

## **APPENDIX 10**

### **Victorville 2 Hybrid Power Project**

**PRELIMINARY DETERMINATION of JURISDICTONAL LIMITS U.S. ARMY CORPS of  
ENGINEERS SECTION 404 WATERS of the UNITED STATES INCLUDING WETLANDS and  
STATE WATERS SUBJECT TO CALIFORNIA DEPARTMENT of FISH and GAME SECTION  
1602 STREAMBED ALTERATION AGREEMENT**



*DRAFT*

**PRELIMINARY DETERMINATION OF JURISDICTIONAL  
WATERS OF THE UNITED STATES  
AND  
WATERS OF THE STATE OF CALIFORNIA  
  
VICTORVILLE 2 POWER PLANT**

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## **Executive Summary**

ENSR International (ENSR) is preparing environmental documentation for the Victorville 2 Hybrid Power Project (VV2), a proposed natural gas-fired combined cycle power plant with a thermally integrated solar-thermal facility, located north of the City of Victorville, California. AMEC Earth & Environmental, Inc. (AMEC) was retained by ENSR to investigate natural resources on the proposed facility and three associated electrical transmission line corridors. AMEC conducted a preliminary determination of the jurisdictional status of Waters of the United States (WUS) as defined in Section 404 of the Clean Water Act that are subject to United States Army Corps of Engineers (USACE) jurisdiction and Waters of the State of California (WSC) as defined in Section 1602 of the California Fish and Game Code that are subject to California Department of Fish and Game (CDFG) jurisdiction. No jurisdictional waters were observed within the boundaries of the proposed power plant facility. A total of 55 ephemeral drainages were documented within the three proposed electrical transmission line corridors, 54 of which were determined to be both WUS and WSC subject to the jurisdiction of both the USACE and the CDFG. One ephemeral drainage was determined to be only a WSC subject to the jurisdiction of the CDFG. All jurisdictional waters found in the project area are part of dryland fluvial systems that lack wetlands as defined by the USACE and riparian habitat as defined by the CDFG.

## **1.0 INTRODUCTION**

ENSR is preparing environmental documentation for submittal to the California Energy Commission for the VV2 Project, a proposed natural gas-fired combined cycle power plant with a thermally integrated solar-thermal facility, located north of the Southern California Logistics Airport, the former George Air Force Base, in the City of Victorville, California. AMEC was retained by ENSR to investigate natural resources on the proposed facility and three associated electrical transmission line corridors.

The purpose of this report is to provide a preliminary determination of the jurisdictional status of WUS as defined by Section 404 of the Clean Water Act (33 U.S.C. 1344) that are subject to USACE jurisdiction and WSC as defined by Section 1602 of the California Fish and Game Code that are subject to CDFG jurisdiction for the proposed VV2 Project.

### **1.1 Project Setting**

The proposed VV2 Project site and two adjacent construction staging areas occupies approximately 338 acres and 50 acres, respectively, located within the northern portion of the City of Victorville, San Bernardino County, California. Three linear transmission lines (Segment 1, Segment 2, and Segment 3) will be completed as part of the facility construction (Figure 1).

The project site occurs in the High Desert Plains and Hills subregion of the western Mojave Desert (U.S. Department of Agriculture [USDA] 1997). The arid climate in this location is dominated by low annual rainfall (averaging approximately 4 inches annually in the Victorville area) and low soil moisture conditions. Due to the temporal and spatial variability of rainfall in dryland areas, most arid rivers are ephemeral, flowing only during storm events and remaining dry for most of the year. As a result, the analysis of stream flow and changes in channel morphology in dryland systems emphasizes flood events (Graf 1988 from USACE 2001). Since dryland river systems are dominated by short, high magnitude storm events in areas with substantial coarse alluvium, many arid rivers exhibit braided channel morphology generally characterized by abundant bedload, steep channel gradients, highly erodible banks and highly variable discharge (USACE 2001).

Linear transmission line Segment 1 travels south from the Power Plant Site approximately 4.3 miles, along the Projects proposed new power line corridor, before connecting with an existing power corridor line that is identified as the Segment 2 transmission line (Figure 1). Segment 2 travels south, southwest for approximately 6 miles where it enters the High Desert Power Plant. From the High Desert Power Plant, Segment 3 transmission line travels south, southeast down an existing power line corridor approximately 11 miles. Vegetation within the linear corridor and adjacent to the watercourses is predominantly that of the Mojave Creosote Bush Scrub (Holland 1986).

No jurisdictional drainages occur within the 338 acre Power Plant Project area or within the 50 acres identified as construction staging areas. All of the drainages described in this report occur along the linear transmission lines of Segment 1, Segment 2, and Segment 3.

## 1.2 Regulatory Framework

USACE regulates the discharge of fill and dredged material into non-tidal WUS through its permitting authority granted under Section 404 of the Clean Water Act (33 CFR 320-330). The USACE generally recommends that a project proponent provide a preliminary determination of the extent of waters in the form of a waters delimitation/wetlands delineation report prior to granting authorization to proceed with an action that will potentially impact jurisdictional waters. The USACE reserves the ultimate authority regarding making the final waters/wetlands jurisdictional determination per Section 325.9 of the Regulations. Likewise, CDFG has ultimate discretion in the determination of adequacy of the materials submitted in support of a Streambed Alteration Agreement with respect their jurisdictional authority under Section 1602 of the California Fish and Game Code.

According to USACE regulatory guidelines (USACE 1986), WUS include essentially all surface waters such as all navigable waters and their tributaries, all interstate waters and their tributaries, all wetlands adjacent to these waters, and all impoundments of these waters. Wetlands are areas characterized by growth of wetland vegetation, the presence of hydric soils, and the presence of surface or subsurface hydrology. The regulatory limit for non-tidal WUS (in the absence of adjacent wetlands) is the Ordinary High Water Mark (OHWM). Guidelines for determinations of wetlands in arid climates are presented in the "Arid West Supplement to the 1987 Wetlands Delineation Manual" (USACE 2006). Guidelines for characterization and identification of the physical and biological factors associated with desert washes (including OHWM) is found in a report titled "Final Summary Report: Guidelines for Jurisdictional Determinations for Waters of the United States in the Arid Southwest" (USACE 2001).

Section 401 of the Clean Water Act addresses the impact of a project on water quality. A project must comply with Section 401 before the USACE can issue a Section 404 Permit. Normally the Regional Water Quality Control Board (RWQCB) in charge of the project area issues Section 401 Water Quality Certifications or Waivers of Certification, depending upon the extent of impacts to WUS and WSC.

Section 1602 of the California Fish and Game Code requires any person who proposes a project that will substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake, or their tributaries, or use materials from a streambed, to submit an application for a Streambed Alteration Agreement to the CDFG.

## 2.0 METHODS

The field assessments for Segment 1 were conducted by AMEC biologists Daryl Trumbo and Dave Kajtaniak on December 12 and 13, 2006. The field assessments for Segment 2 and Segment 3 were conducted by AMEC biologists Nick Ricono and Michael Wilcox on 29 and 30 January 2007. The watercourses within the area were assessed on the characteristic physical and biological features associated with desert washes and other dryland fluvial systems. Ephemeral washes were visually identified within 100 feet of the proposed utility line corridor. Channel characteristics were identified and jurisdictional waters were delineated using the following methods:

Delineations of WUS and WSC within Segment 1 were conducted by walking the streambeds within approximately 100 feet of the proposed utility line corridor and measuring the widths of the jurisdictional limits with the aid of a field measuring tape at approximately 30-foot intervals, based on the geo-morphological configuration of the channel. Points were taken with a hand-held global positioning system (GPS) unit at intervals to verify corresponding site linear locations on a map. The width of the jurisdictional waters were then summed for these watercourses and average widths calculated.

Delineation of WUS and WSC within Segment 2 and Segment 3 were conducted by walking the streambeds within approximately 100 feet of the proposed utility line corridors. Jurisdictional boundaries were delineated using a Trimble Geo XR GPS. The GPS receiver and data collector were operated following manufacturer's recommendations for obtaining sub-meter accuracy. Post-processing of the data was carried out using Pathfinder Office software and electronic Geographic Information Systems (GIS) shape files were created. GIS data was geo-referenced to aerial photography using AutoCADD 3.2 to produce figures with visible boundary lines of jurisdictional waters. The average widths of jurisdictional waters were calculated using on electronic data. Based on proposed project design, acreage of potential impacts to jurisdictional WUS and WSC can be estimated for drainages within Segment 1 with additional calculations and quantified for drainages within Segment 2 and Segment 3 using electronic data.

## **2.1 Waters of the United States**

According to the USACE (2001) when conducting jurisdictional determinations in arid areas, one should be cognizant of the physical characteristics of dryland fluvial systems and insure that the horizontal extent of jurisdiction includes small to moderate storm events, but is not so expansive that it incorporates field evidence from the 25-year, 50-year or 100-year storm event. The horizontal extent of Section 404 jurisdiction will, therefore, usually include the active stream channel(s) and flood terraces immediately adjacent to these active braids.

