

Topock Project Executive Abstract

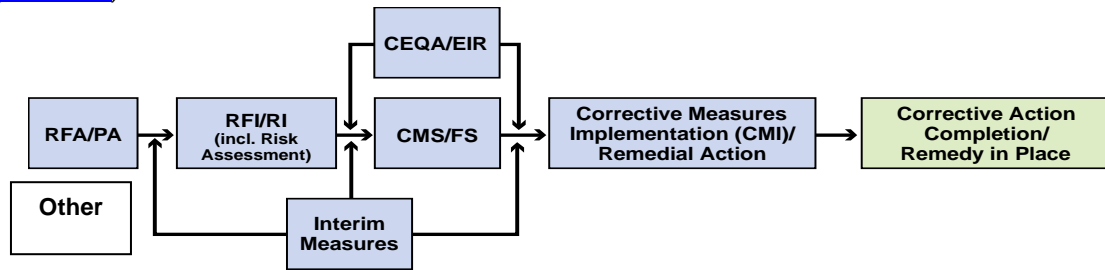
<p>Document Title: Supplemental Ethnobotanical Plant Surveys</p> <p>Submitting Agency: DTSC, DOI</p> <p>Final Document? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>Date of Document: February 28, 2014</p> <p>Who Created this Document?: (i.e. PG&E, DTSC, DOI, Other) – PG&E</p>
<p>Priority Status: <input type="checkbox"/> HIGH <input type="checkbox"/> MED <input checked="" type="checkbox"/> LOW</p> <p>Is this time critical? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	<p>Action Required: <input checked="" type="checkbox"/> Information Only <input type="checkbox"/> Review & Comment</p> <p>Return to: _____</p> <p>By Date: _____</p> <p><input type="checkbox"/> Other / Explain:</p>
<p>Type of Document: <input type="checkbox"/> Draft <input checked="" type="checkbox"/> Report <input type="checkbox"/> Letter <input type="checkbox"/> Memo</p> <p><input type="checkbox"/> Other / Explain:</p>	<p>What does this information pertain to? <input type="checkbox"/> Resource Conservation and Recovery Act (RCRA) Facility Assessment (RFA)/Preliminary Assessment (PA) <input type="checkbox"/> RCRA Facility Investigation (RFI)/Remedial Investigation (RI) (including Risk Assessment) <input type="checkbox"/> Corrective Measures Study (CMS)/Feasibility Study (FS) Corrective Measures Implementation (CMI)/Remedial Action <input checked="" type="checkbox"/> California Environmental Quality Act (CEQA)/Environmental Impact Report (EIR) <input type="checkbox"/> Interim Measures <input type="checkbox"/> Other / Explain:</p>
<p>What is the consequence of NOT doing this item? What is the consequence of DOING this item? The field survey and this report were conducted pursuant to the resolution on 60% design comment RTC #311 DOI-140. If this work was not performed, it would constitute a non-compliance with the subject resolution.</p>	<p>Is this a Regulatory Requirement? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If no, why is the document needed?</p>
<p>Other Justification/s: <input type="checkbox"/> Permit <input type="checkbox"/> Other / Explain:</p>	
<p>Brief Summary of attached document:</p> <p>The Final Environmental Impact Report (EIR) for the Topock Compressor Station Groundwater Remediation Project prescribes mitigation measures to reduce impacts associated with the groundwater remedy design and cleanup. In compliance with EIR mitigation measure CUL-1a-5, PG&E conducted a comprehensive ethnobotanical survey for the presence of plants with cultural significance (plants listed in Appendix PLA of the EIR) in the Topock Groundwater Remediation Project Area, with field efforts in August, October and November 2011, March 2012, and March 2013, with incidental data to support this effort also collected during the February 2012 Wetlands surveys performed under mitigation measure BIO-1. On March 29, 2013, PG&E submitted a report that summarized the 2011 and 2012 ethnobotanical survey results, and the Revised Final Topock Groundwater Remediation Ethnobotany Survey Report was submitted on January 15, 2014.</p> <p>This Technical Memorandum includes the results of a December 2013 survey for two ethnobotanical plant species, Lycium and Arrowweed, conducted pursuant to the resolution on 60% design comment RTC #311 DOI-140. The Technical Memorandum includes a detailed map of Lycium and Arrowweed occurrence. The data presented with this report will be used in the groundwater remedy design and inform the risk assessment.</p> <p>Written by: PG&E</p>	
<p>Recommendations: This report is for your information only.</p>	
<p>How is this information related to the Final Remedy or Regulatory Requirements: This report presents data collected for use with the remedy design.</p>	

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



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February 28, 2014

Mr. Aaron Yue
Project Manager
California Department of Toxic Substances Control
5796 Corporate Avenue
Cypress, CA 90630

Subject: *Supplemental Ethnobotanical Plant Surveys for the PG&E Topock Compressor Station*

Dear Mr. Yue:

Enclosed is the Technical Memorandum reporting *Supplemental Ethnobotanical Plant Surveys for the Pacific Gas and Electric Company's Topock Compressor Station*. This Technical Memorandum presents data that was collected from a survey for two ethnobotanical plant species, Lycium and Arrowweed, conducted in December 2013 pursuant to the resolution of the 60% Basis or Design comment RTC #311 DOI-140.

This Technical Memorandum is a supplement to the January 2014 *Topock Groundwater Remediation Project Revised Ethnobotany Survey Report*. This information will be used in the groundwater remedy design and inform the risk assessment.

Please contact me at (805) 234-2257 or Virginia Strohl at (559) 263-7417 if you have any questions about this.

Sincerely,

A handwritten signature in blue ink that reads 'Yvonne Meeks'.

Yvonne Meeks
Topock Project Manager

Enclosure

Supplemental Ethnobotanical Plant Surveys Technical Memorandum

cc: Karen Baker/DTSC
Pam Innis/DOI
Carrie Marr/FWS

Supplemental Ethnobotanical Plant Surveys for the Pacific Gas and Electric Company's Topock Compressor Station, San Bernardino County, California

TO: Pacific Gas and Electric Company
COPIES: Marjorie Eisert, CH2M HILL
FROM: Russell Huddleston, E2 Consulting Engineers, Inc.
DATE: February 28, 2014

Introduction

Pacific Gas and Electric Company (PG&E) is implementing the final groundwater remedy to address chromium in groundwater near the PG&E Topock Compressor Station, located in eastern San Bernardino County 12 miles southeast of the city of Needles, California. The California Department of Toxic Substance Control (DTSC) is the state lead agency overseeing corrective actions at the compressor station. Pursuant to the California Environmental Quality Act (CEQA), DTSC (2011) prepared and certified an Environmental Impact Report (EIR) that evaluated and prescribed mitigation measures to lessen the potential environmental impacts of the final groundwater remedy. The EIR Mitigation Measure CUL-1a-5 requires PG&E to avoid, protect, and encourage the regeneration of the culturally-significant plants to the extent feasible.

A number of botanical surveys were conducted between August 2011 and March 2013 to characterize the vegetation communities and document the flora of the project area. As part of the botanical surveys all of the ethnobotanically sensitive plants that were included in Appendix PLA of the final Environmental Impact Report (DTSC, 2011) were identified and mapped. These survey results were reported in the Revised Final Ethnobotany Survey Report (CH2M HILL, 2014).

During the November 2013 Resources Agency Meeting, the Department of the Interior requested the additional mapping of two additional ethnobotanically-significant plants arrowweed (*Pluchea sericea*) and *Lycium* spp. within the project area. This memorandum includes the methods and the results of the December 2013 mapping efforts for these two additional plants.

Methods

The location of arrowweed within the project area was primarily documented during the August 18 to 26, 2011 vegetation community mapping and mature plants surveys. During this survey, field mapping was conducted using a combination of Global Positioning System (GPS) data collection and survey or notations recorded on aerial photographs. Additional surveys to map the locations of *Lycium* and arrowweed were conducted on December 16 and 17, 2013. During the survey the locations of *Lycium* shrubs as well as any additional locations of arrowweed (not included in the 2011 vegetation maps) were mapped in the field using a hand-held GPS unit.

Results

Arrowweed thicket is most common on the low sandy terraces along the Colorado River and Park Moabi Slough (Figure 1). Arrowweed is the sole dominant shrub species with individuals widely scattered or aggregated into dense, nearly impenetrable stands. Arrowweed is often intermixed with tamarisk thickets in

the Park Moabi Campground area. Arrowweed is also present in some areas, intermixed with the Western Honey Mesquite and Screwbean Mesquite habitats that were included in the original ethnobotanical survey maps; therefore these areas are not included in the supplemental map.

Two species of *Lycium* have been identified in the survey area. The most common species is peach thorn (*Lycium andersonii*) which occurs along the channel bottoms of the larger ephemeral washes of the dissected alluvial terraces south of the Colorado River (Figure 1). This species is commonly associated with species such as blue palo verde (*Parkinsonia florida*), desert lavender (*Hyptis emoryi*), catclaw acacia (*Senegalia greggii*), brittlebush (*Encelia farinosa*), sweetbush (*Bebbia juncea* var. *aspera*), and cheesebush (*Hymenoclea salsola*).

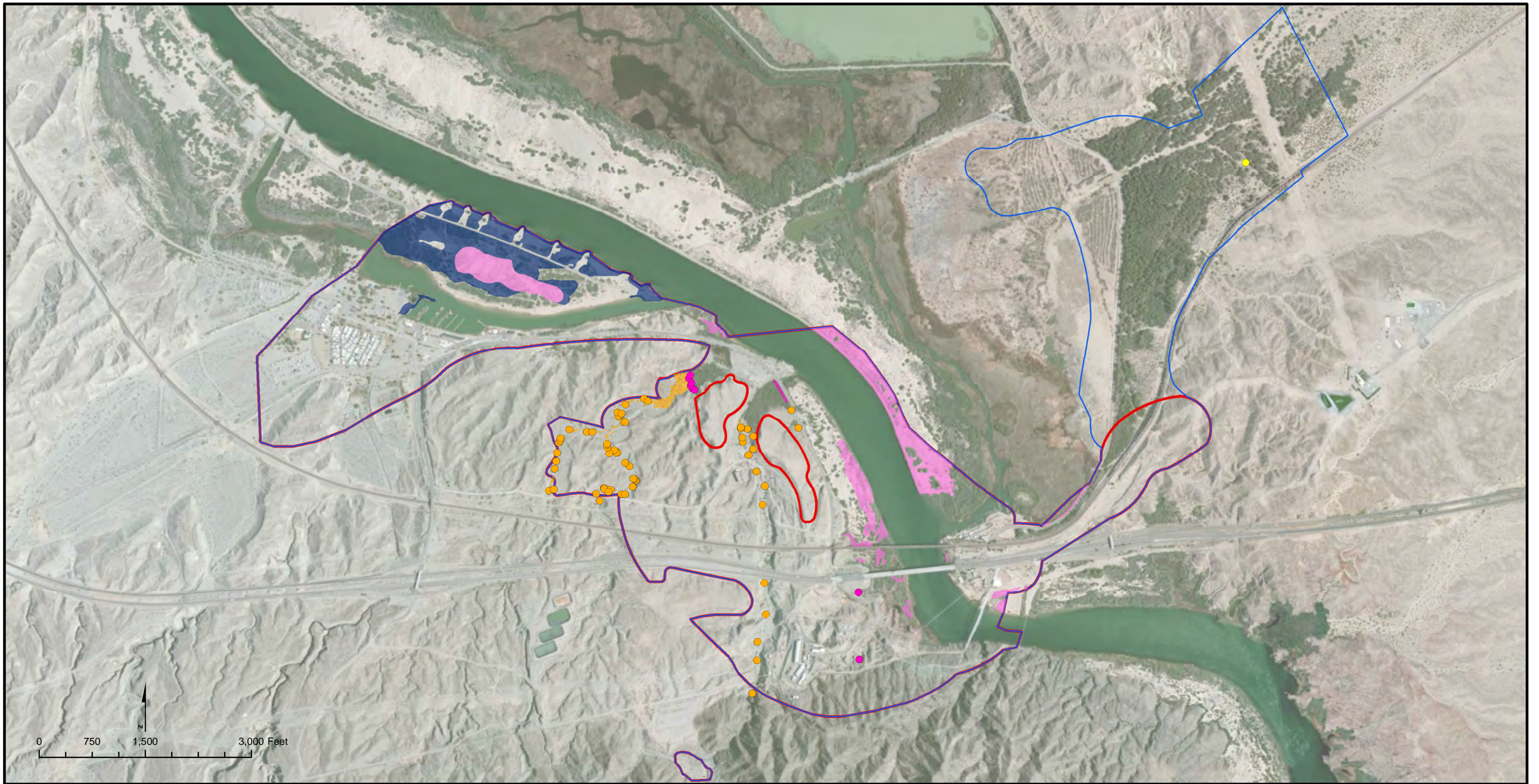
A single shrub of Anderson's desert thorn (*Lycium cooperi*) was identified south of the Sacramento Wash in Arizona, in an open area surrounded by Athel tamarisk (*Tamarix aphylla*).

References

California Department of Toxic Control Substances. 2011. Final Environmental Impact Report for the Topock Compressor Station Groundwater Remediation Project. January. Available on line at:

<http://www.dtsc-topock.com/>

CH2M HILL. 2014. Revised Final Topock Groundwater Remediation Project Ethnobotany Survey Report. January.



LEGEND

- ⬭ Vegetation Survey Area
- ⬭ EIR Project Area
- Arrow Weed (MCV2: Arrow weed thickets)[2]
- Salt Cedar/Arrow Weed (MCV2: Tamarisk/Arrow weed thickets)[22]
- Anderson's desert thorn (*Lycium andersonii*)
- Peach Thorn (*Lycium cooperi*)
- Arrowweed (*Pluchea sericea*)
- Anderson's desert thorn (*Lycium andersonii*)
- Arrowweed (*Pluchea sericea*)

FIGURE 1
ADDITIONAL ETHNO-BOTANICAL
PLANT LOCATIONS
 PG&E TOPOCK COMPRESSOR STATION
 NEEDLES, CALIFORNIA