CALIFORNIA ENVIRONMENTAL QUALITY ACT
INITIAL STUDY

The Department of Toxic Substances Control (DTSC) has completed the following document for this project in accordance with the California Environmental Quality Act (CEQA) [Pub. Resources Code, div. 13, § 21000 et seq] and accompanying guidelines [Cal. Code Regs., tit. 14, § 15000 et seq].

<table>
<tr><td colspan="2">PROJECT TITLE:
Proposed RCRA Corrective Action Remedy Selection for PG&E Solid Waste Management Units 4.12 (Carbon Black Area) and 4.18 (Shell Pond)</td><td>SITE CODING:
202260</td></tr>
<tr><td>PROJECT ADDRESS:
100 Trojan Road</td><td>CITY:
Bay Point</td><td>COUNTY:
Contra Costa</td></tr>
<tr><td>PROJECT SPONSOR:
PG&E</td><td>CONTACT:
Robert Gray</td><td>PHONE:
(925) 415-6355</td></tr>
<tr><td colspan="3">APPROVAL ACTION UNDER CONSIDERATION BY DTSC:

☐ Initial Permit Issuance ☐ Permit Re-Issuance ☐ Permit ☐ Modification ☐ Closure Plan Removal ☐ Action Workplan ☐ Remedial Action ☐ Plan Interim ☐ Removal Regulations
☒ Other (specify): Statement of Basis/Corrective Measures Study</td></tr>
<tr><td colspan="3">STATUTORY AUTHORITY:

☒ California H&SC, Chap. 6.5 ☐ California H&SC, Chap. 6.8 ☐ Other (specify):</td></tr>
<tr><td>DTSC PROGRAM/ADDRESS:
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</table>

PROJECT OVERVIEW:

The California DTSC is considering corrective measure options for Solid Waste Management Unit (SWMU) 4.18 and SWMU 4.12 at the PG&E property located on a 292-acre parcel at 100 Trojan Road in Bay Point, California (Figure 1; Attachment A).

The remedial approaches for each SWMU were evaluated and selected via working meetings between PG&E and DTSC using tools from the Resource Conservation and Recovery Act (RCRA) Facilities Investigation Remedy Selection Track: A Toolbox of Corrective Action (2016). The meeting tools and resultant discussion were utilized to develop concurrence with the Corrective Action Objectives (CAOs) and remedial approach for both SWMU 4.18 and 4.12 as documented in a Corrective Measure Study (CMS; ERM 2018 [see link below]). The planned and contingency remedial approaches described herein comprise the "Proposed Project."

The Project Site (or "Site") that is the subject of this analysis is limited to the construction footprint as shown on Figure 2. The Site is predominately comprised of the Shell Pond Area (SWMU 4.18) and Carbon Black Area (CBA; SWMU 4.12), with support activities conducted from surrounding areas. The remedial approaches discussed herein would be implemented within SWMU 4.18 and 4.12 with the former Material Handling Area (MHA) designated for potential staging of construction equipment and to provide a source of clean soil, if needed (refer to SWMU 4.12 Contingency Approach below). Equipment would be transported to and from the MHA via an existing access road (also shown on Figure 2).

The SWMU 4.18 Planned Approach will be completed in phases. It is anticipated that construction activities will consist of 3-4 months of activity per phase over three phases in years 1, 3, and 5 (following the 5th year of activity, natural recovery is anticipated to continue until year 8 to achieve the CAOs). If needed, the SWMU 4.18 Contingency Approach will consist of 4 to 6 months of activity during whichever phase(s) is deemed necessary. The SWMU 4.12 Planned Approach will require no action and, if needed, the SWMU 4.12 Contingency Approach will consist of a one-time duration of 3 months.

PROJECT BACKGROUND

The Project consists of remediation of a former wastewater pond known as Shell Pond (SWMU 4.18) and a former land disposal site known as the Carbon Black Area (SWMU 4.12). The units are part of contiguous land belonging to PG&E that is included in the Hazardous Waste Facility Permit issued in 1995 for the PG&E Pittsburg Power Plant, and thereby subject to Corrective Action requirements of the California Health and Safety Code.

The parcel where both of these units are located was purchased by PG&E from the Shell Oil Products Company (Shell) in 1973. These two SWMUs were originally constructed, owned, and operated by Shell in support of its adjacent operations, which began in 1930 and included thermal cracking of natural gas to produce ammonia (by generation of hydrogen from natural gas and reacting the hydrogen with atmospheric nitrogen), and manufacturing of metal catalysts. In 1969, Dexter/Hysol, which produced adhesives for the aerospace industry, also began discharging wasters and wastewaters to SWMU 4.18 from property leased from Shell.

PG&E has conducted investigations, monitoring, and remedial activities at the Site since 1980. Between 2000 and 2008, a CMS and subsequent remediation were implemented at the SWMUs that included site revegetation, installation of a circulation system, groundwater monitoring, and a deed restriction to prohibit residential development. In 2008, PG&E suspended the circulation and discharge components of the remedy after it could not consistently meet the revised and more stringent water discharge limits, particularly new total maximum daily load (TMDL) standards for mercury under the National Pollutant Discharge Elimination System (NPDES). The constituents of concern (COCs) present at both SWMU 4.12 and 4.18 as identified in the draft 2019 Statement of Basis are:

- Carbon black
- Polycyclic aromatic hydrocarbons (PAHs)
- Semi-volatile organic compounds (SVOCs)
- Volatile organic compounds (VOCs)
- Cyanide, and
- Metals

The 22-acre SWMU 4.12 Carbon Black Area was used by Shell to dispose of carbon slurry waste. By the early 1950s this SWMU was full and was subsequently used for the management of carbon black, a material produced by the incomplete combustion of hydrocarbons, which was stored for anticipated recovery and sale. The site consists primarily of carbon black waste, total petroleum hydrocarbons (TPHs), and polycyclic aromatic hydrocarbons (PAHs) generally ranging in depth from 2 to 7.5 feet below ground surface (bgs), but is exposed at the surface in some locations. SWMU 4.12 is mostly covered by local upland and facultative wetland vegetation such as wild grasses, bushes, and shrubs.

Within SWMU 4.12, re-seeding was performed in 2012 and no further remedial actions were taken at that time. In August 2018, a vegetation fire occurred at SWMU 4.12, burning most of the surface vegetation and igniting the underlying carbon black material. Between September and December 2018, PG&E implemented emergency actions to mitigate the ignitability and flammability risks of this material and to stabilize the waste material against water and wind erosion (referred to herein as the "Carbon Black Soil Stabilization" action). These actions included placement of clean soil cover from the MHA onto areas where carbon black was exposed.

Shell built the 73-acre SWMU 4.18 pond in 1953 when the pond at SWMU 4.12 reached capacity. Shell operated the pond for settling and evaporating liquid wastes and discharging wastewater to the Delta from its adjacent chemical plant. Shell and Dexter/Hysol discharged wastes to this unit until 1980, although after 1973 the discharge was primarily untreated cooling water.

PG&E has conducted investigations, monitoring, and remedial activities at the Site since 1980. Between 2000 and 2008, a CMS and subsequent remediation were implemented at the SWMUs that included site revegetation, installation of a circulation system, groundwater monitoring, and a deed restriction to prohibit residential development is pending. In 2009, PG&E initiated another CMS to develop a modified proposed remedy for submittal to the DTSC that included the excavation of contaminated material within SWMU 4.18 through dredging and application of a soil cover to unvegetated portions of SWMU 4.12. Waste removal actions were initiated in SWMU 4.18, but were not completed due to community complaints regarding odors. In January 2012, the modified remedy was suspended because of the associated odor issues. Since that time, odors at SWMU 4.18 have been managed through the implementation of a water cap. Groundwater is pumped when the area is dry in the summer to maintain a water cap of a few inches deep. This existing well pump is also the source of water for irrigation. Currently the pond is underlain by a 0.5- to 2.5-foot-thick layer of carbon black waste (also referred to as Non-Native Material [NNM]) at the bottom of the unit and is mostly covered by water that is added to the pond to suppress odors and dust.

Both a Human Health Risk Assessment (HHRA) and an Ecological Risk Assessment (ERA) were performed and finalized between 2015 and 2018. A revision to the ERA was issued in December 2018 based on further analysis of surface water samples (JJ&A, 2018a). The findings of each assessment led to establishing COCs (listed above), CAOs, and clean up goals for both SWMU 4.18 and SWMU 4.12.

Between 2013 and 2018, PG&E conducted pilot studies to investigate the ability of selected plant species to grow in the pond and NNM environment, reduce concentrations of COCs through phytoremediation and enhanced biodegradation, and mitigate odors and dust to allow partial removal of the water cap at SWMU 4.18. The results of the pilot studies provided the basis for the cleanup strategies presented in the 2018 CMS (ERM 2018).

PROPOSED PROJECT ACTIVITIES

Based on the results of the CMS, the following planned and contingency remedial options were selected as the Proposed Project for each SWMU. These corrective measures are protective of human health and the environment and are the most cost-effective options that meet the remedy decision factors.

SWMU 4.18 Planned Approach—Dewatering, Vegetation, and Managed Natural Recovery:

- Isolating and dewatering a portion of the Site by installing and maintaining coffer dams;
- Installing an irrigation system and applying compost and amendments to the remedial areas;
- Establishing vegetation, with ongoing dewatering and irrigation;
- Once vegetation has been sufficiently established to survive winter inundation, construction would proceed on another portion of the Site;
- Achieving CAOs through natural biological and chemical processes (no direct action); and

- Post-remediation sampling.

Dewatering and Irrigation System Installation

PG&E would deploy coffer dams to isolate sections of SWMU 4.18. PG&E anticipates that sections for remediation would range in size from 10 to 20 acres. The coffer dams would be installed to isolate each section. Once the coffer dams have been installed, the section would be dewatered through evaporation and utilization of pumps. Following dewatering, PG&E would construct an irrigation system to utilize the existing pump and irrigation conveyance system. The irrigation system would consist of aboveground piping and sprinklers and/or drip irrigation installed using handwork and small utility vehicles to move parts of the pipe. PG&E would continue dewatering activities during the winter as needed to keep the section free from excessive water ponding. Dewatering would pertain only to the surface water resulting from storms. Initially, removed surface water would be transferred from one section of SWMU 4.18 to another. Additional dewatering options such as discharge to other portions of the site or treatment and discharge to the Bay may be considered. This would likely require additional permitting. Any required treatment and sampling of the discharged storm water would be conducted, as required, to ensure compliance with any discharge requirements. PG&E would conduct routine operation and maintenance on an ongoing basis.

Import and Placement of Amendment

PG&E estimates that up to 16,000 cubic yards of imported compost and amendments (potential amendments include nitrogen, phosphorus, and gypsum fertilizers) would be imported to the Site for every 10 acres of area. PG&E would conduct all trucking in accordance with a Project-specific Transportation Management Plan and implement trucking at times to limit impact to the local community. The Proposed Project would involve all imported fill being mixed with amendments and applied to the remedial areas pneumatically or using general construction equipment. PG&E would employ an odor controlling slurry (e.g., Concover) required to minimize fugitive dust.

Establishment of Vegetation

To establish vegetation, PG&E would mix compost, California native seeds, and any amendments on-site and apply to the remedial areas pneumatically. In areas where vegetation is difficult to establish, the Proposed Project may employ other alternatives such as placement of additional amendments or employing landfarming techniques. PG&E would maintain the irrigation system, winter dewatering, and coffer dams during the establishment of vegetation until such time that it is determined the vegetation is sufficiently established.

Levee Maintenance

SWMU 4.18 is contained by Contra Cost County Levee 185, a non-U.S. Army Corps of Engineers (USACE) levee. PG&E estimates that it would take a minimum of 8 years to achieve the CAOs. During this time, PG&E would maintain the levee to ensure isolation of SWMU 4.18 from Suisun Bay. According to USACE's sea level change curve online calculator (USACE 2018), the "high curve model" (reasonable worst case) estimates a sea level rise in the nearby Port Chicago tide gauge of 0.34 feet over the next 10 years. To accommodate anticipated sea level rise, the levee would need to be maintained and the height possibly increased over time. As a result, PG&E assumes that levee repair and maintenance would be conducted annually and would include the addition of new material to the top of the levee to increase its height. Adding to the height of the levee would not impact adjacent wetlands.

Coffer Dam Removal

Once the vegetation is sufficiently established, PG&E would remove the coffer dams and discontinue dewatering, allowing the area to be flooded during the winter. Water contained within the coffer dams would be discharged to the pond. At that time, PG&E would install the coffer dams in other areas of SWMU 4.18 to isolate those sections, and the steps described above would be repeated.

SWMU 4.18 Contingency Approach - Excavation and Landfarming:

In the event alternative approaches are required to meet the planned managed natural recovery approach, excavation and disposal of up to 6 inches of material across approximately 5 acres of the pond (approximately 4,000 cubic yards) and focused land farming are considered contingent remedial approaches. PG&E plans to dispose excavated material at the nearby Keller Canyon Landfill as Class II non-hazardous waste, taking approximately 370 round truck trips per phase. Land farming is similar in concept to the planned managed natural recovery approach, except that the compost would be tilled into the NNM; no additional water would be required.

SWMU 4.12 Planned Approach—Managed Natural Recovery only:

- Achievement of CAOs through natural biological and chemical processes (no direct action); and
- Post-remediation sampling.

SWMU 4.12 Contingency Approach—Soil Cover, Vegetation and Managed Natural Recovery:

In the event that confirmation sampling does not show the required reduction in COCs from managed natural recovery alone, the contingency would include placing 6 inches of clean soil cover from the MHA over the 10 acres that were not covered during the Carbon Black Soil Stabilization action (see Figure 3). All wetlands (i.e., 6 acres) within the 10 acres would be excavated 6 inches and back-filled with 6 inches of clean soil to maintain the grade of the wetland. PG&E would spread the carbon black material removed from the wetland over the upland areas (i.e., 4 acres of the 10 acres) prior to placement of the 6-inch clean soil cover. All areas of clean soil would then be hydro-seeded and vegetation established without the addition of amendments. PG&E would excavate the clean soil from the existing MHA and transport it by truck via an existing access road to SWMU 4.12. Prior to commencing activities, PG&E would apply for a Nationwide Permit under Section 404 of the Clean Water Act from the USACE for regulated activities in wetlands.

PROPOSED PROJECT STAFFING AND EQUIPMENT REQUIREMENTS

SWMU 4.18 (Shell Pond Area)

Equipment	Planned Approach (per phase)			Contingency Approach		
	Number of Units	*Estimated Duration of Use*	*Hours/day*	*Number of Units*	*Estimated Duration of Use*	*Hours/day*
Excavators	-	-	-	1	4–6 months	8
Loaders	-	-	-	1	4–6 months	4
Rototiller	-	-	-	1	1 month, cumulatively	8
Bobcat or similar	1	20 days	10			
Mixing Rig and Transfer Pump	1	2 months	10	1	4–6 months	8
Support Trucks (Haul)	2	3–4 months (~730 round trips total per phase)	2	2	300 round trips total over 4–6 months	2
Support Trucks (Haul for levee maintenance)	1	10 trips per year	8			
Crew Vehicles	5	30 miles/day for 3–4 months	2	5	30 miles/day for 4–6 months	2

SWMU 4.12 (CBA)

Equipment	Planned Approach			Contingency Approach		
	Number of Units	*Estimated Duration of Use*	*Hours/day*	*Number of Units*	*Estimated Duration of Use*	*Hours/day*
Excavators	-	-	-	1	3 months	8
Loaders	-	-	-	1	3 months	8
Scrapers	-	-	-	2	3 months	8
Bobcat	-	-	-	1	3 months	8
Support Trucks (Haul)	-	-	-	-	-	-
Crew Vehicles	-	-	-	5	30 miles/day for 3 months	2

PROPOSED PROJECT SCHEDULE

Proposed Activity	Duration
SWMU 4.18 Planned Approach	3–4 months of activity per phase over three phases in years 1, 3, and 5 (following the 5th year of activity, natural recovery would occur up to a minimum of 8 years to achieve CAOs)

SWMU 4.18 Contingency Approach	4–6 months, determined by phasing
SWMU 4.12 Planned Approach	No action taken
SWMU 4.12 Contingency Approach	3 months

PROJECT CONTROLS

Given the long history of activities at the Project Site, PG&E has adopted several Best Management Practices (BMPs) in accordance with standard construction practices. Additionally, the project controls in Attachment B will further reduce impacts associated with the Proposed Project. Additional plans that would be prepared for the project are as follows:

- Health and Safety Plan
- Spill Management Plan
- Storm Water Pollution Prevention Plan (for the contingency plan, if needed)
- Transportation Management Plan (for the contingency plan, if needed)

REQUIRED PERMITS AND APPROVALS

In addition to DTSC approval of the CMS, the proposed Project would require the following regulatory approvals.

- A Nationwide Permit under Section 404 of the Clean Water Act would be obtained from the USACE
- A 401 Water Quality Certification would be obtained from the Regional Water Quality Control Board

LIST OF FIGURES

ATTACHMENTS

REFERENCES

DTSC. 2011. *Modification of Environmental Remedy at the PG&E "Shell Pond and CBA Property" in Bay Point, CA.* Initial Study

DTSC. 2017. *Corrective Action Consent Agreement.* Docket HWCA-FY14/15-002.

ERM. 2018. *Draft Corrective Measures Study, Shell Pond Site, Bay Point, California.*

JJ&A. 2018a. *Revised Pages and Appendix H for the Final Ecological Risk Assessment Report, Solid Waste Management Units 4.12 and 4.18 for the PG&E Shell Pond project site located in Bay Point, California.*

PG&E. 2010. *Draft Final Corrective Measures Study. Proposed Modifications to Remedy Corrective Action Consent Agreement P2-03/04-006 Shell Pond, Bay Point, California.* Prepared by CH2MHill.

USACE. 2018. *http://corpsmapu.usace.army.mil/rccinfo/slc/slcc_calc.html*. Accessed August 2018.

ENVIRONMENTAL IMPACT ANALYSIS:

1. Aesthetics

Project Activities Likely to Create an Impact:

SWMU 4.18:
Planned Approach

- Mobilization of construction equipment
- Movement of trucks or other vehicles to transport materials and supplies to and from the Site
- Movement of vehicles to transport personnel to and from the Site
- Installation of coffer dams to isolate and dewater sections of SWMU 4.18 in sections ranging in size from 10 to 20 acres
- Installation of an irrigation system comprising above-grade lines and sprinklers to establish vegetation
- Import and placement of compost and amendment
- Ongoing maintainence and potential improvement of existing levee system

Contingency Approach

- Mobilization of construction equipment
- Movement of trucks or other vehicles to transport materials and supplies to and from the Site; and
- Movement of vehicles to transport personnel to and from the Site

SWMU 4.12
Planned Approach

- None

Contingency Approach

- Mobilization of construction equipment
- Movement of trucks or other vehicles to transport materials and supplies to and from the Site
- Movement of NNM within SWMU 4.12 and excavation and movement of soil from MHA to the SWMU 4.12

Description of Baseline Environmental Conditions:

The Project Site is bordered on the north by Suisun Bay and on the south by a railway corridor (Figure 1). Both SWMUs are fenced to prevent unauthorized access. The area separating the SWMUs from Suisun Bay to the north is dominated by coastal marshland (Figure 2). The Site is part of the San Francisco Bay/Delta estuary system, which is identified as a scenic resource in the Contra Costa County (CCC) 2005–2020 General Plan (CCC 2005).

Analysis as to whether or not project activities would:

a. Have a substantial adverse effect on a scenic vista?

Impact Analysis:

The Project Site can be seen from nearby roads including McAvoy Road and Willow Pass Road. The Site comprises a small area in comparison to the extended bay shoreline. As such, the Proposed Project would not have a significant impact on available views from these or other roadways in the vicinity of the Site.

The Site can also be viewed from select locations in a neighborhood approximately 0.25 mile to the south of SWMU 4.18. The view of the Site from most homes in this neighborhood is partially or entirely obstructed by other houses or trees. However, for residents with unobstructed views of the Site, SWMU 4.18 is a prominent feature, and Proposed

Project activities would be visible from these residences. Although PG&E projects the dewatering and restoration of SWMU 4.18 to take up to 8 years, Proposed Project activities would not be continuous during this time period. The SWMU 4.12 Contingency Approach would also be visible from residents with unobstructed views of the Site over the duration of approximately 3 months when material would be moved by standard construction equipment across SWMU 4.12 and between the MHA and SWMU 4.12. Post remediation, the Site would be covered with native vegetation at SWMU 4.18 and a combination of soil and vegetation at SWMU 4.12, as compatible with natural surroundings. As such, the long-term effects of the Proposed Project on scenic vistas and the overall impact on available scenic vistas would be improved over time.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact
☐ No Impact

b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

Impact Analysis:

The nearest roadway to the Project Site that is officially designated as a California State Scenic Highway is a section of Interstate 680 (I-680), located over 10 miles away from the Site. The nearest roadway to the Site that is identified as eligible for California State Scenic Highway Program is a segment of State Route 4 (SR-4), located approximately 11 miles to the east of the site in Antioch (Caltrans 2010). There are no views of the Site from these sections of I-680 or SR-4.

The CCC Scenic Routes Plan identifies the sections of I-680 and SR-4 described above as Scenic Highways. In addition, the county identifies a 1.8-mile section of Port Chicago Highway and a short section of Willow Pass Road that connects Port Chicago Highway to SR-4 as Scenic Routes. The county also identifies the stretch of SR-4 that extends approximately 20 miles from Bay Point to Hercules, California as a Scenic Highway (CCC 2005). The Site is not visible from these roadways.

Truck traffic associated with the Proposed Project would utilize the sections of Port Chicago Highway and Willow Pass Road that are identified by the county as Scenic Routes. However, truck traffic would have short-term, temporary impacts on these Scenic Routes. The Proposed Project is expected to have a less than signifcant impact.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact
☐ No Impact

c. Substantially degrade the existing visual character or quality of the site and its surroundings?

Impact Analysis:

Once the Proposed Project is completed, the Site would be mostly covered with vegetation. Therefore, the Proposed Project would improve the existing visual character and quality of the Site and its surroundings.

Conclusion:

☐ Potentially Significant Impact

☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

d. Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?

Impact Analysis:

The Proposed Project activities would be conducted during daytime hours and not introduce any new temporary or permanent sources of substantial light or glare that would adversely affect day or nighttime views in the area.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

References Used:

California Department of Transportation. 2018. California Scenic Highway Program. http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/. (Accessed September 2018).

CCC. 2005, (Reprint 2010). Contra Costa General Plan, 2005-2020.

2. Agricultural Resources

Project Activities Likely to Create an Impact:

SWMU 4.18:
Planned Approach

- None

Contingency Approach

- None

SWMU 4.12:
Planned Approach

- None

Contingency Approach

- None

Description of Baseline Environmental Conditions:

There are currently no agricultural or forest resources at the Project Site.

Analysis as to whether or not project activities would:

a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

Impact Analysis:

The Proposed Project would not convert any Prime, Unique, or Farmland of Statewide importance to non-agricultural use. Therefore, there would be no impact.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?

Impact Analysis:

The Project Site is designated as open space in the CCC 2005–2020 General Plan (CCC 2005). Proposed Project activities and components would not conflict with existing zoning for agricultural use or a Williamson Act contract. Therefore, there would be no impact.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

Impact Analysis:

The Proposed Project would not conflict with existing zoning or cause rezoning of forest or timberland. The Project Site is not designated or zoned for timberland production. Therefore, there would be no impact.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

d. Result in the loss of forest land or conversion of forest land to non-forest use?

Impact Analysis:

The Project Site does not include forest land and so would not result in the loss of forest land to non-forest use. Therefore, there would be no impact.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

e. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural uses?

Impact Analysis:

The Proposed Project would not involve changes in the existing environment that would result in conversion of farmland to non-agricultural uses. Therefore, there would be no impact.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

References Used:

CCC. 2005, (Reprint 2010). Contra Costa 2005 - 2010 General Plan.

3. Air Quality

Project Activities Likely to Create an Impact:

SWMU 4.18:
Planned Approach

- Mixing rig and pump use over a 2-month period during each phase
- Haul trucks to import compost and amendments during each phase, approximately 730 truck trips (round trip) over a year period, with only one phase in a given year; hauling distance up to approximately 56 miles one way
- Use of vehicles to bring personnel and supplies to the Site during construction, approximately five vehicles per day over a 4-month period during each phase (one phase in a given year)

Contingency Approach

- Excavator, loader, rototiller, and mixing rig and pump use over a 4- to 6-month period during each phase
- Haul trucks to import compost and amendments during each phase, approximately 370 truck trips (round trip) over a year period, with only one phase in a given year; hauling distance up to approximately 56 miles one way
- Use of vehicles to bring personnel and supplies to the Site during construction, approximately five vehicles per day over a 4-month period during each phase (one phase in a given year)

SWMU 4.12:
Planned Approach

- None

Contingency Approach

- Excavator, loader, scaper, and bobcat use over a 3-month period during each phase
- Use of vehicles to bring personnel and supplies to the Site during construction, approximately five vehicles per day over a 3-month period during each phase (one phase in a given year)

Description of Baseline Environmental Conditions:

The Proposed Project is located within the Carquinez Strait Climatological Sub-region. This sub-region is the only sea level gap between the Bay and the Central Valley. Prevailing winds in the Carquinez Strait are from the west. During the summer and fall months, high pressure offshore coupled with low pressure in the Central Valley causes marine air to flow eastward through the Carquinez Strait. The wind is strongest in the afternoon. Afternoon wind speeds of 15 to 20 miles per hour are common throughout the region. Sometimes atmospheric conditions cause air to flow from the east. East winds usually contain more pollutants than the cleaner marine air from the west. In the summer and fall months, this can cause elevated pollutant levels to move into the central San Francisco Bay Area Air Basin (SFBAAB) through the strait. These high-pressure periods are usually accompanied by low wind speeds, shallow mixing depths, higher temperatures, and little to no rainfall.

Summer mean maximum temperatures reach about 90 degrees Fahrenheit in the sub-region. Mean minimum temperatures in the winter are in the high 30's. Temperature extremes are especially pronounced in sheltered areas farther from the moderating effects of the strait itself (e.g., at Fairfield).

Many industrial facilities with significant air pollutant emissions (e.g., chemical plants and refineries) are located in the Carquinez Strait Region. The pollution potential of this area is often moderated by high wind speeds. However, upsets at industrial facilities can lead to short-term pollution episodes and emissions of unpleasant odors may occur at any time. Receptors downwind of these facilities could experience more long-term exposure to air contaminants than individuals elsewhere. Areas of the sub-region that are traversed by major roadways (e.g., Highway 4) may also be subject to higher local concentrations of carbon monoxide and particulate matter, as well as certain toxic air contaminants (TACs) such as benzene.

The main pollutants of concern in the Bay Area are particulate matter and ozone. Particulate matter, in diameters of 2.5 and 10 micrometers (fine and inhalable, respectively), is detrimental to health because it can get lodged in the lungs and is not filtered out by the respiratory system. Ozone causes problems to lung function and the respiratory system. The Bay

Area, as a whole does not attain ambient standards for these two pollutants. The Bay Area does not attain the federal and state ozone standards, the federal and state $PM_{2.5}$ (fine particulate matter) standards, or the state PM_{10} (inhalable particulate matter) standards.

The City of Bay Point is located within the SFBAAB, which includes Alameda, Contra Costa, Marin, San Francisco, San Mateo, Santa Clara, and Napa Counties, and a portion of Solano and southern Sonoma Counties. The management of air quality in the San Francisco Bay Area is primarily the responsibility of the BAAQMD. The BAAQMD has published guidelines for analysis and mitigation of impacts from projects within its jurisdiction. This Study used the methodology from the BAAQMD 2017 CEQA Air Quality Guidelines (BAAQMD 2017) to evaluate impacts from the Proposed Project. The "Thresholds of Significance" from this document are presented in Table 3.A below. In addition, these Thresholds of Significance were used to determine the significance of each impact discussed in Sections 3(a) through 3(d) below.