During field investigations, ephemeral drainages were inspected for OHWM indicators including scour lines, sediment deposition lines, shelving, and debris deposition lines. Based on the lack of wetland indicators including soils and vegetation, it was concluded that no jurisdictional wetlands occurred within or adjacent to any of the washes identified.

Based on USACE regulatory guidelines, WUS in the project area were determined to be those that show surface or subsurface connectivity to a "navigable waterway". The USACE has determined the Mojave River to be a "navigable waterway" thus regulating tributaries to that river under Section 404 of the Clean Water Act. Connectivity was determined visually in the field or by using aerial photographs and topographic maps upon completion of the field assessment. All but one of the drainages identified within Segment 1 were determined to flow directly into the Mojave River. Several drainages within Segment 2 and Segment 3 flow directly into Oro Grande Wash which is a direct tributary to the Mojave River. Due to construction of housing developments adjacent to Segment 2 and Segment 3 corridors, overland drainages have been altered and often re-routed underground, making direct overland connection difficult to observe. However, due to the proximity of these identified drainages to the Oro Grande Wash and based on topographic contours, all drainages identified in Segment 2 and Segment 3 have been determined to show connectivity to the Mojave River.

## 2.2 Waters of the State of California

In practice, CDFG generally interprets their jurisdictional limits to include the top-of-embankment to top-of-embankment width plus the outer canopy and ground cover extents of typical, riparian associated vegetation that would be sustained by surface and/or subsurface waters of the watercourse. Additionally, CDFG regards as jurisdictional the following:

- (1) At minimum, intermittent and seasonal flow through a bed or channel with banks and that also supports fish or other aquatic life.
- (2) A watercourse having a surface or subsurface flow regime that supports or that has supported riparian vegetation.
- (3) Hydrogeomorphically distinct top-of-embankment to top-of-embankment limits.
- (4) Outer ground cover and canopy extents of, typically, riparian associated vegetation species that that would be sustained by surface and/or subsurface waters of the watercourse.

Following the interpretation of CDFG jurisdictional extent above, and based on the lack of riparian vegetation adjacent to the ephemeral drainages observed in the field, the extent of WSC was assessed based on criteria (3) Hydrogeomorphically distinct top-of-embankment to top-of-embankment limits.

Based on the highly eroded channels of the ephemeral drainages found in Segment 1, Segment 2, and Segment 3, differences between the jurisdictional boundaries of WSC and WUS were determined to be insignificant (i.e., the jurisdictional extent of WSC and WUS were determined to be essentially the same).

## 3.0 RESULTS

As a result of the preliminary determination of the jurisdictional status of WUS and WSC on the VV2 project site, a total of 55 jurisdictional waters were documented within the three proposed electrical transmission line corridors as described in Table 1 below. Forty jurisdictional waters were identified along Segment 1, ten along Segment 2, and five along Segment 3 (Figures 2 through 15). No jurisdictional waters were observed within the 338-acre boundary of the proposed power plant facility or within the 50 acre boundary of the proposed construction staging area.

**Table 1**  
**Jurisdictional Determinations of Ephemeral Drainages Found**  
**within 100 Feet of Linear Corridor Segments of the VV2 Power Plant Project**

Ephemeral Drainage	Average Width (feet)	Jurisdictional Status	Connectivity to WUS
<b>Segment 1</b>			
<b>1</b>	1.0	WSC	Flows into nearby sewer plant and not to Mojave River.
<b>2</b>	103.7	WSC and WUS	Disturbed wash flows directly to Mojave River.
<b>3</b>	13.0	WSC and WUS	Man-made earthen channel that flows directly to Mojave River.

**Table 1**  
**Jurisdictional Determinations of Ephemeral Drainages Found**  
**within 100 Feet of Linear Corridor Segments of the VV2 Power Plant Project**

<b>Ephemeral Drainage</b>	<b>Average Width (feet)</b>	<b>Jurisdictional Status</b>	<b>Connectivity to WUS</b>
<b>Segment 1</b>			
<b>4</b>	5.8	WSC and WUS	Flows directly to Mojave River
<b>5</b>	19.0	WSC and WUS	Flows directly to Mojave River
<b>6</b>	6.0	WSC and WUS	Flows directly to Mojave River
<b>7</b>	5.0	WSC and WUS	Flows directly to Mojave River
<b>8</b>	3.3	WSC and WUS	Flows directly to Mojave River
<b>9</b>	7.3	WSC and WUS	Flows directly to Mojave River
<b>10</b>	25.7	WSC and WUS	Flows directly to Mojave River
<b>11</b>	8.5	WSC and WUS	Flows directly to Mojave River
<b>12</b>	1.2	WSC and WUS	Flows directly to Mojave River
<b>13</b>	3.7	WSC and WUS	Flows directly to Mojave River
<b>14</b>	34.8	WSC and WUS	Flows directly to Mojave River
<b>15</b>	4.0	WSC and WUS	Flows directly to Mojave River
<b>16</b>	1.2	WSC and WUS	Flows directly to Mojave River
<b>17</b>	2.4	WSC and WUS	Flows directly to Mojave River
<b>18</b>	1.7	WSC and WUS	Flows directly to Mojave River
<b>19</b>	1.3	WSC and WUS	Flows directly to Mojave River
<b>20</b>	1.0	WSC and WUS	Flows directly to Mojave River
<b>21</b>	1.1	WSC and WUS	Flows directly to Mojave River
<b>22</b>	18.5	WSC and WUS	Flows directly to Mojave River
<b>23</b>	4.1	WSC and WUS	Flows directly to Mojave River
<b>24</b>	4.9	WSC and WUS	Flows directly to Mojave River
<b>25</b>	7.6	WSC and WUS	Flows directly to Mojave River
<b>26</b>	1.5	WSC and WUS	Flows directly to Mojave River
<b>27</b>	2.8	WSC and WUS	Flows directly to Mojave River
<b>28</b>	13.2	WSC and WUS	Flows directly to Mojave River
<b>29</b>	0*	WSC and WUS	Flows directly to Mojave River through culvert under the road within the project area and will not be impacted by the project.
<b>30</b>	7.7	WSC and WUS	Flows directly to Mojave River
<b>31</b>	3.9	WSC and WUS	Flows directly to Mojave River
<b>32</b>	3.0	WSC and WUS	Flows into larger drainage that flows directly to Mojave River.
<b>33</b>	4.2	WSC and WUS	Flows directly to Mojave River

**Table 1**  
**Jurisdictional Determinations of Ephemeral Drainages Found**  
**within 100 Feet of Linear Corridor Segments of the VV2 Power Plant Project**

<b>Ephemeral Drainage</b>	<b>Average Width (feet)</b>	<b>Jurisdictional Status</b>	<b>Connectivity to WUS</b>
<b>Segment 1</b>			
<b>34</b>	2.2	WSC and WUS	Man-made earthen channel that flows directly to Mojave River
<b>35</b>	2.8	WSC and WUS	Flows directly to Mojave River
<b>36</b>	11.0	WSC and WUS	Flows directly to Mojave River
<b>37</b>	4.4	WSC and WUS	Flows directly to Mojave River
<b>38</b>	1.0	WSC and WUS	Flows directly to Mojave River
<b>39</b>	2.0	WSC and WUS	Flows directly to Mojave River
<b>40</b>	1.4	WSC and WUS	Flows directly to Mojave River
<b>Segment 2</b>			
<b>41</b>	8.0	WSC and WUS	Channel follows paved road directly to Oro Grande Wash
<b>42</b>	6.7	WSC and WUS	Flows directly to Oro Grande Wash
<b>43</b>	8.1	WSC and WUS	Channel follows roadbed directly to Oro Grande Wash
<b>44</b>	5.0	WSC and WUS	Flows directly to Oro Grande Wash
<b>45</b>	33.6	WSC and WUS	Oro Grande Wash located adjacent to corridor
<b>46</b>	7.2	WSC and WUS	Channel running parallel to corridor, flows directly to Oro Grande Wash
<b>47</b>	7.7	WSC and WUS	Flows directly to Oro Grande Wash
<b>48</b>	43.0	WSC and WUS	Channel routed through a development, flows directly to Oro Grande Wash
<b>49</b>	8.1	WSC and WUS	Channel routed through a development, flows indirectly to Oro Grande Wash
<b>50</b>	5.6	WSC and WUS	Channel routed through a development, flows indirectly to Oro Grande Wash
<b>Segment 3</b>			
<b>51</b>	17.3	WSC and WUS	Channel routed through a development, flows indirectly to Oro Grande Wash
<b>52</b>	7.4	WSC and WUS	Flows directly to Oro Grande Wash
<b>53</b>	11.4	WSC and WUS	Flows directly to Oro Grande Wash
<b>54</b>	15.0	WSC and WUS	Oro Grande Wash
<b>55</b>	12.2	WSC and WUS	Channel routed through a development, flows indirectly to Oro Grande Wash

WSC – Water of the State of California. Jurisdictional to California Department of Fish and Game under Section 1602 of the California Fish and Game Code.

