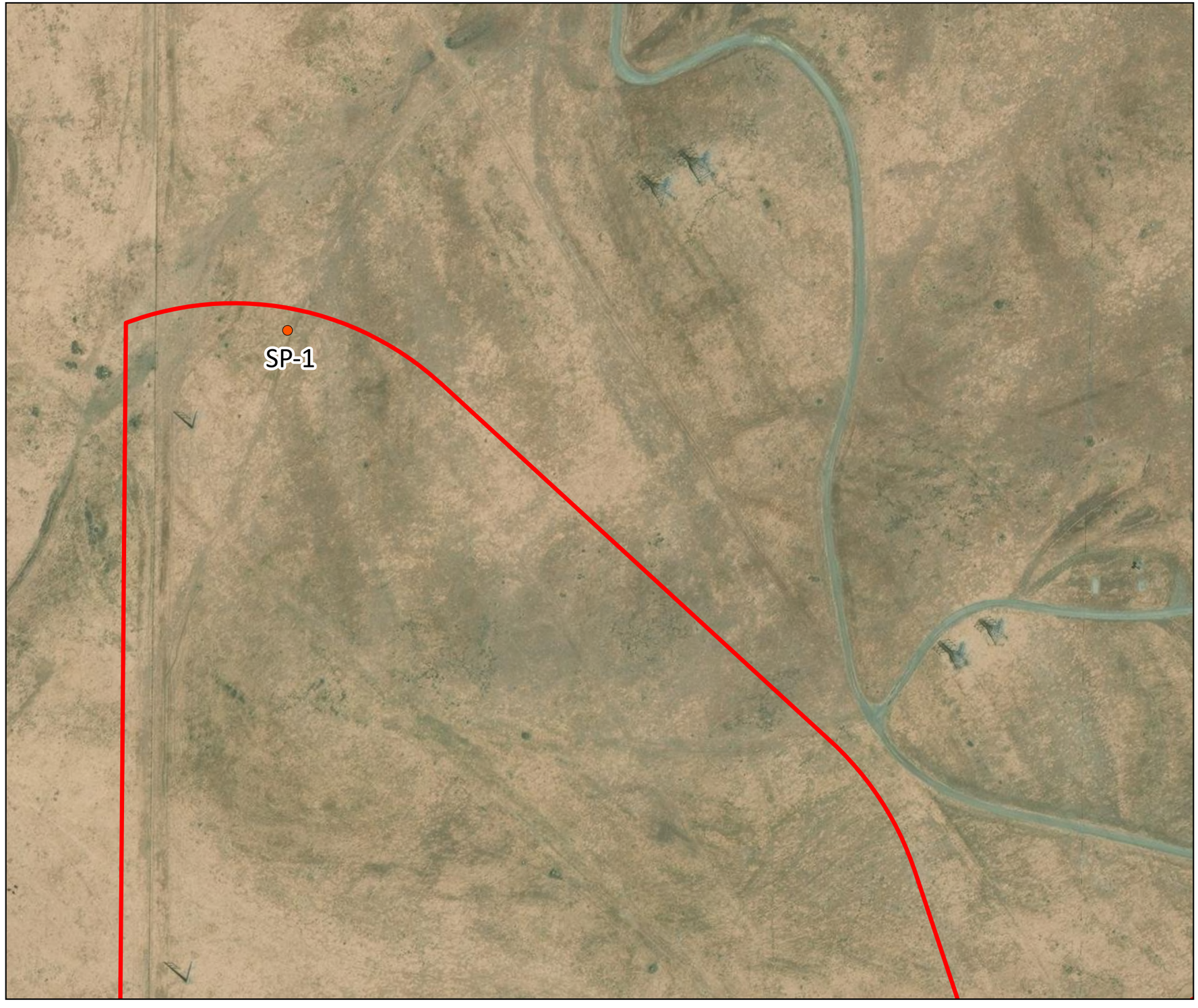

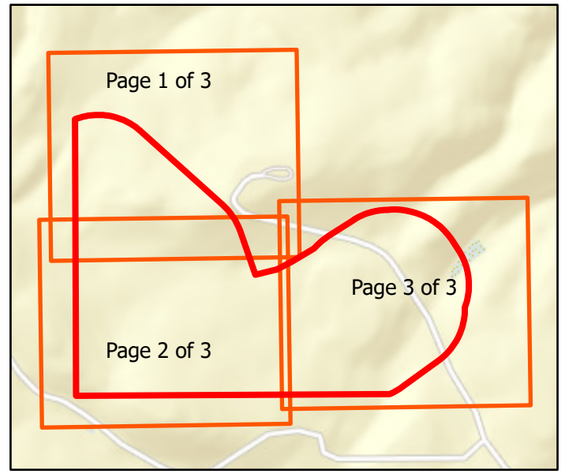

Legend

Aquatic Resources Study Area (103.31 acres)

Sample Point

Culvert

Aquatic Resources

Wetland (WET)

Other Waters

Aquatic Resources Delineation conducted on 3/18/2025 by Greg Davis and Pim Laulikitnont-Lee

Source:
1) ESRI Aerial Images

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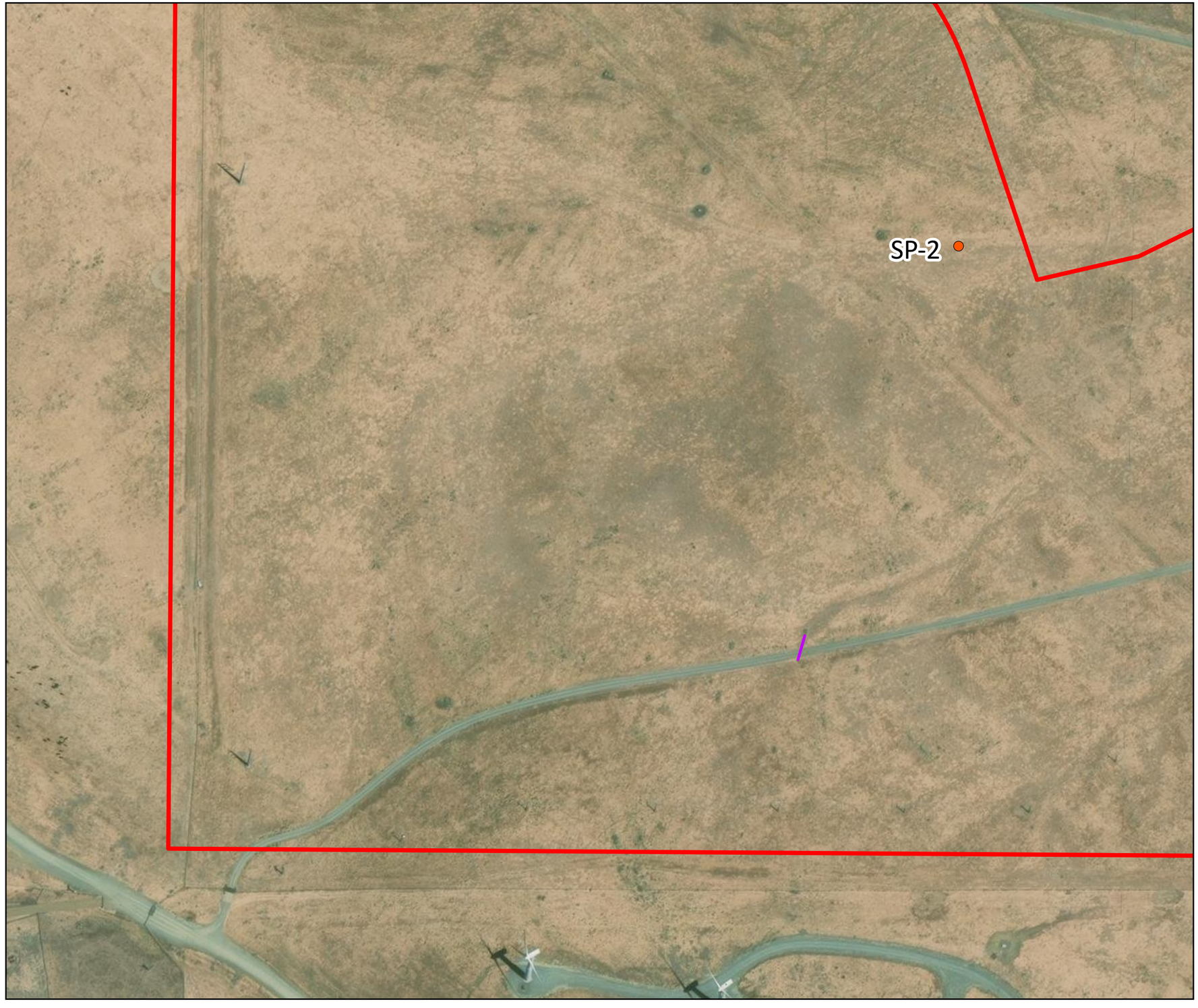
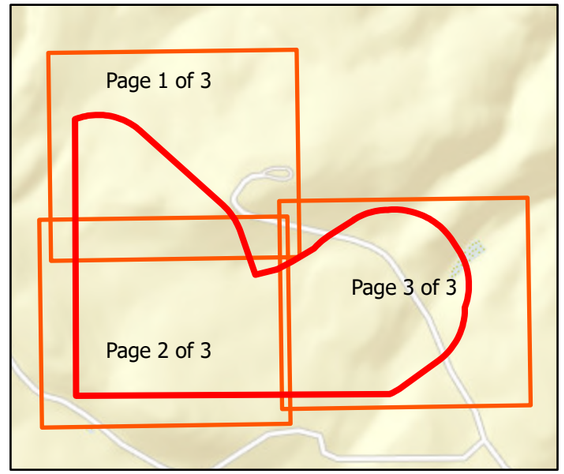
Figure 5a Page 1 of 3
Aquatic Resources Delineation Map
Viracocha Hill BESS Project
Alameda County, California

Jacobs





Legend

- Aquatic Resources Study Area (103.31 acres)
- Sample Point
- Culvert

Aquatic Resources

- Wetland (WET)
- Other Waters

Aquatic Resources Delineation conducted on 3/18/2025 by Greg Davis and Pim Laulikitnont-Lee

Source:
1) ESRI Aerial Images

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Figure 5a Page 2 of 3
Aquatic Resources Delineation Map
Viracocha Hill BESS Project
Alameda County, California

Jacobs

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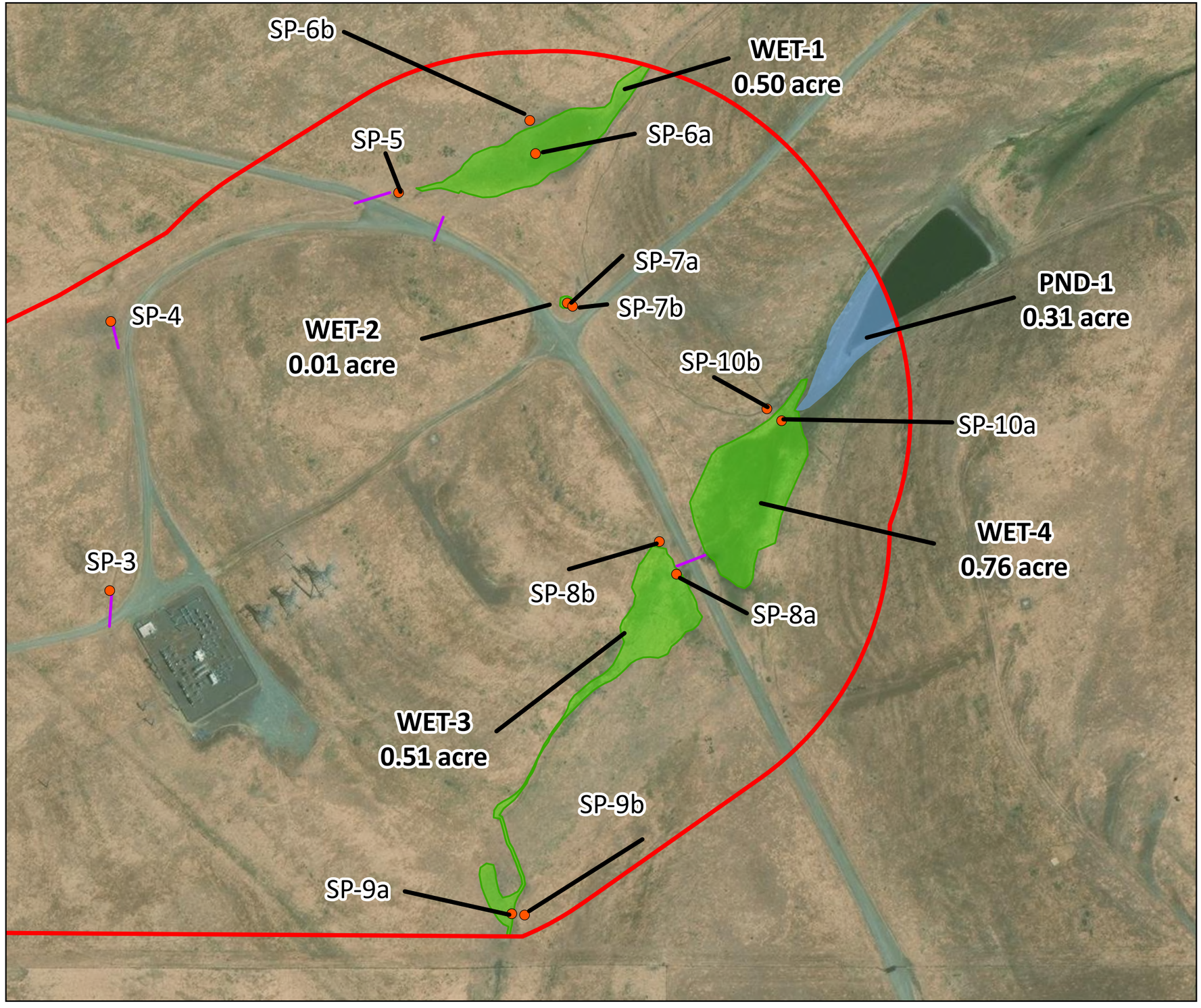

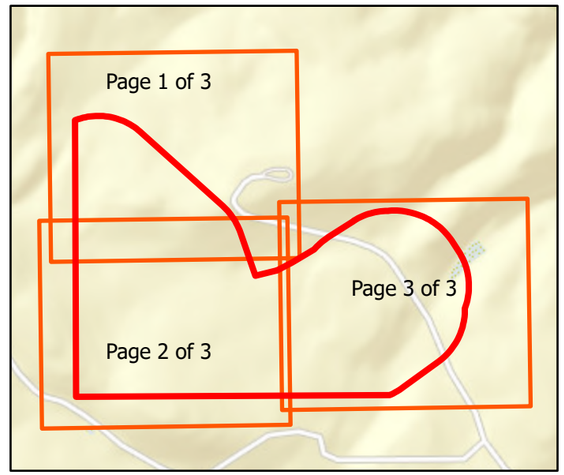

Legend

- Aquatic Resources Study Area (103.31 acres)
- Sample Point
- Culvert

Aquatic Resources

- Wetland (WET)
- Other Waters

Aquatic Resources Delineation conducted on 3/18/2025 by Greg Davis and Pim Laulikitnont-Lee

Source:
1) ESRI Aerial Images

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0 250 500
Feet

Figure 5a Page 3 of 3
Aquatic Resources Delineation Map
Viracocha Hill BESS Project
Alameda County, California

Jacobs

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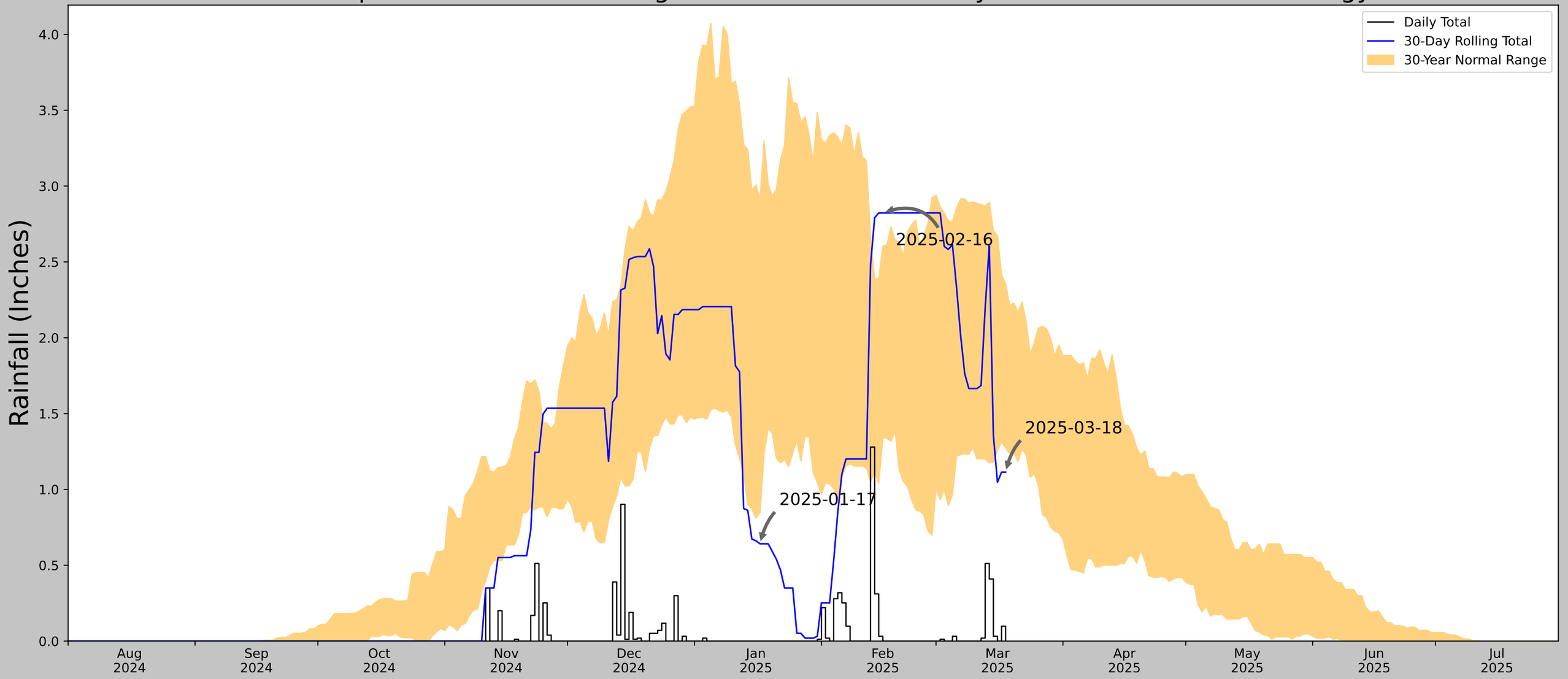
Appendix A
Antecedent Precipitation Tool Results

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	37.768042, -121.618651
Observation Date	2025-03-18
Elevation (ft)	400.331
Drought Index (PDSI)	Severe drought (2025-02)
WebWIMP H_2O Balance	Wet Season

30 Days Ending	30^{th} %ile (in)	70^{th} %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2025-03-18	1.274803	2.354331	1.114173	Dry	1	3	3
2025-02-16	1.338976	2.60315	2.822835	Wet	3	2	6
2025-01-17	0.848032	2.909055	0.641732	Dry	1	1	1
Result							Normal Conditions - 10

US Army Corps of Engineers

ERDC

Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Developed by: U.S. Army Corps of Engineers and U.S. Army Engineer Research and Development Center

