



**Pacific Gas and
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October 17, 2013

Ms. Carrie Marr
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2321 W Royal Palm Road, Suite 103
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Mr. Aaron Yue
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5796 Corporate Avenue
Cypress, CA 90630

Subject: Desert Tortoise Presence/Absence Surveys for the Pacific Gas and Electric Company
Topock Arizona Freshwater Sites

Dear Ms. Marr:

This letter transmits the 2013 Desert Tortoise Presence/Absence Survey Report for Arizona areas considered as alternate freshwater sources for the Topock final groundwater remedy.

No individual tortoise or tortoise sign were seen during the surveys conducted in April and May 2013. The majority of the survey area was not suitable desert tortoise habitat. The survey noted areas in hills east of the railroad that may contain potentially suitable habitat for desert tortoise, but no sign of tortoise or burrowing activity was observed.

PG&E appreciates your consideration of the attached report. Please contact Virginia Strohl, project biologist, at (559) 263-7417 or me at (805) 234-2257 with any questions or concerns.

Sincerely,

Yvonne Meeks
Topock Project Manager

cc: Cathy Wolff-White/BLM
Linda Miller/HNWR
Victoria Chau/CDFW
Pam Innis/DOI

Topock Project Executive Abstract

<p>Document Title:</p> <p>Desert Tortoise Presence/Absence Survey for the Topock Compressor Station Groundwater Remediation Project - Arizona Freshwater Sites</p> <p>Submitting Agency: DTSC, DOI</p> <p>Final Document? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>Date of Document: October 17, 2013</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:</p> <p><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:</p> <p><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?</p> <p><input type="checkbox"/> Resource Conservation and Recovery Act (RCRA) Facility Assessment (RFA)/Preliminary Assessment (PA)</p> <p><input type="checkbox"/> RCRA Facility Investigation (RFI)/Remedial Investigation (RI) (including Risk Assessment)</p> <p><input type="checkbox"/> Corrective Measures Study (CMS)/Feasibility Study (FS) Corrective Measures Implementation (CMI)/Remedial Action</p> <p><input checked="" type="checkbox"/> California Environmental Quality Act (CEQA)/Environmental Impact Report (EIR)</p> <p><input type="checkbox"/> Interim Measures</p> <p><input type="checkbox"/> Other / Explain:</p>
<p>What is the consequence of NOT doing this item? What is the consequence of DOING this item?</p> <p>This report complies with the Programmatic Biological Assessment (PBA) and the EIR mitigation measure BIO-2b. If this work was not performed, it would constitute a non-compliance with the PBA and EIR mitigation measure BIO-2b.</p>	<p>Is this a Regulatory Requirement?</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If no, why is the document needed?</p>
<p>Brief Summary of attached document:</p> <p>In compliance with the PBA General Management Measure No. 21, a protocol survey for desert tortoise was performed in April and May 2013 for the portion of the PBA Action Area located in Arizona. This survey was conducted to support the design of the Topock Compressor Station Groundwater Remediation Project which includes freshwater sites in Arizona. Mitigation measure BIO-2b set forth in the certified Environmental Impact Report (EIR) for the groundwater remediation project requires that "In areas where impacts to potential desert tortoise habitat are unavoidable, measures outlined in the PBA and the USFWS letter concurring with the PBA shall be implemented, as described below. To the extent feasible, project construction shall be designed to minimize removal of habitat for the desert tortoise. Before any ground disturbing project activities begin, a USFWS authorized desert tortoise biologist shall identify potential desert tortoise habitat in areas that could be affected by the final project design."</p> <p>This report presents the results of the field survey and detailed maps showing the surveyed work Freshwater areas and surrounding zone of influence, and photographs. No individual Desert Tortoise or sign was encountered in the survey areas.</p> <p>Written by: PG&E</p>	<p>Other Justification/s:</p> <p><input type="checkbox"/> Permit <input type="checkbox"/> Other / Explain:</p>
<p>Recommendations:</p> <p>This report is for your information only.</p>	