For the purposes of this Proposed Project, emissions were calculated to demonstrate that the impacts would be below the 2017 CEQA Thresholds of Significance for construction impacts. In addition, the Proposed Project would implement BMPs to reduce fugitive dust impacts to less than significant, consistent with the requirements from the 2017 BAAQMD CEQA Guidelines and project controls established for the PG&E Site (Attachment B). These BMPs and project controls include:

AQ-1: Primary NOx reduction measures:

- Use of electrical power instead of diesel motors or generators where feasible: The pumps used to operate the irrigation system will be electrically powered, and other equipment will be electrically powered if feasible.
- Use of onsite soil from the West Parcel or other upland for cover at the CBA**:** The use of onsite soil will reduce the truck trips that will otherwise be required to deliver material from offsite.
- Selection of a landfill location as close to the Project site as possible.
- Appropriate phasing of the work schedule.

AQ-2: Additional operating measures for NOx reduction:

- Idling time from all equipment will be minimized, with a special emphasis on reducing idling time from diesel-powered construction equipment. Idling times will be minimized either by shutting off equipment when not in use or limiting the maximum idling time for all equipment to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage will be provided for construction workers at all access points. To more effectively reduce emissions from diesel-powered equipment, the idling time for this type of construction equipment will be limited even more, to 2 minutes.
- All construction equipment, diesel trucks, and generators will be equipped with Best Available Control Technology for emission reductions of NOx.
- All contractors will be required to use equipment that meets CARB's most recent certification standard for off-road heavy- duty diesel engines.
- All contractor construction equipment that will be required for use will be maintained and properly tuned in accordance with manufacturer specifications. All equipment will be checked by a certified mechanic and determined to be running in proper condition prior to operation. Equipment that remains onsite for an extended period will also be checked by a certified mechanic at scheduled intervals.

AQ-3: Basic control measures recommended by BAAQMD to be implemented at all construction sites:

- All exposed surfaces (for example, parking areas, staging area, soil piles, graded areas, and unpaved access roads) shall be watered, as needed, based on observed dust suppression and weather conditions.
- All haul trucks transporting soil, sand, or other loose material offsite shall be covered.
- All visible mud or dirt tracked out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- Posting of a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours.

AQ-4: Enhanced Control Measures to be implemented, if needed:

- Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for ten days or more).

- Enclose, cover, water twice daily, or apply (non-toxic) soil binders to exposed stockpiles (dirt, sand, etc.).
- All vehicle speeds on unpaved roads shall be limited to 15 mph.
- Replant vegetation in disturbed areas as quickly as possible, where appropriate.

The 2017 BAAQMD CEQA Guidelines present average daily emissions Thresholds of Significance for construction projects, such as this project. These thresholds are presented in Table 3.A below. Note: the daily emission thresholds in Table 3.A are average daily emissions. Thus, even if certain peak days have emissions over the identified thresholds, as long as the average daily emissions are below these thresholds, the impacts are considered less than significant.

Table 3.A. Thresholds of Significance for Construction-Related Criteria Air Pollutants and Precursors

Pollutant	Average Daily Emissions Threshold of Significance (pounds per day)
Reactive organic gases (ROG)	54
NO_x	54
PM_{10}	82 (applies to construction exhaust emissions only)
$PM_{2.5}$	54 (applies to construction exhaust emissions only)

Analysis as to whether or not project activities would:

a. Conflict with or obstruct implementation of the applicable air quality plan

Impact Analysis:

Proposed Project activities would not obstruct implementation of applicable air quality plans. The most recent BAAQMD clean air plan is the Bay Area 2017 Clean Air Plan (BAAQMD 2017). Construction associated with the Proposed Project would result in emissions of ozone precursors (NO_X and ROG), particulate matter, air toxics, and greenhouse gases (see Section 7 of this checklist). However, the Proposed Project would be consistent with the control strategies contained in the Clean Air Plan. Implementation of appropriate and feasible control strategies, combined with the temporary nature of Proposed Project construction, would reduce the impact to less than significant in that the Proposed Project would not obstruct implementation of the Clean Air Plan.

The Proposed Project has been designed to reduce air emissions (NO_X, ROG, and particulate matter among other pollutants) during construction as much as possible through project controls AQ-1, AQ-2, AQ-3 and AQ-4, listed above. In addition, as shown in Table 3.B, emissions from construction equipment and haul truck trips would be less than the BAAQMD CEQA significance thresholds. The recommended measure for determining project support of the goals of the Clean Air Plan is to evaluate consistency with District-approved CEQA Thresholds of Significance (Section 9.1 of the BAAQMD CEQA Air Quality Guidelines). Therefore, since project emissions would be less than the District-approved CEQA Thresholds of Significance, the Proposed Project would be consistent with the Clean Air Plan, and the impact would be less than significant.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact
☐ No Impact

b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation.

Impact Analysis:

Construction associated with the Proposed Project would result in the following types of emissions:

- Fugitive dust from ground-disturbing activities (PM_{10} and $PM_{2.5}$)

- Ozone precursors (ROG and NOx) and particulates (PM_{10}, and $PM_{2.5}$) from vehicle and construction exhaust

Fugitive Dust (PM_{10} and $PM_{2.5}$)

Construction emissions of fugitive dust (PM_{10}) can vary greatly depending on the level of activity, the specific operations taking place, the equipment being operated, local soils, weather conditions, and other factors. Despite this variability, multiple feasible control measures can be reasonably implemented to reduce fugitive PM_{10} emissions, as listed above under Section 3(a). The BAAQMD 2017 CEQA Guidelines (Table 2-1) state that a project's fugitive dust impact would be less than significant with implementation of BMPs for dust control. Project controls **AQ-3** includes the following measures recommended by the BAAQMD that will be implemented at all construction sites:

- All exposed surfaces (e.g., parking areas, staging area, soil piles, graded areas, and unpaved access roads) shall be watered, as needed, based on observed dust suppression and weather conditions.
- All haul trucks transporting soil, sand, or other loose material off Site shall be covered.
- All visible mud or dirt tracked out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- Posting of a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours.

Vehicle/Construction Equipment Exhaust

Proposed Project activities that would generate air pollutant emissions include construction equipment use, haul truck travel, and construction employee commuting. The BAAQMD 2017 CEQA Guidelines (Section 8.1) prescribe the steps for assessing the significance of construction-related emissions of criteria pollutants and precursors.

Step 1 prescribes that, under certain circumstances, a project can be found to have less-than-significant impacts based on an abbreviated assessment under Chapter 3 of the BAAQMD 2017 CEQA Guidelines. Those circumstances are not present here.

Step 2 is emissions quantification. Table 3.B summarizes estimated Proposed Project emissions. Construction emissions for off-road heavy equipment, haul trucks, and construction employee commute trips were estimated using the California Emissions Estimation Model (CalEEMod), which incorporates emission factors from the California Air Resources Board (CARB) OFFROAD program for heavy equipment and the CARB Emission Factors 2017 program for on-road vehicles. PG&E assumed the Proposed Project to be under way in 2019 for the purposes of the CalEEMod analysis, and ran CalEEMod for one year (2019), as the project would be completed in three phases, with each phase completed in a distinct year (i.e., years 1, 3 and 5). This approach is suitable for comparison to the BAAQMD CEQA thresholds since they are based on average daily emissions. The CalEEMod output file is included in Attachment C.

Step 3 is comparison of the quantified emissions to BAAQMD's Thresholds of Significance. The 2017 BAAQMD CEQA Guidelines state (p. 8-2):

> If daily average emissions of construction-related criteria air pollutants or precursors would not exceed any of the Thresholds of Significance, then the project would result in a less-than-significant impact to air quality.

Table 3.B presents estimated emissions from both the SWMU 4.18 and 4.12 Planned and Contingency Approaches. Only one of these activities would occur in a given year. The estimated emissions from either the Planned or Contingency Approaches are well below the 2017 BAAQMD CEQA thresholds; therefore, impacts are considered less than significant (Table 3-B). The daily BAAQMD CEQA thresholds are based on average daily emissions. The assumptions used for the number of haul truck trips (370 trips in a worst-case year for compost import, construction debris removal, and levee maintenance) on the expected average number of trips per day. There may be certain days with more haul truck trips than assumed in the analysis; however, the daily average number of truck trips over the course of the Proposed Project would not be more than assumed in this analysis. Therefore, construction-related air quality impacts would be less than significant. In addition, there would be no emissions associated with the Site following restoration.

Table 3.B. Comparison of Project Emissions of Criteria Pollutants and Precursors to BAAQMD's Thresholds of Significance

Criteria Pollutant or Precursor	*SWMU 4.18 and 4.12 Planned Approaches* Haul Truck, Employee Commute, and Compost Placement Emissions	*SWMU 4.18 and 4.12 Contingency Approaches* Haul Truck, Employee Commute, and Compost Placement Emissions	BAAQMD CEQA Thresholds
NOx (lb/day)	2.10	12.71	54
PM_{10} Exhaust (lb/day)	0.014	0.57	82
$PM_{2.5}$ Exhaust (lb/day)	0.013	0.52	54
ROG (lb/day)	0.08	1.11	54

Note: Emissions calculated using the CalEEMod emissions estimation model. The BAAQMD CEQA thresholds shown are those listed in 2017 BAAQMD CEQA Guidelines, Table 2-4 "Thresholds of Significance for Construction-Related Criteria Air Pollutants and Precursors."

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact
☐ No Impact

c. Result in cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

Impact Analysis:

The Proposed Project region is non-attainment for ozone, PM_{10} and $PM_{2.5}$ (BAAQMD 2018). NO_X and ROGs are ozone precursors. Thus, the pollutants to be addressed here—ROGs, NO_X, PM_{10} and $PM_{2.5}$—are the same criteria pollutants and precursors discussed above.

The 2017 BAAQMD CEQA Guidelines provide a discussion regarding whether the Proposed Project contribution to the cumulative air quality impact is considerable, Section 2, page 2-1:

> By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in non-attainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant.
>
> In developing Thresholds of Significance for air pollutants, BAAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions. Therefore, additional analysis to assess cumulative impacts is unnecessary.

Additionally, Section 2, page 2-6 states:

> Table 2-4 presents the Thresholds of Significance for construction-related criteria air pollutant and precursor emissions. If daily average emissions of construction-related criteria air pollutants or precursors would exceed

> any applicable Threshold of Significance listed in Table 2-4, the project would result in a significant cumulative impact.

And, as noted above, the 2017 BAAQMD CEQA Guidelines state (at p. 8-2):

> If daily average emissions of construction-related criteria air pollutants or precursors would not exceed any of the Thresholds of Significance, then the Proposed Project would result in a less-than-significant impact to air quality.

The Proposed Project's emissions of these non-attainment pollutants would be less than significant under BAAQMD's Thresholds of Significance (Table 2-4 of the 2017 BAAQMD CEQA Guidelines). Thus, the Proposed Project would not result in a cumulatively considerable net increase and the impact would be less than significant.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact
☐ No Impact

d. Expose sensitive receptors to substantial pollutant concentrations.

Impact Analysis:

Sensitive receptors are individuals that are more susceptible to pollutant effects such as children, the elderly, the ill, or individuals with inhibited respiratory conditions. The residential structures located approximately 1,000 feet from the Shell Pond Area on the corner of Gregory Drive and Pamela Drive in Bay Point, CA are assumed to be occupied by sensitive receptors.

Construction Equipment
These sensitive receptors are not expected to be exposed to substantial pollutant concentrations from construction equipment exhaust – for which the pollutant of concern is diesel particulate matter [DPM]). Exhaust emissions of DPM, which is predominantly $PM_{2.5}$, are well below BAAQMD significance thresholds and would not lead to substantial pollutant concentrations. In addition, diesel equipment use would only take place over a maximum of 6 months (SWMU 4.18 Contingency Approach) during each phase of the project. The health risk impact from DPM is a long-term risk, assuming continuous exposure over a period of 30 years (BAAQMD 2017).

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact
☐ No Impact

e. Create objectionable odors affecting a substantial number of people.

Impact Analysis:

In general, odors from construction activities are those associated with diesel exhaust from heavy equipment and are difficult to assess (as the identification and degree of perceived odor is subjective). Most of the Proposed Project activities would be conducted a substantial distance (more than 400 feet) from any sensitive receptors and would be short in duration (up to 6 months per phase). In addition, implementation of project control **AQ-3** to control dust emissions may also help control odors, if any are present.

PG&E currently maintains a water cap at SWMU 4.18 to reduce odors associated with the underlying material. The Planned Approach for SWMU 4.18 includes water removal to allow the NNM to dry. PG&E will post a publicly visible

sign with the telephone number and person to contact regarding construction activity complaints. If the drying process causes unreasonable odors as determined by on-site personnel or public complaints, PG&E will apply an odor controlling slurry (e.g., ConCover[OBJ]).

Due to the nature of the project scope of work and the project controls that would be implemented, the odor impacts related to construction activities would be less than significant.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact
☐ No Impact

f. Result in human exposure to naturally occurring asbestos.

Impact Analysis:

There would be no potential for exposure to naturally occurring asbestos within the Project Site. According to the map in the report *A General Location Guide for Ultramafic Rocks in California – Areas More Likely to Contain Naturally Occurring Asbestos* (Department of Conservation 2000), the Project Site is not located in an area of naturally occurring asbestos.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

***References Used*:**

BAAQMD. 2017. Bay Area 2010 Clean Air Plan.

BAAQMD. 2017. CEQA Air Quality Guidelines.

BAAQMD. 2018. http://www.baaqmd.gov/research-and-data/air-quality-standards-and-attainment-status.

California Department of Conservation. 2000. A General Location Guide for Ultramafic Rocks in California – Areas More Likely to Contain Naturally Occurring Asbestos.

4. Biological Resources

Project Activities Likely to Create an Impact:

SWMU 4.18:
Planned Approach

- Mobilization of construction equipment, including disruption from noise
- Movement of trucks or other vehicles to transport materials and supplies to and from the Site
- Installation of coffer dams to isolate and dewater sections of SWMU 4.18
- Import and placement of compost and amendments
- Conversion of SWMU 4.18 from the current managed open pond system, with its related fringe wetland and exposed material, to a grassland

Contingency Approach

- Mobilization of construction equipment, including disruption from noise
- Movement of trucks or other vehicles to transport materials and supplies to and from the Site
- Excavation of 6 inches of material across SWMU 4.18 and landfarming

SWMU 4.12
Planned Approach

- None

Contingency Approach

- Mobilization of construction equipment
- Movement of trucks or other vehicles to transport materials and supplies to and from the Site
- Movement of NNM within SWMU 4.12 and excavation and movement of soil from MHA to SWMU 4.12

Description of Baseline Environmental Conditions:

Located on the south shore of Suisun Bay, the Project Site is near the confluence of the San Joaquin River and the Bay. The Project Site comprises three distinct, non-contiguous areas: Shell Pond Area (SWMU 4.18), CBA (SWMU 4.12), and the MHA. According to baseline vegetation field surveys conducted prior to the 2011 Initial Study, this Study assumes that baseline conditions of the Project Site represent a mix of open water habitat, seasonal wetlands, grasslands, and brush scrub (Figure 5; DTSC 2011).

<u>Shell Pond Area (SWMU 4.18)</u>
SWMU 4.18 largely consists of 68.5 acres of open water habitat with transitional areas, uplands, and 3.78 acres of wetland inclusions (referred to as “Shell Pond wetlands” in the 2011 IS) south of the open water (comprising approximately 73 acres in total). SWMU 4.18 is surrounded by levees topped with a gravel access road. While the pond has no direct hydrologic connection with the bay or adjacent tidal marshes, its water level elevation fluctuates with evaporation, pond operations, and rain. As a result, the southern part of SWMU 4.18 and the levee edges are intermittently exposed and support a narrow, discontinuous fringe of salt marsh vegetation such as saltgrass (*Distichlis spicata)*, brass buttons (*Cotula coronopifolia*), perennial pickleweed (*Salicornia sp.*), sand-spurry (*Spergularia rubra*), sea-purslane (*Sesuvium verrucosum*), and bristly ox-tongue (*Picris echioides*). The patches of pickleweed are of low quality and mostly occur at the base of the inside bank the levees and just above the water line on the southern portions of the east and west levees. The pickleweed abruptly transitions to upland, non-native grasses; this transition generally corresponds to habitat improvement and early soil formation. The southern 10 acres of the pond was re-seeded with California native species between 2016 and 2018 as part of approved pilot study activities.

A wetland delineation conducted in 2010 and subsequent USACE concurrence concluded that the open water habitat and wetlands of SWMU 4.18 were designated as jurisdictional features (Figure 4).

Beyond the SWMU 4.18 boundaries tidal emergent marshes, predominately comprised of narrow leaf cattail (*Typha angustifolia*), common three-square (*Schoenoplectus americanus*), Mexican rush (*Juncus mexicanus*), and hard stem bulrush (*Schoenoplectus acutus*) are present. As part of the DTSC-approved remedy currently being implemented, PG&E

maintains a water cap over the pond bottom to reduce the exposure of impacted material to air and minimize odors by periodically pumping water into the pond from an on-site irrigation well.

CBA (SWMU 4.12)
SWMU 4.12 consists mainly of perennial weed species, ruderal vegetation, and brome grassland with pockets of seasonal wetlands and unvegetated seasonal pools in low-lying areas. Tidal emergent marshes comprised of narrow leaf cattail (*Typha angustifolia*), common three-square (*Schoenoplectus americanus*), Mexican rush (*Juncus mexicanus*), and hard stem bulrush (*Schoenoplectus acutus*) are present (Figure 5).

The wetland delineation identified that approximately 25 percent of SWMU 4.12 is jurisdictional wetland habitat. (Figure 4).

Material-Handling Area
The entire MHA is characterized as Annual Brome Grassland. The area north of the MHA, not impacted by the Proposed Project, consists of upland annual grasslands and high marsh habitat containing saltgrass and pickleweed (Figure 5). No wetlands or other waters of the U.S. were identified within the MHA during the 2010 wetland delineation.

Biological Resources

Special status species are defined as species that are legally protected under the California and Federal Endangered Species Acts or other regulations, or species considered sufficiently rare by the scientific community to qualify for such listing. Special status species that have the potential to occur in or near the Project Site were identified from United States Fish and Wildlife Service (USFWS) Species Lists, the USFWS Information for Planning and Consultation Database (IPaC), the California Natural Diversity Database (CNDDB), and the California Native Plant Society (CNPS) List for the Honker Bay U.S. Geologic Survey (USGS) 7.5-minute Quadrangle map. The CNDDB and IPaC record searches were updated in October 2018 for this study. Additionally, species observed during field surveys in 2007, 2010, and 2011 (ENTRIX 2007; CH2MHIll 2010; Avocet Research Associates 2011) are incorporated into Tables 4.A and 4.B. In 2011, PG&E received concurrence from the USFWS and the CDFW that, with incorporation of PG&E's proposed biological measures (Attachment B), activities at the property are not likely to affect the soft bird's-beak (*Chloropyron molle ssp. molle*), delta smelt, Ridgway's rail (*Rallus longirostris obsoletus*), California black rail (CBR; *Laterallus jamaicensis coturniculus*), California least tern (*Sternula antillarum browni*), or salt marsh harvest mouse (*Reithrodontomys raviventris*). The presence of suitable habitat for these species within the Project Site considered for this Proposed Project is further analyzed (Tables 4.A, 4.B).

Plant Species
A 2018 CNDDB record search shows several special status plant species including the delta tule pea (*Lathyrus jepsonii*; 1B.2), the California rare Mason's lilaeopsis (*Lilaeopsis masonii*; 1B.1), the Suisun marsh aster (*Symphyotrichum lentum*; 1B.2), and the federally endangered and state-listed rare soft bird's-beak (*Cordylanthus mollis ssp.*; 1B.2) have been observed within a 2-mile radius of the Project Site. In addition, a search of the IPaC Database revealed the federally and state endangered Antioch dunes evening-primrose (*Oenothera deltoides ssp. howellii*) is known to occur within or near the Project Site. Although the CNDDB results do not indicate presence of the above-referenced plant species in the vicinity of the Project Site (Figure 6), field surveys conducted in 2011 confirm that the soft bird's-beak, the delta tule pea, the Mason's lilaeopsis, and the Suisun marsh aster were observed directly adjacent to, but beyond the boundaries of, the Project Site (Table 4.A).

Bird Species
The CNDDB revealed that several bird species of conservation concern including the state threatened (ST) and fully protected (FP) California black rail (CBR; *Laterallus jamaicensis coturniculus*), the federal and state endangered (FE, SE) California least tern (*Sternula antillarum browni*), and the Species of Special Concern (SSC) Suisun song sparrow (*Melospiza melodia maxillaris*) and burrowing owl (*Athene cunicularia*) are present within a 2-mile radius of the Project Site. Results from IPaC also revealed the FE/SE/FP Ridgway's rail, FP golden eagle (*Aquila chrysaetos*), ST tricolored blackbird (*Agelaius tricolor*), salt marsh common yellow throat (*Geothlypis trichas sinuosa*), song sparrow (*Melospiza melodia*), and spotted towhee (*Pipilo maculatus clementae*) are known to occur within or near the Project Site based on the presence of suitable habitat.. Of these, the CNDDB reports occurrences of the CBR directly abutting, but outside SWMU 4.18 and Suisun song sparrow in the eastern portion of SWMU 4.12 (Figure 7).

Field observations conducted in 2011 also confirmed observations of other special status species within or directly adjacent to the Project Site (e.g., within the sloughs) that were not revealed in the desktop review, including: the FP white-tailed kite (*Elanus leucurus*) and SSC northern harrier (*Circus cyaneus*), loggerhead shrike (*Lanius ludovicianus*), and salt marsh common yellowthroat (*Geothlypis trichas sinuosa*). These species likely occur at the Site on a sporadic basis for foraging, but are not known or expected to nest due to a lack of suitable habitat. The nearest potential habitat is located east/southeast of Shell Pond and along the railroad tracks to the south approximately 850 feet away

Protocol level surveys for the Ridgway's rail, CBR, and burrowing owl were conducted in 2011 at the Site. The surveys concluded that the southernmost detection of suitable CBR habitat was approximately 100 feet north of the Project Site; however, the 300-foot buffer for the CBR detection extends south into the Project Site. Ridgway's rail was not detected in the Project Site during the protocol surveys. The burrowing owl was not detected during the protocol surveys; however, this species was observed in flight during a routine pre-work survey of the MHA in November of 2011. Two burrows were observed near the outside of the entrance to the Project Site and a 160-foot buffer was established around the burrows at the time (Avocet Research Associates 2011).

Wildlife Species

The CNDDB search records identified several special status wildlife species within a 2-mile radius of the Project Site which include the federally threatened (FT) California red-legged frog (*Rana draytonii*), FT steelhead (*Oncorhynchus mykiss irideus* pop. 11), ST longfin smelt (*Spirinchus thaleichthys*) and FE/SE/FP salt marsh harvest mouse. Results from IPaC indicate FT vernal pool fairy shrimp (*Branchinecta lynchi*), FE vernal pool tadpole shrimp (*Lepidurus packardi*), FE San Bruno elfin butterfly (*Callophrys mossii bayensis*), FT delta green ground beetle (*Elaphrus viridis*), FT valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), FT/SE delta smelt, FT/ST California tiger salamander (*Ambystoma californiense*), the FT/ST Alameda whipsnake (*Masticophis lateralis euryxanthus*), and the FT/ST giant garter snake (*Thamnophis gigas*) are known to occur within or near the Project Site based on the presence of suitable habitat.

The CNDDB search results reported that none of the above-mentioned species are within the Project Site (Figure 8). However, field observations during a plant survey in the spring of 2010 confirmed the presence of western pond turtles (*Actinemys marmorata*) basking on islands in the ditch north of SWMU 4.12 and on levee banks between SWMU 4.18 and 4.12 (CH2MHill 2010). Additionally, a salt marsh harvest mouse trapping study, conducted in 2006, identified four individuals present within pickleweed on the Project Site. However, habitat conditions at the Site were more suitable for the salt marsh harvest mouse in 2006 when the site experienced regular input and outflow of Suisun Bay water. The shift in hydrology regime dramatically modified the amount of vegetative cover, including pickleweed and upland grasses, which are favorable habitat for the salt marsh harvest mouse. As such, the current habitat conditions at the Site are unsuitable for the salt marsh harvest mouse and this species is not likely present at the Site. Due to the presence of NNM within SWMU 4.18 and SWMU 4.12, these areas are not considered sensitive habitat. All project activities will be restricted to within the SWMUs, the MHA and access roads, therefore no impacts will occur outside of these areas. A Habitat Management Plan was developed in 2014 providing recommendations that will assist PG&E in maintaining habitat conditions that are unsuitable for salt marsh harvest mouse until the Site has been fully remediated (California Environmental Service [CES], 2014). The long-term goal of the proposed project is to restore the PG&E Shell Pond from its current state to a self-sustaining habitat.

TABLE 4.A. Special Status Plants Potentially Present at the Project Site

Scientific Name **Common Name**	**Status** [a] **(Fed/State/CNPS)**	**Habitat Requirements**	**Potential Occurrence in Project Site**	**Blooming Period**
Cordylanthus mollis ssp. mollis Soft bird's-beak	FE/ SR/ 1B.2	Marshes and swamps (coastal salt)	According to 2007 field survey, this species occurs along the north shore of the tidal pond found in the field to the west of SWMU 4.18 in an area outside the Site (ENTRIX 2007)	Jul-Nov
Lathyrus jepsonii var. jepsonii Delta tule pea	--/ SR/ 1B.2	Marshes and swamps (freshwater and brackish)	According to 2010 field survey, this species was found on the west bank of the West Slough, roughly halfway to Suisun Bay from SWMU 4.18 in an area outside the Site boundary (CH2MHill 2010)	May-Jul (Sep)
Lilaeopsis masonii Mason's lilaeopsis	--/ SR / 1B.1	Marshes and swamps (brackish or freshwater); riparian scrub. Occurs typically in intertidal areas of	According to 2010 field survey, species occurs along the East Slough and along the northern limit of the adjacent marshes at Suisun Bay in an area outside the Site boundary (CH2MHill 2010)	Apr-Nov
Symphyotrichum lentum Suisun Marsh aster	--/ SR/ 1B.2	Marshes and swamps (brackish and freshwater)	Potential to occur along the shore of Suisun Bay and along SWMU 4.18 levees. Species previously reported to occur at the northwest corner of the SWMU 4.18 levees (CNDDB). Not found during 2010 protocol surveys at SWMU 4.18 or observed within Project Site.	May-Nov
Antioch dunes evening-primrose *Oenothera deltoids ssp. howellii*	FE/ SE; SR/ 1B.1	Inland dunes and sandy environments	No suitable habitat is present within the Site.	Mar-Sep

Sources: CNPS, 2018; California Natural Diversity Database, 2018; California Department of Fish and Wildlife (CDFW), 2018; U.S. Fish and Wildlife Service (USFWS), 2018.

Federal (USFWS) designations:
FE Endangered: Any species in danger of extinction throughout all or a significant portion of its range.
State (CDFW) designations:
SE Endangered: Any species in danger of extinction throughout all or a significant portion of its range.
SR Rare: Any species not currently threatened with extinction, but in such small numbers throughout its range that it may become endangered if its present environment worsens.

CNPS List:
1B Plants Rare, Threatened, or Endangered in California and Elsewhere
2 Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere
3 Plants About Which We Need More Information - A Review List
4 Plants of Limited Distribution – A Watch List
CNPS threat Ranks:
1 Seriously threatened in California (high degree/immediacy of threat)
2 Fairly threatened in California (moderate degree/immediacy of threat)
3 Not very threatened in California (low degree/immediacy of threats or not current threats known)

TABLE 4.B. Special Status Wildlife Species Potentially Present at the Project Site

Common Name	Scientific Name	Status[a]	Season[b]	Primary Habitat[c]	Potential Occurrence in Project Site
Insects and Crustaceans					
Vernal pool fairy shrimp	*Branchinecta lynchi*	FT	Resident	Vernal pools, ephemeral alkali pools, seasonal drainages,stock ponds, vernal swales, and rock outcrops.	Seasonal wetlands within the Site have low potential to provide habitat. Nearest CNDDB occurrence is more than 5 miles from Project Site.
Vernal pool tadpole shrimp	*Lepidurus packardi*	FE	Resident	Inhabits vernal pools and swales in the Sacramento Valleyand San Joaquin Valley containing clear to highly turbid water.	No suitable habitat present at the Site. Nearest CNDDB occurrence is more than 5 miles from Project Site.
Delta green ground beetle	*Elaphrus viridis*	FT	Resident	Riparian areas, along margins and banks of temporary pools of water with low-growing vegetation. Often found in sediment/beneath vegetative cover near or partially submerged in water.	Unlikely to occur. While potential habitat is present to support this species, to-date, the species has only been found in the greater Jepson Prairie area in south-central Solano County.
Valley elderberry longhorn beetle	*Desmocerus californicus dimorphus*	FT	Resident	Riparian areas, shrublands, woodlands in areas where elderberries occur.	Unlikely to be present due to lack of host plant habitat and current known range.