WUS – Water of the United States. Jurisdictional to U.S. Army Corps of Engineers under Section 404 of the Clean Water Act.

\* Ephemeral Drainage 29 on Segment 1 was observed flowing through a culvert for the entire length of the 100 foot project corridor. Although still considered a WUS and WSC, the drainage width was not calculated because project implementation will not affect this drainage directly.

The USACE and CDFG maintain the ultimate authority regarding the jurisdictional status of WUS and WSC. Preliminary determinations were made during this investigation using methods approved by the USACE and CDFG, described in Section 1.2 and 2.0 of this document, based on hydrogeomorphic characteristics of ephemeral drainages found within 100 feet of the proposed project, including the visual identification of an OHWM and the identification of bed and bank features. All jurisdictional waters found in the project area are part of dryland fluvial systems that lack wetlands as defined by the USACE and riparian habitat as defined by the CDFG.

### **3.1 Waters of the United States**

Ephemeral drainages that contained both an observable OHWM and a surface or subsurface connection to a “navigable waterway” (the Mojave River) were considered to be WUS. The majority of ephemeral drainages determined to be WUS were direct tributaries to the Mojave River or secondary tributaries through connection to Oro Grande Wash. Ephemeral Drainage #49 and #50 on Segment 2 and #51 and #55 on Segment 3 had been physically altered by adjacent housing developments and direct connection with Oro Grande Wash was difficult to observe in the field. However, due to the proximity of these identified drainages to the Oro Grande Wash and based on topographic contours on USGS maps, all washes identified in Segment 2 and Segment 3 were determined to be connected (either directly or indirectly [through underground storm drains]) to Oro Grande Wash. Overall, 54 of the 55 total jurisdictional waters identified in the project area were determined to be WUS and WSC subject to the jurisdiction of both the USACE and the CDFG, respectively.

### **3.2 Waters of the State of California**

Ephemeral Drainage #1, on Segment 1, was observed flowing into the Victor Valley Water Reclamation Authority (VWRA) wastewater treatment plant between the proposed Segment 1 corridor and the Mojave River. No outlet was observed leading from the VWRA to the Mojave River and it was, therefore, determined that Ephemeral Drainage #1 was not connected to the Mojave River making it a WSC only, subject to the jurisdiction of the CDFG.

## **4.0 CONCLUSIONS**

AMEC reviewed the jurisdictional status of waterways in the vicinity of the VV2 Power Plant Project in and in the vicinity of Victorville, California. Jurisdictional WUS, as defined in Section 404 of the Clean Water Act, are subject to USACE jurisdiction and WSC, as defined in Section 1602 of the California Fish and Game Code, are subject to CDFG jurisdiction. It was determined that no WUS or WSC occur within the 338 acre boundary of the proposed power plant facility or the 50 acre boundaries of the proposed construction staging areas. A total of 55 jurisdictional waters were documented within the three proposed electrical transmission line corridors. Fifty-four of these washes were determined to have direct or indirect connectivity to a “navigable water” (the Mojave River) thus making these 54 washes both WUS and WSC subject to the jurisdiction of the USACE and the CDFG, respectively. One wash along Segment 1 was determined not to have connectivity to the Mojave River and was, therefore, determined only to be a WSC subject to the jurisdiction of the CDFG. All jurisdictional waters found in the project area are part of dryland fluvial systems that lack wetlands as defined by the USACE and riparian habitat as defined by the CDFG.

The CDFG regulates projects that will substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake, or their tributaries, or use materials from a streambed through Section 1602 of the California Fish and Game Code. A Streambed Alteration Agreement is required from the CDFG for such projects. The USACE regulates the discharge of fill and dredged material into WUS through Section 404 of the Clean Water Act. A 404 Permit is required from the USACE for any project that requires the deposition of fill or dredged material into a WUS. Furthermore, Section 401 of the Clean Water Act addresses the impact of a project on water quality. A project requiring a Section 404 Permit must receive 401 Water Quality Certification from the RWQCB before the USACE can issue a 404 Permit.

Current construction plans for the Project include avoidance of all jurisdictional waters. The majority of the project is to occur on existing roadways and existing transmission lines. New roads for transmission line construction are to be routed to avoid impact to jurisdictional waters as are support structure locations themselves.

However, should it be determined that the Project can not avoid impacts to jurisdictional waters, specific permitting as outlined above would be required. This would entail the submission of an application for Streambed Alteration Agreement to the CDFG for proposed impacts to WSC. The CDFG will determine if an Agreement is required based on proposed impacts and supply that agreement outlining minimization and mitigation measures required. Projects that require the deposition of fill material into a WUS will require a Section 404 Permit from the USACE. Depending upon the proposed project and the proposed impacts, the project proponent would contact the USACE to determine if their project meets the requirements of a Nationwide Permit (NWP) (potentially NWP 12 for Utility Line Activities or NWP 14 for Linear Transportation Crossings). If the project does not qualify for a NWP, it would have to go through the Individual Permitting Process which requires alternatives analysis and a public comment period. The project proponent would submit an application for 401 Water Quality Certification to the Lahontan RWQCB and receive that certification before the USACE can issue a Section 404 Permit.

## 5.0 REFERENCES

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# Appendix A Figures

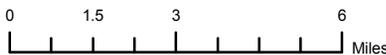


**Legend**

- |                          |                      |
|--------------------------|----------------------|
| <b>Transmission Line</b> | <b>Base Data</b>     |
| --- Segment 1            | ● Major Cities       |
| — Segment 2              | — Limited Access     |
| --- Segment 3            | — Highway            |
| □ Power Plant            | — Major Road         |
| ▨ Laydown Area           | — Railroads          |
|                          | — Rivers and Streams |