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
TRACY PUMPING PLT	37.7958, -121.5831	61.024	2.729	339.307	2.154	11316	89
TRACY 2.1 W	37.7353, -121.4699	51.837	7.463	9.187	3.427	6	0
TRACY 1.1 SSW	37.7232, -121.4403	78.084	9.274	17.06	4.332	21	1
ANTIOCH PUMPING PLT #3	37.9833, -121.7525	60.039	15.911	0.985	7.176	8	0
TRACY CARBONA	37.6819, -121.3467	134.843	15.125	73.819	7.923	1	0
STOCKTON 2.1 NW	37.9912, -121.3333	6.89	19.178	54.134	9.668	1	0

Appendix B
Delineation Data Forms

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Viracocha BESS Project City/County: Alameda County Sampling Date: 3/18/2025

Applicant/Owner: Reclaimed Wind, LLC State: CA Sampling Point: SP-1

Investigator(s): G. Davis, P. Laulikitnont-Lee Section, Township, Range: S 11, T2S, R3E

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): 5-10

Subregion (LRR): C Lat: 37.771884 Long: -121.622323 Datum: WGS 84

Soil Map Unit Name: Sa - San Ysidro loam, 0-2% slopes, MLRA 14 NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✔	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____	No ✔	
Wetland Hydrology Present?	Yes _____	No ✔	

Remarks:

Sampling point is located on a cattle trail that is visible on aerial imagery as a darker, linear signature on the landscape.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 5 ft x 5 ft)			
1. Festuca perennis	40	Y	FAC
2. Avena barbata	30	Y	NL
3. Erodium moschatum	10	N	NL
4. Hirschfeldia incana	5	N	NL
5.			
6.			
7.			
8.			
	85 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 15 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	40	x 3 =	120
FACU species	0	x 4 =	0
UPL species	45	x 5 =	215
Column Totals:	85 (A)		335 (B)

Prevalence Index = B/A = 3.9

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✔

Remarks:

SOIL

Sampling Point: SP-1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 4/3	100					SiL	fine sands present
6-18	10YR 3/3	100					C	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✔

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

According to the Palmer Drought Severity Index (PDSI), the project site was subject to severe drought conditions at the time of the survey, however antecedent precipitation conditions were considered to normal.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Viracocha BESS Project City/County: Alameda County Sampling Date: 3/18/2025

Applicant/Owner: Reclaimed Wind, LLC State: CA Sampling Point: SP-2

Investigator(s): G. Davis, P. Laulikitnont-Lee Section, Township, Range: S 11, T2S, R3E

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 0-5

Subregion (LRR): C Lat: 37.7687194 Long: -121.6187868 Datum: WGS 84

Soil Map Unit Name: ArD - Altamont clay, 15-30% slopes, MLRA 15 NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✔	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____	No ✔	
Wetland Hydrology Present?	Yes _____	No ✔	

Remarks:

Sampling point is located within a broad swale / topographic low point on the landscape and is associated with a modeled USGS NHD flow line, however the site is an upland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 5 ft x 5 ft)			
1. Festuca perennis	70	Y	FAC
2. Hordeum murinum	20	Y	FACU
3. Bromus diandrus	5	N	NI
4. Capsella bursa-pastoris	5	N	FACU
5.			
6.			
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	70	x 3 =	210
FACU species	20	x 4 =	80
UPL species	5	x 5 =	25
Column Totals:	100 (A)		315 (B)

Prevalence Index = B/A = 3.15

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✔

Remarks:

SOIL

Sampling Point: SP-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 3/3	100					C	heavy clay

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✔

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

According to the Palmer Drought Severity Index (PDSI), the project site was subject to severe drought conditions at the time of the survey, however antecedent precipitation conditions were considered to normal.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Viracocha BESS Project City/County: Alameda County Sampling Date: 3/18/2025

Applicant/Owner: Reclaimed Wind, LLC State: CA Sampling Point: SP-3

Investigator(s): G. Davis, P. Laulikitnont-Lee Section, Township, Range: S 11, T2S, R3E

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 0-5

Subregion (LRR): C Lat: 37.767537 Long: -121.617039 Datum: WGS 84

Soil Map Unit Name: ArD - Altamont clay, 15-30% slopes, MLRA 15 NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____	No ✔	
Wetland Hydrology Present?	Yes _____	No ✔	

Remarks:

Sampling point is located immediately downslope of a culvert outlet and is situated within a vegetated, constructed ditch.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 5 ft x 5 ft)			
1. Festuca perennis	90	Y	FAC
2. Amsinckia menziesii	5	N	NL
3. Erodium moschatum	3	N	NL
4. Avena barbata	2	N	NL
5.			
6.			
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals: (A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

SOIL

Sampling Point: SP-3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 3/2	100					C	heavy clay

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✔

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

According to the Palmer Drought Severity Index (PDSI), the project site was subject to severe drought conditions at the time of the survey, however antecedent precipitation conditions were considered to normal.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Viracocha BESS Project City/County: Alameda County Sampling Date: 3/18/2025

Applicant/Owner: Reclaimed Wind, LLC State: CA Sampling Point: SP-4

Investigator(s): G. Davis, P. Laulikitnont-Lee Section, Township, Range: S 11, T2S, R3E

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 0-5

Subregion (LRR): C Lat: 37.7687393 Long: -121.6170508 Datum: WGS 84

Soil Map Unit Name: ArD - Altamont clay, 15-30% slopes, MLRA 15 NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____	No ✔	
Wetland Hydrology Present?	Yes ✔	No _____	

Remarks:

Sampling point is associated with a puddle that is located immediately downslope of a culvert outlet. While hydrophytic vegetation and wetland hydrology is present, this feature lacks hydric soils and was determined to be within uplands.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 5 ft x 5 ft)			
1. Festuca perennis	10	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	10 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 90 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

Most of this sampling area was barren due to heavy cattle traffic.

SOIL

Sampling Point: SP-4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-16	7.5YR 3/1	100					C	heavy clay
16-	REFUSAL							

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: Gravel/Rock

Depth (inches): 16

Hydric Soil Present? Yes ___ No ✔

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ✔ High Water Table (A2)
- ✔ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No ✔ Depth (inches): ___

Water Table Present? Yes ✔ No ___ Depth (inches): 3

Saturation Present? (includes capillary fringe) Yes ✔ No ___ Depth (inches): 0

Wetland Hydrology Present? Yes ✔ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology was met at this sampling location with multiple indicators. Feature is associated with a puddle downslope of a partially plugged culvert outlet. This feature likely fills in response to precipitation events; between 3/13-3/14 the site received 0.92" of rain and the day prior to the survey the site received 0.10" of rain (according to the TRACY PUMPING PLANT, CA WETS station). The feature was not mapped as waters due to lack of OHWM indicators.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Viracocha BESS Project City/County: Alameda County Sampling Date: 3/18/2025

Applicant/Owner: Reclaimed Wind, LLC State: CA Sampling Point: SP-5

Investigator(s): G. Davis, P. Laulikitnont-Lee Section, Township, Range: S 11, T2S, R3E

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Concave Slope (%): 0-5

Subregion (LRR): C Lat: 37.7693319 Long: -121.6154388 Datum: WGS 84

Soil Map Unit Name: ArD - Altamont clay, 15-30% slopes, MLRA 15 NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____	No ✔	
Wetland Hydrology Present?	Yes ✔	No _____	

Remarks:

Sampling point is associated with a ponded area that is located immediately downslope of a culvert outlet. While hydrophytic vegetation and wetland hydrology is present, this feature lacks hydric soils and was determined to be within uplands. The site is heavily compacted from cattle and is subject to saturation and inundation at the surface, but not in the subsurface.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 5 ft x 5 ft)			
1. Festuca perennis	5	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	5 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 95 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals: (A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

Most of this sampling area was barren due to heavy cattle traffic.

SOIL

Sampling Point: SP-5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 3/2	100					C	heavy clay
12-18	10YR 3/3	100					SCL	pockets of sand present

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ___ No ✔

Remarks:

Soil is compacted at the surface and pools water, but no hydric soils were detected.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ✔ Surface Water (A1)
- ___ High Water Table (A2)
- ✔ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ✔ Saturation Visible on Aerial Imagery (C9)
- ✔ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ✔ No ___ Depth (inches): 0

Water Table Present? Yes ___ No ✔ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ✔ No ___ Depth (inches): 0 - 2

Wetland Hydrology Present? Yes ✔ No ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology was met at this sampling location with multiple indicators. Water appears to pond here during the wet season but not long enough to develop hydric soils. Saturation was present at the soil surface (0-2") but not saturated below. There was no high water table at this site, however surface water spilled over the edge of the pit and filled the hole while sampling. The soil between 2-18" was moist but not saturated.

*See SP-4 wetland hydrology remarks section for additional information.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Viracocha BESS Project City/County: Alameda County Sampling Date: 3/18/2025

Applicant/Owner: Reclaimed Wind, LLC State: CA Sampling Point: SP-6a

Investigator(s): G. Davis, P. Laulikitnont-Lee Section, Township, Range: S 11, T2S, R3E

Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 0-2

Subregion (LRR): C Lat: 37.7695132 Long: -121.6146723 Datum: WGS 84

Soil Map Unit Name: ArD - Altamont clay, 15-30% slopes, MLRA 15 NWI classification: PEM1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔	No _____	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes ✔	No _____	
Wetland Hydrology Present?	Yes ✔	No _____	

Remarks:

Sampling point associated with an emergent wetland located within a broad, low-gradient swale that is subject to heavy cattle traffic due to feed trough placement.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 5 ft x 5 ft)			
1. Festuca perennis	100	Y	FAC
2. Veronica persica	<1	N	NI
3.			
4.			
5.			
6.			
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

Vegetation throughout the entire feature was relatively uniform but included patches of Mediterranean barley (Hordeum marinum) (FAC) and some scattered non-native upland herbs and forbs.

SOIL

Sampling Point: SP-6a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 3/2	95	10YR 4/6	5	C	M/PL	C	heavy clay

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ✔ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: ___

Depth (inches): ___

Hydric Soil Present? Yes ✔ **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ✔ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ✔ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No ✔ Depth (inches): ___

Water Table Present? Yes ___ No ✔ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ✔ No ___ Depth (inches): 11

Wetland Hydrology Present? Yes ✔ **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology was met at this sampling location with the Saturation (A3) indicator just within 12" of the ground surface. Given that the site was subject to severe drought conditions at the time of the survey, it is likely that site hydrology was less expressive for the 2024-2025 wet season.

According to the Palmer Drought Severity Index (PDSI), the project site was subject to severe drought conditions at the time of the survey, however antecedent precipitation conditions were considered to normal.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Viracocha BESS Project City/County: Alameda County Sampling Date: 3/18/2025

Applicant/Owner: Reclaimed Wind, LLC State: CA Sampling Point: SP-6b

Investigator(s): G. Davis, P. Laulikitnont-Lee Section, Township, Range: S 11, T2S, R3E

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): 10-15

Subregion (LRR): C Lat: 37.7696616 Long: -121.6147059 Datum: WGS 84

Soil Map Unit Name: ArD - Altamont clay, 15-30% slopes, MLRA 15 NWI classification: PEM1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✔	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____	No ✔	
Wetland Hydrology Present?	Yes _____	No ✔	

Remarks:

Sampling point is located on a hillslope adjacent to a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 5 ft x 5 ft)			
1. Bromus diandrus	40	Y	NL
2. Hordeum murinum	30	Y	FACU
3. Silybum marianum	10	N	NL
4. Amsinckia menziesii	10	N	NL
5. Festuca perennis	10	N	FAC
6.			
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✔

Remarks:

SOIL

Sampling Point: SP-6b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-19	10YR 3/1	100					C	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✔

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

According to the Palmer Drought Severity Index (PDSI), the project site was subject to severe drought conditions at the time of the survey, however antecedent precipitation conditions were considered to normal.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Viracocha BESS Project City/County: Alameda County Sampling Date: 3/18/2025

Applicant/Owner: Reclaimed Wind, LLC State: CA Sampling Point: SP-7a

Investigator(s): G. Davis, P. Laulikitnont-Lee Section, Township, Range: S 11, T2S, R3E

Landform (hillslope, terrace, etc.): Toe of slope Local relief (concave, convex, none): Concave Slope (%): 0-2

Subregion (LRR): C Lat: 37.7695132 Long: -121.6146723 Datum: WGS 84

Soil Map Unit Name: ArD - Altamont clay, 15-30% slopes, MLRA 15 NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔ No _____	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes ✔ No _____	
Wetland Hydrology Present?	Yes ✔ No _____	

Remarks:

Sampling point associated with with a depressional area adjacent to a road junction.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 5 ft x 5 ft)			
1. Festuca perennis	70	Y	FAC
2. Cryptantha sp.	15	N	NL
3. Rumex crispus	5	N	FAC
4. Hirschfeldia incana	5	N	NL
5.			
6.			
7.			
8.			
	95 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

SOIL

Sampling Point: SP-7a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/2	95	10YR 4/4	5	C	M/PL	C	ox. rhizo. along living roots obs.
6-14	10YR 4/2	100	-	-	-	-	CL	gravelly clay loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ✔ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ✔ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: Gravel

Depth (inches): 14

Hydric Soil Present? Yes ✔ **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ✔ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ✔ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No ✔ Depth (inches): ___

Water Table Present? Yes ___ No ✔ Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No ✔ Depth (inches): ___

Wetland Hydrology Present? Yes ✔ **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Some cracks were observed in bare soil portions of this feature, however it was mostly vegetated.

According to the Palmer Drought Severity Index (PDSI), the project site was subject to severe drought conditions at the time of the survey, however antecedent precipitation conditions were considered to normal.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Viracocha BESS Project City/County: Alameda County Sampling Date: 3/18/2025

Applicant/Owner: Reclaimed Wind, LLC State: CA Sampling Point: SP-7b

Investigator(s): G. Davis, P. Laulikitnont-Lee Section, Township, Range: S 11, T2S, R3E

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): 2-5

Subregion (LRR): C Lat: 37.7688329 Long: -121.6144651 Datum: WGS 84

Soil Map Unit Name: ArD - Altamont clay, 15-30% slopes, MLRA 15 NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____	No ✔	
Wetland Hydrology Present?	Yes _____	No ✔	

Remarks:

Sampling point is located on a slope adjacent to a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 5 ft x 5 ft)			
1. Festuca perennis	90	Y	FAC
2. Amsinckia menziesii	5	N	NL
3. Lupinus microcarpus	5	N	NL
4.			
5.			
6.			
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species	x 4 =	
UPL species	x 5 =	
Column Totals: (A)		(B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

SOIL

Sampling Point: SP-7b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 3/3	100					C	
8-16	10YR 4/2	100					CL	gravelly clay loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: Rock

Depth (inches): 16

Hydric Soil Present? Yes _____ No ✔

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

According to the Palmer Drought Severity Index (PDSI), the project site was subject to severe drought conditions at the time of the survey, however antecedent precipitation conditions were considered to normal.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Viracocha BESS Project City/County: Alameda County Sampling Date: 3/18/2025

Applicant/Owner: Reclaimed Wind, LLC State: CA Sampling Point: SP-8a

Investigator(s): G. Davis, P. Laulikitnont-Lee Section, Township, Range: S 11, T2S, R3E

Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 0-2

Subregion (LRR): C Lat: 37.7676408 Long: -121.6138492 Datum: WGS 84

Soil Map Unit Name: ArD - Altamont clay, 15-30% slopes, MLRA 15 NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔ No _____	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes ✔ No _____	
Wetland Hydrology Present?	Yes ✔ No _____	

Remarks:

Sampling point associated with with a broad wetland swale.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 5 ft x 5 ft)			
1. Distichilis spicata	60	Y	FAC
2. Hordeum marinum	30	Y	FAC
3. Festuca perennis	10	N	FAC
4.			
5.			
6.			
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

SOIL

Sampling Point: SP-8a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 3/1	98	7.5YR 4/4	2	C	M	C	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ✔ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✔ **No** _____

Remarks:

Soil is heavily compacted at the surface due to cattle traffic.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ✔ High Water Table (A2)
- ✔ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ✔ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No ✔ Depth (inches): _____

Water Table Present? Yes ✔ No ___ Depth (inches): 3

Saturation Present? (includes capillary fringe) Yes ✔ No ___ Depth (inches): 0-2

Wetland Hydrology Present? Yes ✔ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

According to the Palmer Drought Severity Index (PDSI), the project site was subject to severe drought conditions at the time of the survey, however antecedent precipitation conditions were considered to normal.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Viracocha BESS Project City/County: Alameda County Sampling Date: 3/18/2025

Applicant/Owner: Reclaimed Wind, LLC State: CA Sampling Point: SP-8b

Investigator(s): G. Davis, P. Laulikitnont-Lee Section, Township, Range: S 11, T2S, R3E

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): 10-15

Subregion (LRR): C Lat: 37.7677633 Long: -121.6139614 Datum: WGS 84

Soil Map Unit Name: ArD - Altamont clay, 15-30% slopes, MLRA 15 NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✔	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____	No ✔	
Wetland Hydrology Present?	Yes _____	No ✔	

Remarks:

Sampling point is located on a slope adjacent to a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 5 ft x 5 ft)			
1. Bromus hordeaceus	70	Y	FACU
2. Festuca perennis	20	Y	FAC
3. Distichilis spicata	5	N	FAC
4. Amsinckia menziesii	5	N	NL
5.			
6.			
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	25	x 3 =	75
FACU species	70	x 4 =	280
UPL species	5	x 5 =	25
Column Totals:	100 (A)		380 (B)

Prevalence Index = B/A = 3.8

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✔

Remarks:

SOIL

Sampling Point: SP-8b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 3/3	100					C	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✔

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

According to the Palmer Drought Severity Index (PDSI), the project site was subject to severe drought conditions at the time of the survey, however antecedent precipitation conditions were considered to normal.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Viracocha BESS Project City/County: Alameda County Sampling Date: 3/18/2025

Applicant/Owner: Reclaimed Wind, LLC State: CA Sampling Point: SP-9a

Investigator(s): G. Davis, P. Laulikitnont-Lee Section, Township, Range: S 11, T2S, R3E

Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 0-2

Subregion (LRR): C Lat: 37.7661147 Long: -121.6147497 Datum: WGS 84

Soil Map Unit Name: ArD - Altamont clay, 15-30% slopes, MLRA 15 NWI classification: PEM1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔	No _____	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes ✔	No _____	
Wetland Hydrology Present?	Yes ✔	No _____	

Remarks:

Sampling point associated with with a wetland swale.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft x 5 ft)			
1. Festuca perennis	75	Y	FAC
2. Distichilis spicata	20	Y	FAC
3. Erodium moschatum	5	N	NL
4.			
5.			
6.			
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

SOIL

Sampling Point: SP-9a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 3/1	95	7.5YR 4/4	5	C	M	C	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ✔ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✔ **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ✔ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes ✔ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Wetland hydrology was met at this sampling location with the Surface Cracks indicator (B6). Cracks were present sporadically throughout this feature where unvegetated. A low point upslope of this sampling point had racked vegetation and sediment marks at the base of a barbed wire fence.