Common Name	Scientific Name	Status[a]	Season[b]	Primary Habitat[c]	Potential Occurrence in Project Site
Fish					
Delta smelt	*Hypomesus transpacificus*	FT, SE	Resident	Found upstream from Suisun Bay through the delta, primarily in the mixing zone, but dispersing up rivers and sloughs in spawning season.	Previous field surveys confirmed that this species was documented in the tidally influenced riverine waters of the Project Site with potential to occur in sloughs. However, the sloughs are outside of the Project Site and would not be impacted by proposed activities.
Longfin smelt	*Spirinchus thaleichthys*	ST	Resident	Found from Monterey to Alaska in saltwater and freshwater habitats, including coastal lagoons, estuaries, and marshes.	Potential to occur in sloughs. However, the sloughs are outside of the Project Site and would not be impacted by proposed activities.
Steelhead- Central Valley evolutionarily significant unit (and critical habitat)	*Oncorhynchus mykiss irideus*	FT	Summer run (May-Oct); Winter run (Nov-Apr)	From Russian River south to Pajaro River. Known to inhabit the Sacramento and San Joaquin Rivers.	Potential to occur in sloughs. However, the sloughs are outside of the Project Site and would not be impacted by proposed activities.
Amphibians					
California tiger salamander	*Ambystoma californiense*	FT, ST	Resident	Grassland, oak savanna, and edges of mixed woodlands; breeding: vernal pools, temporary rainwater ponds, permanent human-made ponds if predatory fishes are absent.	Unlikely to occur within the Project Site due to lack of freshwater habitat.
California red-legged frog	*Rana draytonii*	FT, SSC	Resident	Grasslands and stream sides with plant cover; permanent water sources: lakes, ponds, reservoirs, slow streams, marshes, bogs, and swamps.	Unlikely to occur due to lack of freshwater habitat.
Reptiles					
Western pond turtle	*Actinemys marmorata*	SSC	Resident	Ponds, lakes, rivers, streams, creeks, marshes, and irrigation ditches, with abundant vegetation.	Not known to be in Proposed Project area according to CNDDB and IPaC; however, observed on banks of levees and north of SWMU 4.12 during plant survey in the Spring of 2010. (CH2MHill 2010)
Alameda whipsnake	*Masticophis lateralis euryxanthus*	FT, ST	Resident	Found in chaparral foothills, mixed woodlands, shrublands with scattered grassy areas, rocky landscapes, and watercourses.	The Project Site is fragmented and contains little vegetation. Unlikely habitat to support this species is present in the Project Site. Nearest CNDDB occurrence is more than a mile from the Project Site.

Common Name	Scientific Name	Status[a]	Season[b]	Primary Habitat[c]	Potential Occurrence in Project Site
Giant garter snake	*Thamnophis gigas*	FT, ST	Resident	Herbaceous wetlands, medium rivers, pools of water, creeks, and riparian corridors. Burrows in soil and fallen logs/debris.	Potentially present based on presence of potentially suitable habitat and current range.
Birds					
Burrowing owl	*Athene cunicularia*	SSC	Resident; Breeds Mar.-Aug.	Primarily inhabits open areas with short vegetation and bare ground in desert, grassland, and shrub-steppe environments; dependent on the presence of fossorial mammals (primarily prairie dogs and ground squirrels), whose burrows are used for nesting and roosting.	Potentially present based on presence of potentially suitable habitat (i.e., ground squirrel burrows) and current range.
Ridgway's rail	*Rallus longirostris obsoletus*	FE, FP, SE	Resident	Inhabits freshwater marshes, wet meadows, and shallow margins of saltwater marshes bordering larger bays; needs water depth of about 1 inch that does not fluctuate during the year and dense vegetation for nesting habitat.	No Ridgway's rails noted during protocol surveys (Avocet Research Associates 2011). They may forage in adjacent sloughs; these areas would not be impacted by Project activities.
California black rail	*Laterallus jamaicensis coturniculus*	FP, ST	Resident; Breeds Mar.-Sep.	Inhabits freshwater marshes, wet meadows, and shallow margins of saltwater marshes bordering larger bays; needs water depth of about 1 inch that does not fluctuate during the year and dense vegetation for nesting habitat.	CNDDB and field observations confirmed the presence of this species north of SWMU 4.18 but not within the Site (Avocet Research Associates 2011); the buffer area extends into north part of SWMU 4.18.
California least tern	*Sterna antillarum browni*	FE, FP, SE	Summer	Nests along the coast from San Francisco Bay south to northern Baja California. Colonial breeder on bare or sparsely vegetated, flat substrates: sandy beaches, alkali flats, landfills, or paved areas.	Suitable foraging habitat within the Site but unsuitable for nests. Species not known or observed to nest within the Site or adjacent to the Site.
Northern harrier	*Circus cyaneus*	SSC	Resident (primarily)	Flat, open areas of tall, dense grasses, moist or dry shrubs,and edges for nesting, cover, and feeding.	According to the 2011 Initial Study, this species has been observed foraging in the SWMU 4.18 during pre-2011 site visits (date not provided); potential breeding habitat nearby but not within the Site.
Tricolored blackbird	*Agelaius tricolor*	ST	Resident (primarily); Breeds Mar.–Aug.	Near open accessible water with dense emergent vegetation(for example, cattails).	Although tricolored blackbirds are not known to nest in the bay or delta, potential nesting habitat exists in and around the Site such as in the blackberries southwest of SWMU 4.18 and foraging habitat in the pasture west of the pond.
Loggerhead shrike	*Lanius ludovicianus*	SSC	Resident	Open shrub/grassland.	Observed foraging in the Project area; potential breeding habitat nearby but not within the Site. (ENTRIX 2007)

Common Name	Scientific Name	Status[a]	Season[b]	Primary Habitat[c]	Potential Occurrence in Project Site
Salt marsh common yellowthroat	*Geothlypis trichas sinuosa*	SSC	Resident; Breeds May–Jul.	Salt marshes.	Observed foraging in the Project area during site visits in spring of 2010 (CH2MHill 2010); potential breeding habitat nearby but not within the Site.
Suisun song sparrow	*Melospiza melodia maxillaries*	SSC	Resident	Brackish marshes.	CNDDB confirms the presence of this species within the eastern edge of SWMU 4.12. Observed foraging in the Proposed Project area during site visits in spring of 2010 (CH2MHill 2010); potential breeding habitat nearby but not within the Site.
Spotted towhee	*Pipilo maculatus clementae*	SSC	Resident; Breeds Apr.-Jul.	Riparian, shrubland, chaparral, and mixed woodlands. Found in undergrowth of open woodlands, in leaf litter, and brushy areas.	Potentially present based on presence of riparian and shrubland habitat and current range.
Golden eagle	*Aquila chrysaetos*	BGEPA, FP	Resident; Breeds Jan.-Aug.	Typically found in open to semi-open country such as prairie, sagebrush, alpine tundra, savanna, sparse woodlands, rocky/cliff areas, deserts, and grasslands.	Suitable habitat not present within the Project Site.
White-tailed kite	*Elanus leucurus*	FP	Resident	Herbaceous wetlands, riparian areas, marshes, open woodlands, low-lying areas near water, and savannas.	Species was observed foraging in the Proposed Project area during 2011 Site visits (DTSC 2011); not known to or expected to nest within the Site due to a lack of suitable habitat.
Mammals					
Common Name	**Scientific Name**	**Status[a]**	**Season[b]**	**Primary Habitat[c]**	**Potential Occurrence in Project Site**
Salt marsh harvest mouse	*Reithrodontomys raviventris*	FE, FP, SE	Resident	Inhabits the saline emergent wetlands of San Francisco Bay and its tributaries. Typically found in pickleweed marshes.	The current habitat conditions at the Site are unsuitable for the salt marsh harvest mouse and this species is not likely present at the Site.

Notes:

[a] Status.

Federal Status
BGEP = Bald and Golden Eagle Protection Act
FD = Federal Delisted
FE = Federal Endangered
FT = Federal Threatened

State Status
SSC = Species of Special Concern
FP = Fully Protected
SE = State Endangered
SP = State Protected
SR = State Rare
ST = State Threatened

[b] Season. Season of use for animals. N.A. = not applicable.

[c] Primary Habitat: Most likely habitat association

Analysis as to whether or not project activities would:

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

Impact Analysis:

A potential exists for impacts through direct mortality of individuals during the implementation of the Project from moving equipment and grading activities. Equipment noise and/or lighting could also lead to disruption of behavior and associated potential loss of reproductive success, foraging, and nesting activities during construction. Habitat modification would occur within SWMU 4.18, which would convert from the current managed open pond system, with its related fringe wetland and exposed material, to a grassland. Protection of all special-status species would be incorporated directly into the Project design as project controls as follows:

BIO-1: A biological monitor will be present as required by permitting agencies, and will have the authority to stop or redirect work should the work have the potential to adversely affect sensitive species.

If required, the biological monitor's duties *may* include but will not be limited to the following:

- Providing training to workers regarding the potential species of concern and habitats in the area and measures taken to minimize any effects on the species of concern and habitats.
- Verifying the limits of the work areas and staging areas and ensuring that they are properly marked before the construction begins.
- Verifying the locations of signs and flagging marking the boundaries of sensitive resource areas and other areas with special requirements in the construction work area.
- Conducting any surveys and/or inspections as required to ensure that no special status species are in the work area.

BIO-2: Vehicles parked for more than 30 minutes in SWMU 4.18 or 4.12 will be inspected by trained personnel before they are allowed to move. With the exception of areas inside the pond itself, all construction work areas will be marked to ensure that activities are confined to uplands and designated sensitive habitat areas are avoided.

BIO-3: Pre-construction bird nesting surveys will be conducted for the work areas within two weeks of the start of any construction activity during the bird breeding season. If active nests are found, appropriate buffers will be established around active nests in accordance with PG&E's Nesting Bird Management Plan. Where feasible, standard buffers will apply, although the monitoring biologist may increase or decrease the standard buffers in accordance with the factors set forth in the PG&E Nesting Bird Management Plan.

BIO-4: If nesting burrowing owls are encountered during Project construction, buffers will be established around occupied burrows (160 ft from Sept 1 to Jan 31 and 250 ft from Feb 1 to Aug 30), and work within these areas will be prohibited.

BIO-5: Vehicle traffic within the Project area will be restricted to roads established for the Project and clearly indicated on Project drawings. These areas will be included in pre-construction surveys. Project-related vehicles will observe a 15-mile-per-hour speed limit or less within the work area. A 10-mph speed limit will be strictly enforced on the Shell Pond levees.

BIO-6: In general, work hours will be limited to daytime only, and will begin no sooner than one-half hour after sunrise and end at least one-half hour before sunset. Where the nighttime use of construction equipment is required, lighting will be kept as low as possible and will be directed away from the marsh to the north to minimize disturbance to surrounding ecological and human communities.

BIO-7: The following good management practices will also be implemented:

- Environmentally Sensitive Areas will be clearly marked on Project drawings.
- All food-related trash items such as wrappers, cans, bottles, and food scraps will be disposed of in closed containers and removed from the study area at least once a day.
- No firearms will be allowed in the work area except for those carried by authorized security personnel or by local, state, or federal law enforcement officials.
- No pets will be permitted in the work area.

- All construction equipment and materials that are stored at a construction site will be inspected before being used or moved. If wildlife species are present, they will be allowed to exit on their own without being handled, or they will be handled as authorized by resource agencies.
- Once the Project is completed, all unused material and equipment will be removed from the work area.
- Fueling or refueling will be restricted to a designated area, away from the sloughs. To minimize consequences of a fuel spill, a Spill Management Plan will be prepared and strictly implemented by the contractor.

BIO-8: Install wildlife deterrence fencing where appropriate as determined by the biological monitor.

Species Addressed During Prior Consultation

PG&E received concurrence in 2011 from the USFWS and CDFW that, with the incorporation of PG&E's proposed measures, activities within the property are not likely to adversely affect soft bird's-beak (plant community), delta smelt (fish), California black rail (bird), Ridgway's rail (bird), California least tern (bird), or salt marsh harvest mouse (mammal). PG&E will need to obtain a Section 404 permit for this work, and consultation with the USFWS will be addressed at that time. However, it is unlikely that consultation with the state and federal resource agencies will be needed due to previous resource agency concurrences that impacts are not likely to adversely affect listed species and that the proposed project activities will result in less than significant impacts to the relevant species.

Of these species, known communities of the soft bird's-beak and suitable habitat for the delta smelt and Ridgway's rail are outside of the Site designated for the Proposed Project. Specifically, the protected plant soft bird's-beak occurs along the north shore of the tidal pond found in the field to the west of SWMU 4.18 and the delta smelt has a low potential of occurrence within the sloughs adjacent to, but outside of, the direct area affected by pond dewatering. Ridgway's rail was not detected in the Project Site during the protocol surveys.

Regarding the salt marsh harvest mouse, as mentioned previously, a shift in hydrology and a decrease in vegetative cover (i.e., pickleweed) since 2006 resulted in unsuitable habitat conditions for the salt marsh harvest mouse at the Site. Therefore, it is unlikely this species is present at the Site and unsuitable habitat conditions will be maintained until remediation is complete (CES, 2014).

The California least tern, specifically addressed in the 2011 consultation, is known to forage within the open water of SWMU 4.18 but is not expected to nest due to limited suitable habitat; the protective measures designed for nesting bird species, as described below would also offer protection for the least tern.

Plants

As summarized above in Table 4.A, no special status plants are present within the Project Site.

Birds

In general, construction activities could potentially affect sensitive bird species nesting and foraging opportunities. Potential impacts to these species would be temporary and limited to the construction area. Construction-related impacts on foraging habitat would not be significant since alternative foraging habitat in the Proposed Project region is plentiful. Implementation of project controls BIO-3, BIO-4, and BIO-5 will further reduce the less than significant impacts.

Wildlife

Other special status wildlife with potential to occur within the Site include the SSC western pond turtle and FT/ST giant garter snake. These species would be protected by the implementation of project controls **BIO-1, Bio-2, BIO-5, BIO-6, BIO-7**, and **BIO-8** which include worker training, biological monitoring, checking underneath parked vehicles and equipment for snakes, installation of wildlife deterrence fencing, and strictly enforced speed limits along the levees.

Fish
There would be no direct impacts to the waterways inhabited by special status fish outside of the Project Site. However, due to the potential for indirect impacts such as runoff and/or erosion of waste into these nearby receptors, environmental protective measures listed in Attachment B would reduce the potential for indirect impacts to these fish species.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact
☐ No Impact

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

Impact Analysis:

Due to the presence of NNM within SWMU 4.18 and SWMU 4.12, these areas are not considered sensitive habitat. The Project activities would not have a substantial adverse effect on any riparian habitat or sensitive natural communities outside of the project area. The project impacts are only temporary and occur on a limited portion of larger natural communities and would restore an estimated 73 acres in SWMU 4.18 and 22 acres in SWMU 4.12. All potential impacts are limited to within the SWMUs, established gravel roads, and in the materials handling area. Implementation of project controls **BIO-3** and **BIO-4,** which include biological monitors, verifying areas of sensitive resources and special status species, and biological training of workers will be implemented to further reduce the less than significant impacts.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact
☐ No Impact

c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Impact Analysis:

The SWMU 4.18 Planned Approach would involve temporary fill (with degradable compost) and re-vegetation of approximately 72 acres of federally regulated wetlands. The SWMU 4.12 Contingency Approach, if required, would also directly impact up to 6 acres of regulated wetlands in SWMU 4.12. The project would enhance the natural degradation of COCs in the waste and re-seed with California native species that occur in wetlands. All work performed within wetland areas would be performed with low ground pressure equipment to the extent possible. All potential impacts are limited to within the SWMUs, established gravel roads, and in the materials handling area. All impacts would be temporary and there would be no net loss to waters of the U.S. These activities and impacts are regulated under a Section 404 USACE permit to dredge/fill wetlands implementing any prescribed conditions, reducing the associated impacts to less than significant. As such, PG&E will work with the U.S Army Corps of Engineers and the Regional Water Quality Control Board to obtain Section 404/401 permits prior to construction.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact
☐ No Impact

d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Impact Analysis:

The Proposed Project would not interfere substantially with the movement of fish or wildlife species. Impacts would be less than significant with the implementation of project controls **BIO-1, Bio-2, BIO-6, BIO-7**, and **BIO-8** that include the presence of a biological monitor, pre-construction surveys, installation of wildlife deterrence fencing where appropriate, restriction of vehicle movement to daylight hours only, and a speed limit on levees.

In addition, PG&E would conduct pre-construction bird nesting surveys during breeding season prior to the start of any construction activity, and buffers would be established around active nests in consultation with CDFW and USFWS. Certain activities may be permitted within established buffers with monitoring by a qualified biologist.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact
☐ No Impact

e. Conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Impact Analysis:

The Conservation Element (Chapter 8) and the Open Space Element (Chapter 9) of the Contra Costa County General Plan were reviewed for compatibility with local policies and ordinances. The Contra Costa County General Plan provides the broad goals and policies of the county, which will guide decisions on future growth, development, and the conservation of resources through the year 2020.

Chapter 8 includes goals and policies for vegetation and wildlife, agricultural resources, renewable energy resources, mineral resources, soil resources, oil and gas resources, water resources, harbors, and air resources. Specific attention was given to review of goals and policies for overall conservation (3 goals, 5 policies), vegetation and wildlife (3 goals, 23 policies), and water resources (5 goals, 21 policies). The proposed activities are compatible with the goals and policies included in Chapter 8 and no impact will occur.

Chapter 9 includes goals and policies for scenic resources, historic and cultural resources, and parks and recreation facilities. Figure 9-1 identifies scenic waterways within the project site, and the general plan maps the project area in open space areas. Therefore, specific attention was given to review of goals and policies for overall open space (3 goals, 9 policies) and scenic resources (3 goals, 18 policies). The proposed project activities will not change the visual characteristics nor the existing land uses; thus, the proposed project is compatible with the goals and policies included in Chapter 9 and no impact will occur.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

f. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Impact Analysis:

The Project Site is located just west of the East Contra Costa County Habitat Conservation Planning area; therefore, no conflicts with this plan are anticipated. The Project Site is located in Contra Costa County, and therefore falls within the covered area of PG&E's Bay Area Operations and Maintenance Habitat Conservation Plan; however, the work proposed at the Project Site is not a covered activity. Thus, no conflicts with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plans are anticipated.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

References Used:

Avocet Research Associates. 2011. Protocol Level Surveys in Bay Point, CA.

California Environmental Services (CES). 2014. Shell Pond Draft Habitat Management Plan. Prepared for the Pacific Gas and Electric Company. San Ramon, CA.

California Natural Diversity Database (CNDDB). 2018. Accessed on October 16, 2018. Retrieved from: https://www.wildlife.ca.gov/Data/CNDDB/Maps-and-Data

CDFW. 2018. Accessed on October 16, 2018. Retrieved from: https://www.wildlife.ca.gov/

CH2M HILL. 2010. Rare Plant Survey for the Shell Pond Project. Prepared for the Pacific Gas and Electric. San Ramon, CA.

CNPS. 2018. Accessed on October 16, 2018. Retrieved from: https://www.cnps.org/

Contra Costa General Plan. http://www.co.contra-costa.ca.us/4732/General-Plan. Accessed on April 26, 2019.

DTSC. 2011. *Modification of Environmental Remedy at the PG&E* "Shell Pond and CBA Property" in Bay Point, CA. Initial Study

East Contra Costa County Habitat Conservation Plan Association. 2006. *East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan*. Prepared by Jones & Stokes

ENTRIX. 2007. Biological Resources Assessment for Shell Pond, Bay Point, California Final Report. Prepared for Pacific Gas and Electric. February 16.

Far Western Anthropological Research Group, Inc. 2011. *Subsurface Geoarchaeological Exploration Results for the PG&E Shell Pond Remediation Project*, Contra Costa County, California.

U.S. Fish and Wildlife Service (USFWS). 2018. Accessed on October 16, 2018. Retrieved from: https://www.fws.gov/

U.S. Fish and Wildlife Service (USFWS) IPaC. 2018. Accessed on October 16, 2018. Retrieved from: https://ecos.fws.gov/ipac/

5. Cultural Resources

Project Activities Likely to Create an Impact:

SWMU 4.18:
Planned Approach

- Re-vegetation of SWMU 4.18

Contingency Approach

- Excavation of 6 inches of material across SWMU 4.18 and landfarming

SWMU 4.12:
Planned Approach

- None

Contingency Approach

- Excavation of 6-inches of wetland NNM in SWMU 4.12 for placement elsewhere in the SWMU and fill of wetland areas with clean soil from MHA

Description of Baseline Environmental Conditions:

Garcia and Associates completed a Cultural Resources Inventory and Evaluation (cultural survey) in 2010 to identify cultural resources within a larger area that included the Site of the Proposed Project (Garcia and Associates 2010). The cultural survey, conducted in compliance with Section 106 of the National Historic Preservation Act, identified ten historic period archeological and architectual resources within an area that includes the Project Site; none of those resources were eligible for the National Register of Historic Places or California Register of Historic Places. Further, the survey did not identify any documented or new prehistoric resources within the Project Site. The survey concluded that no historic resources were located within the Project Site. Since the Project Site is located within the footprint of the 2010 survey, and it is not expected that any cultural resources have been introduced to the Site since the cultural survey was conducted, it is assumed that conditions on the Site related to cultural resources remain unchanged.

Far Western Anthropological Group conducted a geoarcheological exploration in 2011 that included excavating seven exploration trenches across the footprint of the MHA and SWMU 4.18. The investigation found no archaeological materials in excavated sediments, indicating that finding a substantial archaeological site would be unlikely. An assessment of the depth of the Proposed Project excavation relative to the thickness of artificial fill found below the area also indicated that subsurface impacts would be unlikely below the artificial fill and that the fill, being composed of dredged river sediments, was unlikely to contain redeposited archaeological materials.

There are no known paleontological locations within a mile of the Project Site, and past paleontological monitoring in the same geological settings nearby failed to yield significant fossil remains. A “low” sensitivity rating has therefore been applied to sediments potentially affected by the Proposed Project because they are generally devoid of fossils in this area. This is likely because near surface (within 15 feet of the ground surface) sediments are of Holocene age and therefore unlikely to contain scientifically significant fossils (DTSC 2011).

Analysis as to whether or not project activities would:

a. Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?

Impact Analysis:

No object has been found to date in the Project Site meeting the definition of a historical resource designated in Title 14 of the Code of California Regulations (CCR) Section 15064.5. Findings from the cultural survey completed in 2010 indicate the potential for finding historical resources in the Project Site is low. The footprint of Proposed Project activities is contained in the area considered in the 2010 survey; therefore, the survey results can be used to conclude that Proposed Project activities have a very low liklihood of impacting cultural resources. If buried cultural resources such as chipped or ground stone, large quantities of shell, historic debris, or building foundations are discovered

during ground-disturbing activities, then work would stop in that area and within 100 feet of the find until a qualified archaeologist can assess the significance of the find and, if necessary, develop appropriate treatment measures in consultation with DTSC, PG&E, other agencies, and Native American representatives. The following project controls will be followed during project activities:

CR-1: All site workers will be trained to recognize buried artifacts and on the appropriate procedures to be followed should buried artifacts or human remains be encountered. If buried cultural resources, such as chipped or ground stone, large quantities of shell, historic debris, or building foundations are discovered inadvertently during ground-disturbing activities, work will stop in the area and within 100 feet of the find until a qualified archaeologist can assess the significance of the find and, if necessary, develop appropriate measures in consultation with DTSC, PG&E, other agencies, and Native American representatives as appropriate.

CR-2: If human skeletal remains are encountered, the county coroner will be contacted immediately. If the county coroner determines that the remains are Native American, the coroner will then be required to contact the Native American Heritage Commission (pursuant to Section 7050.5 (c) of the California Health and Safety Code) and the County Coordinator of Indian Affairs. A qualified cultural resources specialist also will be contacted immediately.

CR-3: If any human remains are discovered in any location, there will be no further work or disturbance of the location or any nearby area reasonably suspected to overlie adjacent human remains until:

- The county coroner has been informed and has determined that no investigation of the cause of death is required and whether or not the remains are of Native American origin.
- The descendants of the deceased Native Americans have made a recommendation to DTSC and PG&E for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98.
- The Native American Heritage Commission was unable to identify a descendant or the descendant failed to make a recommendation within 24 hours after being notified by the Commission.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact
☐ No Impact

b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?

Impact Analysis:

The archaeological survey conducted in 2011 by Far Western Anthropological Research Group, Inc., found no archaeological resources, as defined in 14 CCR Section 15064.5, within the Project Site. The survey further concluded that the potential for finding archaeological resources in the Project Site is low. Therefore, Proposed Project activities have a low liklihood of impacting archaeological resources and impacts are less than significant. However, as noted above, in accordance with CR-1, workers would be trained to identify such resources if encountered and work would stop within 100 feet until the resource could be properly assessed.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact
☐ No Impact

c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Impact Analysis:

Proposed Project activities that would involve ground disturbance include: placement of compost and amendment across the SWMU 4.18, removal of approximately 6 inches of NNM from SWMU 4.12 as a contingency measure, and replacement with clean soil from the MHA. Waste that could be affected by Proposed Project activities exhibit low to no paleontological sensitivity, and thus the probability that the Proposed Project would directly or indirectly affect unique paleontological resources is negligible. This conclusion is based on scientific literature and paleontological records as well as previous paleontological monitoring in similar settings along the south shore of the Sacramento-San Joaquin River. Therefore, the Proposed Project is not expected to encounter or destroy any unique paleontological resources or geological features.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

d. Disturb any human remains, including those interred outside of dedicated cemeteries?

Impact Analysis:

Results from the cultural survey indicated that encountering human remains was unlikely within an area that includes the Project Site. However, if any human remains are discovered in the Project Site, work would be stopped immediately within a perimeter of at least 100 feet around the discovery. The county coroner would be notified immediately, and there would be no further work or disturbance of the discovery location, or any nearby area reasonably suspected to overlie adjacent human remains, until the coroner has completed investigation of the Site. If the county coroner determines that the remains are Native American, the coroner would then be required to contact the Native American Heritage Commission (pursuant to Section 7050.5 (c) of the California Health and Safety Code) and the County Coordinator of Indian Affairs. PG&E would also contact a qualified cultural resources specialist immediately. Therefore, the expected impact to human remains as a result of the project is less than signficant.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact
☐ No Impact

References Used:

DTSC. 2011. Modification of Environmental Remedy at the PG&E “Shell Pond and CBA Property” in Bay Point, CA. Initial Study

Garcia and Associates. 2010. Cultural Resource Inventory and Evaluation for the Shell Pond Remedy Project, Bay Point, Contra Costa County, California.

Far Western Anthropological Research Group, Inc. 2011. Subsurface Geoarchaeological Exploration Results for the PG&E Shell Pond Remediation Project, Contra Costa County, California.