**Project Location  
Linear Utility Corridor, Segment 1, 2, and 3  
Victorville 2 Hybrid Power Project**

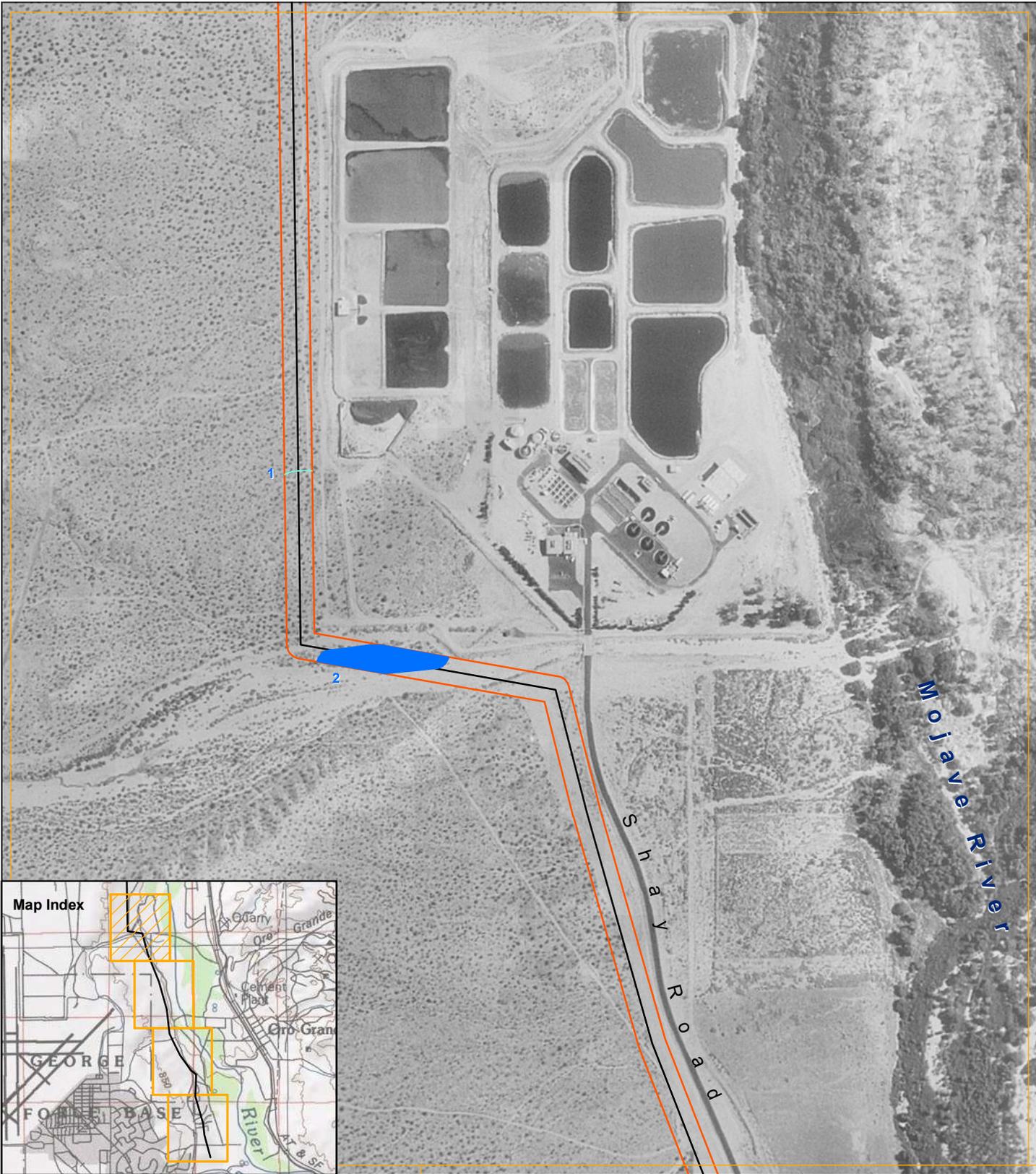
**Figure 1**



**Map Note**

Data Source:  
 AMEC - Project Boundary  
 ESRI - Places, Streets, Railroad  
 Rivers and Streams  
 Projection: State Plane (Zone 5),  
 NAD83, Feet  
 Path: w:\s06\bio\victorville\_wetland  
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 Date: 02/05/2007

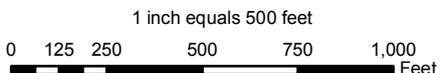




- Legend**
- Water of the State Only
  - Water of the U.S. and Water of the State
  - Map Index
  - Study Boundary
  - Segment 1 Centerline

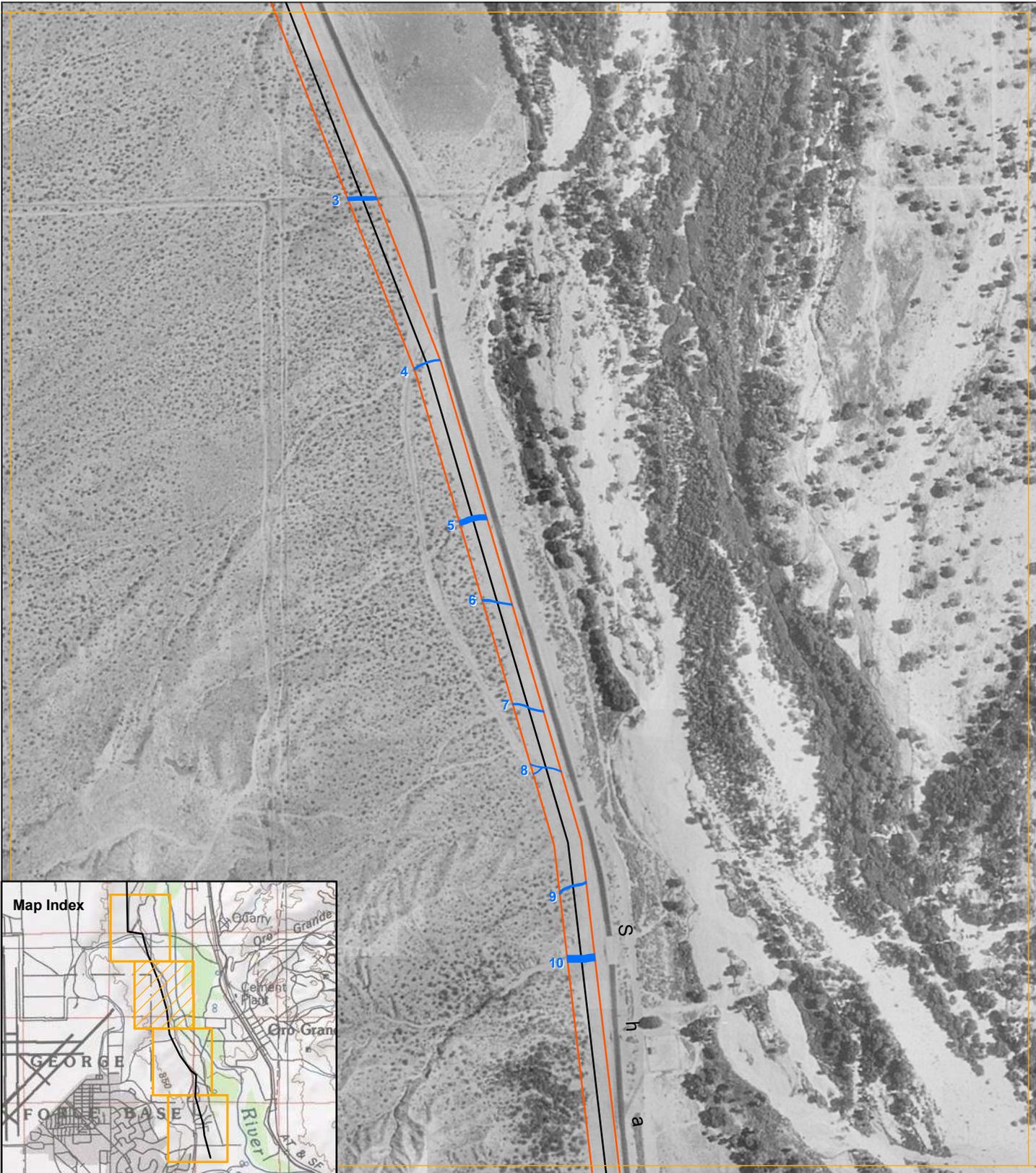
**Preliminary Determination of Jurisdictional Waters  
Victorville 2 Hybrid Power Project  
Linear Utility Corridor, Segment 1**

**Figure 2**



**Map Notes**  
 Base Data:  
 AMEC - Preliminary Determination of Jurisdictional Waters;  
 Study Boundary  
 Projection: State Plane (Zone 6), NAD83, Feet  
 Path: w:\sd06\biology\vicorville\_wetland\mxd\drainage\_seg1.mxd  
 Date: 02/08/2007



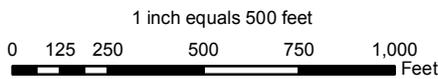


**Legend**

- Water of the State Only
- Water of the U.S. and Water of the State
- Map Index
- Study Boundary
- Segment 1 Centerline

**Preliminary Determination of Jurisdictional Waters  
Victorville 2 Hybrid Power Project  
Linear Utility Corridor, Segment 1**