According to the Palmer Drought Severity Index (PDSI), the project site was subject to severe drought conditions at the time of the survey, however antecedent precipitation conditions were considered to normal.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Viracocha BESS Project City/County: Alameda County Sampling Date: 3/18/2025

Applicant/Owner: Reclaimed Wind, LLC State: CA Sampling Point: SP-9b

Investigator(s): G. Davis, P. Laulikitnont-Lee Section, Township, Range: S 11, T2S, R3E

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): 5-10

Subregion (LRR): C Lat: 37.7661094 Long: -121.614682 Datum: WGS 84

Soil Map Unit Name: ArD - Altamont clay, 15-30% slopes, MLRA 15 NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No ✔	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____	No ✔	
Wetland Hydrology Present?	Yes _____	No ✔	

Remarks:

Sampling point is located on a slope adjacent to a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 5 ft x 5 ft)			
1. Bromus hordeaceus	50	Y	FACU
2. Festuca perennis	40	Y	FAC
3. Hirschfeldia incana	5	N	NL
4. Amsinckia menziesii	5	N	NL
5.			
6.			
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft x 30 ft)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	40	x 3 =	120
FACU species	50	x 4 =	200
UPL species	10	x 5 =	50
Column Totals:	100 (A)		370 (B)

Prevalence Index = B/A = 3.7

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes _____ No ✔

Remarks:

SOIL

Sampling Point: SP-9b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-17	10YR 3/3	100					C	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✔

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes _____ No ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

According to the Palmer Drought Severity Index (PDSI), the project site was subject to severe drought conditions at the time of the survey, however antecedent precipitation conditions were considered to normal.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Viracocha BESS Project City/County: Alameda County Sampling Date: 3/18/2025

Applicant/Owner: Reclaimed Wind, LLC State: CA Sampling Point: SP-10a

Investigator(s): G. Davis, P. Laulikitnont-Lee Section, Township, Range: S 11, T2S, R3E

Landform (hillslope, terrace, etc.): Swale Local relief (concave, convex, none): Concave Slope (%): 0-2

Subregion (LRR): C Lat: 37.768333 Long: -121.613266 Datum: WGS 84

Soil Map Unit Name: ArD - Altamont clay, 15-30% slopes, MLRA 15 NWI classification: R4SBC

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No ✔ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔	No _____	**Is the Sampled Area within a Wetland?** Yes ✔ No _____
Hydric Soil Present?	Yes ✔	No _____	
Wetland Hydrology Present?	Yes ✔	No _____	

Remarks:

Sampling point associated with with a broad wetland swale.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5 ft x 5 ft)			
1. Festuca perennis	60	Y	FAC
2. Distichilis spicata	40	Y	FAC
3.			
4.			
5.			
6.			
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

SOIL

Sampling Point: SP-10a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	10YR 3/1	95	7.5YR 4/6	5	C	M	C	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ✔ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✔ **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ✔ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

Wetland Hydrology Present? Yes ✔ **No** _____

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

According to the Palmer Drought Severity Index (PDSI), the project site was subject to severe drought conditions at the time of the survey, however antecedent precipitation conditions were considered to normal.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Viracocha BESS Project City/County: Alameda County Sampling Date: 3/18/2025

Applicant/Owner: Reclaimed Wind, LLC State: CA Sampling Point: SP-10b

Investigator(s): G. Davis, P. Laulikitnont-Lee Section, Township, Range: S 11, T2S, R3E

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): None Slope (%): 5-10

Subregion (LRR): C Lat: 37.768314 Long: -121.61224 Datum: WGS 84

Soil Map Unit Name: ArD - Altamont clay, 15-30% slopes, MLRA 15 NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ✔ No _____ (If no, explain in Remarks.)

Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes ✔ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ✔	No _____	**Is the Sampled Area within a Wetland?** Yes _____ No ✔
Hydric Soil Present?	Yes _____	No ✔	
Wetland Hydrology Present?	Yes _____	No ✔	

Remarks:

Sampling point is located on a slope adjacent to a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 5 ft x 5 ft)			
1. Festuca myorus	50	Y	FACU
2. Festuca perennis	30	Y	FAC
3. Distichilis spicata	20	Y	FAC
4.			
5.			
6.			
7.			
8.			
	100 = Total Cover		
Woody Vine Stratum (Plot size: 30 ft x 30 ft)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

✔ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes ✔ No _____

Remarks:

SOIL

Sampling Point: SP-10b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 3/3	100					C	
8-17	10YR 3/4	100					C	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) (**LRR C**)
- ___ 2 cm Muck (A10) (**LRR B**)
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✔

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) (**Nonriverine**)
- ___ Sediment Deposits (B2) (**Nonriverine**)
- ___ Drift Deposits (B3) (**Nonriverine**)
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres along Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes _____ No ✔ Depth (inches): _____

Water Table Present? Yes _____ No ✔ Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes _____ No ✔ Depth (inches): _____

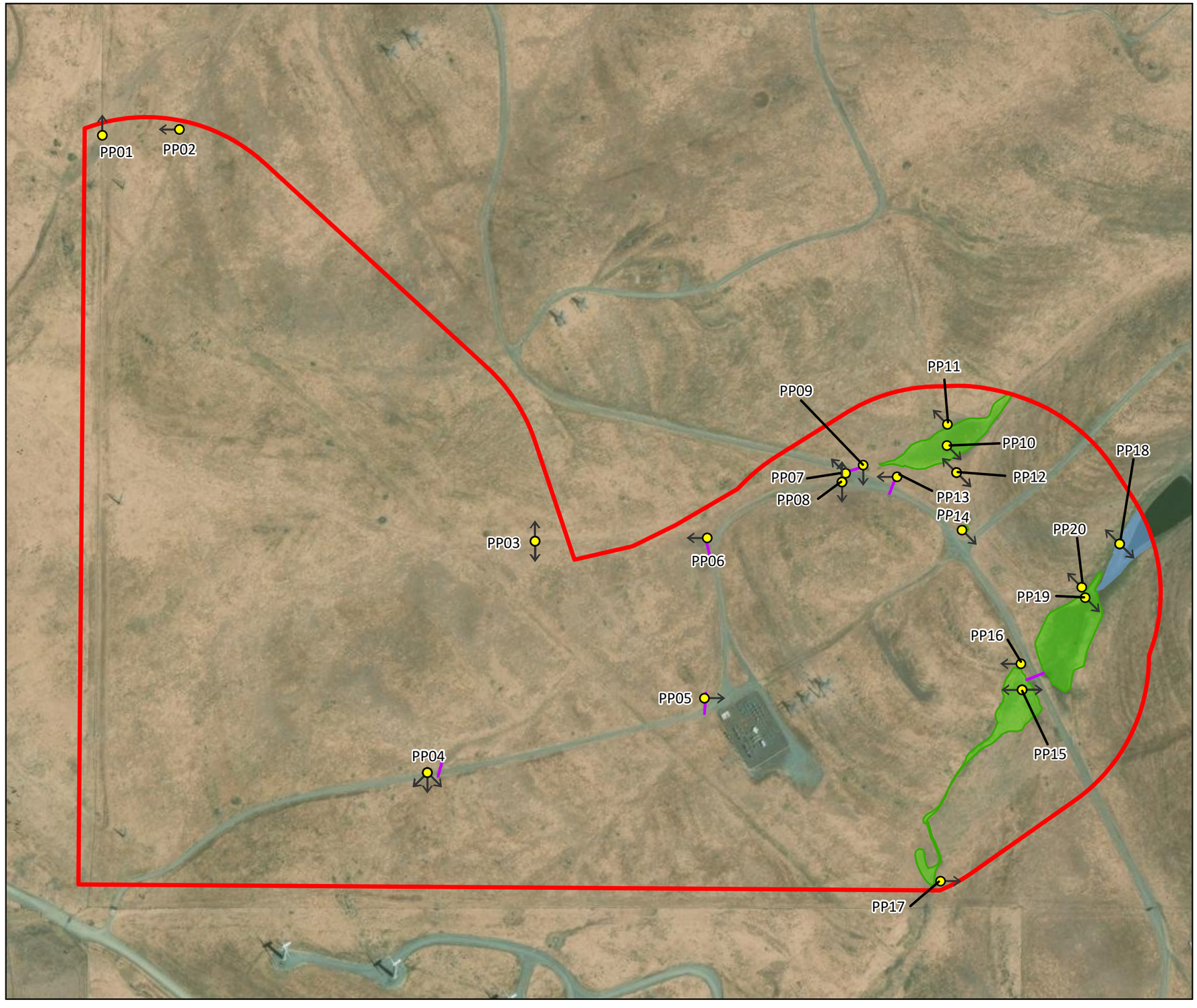
Wetland Hydrology Present? Yes _____ No ✔

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

According to the Palmer Drought Severity Index (PDSI), the project site was subject to severe drought conditions at the time of the survey, however antecedent precipitation conditions were considered to normal.

Appendix C
Representative Photographs



Legend

- Aquatic Resources Study Area (103.31 acres)
- Photo Point and Direction
- Culvert

Aquatic Resources

- Wetland (WET)
- Other Waters

Aquatic Resources Delineation conducted on 3/18/2025 by Greg Davis and Pim Laulikitnont-Lee

Source:
1) ESRI Aerial Images

N

0 500 1,000
Feet

Appendix C
Representative Photograph Location
Viracocha Hill BESS Project
Alameda County, California

Jacobs

\\dc1vs01\gisproj\S\Salka_Energy\Viracocha\MapFiles\BESS\ARDR\BESS_ARDR_Figures.aprx

Photo 1: Photo capturing area where the NHD mapped a flowline in the northwestern portion of the study area. No OHWM indicators or wetland indicators observed. Photo taken on March 18, 2025, facing west.

Photo 2: Sample Point 1 (SP-1) was established in the topographic low point of a vegetated swale where saturation was potentially visible on aerial imagery. No indicators of wetland hydrology or hydric soils observed. Photo taken on March 18, 2025, facing south.

Photo 3: Overview of a vegetated swale at SP-2 where an NHD flowline was mapped. No OHWM indicators or wetland indicators observed. Photo taken on March 18, 2025, facing west.

Photo 4: Culvert inlet along the south side of the exisiting access road. No aquatic resources were delineated in this area. Photo taken on March 18, 2025, facing east.

Photo 5: A vegetated swale at culvert outlet at SP-3. No OHWM indicators or wetland indicators observed. Photo taken on March 18, 20205; facing north.

Photo 6: A small depression formed at culvert outlet at SP-.4; facing south. No hydric soils or OHWM indicators observed. Photo taken on March 18, 2025.

Photo 7: A vegetated swale at culvert outlet. No OHWM indicators or wetland indicators observed. Photo taken on March 18, 2025, facing southwest.

Photo 8: Photo taken at a mapped NHD flowline at the access road. No OHWM indicators observed. Photo taken on March 18, 2025, facing west.

Photo 9: Pooling water observed in a depression at SP-5 but the area lacked hydric soils indicator. Pooling water assumed to be caused by recent rain events and there was no defined OHWM. Photo taken on March 18, 2025, facing east.

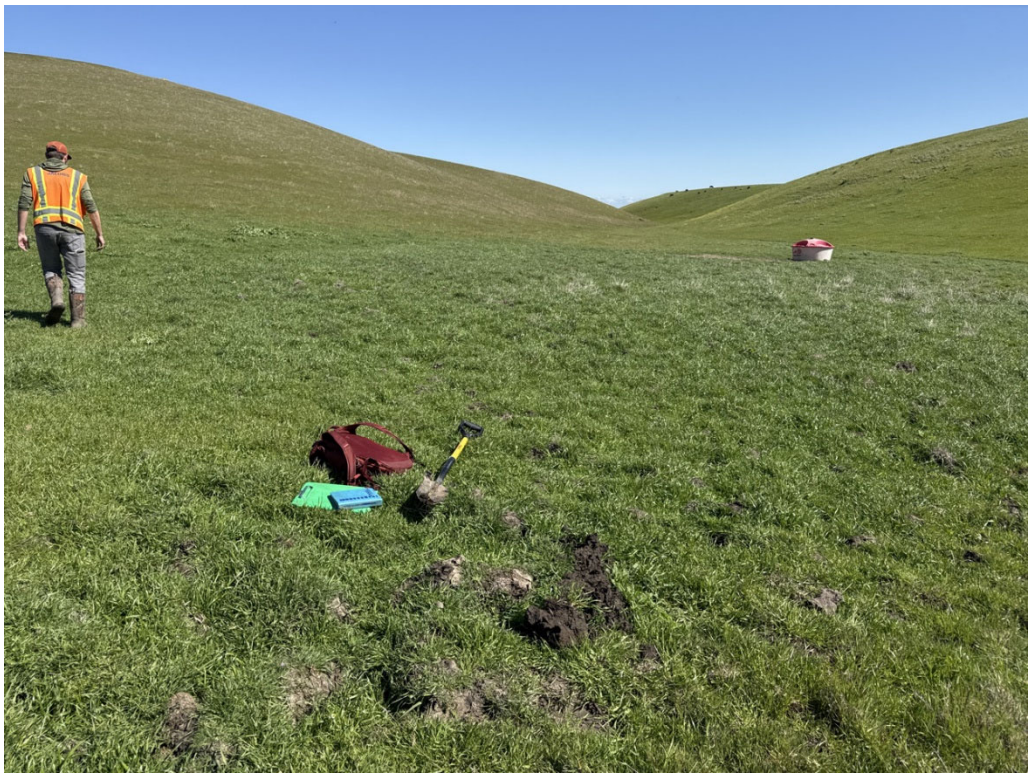


Photo 10: Photo taken in the central portion of WET-1 at SP-6a; facing northeast. Photo taken on March 18, 2025.

Photo 11: Photo taken at the delineated boundary of WET-1 at SP-6b where vegetation composition changes and no hydric soils were observed. The dashed yellow line shows WET-01 in the background. Photo taken on March 18, 2025.

Photo 12: Photo in an area the NHD mapped a flowline adjacent to WET-1. No OHWM indicators or wetland indicators observed. Photo taken on March 18, 2025, facing southwest.

Photo 13: No aquatic resources observed at culvert outlet; facing south. Photo taken on March 18, 2025.

Photo 14: Overview of WET-2 at SP-7a. Photo taken on March 18, 2025, facing northeast.

Photo 15: View of WET-3 at SP-8a. Photo taken on March 18, 2025, facing north.

Photo 16: Photo taken at the delineated boundary of WET-3. The wetland is confined by the hillslope. Photo taken on March 18, 2025, facing south.

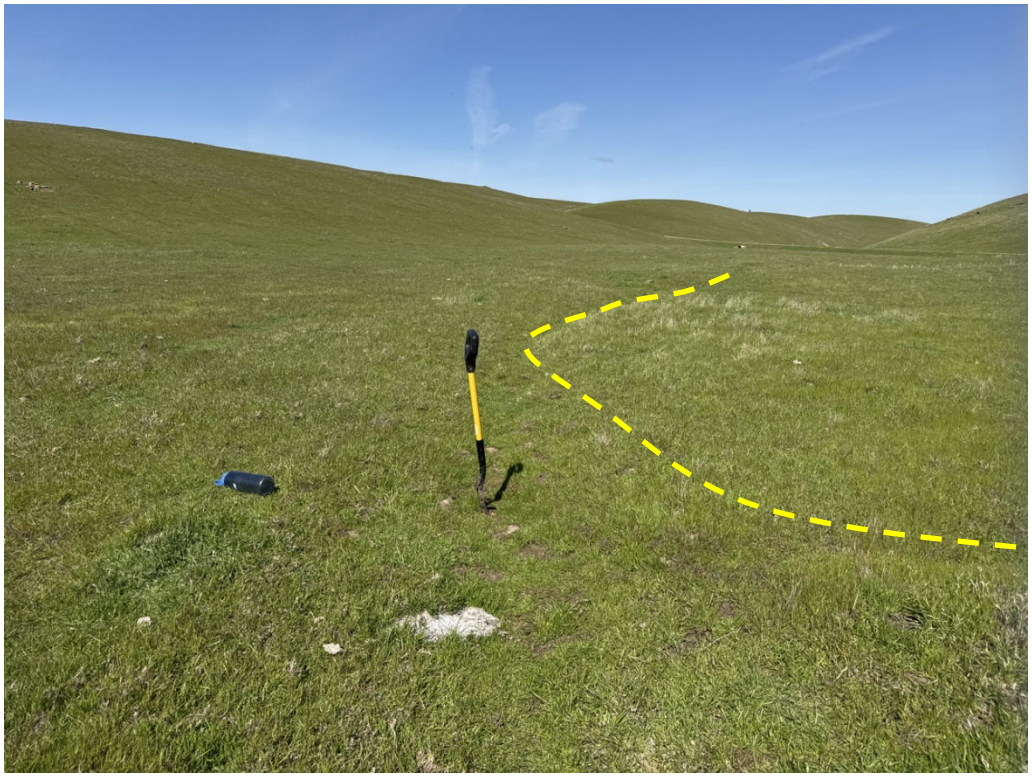


Photo 17: View from the southernmost portion of WET-4 at SP-9a. Photo taken on March 18, 2025, facing north.

Photo 18: View of feature PND-1. Photo taken on March 18, 2025, facing northeast.

Photo 19: View of WET-4 facing northeast towards PND-1. Photo taken on March 18, 2025.

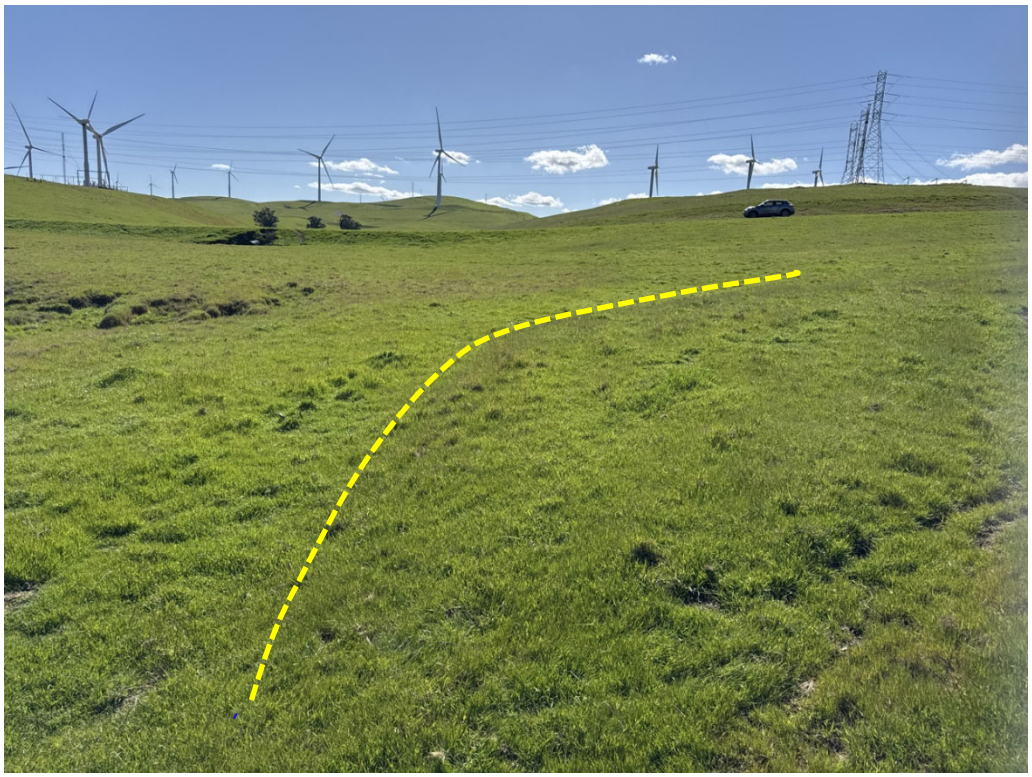


Photo 20: View of the delineated boundary of WET-4. WET-4 is visible on the left side of the photo confined by the hillslope on the right. Photo taken on March 18, 2025, facing southwest.