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

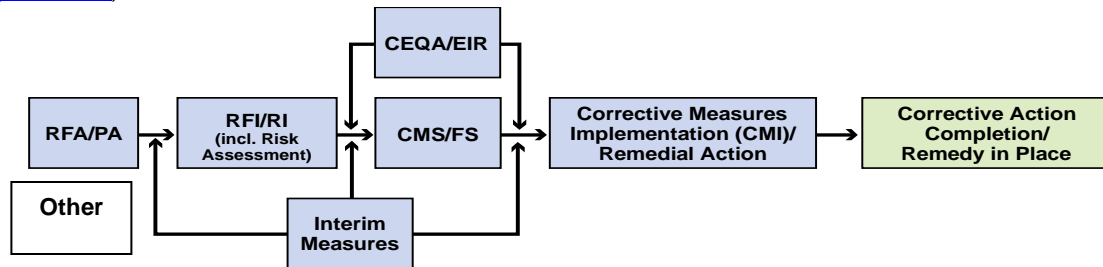
This report presents data collected for use with the remedy design. The Desert Tortoise Presence/Absence Surveys Report complies with EIR mitigation measure BIO-2b.

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

Desert Tortoise Presence/Absence Surveys for the PG&E Topock Arizona Freshwater Sites

Prepared by
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October 2013

WSA Technical Report No. 2013-30

Desert Tortoise Presence/Absence Surveys for the PG&E Topock Arizona Freshwater Sites

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Principal

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October 2013
WSA Technical Report No. 2013-30

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INTRODUCTION

Pacific Gas and Electric Company (PG&E) is implementing the selected groundwater remedy for chromium in groundwater at the PG&E Topock Compressor Station in San Bernardino County, California. As part of the final groundwater remedy design, freshwater sources including existing groundwater supply wells have been considered for use during the remedy operation. PG&E is evaluating options for freshwater supply which includes finding locations for new wells that may supply an adequate amount of water without requiring treatment prior to use for the remedy operation.

In compliance with the PBA General Management Measure No. 21, a protocol survey for desert tortoise was performed in April and May 2013 for the Fresh Water Implementation Plan to support the design of the Topock Compressor Station Groundwater Remediation Project which includes freshwater sites in Arizona. Mitigation measure BIO-2b set forth in the certified Environmental Impact Report (EIR) for the groundwater remediation project requires that “In areas where impacts to potential desert tortoise habitat are unavoidable, measures outlined in the PBA and the USFWS letter concurring with the PBA shall be implemented, as described below. To the extent feasible, project construction shall be designed to minimize removal of habitat suitable for the desert tortoise. Before any ground disturbing project activities begin, a USFWS authorized desert tortoise biologist shall identify potential desert tortoise habitat in areas that could be affected by the final project design.”

In evaluating freshwater sources, PG&E is investigating potential areas on the Arizona side of the Colorado River near Sacramento Wash and Oatman-Topock Highway. This survey report presents the results of Sonoran desert tortoise (*Gopherus morafkai*) surveys conducted in these areas. Figure 1 provides a general location map for the area.

DESERT TORTOISE

The Sonoran desert tortoise occurs along the western border south and east of the Colorado River across most of southwestern and south-central Arizona and Sonora, Mexico. It generally occurs at elevations ranging from near sea level along the Colorado River to just over 5,000 feet (1,524 m). The desert tortoise is completely terrestrial, requiring firm, suitable substrates for digging burrows and nest sites or providing other shelter sites, such as rock crevices for shelter. The tortoise primarily inhabits Sonoran desert scrub and semi-desert grassland within its range. It is most often found in rugged uplands such as rocky bajadas, hillsides, mountain slopes, and canyons. The Sonoran desert tortoise is currently a candidate species for federal listing.

SURVEY AREA DESCRIPTION

The Topock Compressor Station is located in a sparsely populated, rural area. Much of the nearby land is publicly owned by the federal government and has important spiritual meaning to local

Indian tribes. Public lands in the area are owned and/or managed by a number of federal and regional agencies, including the Bureau of Land Management, U.S. Fish and Wildlife Service (USFWS), Bureau of Reclamation, and San Bernardino County.

Dominant features of the area include the Colorado River to the east; the Chemehuevi Mountains to the south; the Burlington Northern Santa Fe railroad tracks and bridge; and Interstate 40, which links Barstow, California, and Topock, Arizona. Topography in the area is abrupt, rising from around 450 feet (137 m) above mean sea level at the Colorado River to over 1,200 feet (365 m) above mean sea level within 1 mile (1.6 km) to the south and southwest.

