Topock Project Executive Abstract

Document Title:

Riparian and Sensitive Habitat Impact Evaluation

Submitting Agency: DTSC

Final Document? ☒ Yes ☐ No

Date of Document: May 26, 2017

Who Created this Document?: (i.e. PG&E, DTSC, DOI, Other) –

PG&E

Priority Status: ☒ **HIGH** ☐ **MED** ☐ **LOW**

Is this time critical? ☒ Yes ☐ No

Type of Document:

☐ Draft ☐ Report ☐ Letter ☒ Memo

☐ Other / Explain:

Action Required:

☒ Information Only ☐ Review & Comment

Return to: _____

By Date: _____

☐ Other / Explain:

What does this information pertain to?

☐ Resource Conservation and Recovery Act (RCRA) Facility Assessment (RFA)/Preliminary Assessment (PA)

☒ RCRA Facility Investigation (RFI)/Remedial Investigation (RI) (including Risk Assessment)

☐ Corrective Measures Study (CMS)/Feasibility Study (FS)

☐ Corrective Measures Implementation (CMI)/Remedial Action

☒ California Environmental Quality Act (CEQA)/Environmental Impact Report (EIR)

☐ Interim Measures

☐ Other / Explain:

Is this a Regulatory Requirement?

☒ Yes

☐ No

If no, why is the document needed?

What is the consequence of NOT doing this item? What is the consequence of DOING this item?

This memorandum complies with DTSC Conditions of Approval of the Soil RFI/RI Work Plan (Item x on Page 9 of 10). If this work was not performed, it would constitute a non-compliance with the Soil RFI/RI Work Plan Conditions of Approval.

Other Justification/s:

☐ Permit ☐ Other / Explain:

Brief Summary of attached document:

Attached to the DTSC approval letter of the Soil RFI/RI Work Plan along with the Addendum and Errata was a Statement of Decision and Resolution of Approval for the Pacific Gas and Electric Company Topock Compressor Station Soil Investigation Project (SCH No. 2012111079). The project requirement for reporting native riparian biological habitat impacts derives from the Condition of Approval (Item x on page 9 of 10) which states: *"Within 30 days of completion of the Project, including the completion of any pilot studies deemed needed, PG&E shall identify and provide to DTSC the amount of native riparian biological habitat impacted by the Project, if any, for DTSC verification. Once verified, DTSC shall provide that information to CDFW. Native riparian biological habitat does not include effects on salt cedar, tamarisk or other non-native or invasive plant species."*

Conclusions of the technical memorandum indicate that there was limited cutting of non-native tamarisk near the mouth of Bat Cave Wash to provide drill rig access but it was not considered as riparian habitat loss. Similarly, the limited cutting of above-ground portions of arrow weed near the mouth of Bat Cave Wash and the cutting of above-ground portions of tules along the Colorado River near East Ravine did not represent wetland or floodplain habitat loss because the intact roots of the cut plants in these areas were expected to re-sprout immediately. Based on the monitoring activities and observations discussed in the memorandum, there was no loss of floodplain, riparian areas, wetlands, and WOUS habitats or habitats designated by CDFW as sensitive, including ephemeral washes and western honey mesquite bosque, or their functions, or values resulting from the soil investigation activities between October 2015 and April 2017.

Written by: PG&E

Recommendations:

This report is for your information only.

How is this information related to the Final Remedy or Regulatory Requirements:

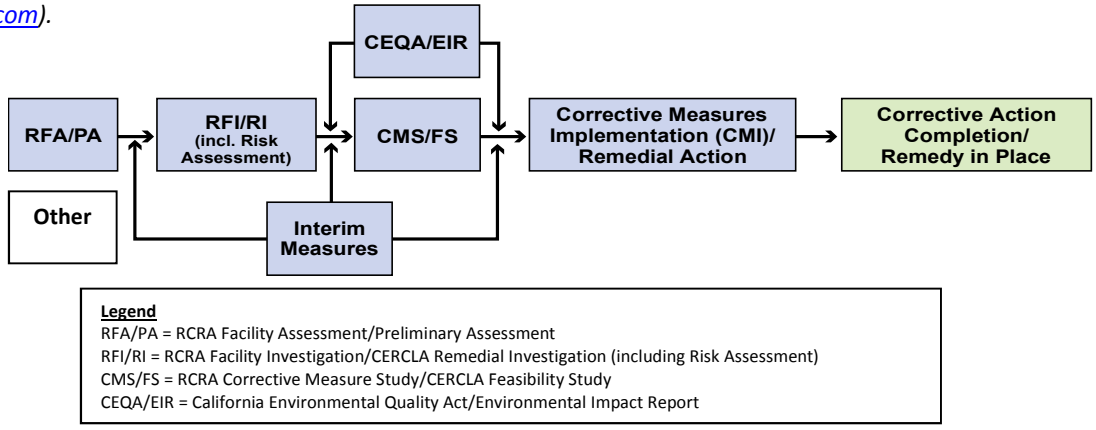
This memorandum presents a summary of the impacts of the completed Soil RFI/RI activities within CDFW jurisdictional areas. This memorandum was prepared to comply with the reporting requirement in the DTSC Conditions of Approval of the Soil RFI/RI Work Plan (Item x on Page 9 of 10).

Other requirements of this information?

None.

Related Reports and Documents:

Click any boxes in the Regulatory Road Map (below) to be linked to the Documents Library on the DTSC Topock Web Site (www.dtsc-topock.com).



Legend
RFA/PA = RCRA Facility Assessment/Preliminary Assessment
RFI/RI = RCRA Facility Investigation/CERCLA Remedial Investigation (including Risk Assessment)
CMS/FS = RCRA Corrective Measure Study/CERCLA Feasibility Study
CEQA/EIR = California Environmental Quality Act/Environmental Impact Report

Version 9

Soil RCRA Facility Investigation/Remedial Investigation, Riparian and Sensitive Habitat Impact Evaluation, Topock Compressor Station, California

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COPIES:	Marjorie Eisert/CH2M
DATE:	May 26, 2017

Introduction

Pacific Gas and Electric Company (PG&E) recently completed field implementation of a Soil Resource Conservation and Recovery Act (RCRA) Facility/Remediation Investigation (RFI/RI) in accordance with the Soil RFI/RI Work Plan (CH2M HILL 2013), Addendum and Errata to the 2013 Soil RFI/RI Work Plan (CH2M HILL 2014), and subsequent Data Gaps Work Plans 1 through 3 (CH2M HILL 2016a, b, and c). All work plans were approved by the California Department of Toxic Substances Control (DTSC) and the U.S. Department of the Interior (DOI). All conditions of agencies' approvals were also implemented by PG&E.

DTSC conducted an environmental review of the soil investigation project, and certified the Soil Investigation Project Final Environmental Impact Report (FEIR) (DTSC 2015a) on August 24, 2015 (DTSC 2015b). Attached to the DTSC approval letter of the Soil RFI/RI Work Plan along with the Addendum and Errata, dated August 24, 2015, was a Statement of Decision and Resolution of Approval for the Pacific Gas and Electric Company Topock Compressor Station Soil Investigation Project (SCH No. 2012111079). The project requirement for reporting native riparian biological habitat impacts derives from the Condition of Approval (Item x on page 9 of 10) which states:

> *"Within 30 days of completion of the Project, including the completion of any pilot studies deemed needed, PG&E shall identify and provide to DTSC the amount of native riparian biological habitat impacted by the Project, if any, for DTSC verification. Once verified, DTSC shall provide that information to CDFW. Native riparian biological habitat does not include effects on salt cedar, tamarisk or other non-native or invasive plant species."*

Soil investigation field work began on October 29, 2015, and was completed on April 28, 2017. Work activities included the installation of soil borings and collection of soil samples; installation of soil vapor probes and collection of soil vapor samples; X-ray fluorescence field screening; geophysical surveying (i.e., electromagnetic induction, vertical magnetic gradient and ground-penetrating radar); and sediment and pore water sample collection. The soil investigations also included a limited vegetation removal within thick tamarisk stands in Bat Cave Wash and some emergent vegetation trimming in the Colorado River on the east end of East Ravine.

Requirements for Work in Riparian Areas and Other Sensitive Habitats

The Soil Investigation Project FEIR's requirement for avoiding or minimizing impacts was included in the Biological Resources Mitigation Measure **(BR-1): No-net-loss of Wetland, Riparian or other Sensitive Habitat Function or Value**, which states:

> *"The Project shall be implemented to avoid effects to the habitat values and functions of identified jurisdictional areas (i.e., floodplain and riparian areas, wetlands, and waters of the United States and habitats designated by CDFW as sensitive, including ephemeral washes and western honey mesquite bosque). Before undertaking ground-disturbing activities within East Ravine and Bat Cave Wash, a qualified biologist shall coordinate with PG&E to ensure that the footprints of investigation activities, including drill pads, staging areas, and access routes, are designed to avoid disturbance to sensitive habitats. Where complete avoidance to sensitive habitat is not feasible DTSC shall be notified and Project activities shall be implemented to ensure no-net-loss of habitat value or function under the direction of a qualified biologist. The following avoidance measures shall be implemented when working in Bat Cave Wash and East Ravine:*
>
> *a. No plants or vegetation shall be completely removed – only pruning, trimming, clearing, or similar approaches which allow the natural regrowth of the plant will be allowed;*
>
> *b. Vegetation pruning, trimming, or clearing shall only occur to access investigation sites and clear around the sample areas where absolutely necessary;*
>
> *c. The only vegetation to be cut off at the base (cleared rather than pruned or trimmed) will be salt cedar at the mouth of Bat Cave Wash. The roots of the salt cedar at the mouth of Bat Cave Wash will be left in place where possible to allow for natural, rapid regrowth of vegetation;*
>
> *d. No more than 20 percent of the crown on all native trees, such as palo verde, shall be trimmed, and no main branches shall be trimmed. This is consistent with what is recommended by the International Society of Arboriculture (ISA 2011);*
>
> *e. Complete removal of vegetation in any work area shall be prohibited; and*
>
> *f. Project equipment and materials from work areas shall be completely removed and, if the area is not paved, it shall be raked/brushed to remove tire tracks.*
>
> *"No net loss" shall be achieved through any combination of the following, in descending order of desirability: (1) avoidance; (2) where avoidance is not possible, minimization of impacts on the resource (a – f above); or (3) 1:1 like kind habitat compensation, including use of a mitigation banking program that provides the opportunity to mitigate impacts to rare, threatened, and endangered species and /or the habitat which supports these species in wetland and riparian areas. A biological monitor shall be present for all vegetation trimming, pruning, and clearing to ensure the above measures are implemented and that vegetation is protected to the extent feasible."*

Project Approach

In conformance with the requirement of mitigation measure BR-1, the planning and investigation design phase sought to identify important resources and minimize work within sensitive habitats. However, complete avoidance of work in riparian area was not possible because of required soil investigation activities in Bat Cave Wash and along the Colorado River, both jurisdictional waterways. The principle of avoiding vegetation impacts was carried forward into the field implementation of the Soil RFI/RI.

A biological monitor, Brandy McWain of Transcon Environmental, Inc. (Transcon) was present for all vegetation trimming, pruning, and clearing to ensure the above measures were implemented. The biologist was also present during soil investigation activities to ensure that vegetation was protected to the extent feasible.

An initial Work Environmental Awareness Training (WEAT) was provided by qualified biologists from TransCon, Mike Shrum and Brandy McWain, prior to the start of investigation activities on October 29, 2015. All new crew members beginning after that date were also provided the WEAT prior to starting work. The WEAT included information on protected and sensitive species and how to avoid impacts to these species. It also included information on CDFW jurisdictional areas and the avoidance measures to be followed to reduce impacts. For every site, pre- and post-construction surveys were performed by the qualified biologist to document impacts.

Excavations (i.e., trenching) within jurisdictional areas required daily monitoring by the qualified biologist. For all other soil investigation activities when the biologist was not present, a Field Contact Representative (FCR) was required to be present after they had been given an in-depth training by the qualified biologist. A daily morning tailboard meeting was conducted to discuss the work being conducted that day, as well as safety requirements, and the specific biological and cultural restrictions for each site.

Results

This section focuses on two soil investigation areas where CDFW jurisdictional areas are known to occur. The first area is Bat Cave Wash (AOC-1) where soil samples were collected in a jurisdictional waters of the United States (WOUS). The second area is near the East Ravine where pore water samples were collected in jurisdictional wetlands, which also represent riparian vegetation, along the Colorado River within the 100-year flood plain. Results for each area are organized based on activities (e.g., hand sample sites, bore sample sites, excavation sites) that were completed there.

All disturbance was categorized under either riparian, floodplain habitat, WOUS or wetland impacts. Impacts were assessed based on the habitat type. If the site was previously disturbed, then additional impacts to these sites from soil investigation activities were not considered as additional disturbance. The assessment of upland habitat impacts is not included as part of this memorandum. The locations where some vegetation removal was required within jurisdictional areas is described in the following section and are shown on Figure 1.

Additional soil investigations occurred within other AOCs, such as AOCs 11, 14, 27, 29, 30, and 31, where no jurisdictional water features exist. Because these AOCs did not contain any floodplain, riparian areas, wetlands, WOUS, or other habitats designated by CDFW as sensitive, including ephemeral washes and western honey mesquite bosque, the impacts from those soil investigations are not discussed further in this memorandum.

AOC-1 – Bat Cave Wash from West of Topock Compressor Station to National Trails Highway

Hand Samples at Two Locations (see Photos 1, 2, and 3). All hand sampling work was conducted with soil augers or shovels and occurred in previously disturbed or non-vegetated habitats. No native, perennial vegetation was trimmed or removed for these activities at any locations. For these reasons, no impacts to riparian or floodplain habitat occurred within Bat Cave Wash during hand sampling.

Drill Sites (Borehole samples) at 35 Locations (see Photo 4). All borehole sample sites occurred within previously disturbed access routes in Bat Cave Wash. As part of the work within Bat Cave Wash, six bore samples were taken in the wash on the western edge of AOC 4. The trimming of one palo verde located in Bat Cave Wash was required, about half way between IM3 and the tamarisk thicket at the mouth of Bat Cave Wash, to clear the access route to sample AOC 1-7. In order to reduce the amount of trimming

required, the branches of the palo verde were pulled back and tied off at the base of the tree so that the overall trimming needed was less than 1 percent of the overall crown of the tree (see Photos 5 and 6). No other native, perennial vegetation was trimmed or removed at any other locations for any activities conducted in the jurisdictional features of Bat Cave Wash. For these reasons, no impacts to riparian or floodplain habitat occurred within Bat Cave Wash during drilling activities.

Additional boreholes were required in the riparian area near the mouth of Bat Cave Wash, which required limited clearing of the non-native tree, salt cedar (*Tamarix ramosissima*) and arrow weed (*Pluchea sericea*). As described in BR-1 (Item c) above, a large number of salt cedar trees were cut off at the base to allow drill rig access to the soil borehole sample sites. However, because salt cedar is an invasive, non-native plant and because vigorous sprouting of the cut stumps is expected, this impact was not considered as part of the riparian habitat loss tally.

There was some pruning of arrow weed within the jurisdictional waters of Bat Cave Wash to access a drill location along the right (southeast) side of Bat Cave Wash. Arrow weed was pruned to approximately 1 to 1.5 feet above the ground surface to allow re-sprouting. By avoiding complete removal of the arrow weed plants or roots, this pruning did not result in a permanent disturbance or loss of riparian habitat (see Photos 7 and 8). For these reasons, the limited vegetation clearing described here did not qualify as a riparian habitat loss associated with borehole sampling.

Trenching at Three Locations (see Photo 9). Soil samples were collected from three 4-foot-wide trenches within Bat Cave Wash that ranged in length from approximately 12 to 15 feet long and were all about 10 feet deep. All trenches within Bat Cave Wash were located within the previously disturbed access routes and no native, perennial vegetation was trimmed or removed for these activities at any locations. For these reasons, no impacts to riparian habitat or floodplain occurred within Bat Cave Wash during trenching.

East Ravine Pore Water Sampling

The pore water samples were collected at 10 locations (see Photo 10) within the adjacent, emergent wetland vegetation that occurs within the 100-year floodplain of the Colorado River, and are discussed below as they relate to jurisdictional wetland and floodplain habitat impacts.

Pore water samples were collected along the edge of the Colorado River near East Ravine. Limited clearing of the tules (*Schoenoplectus californicus*) at ten separate locations that were accessed on foot. Pore water samples of the sediment were collected using a narrow, hollow rod with a sampling head and tube to within the pore water sample. This sampling rod was pounded into the ground using hand tools. To gain access to the river sediment for these pore water samples, an area of approximately 5 by 5 feet was created by pushing over the tules rather than cutting them. Only the tules that were in the immediate location around the sample hole were cut to permit access to the pore water sample location. No more than 10 tules stems at each sample location were cut just above ground level with the root balls left intact. All pre-clearing activities were conducted under the supervision of the qualified biologist and, by leaving the tules roots intact, these activities did not result in wetland or floodplain habitat loss or permanent disturbance.

Conclusions

There was limited cutting of non-native tamarisk near the mouth of Bat Cave Wash to provide drill rig access, but this was not considered as riparian habitat loss. Similarly, the limited cutting of above-ground portions of arrow weed near the mouth of Bat Cave Wash and the cutting of above-ground portions of tules along the Colorado River near East Ravine did not represent wetland or floodplain habitat loss because the intact roots of the cut plants in these areas were expected to re-sprout immediately.

Based on the monitoring activities and observations discussed above, there was no loss of floodplain, riparian areas, wetlands, and WOUS habitats or habitats designated by CDFW as sensitive, including ephemeral washes and western honey mesquite bosque, or their functions, or values resulting from the soil investigation activities between October 2015 and April 2017.

References

CH2M HILL. 2013. Soil RCRA Facility Investigation/Remedial Investigation Work Plan, PG&E Topock Compressor Station, Needles, California, revised. January 14.

CH2M HILL. 2016a. Plan to Address Data Gaps Identified During Work Plan Implementation – DG-WP-01. January 13.

CH2M HILL. 2016b. Plan to Address Data Gaps Identified During Work Plan Implementation – DG-WP-02. February 12.

CH2M HILL. 2016c. Plan to Address Data Gaps Identified During Work Plan Implementation – DG-WP-03. September.

Department of Toxic Substances Control (DTSC). 2015a (January). *Final Environmental Impact Report for the Topock Compressor Station Soil Investigation Project (SCH# 2012111079).* August 20.

Department of Toxic Substances Control (DTSC). 2015b. *Approval for the Soil RCRA Facility Investigation/Remedial Investigation Workplan (January 2013) and Addendum and Errata (January 2014) for the Pacific Gas and Electric Company Topock Compressor Station, Needles, California* (EPA ID No. CAT080011729). August 24.

Representative Photographs

Photo 1. Example of AOC 1 hand sample site in Bat Cave Wash

Photo 2. Hand sample site at AOC 1-32 near the mouth of Bat Cave Wash before sampling

Photo 3. Hand sample site at AOC 1-32 near the mouth of Bat Cave Wash after sampling

Photo 4. Example of AOC 1 bore sample site in Bat Cave Wash after completion

Photo 5. Before palo verde was trimmed for access to AOC 1-7 drill site

Photo 6. After trimming the palo verde for access to AOC 1-7 drill site

Photo 7. Before arrow weed was trimmed for access to the mouth of Bat Cave Wash drill sites

Photo 8. Trimming of arrow weed for access to the drill sites within the tamarisk in Bat Cave Wash

Photo 9. Example of AOC 1 excavation sample site within Bat Cave Wash after backfill

Photo 10. East Ravine Pore Water sample site 8 after clearance

Figure

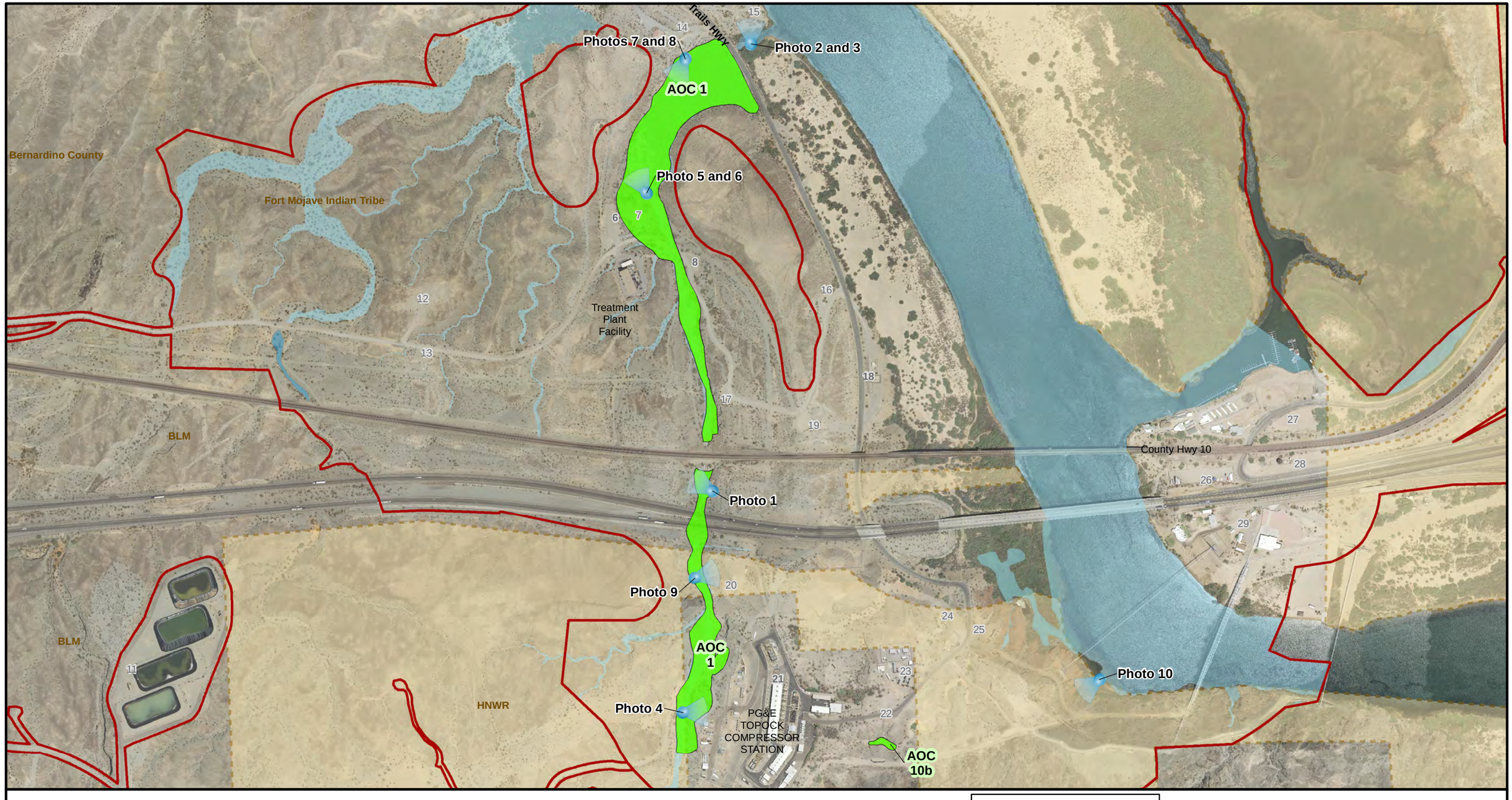

Photo Location

Area of Concern (AOC)
Jurisdictional Waters and Wetlands
SEIR Boundary
HNWR Boundary

N

0 600
Feet

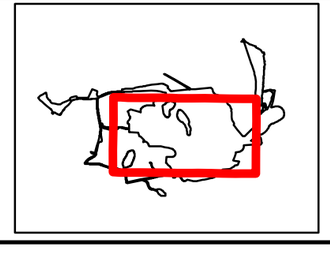

FIGURE 1
PLANT REMOVAL LOCATIONS WITHIN JURISDICTIONAL AREAS
RIPARIAN AND SENSITIVE HABITAT IMPACT EVALUATION
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CALIFORNIA

CH2MHILL

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