Appendix 5.2B - Special-status Species and Potential to Occur in BSA

Appendix 5.2B
Special-Status Species and Potential to Occur in the BSA

Appendix 5.2B, Table 5.2B-1
Special-status Plant Species with Potential to Occur in the BSA
Viracocha Hill BESS Project

Scientific Name	Common Name	Family	Status[a]			Habitat	Blooming Period	Potential for Occurrence within the BSA[b]
			Federal	State	CNPS			
Acanthomintha lanceolata	Santa Clara thorn mint	Lamiaceae	-	-	4.2	Annual herb that occurs in arid and rocky places and often on serpentine slopes, in chaparral, cismontane woodland and coastal scrub from 260 to 600 feet. Known in Alameda, Fresno, Merced, Monterey, San Benito, San Joaquin, Santa Clara, Stanislaus, and Ventura counties (CDFW 2025, CNPS 2025).	March to June	**Absent**. There is no suitable habitat within the BSA to support this species. Additionally, there are no documented CNDDB occurrences of this species within a 5-mile radius of the BSA (CDFW 2025).
Amsinckia grandiflora	Large-flowered fiddleneck	Boraginaceae	E	E	1B.1	Annual herb found in cismontane woodland and valley and foothill grassland from 500 to 1,800 feet. Known from fewer than five natural occurrences in Alameda, Contra Costa, and San Joaquin counties. Known from only two natural populations (CDFW 2025, CNPS 2025).	March to May	**Low Potential**. Suitable habitat is present within the BSA; however, the BSA is outside of the species' known range. Additionally, there are no documented CNDDB occurrences of this species within a 5-mile radius of the BSA (CDFW 2025).
Androsace elongata ssp. acuta	California rockjasmine	Primulaceae	-	-	4.2	Annual herb found in chaparral, cismontane woodland, coastal scrub, meadows and seeps, pinyon and juniper woodland, and valley	February to June	**High Potential**. Suitable habitat is present within the BSA. This species is not tracked in the CNDDB;

Appendix 5.2B, Table 5.2B-1
Special-status Plant Species with Potential to Occur in the BSA
Viracocha Hill BESS Project

Scientific Name	Common Name	Family	Status[a]			Habitat	Blooming Period	Potential for Occurrence within the BSA[b]
			Federal	State	CNPS			
						and foothill grassland, from 490 to 4,290 feet. Known in Alameda, Contra Costa, Colusa, Fresno, Glenn, Kern, Los Angeles, Merced, Riverside, San Bernardino, San Benito, Santa Clara, San Diego, Siskiyou, San Joaquin, San Luis Obispo, San Mateo, Stanislaus, and Tehama counties (CDFW 2025, CNPS 2025).		however, it has been documented within the Midway and Altamont quads (Calflora 2025).
Arctostaphylos manzanita ssp. laevigata	Contra Costa manzanita	Ericaceae	-	-	1B.2	An evergreen shrub found in rocky chaparral from 1,640 to 3,610 feet. Known from 10 occurrences in Contra Costa County (CDFW 2025, CNPS 2025).	January to March	**Absent**. There is no suitable habitat within the BSA to support this species. Additionally, there are no documented CNDDB occurrences of this species within a 5-mile radius of the BSA (CDFW 2025).
Astragalus tener var. tener	Alkali milk-vetch	Fabaceae	-	-	1B.2	Annual herb found in alkaline areas of playas, adobe clay valley and foothill grassland, and vernal pools from 3 to 200 feet. Known in Alameda, Merced, Napa, Solano,	March to June	**High Potential**. The alkali wetlands within the BSA provide suitable habitat for this species. There are two documented CNDDB occurrences of this species

Appendix 5.2B, Table 5.2B-1
Special-status Plant Species with Potential to Occur in the BSA
Viracocha Hill BESS Project

Scientific Name	Common Name	Family	Status[a]			Habitat	Blooming Period	Potential for Occurrence within the BSA[b]
			Federal	State	CNPS			
						and Yolo counties (CDFW 2025, CNPS 2025).		within a 5-mile radius of the BSA (CDFW 2025).
Atriplex cordulata var. cordulata	Heartscale	Amaranthaceae	-	-	1B.2	Annual herb found in saline or alkaline conditions of chenopod scrub, meadows and seeps, and sandy Valley and foothill grassland from 3 to 1,230 feet. Known in Alameda, Butte, Fresno, Glenn, Kern, Madera, Merced, San Joaquin, San Luis Obispo, Solano, Stanislaus, Tulare, and Yolo counties (CDFW 2025, CNPS 2025).	April to October	**High Potential**. The alkali wetlands within the BSA provide suitable habitat for this species. There are two documented CNDDB occurrences of this species within a 5-mile radius of the BSA (CDFW 2025).
Atriplex coronata var. coronata	Crownscale	Amaranthaceae	-	-	4.2	Annual herb found in alkaline soils (often clay) within chenopod scrub, valley and foothill grasslands, and vernal pools from 5 to 1,935 feet. Known in Contra Costa and Kern counties (CDFW 2025, CNPS 2025).	March to October	**High Potential**. The alkali wetlands within the BSA provide suitable habitat for this species. This species is not tracked in the CNDDB; however, it has been documented within the Clifton Court Forebay 7.5-minute USGS quadrangle and near the intersection of

Appendix 5.2B, Table 5.2B-1
Special-status Plant Species with Potential to Occur in the BSA
Viracocha Hill BESS Project

Scientific Name	Common Name	Family	Status[a]			Habitat	Blooming Period	Potential for Occurrence within the BSA[b]
			Federal	State	CNPS			
								Altamont Pass Road and Dyer Road (Calflora 2025).
Atriplex depressa	Brittlescale	Amaranthaceae	-	-	1B.2	Annual herb found in alkaline, clay soils of chenopod scrub, meadows and seeps, playas, valley and foothill grassland, and vernal pools from 3 to 1,050 feet. Known in Alameda, Contra Costa, Colusa, Fresno, Glenn, Merced, Solano, Stanislaus, Tulare, and Yolo counties (CDFW 2025, CNPS 2025).	April to October	**High Potential**. The alkali wetlands within the BSA provide suitable habitat for this species. There are six documented CNDDB occurrences of this species within a 5-mile radius of the BSA (CDFW 2025). The nearest EO of this species is located approximately 2.7 miles north of the BSA (CDFW 2025).
Atriplex minuscula	Lesser saltscale	Amaranthaceae	-	-	1B.1	An annual herbaceous species found in sandy, alkaline soils in chenopod scrub, playas, and valley and foothill grassland from 50 to 730 feet. Occurs only in California; known in Alameda, Butte, Fresno, Kern, Madera, Merced, and Tulare counties. Presumed extirpated in Stanislaus County (CDFW 2025,	April to October	**Moderate Potential**. The alkali wetlands within the BSA provide suitable habitat for this species. There are four documented CNDDB occurrences of this species within a 5-mile radius of the BSA (CDFW 2025). The nearest EO of this species is located approximately 3.2

Appendix 5.2B, Table 5.2B-1
Special-status Plant Species with Potential to Occur in the BSA
Viracocha Hill BESS Project

Scientific Name	Common Name	Family	Status[a]			Habitat	Blooming Period	Potential for Occurrence within the BSA[b]
			Federal	State	CNPS			
						CNPS 2025) (CDFW 2025, CNPS 2025).		miles west of the BSA near the intersection of Altamont Pass Road and Dyer Road (CDFW 2025). San Ysidro series soils have the appropriate texture, but no seeps were identified in that portion of the BSA.
Balsamorhiza macrolepis	Big-scale balsamroot	Asteraceae	-	-	1B.2	Perennial herb found in chaparral, cismontane woodland, and valley and foothill grassland, sometimes on serpentine soils, from 295 to 5,102 feet. Known in Alameda, Amador, Butte, Colusa, El Dorado, Lake, Mariposa, Napa, Placer, Santa Clara, Shasta, Solano, Sonoma, Tehama, and Tuolumne counties (CDFW 2025, CNPS 2025).	March to July	**Low Potential**. Suitable habitat is present within the BSA; however, serpentine soils are not present. Additionally, there are no documented CNDDB occurrences of this species within a 5-mile radius of the BSA (CDFW 2025).
Blepharizonia plumosa	Big tarplant	Asteraceae	-	-	1B.1	Annual herb found on clay soils in valley and foothill grassland from 100 to 1,660 feet. Known in Alameda, Contra Costa, and San Joaquin, San Luis Obispo, and	July to November	**High Potential**. Suitable habitat and clay soils are present within the BSA. There are two documented CNDDB occurrences of this

Appendix 5.2B, Table 5.2B-1
Special-status Plant Species with Potential to Occur in the BSA
Viracocha Hill BESS Project

Scientific Name	Common Name	Family	Status[a]			Habitat	Blooming Period	Potential for Occurrence within the BSA[b]
			Federal	State	CNPS			
						Stanislaus counties (CDFW 2025, CNPS 2025).		species within a 5-mile radius of the BSA (CDFW 2025). The nearest EO of this species is located approximately 4 miles northwest of the BSA (CDFW 2025).
Calochortus pulchellus	Mt. Diablo fairy-lantern	Liliaceae	-	-	1B.2	Perennial bulbiferous herb found in chaparral, cismontane woodland, riparian woodland, and valley and foothill grassland from 100 to 1,550 feet. Known in Alameda, Contra Costa, and Solano counties (CDFW 2025, CNPS 2025).	April to June	**Low Potential**. Annual grassland within the BSA provides suitable habitat for this species. However, yhis species prefers partial shade and north aspects and most occurrences are in woodland habitats. Additionally, there are no documented CNDDB occurrences of this species within a 5-mile radius of the BSA (CDFW 2025).
Carex comosa	Bristly sedge	Cyperaceae	-	-	2B.1	Perennial rhizomatous herb found on lake margins and other wet places within coastal prairie, marshes and swamps, and valley and foothill grassland from 0 to	May to September	**Low Potential**. Aquatic resources within the BSA are not the typical perennial marshes this species is found in, such as wetlands in

Appendix 5.2B, Table 5.2B-1
Special-status Plant Species with Potential to Occur in the BSA
Viracocha Hill BESS Project

Scientific Name	Common Name	Family	Status[a]			Habitat	Blooming Period	Potential for Occurrence within the BSA[b]
			Federal	State	CNPS			
						2,050 feet (CDFW 2025, CNPS 2025).		the San Francisco Bay and Sacramento-San Joaquin River Delta. Additionally, there are no documented CNDDB occurrences of this species within a 5-mile radius of the BSA (CDFW 2025).
Caulanthus lemmonii	Lemmon's jewelflower	Brassicaceae	-	-	1B.2	An annual herbaceous species, flowers generally creamy white, found in pinyon and juniper woodland, chaparral, scrub, and valley and foothill grassland from 250 to 4,750 ft. Occurs only in California; known in Fresno, Kings, Kern, Merced, Monterey, Santa Barbara, San Benito, San Joaquin, San Luis Obispo, Stanislaus, and Ventura Counties. Presumed extirpated in Alameda County (CDFW 2025, CNPS 2025).	February to May	**Low Potential**. Suitable habitat is present within the BSA; however, the BSA is outside of the species' known range. Additionally, there are no documented CNDDB occurrences of this species within a 5-mile radius of the BSA (CDFW 2025).
Centromadia parryi ssp. congdonii	Condgon's tarplant	Asteraceae	-	-	1B.1	Annual herb found on alkaline soils in Valley and foothill grassland from 0 to 800 feet.	May to November	**High Potential**. The alkali wetlands within the BSA provide suitable habitat for

Appendix 5.2B, Table 5.2B-1
Special-status Plant Species with Potential to Occur in the BSA
Viracocha Hill BESS Project

Scientific Name	Common Name	Family	Status[a]			Habitat	Blooming Period	Potential for Occurrence within the BSA[b]
			Federal	State	CNPS			
						Known in Alameda, Contra Costa, Monterey, Santa Clara, San Luis Obispo, and San Mateo counties. Presumed extirpated from Santa Cruz and Solano Counties (CDFW 2025, CNPS 2025).		this species. There is one documented CNDDB occurrence of this species within a 5-mile radius of the BSA (CDFW 2025). The nearest EO of this species is located approximately 3.2 miles west of the BSA near the intersection of Altamont Pass Road and Dyer Road (CDFW 2025).
Chloropyron molle ssp. hispidum	Hispid salty bird's-beak	Orobanchaceae	-	-	1B.1	Annual, hemiparasitic herb found in alkaline soils of meadows and seeps, playas, and valley and foothill grassland from 3 to 500 feet. Known in Alameda, Fresno, Kern, Merced, Placer, and Solano counties (CDFW 2025, CNPS 2025).	June to September	**Moderate Potential**. Alkali wetlands within the BSA provide suitable habitat for this species. Additionally, there are no documented CNDDB occurrences of this species within a 5-mile radius of the BSA (CDFW 2025).
Chloropyron palmatum	Palmate-bracted bird's-beak	Orobanchaceae	E	E	1B.1	Annual hemiparasitic herb found on mesic sites in alkaline soil of chenopod scrub and valley and foothill grassland from 16 to 510	May to October	**Moderate Potential**. Alkali wetlands within the BSA provide suitable habitat for this species. There are no

Appendix 5.2B, Table 5.2B-1
Special-status Plant Species with Potential to Occur in the BSA
Viracocha Hill BESS Project

Scientific Name	Common Name	Family	Status[a]			Habitat	Blooming Period	Potential for Occurrence within the BSA[b]
			Federal	State	CNPS			
						feet. Known in Alameda, Colusa, Fresno, Glenn, Madera, and Yolo counties. Presumed extirpated in San Joaquin County (CDFW 2025, CNPS 2025).		documented CNDDB occurrences of this species within a 5-mile radius of the BSA (CDFW 2025).
Cicuta maculata var. bolanderi	Bolander's water-hemlock	Apiaceae	-	-	1B.1	Perennial herb found in coastal fresh or brackish marshes and swamps from 0 to 650 feet. Known in California in Contra Costa, Marin, Sacramento, and Solano counties. Presumed extirpated in Santa Barbara County (CDFW 2025, CNPS 2025).	July to September	**Absent**. There is no suitable habitat within the BSA to support this species.
Convolvulus simulans	Small-flowered morning glory	Convolvulaceae	-	-	4.2	An annual herb often seen on heavy, cracking, and friable clay substrates in coastal scrub or vernal pools from 98 to 2,871 feet. Known in numerous counties, primarily along coastal California or southern California (CDFW 2025, CNPS 2025).	March to July	**Absent**. There is no suitable habitat within the BSA to support this species.
Deinandra bacigalupii	Livermore tarplant	Asteraceae	-	E	1B.1	An annual herb found in alkaline soils of meadows and seeps from 492 to 607 feet. Known from	June to October	**Low Potential**. Suitable habitat is present within the BSA; however, the BSA is

Appendix 5.2B, Table 5.2B-1
Special-status Plant Species with Potential to Occur in the BSA
Viracocha Hill BESS Project

Scientific Name	Common Name	Family	Status[a]			Habitat	Blooming Period	Potential for Occurrence within the BSA[b]
			Federal	State	CNPS			
						fewer than five occurrences near Livermore (CDFW 2025, CNPS 2025).		outside the species' known range. Additionally, there are no documented CNDDB occurrences of this species within a 5-mile radius of the BSA (CDFW 2025).
Delphinium californicum ssp. interius	Hospital Canyon larkspur	Ranunculaceae	-	-	1B.2	A perennial herb found in openings of chaparral, mesic cismontane woodlands and coastal scrub from 754 to 3,592 feet. Known in Alameda, Contra Costa, Merced, Monterey, San Benito, Santa Clara, San Joaquin, and Stanislaus counties (CDFW 2025, CNPS 2025).	April to June	**Absent**. There is no suitable habitat within the BSA to support this species.
Delphinium recurvatum	Recurved larkspur	Ranunculaceae	-	-	1B.2	A perennial herbaceous species found in poorly drained, fine, alkaline soils in chenopod scrub, cismontane woodland, and valley and foothill grassland from 50 to 4,200 feet. Occurs only in California; known in Alameda, Contra Costa, Fresno, Glenn, Kings, Kern, Madera, Merced, Monterey,	March to June	**Moderate Potential**. Alkaline soils within the BSA provide suitable habitat for this species. There are three documented CNDDB occurrences of this species within a 5-mile radius of the BSA (CDFW 2025). The nearest EO of this species is

Appendix 5.2B, Table 5.2B-1
Special-status Plant Species with Potential to Occur in the BSA
Viracocha Hill BESS Project

Scientific Name	Common Name	Family	Status[a]			Habitat	Blooming Period	Potential for Occurrence within the BSA[b]
			Federal	State	CNPS			
						San Joaquin, San Luis Obispo, Solano, Sutter, and Tulare counties. Presumed extirpated in Butte and Colusa counties (CDFW 2025, CNPS 2025) (CDFW 2025, CNPS 2025).		located approximately 2.6 miles north of the BSA (CDFW 2025).
Eriophyllum jepsonii	Jepson's woolly sunflower	Asteraceae	-	-	4.3	A subshrub found in dry, ultramafic soils in chaparral and oak woodland from 630 to 1,630 feet. Known in Alameda, Contra Costa, El Dorado, Fresno, Kern, Merced, Monterey, San Benito, Santa Clara, and Stanislaus counties (CDFW 2025, CNPS 2025).	April to June	**Absent**. There are no suitable ultramafic substrates within the BSA to support this species.
Eryngium racemosum	Delta button-celery	Apiaceae	-	E	1B.1	An annual or perennial herb found in vernally mesic clay depressions of riparian scrub from 10 to 100 feet. Known in Calaveras, Contra Costa, Merced, and Stanislaus counties. Presumed extirpated in San Joaquin County (CDFW 2025, CNPS 2025).	June to October	**Absent**. There is no riparian scrub habitat within the BSA to support this species.

Appendix 5.2B, Table 5.2B-1
Special-status Plant Species with Potential to Occur in the BSA
Viracocha Hill BESS Project

Scientific Name	Common Name	Family	Status[a]			Habitat	Blooming Period	Potential for Occurrence within the BSA[b]
			Federal	State	CNPS			
Eryngium spinosepalum	Spiny-sepaled button-celery	Apiaceae	-	-	1B.2	Annual to perennial herb found in valley and foothill grassland vernal pools (including vernal pool complexes) from 260 to 4,170 feet (Jepson eFlora 2025). Known in Contra Costa, Fresno, Kern, Madera, Merced, San Luis Obispo, Stanislaus, Tulare, and Tuolumne counties (CDFW 2025, CNPS 2025).	April to May	**Absent**. There are no vernal pools within the BSA to support this species.
Erysimum capitatum var. angustatum	Contra Costa wallflower	Brassicaceae	E	E	1B.1	Perennial herb found in inland dunes from 10 to 65 feet (CDFW 2025, CNPS 2025).	March to July	**Absent**. There are no inland dunes within the BSA to support this species.
Eschscholzia rhombipetala	Diamond-petaled California poppy	Papaveraceae	-	-	1B.1	Annual herb found in alkaline, clay soil of valley and foothill grassland from 0 to 3,200 feet. Known in Alameda, San Joaquin, and San Luis Obispo counties (CDFW 2025, CNPS 2025).	March to April	**Moderate Potential**. Alkaline clay soils within the BSA provide suitable habitat for this species. There are two documented CNDDB occurrences of this species within a 5-mile radius of the BSA (CDFW 2025). The nearest extant EO of this species is located approximately 1 mile

Appendix 5.2B, Table 5.2B-1
Special-status Plant Species with Potential to Occur in the BSA
Viracocha Hill BESS Project

Scientific Name	Common Name	Family	Status[a]			Habitat	Blooming Period	Potential for Occurrence within the BSA[b]
			Federal	State	CNPS			
								northeast of the BSA (CDFW 2025).
Extriplex joaquiniana	San Joaquin spearscale	Amaranthaceae	-	-	1B.2	Annual herb found in alkaline chenopod scrub, meadows and seeps, playas, and valley and foothill grassland from 3 to 2,740 feet. Known in Alameda, Contra Costa, Colusa, Fresno, Glenn, Merced, Monterey, Napa, San Benito, Santa Clara, San Joaquin, San Luis Obispo, Solano, Tulare, and Yolo counties (CDFW 2025, CNPS 2025).	April to October	**Moderate Potential**. The alkali wetlands within the BSA provide suitable habitat for this species. There are 21 documented CNDDB occurrences of this species within a 5-mile radius of the BSA (CDFW 2025). The nearest EO of this species is within 1 mile of the BSA (CDFW 2025).
Fritillaria agrestis	Stinkbells	Liliaceae	-	-	4.2	Perennial bulbiferous herb found on clay, or sometimes serpentinite substrates in chaparral, cismontane woodland, pinyon and juniper woodland, and valley and foothill grassland from 984 to 5,003 feet. Known in Alameda, Contra Costa, Fresno, Kern, Mendocino, Merced, Monterey, Mariposa, Placer, Sacramento, Santa Barbara, San Benito, Santa	March to June	**High Potential** Suitable habitat is present within the BSA. There is a documented record of this species approximately 2.75 miles southwest of the BSA (CDFW 2025, Calflora 2025).