The area included in this survey is located on the Arizona side of the Colorado River along the eastern and western sides of the Oatman-Topock Highway from Topock Marina to Sacramento Wash. Figure 2 indicate the survey areas.

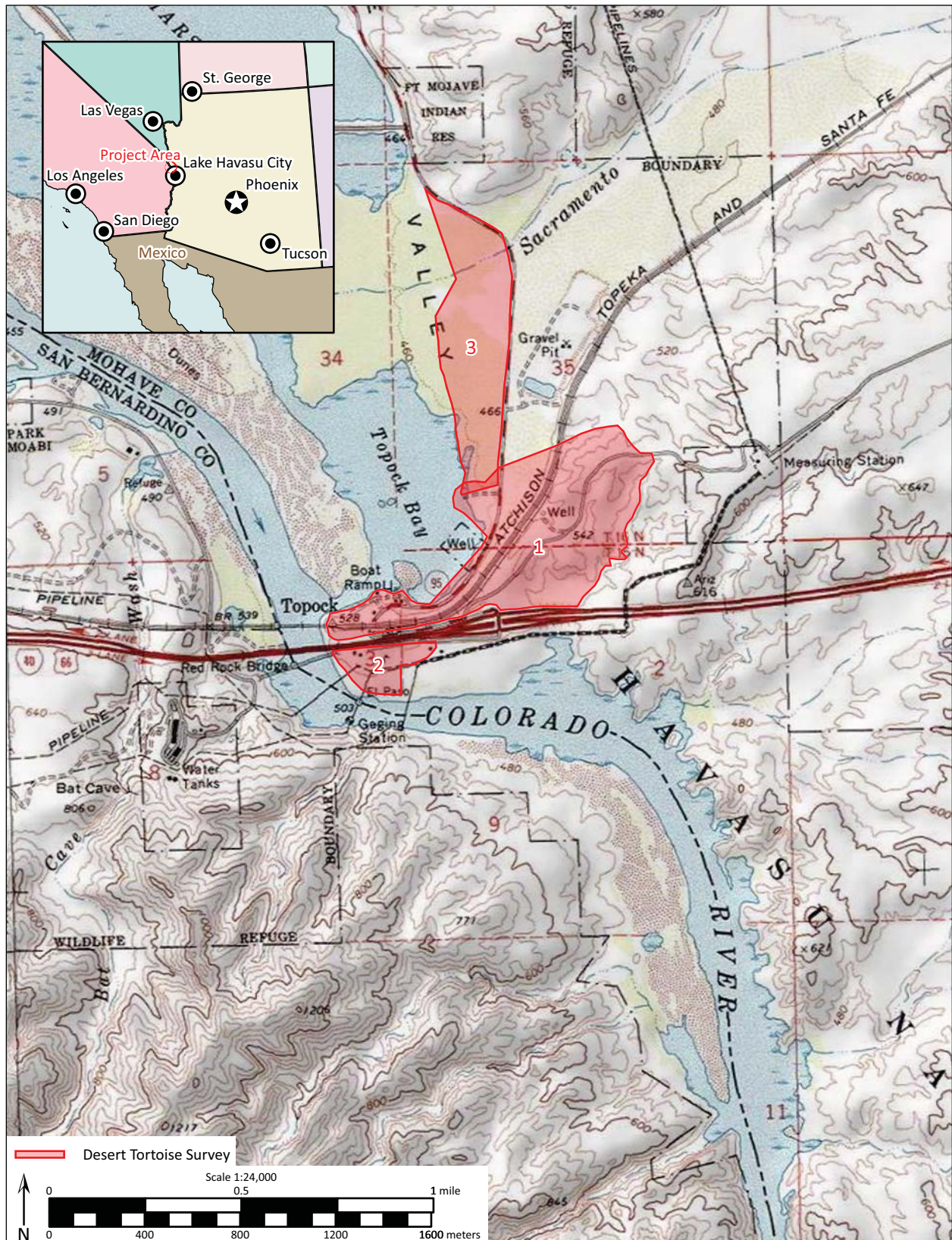


Figure 1. Project location map.