6. Geology and Soils

Project Activities Likely to Create an Impact:

SWMU 4.18:
Planned Approach

- Isolation of selected areas in SWMU 4.18 (i.e. remedial areas) through installation of coffer dams and ongoing surface dewatering of these areas
- Installation of an irrigation system consisting of aboveground piping and sprinklers
- Import and application of compost and amendment to remedial areas using trucks
- Ongoing irrigation of remedial areas
- Establishment of vegetation in remedial areas
- Levee maintenance and repair consisting of import and addition of aggregate base using trucks
- Post-remediation sampling

Contingency Approach

- Excavation of 6 inches of material across SWMU 4.18 and landfarming

SWMU 4.12
Planned Approach

- None

Contingency Approach

- Excavation of 6 inches of clean soil from 6 acres of MHA to SWMU 4.12 and excavation of 6-inches of NNM within the SWMU 4.12 wetlands for placement elsewhere in the SWMU

Description of Baseline Environmental Conditions:

The Site is located adjacent to Suisun Bay in Contra Costa County, on the eastern edge of the Coast Range Geologic Province, with the Great Valley Province to the east. The geology of the area consists of northwest trending mountain ranges and valleys that run along the San Andreas Fault. Local topography is flat, with some rolling hills sloping south toward Suisun Bay. The Site is located within the Pittsburg Plain Groundwater Basin and was constructed on Holocene Mud and alluvium. The Pittsburg Basin consists of an alluvium plain ranging from sea level to approximately 100 feet above sea level. Primary geologic units in the area are alluvial deposits consisting of sand, gravel, and clay. Groundwater flow is generally north to northeast, discharging into the Suisun Bay.

According to investigation activities led by Jacobson James & Associates (JJ&A), geology at the Site generally consists of three subsurface units: fill, Bay Mud, and alluvium (JJ&A 2017). The fill consists of native deposits and NNM; the Bay Mud unit consists of organic peat layers and organic and inorganic silt and clay. The alluvium unit consists of silt, fine sand with lesser amounts of clay, and is present at the surface in the southern portion of the Site. SWMU 4.18 is primarily located on Bay Mud, which consists of highly organic peat and organic and inorganic clay and silt. Previous investigations within SWMU 4.18 identified a layer of pond-impacted material consisting of byproducts from Shell Chemicals' former manufacturing plant and organic silt that varies in thickness from approximately 0.25 to 5 feet across the SWMU 4.18 footprint (J&A 2017). The impacted material is underlain by a layer of peat and Bay Mud that range in thickness from 2.5 to 7 feet (DTSC 2011). Levees have been constructed around the perimeter of SWMU 4.18 using Bay Mud and other fill materials. The fil consists of clay, silt, and sand. SWMU 4.12 is primarily located on alluvial deposits. Depth to first groundwater beneath SWMU 4.12 has been measured at approximately 2 to 6 feet bgs (ERM 2018).

The Project Site is not located within a current designated Alquist-Priolo Earthquake Fault Zone, but in a seismically active region approximately 6 miles east of the Concord-Green Valley Fault, 12 miles east of the Greenville Fault, 15 miles east of the Northern Calaveras Fault, and 20 miles east of the Hayward Fault (California Department of Conservation 2015). All of these faults have shown historical displacement (during the past 200 years) and a major (magnitude 7.0) earthquake on any would result in moderate to strong ground shaking at the site (California Department of Conservation 2015; Association of Bay Area Governments 1995).

Liquefaction has the potential to occur in saturated, loose, unconsolidated soils during strong seismic shaking. Since saturated soils are a necessary condition for liquefaction, soil in areas where the groundwater table is near the surface have a higher liquefaction potential than areas where the water table is located at greater depths. According to the California Geological Survey Seismic Hazard Zones maps, the Project Site is located in an area identified as having a moderate potential for liquefaction (California Geological Survey 2005). According to the CCC General Plan, the Project Site is not located in an area identified as unstable or having a greater than 26 percent slope and therefore has a low susceptibility to landslides. Landslides may occur on slopes of 15 percent or less; however, the probability is greater on steeper slopes, with old landslide deposits being most likely to experience failure (CCC 2010).

Analysis as to whether or not project activities would:

a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

Impact Analysis:

See individual analyses in below sections.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact
☐ No Impact

b. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

Impact Analysis:

The Project Site is not located within a designated Alquist-Priolo Earthquake Fault Zone (California Department of Conservation 2010); therefore, damage from surface fault rupture is not considered likely. However, the Site is located in a seismically active area and may experience the effects of rupture on nearby Alquist-Priolo Earthquake faults. Proposed Project activities would involve the presence of heavy equipment for short durations at a time (3 to 6 months), and seismic activity in the area is unlikely to result in substantial adverse effects from Proposed Project-related equipment. Site workers would be present for a short duration during Proposed Project activities and therefore the potential for exposure to substantial risk of injury to people would be limited. PG&E would complete the Proposed Project activities in compliance with the required permits (USACE 401 and 404), standard engineering, and seismic safety design standards. Potential impacts as a result of the Proposed Project to be less than significant.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact
☐ No Impact

c. Strong seismic ground shaking?

Impact Analysis:

The Project Site may experience the effects of strong seismic ground shaking due to movement on nearby faults. However, remediation activities would not exacerbate existing, or introduce new, seismic ground shaking hazards. Proposed Project activities would involve the presence of heavy equipment for short durations (3 to 6 months) and

strong seismic ground shaking in the area is unlikely to result in substantial adverse effects from Proposed Project–related equipment. Site workers would be present for a short duration during Project activities and therefore the potential for exposure to substantial risk of injury to people would be limited. To avoid or minimize potential damage from seismic shaking, Proposed Project–related activities would be conducted in compliance with the required permits and standard engineering and seismic safety design standards. Potential impacts as a result of the Proposed Project are therefore expected to be less than significant.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact
☐ No Impact

d. Seismic-related ground failure, including liquefaction?

Impact Analysis:

According to the California Geological Survey Seismic Hazard Zones maps, the Project Site is located in an area identified as having a moderate potential for liquefaction (California Geological Survey 2005). Primarily fine-grained, cohesive sediments (Bay Mud peat, clay, and silt) underlie SWMU 4.18 and SWMU 4.12. These materials have a low susceptibility for liquefaction due to ground shaking. Liquefaction could potentially occur within SWMU 4.12, which is primarily underlain by unconsolidated alluvial deposits. To reduce the potential for seismically induced ground failure related to Proposed Project activities within this area, PG&E would undertake all soil excavation and backfilling (SWMU 4.12 Contingency Approach) following methodologies that are widely accepted standard practice in the region and use equipment and imported materials that meet appropriate engineering specifications. PG&E would conduct Proposed Project–related construction activities (excavation, backfilling) in compliance with the required permits and standard engineering and seismic safety design standards. Potential impacts as a result of the Proposed Project are therefore expected to be less than significant.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact
☐ No Impact

e. Landslides?

Impact Analysis:

Seismic and static landslides typically occur where ground slopes are steep and soils are unconsolidated and saturated with groundwater. Although groundwater exists beneath the Project Site at a depth of 2 to 6 feet bgs, the Site is primarily underlain by cohesive materials and is relatively flat, with the exception of levees (less than 9 feet in height). According to the CCC General Plan, the Project Site is not located in an area identified as unstable or having a greater than 26 percent slope (CCC 2010). All Proposed Project–related construction activities would take place following methodologies that are widely accepted standard practice in the region and using equipment and imported materials that meet appropriate engineering specifications; therefore, there is no anticipated threat of landslides occurring as a result of Proposed Project activities. Potential impacts as a result of the Proposed Project are therefore expected to be less than significant.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact
☐ No Impact

f. Result in substantial soil erosion or the loss of topsoil?

Impact Analysis:

Proposed Project activities would occur in unpaved areas where there is the potential for exposure to weather conditions such as rain or wind that would cause erosion. Erosion has the potential to occur during Proposed Project activities, including soil disturbance related to import and application of compost and amendments and excavation of 6 inches of soil for SWMU 4.18 and 4.12 Contingency Approaches. However, such earth disturbance activities would be temporary and would not result in substantial soil erosion or loss of topsoil because the earth disturbance work would be performed in localized areas. Additionally, Proposed Project activities, including the application of compost/amendments and establishment of vegetation in remedial areas would eliminate/reduce the loss of topsoil. Potential impacts as a result of the Proposed Project are therefore expected to be less than significant and will be further reduced with the implementation of project control **GEO-1**.

GEO-1: If required based on extent of ground disturbance (contingency excavation activities only), a Storm Water Pollution Prevention Plan (SWPPP) will be prepared and implemented in compliance with State Water Resources Control Board Order No. 2009-009-DWQ, General Permit No. CAS 000002.The SWPPP would specify appropriate practices to prevent potential run-off of soils and chemicals from the Project site or into sensitive areas within the Project site. Storm water collected within the material-handling areas would be discharged to the pond in conjunction with the filtrate and any other water generated by the Project. No fueling or refueling will be allowed onsite except where it is impractical to send vehicles and equipment offsite for fueling. When fueling must occur onsite, the contractor will designate an area to be used, in an appropriate area subject to the approval of the onsite biological monitor.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact
☐ No Impact

g. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Impact Analysis:

Unstable conditions associated with geologic units or soils are not expected within the Project Site. The Project Site is located in an area identified as having a moderate to high potential for liquefaction (California Geological Survey 2005). The Project Site is flat-lying and has not been identified as a landslide hazard zone (CCC 2010). Subsidence can occur due to decomposition of highly organic soils and seasonal drying of expansive clay soils. The soil types underlying SWMU 4.18 are primarily fine-grained, cohesive sediments (Bay Mud peat, clay, and silt), which could exhibit potentially expansive behavior as a result of wetting/drying. However, because the moisture contents of native and existing soils are not expected to deviate significantly from pre- and post-cleanup levels (due to the combination of ongoing surficial dewatering and irrigation), changes in volume are anticipated to be minor.

Minor soil disturbances associated with the application of amendments and compost to remedial areas, surficial pond dewatering, and/or excavating the top 6 inches of soil as potential contingency approaches, have a low risk of

impacting soil stability. All soil disturbance activities would take place following methodologies that are widely accepted standard practice in the region, using equipment and imported materials that meet appropriate engineering specifications. PG&E would only remove surficial water from within selected areas of SWMU 4.18 as part of dewatering activities, and these areas would be irrigated on an ongoing basis to establish the vegetation, which would lower the risk for creating unstable soil conditions. Potential impacts as a result of the Proposed Project are therefore expected to be less than significant.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact
☐ No Impact

h. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

Impact Analysis:

The soil types underlying SWMU 4.18 are primarily fine-grained, cohesive sediments (Bay Mud peat, clay, and silt), which could exhibit potentially expansive behavior as a result of wetting/drying. However, because the moisture contents of native and existing soils are not expected to deviate significantly from pre- and post-cleanup levels (due to the combination of ongoing surficial dewatering and irrigation), changes in volume are anticipated to be minor. Additionally, the compost and amendment materials to be applied to the remedial areas and aggregate base material that would be added to the levees as part of ongoing maintenance and repair would be inert and non-expansive. The Proposed Project would not expose populations or structures to any risk, as activities do not include the construction of any structure on the Site, Site workers would be present for a short duration during Proposed Project activities, and the Site would not be occupied after Proposed Project activities commence. Potential impacts as a result of the Proposed Project are therefore expected to be less than significant.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact
☐ No Impact

i. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

Impact Analysis:

No sewer systems, septic tanks, or alternative wastewater disposal systems are included as part of this Proposed Project and there are no impacts related to support of septic and alternative wastewater disposal systems.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

References Used:

Association of Bay Area Governments. 1995. On Shaky Ground. Accessed on September 20, 2018. Retrieved from: http://www.abag.ca.gov/bayarea/eqmaps/doc/text1.html.

California Department of Conservation. 2010. Fault Activity Map of California. Accessed: September 20, 2018. Retrieved from: http://maps.conservation.ca.gov/cgs/fam /.

California Geological Survey. 2005. Susceptibility Map of the San Francisco Bay Area. Accessed: September 20, 2018. Retrieved from: https://geomaps.wr.usgs.gov/sfgeo/liquefaction/susceptibility.html

CCC. 2010. Contra Costa County General Plan, Chapter 10: Safety Element. Accessed: November 26, 2018. Retrieved from: http://www.co.contra-costa.cs.us/4732/General-Plan

ERM. 2018. Draft Corrective Measures Study, Shell Pond Site, Bay Point, California. August.

JJ&A. 2017. Supplemental RCRA Facility Investigation Report. Solid Waste Management Units 4.12 and 4.18. PG&E Shell Pond Site*, Bay Point, California.* 29 June.

7. Greenhouse Gas Emissions

Project Activities Likely to Create an Impact:

SWMU 4.18:
Planned Approach

- Mixing rig and pump use over a 2-month period during each phase
- Haul trucks to import compost during each phase, approximately 730 truck trips (round trip) over a year period, with only one phase in a given year
- Use of vehicles to bring personnel and supplies to the Site during construction, approximately five vehicles per day over a 4-month period during each phase (one phase in a given year)

Contingency Approach

- Excavator, loader, rototiller, and mixing rig and pump use over a 4- to 6-month period during each phase.
- Haul trucks to import compost during each phase, approximately 370 truck trips (round trip) over a year period, with only one phase in a given year
- Use of vehicles to bring personnel and supplies to the Site during construction, approximately five vehicles per day over a 4-month period during each phase (one phase in a given year)

SWMU 4.12:
Planned Approach

- None

Contingency Approach

- Excavator, loader, scaper, and bobcat use over a 3-month period during each phase.
- Use of vehicles to bring personnel and supplies to the Site during construction, approximately five vehicles per day over a 3-month period during each phase (one phase in a given year)

The major category of greenhouse gas (GHG) emissions resulting from human activities is carbon dioxide (CO_2) from fossil fuel combustion. There are several other gases that contribute to global warming, including methane, nitrous oxide, sulfur hexafluoride, perfluorocarbons, and hydrofluorocarbons. However, the majority of GHG emissions associated with the project would be CO_2 from diesel-fueled heavy equipment and trucks, so this discussion focuses on CO_2.

Proposed Project activities that would generate CO_2 emissions include construction equipment use, haul truck travel, and construction employee commute trips.

Description of Baseline Environmental Conditions:

State Executive Order S-3-05 established GHG reductions targets for the state of California. The targets called for a reduction to 2000 levels by 2010; a reduction of GHG emissions to 1990 levels by 2020; and a reduction of GHG emissions to 80 percent below 1990 levels by 2050. In April 2015, Governor Brown signed Executive Order B-30-15 that added the intermediated target of reducing GHG emissions to 40 percent below 1990 levels by 2030.

The BAAQMD adopted the 2017 Bay Area Climate Action Plan (CAP) on April 19, 2017. The 2017 CAP provides a regional strategy to protect public health and protect the climate. To protect public health, the plan describes how the BAAQMD will continue its progress toward attaining all state and federal ambient air quality standards and eliminating health risk disparities from exposure to air pollution among Bay Area communities. To protect the climate, the plan defines a vision for transitioning the regions to a post-carbon economy needed to achieve ambitious GHGs reduction targets for 2030 and 2050, and provides a regional climate protection strategy that will put the Bay Area on a pathway to achieve those GHG targets.

Local county strategy is focused on reducing local GHG emissions, in order to reduce the county's impact, increase the county's resiliency to climate change and improve public health. Contra Costa County has implemented the Contra Costa County CAP(2015) in order to address the potential impacts around the world as well as locally. The CAP focuses on impacts that are most relevant to Contra Costa County, particularly public health.

Analysis as to whether or not project activities would:

a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

Impact Analysis:

During construction, the Proposed Project would contribute GHG emissions through direct CO_2 emissions from vehicles and heavy equipment. Calculations of CO_2 emission estimates both the Planned and Contingency Approaches for the Proposed Project are in Attachment C and Table 7.A. PG&E will implement the following project control:

GHG-1: Greenhouse gas BMPs may include:

- Use of local source(s) of backfill material that would minimize travel distance.
- Sourcing amendments and compost from nearby.
- Limiting equipment idle time.

Total annual CO_2 emissions for either the Planned or Contingency Approach are below BAAQMD "operational" significance thresholds for land use projects. BAAQMD has not established Thresholds of Significance for construction-related GHG emissions, which would apply to this project. Nevertheless, BAAQMD's 2017 CEQA Guidelines (Section 8.2) prescribe that the lead agency should still "make a determination on the significance of these construction-generated GHG emission impacts" even though BAAQMD does not identify a standard to use for that determination.

In lieu of construction-related Thresholds of Significance, the operational-related maximum annual Threshold of Significance for land use projects is used as a point of comparison (1,100 metric tons per year). The Proposed Project's calculated annual CO_2 emissions would be well below this threshold. The project would not create a new permanent stationary or non-stationary source of emission, including GHG emissions as defined by BAAQMD guidelines (BAAQMD 2017).

Table 7.A. Greenhouse Gas Emissions for Proposed Project Activities

Pollutant	***SWMU 4.18 and 4.12 Planned Approaches*** **Haul Truck, Employee Commute, and Compost Placement Emissions**	***SWMU 4.18 and 4.12 Contingency Approaches*** **Haul Truck, Employee Commute, and Compost Placement Emissions**	**BAAQMD CEQA Threshold**
CO_2 (metric tons/yr)	42	225	1100

Note: Emissions calculated using the CalEEMod emissions estimation model.

Conclusion:

☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☒ Less Than Significant Impact
☐ No Impact

b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Impact Analysis:

The Proposed Project's use of construction equipment would be short-term and temporary. Haul truck trips would be limited to the duration of Site restoration such that greenhouse gas emissions from haul trucks would cease once the Proposed Project is complete. As such, the Proposed Project would not conflict with the goals of the 2015 CCC Climate Action Plan, nor with the BAAQMD 2017 CAP because GHG emissions would be below the BAAQMD operational significance thresholds for GHGs. All project activities would be performed consistent with project controls AQ-1, AQ-2, and AQ-3 as listed in Attachment B.

Conclusion:

☐ Potentially Significant Impact
☐ Potentially Significant Unless Mitigated
☒ Less Than Significant Impact
☐ No Impact

References Used:

BAAQMD. 2017. BAAQMD Updated CEQA Guidelines.

BAAQMD. 2018. Bay Area Climate Protection Program. Accessed on November 26, 2018. Retrieved from: http://www.baaqmd.gov/plans-and-climate/climate-protection

CARB. 2015. California Greenhouse Gas Emissions Inventory – 2015 Edition. Available at http://www.arb.ca.gov/cc/inventory/data/data.htm, accessed on June 10, 2016.

CCC. 2015. Climate Action Plan. Accessed on November 26, 2018. Retrieved from: http://www.co.contra-costa.ca.us/4554/Climate-Action-Plan

8. Hazards and Hazardous Materials

Project Activities Likely to Create an Impact:

SWMU 4.18
Planned Approach

- None

Contingency Approach:

- Excavation, handling, transportation and disposal of NNM from SWMU 4.18
- Spills or improper management of hazardous materials used onsite during construction including fuels, oils, maintenance chemicals, or chemical oxidation additives

SWMU 4.12
Planned Approach

- None

Contingency Approach

- Excavation and movement of NNM across SWMU 4.12
- Spills or improper management of hazardous materials used onsite during construction including fuels, oils, maintenance chemicals

Description of Baseline Environmental Conditions:

The primary source of concern in SWMUs 4.18 and 4.12 is the NNM, primarily composed of carbon black containing COCs along with variable amounts of organic matter from historical biological wastewater treatment process for the unit, algae, and organic debris such as decaying leaves. This NNM is a carbon black matrix with varying amounts of organic material from the biological treatment process that occurred during the operating life of the unit and the subsequent addition/mixing of algae, organic debris, and other detritus that forms and collects in the unit.

The highest concentration of COCs in both SWMUs are present within the NNM. The NNM is a visually distinct layer on top of the native material. Within SWMU 4.18, the thickness of the NNM ranges from approximately 0.25 to 5 feet, with the maximum thicknesses observed in the northeast, southeast and center-west edge of the unit. Within SWMU 4.12, NNM is present throughout the unit with NNM exposed at the surface of some areas not previously covered with native fill from the MHA. Within both SWMUs, detections of COCs within the native material underlying the NNM were reduced in frequency and magnitude; polycyclic aromatic hydrocarbons (PAH) evaluations indicate that the PAHs have not migrated into or mixed in most areas of the native material.

The COCs present at both SWMU 4.18 and 4.12 are primarily heavy-range total petroleum hydrocarbons and PAHs, but also include metals, volatile organic compounds, non-PAH semi-volatile organic compounds, and cyanide.

The COCs in SWMU 4.18 and 4.12 are not highly mobile and confined within the levees. Prior investigations have concluded that there would be no significant impact to groundwater and surface water (excluding the water cover) warranting further evaluation (JJ&A, 2018a); DTSC has previously concurred that groundwater and surface water (excluding the water cover in SWMU 4.18) are not media of concern based on the characterization data. There are detections of COCs in the SWMU 4.18 surface water that provide the cover for dust and odor control. The water used for the cover is provided by an on-Site groundwater supply well and the organics detected would be sourced from the NNM. Once the coffer dams are relocated, the remaining surface water would eventually evaporate out of the section leaving behind the COCs.

The DTSC-approved *HHRA* for SWMUs 4.12 and 4.18 (Iris 2016) evaluated the potential risks for human exposure to the SWMU media of concern based on a current Site use child trespasser scenario and a future Site use consisting of a recreational trail. Based on these scenarios, the HHRA concluded that remediation of the Site media is not necessary to protect trespassers or potential future recreational users.

Separately, an ERA (Ecological Risk, Inc. 2018) was prepared and approved by the DTSC in 2018. To further analyze uncertain conclusions related to levels of cyanide and sulfide in SWMU 4.18, a Technical Addendum was prepared in November 2018 following collection of surface water samples (JJ&A 2018b).

In SWMU 4.18, exposures considered included:

- PAHs in surface water (i.e., pond water), NNM (waste), native material (underlying sediment), and soil;
- Cyanide in surface water (i.e., pond water), NNM (waste), and native material (underlying sediment);
- Sulfide in surface water (i.e., pond water); and
- Metals (chromium, copper, nickel, and selenium) in NNM (waste) and native material (underlying sediment).

Within SWMU 4.12, the ERA considered exposures of ecological receptors to PAHs, lead, and cyanide in soil.

The ERA confidence in the risk driver conclusions for cyanide and sulfide in the SWMU 4.18 surface water was low. While there were no detections of cyanide or sulfide in SWMU 4.18 surface water, the laboratory reporting limits for cyanide and sulfide surface water samples were higher than the ecological risk screening levels. Samples of the SWMU 4.18 surface water were collected for analyses with lower reporting limits. According to the 2018 Technical Addendum, which analyzed these samples, the new data collected was compared to the chronic marine NRWQC for both analytes to determine whether concentrations present risks to water column biota. Cyanide concentrations were below detection limits in 9 of 10 samples and below the NRWQC in all samples. In contrast, sulfide was detected in, and exceeded the NRWQC, in all 10 samples. However, sulfide concentrations in SWMU 4.18 were not significantly different from those from adjacent locations in Suisun Bay. These results indicate that neither cyanide nor sulfide are likely to present risks to water column biota in SWMU 4.18 (JJ&A 2018b).

While NNM at both SWMUs contain hazardous constituents, these materials do not classify as hazardous waste and risk assessments have determined that short-term exposure to these material does not pose a risk to human health

Analysis as to whether or not project activities would:

a. Create a significant hazard to the public or the environment throughout the routine transport, use, or disposal of hazardous materials?

Impact Analysis:

Hazardous materials on Site for the Proposed Project under the SWMU 4.18 Planned Approach and SWMU 4.12 Contingency Approach would include fuels and oils for standard operation of construction equipment. PG&E would minimize potential impacts associated with the use of such materials through proper storage and disposal, the use of BMPs, and compliance with applicable laws and regulations governing the management of hazardous materials and hazardous waste. After restoration is completed and construction activities cease, routine transport, use of hazardous materials, or management of waste generated by the use of these materials would also cease completely.

Should the SWMU 4.18 Contingency Approach be required, the proposed environmental remediation would include the removal, management, and transportation of up to 4,000 cubic yards of Class II nonhazardous waste. PG&E plans to dispose excavated material at the nearby Keller Canyon Landfill as Class II non-hazardous waste, taking approximately 730 round truck trips per phase. The management, storage, and transport of remediation materials would be consistent with all applicable federal and state laws. A Transportation Management Plan would be in place prior to the start of off-site transport of the impacted material (project control **TT-**1; see Traffic and Transportation below). Any storage of hazardous or impacted materials would occur in a designated material-handling area with secondary containment. Accidental releases of hazardous or remediation materials would be minimized through the implementation of a SWPPP (project control **GEO-1**), if required, and with enhanced spill response training for site workers. Therefore, impacts related to the transport, use, or disposal of hazardous materials would be less than significant.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated

☒ Less Than Significant Impact
☐ No Impact

b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Impact Analysis:

Potential upsets could include the accidental release of contaminated site materials during their removal, management, or transport (under SWMU 4.18 Contingency Approach); the accidental release of construction-related hazardous materials such as fuel, oil, or maintenance chemicals; or the generation of dust and odor during Proposed Project activities.

Regarding the dewatering activities for the SWMU 4.18 Planned Approach, most COCs within SWMU 4.18 are not volatile and their concentrations are low, the dewatering activities during SWMU 4.18 restoration could enhance the emission and transfer of COCs to air. Specific enhancement processes include evaporation and bacterial action induced by aerobic exposure of media and physical separation processes such as dewatering and segregation could increase COC concentration. To prevent air impacts associated with remediation activities, the dewatering activities will be conducted in stages.

The SWMU 4.18 Contingency Approach would include the removal, management, and transportation of up to 4,000 cubic yards of waste that risk assessments have determined short-term exposure does not pose a risk to human health. These management activities would also take place for less than a year. In addition, the probability that remediation materials escape to the environment during transportation accidents will be minimized through the implementation of project control **TT-1** (a Transportation Management Plan).

PG&E would minimize potential spills or releases of hazardous materials through implementation of a Spill Management Plan.

Vehicle fueling would occur off-site except when necessary. With the implementation of the project control **HAZ-1**, in addition to those contained in the Transportation Management Plan (TT-1) and the Spill Management Plan where applicable, potential impacts associated with accidental release of fuel would be less than significant.

HAZ-1: The following will be implemented to minimize potential impacts from hazardous materials:

- Preparation of a Health and Safety Plan including requirements for workers and other construction management components, such as dust and off-site migration control.
- All construction activities involving work in proximity to potentially contaminated soils would be undertaken in accordance with California Occupational Safety and Health Administration standards, contained in Title 8 of the CCR.
- Establishment of health and safety provisions for monitoring exposure to construction workers, procedures to be undertaken in the event that previously unreported contamination is discovered, and emergency procedures and responsible personnel.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact
☐ No Impact

c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances or waste within one-quarter mile of an existing or proposed school?

Impact Analysis:

Proposed Project activities would not emit hazardous emissions, or involve handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. Portions of the route selected to haul materials to the landfill under the SWMU 4.18 Contingency Approach do run within 0.25 mile of existing schools, but remediation materials are not classified as hazardous waste, acutely hazardous materials, or pose an acute threat to human health. PG&E would minimize potential spills of hazardous materials through implementation of **HAZ-1**. Risk would be further minimized through Proposed Project compliance with applicable federal and state hazardous material and waste regulations.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact
☐ No Impact

d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Impact Analysis:

SWMU 4.18 and SWMU 4.12 are not on the "Cortese List" associated with Section 65962.5. Therefore, no impact related to the exposure of the public or environment to such sites would occur.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

Impact Analysis:

The Project Site is not located within an airport land use plan or any existing airports. Therefore, there would be no impacts associated with people residing or working at an airport near the Project Site.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

Impact Analysis:

The Project Site is not located within the vicinity of a private airstrip. Therefore, there would be no impacts associated with people residing or working at a private airstrip near the Project Site.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

g. Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?