Appendix 5.2B, Table 5.2B-1
Special-status Plant Species with Potential to Occur in the BSA
Viracocha Hill BESS Project

Scientific Name	Common Name	Family	Status[a]			Habitat	Blooming Period	Potential for Occurrence within the BSA[b]
			Federal	State	CNPS			
						Clara, San Luis Obispo, Stanislaus, Tuolumne, Ventura, and Yuba counties. Presumed extirpated from Santa Cruz and San Mateo counties (CDFW 2025, CNPS 2025).		
Hesperevax caulescens	Hogwallow starfish	Asteraceae	-	-	4.2	Annual herb found in drying, shrink-swell clay soils of shallow vernal pools, flats, slopes (sometimes serpentine), in valley and foothill grassland from 0 to 1,650 feet. Known in Alameda, Amador, Butte, Contra Costa, Colusa, Fresno, Glenn, Kern, Merced, Monterey, Sacramento, San Joaquin, San Luis Obispo, Solano, Stanislaus, Sutter, Tehama, and Yolo counties. Presumed extirpated in Napa and San Diego counties (CDFW 2025, CNPS 2025).	March to June	**Low Potential**. Preferred suitable habitat is marginal in the BSA. Additionally, there are no documented CNDDB occurrences of this species within a 5-mile radius of the BSA (CDFW 2025).
Hesperolinon breweri	Brewer's western flax	Linaceae	-	-	1B.2	Annual herb found in chaparral, cismontane woodland, and valley and foothill grassland from 100 to	May to July	**Low Potential**. Preferred suitable habitat is marginal in the BSA given that there

Appendix 5.2B, Table 5.2B-1
Special-status Plant Species with Potential to Occur in the BSA
Viracocha Hill BESS Project

Scientific Name	Common Name	Family	Status[a]			Habitat	Blooming Period	Potential for Occurrence within the BSA[b]
			Federal	State	CNPS			
						2,950 feet. Usually found on serpentinite soils. Known in Contra Costa, Napa, and Solano counties (CDFW 2025, CNPS 2025).		are no serpentine soils present. Additionally, there are no documented CNDDB occurrences of this species within a 5-mile radius of the BSA (CDFW 2025).
Hibiscus lasiocarpus var. occidentalis	Woolly rose-mallow	Malvaceae	-	-	1B.2	A perennial, rhizomatous, aquatic emergent herb found in freshwater marshes and swamps from 0 to 400 feet. Occurs in freshwater-soaked riverbanks and low peat islands in sloughs. In California, known in the Delta watershed in Butte, Contra Costa, Colusa, Glenn, Sacramento, San Joaquin, Solano, Sutter, and Yolo counties (CDFW 2025, CNPS 2025; Jepson eFlora 2025).	June to November	**Absent**. There is no suitable habitat within the BSA to support this species.
Lasthenia ferrisiae	Alkali goldfields	Asteraceae	-	-	4.2	Annual herb found in vernal pools and saline flats above 2,400 feet. Known in numerous counties across California (CDFW 2025, CNPS 2025).	February to May	**Low Potential**. Preferred suitable habitat is marginal in the BSA. Additionally, there are no documented CNDDB occurrences of this species within a 5-mile

Appendix 5.2B, Table 5.2B-1
Special-status Plant Species with Potential to Occur in the BSA
Viracocha Hill BESS Project

Scientific Name	Common Name	Family	Status[a]			Habitat	Blooming Period	Potential for Occurrence within the BSA[b]
			Federal	State	CNPS			
								radius of the BSA (CDFW 2025).
Lathyrus jepsonii var. jepsonii	Delta tule pea	Fabaceae	-	-	1B.2	Perennial herb found in freshwater and brackish marshes, usually on marsh and slough edges, from 0 to 15 feet (CDFW 2025, CNPS 2025).	May to July (August to September)	**Absent**. There is no suitable marsh or slough habitat within the BSA to support this species.
Leptosiphon ambiguus	Serpentine leptosiphon	Polemoniaceae	-	-	4.2	An annual herb found in serpentine soils in cismontane woodland in elevations above 3,000 feet. Known in Alameda, Contra Costa, Fresno, Lake, Merced, Monterey, San Benito, San Mateo, Santa Clara, Santa Cruz, Stanislaus, and Tehama counties (CDFW 2025, CNPS 2025).	March to June	**Absent**. There are no suitable serpentine substrates within the BSA to support this species.
Lilaeopsis masonii	Mason's lilaeopsis	Apiaceae	-	R	1B.1	Rhizomatous herb found in brackish and freshwater marshes and swamps and riparian scrub from 0 to 33 feet. Known in Alameda, Contra Costa, Marin, Napa, Sacramento, San Joaquin, and Solano counties (CDFW 2025, CNPS 2025).	April to November	**Absent**. There is no suitable marsh or riparian scrub habitat within the BSA to support this species.

Appendix 5.2B, Table 5.2B-1
Special-status Plant Species with Potential to Occur in the BSA
Viracocha Hill BESS Project

Scientific Name	Common Name	Family	Status[a]			Habitat	Blooming Period	Potential for Occurrence within the BSA[b]
			Federal	State	CNPS			
Limosella australis	Delta mudwort	Scrophulariaceae	-	-	2B.1	Stoloniferous herb found in marshes and swamps from 0 to 10 feet. Known in Contra Costa, Marin, Sacramento, San Joaquin, and Solano counties (CDFW 2025, CNPS 2025).	April to August	**Absent**. There is no suitable marsh habitat within the BSA to support this species.
Madia radiata	Showy madia	Asteraceae	-	-	1B.1	Annual herb found in cismontane woodland and valley and foothill grassland from 82 to 2,952 feet. Known in Fresno, Kern, San Benito, San Luis Obispo, and Stanislaus counties. Presumed extirpated from Contra Costa, Kings, Monterey, San Joaquin, and Santa Barbara counties (CNPS 2025) (CDFW 2025, CNPS 2025).	March to May	**Low Potential**. Suitable habitat is present within the BSA; however, the BSA is outside the current known range. Additionally, there are no documented CNDDB occurrences of this species within a 5-mile radius of the BSA (CDFW 2025).
Myosurus minimus ssp. apus	Little mouse tail	Ranunculaceae	-	-	3.1	An annual herb found in vernal pools, wet fields, and lake shores from 0 to 2,400 feet. Known in Alameda, Butte, Colusa, Contra Costa, Fresno, Kern, Lake, Los Angeles, Merced, Orange, Riverside, San Bernardino, San Diego, San Luis Obispo, Solano,	March to June	**Moderate Potential**. Wetlands and pond margins within the BSA provide suitable habitat for this species. However, there are no documented CNDDB occurrences of this species

Appendix 5.2B, Table 5.2B-1
Special-status Plant Species with Potential to Occur in the BSA
Viracocha Hill BESS Project

Scientific Name	Common Name	Family	Status[a]			Habitat	Blooming Period	Potential for Occurrence within the BSA[b]
			Federal	State	CNPS			
						Tulare, Ventura, and Yolo counties (CDFW 2025, CNPS 2025).		within a 5-mile radius of the BSA (CDFW 2025).
Navarretia cotulifolia	Cotula navarretia	Polemoniaceae	-	-	4.2	Annual herb found on adobe clay sites in chaparral, cismontane woodland, closed-cone coniferous forest, coastal bluff scrub, coastal scrub, and lower montane coniferous forest from 15 to 6,005 feet (CNPS 2025).	May to June	**Absent**. There is no suitable habitat within the BSA to support this species.
Navarretia nigelliformis ssp. radians	Shining navarretia	Polemoniaceae	-	-	1B.2	Annual herb found in cismontane woodland, valley and foothill grassland, and in vernal pools from 250 to 3,300 feet. Known in Alameda, Contra Costa, Colusa, Fresno, Madera, Merced, Monterey, San Benito, San Joaquin, and San Luis Obispo counties (CDFW 2025, CNPS 2025).	March to July	**Moderate Potential**. Suitable habitat is present within the BSA. There is one documented CNDDB record of this species within a 5-mile radius of the BSA, which overlaps the southwestern portion of the BSA (CDFW 2025).
Oenothera deltoides ssp. howellii	Antioch Dunes evening-primrose	Onagraceae	E	E	1B.1	Perennial herb found in inland dunes from 0 to 100 feet. Blooms March through September (CDFW 2025, CNPS 2025).	March to September	**Absent**. There are no inland dunes within the BSA to support this species.

Appendix 5.2B, Table 5.2B-1
Special-status Plant Species with Potential to Occur in the BSA
Viracocha Hill BESS Project

Scientific Name	Common Name	Family	Status[a]			Habitat	Blooming Period	Potential for Occurrence within the BSA[b]
			Federal	State	CNPS			
Plagiobothrys glaber	Hairless popcornflower	Boraginaceae	-	-	1A	An annual herb found in alkaline meadows and seeps, and coastal salt marshes and swamps from 49 to 590 feet. Last confirmed sighting in 1954. Possibly relocated near Antioch; identification uncertain. All collections since 1930s located in the Hollister area. Presumed extinct in California (CDFW 2025, CNPS 2025).	March to May	**Absent**. Suitable habitat is present within the BSA but species is presumed extinct.
Puccinellia simplex	California alkali grass	Poaceae	-	-	1B.2	Annual herb found in alkaline, vernally mesic sinks, flats, and lake margins within chenopod scrub, meadows, seeps, valley and foothill grassland, and vernal pools from 7 to 3,050 feet. Known in Alameda, Butte, Contra Costa, Colusa, Fresno, Glenn, Kern, Lake, Los Angeles, Madera, Merced, Napa, San Bernardino, Santa Clara, Santa Cruz, San Luis Obispo, Solano, Stanislaus, Tulare, and Yolo counties. Presumed	March to May	**Moderate Potential**. Suitable habitat is present within the BSA. There are three documented CNDDB records of this species within a 5-mile radius of the BSA, with the nearest EO located approximately 1.4 miles to the south off Altamont Pass Road (CDFW 2025).

Appendix 5.2B, Table 5.2B-1
Special-status Plant Species with Potential to Occur in the BSA
Viracocha Hill BESS Project

Scientific Name	Common Name	Family	Status[a]			Habitat	Blooming Period	Potential for Occurrence within the BSA[b]
			Federal	State	CNPS			
						extirpated from Kings County (CDFW 2025, CNPS 2025).		
Ravenella exigua	Chaparral harebell	Campanulaceae	-	-	1B.2	Annual herb found in rocky (usually serpentinite) chaparral from 902 to 4,100 feet. Known in Alameda, Contra Costa, Merced, San Benito, Santa Clara, and Stanislaus counties (CDFW 2025, CNPS 2025).	May to June	**Absent**. There is no suitable habitat within the BSA to support this species.
Scutellaria galericulata	Marsh skullcap	Lamiaceae	-	-	2B.2	Perennial rhizomatous herb found on mesic sites within lower montane coniferous forest, marshes and swamps, and meadows and seeps from 0 to 6,890 feet (CDFW 2025, CNPS 2025).	June to September	**Absent**. There is no suitable habitat within the BSA to support this species.
Senecio aphanactis	Chaparral ragwort	Asteraceae	-	-	2B.2	Annual herb found in chaparral, cismontane woodland, and coastal scrub from 50 to 2,625 feet. Known in the following counties: Alameda, Contra Costa, Fresno, Los Angeles (including Santa Catalina Island), Merced, Monterey, Orange, Riverside,	January to April	**Absent**. There is no suitable habitat within the BSA to support this species.

Appendix 5.2B, Table 5.2B-1
Special-status Plant Species with Potential to Occur in the BSA
Viracocha Hill BESS Project

Scientific Name	Common Name	Family	Status[a]			Habitat	Blooming Period	Potential for Occurrence within the BSA[b]
			Federal	State	CNPS			
						Santa Barbara (including Santa Cruz Island and Santa Rosa Island), Santa Clara, Santa Catalina Island, , San Diego, San Luis Obispo, Solano, and Ventura (CDFW 2025, CNPS 2025).		
Spergularia macrotheca var. longistyla	Long styled sand spurrey	Caryophyllaceae	-	-	1B.2	A perennial herb found in alkaline marshes, seeps and meadows from 0 to 640 feet. Known in Alameda, Contra Costa, Fresno, Marin, Mendocino, Napa, Placer, and Solano counties (CDFW 2025, CNPS 2025).	February to May	**Moderate Potential**. Suitable habitat is present within the BSA. There are 10 documented CNDDB occurrences of this species within a 5-mile radius of the BSA, with the nearest EO located approximately 1.4 miles to the south of Altamont Pass Road (CDFW 2025).
Symphyotrichum lentum	Suisun Marsh aster	Asteraceae	-	-	1B.2	Perennial rhizomatous herb found in brackish and freshwater marshes, most often seen along sloughs with *Phragmites* spp., *Scirpus* spp., *Rubus* spp., and *Typha* spp., from 0 to 45 feet (CDFW 2025, CNPS 2025).	May to November	**Absent**. There is no suitable habitat within the BSA to support this species.

Appendix 5.2B, Table 5.2B-1
Special-status Plant Species with Potential to Occur in the BSA
Viracocha Hill BESS Project

Scientific Name	Common Name	Family	Status[a]			Habitat	Blooming Period	Potential for Occurrence within the BSA[b]
			Federal	State	CNPS			
Trifolium hydrophilum	Saline clover	Fabaceae	-	-	1B.2	Annual herb found in salt marshes and swamps, open mesic and alkaline soils of valley and foothill grassland, and vernal pools from 0 to 985 feet. Known in the Central Valley, Bay Area, south Coast Ranges, and Central Coast (CDFW 2025, CNPS 2025).	April to June	**Low Potential**. Typical salt marsh habitat is not present within the BSA. There are no documented CNDDB records of this species within a 5-mile radius of the BSA (CDFW 2025).
Tropidocarpum capparideum	Caper-fruited tropidocarpum	Brassicaceae	-	-	1B.1	Annual herb found in alkaline hills of valley and foothill grassland from 3 to 1,500 feet in Alameda, Contra Costa, Monterey, San Joaquin, and San Luis Obispo Counties. (CDFW 2025, CNPS 2025).	March to April	**High Potential**. Suitable habitat is present within the BSA. This species has a CNDDB occurrence approximately 2.3 miles to the southwest. Altamont series soils underlying annual grassland habitat on site are potentially suitable but may not have ideal surface chemistry for this species (CNPS 2025, NRCS 2025).

[a] Status abbreviations:

CNPS = California Native Plant Society

E = Endangered

CRPR Designations:

1A = presumed extirpated or extinct because they have not been seen or collected in the wild in California for many years

1B = rare throughout their range with the majority of them endemic to California

2A = presumed extirpated because they have not been observed or documented in California for many years

2B = Except for being common beyond the boundaries of California, plants with a California Rare Plant Rank of 2B would have been ranked 1B

3 = lack the necessary information to assign them to one of the other ranks or to reject them

4 = limited distribution or infrequent throughout a broader area in California

EO = Element Occurrence

Citations:

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Appendix 5.2B, Table 5.2B-2
Special-status Wildlife Species with Potential to Occur in the BSA
Viracocha Hill BESS Project

Scientific Name	Common Name	Status[a]			Habitat	Potential For Occurrence within the BSA
		Federal	State	CDFW		
Invertebrates						
Bombus occidentalis	Western bumble bee	-	CE	-	Open grassy areas, urban parks and gardens, chaparral and shrub areas, and mountain meadows.	**Absent.** Required flowering plants and suitable habitat are not present within the BSA. CDFW range data further suggest species' extant range does not overlap the BSA.
Bombus crotchii	Crotch's bumble bee	-	CE	-	Nest underground in scrub grassland habitats, and individuals forage at sages, lupines, medics, phacelias, and milkweeds (*Asclepias* spp.).	**Low Potential.** Habitat for this species, including annual grassland, small mammal burrows, and floral host plants occur within the BSA at low densities. However, current land use such as long history of heavy grazing, as well as naturally high wind conditions, reduce potential for the species to occur. There is one CNDDB occurrence 9.4 miles southeast of the BSA (CDFW 2025).
Branchinecta conservatio	Conservancy fairy shrimp	E	-	-	Inhabits vernal pools in California's Central Valley from Tehama County in the north to Merced County in the south. There is one outlying population in Ventura County's Interior Coast Ranges.	**Absent.** Vernal pool habitat is absent from the BSA.
Branchinecta longiantenna	Longhorn fairy shrimp	E	-	-	Found from eastern margin of central Coast Ranges from Contra Costa to San Luis Obispo Counties; disjunct population in Madera County. Inhabits small, clear pools in sandstone rock outcrops of clear to	**Absent.** Vernal pool habitat is absent from the BSA.

Appendix 5.2B, Table 5.2B-2
Special-status Wildlife Species with Potential to Occur in the BSA
Viracocha Hill BESS Project

Scientific Name	Common Name	Status[a]			Habitat	Potential For Occurrence within the BSA
		Federal	State	CDFW		
					moderately turbid clay- or grass-bottomed pools.	
Branchinecta lynchi	Vernal pool fairy shrimp	T	-	-	Found in Central Valley, central and south Coast Ranges from Tehama to Santa Barbara Counties; isolated populations in Riverside County. They are common in vernal pools; also found in sandstone rock outcrop pools.	**Absent.** Vernal pool habitat is absent from the BSA.
Danaus plexippus	Monarch butterfly	C	-	-	Flowering plants and milkweed are required components of monarch habitat. Habitat includes annual grassland. Adult monarchs feed on the nectar of many flowers during breeding and migration, but they lay eggs on milkweed plants.	**Low Potential.** Habitat for this species, including annual grassland, floral nectar plants, and larval host plant narrow-leafed milkweed (*Asclepias fascicularis*) occurs within the BSA. However, current land use and a long history of heavy grazing, as well as naturally high wind conditions reduce potential for this species to occur. The nearest CNDDB occurrence is more than 10 miles southeast of the BSA. There is a Western Monarch Milkweed Mapper observation 9 miles south of the BSA from 2023 (Western Monarch Milkweed Mapper 2025).
Lepidurus packardi	Vernal pool tadpole shrimp	T	-	-	Found in vernal pools and ephemeral stock ponds from Shasta to Merced Counties.	**Absent**. Vernal pool habitat is absent from the BSA.

Appendix 5.2B, Table 5.2B-2
Special-status Wildlife Species with Potential to Occur in the BSA
Viracocha Hill BESS Project

Scientific Name	Common Name	Status[a]			Habitat	Potential For Occurrence within the BSA
		Federal	State	CDFW		
Desmocerus californicus	Valley elderberry longhorn beetle	T	-	-	Found throughout the Central Valley in riparian and oak savanna habitats with elderberry shrubs and streamside habitats less than 3,000 feet above sea level. Elderberry shrub is the host plant.	**Absent.** Elderberry host plants are absent from the BSA.
Fish						
Acipenser medirostris	Green sturgeon	T	-	SSC	Found in marine waters of the Pacific Ocean from the Bering Sea to Ensenada, Mexico. Uses rivers from British Columbia south to the Sacramento River, primarily in the Klamath/Trinity and Sacramento Rivers, for spawning.	**Absent.** BSA is outside of species' known range, and no suitable habitat is present in BSA.
Hypomesus transpacificus	Delta smelt	T	E	-	Sacramento–San Joaquin Delta. Seasonally in Suisun Bay, Carquinez Strait, and San Pablo Bay. Seldom found at salinities greater than 10 ppt. Most often at salinities less than 2 ppt.	**Absent.** No suitable marine or estuarine habitat is present within the BSA.
Oncorhynchus mykiss	Steelhead - Central Valley DPS	T	-	-	Inhabits Sacramento and San Joaquin Rivers and their Tributaries. Spawns and spends a portion of its life in inland streams, typically maturing in the open ocean	**Absent.** No perennial streams suitable for anadromous fish are present in the BSA.