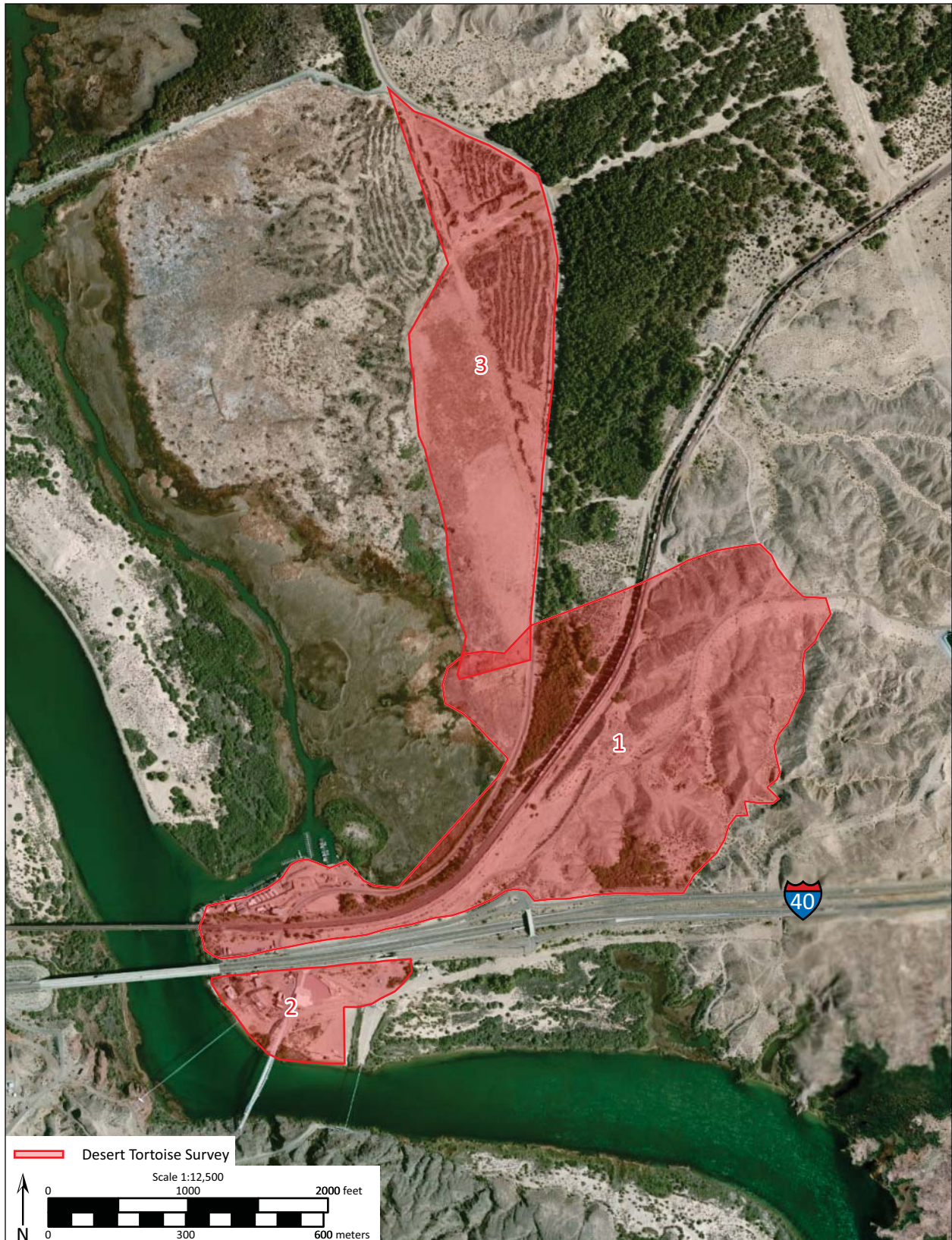


Figure 2. Detail of project survey areas.

Survey Area 1 contains the area surrounding the railroad tracks. The southwestern region of this area north of Interstate 10 is heavily disturbed and includes the area of Topock Marina. This area is undergoing construction and contains no suitable tortoise habitat. Both sides of the road to the north contain roadside weeds and tamarisk (*Tamarix ramosissima*). The area containing the best potential tortoise habitat is located east of the railroad in the north-eastern portion of Survey Area 1. However, this area contains extremely rocky soil and steep terrain formed by ephemeral washes. Vegetation is sparse and is comprised of creosote (*Larrea tridentata*), silver cholla (*Cylindropuntia echinocarpa*), and saltbush (*Atriplex canescens*). This area would be considered marginally suitable tortoise habitat.