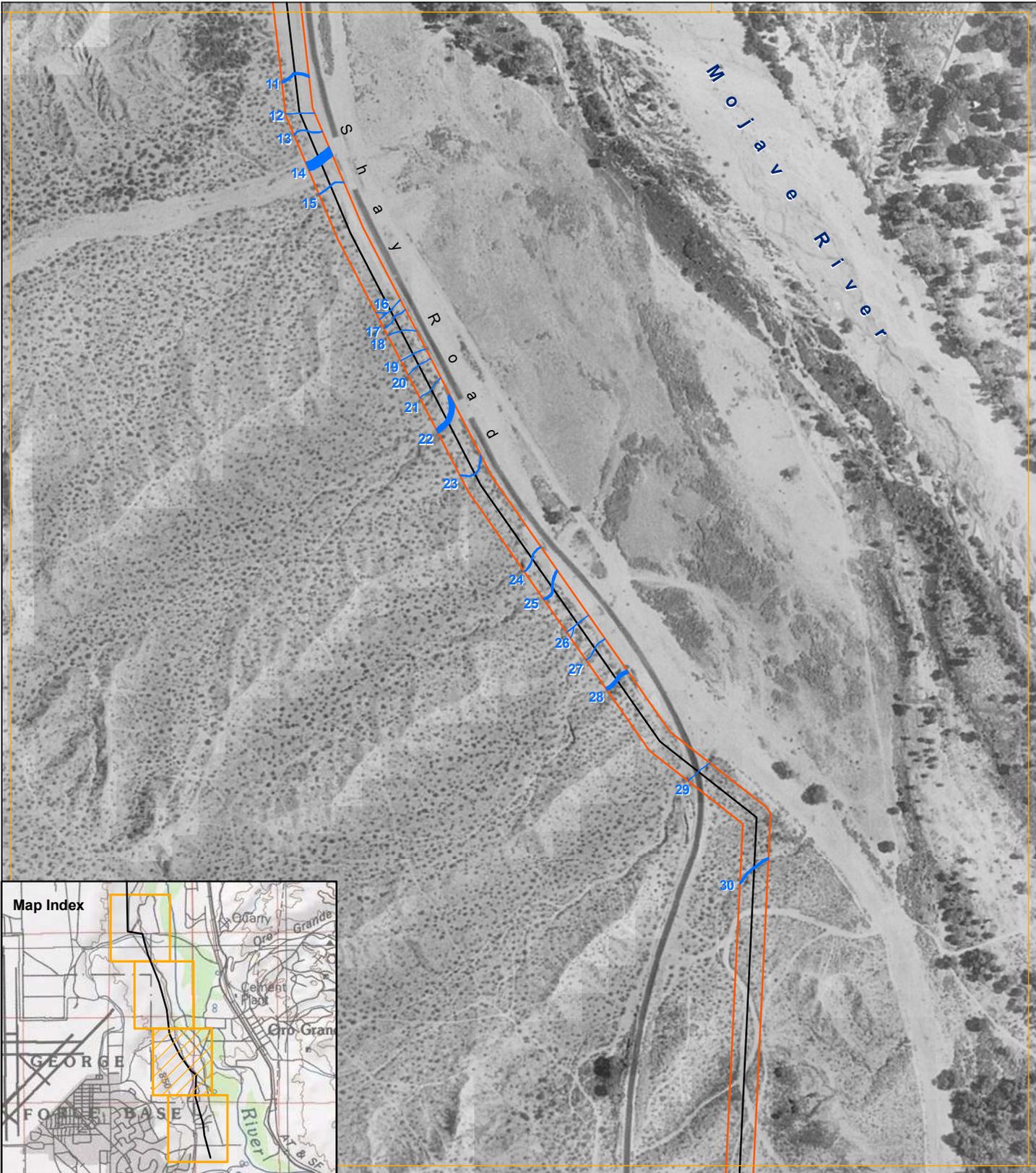
**Figure 3**



**Map Notes**

Base Data:  
 AMEC - Preliminary Determination  
 of Jurisdictional Waters;  
 Study Boundary  
 Projection: State Plane (Zone 6),  
 NAD83, Feet  
 Path: w:\isd06\biology\vicorville\_wetland  
 \mxd\drainage\_seg1.mxd  
 Date: 02/08/2007



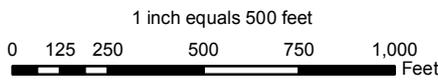


**Legend**

- Water of the State Only
- Water of the U.S. and Water of the State
- Map Index
- Study Boundary
- Segment 1 Centerline

**Preliminary Determination of Jurisdictional Waters  
Victorville 2 Hybrid Power Project  
Linear Utility Corridor, Segment 1**

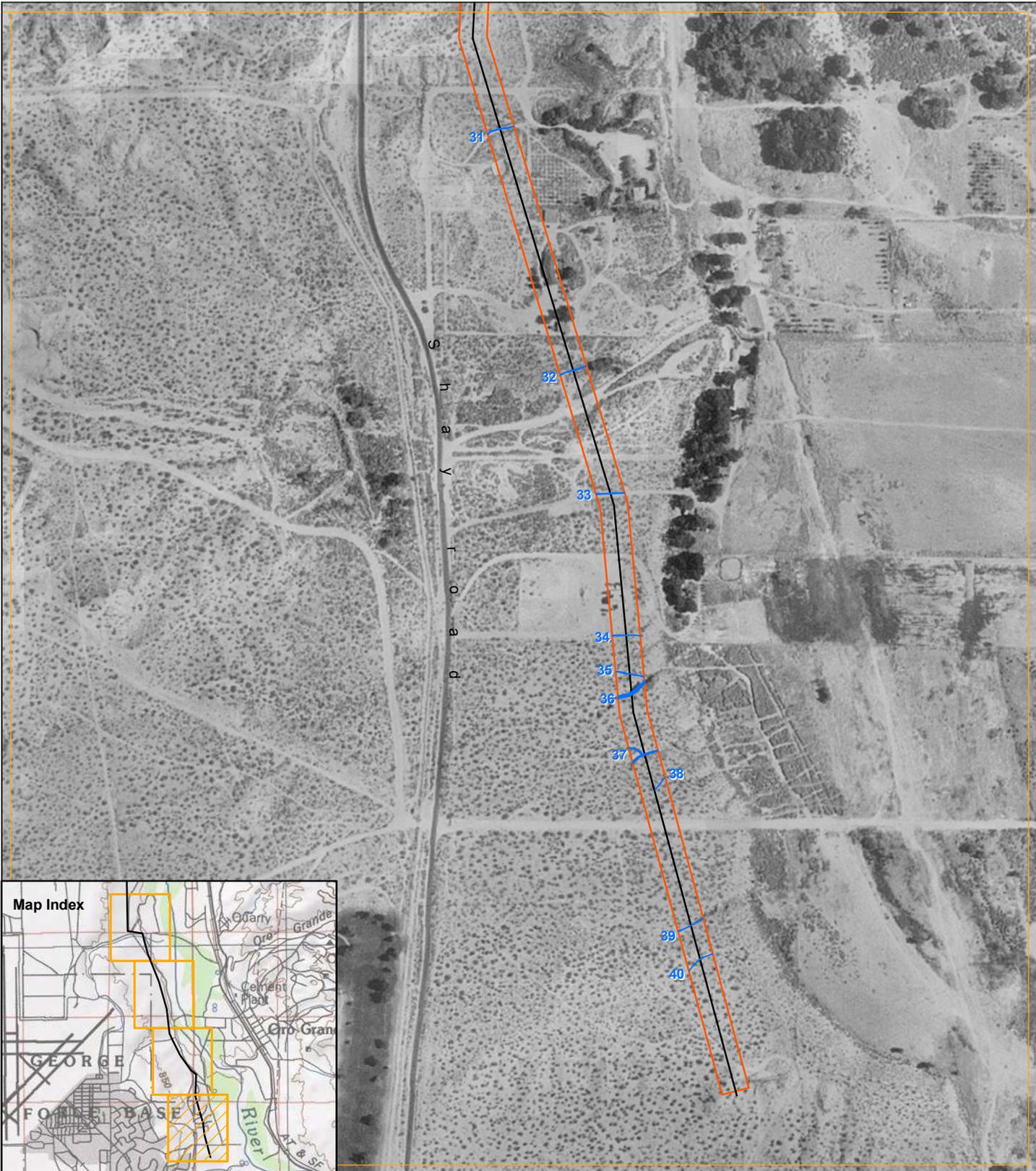
**Figure 4**



**Map Notes**

Base Data:  
AMEC - Preliminary Determination of Jurisdictional Waters;  
Study Boundary  
Projection: State Plane (Zone 6), NAD83, Feet  
Path: w:\isd06\biology\vicorville\_wetland\mxd\drainage\_seg1.mxd  
Date: 02/08/2007



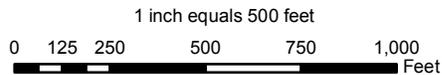


**Legend**

- Water of the State Only
- Water of the U.S. and Water of the State
- Map Index
- Study Boundary
- Segment 1 Centerline

**Preliminary Determination of Jurisdictional Waters  
Victorville 2 Hybrid Power Project  
Linear Utility Corridor, Segment 1**