Appendix 5.2B, Table 5.2B-2
Special-status Wildlife Species with Potential to Occur in the BSA
Viracocha Hill BESS Project

Scientific Name	Common Name	Status[a]			Habitat	Potential For Occurrence within the BSA
		Federal	State	CDFW		
Spirinchus thaleichthys	Longfin smelt	C	T	-	Euryhaline, nektonic, and anadromous. Found in open waters of estuaries, mostly in middle or bottom of water column.	**Absent.** No suitable marine or estuarine habitat is present within the BSA.
Thaleichthys pacificus	eulachon	T	-	SSC	Spawns in major river systems along the Pacific coast and spends the majority of its life in coastal waters.	**Absent.** No suitable marine or estuarine habitat is present within the BSA.
Amphibians						
Ambystoma californiense	California tiger salamander - Central California DPS Population 1	T	T	WL	Needs underground refuges, especially ground squirrel, gopher, or other fossorial mammal burrows, and vernal pools or other generally seasonal water sources for breeding uses.	**Present.** Highly suitable upland habitat with suitable burrows is present within the BSA. Suitable breeding habitat within known migratory distances for the species is also present in the form of ephemeral pools and stock ponds. This species has been incidentally observed by Jacobs biologists breeding 0.75 mile south of the BSA. There are 218 CNDDB occurrences within 10 miles of the BSA, with the closest occurrence located approximately 0.12 mile west of the BSA (CDFW 2025).
Rana boylii	Foothill yellow-legged frog – West/Central Coast DPS	T	E	SSC	Partly shaded, shallow streams and riffles with a rocky substrate in a variety of habitats.	**Absent.** No suitable aquatic habitat is present within the BSA.

Appendix 5.2B, Table 5.2B-2
Special-status Wildlife Species with Potential to Occur in the BSA
Viracocha Hill BESS Project

Scientific Name	Common Name	Status[a]			Habitat	Potential For Occurrence within the BSA
		Federal	State	CDFW		
Rana draytonii	California red-legged frog	T	-	SSC	Found along the coast and coastal mountain ranges of California from Mendocino County to San Diego County and in the Sierra Nevada from Butte County to Stanislaus County. Requires permanent and semi-permanent aquatic habitats, such as creeks and cold-water ponds, with emergent and submergent vegetation; may estivate in rodent burrows or cracks during dry periods.	**Present.** The BSA provides highly suitable upland dispersal habitat and aquatic non-breeding habitat. The pond within the BSA does not contain suitable emergent vegetation to be considered breeding habitat. This species has been incidentally observed by Jacobs biologists breeding 0.75 mile south of the BSA, and adults were observed incidentally by Jacobs biologists 0.2 mile west of the Project. There are 212 CNDDB occurrences within 10 miles of the BSA, with the closest occurrence located approximately 0.12 mile west of the BSA (CDFW 2025).
Critical habitat, *Rana draytonii*	Critical habitat, California red-legged frog	T	-	SSC	Physical or biological features designations include: 1) aquatic breeding habitat, 2) aquatic non-breeding habitat, 3) upland habitat, 4) dispersal habitat.	**Present.** The BSA is entirely within critical habitat for California red-legged frog and contains suitable upland dispersal and aquatic non-breeding habitat. (Unit ALA-2).
Spea hammondi	Western spadefoot	FPT	-	SSC	Found in soil cracks and burrows within grasslands, scrublands, chaparral, and woodlands in the Sierra Nevada foothills, Central Valley, Coast Ranges, and coastal counties in southern California. Breeds in a wide variety of slow-moving or stagnant	**High Potential.** The BSA is within the species' known range, and suitable upland and breeding habitat is present. There are five CNDDB occurrences within 10 miles of the BSA, the closest being 6.1 miles south of the BSA (CDFW 2025).

Appendix 5.2B, Table 5.2B-2
Special-status Wildlife Species with Potential to Occur in the BSA
Viracocha Hill BESS Project

Scientific Name	Common Name	Status[a]			Habitat	Potential For Occurrence within the BSA
		Federal	State	CDFW		
					waters, including puddles, vernal pools, stock ponds, and slow-moving streams.	
Reptiles						
Actinemys marmorata	Northwestern pond turtle	FPT	-	SSC	Occupies ponds, marshes, rivers, streams, and irrigation canals from Baja California to Washington with muddy or rocky bottoms and with watercress, cattails, water lilies, or other aquatic vegetation in woodlands, grasslands, and open forests. Nests are typically constructed in upland habitat within 0.25 mile of aquatic habitat.	**High Potential.** Suitable upland nesting habitat is present in the BSA. Five adult western pond turtles were incidentally observed by Jacobs biologists in a pond 0.3 mile northeast of the BSA in April 2025, adjacent to Bethany Reservoir, during spring Swainson's hawk surveys for the Project.
Anniella pulchra	Northern California legless lizard	-	-	SSC	Occurs in moist warm loose soil with plant cover. Occurs in sparsely vegetated areas of beach dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, and stream terraces with sycamores, cottonwoods, or oaks. Leaf litter under trees and bushes in sunny areas and dunes stabilized with bush lupine and mock heather often indicate suitable habitat.	**Absent.** The BSA is within the known range of this species, but microhabitat variables, including moist soils and leaf litter are absent from the BSA. There are three CNDDB occurrences of this species within 10 miles of the BSA, the closest being 7.77 miles southeast of the BSA (CDFW 2025).
Arizona elegans occidentalis	California glossy snake	-	-	SSC	Habitats include barren to sparse shrubby desert, sagebrush flats, grassland, sandhills, coastal scrub, chaparral slopes, and sometimes oak-hickory woodland, generally	**Moderate Potential.** Suitable habitat is present in the BSA, and the BSA overlaps the northern extent of the species' range. There are six CNDDB occurrences within 10 miles of the BSA,

Appendix 5.2B, Table 5.2B-2
Special-status Wildlife Species with Potential to Occur in the BSA
Viracocha Hill BESS Project

Scientific Name	Common Name	Status[a]			Habitat	Potential For Occurrence within the BSA
		Federal	State	CDFW		
					in open areas with sandy or loamy soil, though rocks may be present. Burrows underground in small mammal burrows.	the closest being 4.27 miles south of the BSA (CDFW 2025).
Masticophis flagellum ruddocki	San Joaquin coachwhip	-	-	SSC	Occurs in open, dry, vegetative associations with little or no tree cover; in valley grassland and saltbush scrub associations; and often occurs in association with mammal burrows from Colusa County in the Sacramento Valley southward to the grapevine in the San Joaquin Valley and westward into the inner coast ranges.	**Moderate Potential.** Suitable grassland habitat is present within the BSA; known occurrences approximately 3.88 miles southwest of the BSA (CDFW 2025).
Masticophis lateralis euryxanthus	Alameda whipsnake	T	T	-	Typically found in chaparral and scrub habitats but will also use adjacent grassland, oak savanna, and woodland habitats. Mostly south-facing slopes and ravines, with rock outcrops, deep crevices, or abandoned rodent burrows.	**Absent.** Although marginally suitable dispersal/grassland habitat is present within the BSA, the BSA lacks significant areas of shrub/scrub habitat that this species prefers, and the Project is outside the species' known range.
Phrynosoma blainvilli	Blainville's (= Coast) horned lizard	-	-	SSC	Found in grasslands, brushlands, woodlands, and open coniferous forest with sandy or loose soil; requires abundant ant colonies for foraging.	**Low Potential.** Annual grasslands in the BSA provide potential habitat for the species. Loose soils and basking areas are also present within the BSA. The BSA is within the species' historical range but is outside its extant range (Hansen and Shedd 2025). There are 12 CNDDB occurrences within 10 miles of the BSA,

Appendix 5.2B, Table 5.2B-2
Special-status Wildlife Species with Potential to Occur in the BSA
Viracocha Hill BESS Project

Scientific Name	Common Name	Status[a]			Habitat	Potential For Occurrence within the BSA
		Federal	State	CDFW		
						the closest being 3.84 miles south of the BSA (CDFW 2025).
Thamnophis gigas	Giant garter snake	T	T	-	Prefers freshwater marsh and low gradient streams. Has adapted to drainage canals and irrigation ditches. This is the most aquatic of the garter snakes in California.	**Absent.** Outside the known range of this species (Hansen and Shedd 2025), and no suitable marsh or aquatic habitat is present in the BSA.
Birds						
Accipiter cooperii	Cooper's hawk	-	-	WL	Inhabits a wide variety of habitats and nests primarily in large trees in dense forested areas.	**Low Potential.** The BSA does not provide the forested or semi-open woodland habitat that this species prefers. This species is not expected to nest in the BSA but may fly through the BSA.
Agelaius tricolor	Tricolored blackbird	-	T	SSC	Requires open water and protected nesting substrate, which may also occur in uplands, and foraging areas with insect prey within a few kilometers of the colony.	**Present.** A flock of 200 tricolored blackbird was observed foraging in the BSA during 2025 wildlife surveys. There are 20 CNDDB occurrences within 10 miles of the BSA (CDFW 2025). Suitable foraging habitat is present within the BSA. The BSA does not contain high-quality nesting habitat for this species, and nesting is not expected.

Appendix 5.2B, Table 5.2B-2
Special-status Wildlife Species with Potential to Occur in the BSA
Viracocha Hill BESS Project

Scientific Name	Common Name	Status[a]			Habitat	Potential For Occurrence within the BSA
		Federal	State	CDFW		
Ammodramus savannarum	Grasshopper sparrow	-	-	SSC	Inhabits grasslands, prairies, hayfields, and open pastures with little to no scrub cover and often with some bare ground. Nests on the ground within grasslands.	**High Potential.** Suitable habitat is present throughout the BSA. There is one CNDDB occurrence of this species within 10 miles of the BSA, approximately 6.4 miles southeast of the BSA (CDFW 2025).
Aquila chrysaetos	Golden eagle	-	-	FP	Rolling foothills, mountain areas, sage-juniper flats, and desert. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.	**Present.** The species is known to occur in the APWRA and was observed soaring over the BSA during 2024 and 2025 surveys; suitable foraging habitat is present within the BSA. No suitable nesting habitat is present in the BSA, but golden eagles are known to nest within 1 mile of planned activities.
Asio flammeus	Short-eared owl	-	-	SSC	Forages in open grasslands, meadows, prairies, and tundra. Nests on the ground in tall, grassy vegetation.	**Present.** The BSA contains suitable foraging and nesting habitat. This species was observed approximately 0.95 mile east in 2023 during biological surveys for a neighboring Project. There is one CNDDB occurrence within 10 miles of the BSA, approximately 7 miles southeast of the BSA (CDFW 2025).
Athene cunicularia hypugaea	Western burrowing owl	-	C	SSC	Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation.	**Present.** Suitable grassland habitat is present, and this species was observed in the BSA during 2024 and 2025 surveys.

Appendix 5.2B, Table 5.2B-2
Special-status Wildlife Species with Potential to Occur in the BSA
Viracocha Hill BESS Project

Scientific Name	Common Name	Status[a]			Habitat	Potential For Occurrence within the BSA
		Federal	State	CDFW		
Buteo regalis	Ferruginous hawk	-	-	WL	Inhabits open, arid grasslands, prairie, and shrub steppe regions across North America, where it breeds in areas with cliffs, outcrops, and tree groves for nesting.	**Present.** Species has been observed in the BSA during 2024 and 2025 surveys but is only present in the region during the winter nonbreeding season.
Buteo swainsoni	Swainson's hawk	-	T	-	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannas, and agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.	**Present.** Suitable foraging habitat is present within the BSA, and suitable nesting habitat is present within 0.5 mile of the BSA. There are 49 CNDDB occurrences within 10 miles of the BSA, with the closest occurrence located approximately 1.25 miles northwest of the BSA (CDFW 2025). This species was observed soaring over the BSA during 2025 surveys.
Circus hudsonius	Northern harrier	-	-	SSC	Coastal salt and freshwater marshes, nesting and foraging habitats in grasslands and agricultural fields.	**Present.** Species was observed in the BSA during 2024 and 2025 surveys; suitable nesting and foraging habitat is present in annual grasslands throughout the BSA.
Elanus leucurus	White-tailed kite	-	-	FP	Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland.	**High Potential.** Species is known to occur in the APWRA; suitable nesting habitat is limited to a few eucalyptus trees near the BSA; species could forage in annual grassland throughout the BSA. The nearest documented nest is 1.78 miles northeast of the BSA (CDFW 2025).

Appendix 5.2B, Table 5.2B-2
Special-status Wildlife Species with Potential to Occur in the BSA
Viracocha Hill BESS Project

Scientific Name	Common Name	Status[a]			Habitat	Potential For Occurrence within the BSA
		Federal	State	CDFW		
Eremophila alpestris actia	California horned lark	-	-	WL	Found from grasslands along the coast and deserts near sea level to alpine dwarf-shrub habitat above treeline. Nests on the ground within grasslands.	**Present.** This species has been observed in the BSA during 2024 and 2025 surveys. Suitable nesting habitat is present throughout the BSA.
Falco mexicanus	Prairie falcon	-	-	WL	Inhabits open habitats ranging from tundra, chaparral, desert, and grassland prairies. Nests on cliff ledges.	**Present.** This species was observed during 2024 and 2025 surveys. Suitable foraging habitat is present in the BSA, but nesting habitat is absent.
Falco peregrinus anatum	American peregrine falcon	Delisted	Delisted	FP	Nests and roosts on protected ledges of high cliffs, usually adjacent to lakes, rivers, or marshes that support large populations of other bird species.	**Low Potential.** Potential winter migrant; foraging areas are limited and no suitable nesting habitat is present in the BSA.
Gymnogyps californianus	California condor	E	E	FP	Lives in rocky shrubland, coniferous forest, grassland, and oak savanna. They are often found near cliffs or large trees, which they use as nesting sites.	**Low Potential.** Suitable nesting habitat is absent from the BSA, and foraging habitat is marginal. Species may fly over the BSA during migration events.
Haliaeetus leucocephalus	Bald eagle	Delisted	E	FP	Requires large bodies of water with an abundant fish population. Feeds on fish, carrion, small mammals, and waterfowl. Nests are usually located within a 1-mile radius of water. Nests are most often situated in large trees with a commanding view of the area.	**Present.** Species winters in the APWRA and may forage near the BSA at Bethany Reservoir approximately 0.5 mile east; however, no suitable nesting or high-quality foraging habitat (large lakes, reservoirs, or rivers) is present in the BSA. Evidence of potential nesting within 1 mile of the BSA is minimal, but potential nesting substrates, such as large

Appendix 5.2B, Table 5.2B-2
Special-status Wildlife Species with Potential to Occur in the BSA
Viracocha Hill BESS Project

Scientific Name	Common Name	Status[a]			Habitat	Potential For Occurrence within the BSA
		Federal	State	CDFW		
						eucalyptus trees and high-voltage power line towers, exist within 1 mile of the BSA. A pair of bald eagles was observed soaring over the BSA during 2024 and 2025 surveys. Bald eagle copulation was observed near the BSA during spring 2025 surveys.
Lanius ludovicianus	Loggerhead shrike	-	-	SSC	Broken woodlands, savannah, pinyon-juniper, Joshua tree, and riparian woodlands, desert oases, scrub, and washes. Prefers open country for hunting, with perches and fairly dense shrubs and brush for nesting.	**Present.** Suitable foraging habitat is present and this species was observed within BSA during 2025 surveys. Nesting is unlikely to occur within the BSA, as dense thickets of brush and trees are absent.
Melospiza melodia pop. 1	Song sparrow (Modesto population)	-	-	SSC	Nests in dense vegetation low to the ground, often near bodies of standing water. Forages in a variety of woodland, riparian, and grassland habitats.	**Moderate Potential.** Suitable foraging habitat is present within the BSA, but nesting habitat is absent. The BSA represents the extreme western edge of the species' range. There are eight CNDDB occurrences of this species within 10 miles of the BSA, the closest being 4.56 miles northeast of the BSA (CDFW 2025).
Mammals						
Antrozous pallidus	Pallid bat	-	-	SSC	Occurs in a variety of habitats from desert to coniferous forest; most closely associated with oak, yellow pine, redwood, and giant sequoia habitats in Northern California. Prefers rocky outcrops, cliffs, and crevices	**Low Potential.** Roosting habitat is absent from the BSA, but this species may fly through the BSA during migrations or while foraging. There is one CNDDB occurrence of this species within 10 miles of the BSA (CDFW 2025).

Appendix 5.2B, Table 5.2B-2
Special-status Wildlife Species with Potential to Occur in the BSA
Viracocha Hill BESS Project

Scientific Name	Common Name	Status[a]			Habitat	Potential For Occurrence within the BSA
		Federal	State	CDFW		
					with access to open habitats for foraging. Uses caves, crevices, mines, and hollow trees for roosting.	
Corynorhinus townsendii	Townsend's big-eared bat	-	-	SSC	Roosts in caves, tunnels, mines, crevices, hollow trees, and buildings; usually near water throughout California.	**Low Potential.** Roosting habitat is absent from the BSA, but this species may fly through the BSA during migrations or while foraging. There is one CNDDB occurrence of this species within 10 miles of the BSA (CDFW 2025).
Neotoma fuscipes annectens	San Francisco dusky-footed woodrat	-	-	SSC	Inhabits forested and riparian habitats throughout the San Francisco Bay Area south towards the Santa Clara Valley. Creates large stick nests, referred to as middens.	**Absent.** The BSA is east of the known range of this species.
Taxidea taxus	American badger	-	-	SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents.	**Presumed Present.** Suitable habitat is present throughout the BSA. Jacobs biologists observed one adult badger at a den incidentally on April 8, 2025, 0.13 mile northeast of the BSA during spring burrowing owl surveys that were conducted within 547 yards of the project footprint. Badger digging sign has been observed within the BSA, but no individuals have been observed within the BSA.
Vulpes macrotis mutica	San Joaquin kit fox	E	T	-	Annual grasslands or grassy open stages with scattered shrubby vegetation. Needs	**Low Potential.** Annual grassland habitat in the BSA provides potential dispersal and denning habitat for San Joaquin kit fox. There are 35

Appendix 5.2B, Table 5.2B-2
Special-status Wildlife Species with Potential to Occur in the BSA
Viracocha Hill BESS Project

Scientific Name	Common Name	Status[a]			Habitat	Potential For Occurrence within the BSA
		Federal	State	CDFW		
					loose-textured sandy soils for burrowing, and suitable prey base.	CNDDB occurrences within 10 miles of the BSA, with the closest occurrence located approximately 0.13 mile northwest of the BSA (CDFW, 2025). The likelihood of occurrence is low because the species has not been detected in the Project vicinity in 25 years; dispersing San Joaquin kit foxes could, however, travel through or den in the BSA at the time of construction and operation.