Survey Area 2 contains land along a frontage road leading to private property just south of Interstate 10 to the river edge. This area is highly disturbed and contains no suitable tortoise habitat. There are building structures along the frontage road and a residential home along the river. There is tamarisk and open beach along the river edge.

Survey Area 3 runs along the western side of the Oatman-Topock Highway north of the Sacramento Wash crossing. Much of the area has been cleared of vegetation, after a fire event. Tamarisk, the previous vegetation, has been chipped and spread across the surface in the area north and south of the Sacramento Wash crossing. The area adjacent to the wash crossing contains some palo verde (*Cercidium microphyllum*). Further south, the vegetation is dominated by saltbush and Russian thistle (*Salsola kali*). The entire area contains extremely sandy soil and contains no suitable tortoise habitat. Appendix A contains photos of the survey areas.

METHODOLOGY

WSA biologist Gabriel Valdes conducted a desert tortoise presence/absence survey on April 1–2 and May 13–14, 2013. Surveys were conducted in accordance with Protocol (USFWS 2010) for the Mojave desert tortoise (*Gopherus agassizii*). Weather during each of the surveys was warm and dry with clear, sunny skies. Air temperatures ranged from 85° F (29° C) to 100° F (37° C) and winds speeds between 5 and 10 miles per hour (8 to 16 km per hour). Surveys were conducted between 07:00 and 16:00 hours.

The biologist walked linear transects, approximately 10m apart, through the survey areas. In areas of steep topography, emphasis was given to walking the ridges and washes in search of tortoise and their sign. Tortoise sign searched for consisted of burrows, scat, shells, or bones.

Figure 2 indicates the area that was surveyed in Arizona. The survey area was delineated as defined by the ‘action area’ in the 2010 Desert Tortoise USFWS Protocol, and therefore the survey area extends beyond the designated project area. The action area is defined by regulation and the protocol as “all areas to be affected directly or indirectly and not merely the immediate area involved in the action” (50 CFR § 402.02). The action area consists of any area within the project area as well as adjacent areas containing suitable or marginally suitable habitat that would potentially contain tortoises or their sign. The action area boundary on the east side of Area 1 consisted of large washes and steep slopes providing a natural barrier. Areas outside the

indicated action area contained unsuitable habitat for desert tortoise. This includes the land outside Areas 2 and 3. The small area to the northeast of Area 3 and Topock Highway contains a steep slope of sandy soil down to the highway with sparse vegetation (eg. palo verde trees). The area west of the highway, including the action area, contains extremely soft silty soil not suitable for desert tortoise. The whole Sacramento wash area, including Area 3 and the surrounding area, is prone to periodic flooding. Due to flood events, the area contains deep, silty soils with sparse vegetation not suitable for desert tortoise.

RESULTS

No individual tortoises or tortoise sign were observed during the surveys.

The entire area of Survey Areas 2 and 3 and most of Survey Area 1 did not contain suitable desert tortoise habitat. These areas are generally previously disturbed and subject to recent human disturbance, with level ground composed of loose soil unstable for burrowing, and with low-lying level areas subject to flooding from the Sacramento Wash. These more level areas are bordered eastward by steep slopes with sparse vegetation. Some portions of Area 1 in the hills located east of the railroad may contain potentially suitable habitat for desert tortoise, but no sign of tortoise or burrowing activity was observed. No other wildlife was observed during these surveys.

CONCLUSION

These findings are consistent with past desert tortoise surveys conducted for the remediation activities at the Topock Compressor Station. The present surveys indicate the absence of tortoises within the Arizona freshwater investigation area. Much of the area has been heavily disturbed over the years or does not contain suitable tortoise habitat. The area north and south of the Sacramento Wash crossing contains tamarisk and sandy soil not suited for desert tortoise. Roads, railroads, and development along the riverbanks bisect other areas. The hills east of the railroad in Survey Area 1 indicated no sign of desert tortoise or other burrowing wildlife.

REFERENCES

USFWS (United States Fish and Wildlife Service)

2010 *Preparing for Any Action that may occur within the Range of the Mojave Desert Tortoise (Gopherus agassizii)*. Guidelines Issued by the U.S. Fish and Wildlife Service during the 2010 Field Season. Electronic document, <http://www.deserttortoise.org/documents/2010DTPreprojectSurveyProtocol.pdf>, March 2013.