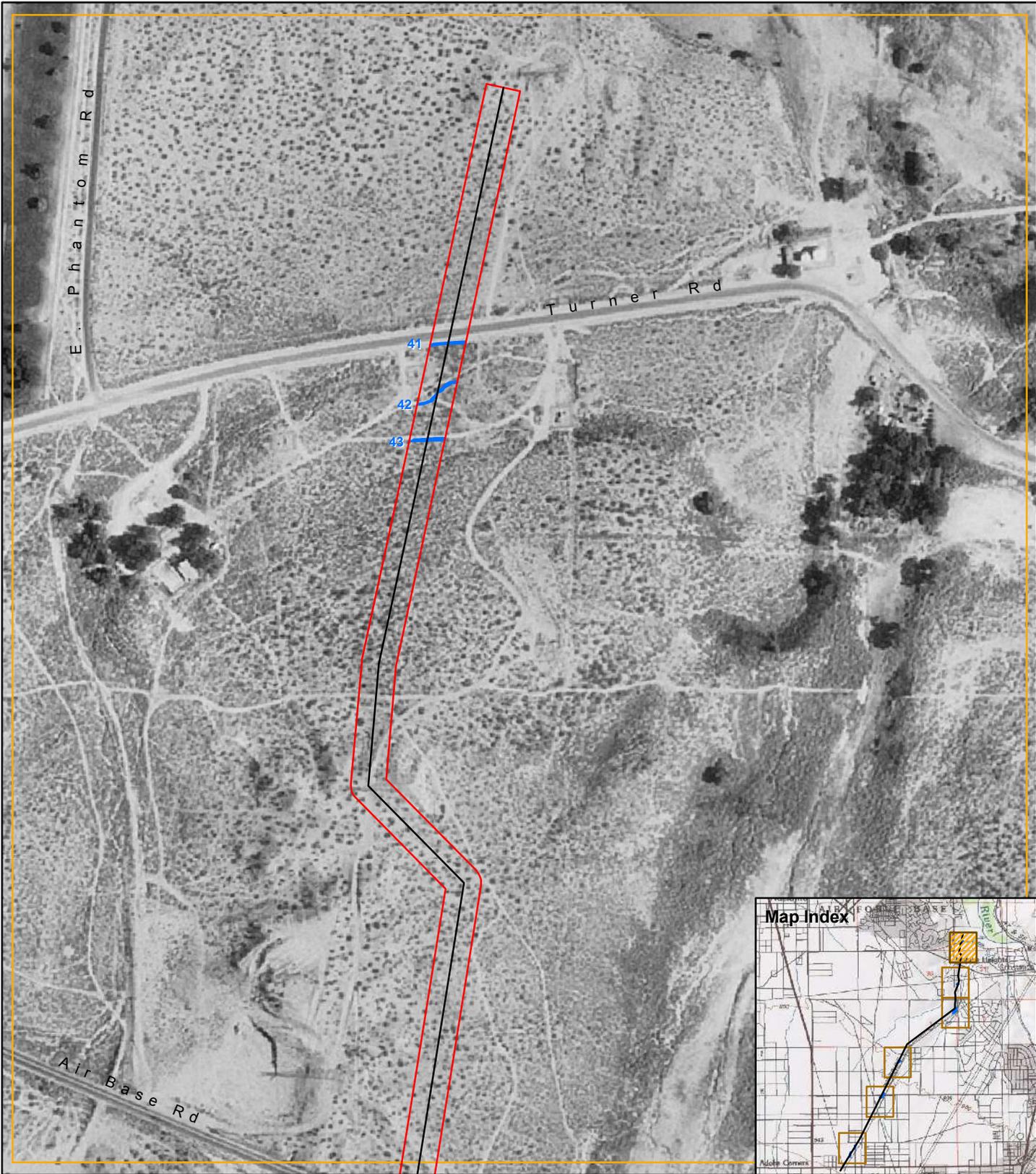
**Figure 5**



**Map Notes**

Base Data:  
 AMEC - Preliminary Determination of Jurisdictional Waters;  
 Study Boundary  
 Projection: State Plane (Zone 6),  
 NAD83, Feet  
 Path: w:\isd06\biology\victorville\_wetland  
 \mxd\drainage\_seg1.mxd  
 Date: 02/08/2007





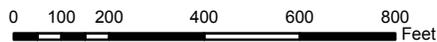
**Legend**

- Water of the U.S and Water of the State
- Study Boundary
- Map Index
- Segment 2 Centerline

**Preliminary Determination of Jurisdictional Waters  
Victorville 2 Hybrid Power Project  
Linear Utility Corridor, Segment 2**

**Figure 6**

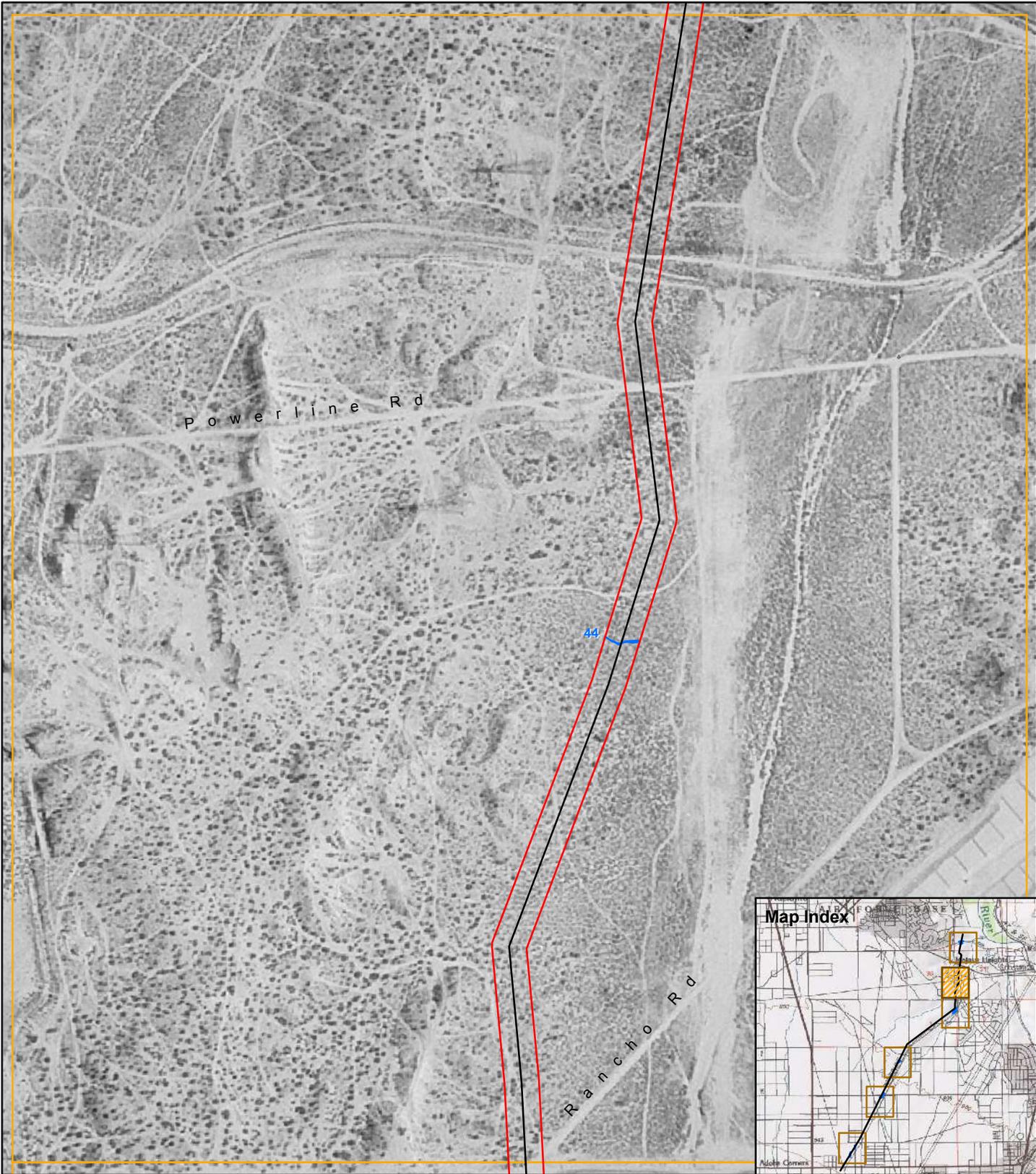
1 inch equals 400 feet



**Map Notes**

Base Data:  
 AMEC - Preliminary Determination of Jurisdictional Waters  
 Projection: State Plane, California 405 NAD83, Feet  
 Path: w:\sd06\biology\vicorville\_wetland\mxd\drainage\_seg2.mxd  
 Date: 02/08/2007





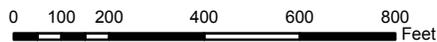
**Legend**

- Water of the U.S and Water of the State
- Study Boundary
- Map Index
- Segment 2 Centerline

**Preliminary Determination of Jurisdictional Waters  
Victorville 2 Hybrid Power Project  
Linear Utility Corridor, Segment 2**

**Figure 7**

1 inch equals 400 feet



**Map Notes**

Base Data:  
 AMEC - Preliminary Determination of Jurisdictional Waters  
 Projection: State Plane, California 405 NAD83, Feet  
 Path: w:\sd06\biology\victimville\_wetland\mxd\drainage\_seg2.mxd  
 Date: 02/08/2007





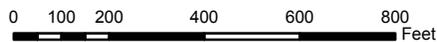
**Legend**

- Water of the U.S and Water of the State
- Study Boundary
- Map Index
- Segment 2 Centerline

**Preliminary Determination of Jurisdictional Waters  
Victorville 2 Hybrid Power Project  
Linear Utility Corridor, Segment 2**