[a] Status abbreviations:
- = not listed
C = Candidate
CE = Candidate Endangered
E = Endangered
FP = Fully Protected
SSC = CDFW Species of Special Concern
T = Threatened
WL = Watch List
Units:
ppt = parts per thousand
Citations:
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Appendix 5.2C - Wildlife Observed

Appendix 5.2C, Table 5.2C-1
Wildlife Species Observed
Viracocha Hill BESS Project

Wildlife Classification	Common Name	Species Name	Status[a]		
			Federal	State	CDFW
Birds	Golden eagle	*Aquila chrysaetos*	-	-	FP
Birds	Red-tailed hawk	*Buteo jamaicensis*	-	-	-
Birds	Ferruginous hawk	*Buteo regalis*	-	-	WL
Birds	Swainson's hawk	*Buteo swainsoni*	-	T	-
Birds	Northern harrier	*Circus hudsonius*	-	-	SSC
Birds	Bald eagle	*Haliaeetus leucocephalus*	Delisted	E	FP
Birds	California horned lark	*Eremophila alpestris actia*	-	-	WL
Birds	Mallard	*Anas platyrhynchos*	-	-	-
Birds	Bufflehead	*Bucephala albeola*	-	-	-
Birds	Common merganser	*Mergus merganser*	-	-	-
Birds	Great egret	*Ardea alba*	-	-	-
Birds	Great blue heron	*Ardea herodias*	-	-	-
Birds	Turkey vulture	*Cathartes aura*	-	-	-
Birds	Killdeer	*Charadrius vociferus*	-	-	-
Birds	Eurasian collared-dove	*Streptopelia decaocto*	-	-	-
Birds	Mourning dove	*Zenaida macroura*	-	-	-
Birds	American crow	*Corvus brachyrhynchos*	-	-	-
Birds	Common raven	*Corvus corax*	-	-	-
Birds	Prairie falcon	*Falco mexicanus*	-	-	WL
Birds	American kestrel	*Falco sparverius*	-	-	-
Birds	Red-winged blackbird	*Agelaius phoeniceus*	-	-	-
Birds	Tricolored blackbird	*Agelaius tricolor*	-	T	SSC
Birds	Brewer's blackbird	*Euphagus cyanocephalus*	-	-	-
Birds	Western meadowlark	*Sturnella neglecta*	-	-	-
Birds	Loggerhead shrike	*Lanius ludovicianus*	-	-	SSC
Birds	Gull species	*Laridae*	-	-	-
Birds	Savannah sparrow	*Passerculus sandwichensis*	-	-	-
Birds	White-crowned sparrow	*Zonotrichia leucophrys*	-	-	-
Birds	Double-crested cormorant	*Nannopterum auritum*	-	-	-

Appendix 5.2C, Table 5.2C-1
Wildlife Species Observed
Viracocha Hill BESS Project

Wildlife Classification	Common Name	Species Name	Status[a]		
			Federal	State	CDFW
Birds	Northern flicker	*Colaptes auratus*	-	-	-
Birds	Nuttall's woodpecker	*Picoides nuttallii*	-	-	-
Birds	Pied-billed grebe	*Podilymbus podiceps*	-	-	-
Birds	Mountain bluebird	*Sialia currucoides*	-	-	-
Birds	European starling	*Sturnus vulgaris*	-	-	-
Birds	Rufous hummingbird	*Selasphorus rufus*	-	-	-
Birds	Marsh wren	*Cistothorus palustris*	-	-	-
Birds	Black phoebe	*Sayornis nigricans*	-	-	-
Birds	Western kingbird	*Tyrannus verticalis*	-	-	-
Birds	Short-eared owl	*Asio flammeus*	-	-	SSC
Birds	Western burrowing owl	*Athene cunicularia*	-	C	SSC
Birds	Barn owl	*Tyto alba*	-	-	-
Mammals	American badger	*Taxidea taxa*	-	-	SSC
Mammals	California ground squirrel	*Otospermophilus beecheyi*	-	-	-
Mammals	Black-tailed jackrabbit	*Lepus californicus*	-	-	-
Mammals	cottontail	*Sylvilagus audubonii*	-	-	-
Reptiles	Northern Pacific rattlesnake	*Crotalus oreganus*	-	-	-
Reptiles	Gopher snake	*Pituophis catenifer*	-	-	-
Reptiles	Northwestern pond turtle	*Actinemys marmorata*	FP, T	-	SSC
Reptiles	Western fence lizard	*Sceloporus occidentalis*	-	-	-
Amphibians	Sierran treefrog	*Pseudacris regilla*	-	-	-
Amphibians	California toad	*Anaxyrus boreas halophilus*	-	-	-

[a] Status abbreviations:
- = not listed
C = Candidate
E = Endangered
FP = Fully Protected
SSC = CDFW Species of Special Concern
T = Threatened
WL = Watch List

Appendix 5.3A - Cultural Resources Technical Report

Appendix 5.3A – Cultural Resources Technical Report

Appendix 5.3A, Cultural Resources Technical Report has been docketed under request for confidential designation.

Appendix 5.4A – Geotechnical Investigation Report (Part A)

Appendix 5.4A, Geotechnical Investigation Report Parts A, B, and C Design was docketed February 14, 2025, TN# 261768and is not included in this submittal package. A copy of this appendix may be found online at https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=25-OPT-01.

Appendix 5.4A – Geotechnical Investigation Report (Part B)

Appendix 5.4A, Geotechnical Investigation Report Parts A, B, and C Design was docketed February 14, 2025, TN# 261774 and is not included in this submittal package. A copy of this appendix may be found online at https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=25-OPT-01.

Appendix 5.4A – Geotechnical Investigation Report (Part C)

Appendix 5.4A, Geotechnical Investigation Report Parts A, B, and C Design was docketed February 14, 2025, TN# 261775 and is not included in this submittal package. A copy of this appendix may be found online at https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=25-OPT-01.

Appendix 5.4B – Geotechnical Supplemental Memo

Appendix 5.4B, Geotechnical Supplemental Memo was docketed February 14, 2025, TN# 261777 and is not included in this submittal package. A copy of this appendix may be found online at https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=25-OPT-01.

Appendix 5.8A – Paleontological Locality Records

Appendix 5.8A, Paleontological Locality Records has been docketed under request for confidential designation.

Appendix 5.9A - Diesel Particulate Matter Construction Emissions

Appendix 5.9A

Construction DPM Emissions Summary

Diesel Exhaust $PM_{10/DPM}$ Annual Emissions

Year	PM_{10} Trucks (Onsite Trucks)	PM_{10} Trucks (Worker, Vendor, and Haul Trucks)	PM_{10} Non-truck	PM_{10} Total (Exhaust Emissions)
	ton/year	ton/year	ton/year	ton/year
2026	0.005	0.002	0.055	0.062
2027	0.003	0.000	0.008	0.011
2056	0.002	0.001	0.011	0.014

Notes:

The HRA analyzed onsite emissions from construction equipment (non-truck) and vehicles (onsite trucks). While emissions from worker, vendor, and haul truck trips would occur mostly offsite, they were conservatively included in the onsite emissions in the HRA.

Emissions Summary - DPM from Construction

Emissions Summary	Truck	Non-truck	Total Trucks + Non-Trucks (Exhaust Emissions)
Total DPM	lb/construction	lb/construction	lb/construction
	25.10	148.08	173.18
Average over 30 years	lb/year	lb/year	lb/year
	0.84	4.94	5.77

Emissions Summary - DPM from Operation

	Emergency Generator	Fire Pump
DPM (ton/year)	1.62E-03	2.07E-04
DPM (lb/year)	3.250	0.413

Note(s):

DPM in ton/year are from Appendix 5.1A.

DPM = diesel particulate matter

lb/year = pound(s) per year

ton/year = ton(s) per year

Appendix 5.9A

$PM_{2.5}$ Concentrations - Construction Phase

Summary of $PM_{2.5}$ Concentrations during Construction

	PM2.5 Emissions	Project PM2.5 Concentration at PMI	Project PM2.5 Concentration at MEIR	Project PM2.5 Concentration at MEIW
	lb/year	$\mu g/m^3$	$\mu g/m^3$	$\mu g/m^3$
2026	10,402	20.71	0.045	0.088
2027	7,913	15.75	0.035	0.067
2056	7,377	14.68	0.032	0.062

Conversion to $PM_{2.5}$ Ground Level Concentrations

2026 Emissions

	DPM emissions	5.77	lb/year		PM2.5 Emissions	10,402	lb/year
PMI #1037	Ground level DPM	1.15E-02	$\mu g/m^3$	PMI #1037	Ground level PM2.5	**20.71**	$\mu g/m^3$
	DPM emissions	5.77	lb/year		PM2.5 Emissions	10,402	lb/year
MEIR #41	Ground level DPM	2.52E-05	$\mu g/m^3$	MEIR #41	Ground level PM2.5	**0.045**	$\mu g/m^3$
	DPM emissions	5.77	lb/year		PM2.5 Emissions	10,402	lb/year
MEIW #33	Ground level DPM	4.88E-05	$\mu g/m^3$	MEIW #33	Ground level PM2.5	**0.088**	$\mu g/m^3$

2027 Emissions

	DPM emissions	5.77	lb/year		PM2.5 Emissions	7,913	lb/year
PMI #1037	Ground level DPM	1.15E-02	$\mu g/m^3$	PMI #1037	Ground level PM2.5	**15.75**	$\mu g/m^3$
	DPM emissions	5.77	lb/year		PM2.5 Emissions	7,913	lb/year
MEIR #41	Ground level DPM	2.52E-05	$\mu g/m^3$	MEIR #41	Ground level PM2.5	**0.035**	$\mu g/m^3$
	DPM emissions	5.77	lb/year		PM2.5 Emissions	7,913	lb/year
MEIW #33	Ground level DPM	4.88E-05	$\mu g/m^3$	MEIW #33	Ground level PM2.5	**0.067**	$\mu g/m^3$

2056 Emissions

	DPM emissions	5.77	lb/year		PM2.5 Emissions	7,377	lb/year
PMI #1037	Ground level DPM	1.15E-02	$\mu g/m^3$	PMI #1037	Ground level PM2.5	**14.68**	$\mu g/m^3$
	DPM emissions	5.77	lb/year		PM2.5 Emissions	7,377	lb/year
MEIR #41	Ground level DPM	2.52E-05	$\mu g/m^3$	MEIR #41	Ground level PM2.5	**0.032**	$\mu g/m^3$
	DPM emissions	5.77	lb/year		PM2.5 Emissions	7,377	lb/year
MEIW #33	Ground level DPM	4.88E-05	$\mu g/m^3$	MEIW #33	Ground level PM2.5	**0.062**	$\mu g/m^3$

Note(s):

$PM_{2.5}$ = particulate matter with a diameter of 2.5 microns or less

DPM = diesel particulate matter

lb/year = pound(s) per year

$\mu g/m^3$ = micrograms per cubic meter

PMI = point of maximum impact

MEIR = maximumly exposed individual resident

MEIW = maximumly exposed individual worker

$PM_{2.5}$ ground level concentrations were scaled based on the ground level concentrations of DPM from HARP2 modeling.

Appendix 5.10A - Environmental Justice

Appendix 5.10A Environmental Justice

Introduction

Executive Order (EO) 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," which required federal agencies to consider whether the project may result in disproportionately high and adverse human health or environmental effects on any minority or low-income population by performing an environmental justice analysis, was rescinded on January 20, 2025. Although EO 12898 can no longer be the basis for conducting environmental justice (EJ) impacts at the federal level, California law, which defines environmental justice as "the fair treatment of people of all races, cultures and income with respect to development, adoption, implementation, and enforcement of environmental laws, regulations, and policies" (Gov. Code § 65040.12), is applicable. Thus, this appendix was prepared in compliance with California law.

The purpose of this report is to determine whether significant adverse impacts associated with the proposed Viracocha Hill Battery Energy Storage System Project (Viracocha Hill BESS or Project)) are likely to fall disproportionately on minority or low-income populations. This appendix focuses on the populations that are located within the area potentially affected by the Project. In accordance with Gov. Code § 65040.12, this appendix documents where minority and low-income populations reside and examines whether significant adverse impacts identified are still present after mitigation measures are implemented (as reported in the various environmental analysis sections of this application) relative to these populations. This report also discusses the specific outreach efforts made to involve minority and low-income populations in the decision-making process. No significant disproportionate impacts are expected as a result of this Project; therefore, no significant effects of this Project are expected to fall disproportionately on minority or low-income populations.

Studies Performed and Coordination Conducted

In keeping with its commitment to environmental sustainability and access to all, California was one of the first states to codify the concept of EJ in its states.

Methodology and Approach

The Viracocha Hill BESS project was evaluated using the California Energy Commission (CEC) four-step EJ analysis:

1. Identification of a population of minority persons and persons with low income (that is, disadvantaged communities), living in an area potentially affected by a proposed project
2. Providing notice in appropriate languages (when possible) of a proposed project and opportunities for participation in public workshops for disadvantaged communities
3. Identification of areas potentially affected by various project-related emissions (for example, air quality, greenhouse gases, and hazardous materials) or other project-related nuisance effects (such as noise and traffic)
4. A determination of the potential for significant adverse disproportionate impact on an identified EJ population resulting from a proposed project alone, or in combination with other existing or planned projects in the area (that is, from cumulative impacts)

For information on the distribution of minority and low-income populations in the Viracocha Hill BESS Project area, 2020 Census data and the 2016-2020 American Community Survey (ACS) 5-year data were used. Minority and income data were reviewed at the finest level available from the Census (Census Tract).

Tables 5.10A-1 and 5.10A-2 show the distribution of the population within the 10-mile radius by minority and income, respectively. These tables are located at the end of this appendix.

Information on participation in workshops is discussed under "Outreach to Minority and Low-Income Populations." The environmental analyses prepared for the Viracocha Hill BESS were reviewed, and discussions with the environmental professionals who prepared these sections were conducted to determine whether there would be any remaining significant and adverse impacts, after proposed mitigation measures were implemented, that could potentially fall disproportionately on the identified EJ population.

Outreach to Minority and Low-Income Populations

The CEC's four-step EJ screening process requires that notice in appropriate languages (when possible) of a project be provided to disadvantaged communities, so they are made aware of opportunities for participation in public workshops.

As part of the application process, the CEC will provide information to residents in the area and provide opportunities for their involvement.

The CEC typically:

- Mails written notice to all property owners within 1,000 feet of the site and within 500 feet of the centerline of all linear corridors
- Publishes notice in the local newspaper announcing public workshops and hearings
- Provides access to information by submitting copies of key documents to local libraries and providing materials via a web page
- Holds hearings and workshops in the local community
- Assigns a public advisor to assist the public in participating in the process

Demographic Analysis

Distribution of the Minority Population

Based on the 2020 Census, the total population within a 10-mile radius of the Viracocha Hill BESS site is approximately 193,940. The minority population, in the Census Tracts within the 10-mile radius of the Viracocha Hill BESS site, composes 59.7% of this total population (see Table 5.10A-1). Figure 5.10A-1 identifies the minority population percentages of Census Tracts in the vicinity of the Viracocha Hill BESS based on 2020 Census data. As shown in Figure 5.10A-1, about two-thirds (65%) of the Census Tracts in the vicinity of the Viracocha Hill BESS are above 50% minority. These Census Tracts have minority population densities high enough (that is, greater than 50%) to be considered minority populations. Figures are provided at the end of this appendix.

Distribution of the Low-Income Population

Based on the 2020 ACS 5-year estimates dataset, the total population for whom poverty status is determined within a 10-mile radius of the Viracocha Hill BESS site was approximately 195,701. The low-income population, in the Census Tracts within the 10-mile radius of the Project, composed 5.7% of the total population (see Table 5.10A-2). Figure 5.10A-2 identifies the low-income population percentages of Census Tracts in the vicinity of Viracocha Hill BESS based on ACS data. Although the CEC's EJ screening calls for the use of a 50% threshold for determining the presence of a minority population, no similar threshold is provided for determining the presence of a low-income population. In the absence of any clear guidance, the presence of a low-income population can be determined in one of two ways: (1) use the same 50% threshold or (2) compare the distribution in the 10-mile radius area to the distribution in

the larger geography (that is, Alameda County, Contra Costa County, San Joaquin County, and the state of California) within which the 10-mile area is located. According to the 2020 ACS 5-year dataset, low-income populations in Alameda County, Contra County, San Joaquin County and the state of California were 9.3%, 8.2%, 3.7%, and 12.6%, respectively. Based on the 50% threshold, none of the Census Tracts (CTs) have low-income population densities greater than the threshold (see Figure 5.10A-2). Using the comparison to the distribution in the larger geography, none of the 13 CTs in Alameda County have low-income population densities greater than 9.3%. Six of the 9 CTs in Contra have low-income population densities that are higher than the county's 8.2% while 1 CT out of the 18 CTs in San Joaquin County have low-income population densities higher than the county's 13.7%. When compared to the state's low-income distribution of 12.6%, only 2 CTs (CT 3040.02 and CT 39) out of the 40 CTs in the vicinity of the Project have low-income population densities that are higher. Thus, while the first method shows that none of the CTs have low-income population densities high enough to be considered low-income, the second method shows that some of CTs have low-income population densities high enough to be considered low-income populations.

Results and Conclusion

As discussed in the Methodology and Approach section, for purposes of this analysis, the CEC four-step screening process was used to evaluate the potential EJ impacts associated with the Viracocha Hill BESS Project. As reported in the environmental analyses prepared for the Viracocha Hill BESS application, and further confirmed through discussions with the environmental professionals who prepared those sections, no significant adverse impacts are expected as a result of this Project after proposed mitigation measures are implemented. Consequently, none of the impacts of this Project can be described as significantly adverse. Because there are no significant adverse impacts expected as a result of this Project, this analysis concludes that no significant adverse effects of this Project are expected to fall disproportionately on minority or low-income populations. The Viracocha Hill BESS Project can, therefore, be considered to be consistent with the CEC EJ policy.

Bibliography and References

U.S. Census Bureau. 2022a. 2020 Redistricting Data SF (PL 94-171) – *Hispanic or Latino, and Not Hispanic or Latino By Race*. Available online: http://factfinder2.census.gov/. Accessed December 12.

U.S. Census Bureau. 2022b. 2020 American Community Survey (ACS) 5-Year Estimates – *Poverty in the Past 12 Months*. Available online: http://factfinder2.census.gov/. Accessed December 12.