Impact Analysis:

The Project does not have potential to impair or interfere with an adopted emergency response plan or emergency evacuation plan except during the transportation of remediation materials to Keller Canyon Landfill when trucks on public streets could slow the flow of traffic. However, the Transportation Management Plan (seeTT-1 below) provides for communication between all trucks and project management, and the ability to manage project-related truck traffic and respond to unexpected conditions in real time. If an Emergency Response or Evacuation Plan were to be implemented, PG&E would then suspend transport of impacted material until the emergency or evacuation is no longer in effect. Therefore, impacts would be less than significant.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact
☐ No Impact

h. Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

Impact Analysis:

Project activities for SWMU 4.18 would have a minimal risk of fire that is not associated with the work of the Proposed Project. However, SWMU 4.12 is composed of primarily carbon black material and a recent fire (September 2018) that occurred burned the surface vegetation and ignited the carbon black. Therefore, the presence of the carbon black could increase the risks of exposing people or structures to injury or death involving wildland fires. To mitigate this, 6 inches of soil was added to the areas of exposed carbon black in SWMU 4.12 as part of the recent Carbon Black Soil Stabilization action. The SWMU 4.12 Planned Approach described herein is to monitor the effects of the emergency action without further intervention. In the event the CAOs are not achieved, additional clean soil would be placed on SWMU 4.12 and vegetation established (ERM 2018).

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact
☐ No Impact

i. Result in human exposure to naturally occurring asbestos?

Impact Analysis:

The Project Site does not contain any naturally occurring asbestos; therefore, there would be no impacts associated with human exposure to naturally occurring asbestos.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

References Used:

Ecological Risk, Inc. 2018. Final Ecological Risk Assessment Report, Solid Waste Management Units 4.12 and 4.18; PG&E Shell Pond Site, Bay Point, California. March, 2018.

ERM. 2018. Draft Corrective Measures Study, Shell Pond Site, Bay Point, California. August 2018.

Iris. 2016. A Human Health Risk Assessment Solid Waste Management Units 4.12 and 4.18 PG&E Shell Pond Site Bay Point, California. February 2016.

JJ&A. 2018a. Revised Pages and Appendix H for the Final Ecological Risk Assessment Report, Solid Waste Management Units 4.12 and 4.18 for the PG&E Shell Pond project site located in Bay Point, California.

JJ&A. 2018b. Evaluation of Ecological Risks from Cyanide and Sulfide in 2018 Shell Pond Surface Water Samples. November, 2018.

PG&E and ERI. 2018. Final Ecological Risk Assessment Report, Solid Waste Management Units 4.12 and 4.18; PG&E Shell Pond Site, Bay Point, CA. March 2018.

9. Hydrology and Water Quality

Project Activities Likely to Create an Impact:

SWMU 4.18:
Planned Approach

- Installation and filling of coffer dams with irrigation system water supply to isolate and dewater sections of SWMU 4.18 via evaporation
- Use of water for irrigation to establish vegetation

Contingency Approach

- Spills or improper management of hazardous materials used onsite during construction including fuels, oils, or maintenance chemicals

SWMU 4.12
Planned Approach

- None

Contingency Approach

- Use of water for irrigation to establish vegetation
- Excavation of 6-inches of wetland NNM in SWMU 4.12 for placement elsewhere in the SWMU and fill of wetland areas with clean soil from MHA
- Spills or improper management of hazardous materials used onsite during construction including fuels, oils, maintenance chemicals

Description of Baseline Environmental Conditions:

Surface Hydrology
The Project Site lies within the San Francisco Bay Area Hydrologic Basin (hydrologic unit code 180500010401). Surface water from the Site eventually drains to Suisun Bay. Suisun Bay is part of the larger Bay-Delta system, which drains the Sacramento Valley, eventually discharging to the Pacific Ocean. The Project Site is relatively flat with elevations that range from 5 to 10 feet above mean sea level. The climate of the San Francisco Bay Area is characterized as Mediterranean with cool wet winters and relatively warmer dry summers. The mean annual rainfall in the Site vicinity ranges from approximately 13 to 17 inches (Western Regional Climate Center—Antioch Pump Plant Station 1955–2009).

The Site is surrounded by wetlands and ruderal upland areas. A small intermittent drainage ditch, which originates in the hills southwest of the site, flows through a development in Bay Point (Shore Acres) through underground culverts and underneath the railroad tracks into the West Slough between SWMU 4.18 and the adjacent western parcel (outside of Site boundaries). The West Slough is tidally influenced to the southern edge of the SWMU, extends due north along the SWMU, and eventually connects to Suisun Bay. A storm water pipe that originates in an area southeast of the Site conveys runoff into the tidally influenced East Slough located immediately beyond the eastern Site boundary. The East Slough extends due north along SWMU 4.18 to Suisun Bay. The remnants of the former wastewater discharge ditch to the SWMU extends from the railroad tracks to the southeast of the Project Site but no longer discharges to SWMU 4.18.

SWMU 4.12 contains two surface water features: a non-tidal channel or depression that bounds the west and north sides of the SWMU and seasonal wetlands over a small portion of the Site (Figure 4). Both are fed by local storm water and are not connected to other surface water bodies.

Hydrogeology and Groundwater
The Site hydrogeology is made up of two units: upper and lower. The upper unit consists of groundwater in the fill unit and upper portion of the Bay Mud unit. The water table is in the upper water-bearing unit and occurs approximately 2 to 6 feet bgs. The lower groundwater zone occurs in the alluvium unit below the Site, encountered at a depth of approximately 30 to 40 feet bgs. The groundwater flow direction is generally toward the northwest during the wet season and to the southeast during the dry season. Groundwater at the Site experiences seawater intrusion, and according to DTSC and Regional Water Quality Control Board (RWQCB), the Upper Zone groundwater at the Site is not considered a potential source for drinking water (ERM 2018).

Analysis as to whether or not project activities would:

a. Violate any water quality standards or waste discharge requirements?

Impact Analysis:

Proposed Project activities would not violate any water quality standards or waste discharge requirements. To address construction-related impacts, PG&E would have a SWPPP and SWPPP training (e.g., training workers in BMPs related to the management of stormwater) in place prior to the initiation of construction, if required based on extent of ground disturbance (i.e. greater than 1 acre). A 401 Water Quality Certification was issued in February 2016 by the RWQCB to assess water quality impacts and assign conditions, as needed. Secondary containment will be provided to contain any potential spills associated with stationary heavy equipment. If required, the SWPPP would specify appropriate practices to prevent potential runoff of soils and chemicals from the Project Site. No fueling or refueling would be allowed onsite except where it is impractical to send vehicles and equipment offsite for fueling (such as for heavy equipment). When fueling must occur onsite, the contractor would use a designated fueling area. In addition, fueling would be subject to spill prevention measures included in the SWPPP, if required.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

Impact Analysis:

Groundwater from a privately owned well onsite is proposed for use to fill the coffer dams, for irrigation purposes to establish vegetation as part of the SWMU 4.18 Contingency Approach. In 2007, the RWQCB determined that the groundwater was not a potential source of drinking water and the DTSC determined that groundwater monitoring at SWMU 4.18 and SWMU 4.12 could be discontinued. During dewatering of SWMU 4.18, surface water only will be pumped from one part of the SWMU to another. Surface and groundwater in SWMU 4.18 are not connected because of the impervious bay Mud that physically separates groundwater and water in the SWMU. The Proposed Project would not alter the hydrogeology of the Site in ways that would have adverse effects on groundwater.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact
☐ No Impact

c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on or off site?

Impact Analysis:

SWMU 4.18 would be dewatered via evaporation by pumping existing surface water and accumulated storm water from one isolated section to another to allow for drying, placement of compost, and vegetation of each area. There would be no alteration of the existing drainage patterns of the Site vicinity. Any waste removed from SWMU 4.18 under the Contingency Approach would be hauled off Site and disposed. Movement of soils from the MHA to SWMU 4.12 and movement of NNM within SWMU 4.12 as part of the Contingency Approach, would be managed and stabilized in accordance with the provisions of the Proposed Project SWPPP using standard erosion control measures. No substantial erosion or siltation would occur as a result of the Proposed Project.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact
☐ No Impact

d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on or off site?

Impact Analysis:

The Project would not alter the existing drainage pattern as described above or increase flooding. Vegetation within SWMU 4.18 would ultimately reduce the risk of flooding of SWMU 4.18. The MHA may be graded and bermed to provide containment for construction-related activities and storm water runoff over a temporary period, but would not be expected to appreciably change the rate of runoff.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact
☐ No Impact

e. Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?

Impact Analysis:

The Proposed Project would not alter the existing or planned drainage systems or pollute storm water runoff. Should the contingency plan be implemented, a SWPPP would be developed in accordance with project control **GEO-1** and implemented prior to the start of any construction activities. During winter rainfall, the water pumping will be adjusted in order to prevent overfilling of SWMU 4.18. If rainfall increases water depth within the pond to elevated levels PG&E would pump excess water from SWMU 4.18 to other areas within the Site such as SWMU 4.12, to prevent overflow. All water prior to being discharged from the pond will be sampled and analyzed in order to meet water quality requirements for discharge.

Levee repair and maintenance would be conducted annually and would include the addition of new material to the top of the levee to increase its height to address estimated rises in sea level. Adding to the height of the levee will not impact adjacent wetlands. Levee repair and maintenance will further reduce the less than significant impact.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated

☒ Less Than Significant Impact
☐ No Impact

f. Otherwise substantially degrade water quality?

Impact Analysis:

Other than the potential impacts described under questions a) through e) above, which are less than significant, no other potential impacts to water quality are anticipated.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact
☐ No Impact

g. Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

Impact Analysis:

The Proposed Project would not create any housing facilities.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

h. Place within a 100-flood hazard area structures which would impede or redirect flood flows?

Impact Analysis:

The Proposed Project would not create any permanent structures or place any structures in a 100-year flood hazard area.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

i. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

Impact Analysis:

The Project Site is in an undeveloped area that does not expose people or structures to a flooding risk. The current SWMU 4.18 levees do not provide any flood protection function to the surrounding areas.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

j. Inundation by seiche, tsunami, or mudflow?

Impact Analysis:

The Proposed Project would not affect the potential for seiche, tsunami, or mudflows. Based on the Department of Conservation Tsunami Inundation Map, the Project Site is outside the tsunami inundation zone (California Department of Conservation 2018). The Project Site is not susceptible to seiche inundation as there are no major landlocked bodies of water within or near the Site. Although SWMU 4.18 is a landlocked body of water there is no exchange with SWMU 4.18 water and Suisun Bay. The nearest landlocked body of water is the Mallard Reservoir located approximately 5 miles southwest of the Project Site. The Contra Costa County General Plan, Chapter 10 mentions no occurrences of a seiche have been recorded in the San Francisco Bay Area and although seiche inundation events can temporarily flood a shoreline, the destructive capacity of a seiche is not as great as a tsunami. As discussed in Section 6, Geology and Soils, no portions of the Project Site are identified as unstable or have slopes great than 26 percent. Therefore, the Project Site has a low susceptibility to landslides and subsequent mudslides or mudflows are rare. As such, the Project would have no impact on the potential for inundation by seiche, tsunami, or mudflow.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

References Used:

ERM. 2018. Draft Corrective Measures Study, Shell Pond Site, Bay Point, California.

10. Land Use and Planning

Project Activities Likely to Create an Impact:

SWMU 4.18:
Planned Approach
- None

Contingency Approach
- None

SWMU 4.12:
Planned Approach
- None

Contingency Approach
- None

Description of Baseline Environmental Conditions:

The Project Site, located in unincorporated CCC is designated as open space in the CCC 20015–2020 General Plan. The Site is bounded by Suisun Bay to the north and Union Pacific Railroad and Burlington Northern Santa Fe railroad tracks to the south. PG&E owns the parcels located to the east and immediately west of the Site. The parcel to the east is designated as open space. The parcel to the west of PG&E's combined property is occupied by the McAvoy Yacht Harbor and is designated for recreational use. A land use covenant for SWMU 4.18 and SWMU 4.12 restricts future development by not allowing residential development (California DTSC 2000).

The railroad corridor that runs from east to west just to the south of the Site is designated as Public and Semi-Public and an area designated as Heavy Industry is located to the south of the railroad tracks. The area to the southwest of the Site is zoned as Single Family Residential-High Density and the area to the southeast is zoned as Multi-Family Residential-Low Density. The Project Site is located outside the Urban Limit Line.

Analysis as to whether or not project activities would:

a. Physically divide an established community?

Impact Analysis:

The Proposed Project is located in an open space, and the adjacent parcels to the east and west are also occupied by open space. The closest residences are approximately 0.25 mile to the south and Suisun Bay is located to the north. The Site is not currently zoned as Residential and a land use convent prevents future residential development on the Site. Therefore, any work conducted related to the Proposed Project would not divide an established community and no impact would occur.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?
Impact Analysis:

The Proposed Project activities would not conflict with any land use plan, policy, or program adopted to avoid or mitigate an environmental effect. The Site would remain as open space after the proposed activities are complete. Therefore, no impact would occur.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

c. Conflict with any applicable habitat conservation plan or natural community conservation plan?

Impact Analysis:

The ECCHCP/Natural Community Conservation Plan goals are to restore and protect wildlife habitat in the area (ECCHCP Association 2006). The Site would remain open space, and proposed work would result in expanding the vegetation in SWMU 4.12 and establishing vegetation in SWMU 4.18. The Proposed Project would not conflict with any natural community conservation plan or any conservation plan. For these reasons, impacts related to the Proposed Project would be less than significant.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact
☐ No Impact

References Used:

California DTSC. 2000. Statement of Basis, Corrective Action Remedy Selection, PG&E, Shell Pond and Carbon Pile Property, and Modification of Southern Energy L.L.C. Hazardous Waste Treatment and Storage Permit, 696-10th West Street, Pittsburg, California 94565.

CCC. 2005. *Contra Costa County General Plan 2005-2020*. Reprinted July 2010. Prepared by the Department of Conservation & Development. Land Use Element Map. Updated 2017.

Contra Costa County Redevelopment Agency. 2008. *Bay Point Waterfront Strategic Plan Final Environmental Impact Report*, State Clearinghouse no. 2004092009.

East Contra Costa County Habitat Conservation Plan Association, 2006. *East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan*. Prepared by Jones & Stokes.

11. Mineral Resources

Project Activities Likely to Create an Impact:

SWMU 4.18:
Planned Approach

- None

Contingency Approach

- None

SWMU 4.12:
Planned Approach

- None

Contingency Approach

- None

Description of Baseline Environmental Conditions:

Contra Costa County is estimated to have more than 5 million tons of sand in the Wolfskill and Domengine Formations and more than 1,012 million tons of Franciscan Complex sandstone (California Department of Conservation Division of Mines and Geology 1987). The foothills located approximately 10 miles south of the Site contain sand and gravel, and stone mineral resources designated MRZ-3. The Project Site does not contain any known mineral resources.

Analysis as to whether or not project activities would:

a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

Impact Analysis:

There are no known mineral resources located within the Project Site boundaries. The nearest identified mineral resources are located 10 miles to the south and would not be impacted by the Proposed Project activities. Therefore, the Proposed Project would not result in loss of availability of any known mineral resource to the region or the state.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

b. Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

Impact Analysis:

No known mineral resources are located within the Project Site. Transport of construction vehicles and equipment would occur on paved city roads and highways and would not disturb potential mineral resources in the area. As such, there would be no impact to locally important mineral resource recovery sites.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

References Used:

California Department of Conservation Division of Mines and Geology. 1987. Special Report 146, Mineral Land Classification: Aggregate Materials in the San Francisco - Monterey Bay Area, Part II Classification of Aggregate Resource Areas, South San Francisco Bay Production - Consumption Region.

12. Noise

Project Activities Likely to Create an Impact:

SWMU 4.18:
Planned Approach

- Mobilization of construction equipment
- Movement of trucks to transport materials and supplies to and from the Site
- Operation of construction equipment or pneumatic equipment to handle materials onsite
- Movement of vehicles to transport personnel to and from the Site
- Mixing and applying amendments
- Pumping water from SWMU 4.18

Contingency Approach

- Mobilization of construction equipment
- Movement of trucks to transport materials and supplies to and from the Site
- Operation of construction equipment or pneumatic equipment to handle materials onsite
- Movement of vehicles to transport personnel to and from the Site

SWMU 4.12
Planned Approach

- None

Contingency Approach

- Mobilization of construction equipment
- Movement of trucks or other vehicles to transport materials and supplies to and from the Site

Description of Baseline Environmental Conditions:

The CCC General Plan (2005–2020) Noise Element includes noise contour maps showing ambient noise levels throughout the county. The purpose of the maps is to guide land uses so that the exposure of residences to excessive noise is minimized. The closest residential area to the Project Site is approximately 0.25 mile southwest of SWMU 4.18. This residential area is located within the 60 decibel (dB) day-night average sound level (DNL) contour line. The DNL is 24-hour average noise level used to define the level of noise impact on a community. Sources of ambient noise in the Project Site vicinity include traffic along Willow Pass Road, motorized boats on Suisun Bay, and railway traffic. Railway noise is generated by trains traveling on tracks and train whistles. According the CCC 2005–2020 General Plan, noise levels from the railway range from 60 to 70 dB, and projected future level is 73 dB. The current noise level at Willow Pass Road is 60 dB, and the estimated future level is 65 dB.

Analysis as to whether or not project activities would result in:

a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Impact Analysis:

- Contra Costa County does not have a specific noise ordinance. However, the CCC 2005–2020 General Plan states that construction activities shall be concentrated during the hours of the day that are not noise-sensitive for adjacent land uses and should be commissioned to occur during normal work hours of the day to provide relative quiet during the more sensitive evening and early morning periods. Project activity would be limited to one-half hour after sunrise and one-half hour before sunset, as feasible. The Proposed Project would proceed in accordance with this standard; therefore, the Proposed Project would have a less-than-significant impact.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact
☐ No Impact

b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

Impact Analysis:

Proposed Project activities are not expected to generate groundborne vibration or noise. Therefore, there would be no impact.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

c. A substantial permanent increase in ambient noise levels in the vicinity above levels existing without the project?

Impact Analysis:

Noise associated with the Proposed Project would be limited to the duration of construction activities, and would be temporary in nature, commencing after each phase of work. Therefore, the Proposed Project would not result in a permanent increase in ambient noise levels.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Impact Analysis:

Proposed Project activities including transport of materials and equipment and pumping may generate temporary increases above ambient noise levels in the Site vicinity. However, these activities would be restricted to daytime hours and would not be continuous. Therefore the impact will be less than significant. Implementation of **NOI-1** will further reduce the less-than-significant impact.

NOI-1: Noise avoidance and minimization measures may include:

- Locating construction equipment staging area, material-handling areas, and stationary construction equipment as far away as possible from sensitive species foraging, nesting, or breeding habitats and residential receptors.
- Shutting off idling equipment when not in use (this measure would also be implemented to reduce NO_X and GHG emissions).
- Selecting or contractually specifying the use of lower noise equipment.
- Adding mufflers on construction equipment, generators, and vehicles.

- Utilizing electrically powered construction equipment where feasible.
- Publicly posted sign with a phone number and contact person regarding noise complaints, so that activities can be adjusted.

As a result, noise-related impacts associated with Proposed Project activities would be less than significant.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact
☐ No Impact

e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

Impact Analysis:

The Project Site is not located within an airport land use plan. Buchanan Airport, approximately 7.5 miles southeast of the site, is the closest public airport. Therefore, there would be no impact.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

f. For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

Impact Analysis:

The Project Site is not located within the vicinity of a private airstrip. Therefore there is no impact.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

References Used:

CCC. 2005. *Contra Costa County General Plan 2005-2020*. Reprinted July 2010.

ERM. 2018. *Draft Corrective Measures Study, Shell Pond Site, Bay Point, California.* August 2018.

13. Population and Housing

Project Activities Likely to Create an Impact:

SWMU 4.18:
Planned Approach

- None

Contingency Approach

- None

SWMU 4.12:
Planned Approach

- None

Contingency Approach

- None

Description of Baseline Environmental Conditions:

The Project Site is located on open space and no housing development or other development is currently located or proposed to be located at the Site. A deed restriction is proposed on the property to prohibit any residential use (California DTSC 2000). Property usage is limited to commercial and industrial activities only. No residential buildings of any kind are allowed on the property.

Analysis as to whether or not project activities would:

a. Induce substantial population growth in area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Impact Analysis:

No housing development or other development is currently located or proposed to be located at the Project Site. Remediation and restoration associated with the Proposed Project would not induce population growth. Therefore, no direct or indirect impact to population growth would occur.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

Impact Analysis:

Land use for the Proposed Project is designated as open space. A deed restriction is proposed for the property to prohibit any residential use. There is not any housing located at the Project Site. No housing would be displaced as a result of the remediation and restoration of the Site. No replacement housing due to displaced housing would be needed elsewhere. Consequently, no impact would occur.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

Impact Analysis:

There is no housing located at the Project Site; people would not be displaced as a result of the remediation and restoration of the Site; therefore no replacement housing would be needed, and no impact would occur.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

References Used:

California DTSC. 2000. Statement of Basis, Corrective Action Remedy Selection, PG&E, Shell Pond and Carbon Pile Property, and Modification of Southern Energy L.L.C. Hazardous Waste Treatment and Storage Permit, 696-10th West Street, Pittsburg, California 94565.

14. Public Services

Project Activities Likely to Create an Impact:

SWMU 4.18:
Planned Approach

- Mobilization of construction equipment
- Movement of trucks or other vehicles to transport materials and supplies to and from the Site

Contingency Approach

- Mobilization of construction equipment
- Movement of trucks or other vehicles to transport materials and supplies to and from the Site

SWMU 4.12:
Planned Approach

- None

Contingency Approach

- Mobilization of construction equipment
- Movement of trucks or other vehicles to transport materials and supplies to and from the Site

Description of Baseline Environmental Conditions:

The Project Site is located in an area designated as open space. Proposed Project activities would include transportation of equipment, supplies, and compost and amendments to and from the Project Site. Proposed Project activities are estimated to occur over 3- to 4-month phases within a period of 5 years for the SWMU 4.18 Planned Approach and a one time span of 4 to 6 months if the SWMU 4.12 Contingency Approach is required.

Access to the Proposed Project is from McAvoy Road, which meets Port Chicago Highway to the south and heads north across the railroad tracks into a commercial/industrial facility. Access is restricted by gate and from there, unpaved roads heading east for approximately 0.5 mile provide access to SWMU 4.18 and SWMU 4.12. Once inside the gate, transportation impacts related to the Proposed Project activities are not expected to impact public services.

The Proposed Project lies within the CCC Fire Protection District, with the nearest fire station located approximately 2 miles from the Site, at 3000 Willow Pass Road (i.e., CCC Fire Protection District—Station 86; CCC Fire Protection District 2018). The nearest hospital is the John Muir Medical Center located approximately 6 miles from the site at 2540 East Street in Concord, California. The nearest school to the Project Site that may be influenced by traffic is Riverview Middle School, approximately 1 mile southwest of the Project Site at 235 Pacifica Avenue, Bay Point, California. Lynbrook Park is located approximately 1 mile southwest of the Project Site in a residential neighborhood. The Pittsburg Police Department is located approximately 0.7 mile east of the Site.

Analysis as to whether or not project activities would:

a. Result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:

i. Fire protection?

Impact Analysis:

The Project Site lies within the CCC Fire Protection District, with the nearest fire station located approximately 2 miles south of the Proposed Project, at 3000 Willow Pass Road (i.e., CCC Fire Protection District—Station 86; CCC Fire

Protection District 2018). Proposed Project activities are not anticipated to impact fire department response times, as the work would occur on private property. No new or physically altered fire protection facilities would be required as a result of the Proposed Project. After completion of the Proposed Project, the Site would remain open space and no increase in public services would be required. Therefore, the impact is less than significant.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact
☐ No Impact

ii. Police protection?

Impact Analysis:

The Pittsburg Police Department is approximately 0.7 mile east of the Project Site (City of Pittsburg Police Department 2018). Proposed Project activities would be conducted on private property and are not anticipated to impact police response times. Therefore, no new or physically altered police protection facilities would be required as a result of the Proposed Project. After completion, the Proposed Project would remain open space and no increase in public services would be required. The impact to police protection is considered less than significant.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact
☐ No Impact

iii. Schools?

Impact Analysis:

The Proposed Project would consist of remediation and restoration activities on private property and would not impact residential areas or housing. Consequently, no new or physically altered school facilities would be required as a result of the Proposed Project. After completion of the Proposed Project activities, the Project Site would remain open space and no increase in school services would be required. Therefore, no impact would occur.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

iv. Parks?

Impact Analysis:

No new or physically altered parks would be required as a result of the Proposed Project because the Proposed Project would not cause an increase in population requiring new park facilities. Access to the nearby Bay Point Regional Shoreline may be temporarily influenced by workers traveling to the Site, along with traffic of vehicles transporting materials and equipment to SWMU 4.18 and SWMU 4.12. After completion of the Proposed Project, the

Site would remain open space and access to the Bay Point Shoreline would be restored; therefore, the impact would be less than significant.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact
☐ No Impact

v. Other public facilities?

Impact Analysis:

The nearest hospital to the Proposed Project is the John Muir Medical Center located approximately 6 miles at 2540 East Street in Concord, California (John Muir Medical Center 2018). The Project Site is located within fenced, private property and response times to John Muir Medical Center are not anticipated to be adversely affected by the Proposed Project. No new or physically altered public facilities would be required as a result of the Proposed Project. After completion, the Site would remain open space and no increase in public services or facilities would be required. Therefore, the impact would be less than significant.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact
☐ No Impact

References Used:

CCC. 2010. Contra Costa County General Plan, Chapter 4: Growth Management Element. Accessed: November 26, 2018. Retrieved from: http://www.co.contra-costa.ca.us/DocumentCenter/View/30914/Ch4-Growth-Management-Element?bidId=

CCC Fire Protection District. 2018. Fire Protection District. Accessed: November 26, 2018. Retrieved from: https://www.cccfpd.org/

City of Pittsburg Police Department. 2018. Police Department. Accessed: November 26, 2018. Retrieved from: http://www.ci.pittsburg.ca.us/index.aspx?page=272

John Muir Medical Center. 2018. Concord Medical Center. Accessed: November 26, 2018. Retrieved from: https://www.johnmuirhealth.com/locations/john-muir-medical-center-concord.html?cid=orgloc:landingURL:yext

15. Recreation

Project Activities Likely to Create an Impact:

SWMU 4.18:
Planned Approach
- None

Contingency Approach
- None

SWMU 4.12:
Planned Approach
- None

Contingency Approach
- None

Description of Baseline Environmental Conditions:

The Project Site does not support recreational activities. Both SWMU-18 and SWMU-12 are fenced per RCRA requirements and to restrict public access. Furthermore, a deed restriction is proposed to restrict access.

A section of the Great California Delta Trail is proposed along the southern boundary Site. The East Bay Regional Park District (EBRPD) would be responsible for construction and maintenance of the trail. According to the EBRPD, the trail is in the early planning stages, and there is no projected start date for construction (Delta Protection Commission 2017).

Analysis as to whether or not project activities would:

a. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

Impact Analysis:

Proposed Project activities would be limited to remediation and restoration of SWMU 4.18 and SWMU 4.12. The Site would remain an open area once the Proposed Project is complete. Therefore, the Proposed Project would not result in an increased use of any existing nearby recreational facilities and there would be no impact.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

b. Does the project include recreational facilities or require construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Impact Analysis:

The Proposed Project would be limited to the remediation and restoration of SWMU 4.18 and SWMU 4.12. The Proposed Project would not include recreational facilities and would not require construction or expansion of recreational facilities. Therefore, there would be no impact.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

References Used:

Delta Protection Commission. 2017. Resolution 17-01. Resolution of the Delta Protection Commission, Designating the Carquinez Strait Scenic Loop Trail and EBRPD's Existing and Proposed Trail Alignments from the Martinez Shoreline to Delta Access as Segments of the Great California Delta Trail.

16. Transportation and Traffic

Project Activities Likely to Create an Impact:

SWMU 4.18:
Planned Approach

- Mobilization of construction equipment
- Movement of trucks or other vehicles to transport materials and supplies to and from the Site
- Movement of vehicles to transport personnel to and from the Site

Contingency Approach

- Mobilization of construction equipment
- Movement of trucks or other vehicles to transport materials and supplies to and from the Site
- Movement of vehicles to transport personnel to and from the Site

SWMU 4.12:
Planned Approach

- None

Contingency Approach

- Mobilization of construction equipment
- Movement of trucks or other vehicles to transport materials and supplies to and from the Site
- Movement of vehicles to transport personnel to and from the Site

Description of Baseline Environmental Conditions:

Traffic associated with the Proposed Project would access the Site via the McAvoy Road/Port Chicago Highway/Willow Pass corridor that connects the Site to SR-4. The northern section of this corridor is zoned industrial, whereas the southern portion is zoned residential. McAvoy Road and Port Chicago Highway serve as an industrial traffic corridor and do not provide direct access to any residential areas. A quadruple railroad crossing is located approximately 50 feet away from the intersection of the Site access road and McAvoy Road, this train services both commuter and commercial transportation. McAvoy Road intersects with Port Chicago Highway where the highway corridor bends from east-west to north-south.