**Figure 8**

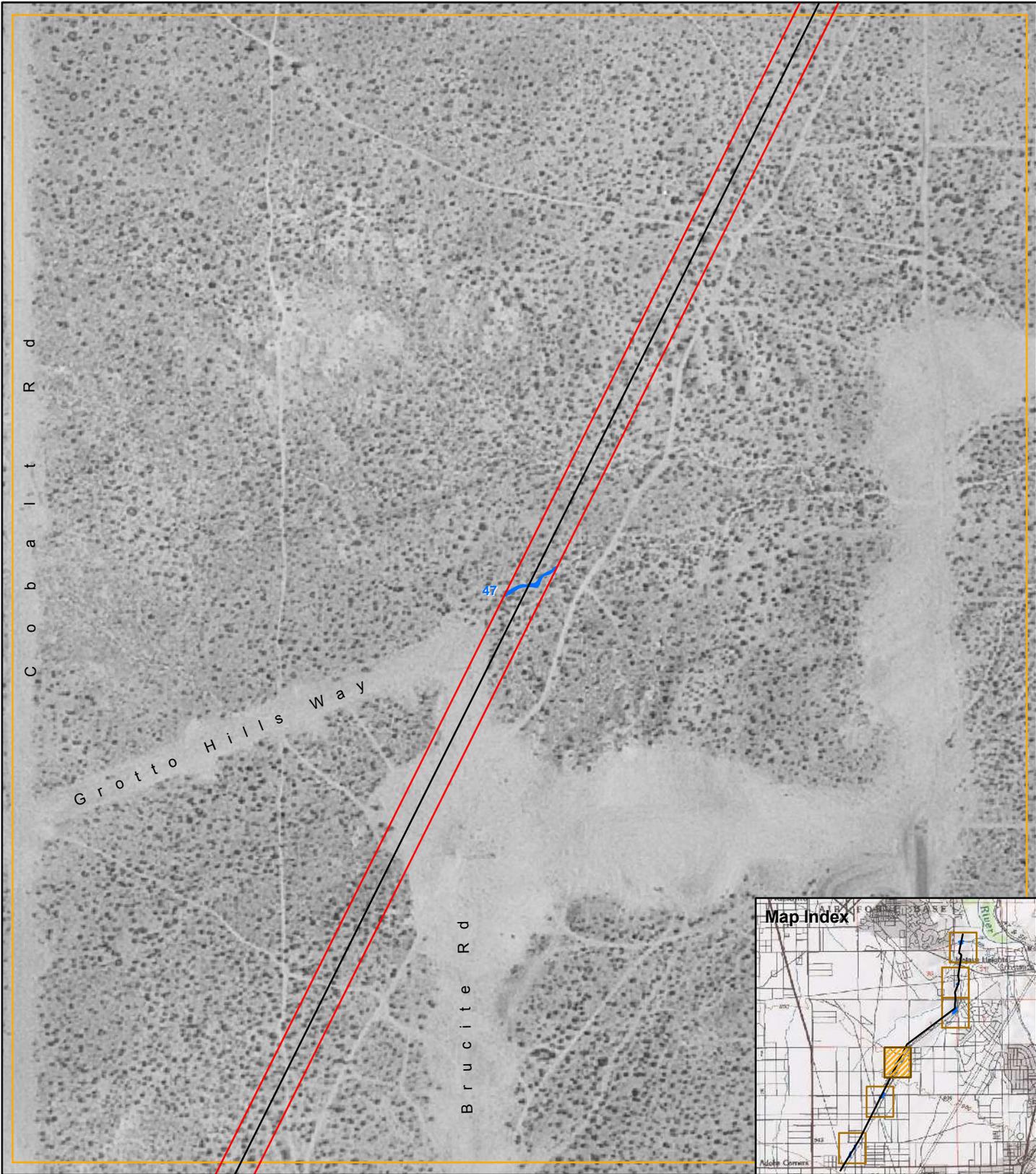
1 inch equals 400 feet



**Map Notes**

Base Data:  
 AMEC - Preliminary Determination of Jurisdictional Waters  
 Projection: State Plane, California 405 NAD83, Feet  
 Path: w:\sd06\biology\vicorville\_wetland\mxd\drainage\_seg2.mxd  
 Date: 02/08/2007





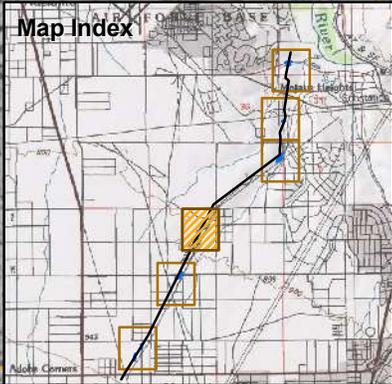
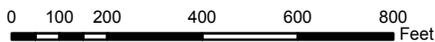
**Legend**

-  Water of the U.S and Water of the State
-  Study Boundary
-  Map Index
-  Segment 2 Centerline

**Preliminary Determination of Jurisdictional Waters  
Victorville 2 Hybrid Power Project  
Linear Utility Corridor, Segment 2**

**Figure 9**

1 inch equals 400 feet



**Map Notes**

Base Data:  
AMEC - Preliminary Determination of Jurisdictional Waters  
Projection: State Plane, California 405 NAD83, Feet  
Path: w:\sd06\biology\vicorville\_wetland\mxd\drainage\_seg2.mxd  
Date: 02/08/2007





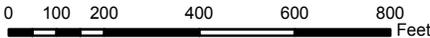
**Legend**

- Water of the U.S and Water of the State
- Study Boundary
- Map Index
- Segment 2 Centerline

**Preliminary Determination of Jurisdictional Waters  
Victorville 2 Hybrid Power Project  
Linear Utility Corridor, Segment 2**

**Figure 10**

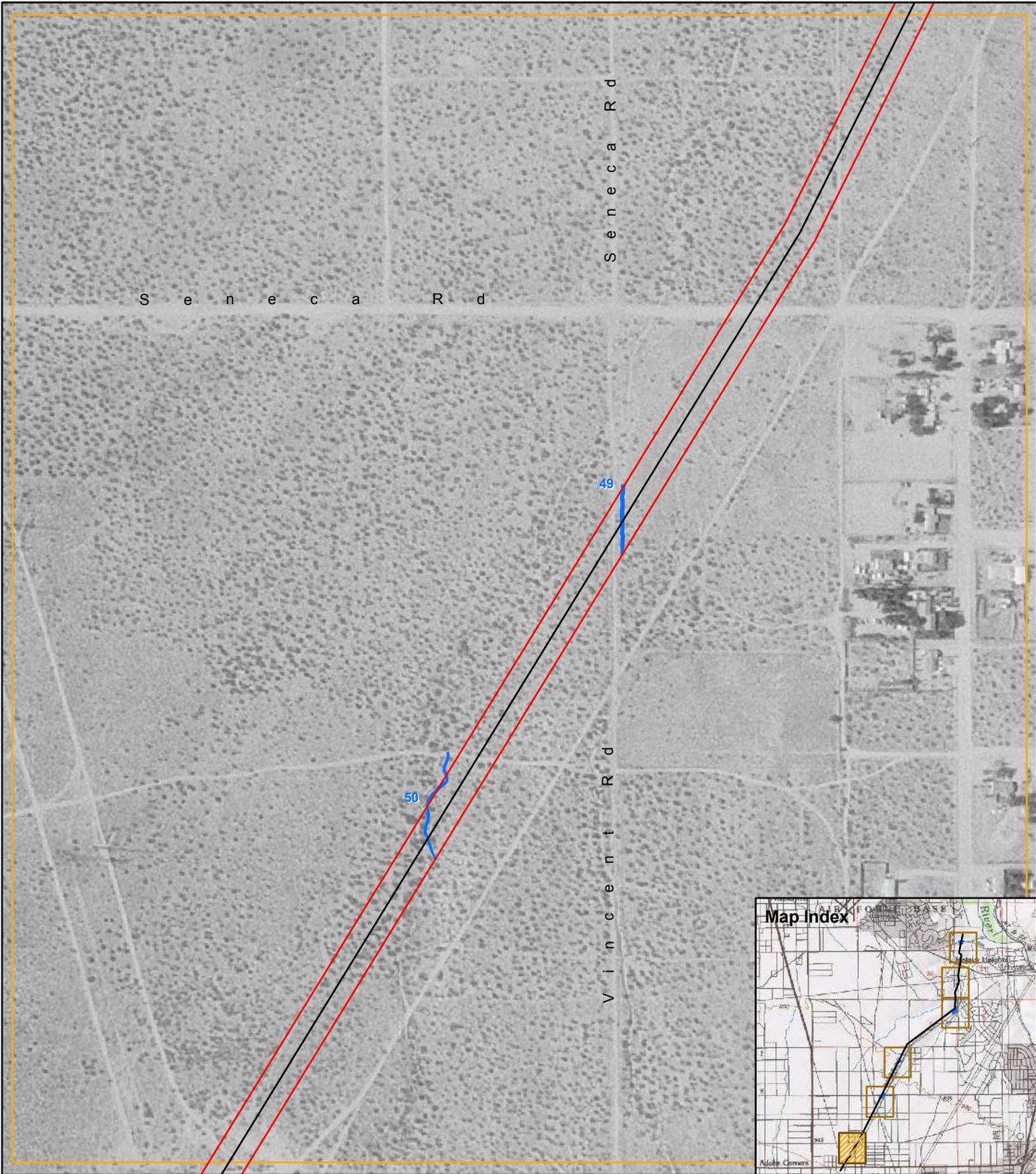
1 inch equals 400 feet



**Map Notes**

Base Data:  
 AMEC - Preliminary Determination of Jurisdictional Waters  
 Projection: State Plane, California 405 NAD83, Feet  
 Path: w:\sd06\biology\vicorville\_wetland\mxd\drainage\_seg2.mxd  
 Date: 02/08/2007