Appendix Table 5.10A-1. 2020 Census Minority Data by Census Tracts Viracocha BESS 10-mile Radius

Census Tract	Population	White	Minority	Percent Minority
Census Tract 4511.03, Alameda County, California	1,480	960	520	35.1
Census Tract 4511.04, Alameda County, California	7,028	3,444	3,584	51.0
Census Tract 4512.01, Alameda County, California	7,271	3,729	3,542	48.7
Census Tract 4512.02, Alameda County, California	5,781	2,745	3,036	52.5
Census Tract 4514.01, Alameda County, California	6,053	3,261	2,792	46.1
Census Tract 4514.03, Alameda County, California	2,175	1,186	989	45.5
Census Tract 4514.04, Alameda County, California	6,613	2,217	4,396	66.5
Census Tract 4515.01, Alameda County, California	4,920	2,896	2,024	41.1
Census Tract 4515.03, Alameda County, California	6,520	3,540	2,980	45.7
Census Tract 4515.04, Alameda County, California	1,657	888	769	46.4
Census Tract 4515.05, Alameda County, California	3,177	2,225	952	30.0
Census Tract 4515.06, Alameda County, California	3,123	1,366	1,757	56.3
Census Tract 4516.01, Alameda County, California	5,003	3,387	1,616	32.3
Census Tract 3031.06, Contra Costa County, California	7,021	2,719	4,302	61.3
Census Tract 3031.07, Contra Costa County, California	6,966	2,832	4,134	59.3
Census Tract 3032.11, Contra Costa County, California	4,958	2,403	2,555	51.5
Census Tract 3040.01, Contra Costa County, California	5,748	3,168	2,580	44.9
Census Tract 3040.02, Contra Costa County, California	1,293	585	708	54.8
Census Tract 3040.03, Contra Costa County, California	3,550	2,619	931	26.2
Census Tract 3040.04, Contra Costa County, California	3,621	2,637	984	27.2
Census Tract 3040.07, Contra Costa County, California	4,706	2,614	2,092	44.5
Census Tract 3551.12, Contra Costa County, California	5,636	3,611	2,025	35.9
Census Tract 39, San Joaquin County, California	1,494	378	1,116	74.7
Census Tract 52.08, San Joaquin County, California	6,267	2,144	4,123	65.8
Census Tract 52.11, San Joaquin County, California	5,476	867	4,609	84.2
Census Tract 52.12, San Joaquin County, California	7,169	1,401	5,768	80.5
Census Tract 52.13, San Joaquin County, California	3,656	1,285	2,371	64.9
Census Tract 52.16, San Joaquin County, California	5,138	1,536	3,602	70.1
Census Tract 52.17, San Joaquin County, California	3,327	1,211	2,116	63.6
Census Tract 52.18, San Joaquin County, California	4,117	940	3,177	77.2
Census Tract 52.21, San Joaquin County, California	9,532	2,116	7,416	77.8
Census Tract 52.22, San Joaquin County, California	4,712	1,156	3,556	75.5
Census Tract 52.23, San Joaquin County, California	10,774	1,562	9,212	85.5
Census Tract 52.24, San Joaquin County, California	4,902	1,234	3,668	74.8

Census Tract	Population	White	Minority	Percent Minority
Census Tract 52.25, San Joaquin County, California	3,419	1,228	2,191	64.1
Census Tract 53.07, San Joaquin County, California	3,294	914	2,380	72.3
Census Tract 53.08, San Joaquin County, California	4,391	1,274	3,117	71.0
Census Tract 53.12, San Joaquin County, California	3,615	1,043	2,572	71.1
Census Tract 54.03, San Joaquin County, California	6,046	2,000	4,046	66.9
Census Tract 55.02, San Joaquin County, California	2,312	868	1,444	62.5
TOTAL	193,941	78,189	115,752	59.7

Source: U.S. Census Bureau 2020a

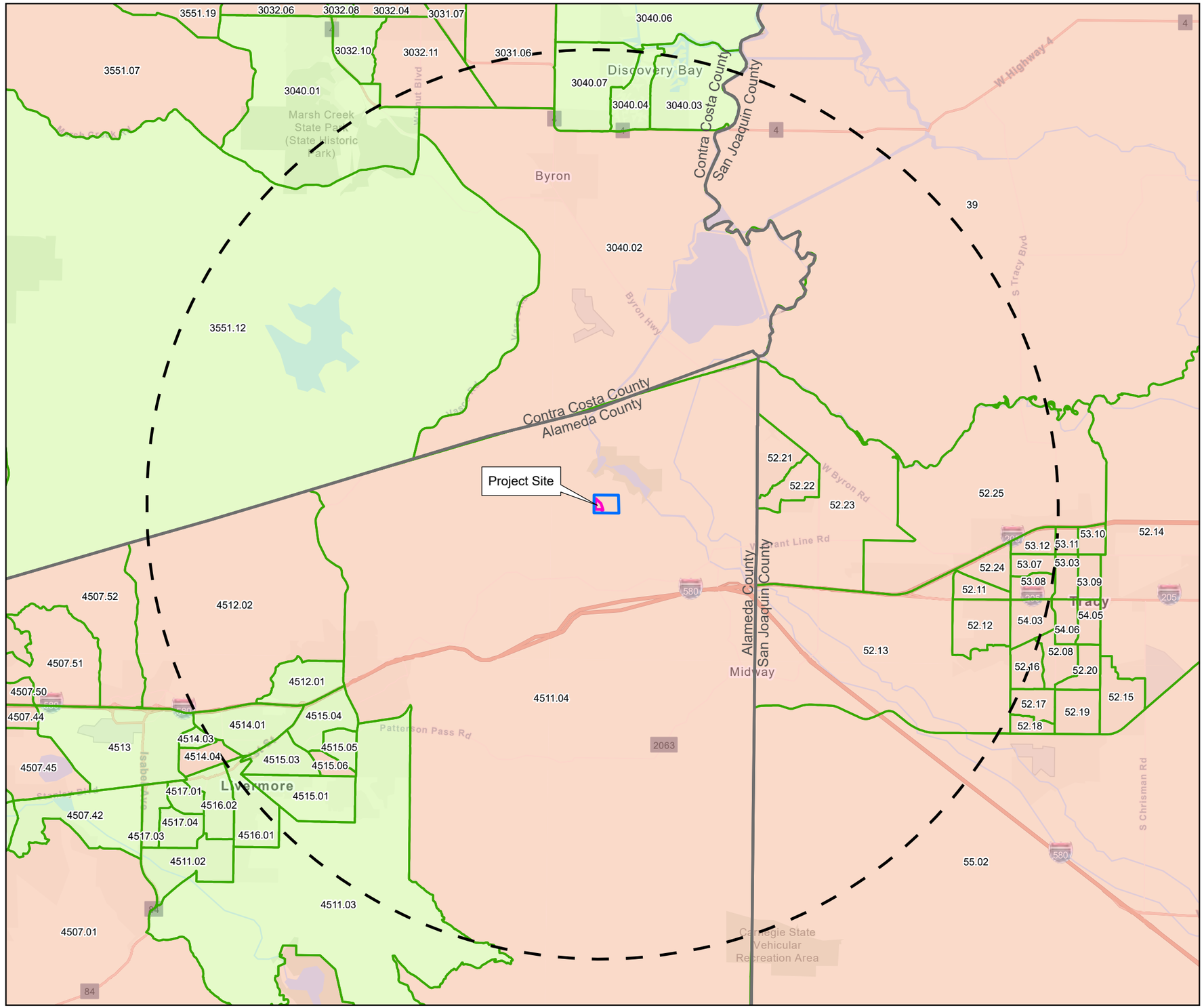
Appendix Table 5.10A-2. 2020 Low-Income Data by Census Tracts Viracocha BESS 10-mile Radius

Census Tract	Total Population*	Population below Poverty Level	Percent Low Income
Census Tract 3031.06; Contra Costa County; California	8,543	767	9.0
Census Tract 3031.07; Contra Costa County; California	7,436	823	11.1
Census Tract 3032.11; Contra Costa County; California	4,241	391	9.2
Census Tract 3040.01; Contra Costa County; California	5,912	69	1.2
Census Tract 3040.02; Contra Costa County; California	1,977	290	14.7
Census Tract 3040.03; Contra Costa County; California	3,424	140	4.1
Census Tract 3040.04; Contra Costa County; California	3,449	299	8.7
Census Tract 3040.07; Contra Costa County; California	4,969	458	9.2
Census Tract 3551.12; Contra Costa County; California	5,684	350	6.2
Census Tract 39; San Joaquin County; California	1,541	316	20.5
Census Tract 4511.03; Alameda County; California	1,363	30	2.2
Census Tract 4511.04; Alameda County; California	6,871	263	3.8
Census Tract 4512.01; Alameda County; California	7,292	436	6.0
Census Tract 4512.02; Alameda County; California	5,549	134	2.4
Census Tract 4514.01; Alameda County; California	5,933	439	7.4
Census Tract 4514.03; Alameda County; California	2,145	43	2.0
Census Tract 4514.04; Alameda County; California	6,537	426	6.5
Census Tract 4515.01; Alameda County; California	4,533	326	7.2
Census Tract 4515.03; Alameda County; California	5,955	179	3.0
Census Tract 4515.04; Alameda County; California	1,493	19	1.3
Census Tract 4515.05; Alameda County; California	3,191	54	1.7
Census Tract 4515.06; Alameda County; California	3,302	91	2.8
Census Tract 4516.01; Alameda County; California	4,848	181	3.7
Census Tract 52.08; San Joaquin County; California	6,581	248	3.8
Census Tract 52.11; San Joaquin County; California	4,602	445	9.7
Census Tract 52.12; San Joaquin County; California	7,679	78	1.0
Census Tract 52.13; San Joaquin County; California	3,685	13	0.4
Census Tract 52.16; San Joaquin County; California	4,903	236	4.8
Census Tract 52.17; San Joaquin County; California	3,564	332	9.3
Census Tract 52.18; San Joaquin County; California	3,649	267	7.3
Census Tract 52.21; San Joaquin County; California	9,226	171	1.9
Census Tract 52.22; San Joaquin County; California	5,078	61	1.2
Census Tract 52.23; San Joaquin County; California	10,793	475	4.4

Census Tract	Total Population*	Population below Poverty Level	Percent Low Income
Census Tract 52.24; San Joaquin County; California	5,536	565	10.2
Census Tract 52.25; San Joaquin County; California	3,291	6	0.2
Census Tract 53.07; San Joaquin County; California	3,191	176	5.5
Census Tract 53.08; San Joaquin County; California	4,119	316	7.7
Census Tract 53.12; San Joaquin County; California	3,332	296	8.9
Census Tract 54.03; San Joaquin County; California	6,381	675	10.6
Census Tract 55.02; San Joaquin County; California	3,903	312	8.0
TOTAL	195,701	11,196	5.7

Source: U.S. Census Bureau 2020b

* Population numbers are only those for whom poverty was determined and exclude full-time college students.



Legend

- County Boundary
- Project Study Area
- Viracocha BESS Equipment Yard
- 10-mile Project Site Radius
- Census Tract Boundary
- Population >50% Racial or Ethnic Minority
- Population <50% Racial or Ethnic Minority

Source:
1) ESRI World Street Map

N

0 2 4
Miles

Figure 5.10A-1
Environmental Justice Communities Racial and Ethnic Minorities
Viracocha Hill BESS Project
Alameda County, California

Jacobs

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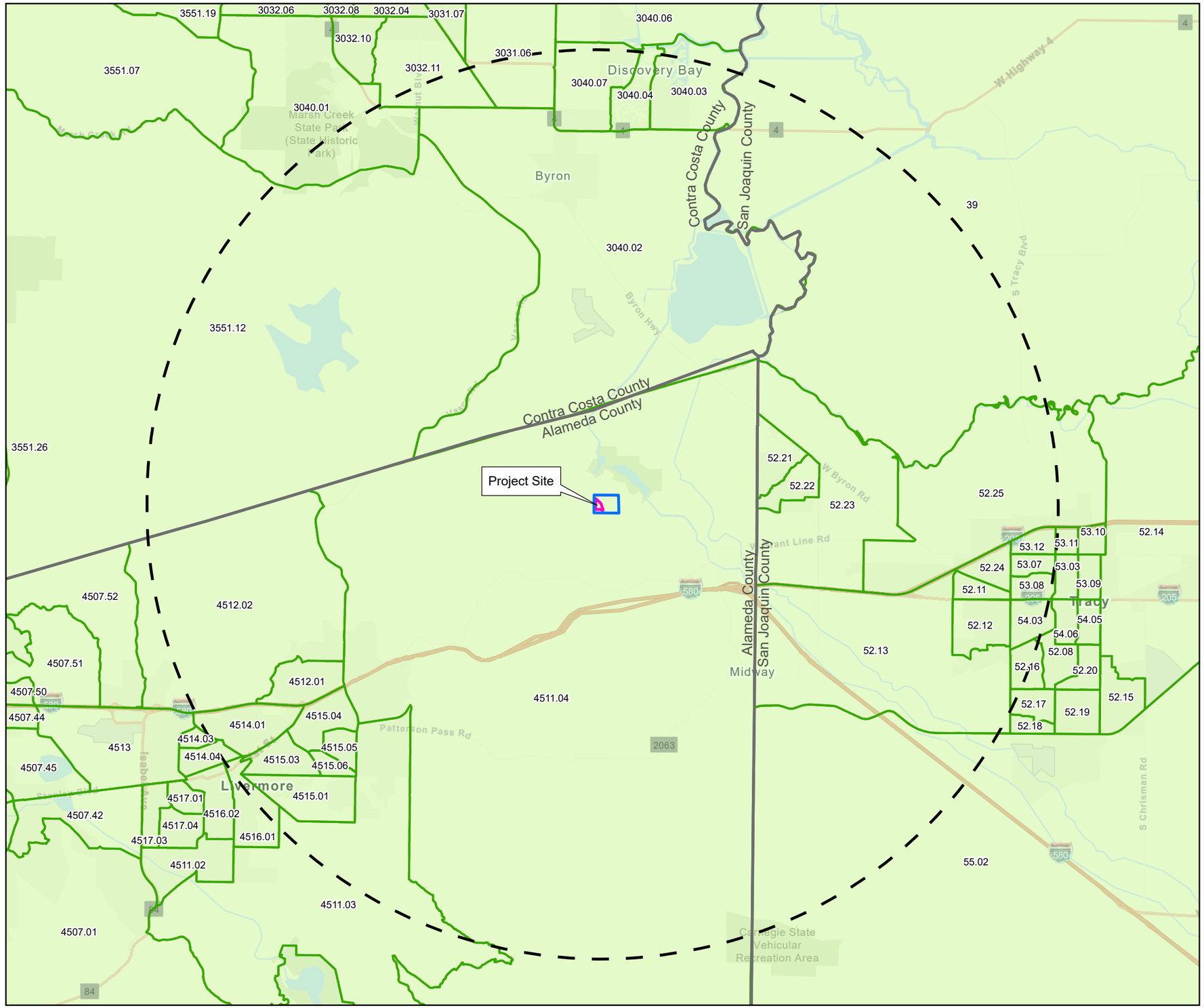

Legend

- County Boundary
- Project Study Area
- Viracocha BESS Equipment Yard
- 10-mile Project Site Radius
- Census Tract Boundary
- Population <50% Below Poverty Line
- Population >50% Below Poverty Line

Source:
1) ESRI World Street Map

N

0 2 4
Miles

Figure 5.10A-2
Environmental Justice Communities
Low Income
Viracocha Hill BESS Project
Alameda County, California

Jacobs

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Appendix 5.10B - Records of Conversation

RECORD OF CONVERSATION

Call To: Beth (Dispatcher 282) at Alameda County Sherifs Office

Phone No.: 510-272-6878

Date: March 31, 2025

Call From: Annie Wollmuth

Message Taken By: Annie Wollmuth

Subject: Alameda County Sherifs Office Service

3/31/2025: Called Alameda County Sheriffs Office. Spoke to Beth, who thought that the closest office serving the project station would be at 15001 1 Foothill Blvd., or the Eden Township Station. She wanted me to call the Trivalley Substation (Sector 5 Area) at 925-803-7916, or email Sergeant Marc Petrini at mpetrini@acgov.org to confirm that information because she was not sure.

3/31/2025: Called the Trivalley Substation at 925-803-7916. No response, left a voicemail.

3/31/2025: Emailed Sergeant Marc Petrini at mpetrini@acgov.org

4/1/2025: Called the Trivalley Substation at 925-803-7916. No response, left a voicemail.

RECORD OF CONVERSATION

Call To: Amy Noyes, Specialist Clerk, Alameda County Fire Department

Phone No.: 925-833-3473 Ext. 1128

Date: December 16, 2024

Call From: Annie Wollmuth

Message Taken By: Annie Wollmuth

Subject: Alameda County Fire Department Station 8 information

12/15/24: Called the Alameda County Fire Department, left voicemail

12/15/24: Amy called me back after work hours, left voicemail

12/16/24: Emailed Amy at email address she specified in voicemail, asking specifics about Alameda County Fire Department

12/16/24: Amy directed me to a Public Records Request Portal

12/17/24: I requested information through the ACFD Public Records Portal. There were issues with the portal working, so Amy and I ended up emailing back and forth to try to resolve the issues with the portal. She provided me with the following information:

- Address of Administration Office for Alameda County Fire Department: 6363 Clark Ave., Dublin, CA 94568; 925.833.3473
- 28 Stations in the department, Total sworn suppression personnel: 326 including Battalion Chiefs, Captains, Engineers and Firefighters
- Station 8 serves the project site, located at 7000 East Livermore Avenue, Livermore
- Crew 8 and Crew 20 are both housed at the same location. Due to the location of incident and the information received from our dispatch, most likely different apparatus was thought to be needed. Another possibility would be crew/apparatus availability
- Station 8 is populated with 3 personnel on duty at all times. If there is a fire, depending on type of fire, 4 more crews of 3 would also respond. Apparatus is listed for each station on the website.
- The hazmat team would be the crew on duty at the time. We have many individuals/crews that are hazmat trained.
- Alameda County Fire Department responds to over 48,000 calls per year in an area covering over 508 square miles including the cities of Dublin, Emeryville, Newark, San Leandro, Union City and all of unincorporated Alameda County. Response time completely depends on the variable circumstances at that time such as availability, weather, road conditions and traffic so it makes it difficult to predict. Under ideal conditions it would be approximately 35 minutes.
- Ambulance provider is Falck

RECORD OF CONVERSATION

Call To: April at STAT MED Urgent Care - Livermore

Phone No.: 925-315-8828

Date: March 31, 2025

Call From: Annie Wollmuth

Message Taken By: Annie Wollmuth

Subject: Trauma Center Serving Project Site

3/31/2025: Called and talked to April, who told me that this was not a trauma center, and that she thought Stanford Emergency Room would be the closest emergency/trauma center.

RECORD OF CONVERSATION

Call To: Rebecca at Stanford Emergency Room

Phone No.: 925-416-3418

Date: March 31, 2025

Call From: Annie Wollmuth

Message Taken By: Annie Wollmuth

Subject: Trauma Center Serving Project Site

3/31/2025: Called and no response, left a voicemail

4/2/2025: Called and talked to Rebecca, who spoke to the emergency response team at Stanford Emergency Room while I was on the phone, and they determined that San Joaquin General Hospital would be the trauma center that serves the Project Site.

RECORD OF CONVERSATION

Call To: San Joaquin General Hospital

Phone No.: 209-468-6000

Date: April 2, 2025

Call From: Annie Wollmuth

Message Taken By: Annie Wollmuth

Subject: Trauma Center Serving Project Site

4/2/2025: Called, they transferred me to Jesse Vaccaro (last name spelling not confirmed), no response, left a voicemail.

4/2/2025: Called, they transferred me to Michael Oledis (last name spelling not confirmed) at the trauma desk, no response, left a voicemail.

RECORD OF CONVERSATION

Call To: Kimberly Jokela, School Administrator, Mountain House Elementary School District

Phone No.: 209-835-2283 x100

Date: March 27, 2025

Call From: Fatuma Yusuf

Time: 2:54 PM

Message Taken By: Fatuma Yusuf

Subject: Current & Projected Enrollment, School Impact Fees

3/26/2025: Called the school administrator and left her a vm message asking for information on current enrollment (2024-2025), projected (2025-2026) enrollment and school impact fees (or developer fees). Also, where students go to for HS once they graduate from the 8th grade and if there are any enrollment issues, e.g., overcrowding.

Ms. Jokela called me back on 3/27/2025 and provided with the data for the current enrollment:

Grade	Current (2024-2025)
K	2
1	1
2	1
3	5
4	0
5	3
6	2
7	2
8	1
Total	17

Future (2025-2026) enrollment numbers are not currently available.

Kimberly Jokela
School Administrator
Mountain House Elementary School District
3590 Mountain House Road
Byron, CA 94514
Tel: (209) 835-2283
E-mail: kimberly.jokela@mtnhouse.k12.ca.us

3/28/2024:

Received email from Kimberly on 3/28/2025 which included a link (https://www.dgs.ca.gov/OPSC/Resources/Page-Content/Office-of-Public-School-Construction-Resources-List-Folder/Annual-Adjustment-to-SFP-Grants-and-Developer-Fee-History) from someone at the Alameda County of Education (ACOE) that shows the amount of developer fees that the school district would assess on commercial/industrial property. The link shows that the 2024 fee is $0.84/sq ft.

Appendix 5.14A – Phase I ESA

Appendix 5.14A, Phase I ESA was docketed February 14, 2025, TN# 261779 and is not included in this submittal package. A copy of this appendix may be found online at https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=25-OPT-01.

Appendix 5.15A – Hydrology & Hydraulics Report

Appendix 5.15A, Hydrology & Hydraulics Report was docketed February 14, 2025, TN# 261770 and is not included in this submittal package. A copy of this appendix may be found online at https://efiling.energy.ca.gov/Lists/DocketLog.aspx?docketnumber=25-OPT-01.