Port Chicago Highway is a two-lane road between McAvoy Road and Pacifica Avenue, and a four-lane road from Pacifica Avenue to where it ends at Willow Pass Road. Willow Pass Road is a four-lane expressway that provides access to SR-4.

SR-4 is highly congested during the commute hours. According to the 2017 Update of the CCC Congestion Monitoring Report, SR-4 operates at a Level of Service (LOS) F between SR-242 and Bailey Road during peak morning and evening traffic. The LOS Standard for this stretch of SR-4 is F (Contra Costa Transportation Authority 2017).

The current morning and evening peak LOS at intersections located along the corridor between SR-4 and the range from A to B with the exception of the Bailey Road SR-4 ramps that have a LOS of D during morning and evening peak travel periods.

Construction debris and any excavated soils (under SWMU 4.18 Contingency Approach) are planned to be sent to the Keller Canyon Sanitary Landfill, which is located on Bailey Road 5 miles southeast of the Project Site. Compost will likely be sourced from a supplier within 56 miles of the Site. Other fill will be sourced from on-site (West Parcel) in order to reduce transportation impacts.

Analysis as to whether or not project activities would:

a. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass

transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?
Impact Analysis:

The Proposed Project activities would not conflict with any plans, ordinances, or policies that have established measures or effectiveness for the performance of intersections, streets, pedestrian and bicycle paths. There is no expected impact.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

b. Conflict with an applicable congestion management program, including, but not limited to LOS standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

Impact Analysis:

The Proposed Project is expected to add some traffic to local roadways due to workers traveling to and from the Site and equipment and materials being delivered or removed from the Site. SR-4 currently operates at LOS F during peak commute hours. While there is a potential for traffic associated with the Proposed Project to incrementally impact traffic on SR-4 and other roads and interesections in the Site vicinity, the impact is expected to be less than signficant.

If the SWMU 4.18 Contigency Approach is implemented and material removed, project control **TT-1** will be implemented to further reduce the less-than-significant impact.

TT-1: If contingency excavation activities occur, a Transportation Management Plan will coordinate major transportation components of the project including the delivery of impacted material to the landfill. The Plan will ensure trucking to and from the landfill is spread sparsely over shipping hours. The plan will include measures to minimize peak-traffic-hours impacts to local intersections and State Route 4 with measures such as the use of alternate hauling routes such as West Leland Road during peak hours, prohibiting hauling activities during peak hours, and timing onsite construction shifts to minimize commuting impacts. The Plan will also address traffic management in the vicinity of sensitive locations (schools, community center, library), construction traffic if necessary.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact
☐ No Impact

c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

Impact Analysis:

The closest airport to the Project Site is Buchanan Airport, approximately 7.5 miles to the southeast. The Proposed Project would have no impact on air traffic patterns.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Impact Analysis:

Traffic associated with the Proposed Project would be consistent with current use and would not substantially increase hazards at curves or intersections. There would be no construction or impacts on public roadways associated with the Proposed Project.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

e. Result in inadequate emergency access?

Impact Analysis:

Proposed Project activities would not impact emergency access to the Project Site or neighboring areas.

Conclusion:
☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

f. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

Impact Analysis:

Proposed Project activities would not conflict with state or county policies, plans, or programs regarding public transit, or bicycle/pedestrian routes or facilities.

The closest public transit facility to the site is a Tri-Delta Transit bus stop, located at Port Chicago Highway and Pacifica Avenue. This bus stop is approximately 0.25 mile south of the intersection of Port Chicago Highway and McAvoy Road and serves routes 201, 389, and 396. The additional traffic associated with the Proposed Project is not expected to have a significant impact on availability of this bus stop.

A section of the Great California Delta Trail is proposed along the southern boundary of the Project Site. The EBRPD would be responsible for construction and maintenance of the trail. According to the EBRPD, the trail is in the early planning stages, and there is no projected start date for construction.

The Proposed Project would not impact the facilities referenced above.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

References Used:

Contra Costa Transportation Authority. 2017. Update of the Contra Costa Congestion Management Program. 2017 Congestion Monitoring Report.

17. Tribal Cultural Resources

Project Activities Likely to Create an Impact:

SWMU 4.18:
Planned Approach

- Dewatering and revegetation of SWMU 4.18

Contingency Approach

- Excavation of 6 inches of material across SWMU 4.18 and landfarming

SWMU 4.12:
Planned Approach

- None

Contingency Approach

- Excavation of 6-inches of wetland NNM within SWMU 4.12 for placement elsewhere in the SWMU and fill of wetland areas with clean soil from MHA

Description of Baseline Environmental Conditions:

A cultural survey was completed in 2010 to identify cultural resources that could be impacted by a project with a footprint that included the Project Site (Garcia and Associates. 2010). Consultation with the Native American Heritage Commission and Native American groups was included in the survey. At that time, no tribal cultural resources were identified in the Project Site.

In accordance with Assembly Bill 52, DTSC provided written notification to requesting tribes on its notice list regarding the Proposed Project in October 2018. The notice included a brief project description, project location, and lead agency's contact information. If a tribe requests consultation, DTSC would then begin consultation within 30 days and prior to release of a CEQA document for the Proposed Project (California Assembly Bill 52 2014). This timeline would allow the agency to consider the information it receives during consultation in determining the Proposed Project's impacts and appropriate level of CEQA review. No reponses by any tribes have been received to date.

Analysis as to whether or not project activities would:

a. Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American Tribe, and that is:

i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k), or

Impact Analysis:

The cultural survey completed in 2010 did not identify any listed or eligible tribal cultural resources. Further, the survey concluded that the potential for finding historical resources within the Site is low. In response to the DTSC notification issued in October 2018, no responses have been received to date. it is expected that the Proposed Project will have no impact or a less than significant impact on a tribal cultural resource that is listed or eligible for listing.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact

☐ No Impact

ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resource Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American Tribe.

Impact Analysis:

No significant tribal cultural resources were identified during the 2010 Cultural Survey. Pending DTSC notification and any resulting consultations with California Native American Tribes, it is expected that the Proposed Project will have no impact a resource having significance to a California Native American Tribe.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact
☐ No Impact

References Used:

California Assembly Bill 52. 2014. Gatto. Native Americans: CEQA.

Garcia and Associates. 2010. *Cultural Resource Inventory and Evaluation for the Shell Pond Remedy Project, Bay Point, Contra Costa County, California*

18. Utilities and Service Systems

Project Activities Likely to Create an Impact:

SWMU 4.18:
Planned Approach

- Generation and disposal of construction debris

Contingency Approach

- Disposal of excavated waste

SWMU 4.12:
Planned Approach

- None

Contingency Approach

- None

Description of Baseline Environmental Conditions:

The Project Site is located within fenced open space on private property. A Delta Diablo Sanitary sewer line and a non-functioning PG&E overhead 12kV electric distribution line exist on the Site. PG&E would be able to provide the electrical power necessary to support the Proposed Project needs. No other utilities are known to be present at the Proposed Project.

Water has been pumped into the SWMU 4.18 to maintain a cover of water over the sediment and NNM as a form of odor management. Water is yielded from an on-site PG&E-owned well. Prior to adding the water at regular intervals, the water levels declined during the dry seasons due to evaporation and leaching into the subsurface. During the sectional dewatering process, the coffer dams would be emptied into the next dewatering section and it is expected that the water would evaporate, as is observed each summer. PG&E does not expect that water needs to be removed off-site as a result of the Proposed Project activities.

Analysis as to whether or not project activities would:

a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

Impact Analysis:

The Proposed Project activities would not generate wastewater that would need to be treated at the Delta Diablo wastewater treatment plant. Therefore, wastewater treatment would not exceed applicable RWQCB requirements. There would be no impact.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Impact Analysis:

Wastewater would not be generated from the Proposed Project activities. Water supply used during activities associated with the Proposed Project would be obtained from an existing on-site well. As such, new water facilities or treatment would not be needed for the Proposed Project. Therefore, no impact is expected from wastewater or new water.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

c. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Impact Analysis:

The Proposed Project would create a vegetative area on the Site currently designated as open space and storm water would drain naturally. No storm water drainage would be constructed and there would not be any discharge to storm drains. Therefore, there would not be any impact to storm water drainage facilities, expansion of exisiting facilities, or need for construction of new facilities

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

Impact Analysis:

Water supply needed for filling the coffer dam and irrigation would be obtained from the existing well located at the Site, as such this would not result in a need for new or expanded entitlements. There would no impact associated with new water supplies including new sources or entitilements

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

e. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Impact Analysis:

No wastewater would be generated by the Proposed Project. Therefore, there would be no impact to wastewater treatment providers.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Impact Analysis:

There would be solid waste generated at the Proposed Project in the form of up to 60 cubic yards of construction debris (e.g., coffer dam materials and other disposable materials) and potentially up to 4,000 cubic yards of non-hazardous excavated waste if the Contingency Approach for SWMU 4.18 is implemented. Both construction debris and excavated waste would be trucked to Keller Canyon Landfill for proper disposal or recycling. The landfill will be contacted in advance with an estimate of the quantity of construction debris or soil they would be receiving and when to expect it. In addition, construction activities would comply with federal, state and local statutes and regulations governing solid waste disposal. Therefore, impacts on solid waste disposal due to implementation of the Proposed Project are considered less than significant.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact
☐ No Impact

g. Comply with federal, state, and local statutes and regulations related to solid waste?

Impact Analysis:

Disposal of construction debris and excavated soils would be conducted in accordance with federal, State and local statutes and regulations governing solid waste disposal. Therefore, impacts on solid waste disposal due to implementation of the Proposed Project are considered less than significant.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact
☐ No Impact

References Used:

None

19. Energy

Project Activities Likely to Create an Impact:

SWMU 4.18:
Planned Approach
- None

Contingency Approach
- None

SWMU 4.12
Planned Approach
- None

Contingency Approach
- None

Description of Baseline Environmental Conditions:
The Proposed Project is located within fenced open space on private property. A non-functioning PG&E overhead 12kV electric distribution line exists on the Site. PG&E would be able to provide the electrical power necessary to support the needs of the Proposed Project. No other utilities are known to be present at the Proposed Project.

Originally developed in 2003 and updated in 2005 and 2008, the California Energy Action Plan identifies specific action areas to ensure that California's energy resources are adequate, affordable, technologically advanced, and environmentally sound. The plan's first-priority actions to address California's increasing energy demands are energy efficiency and demand response (i.e., reduction of customer energy usage during peak periods to address system reliability and support the best use of energy infrastructure). Additional priorities include the use of renewable sources of power and distributed generation.

Contra Costa County has developed draft policies, objectives, strategies, and programs to address
GHG emissions and climate change. These draft policies include improving energy efficiency, increasing renewable energy, reducing transportation emissions through vehicle and fuel strategies, reducing vehicle miles traveled through land use strategies, reducing vehicle miles traveled through public transit, transportation demand management, and active transportation strategies, reducing solid waste sent to landfill, water conservation, and supporting local business and agriculture.

Analysis as to whether or not project activities would:

a. Result in potentially-significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Impact Analysis:

The Project Site is designated as open space in the CCC 2005–2020 General Plan (CCC 2005). The Proposed activities would not result in wasteful, inefficient, or unnecessary consumption of energy resources. Construction of the project will require consumption of fuel to run construction vehicles and equipment. However, the work will be short-term and temporary. Implementation of APM AQ-2, which minimizes unnecessary construction vehicle idling time, will further reduce energy consumption. Therefore, impacts will be less than significant.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact

☐ No Impact

b. Conflict with or obstruct a state or local energy plan for renewable energy or energy efficiency?

Impact Analysis:

There will be no conflict or obstruction to state or local energy plans for renewable energy or energy efficiency from the Proposed Project activities.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

References Used:

CCC. 2015. Climate Action Plan. Accessed on April 19, 2019. Retrieved from: http://www.co.contra-costa.ca.us/4554/Climate-Action-Plan

California Energy Action Plan. Accessed on April 19, 2019. Retrieved from: https://www.energy.ca.gov/2008publications/CEC-100-2008-001/CEC-100-2008-001.PDF

U.S. Department of Energy 2019. 2009 American Recovery and Reinvestment Act Overview. Accessed on April 19, 2019. Retrieved from: https://www.energy.gov/oe/information-center/recovery-act

19. Wildfires

Project Activities Likely to Create an Impact:

SWMU 4.18:
Planned Approach

- Movement of trucks or other vehicles to transport materials and supplies to and from the Site
- Movement of vehicles to transport personnel to and from the Site

Contingency Approach

- Movement of trucks or other vehicles to transport materials and supplies to and from the Site
- Movement of vehicles to transport personnel to and from the Site

SWMU 4.12:
Planned Approach

- None

Contingency Approach

- Movement of trucks or other vehicles to transport materials and supplies to and from the Site
- Movement of vehicles to transport personnel to and from the Site

Description of Baseline Environmental Conditions:
Pursuant to Public Resources Code (PRC) Sections 4201-4204 and Government (Gov't) Code Sections 51175-89, the California Department of Forestry and Fire Protection (CAL FIRE) has created Fire Hazard Severity Zone (FHSZ) maps for the state that identify areas that are within state or local responsibility for preventing or suppressing fires. These maps identify areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors. The FHSZ zones then define the application of various mitigation strategies to reduce risks associated with wildland fires. State Responsibility Areas (SRAs) are areas of the state in which the financial responsibility of preventing and suppressing fires has been determined to be primarily the responsibility of the state (PRC Section 4201). Local Responsibility Areas (LRAs) are areas in which the financial responsibility of preventing and suppressing fires is primarily the responsibility of local agencies, including cities and counties (Gov't Code Sections 51175-51189).

The CC General Plan includes a Fire Protection chapter with goals and policies to reduce damage from wildland fires and establishes the following goals and policies: provide special fire protection for high-risk land uses and structures; a set of special fire protection and prevention requirements shall be developed for inclusion in development standards applied to hillside, open space, and rural area development; and, wildland fire prevention activities and programs such as controlled burning, fuel removal, establishment of fire roads, fuel breaks and water supply, shall be encouraged to reduce wildland fire hazards.

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, analysis as to whether or not project activities would:

a. Substantially impair an adopted emergency response plan or emergency evacuation plan?

Impact Analysis:

The Proposed Project is located in an undeveloped area. Based from Cal Fire FHSZ maps the Proposed Project falls within Local Responsibility Area (LRA). Both SWMU 4.18 and 4.12 are not located in a Fire Hazard Severity Zone (FHSZ). Both SWMUs are approximately 1.87 miles east from nearest very high fire hazard severity zone and about 2 miles to the east from nearest high fire hazard severity zone in Contra Costa County. The Project site is bordered on the north by Suisun Bay and on the south by a railway corridor (Figure 1).

This Project does not have potential to impair an adopted emergency response plan or emergency evacuation plan. Proposed Project activities are not anticipated to impact fire department response times as the work would occur on private property. The nearest fire station is located approximately 2 miles south of the Proposed Project, at 3000 Willow Pass Road (CCC Fire Protection District-Station 86; CCC Fire Protection District 2018). No new or physically

altered fire protection facilities would be required as a result of the Proposed Project. The Proposed Project activities would not impact emergency access to the Project Site or neighboring areas.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risk and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

Impact Analysis:
According to the CCC General Plan, the Project Site is not located in an area identified as unstable or having a greater than 26 percent slope (CCC 2010). The Proposed Project activities would occur in unpaved areas where there is the potential for exposure to weather conditions such as prevailing winds and other factors. As project activities primarily consist of establishing wetland vegetation, the potential for construction activities to exacerbate wildfire risk is less than significant.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☒ Less Than Significant Impact
☐ No Impact

c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

Impact Analysis:
The project would not require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

Impact Analysis:

The project site is on flat terrain and is not within a high or very high fire severity zone. No changes to drainage will be made as a result of the project. The project will not expose people or structures to significant risks, as a result of runoff, post-fire slope instability, or drainage changes.

Conclusion:

☐ Potentially Significant Impact
☐ Less Than Significant With Mitigation Incorporated
☐ Less Than Significant Impact
☒ No Impact

References Used:

California Department of Forestry and Fire Protection (CAL FIRE). 2007. *Fire Hazard Severity Zones, Contra Costa County FHSZ Map.* Accessed: April 18, 2019. Retrieved From: http://egis.fire.ca.gov/FHSZ/

CCC. 2010. Contra Costa County General Plan, Chapter 10: Safety Element. Accessed: November 26, 2018. Retrieved from: http://www.co.contra-costa.cs.us/4732/General-Plan

CCC Fire Protection District. 2018. Fire Protection District. Accessed: April 18, 2019. Retrieved from: https://www.cccfpd.org/

Mandatory Findings of Significance

Based on evidence provided in this Initial Study, DTSC makes the following findings:

a. The Proposed Project ☐~~has~~ ☒does not have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory.

b. The Proposed Project ☐~~has~~ ☒does not have impacts that are individually limited but cumulatively considerable. ("Cumulatively considerable" means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)

c. The Proposed Project ☐~~has~~ ☒does not have environmental effects that would cause substantial adverse effects on human beings, either directly or indirectly.

Determination of Appropriate Environmental Document

On the basis of this initial evaluation:

☒ I find the Proposed Project COULD NOT HAVE a significant effect on the environment. A **Negative Declaration** will be prepared.

☐ I find that although the Proposed Project could have a significant effect on the environment, there would not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A **Mitigated Negative Declaration** will be prepared.

☐ I find the Proposed Project MAY HAVE a significant effect on the environment. An **Environmental Impact Report** is required.

☐ I find the Proposed Project MAY HAVE a "Potentially Significant Impact" or "Less Than Significant With Mitigation Incorporated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An **Environmental Impact Report** is required, but it must analyze only the effects that remain to be addressed.

☐ I find the Proposed Project COULD HAVE a significant effect on the environment. All potentially significant effects (a) have been analyzed adequately in an earlier Environmental Impact Report or Negative Declaration pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier Environmental Impact Report or Negative Declaration, including revisions or mitigation measures that are imposed upon the Proposed Project. **Therefore, nothing further is required**.

Certification:

I hereby certify that the statements furnished above and in the attached exhibits, present the data and information required for this Initial Study evaluation to the best of my ability and that the facts, statements and information presented are true and correct to the best of my knowledge and belief.

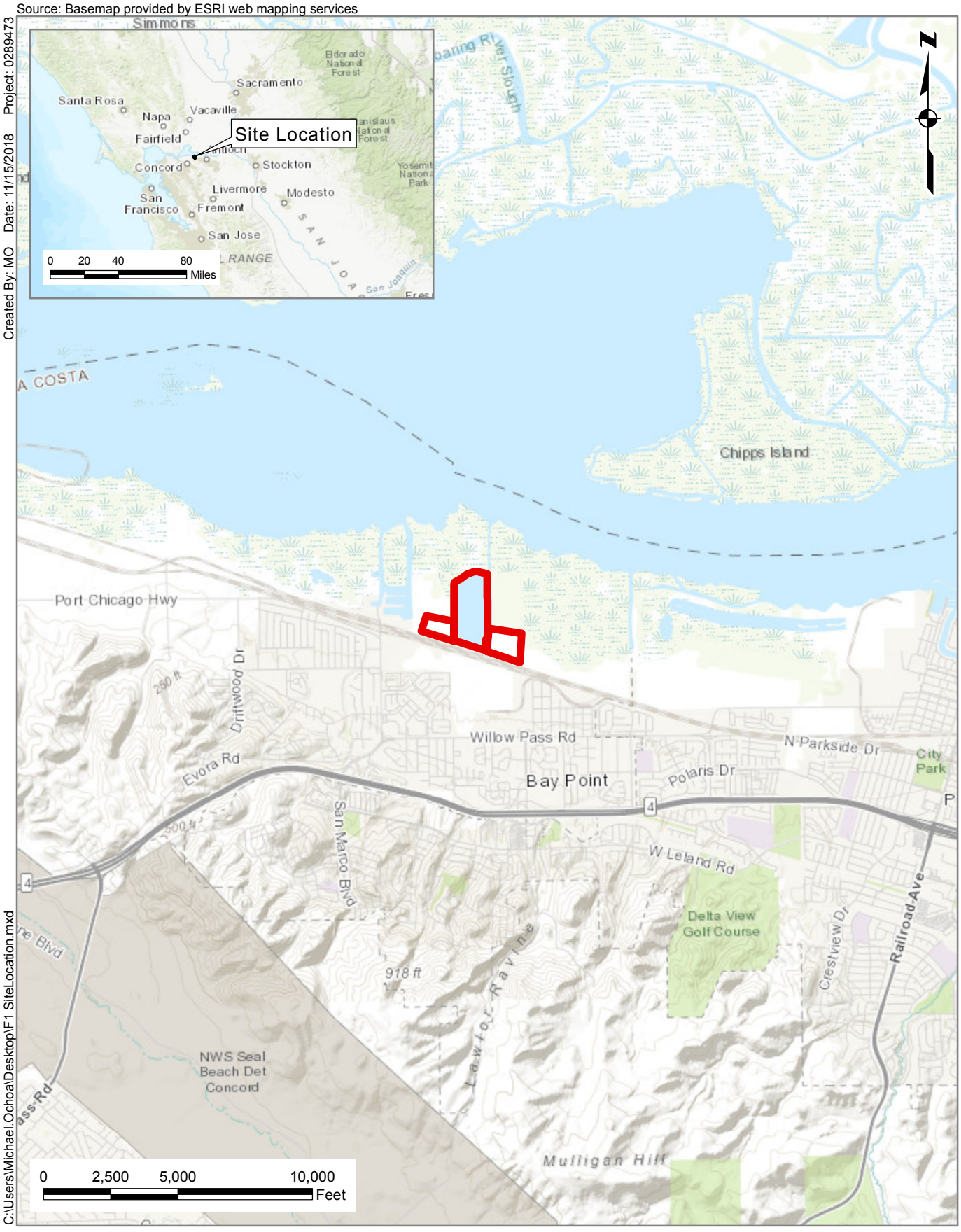
Preparer's Signature	Date: 8/22/19

Preparer's Name	Preparer's Title	Phone #
NANCY TU	Project manager	(510) 540-3824

Branch Chief's Signature	Date: 8/22/2019

Branch Chief's Name	Branch Chief's Title	Phone #
JULIE PETTIJOHN	EPM I	510 540-3848

ATTACHMENT A



ERM

Legend

Site Location

Figure 1
Site Location
PG&E Shell Pond and Carbon Black Area Property
Bay Point, California

M:\Projects\0289473_ShellPonds\maps\CEQA Initial Study\F1-2 SitePlan.mxd Created By: Michael Ochoa Date: 11/29/2018 Project: 0289473

Source: Basemap provided by ESRI web mapping services.

Legend

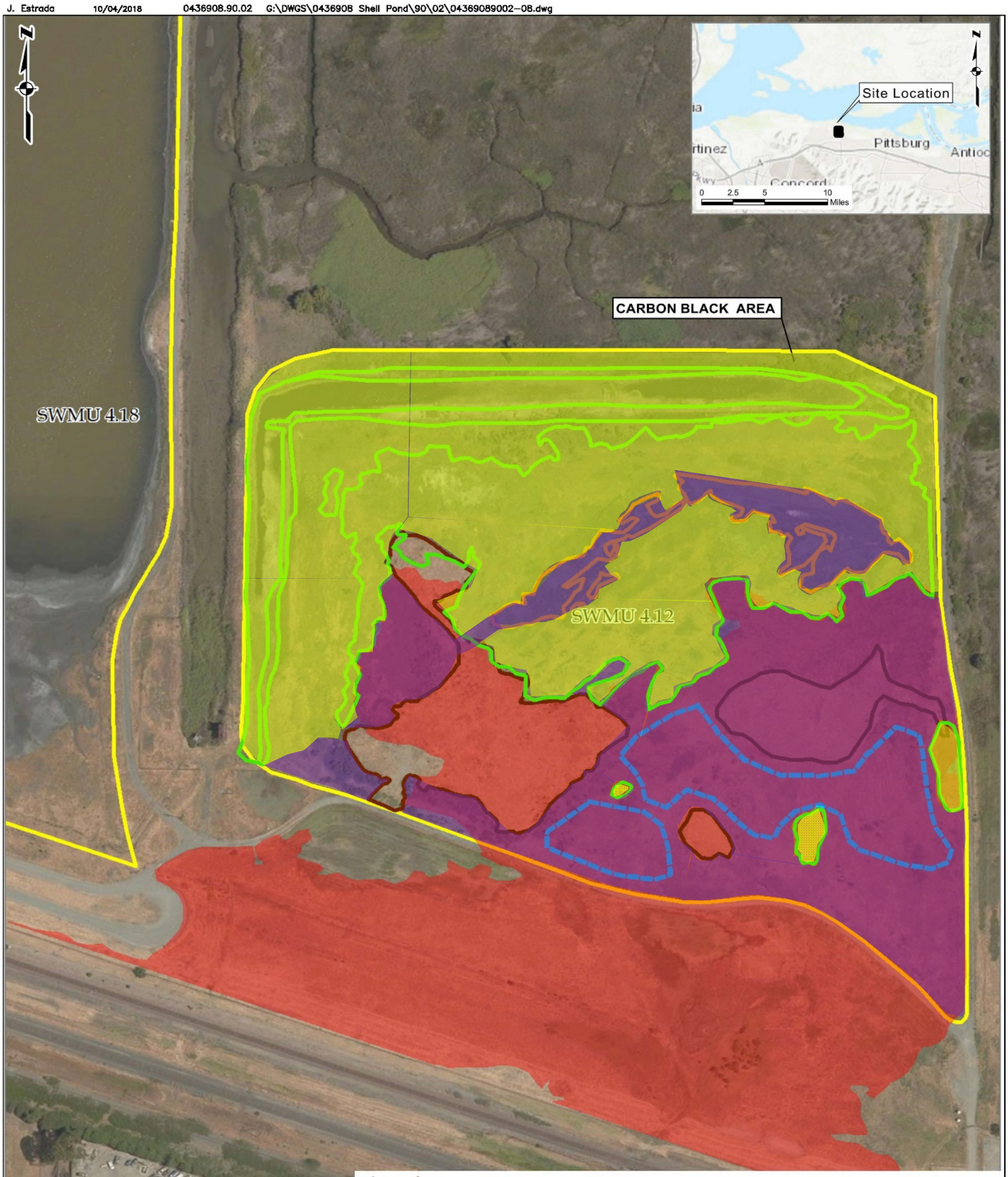
Project Site Boundaries

Figure 2

Project Site Boundaries
PG&E Shell Pond and Carbon Black Area Property
Bay Point, California

Environmental Resources Management
www.erm.com

J. Estrada 10/04/2018 0436908.90.02 G:\DWGS\0436908 Shell Pond\90\02\04369089002-08.dwg



Legend:

- SWMU Boundary
- Carbon Black Material Placement Areas
- Areas of Previously Placed Clean Fill Material from the Former Material Handling Area
- Burned Area
- Wetland Area
- Exposed Carbon Black- Excavation of 6" and relocated
- Areas of current 6" Fill Placement
- Areas of potential future 6" Fill Placement

PG&E: Storm Water Contact Work Supervisor
Contact: Casey Alver
Address: 3401 Crow Canyon Road
San Ramon, CA 94583
Telephone: (925) 357-7276

QSD: ERM-West, Inc. (ERM)
Contact: Kevin Woodhouse, P.G., QSD No. G09203
Address: 1277 Treat Boulevard, Suite 500
Walnut Creek, CA 94597
Telephone: (530) 220-4012