**Legend**

- Water of the U.S and Water of the State
- Study Boundary
- Map Index
- Segment 2 Centerline

**Preliminary Determination of Jurisdictional Waters  
Victorville 2 Hybrid Power Project  
Linear Utility Corridor, Segment 2**

**Figure 11**

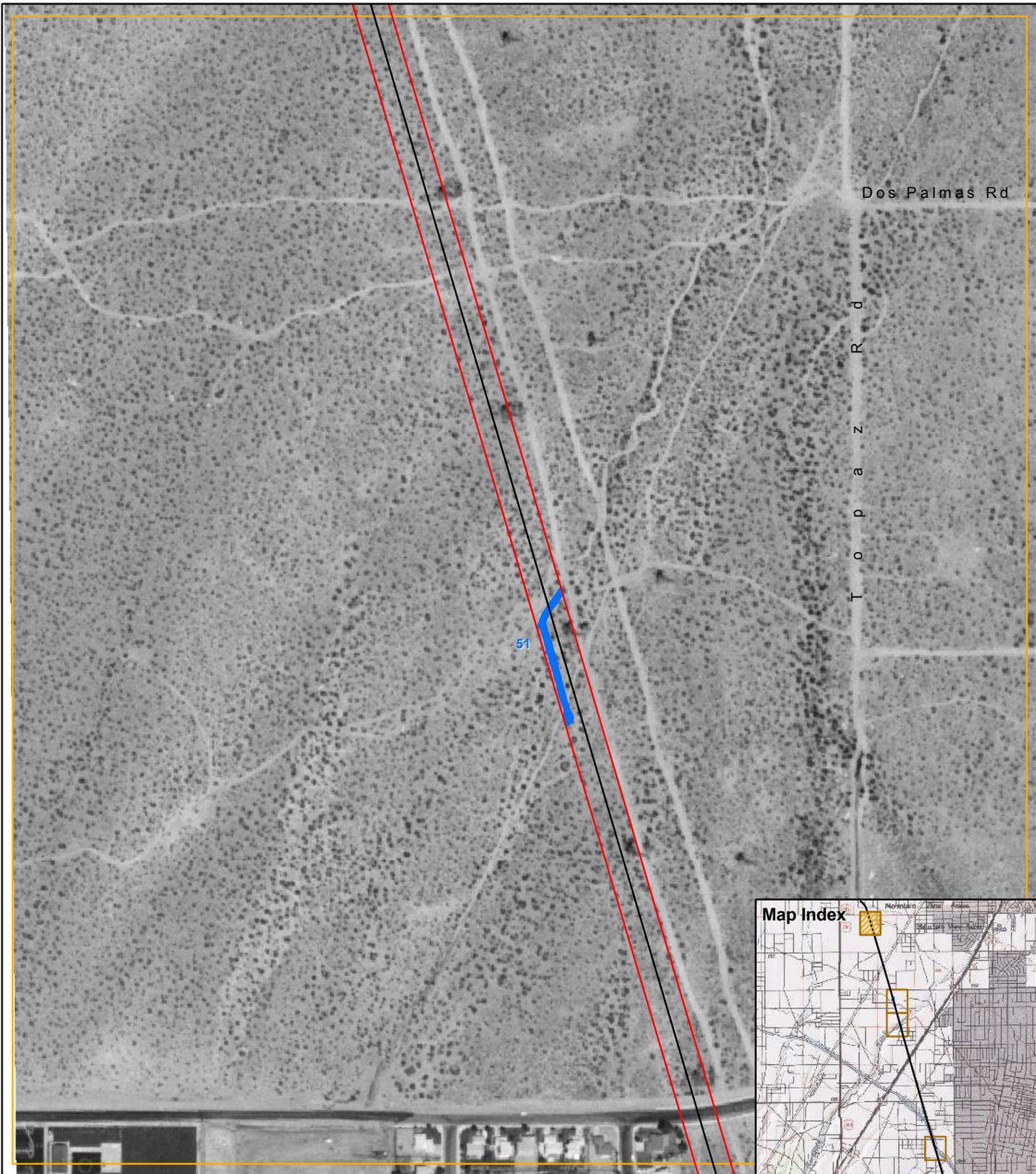
1 inch equals 400 feet



**Map Notes**

Base Data:  
 AMEC - Preliminary Determination of Jurisdictional Waters  
 Projection: State Plane, California 405 NAD83, Feet  
 Path: w:\sd06\biology\victimville\_wetland\mxd\drainage\_seg2.mxd  
 Date: 02/08/2007





**Legend**

- Water of the U.S and Water of the State
- Study Boundary
- Map Index
- Segment 3 Centerline

**Preliminary Determination of Jurisdictional Waters  
Victorville 2 Hybrid Power Project  
Linear Utility Corridor, Segment 3**

**Figure 12**

1 inch equals 400 feet



**Map Notes**

Base Data:  
 AMEC - Preliminary Determination of Jurisdictional Waters  
 Projection: State Plane, California 405 NAD83, Feet  
 Path: w:\sd06\biology\vicorville\_wetland\mxd\drainage\_seg3.mxd  
 Date: 02/08/2007





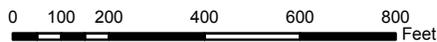
**Legend**

-  Water of the U.S and Water of the State
-  Study Boundary
-  Map Index
-  Segment 3 Centerline

**Preliminary Determination of Jurisdictional Waters  
Victorville 2 Hybrid Power Project  
Linear Utility Corridor, Segment 3**

**Figure 13**

1 inch equals 400 feet



**Map Notes**

Base Data:  
 AMEC - Preliminary Determination of Jurisdictional Waters  
 Projection: State Plane, California 405 NAD83, Feet  
 Path: w:\sd06\biology\vicorville\_wetland\mxd\drainage\_seg3.mxd  
 Date: 02/08/2007





**Legend**

-  Water of the U.S and Water of the State
-  Study Boundary
-  Map Index
-  Segment 3 Centerline

**Preliminary Determination of Jurisdictional Waters  
Victorville 2 Hybrid Power Project  
Linear Utility Corridor, Segment 3**

**Figure 14**

1 inch equals 400 feet



**Map Notes**

Base Data:  
AMEC - Preliminary Determination of Jurisdictional Waters  
Projection: State Plane, California 405 NAD83, Feet  
Path: w:\sd06\biology\vicorville\_wetland\mxd\drainage\_seg3.mxd  
Date: 02/08/2007





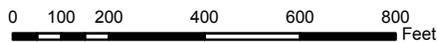
**Legend**

- Water of the U.S and Water of the State
- Study Boundary
- Map Index
- Segment 3 Centerline

**Preliminary Determination of Jurisdictional Waters  
Victorville 2 Hybrid Power Project  
Linear Utility Corridor, Segment 3**

**Figure 15**

1 inch equals 400 feet



**Map Notes**

Base Data:  
 AMEC - Preliminary Determination of Jurisdictional Waters  
 Projection: State Plane, California 405 NAD83, Feet  
 Path: w:\sd06\biology\vicorville\_wetland\mxd\drainage\_seg3.mxd  
 Date: 02/08/2007



## **Appendix B Photographs**

## Photographic Summary of Preliminary Jurisdictional Waters Determination for the Victorville 2 Power Plant Project



Segment 1 Ephemeral Drainage #2 facing east. Drainage flows directly to Mojave River. Jurisdictional Water of the United States (WUS) with an Ordinary High Water Mark and Water of the State of California (WSC) with defined bed and bank.



Segment 1 Ephemeral Drainage #3 facing west. Constructed channel flows directly to Mojave River. Jurisdictional WUS and WSC.



Segment 1 Ephemeral Drainage #10 facing west. Drainage flows directly to Mojave River. Jurisdictional WUS and WSC.



Segment 1 Ephemeral Drainage #27 facing west. Drainage flows directly to Mojave River. Jurisdictional WUS and WSC.



Segment 2 Ephemeral Drainage #44 facing west. Drainage flows directly to Oro Grande Wash. Jurisdictional WUS and WSC.



Segment 2 Ephemeral Drainage #45 facing west. Photo of Oro Grande Wash flowing adjacent to Segment 2 corridor at this location. Jurisdictional WUS and WSC.



Segment 2 Ephemeral Drainage #50 facing northwest. Drainage flows through development and into Oro Grande Wash most likely through underground stormwater channel. Jurisdictional WUS and WSC.



Segment 3 Ephemeral Drainage #52 facing northeast. Drainage flows directly to Oro Grande Wash. Jurisdictional WUS and WSC.