APPENDIX - PHOTOGRAPHS OF THE PROJECT SURVEY AREAS

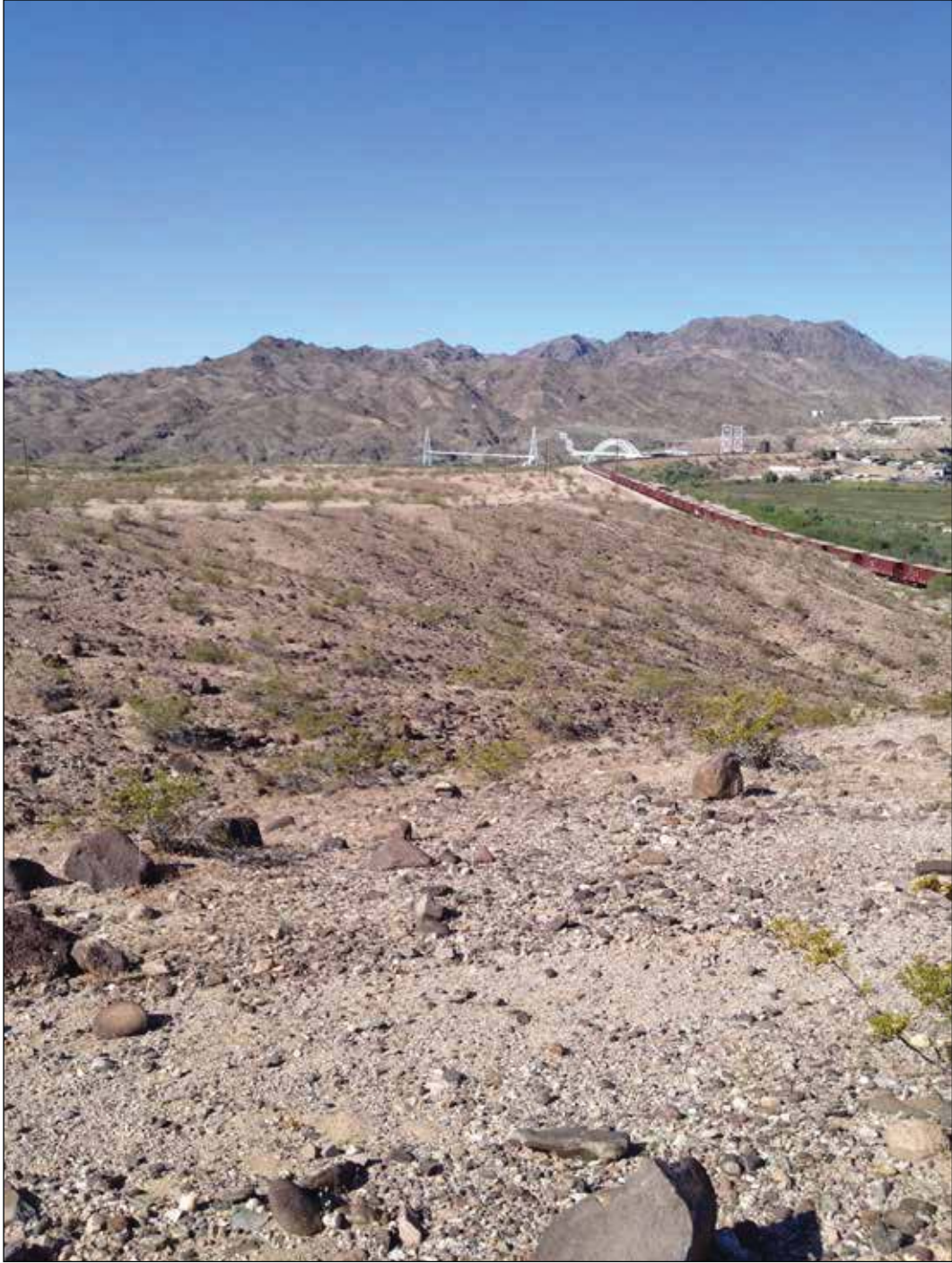


Photo 1. Survey Area 1.



Photo 2. Survey Area 1.



Photo 3. Survey Area 1.



Photo 4. Survey Area 1.



Photo 5. Survey Area 3.



Photo 6. Survey Area 3.



Photo 7. Survey Area 3.



Photo 8. Survey Area 3.



Photo 9. Survey Area 3.