WDID No.: _____

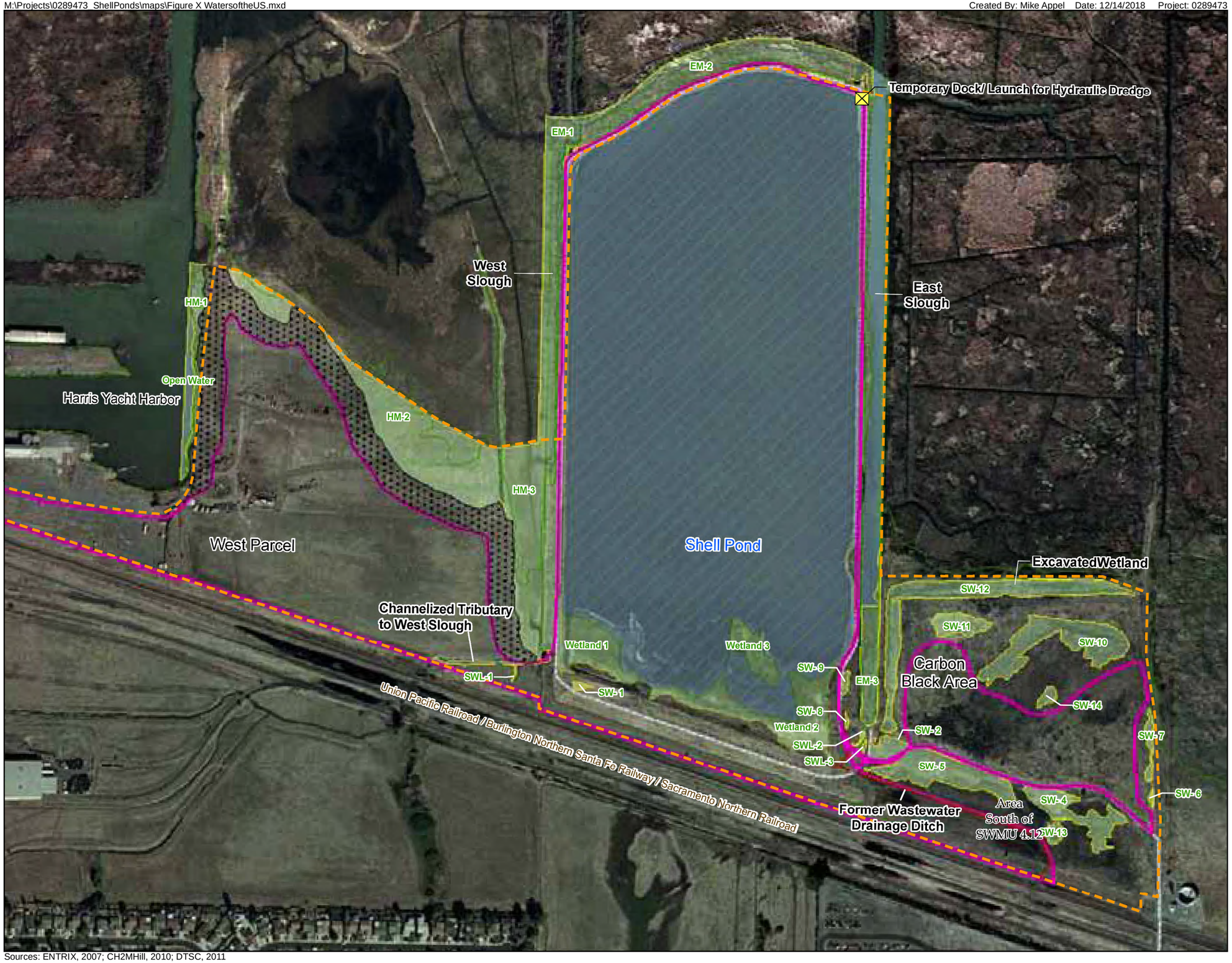
Figure 3

Carbon Black Area Fire Risk Management
PG&E Shell Pond and Carbon Black Area Property
Bay Point, California

Environmental Resources Management
www.erm.com

M:\Projects\0289473 ShellPonds\maps\Figure X WatersoftheUS.mxd

Created By: Mike Appel Date: 12/14/2018 Project: 0289473



Legend

- Wetlands of the U.S.
- Other Waters of the U.S.
- 100-foot Wetland Buffer Zone
- Environmental Sensitive Areas (Avoidance Areas)
- Existing Gravel Road
- Approximate High-Tide Line (7 ft)
- Project Area
- Limits of Construction

N

0 200 400 800
Feet

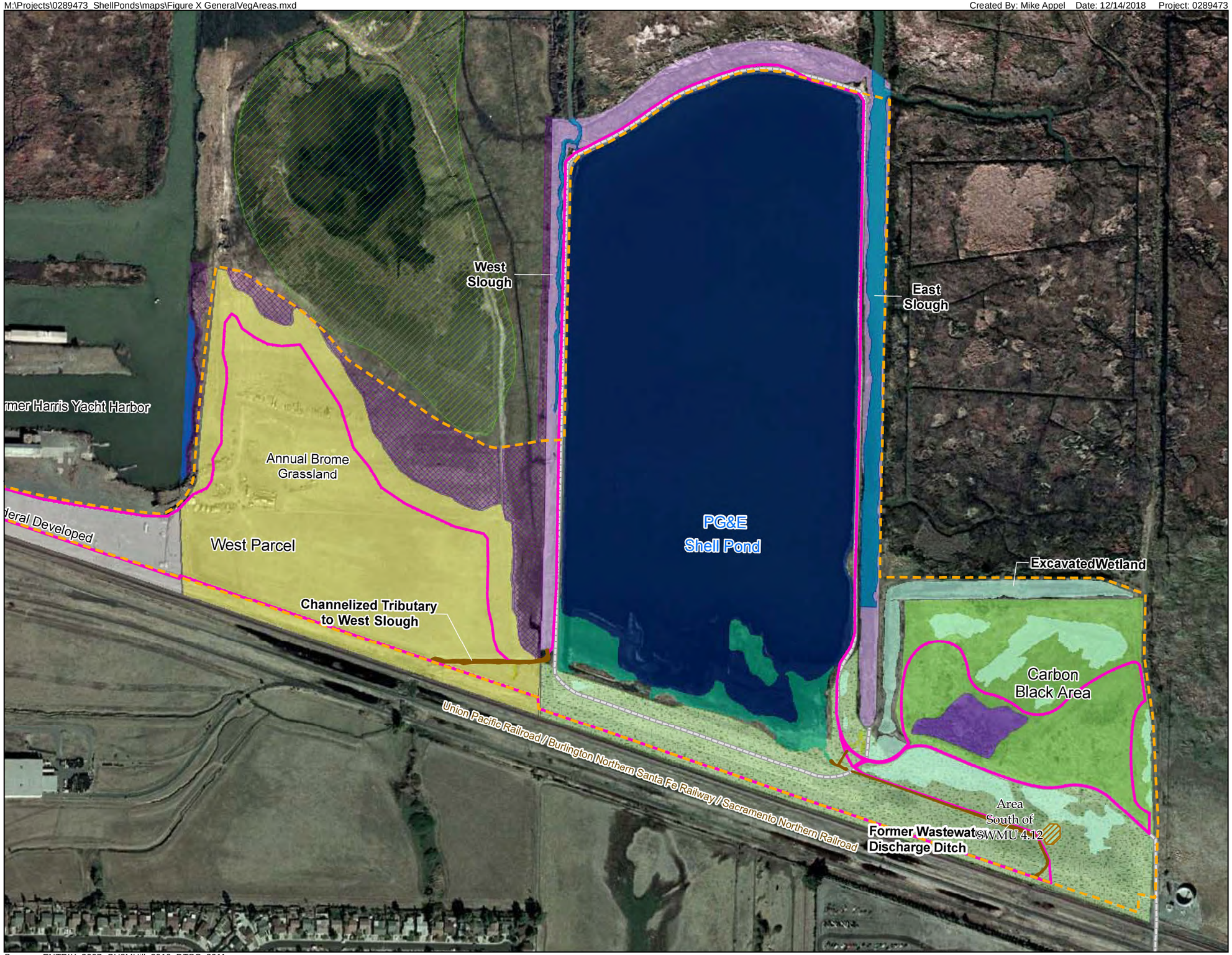
Figure 4
Results of the 2010 Jurisdictional Water Delineation
PG&E Shell Pond and Carbon Black Area Property
Bay Point, California

Environmental Resources Management
www.erm.com

Sources: ENTRIX, 2007; CH2MHill, 2010; DTSC, 2011

M:\Projects\0289473_ShellPonds\maps\Figure X GeneralVegAreas.mxd

Created By: Mike Appel Date: 12/14/2018 Project: 0289473



Legend

- Channelized Trubutary to West Slough
- Existing Gravel Road
- Diked Estuarine Pond
- Wetland
- Seasonal Wetland
- Tidal Slough
- Open Water
- Swale
- High Marsh (Saltgrass/Pickleweed)
- Tidal Emergent Marsh (Mixed Bulrush/Cattail/Mexican Rush)

Vegetation

- Cattail Marsh
- Coyote Brush Scrub
- Annual Brome Grassland
- Ruderal Developed
- Perennial Ryegrass
- Perennial Pepperweed and Brome Grassland
- Pickleweed Mats and Salt Grass Flats
- Project Area
- Limits of Construction

N

0 200 400 800
Feet

Figure 5

Results of 2010 Vegetation Survey
PG&E Shell Pond and
Carbon Black Area Property
Bay Point, California

Environmental Resources Management
www.erm.com

Sources: ENTRIX, 2007; CH2MHill, 2010; DTSC, 2011

Source: California Natural Diversity Database (CNDDB), 2018.

Legend

- 2-Mile Buffer
- Site Boundary
- Coastal Brackish Marsh
- Delta Tule Pea (1B.2)
- Mason's Lilaeopsis (SR, 1B.1)
- Suisun Marsh Aster (1B.2)
- Soft Salty Bird's-Beak (FE, SR, 1B.2)

Federal U.S. Fish and Wildlife Service (USFWS) designations:
- FE Federal Endangered

State California Department of Fish and Wildlife (CDFW) designations:
- SE State Endangered
- SR State Rare

California Native Plant Society (CNPS) List:
- 1B Plants Rare, Threatened, or Endangered in California and Elsewhere
- 2 Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere
- 3 Plants About Which We Need More Information - A Review List
- 4 Plants of Limited Distribution – A Watch List

CNPS threat Ranks:
- 1 Seriously threatened in California (high degree/immediacy of threat)
- 2 Fairly threatened in Californi (moderate degree/immediacy of threat)
- 3 Not very threatened in California (low degree/immediacy of threats or not current threats known)

Figure 6

Special Status Plants Known within 2 Miles of Project Site
PG&E Shell Pond and Carbon Black Area Property
Bay Point, California

Environmental Resources Management
www.erm.com

Project: 0352507
11/30/2018
Created By: Michael Ochoa
M:\Projects\0289473_ShellPonds\maps\CEQA Initial Study\FX Special Status Birds.mxd

Source: California Natural Diversity Database (CNDDB), 2018.

Legend

- 2-Mile Buffer
- Site Boundary
- California Black Rail (FP, ST)
- California Least Tern (FE, FP, SE)
- Suisun Song Sparrow (SSC)
- Burrowing Owl (SSC)

Federal Status
BGEP = Bald and Golden Eagle Protection Act
FD = Federal Delisted
FE = Federal Endangered
FT = Federal Threatened

State Status
SSC = Species of Special Concern
FP = Fully Protected
SE = State Endangered
SP = State Protected
SR = State Rare
ST = State Threatened

Figure 7
Special Status Birds Known within 2 Miles of Project Site
PG&E Shell Pond and Carbon Black Area Property
Bay Point, California

Environmental Resources Management
www.erm.com
ERM

Project: 0352507
11/30/2018
Created By: Michael Ochoa
M:\Projects\0289473_ShellPonds\maps\CEQA Initial Study\FX Special Status Wildlife.mxd

Source: California Natural Diversity Database (CNDDB), 2018.

Legend

- 2-Mile Buffer
- Site Boundary
- California Red-Legged Frog (FT, SSC)
- Steelhead - Central Valley DPS (FT)
- Longfin Smelt (ST)
- Salt-Marsh Harvest Mouse (FE, FP, SE)

Federal Status
BGEP = Bald and Golden Eagle Protection Act
FD = Federal Delisted
FE = Federal Endangered
FT = Federal Threatened

State Status
SSC = Species of Special Concern
FP = Fully Protected
SE = State Endangered
SP = State Protected
SR = State Rare
ST = State Threatened

Figure 8
Special Status Wildlife Known within 2 Miles of Project Site
PG&E Shell Pond and Carbon Black Area Property
Bay Point, California

Environmental Resources Management
www.erm.com
ERM

ATTACHMENT B

SHELL POND AND CARBON BLACK AREA RESTORATION PROJECT
PROJECT CONTROLS
PACIFIC GAS & ELECTRIC COMPANY

RESOURCE AREA	MEASURES	Responsible Party	Responsible for Compliance
AIR QUALITY	**AQ-1**: Primary NOx reduction measures: ▪ Use of electrical power instead of diesel motors or generators where feasible: The pumps used to operate the irrigation system will be electrically powered, and other equipment will be electrically powered if feasible. ▪ Use of onsite soil from the West Parcel or other upland for cover at the CBA**:** The use of onsite soil will reduce the truck trips that will otherwise be required to deliver material from offsite. ▪ Selection of a landfill location as close to the Project site as possible. ▪ Appropriate phasing of the work schedule.	▪ PG&E and Contractors	• DTSC
	AQ-2: Additional operating measures for NOx reduction: ▪ Idling time from all equipment will be minimized, with a special emphasis on reducing idling time from diesel-powered construction equipment. Idling times will be minimized either by shutting off equipment when not in use or limiting the maximum idling time for all equipment to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage will be provided for construction workers at all access points. To more effectively reduce emissions from diesel-powered equipment, the idling time for this type of construction equipment will be limited even more, to 2 minutes. ▪ All construction equipment, diesel trucks, and generators will be equipped with Best Available Control Technology for emission reductions of NOx. ▪ All contractors will be required to use equipment that meets CARB's most recent certification standard for off-road heavy- duty diesel engines. ▪ All contractor construction equipment that will be required for use will be maintained and properly tuned in accordance with manufacturer specifications. All equipment will be checked by a certified mechanic and determined to be running in proper condition prior to operation. Equipment that remains onsite for an extended period will also be checked by a certified mechanic at scheduled intervals.	• PG&E and Contractors	• DTSC

RESOURCE AREA	MEASURES	Responsible Party	Responsible for Compliance
AIR QUALITY (CONTINUED)	**AQ-3**: Basic control measures recommended by BAAQMD to be implemented at all construction sites: ▪ All exposed surfaces (for example, parking areas, staging area, soil piles, graded areas, and unpaved access roads) shall be watered, as needed, based on observed dust suppression and weather conditions. ▪ All haul trucks transporting soil, sand, or other loose material offsite shall be covered. ▪ All visible mud or dirt tracked out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. ▪ Posting of a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours.	• PG&E and Contractors	• DTSC
	AQ-4: Enhanced Control Measures to be implemented, if needed: ▪ Hydroseed or apply (non-toxic) soil stabilizers to inactive construction areas (previously graded areas inactive for ten days or more). ▪ Enclose, cover, water twice daily, or apply (non-toxic) soil binders to exposed stockpiles (dirt, sand, etc.). ▪ All vehicle speeds on unpaved roads shall be limited to 15 mph. ▪ Replant vegetation in disturbed areas as quickly as possible, where appropriate.	• PG&E and Contractors	• DTSC
BIOLOGICAL RESOURCES AND WETLANDS	**BIO-**1: A biological monitor will be present as required by permitting agencies and will have the authority to stop or redirect work should the work have the potential to adversely affect sensitive species. If required, the biological monitor's duties *may* include but will not be limited to the following: ▪ Providing training to workers regarding the potential species of concern and habitats in the area and measures taken to minimize any effects on the species of concern and habitats. ▪ Verifying the limits of the work areas and staging areas and ensuring that they are properly marked before the construction begins. ▪ Verifying the locations of signs and flagging marking the boundaries of sensitive resource areas and other areas with special requirements in the construction work area. ▪ Conducting any surveys and/or inspections as required to ensure that no	• PG&E and Contractors	• DTSC

RESOURCE AREA	MEASURES	Responsible Party	Responsible for Compliance
BIOLOGICAL RESOURCES AND WETLANDS (CONTINUED)	special status species are in the work area.		
	BIO-2: Vehicles parked for more than 30 minutes in SWMU 4.18 or 4.12 will be inspected by trained personnel before they are allowed to move. With the exception of areas inside the pond itself, all construction work areas will be marked to ensure that activities are confined to uplands and designated sensitive habitat areas are avoided.	• PG&E and Contractors	• DTSC
	BIO-3: Pre-construction bird nesting surveys will be conducted for the work areas within two weeks of the start of any construction activity during the bird breeding season. If active nests are found, appropriate buffers will be established around active nests in accordance with PG&E's Nesting Bird Management Plan. Where feasible, standard buffers will apply, although the monitoring biologist may increase or decrease the standard buffers in accordance with the factors set forth in the PG&E Nesting Bird Management Plan.	• PG&E and Contractors	• DTSC
	BIO-4: If nesting burrowing owls are encountered during Project construction, buffers will be established around occupied burrows (160 ft from Sept 1 to Jan 31 and 250 ft from Feb 1 to Aug 30), and work within these areas will be prohibited.	• PG&E and Contractors	• DTSC
	BIO-5: Vehicle traffic within the Project area will be restricted to roads established for the Project and clearly indicated on Project drawings. These areas will be included in pre-construction surveys. Project-related vehicles will observe a 15-mile-per-hour speed limit or less within the work area. A 10-mph speed limit will be strictly enforced on the Shell Pond levees.	• PG&E and Contractors	• DTSC
	BIO-6: In general, work hours will be limited to daytime only, and will begin no sooner than one-half hour after sunrise and end at least one-half hour before sunset. Where the nighttime use of construction equipment is required, lighting will be kept as low as possible and will be directed away from the marsh to the north to minimize disturbance to surrounding ecological and human communities.	• PG&E and Contractors	• DTSC
	BIO-7: The following good management practices will also be implemented: ▪ Environmentally Sensitive Areas will be clearly marked on Project drawings. ▪ All food-related trash items such as wrappers, cans, bottles, and food scraps will be disposed of in closed containers and removed from the study area at least once a day. ▪ No firearms will be allowed in the work area except for those carried by authorized security personnel or by local, state, or federal law enforcement officials.	• PG&E and Contractors	• DTSC

RESOURCE AREA	MEASURES	Responsible Party	Responsible for Compliance
BIOLOGICAL RESOURCES AND WETLANDS (CONTINUED)	▪ No pets will be permitted in the work area. ▪ All construction equipment and materials that are stored at a construction site will be inspected before being used or moved. If wildlife species are present, they will be allowed to exit on their own without being handled, or they will be handled as authorized by resource agencies. ▪ Once the Project is completed, all unused material and equipment will be removed from the work area. ▪ Fueling or refueling will be restricted to a designated area, away from the sloughs. To minimize consequences of a fuel spill, a Spill Management Plan will be prepared and strictly implemented by the contractor.		
	BIO-8: Install wildlife deterrence fencing where appropriate as determined by the biological monitor.	• PG&E and Contractors	• DTSC
CULTURAL RESOURCES	**CR-1**: All site workers will be trained to recognize buried artifacts and on the appropriate procedures to be followed should buried artifacts or human remains be encountered. If buried cultural resources, such as chipped or ground stone, large quantities of shell, historic debris, or building foundations are discovered inadvertently during ground-disturbing activities, work will stop in the area and within 100 feet of the find until a qualified archaeologist can assess the significance of the find and, if necessary, develop appropriate measures in consultation with DTSC, PG&E, other agencies, and Native American representatives as appropriate.	• PG&E and Contractors	• DTSC
	CR-2: If human skeletal remains are encountered, the county coroner will be contacted immediately. If the county coroner determines that the remains are Native American, the coroner will then be required to contact the Native American Heritage Commission (pursuant to Section 7050.5 (c) of the California Health and Safety Code) and the County Coordinator of Indian Affairs. A qualified cultural resources specialist also will be contacted immediately.	▪ PG&E	▪ DTSC
	CR-3: If any human remains are discovered in any location, there will be no further work or disturbance of the location or any nearby area reasonably suspected to overlie adjacent human remains until: ▪ The county coroner has been informed and has determined that no investigation of the cause of death is required and whether or not the remains are of Native American origin. ▪ The descendants of the deceased Native Americans have made a recommendation to DTSC and PG&E for means of treating or disposing of,	▪ PG&E and Contractors	▪ DTSC

RESOURCE AREA	MEASURES	Responsible Party	Responsible for Compliance
	with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98. ▪ The Native American Heritage Commission was unable to identify a descendant or the descendant failed to make a recommendation within 24 hours after being notified by the Commission.		
GREENHOUSE GAS EMISSIONS	**GHG-1**: Greenhouse gas BMPs may include: ▪ Use of local source(s) of backfill material that would minimize travel distance. ▪ Sourcing amendments and compost from nearby. ▪ Limiting equipment idle time.	▪ PG&E and Contractors	▪ DTSC
HAZARDS/HEALTH AND SAFETY	**HAZ-1**: The following will be implemented to minimize potential impacts from hazardous materials: ▪ Preparation of a Health and Safety Plan including requirements for workers and other construction management components, such as dust and offsite migration control. ▪ All construction activities involving work in proximity to potentially contaminated soils be undertaken in accordance with California Occupational Safety and Health Administration (Cal-OSHA) standards, contained in Title 8 of the CCR. ▪ Establishment of health and safety provisions for monitoring exposure to construction workers, procedures to be undertaken in the event that previously unreported contamination is discovered, and emergency procedures and responsible personnel.	▪ PG&E and Contractors	▪ DTSC
NOISE	**NOI-1:** Noise avoidance and minimization measures may include: ▪ Locating construction equipment staging area, material-handling areas, and stationary construction equipment as far away as possible from sensitive species foraging, nesting, or breeding habitats and residential receptors. ▪ Shutting off idling equipment when not in use (this measure will also be implemented to reduce NOx and GHG emissions). ▪ Selecting or contractually specifying the use of lower noise equipment. ▪ Adding mufflers on construction equipment, generators, and vehicles. ▪ Utilizing electrically powered construction equipment where feasible. ▪ Publicly posted sign with a phone number and contact person regarding noise complaints, so that activities can be adjusted.	▪ PG&E and Contractors	▪ DTSC

RESOURCE AREA	MEASURES	Responsible Party	Responsible for Compliance
TRAFFIC AND TRANSPORTATION	**TT-1**: If contingency excavation activities occur, a Transportation Management Plan will coordinate major transportation components of the project including the delivery of impacted material to the landfill. The Plan will ensure trucking to and from the landfill is spread sparsely over shipping hours. The plan will include measures to minimize peak-traffic-hours impacts to local intersections and State Route 4 with measures such as the use of alternate hauling routes such as West Leland Road during peak hours, prohibiting hauling activities during peak hours, and timing onsite construction shifts to minimize commuting impacts. The Plan will also address traffic management in the vicinity of sensitive locations (schools, community center, library), construction traffic if necessary.	▪ PG&E	▪ DTSC
Geology	**GEO-1**: If required based on extent of ground disturbance (contingency excavation activities only), a Storm Water Pollution Prevention Plan (SWPPP) will be prepared and implemented in compliance with State Water Resources Control Board Order No. 2009-009-DWQ, General Permit No. CAS 000002.The SWPPP would specify appropriate practices to prevent potential run-off of soils and chemicals from the Project site or into sensitive areas within the Project site. Storm water collected within the material-handling areas would be discharged to the pond in conjunction with the filtrate and any other water generated by the Project. No fueling or refueling will be allowed onsite except where it is impractical to send vehicles and equipment offsite for fueling. When fueling must occur onsite, the contractor will designate an area to be used, in an appropriate area subject to the approval of the onsite biological monitor.	▪ PG&E and Contractors	▪ DTSC

ATTACHMENT C

Shell Pond SWMU 4.12 and 4.18 - Contingency Actions

San Francisco Bay Area Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	1,742.00	1000sqft	39.99	1,742,000.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	4			**Operational Year**	2019
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Shell Pond SWMU 4.12 and 4.18 - Contingency Actions - San Francisco Bay Area Air Basin, Annual

Project Characteristics - operational year set as 2019.

Land Use - Input 40 acres for land use.

Construction Phase - Worst-case assumption: both 4.18 and 4.12 Contingency Actions happen concurrently (within the same year).

Off-road Equipment - Horsepower on mixer increased to match likely actual value. Rototiller listed as "other construction equipment."

Off-road Equipment - placeholders

Trips and VMT - Haul Trucks: 300 round trips total for 4.18. Crew vehicles: 5 at 30 mi/day for 6 months for 4.18; crew vehicles: 5 at 30 mi/day for 3 months for 4.12

On-road Fugitive Dust - No changes to on-road fugitive dust

Demolition -

Grading -

Vehicle Trips -

Energy Use -

Fleet Mix -

Off-road Equipment - One excavator.

Off-road Equipment - Placeholder

Off-road Equipment - Placeholder

Table Name	Column Name	Default Value	New Value
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tblConstructionPhase	NumDays	30.00	120.00
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tblConstructionPhase	PhaseEndDate	8/23/2019	12/27/2019
tblConstructionPhase	PhaseEndDate	10/4/2019	9/20/2019
tblConstructionPhase	PhaseEndDate	11/15/2019	10/4/2019
tblConstructionPhase	PhaseStartDate	6/3/2019	7/1/2019
tblConstructionPhase	PhaseStartDate	8/24/2019	7/1/2019

Shell Pond SWMU 4.12 and 4.18 - Contingency Actions - San Francisco Bay Area Air Basin, Annual

tblConstructionPhase	PhaseStartDate	10/5/2019	7/13/2019
tblOffRoadEquipment	HorsePower	247.00	5.00
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tblOffRoadEquipment	PhaseName		4.18 Contingency Actions Heavy Equipment

tblOffRoadEquipment	PhaseName		4.18 Contingency Actions Heavy Equipment
tblOffRoadEquipment	PhaseName		4.18 Contingency Actions Heavy Equipment
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tblOffRoadEquipment	PhaseName		4.12 Contingency Actions Heavy Equipment
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tblTripsAndVMT	WorkerTripNumber	3.00	5.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.1453	1.6588	1.2422	2.4600e-003	0.1632	0.0741	0.2373	0.0816	0.0682	0.1498	0.0000	223.4866	223.4866	0.0607	0.0000	225.0030
Maximum	**0.1453**	**1.6588**	**1.2422**	**2.4600e-003**	**0.1632**	**0.0741**	**0.2373**	**0.0816**	**0.0682**	**0.1498**	**0.0000**	**223.4866**	**223.4866**	**0.0607**	**0.0000**	**225.0030**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.1453	0.1088	1.2422	2.4600e-003	0.1632	0.0741	0.2373	0.0816	0.0682	0.1498	0.0000	223.4864	223.4864	0.0607	0.0000	225.0028
Maximum	**0.1453**	**0.1088**	**1.2422**	**2.4600e-003**	**0.1632**	**0.0741**	**0.2373**	**0.0816**	**0.0682**	**0.1498**	**0.0000**	**223.4864**	**223.4864**	**0.0607**	**0.0000**	**225.0028**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**93.44**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Shell Pond SWMU 4.12 and 4.18 - Contingency Actions - San Francisco Bay Area Air Basin, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	6-3-2019	9-2-2019	1.0913	0.1203
2	9-3-2019	9-30-2019	0.3518	0.0459
		Highest	1.0913	0.1203

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	8.8235	1.5000e-004	0.0162	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0311	0.0311	8.0000e-005	0.0000	0.0332
Energy	0.2478	2.2527	1.8922	0.0135		0.1712	0.1712		0.1712	0.1712	0.0000	6,638.1801	6,638.1801	0.2363	0.0841	6,669.1544
Mobile	1.0362	5.5212	13.9341	0.0459	3.7587	0.0582	3.8169	1.0092	0.0549	1.0641	0.0000	4,201.2430	4,201.2430	0.1576	0.0000	4,205.1830
Waste						0.0000	0.0000		0.0000	0.0000	438.4767	0.0000	438.4767	25.9132	0.0000	1,086.3075
Water						0.0000	0.0000		0.0000	0.0000	127.8018	634.1154	761.9171	13.1551	0.3159	1,184.9268
Total	**10.1075**	**7.7740**	**15.8425**	**0.0594**	**3.7587**	**0.2295**	**3.9882**	**1.0092**	**0.2262**	**1.2354**	**566.2785**	**11,473.5696**	**12,039.8481**	**39.4623**	**0.4000**	**13,145.6050**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	8.8235	1.5000e-004	0.0162	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0311	0.0311	8.0000e-005	0.0000	0.0332
Energy	0.2478	2.2527	1.8922	0.0135		0.1712	0.1712		0.1712	0.1712	0.0000	6,638.1801	6,638.1801	0.2363	0.0841	6,669.1544
Mobile	1.0362	5.5212	13.9341	0.0459	3.7587	0.0582	3.8169	1.0092	0.0549	1.0641	0.0000	4,201.2430	4,201.2430	0.1576	0.0000	4,205.1830
Waste						0.0000	0.0000		0.0000	0.0000	438.4767	0.0000	438.4767	25.9132	0.0000	1,086.3075
Water						0.0000	0.0000		0.0000	0.0000	127.8018	634.1154	761.9171	13.1551	0.3159	1,184.9268
Total	**10.1075**	**7.7740**	**15.8425**	**0.0594**	**3.7587**	**0.2295**	**3.9882**	**1.0092**	**0.2262**	**1.2354**	**566.2785**	**11,473.5696**	**12,039.8481**	**39.4623**	**0.4000**	**13,145.6050**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Shell Pond SWMU 4.12 and 4.18 - Contingency Actions - San Francisco Bay Area Air Basin, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	4.18 Contingency Actions Heavy Equipment	Site Preparation	7/1/2019	12/13/2019	5	120	
2	4.12 Contingency Actions Heavy Equipment	Site Preparation	7/1/2019	9/20/2019	5	60	
3	4.18 Contingency Actions Haul Trucks	Site Preparation	7/13/2019	12/27/2019	5	120	Placeholder for vehicle inputs
4	4.12 Contingency Actions Haul Trucks	Site Preparation	7/13/2019	10/4/2019	5	60	Placeholder for vehicle inputs

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
4.18 Contingency Actions Heavy Equipment	Excavators	1	8.00	158	0.56
4.18 Contingency Actions Haul Trucks	Rubber Tired Dozers	1	1.00	5	0.40
4.18 Contingency Actions Heavy Equipment	Other Construction Equipment	1	8.00	75	0.48
4.18 Contingency Actions Heavy Equipment	Cement and Mortar Mixers	1	8.00	60	0.56
4.18 Contingency Actions Heavy Equipment	Tractors/Loaders/Backhoes	1	4.00	203	0.36
4.12 Contingency Actions Heavy Equipment	Excavators	1	8.00	158	0.38
4.12 Contingency Actions Heavy Equipment	Tractors/Loaders/Backhoes	2	8.00	97	0.37
4.12 Contingency Actions Heavy Equipment	Scrapers	2	8.00	367	0.48
4.12 Contingency Actions Haul Trucks	Rubber Tired Loaders	1	1.00	5	0.36

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
4.18 Contingency Actions Heavy Equipm	1	0.00	0.00	0.00	10.80	6.60	0.00	LD_Mix	HDT_Mix	HHDT
4.18 Contingency Actions Haul Trucks	1	0.00	0.00	300.00	10.80	6.60	57.00	LD_Mix	HDT_Mix	HHDT
4.18 Contingency Actions Haul Trucks	1	5.00	0.00	0.00	30.00	6.60	30.00	LD_Mix	HDT_Mix	HHDT
4.12 Contingency Actions Heavy Equipm	0		0.00	0.00	10.80	6.60				
4.12 Contingency Actions Haul Trucks	0	5.00	0.00	0.00	30.00	6.60	30.00			

3.1 Mitigation Measures Construction

3.2 4.18 Contingency Actions Heavy Equipment - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0535	0.5511	0.4787	8.3000e-004		0.0298	0.0298		0.0274	0.0274	0.0000	74.5525	74.5525	0.0236	0.0000	75.1421
Total	**0.0535**	**0.5511**	**0.4787**	**8.3000e-004**	**0.0000**	**0.0298**	**0.0298**	**0.0000**	**0.0274**	**0.0274**	**0.0000**	**74.5525**	**74.5525**	**0.0236**	**0.0000**	**75.1421**

3.2 4.18 Contingency Actions Heavy Equipment - 2019

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0535		0.4787	8.3000e-004		0.0298	0.0298		0.0274	0.0274	0.0000	74.5524	74.5524	0.0236	0.0000	75.1421
Total	**0.0535**		**0.4787**	**8.3000e-004**	**0.0000**	**0.0298**	**0.0298**	**0.0000**	**0.0274**	**0.0274**	**0.0000**	**74.5524**	**74.5524**	**0.0236**	**0.0000**	**75.1421**

3.2 4.18 Contingency Actions Heavy Equipment - 2019

Mitigated Construction Off-Site

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

3.3 4.12 Contingency Actions Heavy Equipment - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0860	0.9988	0.7216	1.2500e-003		0.0437	0.0437		0.0402	0.0402	0.0000	112.6272	112.6272	0.0356	0.0000	113.5181
Total	**0.0860**	**0.9988**	**0.7216**	**1.2500e-003**	**0.0000**	**0.0437**	**0.0437**	**0.0000**	**0.0402**	**0.0402**	**0.0000**	**112.6272**	**112.6272**	**0.0356**	**0.0000**	**113.5181**

3.3 4.12 Contingency Actions Heavy Equipment - 2019

Unmitigated Construction Off-Site

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

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0860		0.7216	1.2500e-003		0.0437	0.0437		0.0402	0.0402	0.0000	112.6271	112.6271	0.0356	0.0000	113.5180
Total	**0.0860**		**0.7216**	**1.2500e-003**	**0.0000**	**0.0437**	**0.0437**	**0.0000**	**0.0402**	**0.0402**	**0.0000**	**112.6271**	**112.6271**	**0.0356**	**0.0000**	**113.5180**

3.3 4.12 Contingency Actions Heavy Equipment - 2019

Mitigated Construction Off-Site

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

3.4 4.18 Contingency Actions Haul Trucks - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1355	0.0000	0.1355	0.0745	0.0000	0.0745	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total					**0.1355**	**0.0000**	**0.1355**	**0.0745**	**0.0000**	**0.0745**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 4.18 Contingency Actions Haul Trucks - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.3300e-003	0.1068	0.0220	3.1000e-004	0.0126	4.9000e-004	0.0131	3.3100e-003	4.7000e-004	3.7800e-003	0.0000	30.4620	30.4620	1.2900e-003	0.0000	30.4942
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4900e-003	2.0400e-003	0.0199	6.0000e-005	0.0123	4.0000e-005	0.0123	3.1500e-003	4.0000e-005	3.1800e-003	0.0000	5.8449	5.8449	1.5000e-004	0.0000	5.8486
Total	**5.8200e-003**	**0.1088**	**0.0419**	**3.7000e-004**	**0.0249**	**5.3000e-004**	**0.0254**	**6.4600e-003**	**5.1000e-004**	**6.9600e-003**	**0.0000**	**36.3069**	**36.3069**	**1.4400e-003**	**0.0000**	**36.3428**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1355	0.0000	0.1355	0.0745	0.0000	0.0745	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total					**0.1355**	**0.0000**	**0.1355**	**0.0745**	**0.0000**	**0.0745**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

3.4 4.18 Contingency Actions Haul Trucks - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	3.3300e-003	0.1068	0.0220	3.1000e-004	0.0126	4.9000e-004	0.0131	3.3100e-003	4.7000e-004	3.7800e-003	0.0000	30.4620	30.4620	1.2900e-003	0.0000	30.4942
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.4900e-003	2.0400e-003	0.0199	6.0000e-005	0.0123	4.0000e-005	0.0123	3.1500e-003	4.0000e-005	3.1800e-003	0.0000	5.8449	5.8449	1.5000e-004	0.0000	5.8486
Total	**5.8200e-003**	**0.1088**	**0.0419**	**3.7000e-004**	**0.0249**	**5.3000e-004**	**0.0254**	**6.4600e-003**	**5.1000e-004**	**6.9600e-003**	**0.0000**	**36.3069**	**36.3069**	**1.4400e-003**	**0.0000**	**36.3428**

3.5 4.12 Contingency Actions Haul Trucks - 2019

Unmitigated Construction On-Site

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

3.5 4.12 Contingency Actions Haul Trucks - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker					2.8400e-003	0.0000	2.8400e-003	7.0000e-004	0.0000	7.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total					**2.8400e-003**	**0.0000**	**2.8400e-003**	**7.0000e-004**	**0.0000**	**7.0000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction On-Site

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

3.5 4.12 Contingency Actions Haul Trucks - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker					2.8400e-003	0.0000	2.8400e-003	7.0000e-004	0.0000	7.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total					**2.8400e-003**	**0.0000**	**2.8400e-003**	**7.0000e-004**	**0.0000**	**7.0000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.0362	5.5212	13.9341	0.0459	3.7587	0.0582	3.8169	1.0092	0.0549	1.0641	0.0000	4,201.2430	4,201.2430	0.1576	0.0000	4,205.1830
Unmitigated	1.0362	5.5212	13.9341	0.0459	3.7587	0.0582	3.8169	1.0092	0.0549	1.0641	0.0000	4,201.2430	4,201.2430	0.1576	0.0000	4,205.1830

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Heavy Industry	2,613.00	2,613.00	2613.00	10,095,237	10,095,237
Total	2,613.00	2,613.00	2,613.00	10,095,237	10,095,237

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Heavy Industry	14.70	6.60	6.60	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Heavy Industry	0.570523	0.041853	0.194077	0.115893	0.018544	0.005373	0.016909	0.024079	0.002502	0.002562	0.005975	0.000872	0.000837

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	4,185.9018	4,185.9018	0.1893	0.0392	4,202.3034
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	4,185.9018	4,185.9018	0.1893	0.0392	4,202.3034
NaturalGas Mitigated	0.2478	2.2527	1.8922	0.0135		0.1712	0.1712		0.1712	0.1712	0.0000	2,452.2783	2,452.2783	0.0470	0.0450	2,466.8510
NaturalGas Unmitigated	0.2478	2.2527	1.8922	0.0135		0.1712	0.1712		0.1712	0.1712	0.0000	2,452.2783	2,452.2783	0.0470	0.0450	2,466.8510

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Heavy Industry	4.5954e+007	0.2478	2.2527	1.8922	0.0135		0.1712	0.1712		0.1712	0.1712	0.0000	2,452.2783	2,452.2783	0.0470	0.0450	2,466.8510
Total		**0.2478**	**2.2527**	**1.8922**	**0.0135**		**0.1712**	**0.1712**		**0.1712**	**0.1712**	**0.0000**	**2,452.2783**	**2,452.2783**	**0.0470**	**0.0450**	**2,466.8510**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Heavy Industry	4.5954e+007	0.2478	2.2527	1.8922	0.0135		0.1712	0.1712		0.1712	0.1712	0.0000	2,452.2783	2,452.2783	0.0470	0.0450	2,466.8510
Total		**0.2478**	**2.2527**	**1.8922**	**0.0135**		**0.1712**	**0.1712**		**0.1712**	**0.1712**	**0.0000**	**2,452.2783**	**2,452.2783**	**0.0470**	**0.0450**	**2,466.8510**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Heavy Industry	1.43889e+007	4,185.9018	0.1893	0.0392	4,202.3034
Total		**4,185.9018**	**0.1893**	**0.0392**	**4,202.3034**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Heavy Industry	1.43889e+007	4,185.9018	0.1893	0.0392	4,202.3034
Total		**4,185.9018**	**0.1893**	**0.0392**	**4,202.3034**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	8.8235	1.5000e-004	0.0162	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0311	0.0311	8.0000e-005	0.0000	0.0332
Unmitigated	8.8235	1.5000e-004	0.0162	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0311	0.0311	8.0000e-005	0.0000	0.0332

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.0185					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	6.8034					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.5300e-003	1.5000e-004	0.0162	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0311	0.0311	8.0000e-005	0.0000	0.0332
Total	**8.8235**	**1.5000e-004**	**0.0162**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**	**0.0000**	**0.0311**	**0.0311**	**8.0000e-005**	**0.0000**	**0.0332**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.0185					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	6.8034					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.5300e-003	1.5000e-004	0.0162	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0311	0.0311	8.0000e-005	0.0000	0.0332
Total	**8.8235**	**1.5000e-004**	**0.0162**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**	**0.0000**	**0.0311**	**0.0311**	**8.0000e-005**	**0.0000**	**0.0332**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	761.9171	13.1551	0.3159	1,184.9268
Unmitigated	761.9171	13.1551	0.3159	1,184.9268

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Heavy Industry	402.837 / 0	761.9171	13.1551	0.3159	1,184.9268
Total		**761.9171**	**13.1551**	**0.3159**	**1,184.9268**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Heavy Industry	402.837 / 0	761.9171	13.1551	0.3159	1,184.9268
Total		**761.9171**	**13.1551**	**0.3159**	**1,184.9268**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	438.4767	25.9132	0.0000	1,086.3075
Unmitigated	438.4767	25.9132	0.0000	1,086.3075

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Heavy Industry	2160.08	438.4767	25.9132	0.0000	1,086.3075
Total		**438.4767**	**25.9132**	**0.0000**	**1,086.3075**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Heavy Industry	2160.08	438.4767	25.9132	0.0000	1,086.3075
Total		**438.4767**	**25.9132**	**0.0000**	**1,086.3075**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Shell Pond SWMU 4.12 and 4.18 - Planned Approach

San Francisco Bay Area Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Heavy Industry	1,742.00	1000sqft	39.99	1,742,000.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	4			**Operational Year**	2019
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Shell Pond SWMU 4.12 and 4.18 - Planned Approach - San Francisco Bay Area Air Basin, Annual

Project Characteristics - operational year set as 2019.

Land Use - Input 40 acres for land use.

Construction Phase - Mixing Rig and Transfer Pump - 2 months. Haul Trucks 4 months. Assume one phase per year at 3-4 months per phase (use 4 months for worst-case).

Off-road Equipment - placeholders

Off-road Equipment - One mixing rig and transfer pump, 10 hrs/day. Increased horsepower of mixer.

Trips and VMT - Haul Trucks: 370 round trips total per phase. Crew vehicles: 5 at 30 mi/day for 4 months.

On-road Fugitive Dust - No changes to on-road fugitive dust

Demolition -

Grading -

Vehicle Trips -

Energy Use -

Fleet Mix -

Off-road Equipment - Placeholder

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	30.00	80.00
tblConstructionPhase	NumDays	30.00	80.00
tblConstructionPhase	PhaseEndDate	10/15/2018	4/22/2019
tblConstructionPhase	PhaseEndDate	11/26/2018	4/22/2019
tblConstructionPhase	PhaseStartDate	9/4/2018	1/1/2019
tblConstructionPhase	PhaseStartDate	10/16/2018	1/1/2019
tblGrading	PhaseName	Support Haul Trucks	Planned Approach Haul Trucks
tblGrading	PhaseName	Support Haul Trucks	Planned Approach Haul Trucks
tblOffRoadEquipment	HorsePower	247.00	5.00
tblOffRoadEquipment	HorsePower	9.00	75.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00

tblOffRoadEquipment	PhaseName	Support Haul Trucks	Planned Approach Haul Trucks
tblOffRoadEquipment	PhaseName		Planned Approach Shell Pond Rig and Pump
tblOffRoadEquipment	UsageHours	8.00	1.00
tblOnRoadDust	PhaseName	Support Haul Trucks	Planned Approach Haul Trucks
tblOnRoadDust	PhaseName	Support Haul Trucks	Planned Approach Haul Trucks
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblTripsAndVMT	HaulingTripLength	20.00	0.00
tblTripsAndVMT	HaulingTripLength	20.00	57.00
tblTripsAndVMT	HaulingTripLength	20.00	30.00
tblTripsAndVMT	HaulingTripNumber	0.00	370.00
tblTripsAndVMT	PhaseName	Support Haul Trucks	Planned Approach Haul Trucks
tblTripsAndVMT	PhaseName	Support Haul Trucks	Planned Approach Haul Trucks
tblTripsAndVMT	WorkerTripLength	10.80	30.00
tblTripsAndVMT	WorkerTripNumber	3.00	0.00
tblTripsAndVMT	WorkerTripNumber	3.00	0.00
tblTripsAndVMT	WorkerTripNumber	3.00	5.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	5.7700e-003	0.1331	0.0404	4.3000e-004	0.0840	6.3000e-004	0.0846	0.0393	6.0000e-004	0.0399	0.0000	41.4664	41.4664	1.6900e-003	0.0000	41.5086
Maximum	**5.7700e-003**	**0.1331**	**0.0404**	**4.3000e-004**	**0.0840**	**6.3000e-004**	**0.0846**	**0.0393**	**6.0000e-004**	**0.0399**	**0.0000**	**41.4664**	**41.4664**	**1.6900e-003**	**0.0000**	**41.5086**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	5.7700e-003	0.1331	0.0404	4.3000e-004	0.0840	6.3000e-004	0.0846	0.0393	6.0000e-004	0.0399	0.0000	41.4664	41.4664	1.6900e-003	0.0000	41.5086
Maximum	**5.7700e-003**	**0.1331**	**0.0404**	**4.3000e-004**	**0.0840**	**6.3000e-004**	**0.0846**	**0.0393**	**6.0000e-004**	**0.0399**	**0.0000**	**41.4664**	**41.4664**	**1.6900e-003**	**0.0000**	**41.5086**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Shell Pond SWMU 4.12 and 4.18 - Planned Approach - San Francisco Bay Area Air Basin, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
2	12-4-2018	3-3-2019	0.0779	0.0779
3	3-4-2019	6-3-2019	0.0616	0.0616
		Highest	0.0779	0.0779

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	8.8235	1.5000e-004	0.0162	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0311	0.0311	8.0000e-005	0.0000	0.0332
Energy	0.2478	2.2527	1.8922	0.0135		0.1712	0.1712		0.1712	0.1712	0.0000	6,638.1801	6,638.1801	0.2363	0.0841	6,669.1544
Mobile	1.0362	5.5212	13.9341	0.0459	3.7587	0.0582	3.8169	1.0092	0.0549	1.0641	0.0000	4,201.2430	4,201.2430	0.1576	0.0000	4,205.1830
Waste						0.0000	0.0000		0.0000	0.0000	438.4767	0.0000	438.4767	25.9132	0.0000	1,086.3075
Water						0.0000	0.0000		0.0000	0.0000	127.8018	634.1154	761.9171	13.1551	0.3159	1,184.9268
Total	**10.1075**	**7.7740**	**15.8425**	**0.0594**	**3.7587**	**0.2295**	**3.9882**	**1.0092**	**0.2262**	**1.2354**	**566.2785**	**11,473.5696**	**12,039.8481**	**39.4623**	**0.4000**	**13,145.6050**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	8.8235	1.5000e-004	0.0162	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0311	0.0311	8.0000e-005	0.0000	0.0332
Energy	0.2478	2.2527	1.8922	0.0135		0.1712	0.1712		0.1712	0.1712	0.0000	6,638.1801	6,638.1801	0.2363	0.0841	6,669.1544
Mobile	1.0362	5.5212	13.9341	0.0459	3.7587	0.0582	3.8169	1.0092	0.0549	1.0641	0.0000	4,201.2430	4,201.2430	0.1576	0.0000	4,205.1830
Waste						0.0000	0.0000		0.0000	0.0000	438.4767	0.0000	438.4767	25.9132	0.0000	1,086.3075
Water						0.0000	0.0000		0.0000	0.0000	127.8018	634.1154	761.9171	13.1551	0.3159	1,184.9268
Total	**10.1075**	**7.7740**	**15.8425**	**0.0594**	**3.7587**	**0.2295**	**3.9882**	**1.0092**	**0.2262**	**1.2354**	**566.2785**	**11,473.5696**	**12,039.8481**	**39.4623**	**0.4000**	**13,145.6050**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Planned Approach Shell Pond Rig and Pump	Site Preparation	1/1/2019	4/22/2019	5	80	
2	Planned Approach Haul Trucks	Site Preparation	1/1/2019	4/22/2019	5	80	Placeholder for vehicle inputs

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

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

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Planned Approach Shell Pond Rig and Pump	Cement and Mortar Mixers	1	10.00	75	0.56
Planned Approach Haul Trucks	Rubber Tired Dozers	1	1.00	5	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Planned Approach Shell Pond Rig and Pu	1	0.00	0.00	0.00	10.80	6.60	0.00	LD_Mix	HDT_Mix	HHDT
Planned Approach Haul Trucks	1	0.00	0.00	370.00	10.80	6.60	57.00	LD_Mix	HDT_Mix	HHDT
Planned Approach Haul Trucks	1	5.00	0.00	0.00	30.00	6.60	30.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Planned Approach Shell Pond Rig and Pump - 2019

Unmitigated Construction On-Site

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

Unmitigated Construction Off-Site

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

3.2 Planned Approach Shell Pond Rig and Pump - 2019

Mitigated Construction On-Site

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

Mitigated Construction Off-Site

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

3.3 Planned Approach Haul Trucks - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0602	0.0000	0.0602	0.0331	0.0000	0.0331	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total					**0.0602**	**0.0000**	**0.0602**	**0.0331**	**0.0000**	**0.0331**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.1100e-003	0.1317	0.0271	3.9000e-004	0.0156	6.0000e-004	0.0162	4.0800e-003	5.7000e-004	4.6600e-003	0.0000	37.5698	37.5698	1.5900e-003	0.0000	37.6095
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6600e-003	1.3600e-003	0.0133	4.0000e-005	8.1800e-003	3.0000e-005	8.2100e-003	2.1000e-003	3.0000e-005	2.1200e-003	0.0000	3.8966	3.8966	1.0000e-004	0.0000	3.8991
Total	**5.7700e-003**	**0.1331**	**0.0404**	**4.3000e-004**	**0.0237**	**6.3000e-004**	**0.0244**	**6.1800e-003**	**6.0000e-004**	**6.7800e-003**	**0.0000**	**41.4664**	**41.4664**	**1.6900e-003**	**0.0000**	**41.5086**

3.3 Planned Approach Haul Trucks - 2019

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0602	0.0000	0.0602	0.0331	0.0000	0.0331	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total					**0.0602**	**0.0000**	**0.0602**	**0.0331**	**0.0000**	**0.0331**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	4.1100e-003	0.1317	0.0271	3.9000e-004	0.0156	6.0000e-004	0.0162	4.0800e-003	5.7000e-004	4.6600e-003	0.0000	37.5698	37.5698	1.5900e-003	0.0000	37.6095
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.6600e-003	1.3600e-003	0.0133	4.0000e-005	8.1800e-003	3.0000e-005	8.2100e-003	2.1000e-003	3.0000e-005	2.1200e-003	0.0000	3.8966	3.8966	1.0000e-004	0.0000	3.8991
Total	**5.7700e-003**	**0.1331**	**0.0404**	**4.3000e-004**	**0.0237**	**6.3000e-004**	**0.0244**	**6.1800e-003**	**6.0000e-004**	**6.7800e-003**	**0.0000**	**41.4664**	**41.4664**	**1.6900e-003**	**0.0000**	**41.5086**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.0362	5.5212	13.9341	0.0459	3.7587	0.0582	3.8169	1.0092	0.0549	1.0641	0.0000	4,201.2430	4,201.2430	0.1576	0.0000	4,205.1830
Unmitigated	1.0362	5.5212	13.9341	0.0459	3.7587	0.0582	3.8169	1.0092	0.0549	1.0641	0.0000	4,201.2430	4,201.2430	0.1576	0.0000	4,205.1830

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Heavy Industry	2,613.00	2,613.00	2613.00	10,095,237	10,095,237
Total	2,613.00	2,613.00	2,613.00	10,095,237	10,095,237

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Heavy Industry	14.70	6.60	6.60	59.00	28.00	13.00	92	5	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Heavy Industry	0.570523	0.041853	0.194077	0.115893	0.018544	0.005373	0.016909	0.024079	0.002502	0.002562	0.005975	0.000872	0.000837

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	4,185.9018	4,185.9018	0.1893	0.0392	4,202.3034
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	4,185.9018	4,185.9018	0.1893	0.0392	4,202.3034
NaturalGas Mitigated	0.2478	2.2527	1.8922	0.0135		0.1712	0.1712		0.1712	0.1712	0.0000	2,452.2783	2,452.2783	0.0470	0.0450	2,466.8510
NaturalGas Unmitigated	0.2478	2.2527	1.8922	0.0135		0.1712	0.1712		0.1712	0.1712	0.0000	2,452.2783	2,452.2783	0.0470	0.0450	2,466.8510

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Heavy Industry	4.5954e+007	0.2478	2.2527	1.8922	0.0135		0.1712	0.1712		0.1712	0.1712	0.0000	2,452.2783	2,452.2783	0.0470	0.0450	2,466.8510
Total		**0.2478**	**2.2527**	**1.8922**	**0.0135**		**0.1712**	**0.1712**		**0.1712**	**0.1712**	**0.0000**	**2,452.2783**	**2,452.2783**	**0.0470**	**0.0450**	**2,466.8510**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Heavy Industry	4.5954e+007	0.2478	2.2527	1.8922	0.0135		0.1712	0.1712		0.1712	0.1712	0.0000	2,452.2783	2,452.2783	0.0470	0.0450	2,466.8510
Total		**0.2478**	**2.2527**	**1.8922**	**0.0135**		**0.1712**	**0.1712**		**0.1712**	**0.1712**	**0.0000**	**2,452.2783**	**2,452.2783**	**0.0470**	**0.0450**	**2,466.8510**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Heavy Industry	1.43889e+007	4,185.9018	0.1893	0.0392	4,202.3034
Total		**4,185.9018**	**0.1893**	**0.0392**	**4,202.3034**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Heavy Industry	1.43889e+007	4,185.9018	0.1893	0.0392	4,202.3034
Total		**4,185.9018**	**0.1893**	**0.0392**	**4,202.3034**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	8.8235	1.5000e-004	0.0162	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0311	0.0311	8.0000e-005	0.0000	0.0332
Unmitigated	8.8235	1.5000e-004	0.0162	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0311	0.0311	8.0000e-005	0.0000	0.0332

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.0185					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	6.8034					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.5300e-003	1.5000e-004	0.0162	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0311	0.0311	8.0000e-005	0.0000	0.0332
Total	**8.8235**	**1.5000e-004**	**0.0162**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**	**0.0000**	**0.0311**	**0.0311**	**8.0000e-005**	**0.0000**	**0.0332**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	2.0185					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	6.8034					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.5300e-003	1.5000e-004	0.0162	0.0000		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	0.0311	0.0311	8.0000e-005	0.0000	0.0332
Total	**8.8235**	**1.5000e-004**	**0.0162**	**0.0000**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**	**0.0000**	**0.0311**	**0.0311**	**8.0000e-005**	**0.0000**	**0.0332**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	761.9171	13.1551	0.3159	1,184.9268
Unmitigated	761.9171	13.1551	0.3159	1,184.9268

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Heavy Industry	402.837 / 0	761.9171	13.1551	0.3159	1,184.9268
Total		**761.9171**	**13.1551**	**0.3159**	**1,184.9268**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Heavy Industry	402.837 / 0	761.9171	13.1551	0.3159	1,184.9268
Total		**761.9171**	**13.1551**	**0.3159**	**1,184.9268**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	438.4767	25.9132	0.0000	1,086.3075
Unmitigated	438.4767	25.9132	0.0000	1,086.3075

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Heavy Industry	2160.08	438.4767	25.9132	0.0000	1,086.3075
Total		**438.4767**	**25.9132**	**0.0000**	**1,086.3075**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Heavy Industry	2160.08	438.4767	25.9132	0.0000	1,086.3075
Total		**438.4767**	**25.9132**	**0.0000**	**1,086.3075**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation