DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, SACRAMENTO
CORPS OF ENGINEERS
1325 J STREET
SACRAMENTO CA 95814-2922

REPLY TO
ATTENTION OF

October 22, 2010

Regulatory Division SPK-2009-01716-NO

Jason Hefner
Vulcan Power Company
775 Bonnett Way, Suite 210
Bend, Oregon 97702

Dear Mr. Hefner:

This concerns your proposed Patua Geothermal project in or near Fernley, Nevada. The project is located on or near the Fernley Wildlife Refuge, Section 19, Township 20 N, Range 26 E, Mount Diablo Base and Meridian, Latitude 39.586°, Longitude -119.0924°, Fernley, Churchill County, Nevada.

Based on the information you have provided, we have determined that the proposed work will not result in the discharge of dredged or fill material within waters of the United States. Therefore, a Department of the Army Permit is not required for this work. Measures should be taken to prevent construction materials and/or activities from entering any waters of the United States. Appropriate soil erosion and sediment controls should be implemented onsite to achieve this end.

Our disclaimer of jurisdiction is only for this activity as it pertains to Section 404 of the Federal Clean Water Act and does not refer to, nor affect jurisdiction over any waters present on site. Other Federal, State, and local laws may apply to your activities. Therefore, in addition to contacting other Federal and local agencies, you should also contact state regulatory authorities to determine whether your activities may require other authorizations or permits.

We appreciate your feedback. At your earliest convenience, please tell us how we are doing by completing the customer survey on our website under *Customer Service Survey*.

Please refer to identification number SPK-2009-01716-NO in any correspondence concerning this project. If you have any questions, please contact Patricia Mcqueary at 321 North Mall Drive, Suite L-101, St. George, Utah 84790, email *Patricia.L.McQueary@usace.army.mil*, or telephone 435-986-3979. For more information regarding our program, please visit our website at *www.spk.usace.army.mil/regulatory.html*.

Sincerely,

Patricia L. McQueary

Patricia L. McQueary
Chief, St. George Regulatory Office
Sacramento District

Enclosure(s)
JD Verify
Appeal Form
JD Forms
Copy furnished without enclosure(s)
Susanne Heim, 7Q10, 500 Damonte Ranch Parkway, Suite 929, Reno, Nevada 89521
Jeryl Gardner, 901 S. Stewart St., Suite 4001, Carson City, Nevada 89701-5249
Jean Stone, 901 S. Stewart St., Suite 4001, Carson City, Nevada 89701-5249

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, SACRAMENTO
CORPS OF ENGINEERS
1325 J STREET
SACRAMENTO CA 95814-2922

REPLY TO
ATTENTION OF

November 4, 2010

Regulatory Division SPK-2009-01716-NO

Jason Hefner
Vulcan Power Company
775 Bonnett Way, Suite 210
Bend, Oregon 97702

Dear Mr. Hefner:

We are responding to your May 7, 2010 request for an approved jurisdictional determination for the Patua Geothermal project. The approximately 16,000-acre site is located on or near Fernley, Nevada, Section 19, Township 20 N, Range 26 E, Mount Diablo Base and Meridian, Latitude 39.5860°, Longitude -119.09246°, Fernley, Churchill County, Nevada.

Based on available information, **we concur with the estimate of waters, as depicted on the November 24, 2009 Attachment 1 – Figures 5, and 6a-c, drawings prepared by Huffman and Carpenter (7Q10).**

The 0.75-acres of waters identified on the above drawing are intrastate isolated water with no apparent interstate or foreign commerce connection. As such, these waters are not currently regulated by the Corps of Engineers. This disclaimer of jurisdiction is only for Section 404 of the Federal Clean Water Act. Other Federal, State, and local laws may apply to your activities. *In particular, you may need authorization from the U.S. Fish and Wildlife Service.*

This verification is valid for five years from the date of this letter, unless new information warrants revision of the determination before the expiration date. This letter contains an approved jurisdictional determination for your subject site. If you object to this determination, you may request an administrative appeal under Corps regulations at 33 CFR Part 331.

A Notification of Appeal Process and Request for Appeal (RFA) form is enclosed. If you request to appeal this determination you must submit a completed RFA form to the South Pacific Division Office at the following address: Administrative Appeal Review Officer, Army Corps of Engineers, South Pacific Division, CESPD-PDS-O, 1455 Market Street, San Francisco, California 94103-1399, Telephone: 415-503-6574, FAX: 415-503-6646.

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 CFR Part 331.5, and that it has been received by the Division Office within 60 days of the NAP. Should you decide to submit an RFA form, it must

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: Jason Hefner, Vulcan Power Company	File No.: SPK-2009-01716-NO	Date: October 22, 2010

Attached is:		See Section below
	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A
	PROFFERED PERMIT (Standard Permit or Letter of permission)	B
	PERMIT DENIAL	C
X	APPROVED JURISDICTIONAL DETERMINATION	D
	PRELIMINARY JURISDICTIONAL DETERMINATION	E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at *http://www.usace.army.mil/inet/functions/cw/cecwo/reg* or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the DISTRICT engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- OBJECT: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the DISTRICT engineer. Your objections must be received by the DISTRICT engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the DISTRICT engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the DISTRICT engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the DISTRICT engineer for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the DIVISION (not district) engineer (address on reverse). This form must be received by the DIVISION engineer within 60 days of the date of this notice.

C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the DIVISION (not district) engineer (address on reverse). This form must be received by the DIVISION (not district) engineer within 60 days of the date of this notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the DIVISION (not district) engineer (address on reverse). This form must be received by the DIVISION engineer within 60 days of the date of this notice. Exception: JD appeals based on new information must be submitted to the DISTRICT engineer within 60 days of the date of this notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): September 27, 2010.

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Sacramento District, Patua Geothermal, SPK-2009-1716.
Name of water being evaluated on this JD form: SPK-2009-1716 Culvert Crossings 1-9, SPK-2009-1716 Wetlands 1, 2 and 3 , PW 2-6

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: Nevada County: Lyon City: Fernley
Center coordinates of site (lat/long in degree decimal format): Lat: 39.604 N, Long: -119.165 W
Universal Transverse Mercator: .
Name of nearest waterbody: Fernley Sink.
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: NA.
Name of watershed or Hydrologic Unit Code (HUC): Granite Springs Valley, Nevada 16060104.
☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc.) are associated with this action and are recorded on a different JD form. List other JDs:

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):
☒ Office (Desk) Determination. Date: July 22, 2010.
☐ Field Determination. Date(s): _____.

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are no** "*navigable waters of the U.S.*" within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [*Required*]
☐ Waters subject to the ebb and flow of the tide.
☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain: _____.

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are no** "*waters of the U.S.*" within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [*Required*]

1. **Waters of the U.S.**
   a. **Indicate presence of waters of U.S. in review area (check all that apply):** [1]
      ☐ TNWs, including territorial seas
      ☐ Wetlands adjacent to TNWs
      ☐ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs
      ☐ Non-RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
      ☐ Impoundments of jurisdictional waters
      ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

   b. **Identify (estimate) size of waters of the U.S. in the review area:**
      Non-wetland waters: linear feet _____ width (ft) and/or _____ acres.
      Wetlands: acres.

   c. **Limits (boundaries) of jurisdiction** based on: **Not established at this time.** and **Pick List:**
      Elevation of established OHWM (if known): _____.

2. **Non-regulated waters/wetlands (check if applicable):**[3]
   ☒ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
   Explain: **The Fernley Wildlife Management Area is located within the Fernley Hydrographic area, which includes the town of Fernley, wetlands and a playa - the Fernley Sink. The sink is an intermitent lake and is the terminus for southwestward drainage from the Bradys Hot Springs and Fireball Valley areas as well as drainage from the Fernley**

[1] Boxes checked below shall be supported by completing the appropriate sections in Section III below.
[2] For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).
[3] Supporting documentation is presented in Section III.F.

area to the south. The area is relatively flat and is bounded on the south by the Virginia Range, on the west by the Truckee Range and on the east by the Hot Springs Mountains. All drainages associated with this project drain into Fernley Sink and have no surface connection with any Traditional Navigable waters. In addition, the Fernley Wildlife Management Area requires no entrance fee, has no boat ramp but does allow hunting (Elmer Bull, August 25, 2010, personal communication). Patua Hot Springs is listed on the Trails.com website as not currently in use by individuals. While there may have been a past commerce connection, there is no connection to navigability.

There are nine culvert crossings of ephemeral drainages and five "Pocket wetlands" associated with the culvert crossings. These crossings drain down into the Fernley Sink, which is an isolated basin. The pocket wetlands associated with the culvert crossings pond water around the culverts. There are also three wetland areas associated with the project area (W/L 1, 2, and 3). These wetlands are associated with the Fernley Sink and also drain into the closed basin.

There are three wetlands associated with the project area (W/L 1, 2 and 3).

SECTION III: CWA ANALYSIS

A. **TNWs AND WETLANDS ADJACENT TO TNWs: NOT APPLICABLE**

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS: **NOT APPLICABLE**

C. SIGNIFICANT NEXUS DETERMINATION: NOT APPLICABLE

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE: NOT APPLICABLE

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):[4]
- ☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
- ☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
- ☐ which are or could be used for industrial purposes by industries in interstate commerce.
- ☐ Interstate isolated waters. Explain: _____.
- ☐ Other factors. Explain: _____.

Identify water body and summarize rationale supporting determination: _____

Provide estimates for jurisdictional waters in the review area (check all that apply):
- ☐ Tributary waters: _____ linear feet _____ width (ft).
- ☐ Other non-wetland waters: _____ acres.
  - Identify type(s) of waters: _____.
- ☐ Wetlands: ____ acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS:
- ☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
- ☒ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
  - ☒ Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR). The wetlands associated with the project are an extension of the Fernley Wildlife Management Area, which is known to contain habitat for a large number of migratory birds. Prior to January of 2001, the Corps would have exerted jurisdiction of this area based on migratory birds.
- ☐ Other: (explain, if not covered above): _____.

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):
- ☒ Non-wetland waters (i.e., rivers, streams): **900** linear feet _____ width (ft).
- ☐ Lakes/ponds: _____ acres.
- ☐ Other non-wetland waters: _____ acres. List type of aquatic resource: _____.
- ☒ Wetlands: 36.6 acres.

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[4] **Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos.***

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

- ☐ Non-wetland waters (i.e., rivers, streams linear feet _____ width (ft).
- ☐ Lakes/ponds: _____ acres.
- ☐ Other non-wetland waters: _____ acres. List type of aquatic resource: _____.
- ☐ Wetlands: _____ acres.

SECTION IV: DATA SOURCES.

A. **SUPPORTING DATA. Data reviewed for JD (check all that apply** - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):

- ☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: 7Q10, May 7, 2010. Preliminary Wetland Delineation Report.
- ☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
  - ☒ Office concurs with data sheets/delineation report.
  - ☐ Office does not concur with data sheets/delineation report.
- ☐ Data sheets prepared by the Corps: _____.
- ☐ Corps navigable waters' study: _____.
- ☒ U.S. Geological Survey Hydrologic Atlas: Granite Springs Valley, Nevada 16050104.
  - ☐ USGS NHD data.
  - ☒ USGS 8 and 12 digit HUC maps.
- ☒ U.S. Geological Survey map(s). Cite scale & quad name: 24K Fernley East, Nevada
- ☐ USDA Natural Resources Conservation Service Soil Survey. Citation: _____.
- ☐ National wetlands inventory map(s). Cite name: _____.
- ☐ State/Local wetland inventory map(s): _____
- ☐ FEMA/FIRM maps: _____.
- ☐ 100-year Floodplain Elevation is: _____ (National Geodectic Vertical Datum of 1929)
- ☒ Photographs: ☒ Aerial (Name & Date): Google Maps, 2010
  or ☒ Other (Name & Date): Provided by Agent, 7Q10, May 5, 2010.
- ☐ Previous determination(s). File no. and date of response letter: _____.
- ☐ Applicable/supporting case law: _____.
- ☒ Applicable/supporting scientific literature:

Lico, M.S., 1992, Detailed study of irrigation drainage in and near wildlife management areas, west-central Nevada, 1987-90, Part A, water quality, sediment composition, and hydrogeochemical processes in Stillwater and Fernley Wildlife Management Areas: US Geological Survey Water-Resources Investigations Report 92-4024A, 65 p.

Rowe, T.G., Lico, M.S., Hallock, R.J., Maest, A.S., and Hoffman, R.J., 1991, Physical, chemical, and biological data for detailed study of irrigation drainage in and near Stillwater, Fernley, and Humboldt Wildlife Management Areas, and Carson Lake, west-central Nevada, 1987-89: U.S. Geological Survey Open-File Report 91-185, 199 p.
http://pubs.er.usgs.gov/pubs/ofr/ofr91185

☒ Other information (please specify): U.S. Environmental Protection Agency. 2010. Enviromapper for Water. http://map24.epa.gov/EMR/?ZoomToWatershed=16050104 (Accessed 7/21/2010).

B. ADDITIONAL COMMENTS TO SUPPORT JD:

The Fernley Wildlife Management Area is located within the Fernley Hydrographic area, which includes the town of Fernley, wetlands and a playa - the Fernley Sink. The sink is an intermitent playa lake and is the terminus for southwestward drainage from the Bradys Hot Springs and Fireball Valley areas as well as drainage from the Fernley area, which is located to the south. The area is relatively flat and is bounded on the south by the Virginia Range, on the west by the Truckee Range and on the east by the Hot Springs Mountains. All drainages associated with this project drain into Fernley Sink and have no surface connection with any Traditional Navigable waters. In addition, the Fernley Wildlife Management Area requires no entrance fee, has no boat ramp but does allow hunting (Elmer Bull, August 25, 2010, personal communication). Patua Hot Springs is listed on the Trails.com website as not currently in use by individuals. While there may have been a past commerce connection, there is no connection to navigability. In addition, an internet search for Patua Hot Springs and the Fernley Wildlife Management area did not reveal any potential interstate commerce connections.

There are nine culvert crossings of ephemeral drainages and five "Pocket wetlands" associated with the culvert crossings. These crossings drain down into the Fernley Sink, which is an isolated basin. The pocket wetlands associated with the culvert crossings pond water around the culverts. There are also three wetland areas associated with the project area (W/L 1, 2, and 3). These wetlands are associated with the Fernley Sink and also drain into the closed basin. Figure 1 is a graphic representation of the drainage patterns within the Fernley Sink.

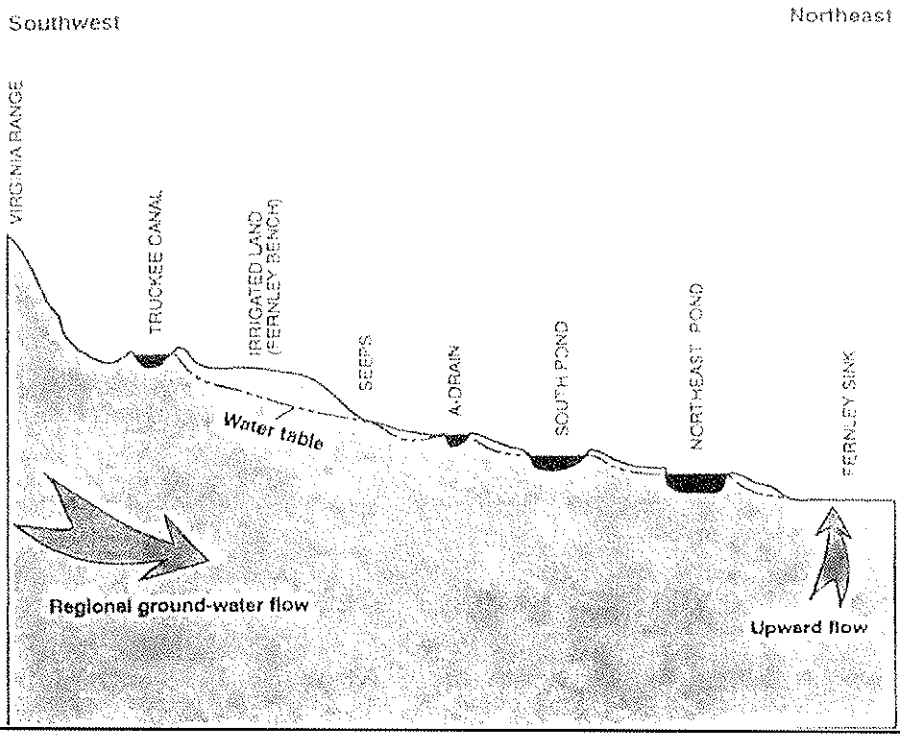

Figure 1: Schematic cross section showing relation of hydrologic features to topography in the southern part of the Fernley Basin. (From: Lico, M.S. 1992. Detailed Study of Irrigation Drainage in and near wildlife management areas, West-Central Nevada, 1987-1990. U.S. Geological Survey, Water Resources Investigations Report 92-4024A)

Fernley Sink is located in a closed hydrologic basin with no outlets and no tributary connections to Traditionally Navigable Waters. The Fernley Sink has both ground-water and surface water inflows. All surface water is provided by the Truckee River (a2 water) through seepage from the Truckee Canal. There is a network of surface drainages, part of which are assessed in this JD as Culvert Crossings 1-9, that receive water from surface run-off from storm events and from excess irrigation water. Topography in the Fernley Sink directs water flows to the Fernley Playa. Fernley Playa is located in a closed hydrologic basin, is not considered a Navigable-In-Fact waterway and has no connection to interstate commerce.

All of the drainages and wetlands associated with this project, Culvert Crossings 1-9, Pocket Wetlands 2-6 and Wetlands 1-3, drain directly into the Fernley Sink, which is an isolated, hydrographic basin with no surface water connections to any traditionally navigable waterways or A2 waters and are therefore, considered non-jurisdictional. The Truckee River is the nearest jurisdictional water (A2) and is approximately 13.0 miles from the project location and separated by the Forty Mile Desert.

Table of Drainages found within the project area:

Regulatory Action Type	Size	Cowardin	HGM
SPK-2010-01716 Culvert 1 (ISOLATE)	100 ft	R4SB2	RIVERINE
SPK-2010-01716 Culvert 2 (ISOLATE)	100 ft	R4SB2	RIVERINE
SPK-2010-01716 Culvert 3 (ISOLATE)	100 ft	R4SB2	RIVERINE
SPK-2010-01716 Culvert 4 (ISOLATE)	100 ft	R4SB2	RIVERINE
SPK-2010-01716 Culvert 5 (ISOLATE)	100 ft	R45B2	RIVERINE
SPK-2010-01716 Culvert 6 (ISOLATE)	100 ft	R4SB2	RIVERINE
SPK-2010-01716 Culvert 7 (ISOLATE)	100 ft	R4SB2	RIVERINE
SPK-2010-01716 Culvert 8 (ISOLATE)	100 ft	R4SB2	RIVERINE
SPK-2010-01716 Culvert 9 (ISOLATE)	100 ft	R4SB2	RIVERINE
Total Linear feet	900		
SPK-2010-01716 W/L 1 (ISOLATE)	29.75	PEM	DEPRESS
SPK-2010-01716 W/L 2 (ISOLATE)	298.52	PEM	DEPRESS
SPK-2010-01716 W/L 3 (ISOLATE)	14.87	PEM	DEPRESS
SPK-2010-01716 PW 2 (ISOLATE)	9.13	PEM	DEPRESS
SPK-2010-01716 PW 3 (ISOLATE)	10.97	PS5	DEPRESS
SPK-2010-01716 PW 4 (ISOLATE)	0.33	PSS	DEPRESS
SPK-2010-01716 PW 5 (ISOLATE)	1.63	PSS	DEPRESS
SPK-2010-01716 PW 6 (ISOLATE)	0.96	PEM	DEPRESS
Total Wetland Acres	366.16		

Watershed information from USGS. 1996.
(http://or.water.usgs.gov/reachfiles_dir/pnwcus.html) (Accessed 7/22/10)
SUBREGION 1605 -- CENTRAL LAHONTAN: THE CENTRAL LAHONTAN BASIN
CONSISTING OF THE CARSON, TRUCKEE, AND WALKER RIVER BASINS. CALIFORNIA, NEVADA.
AREA = 12500 SQ.MI.
ACCOUNTING UNIT 160501 -- TRUCKEE: THE TRUCKEE RIVER BASIN. CALIFORNIA, NEVADA.
AREA = 4710 SQ.MI.
CATALOGING UNITS 16050101 -- LAKE TAHOE. CALIFORNIA, NEVADA. AREA = 505 SQ.MI.
16050102 -- TRUCKEE. CALIFORNIA, NEVADA. AREA = 1190 SQ.MI.
16050103 -- PYRAMID-WINNEMUCCA LAKES. NEVADA. AREA = 1370 SQ.MI.
16050104 -- GRANITE SPRINGS VALLEY. NEVADA. Area = 1640 square miles

Figure 1: Location map

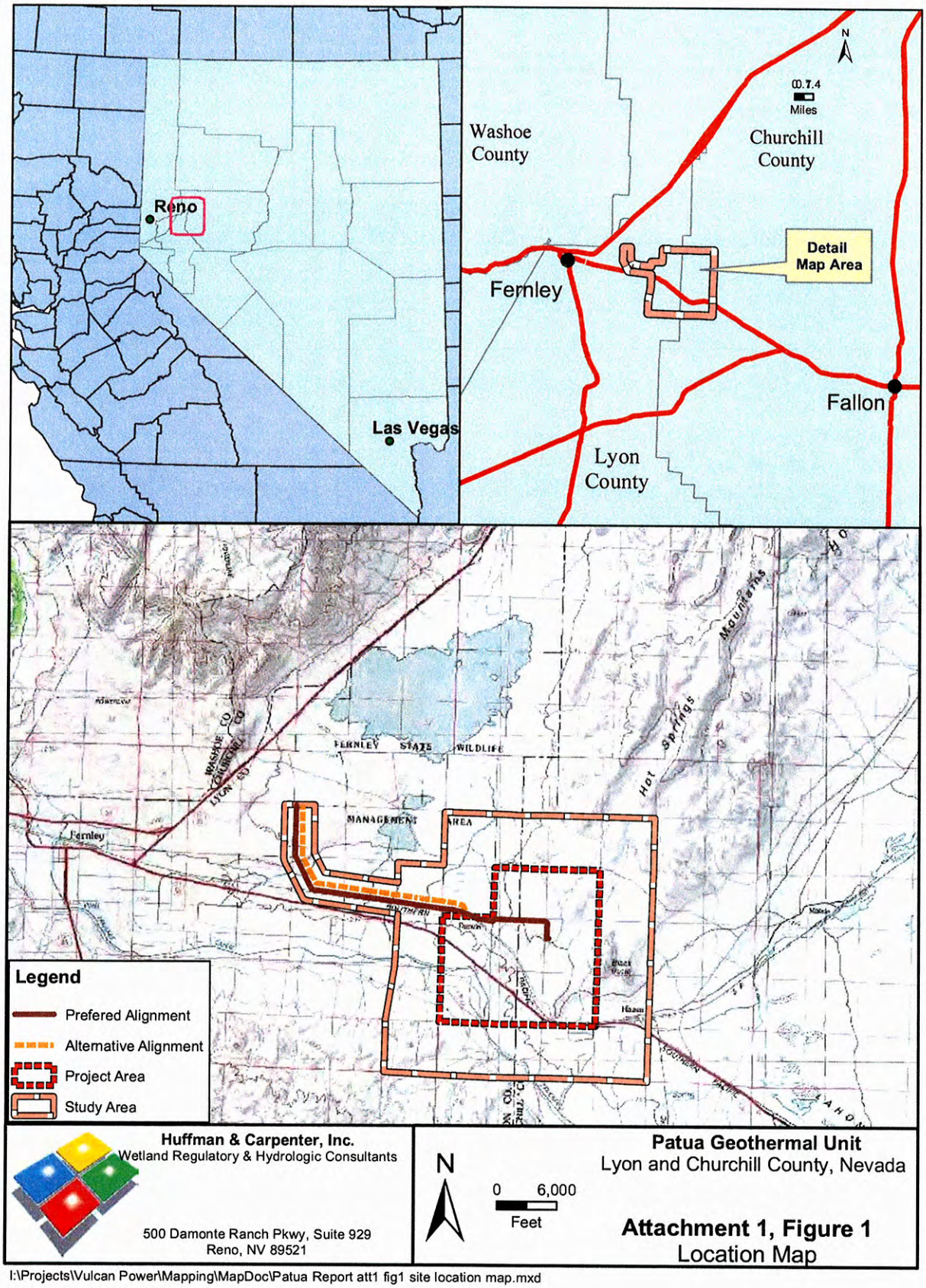

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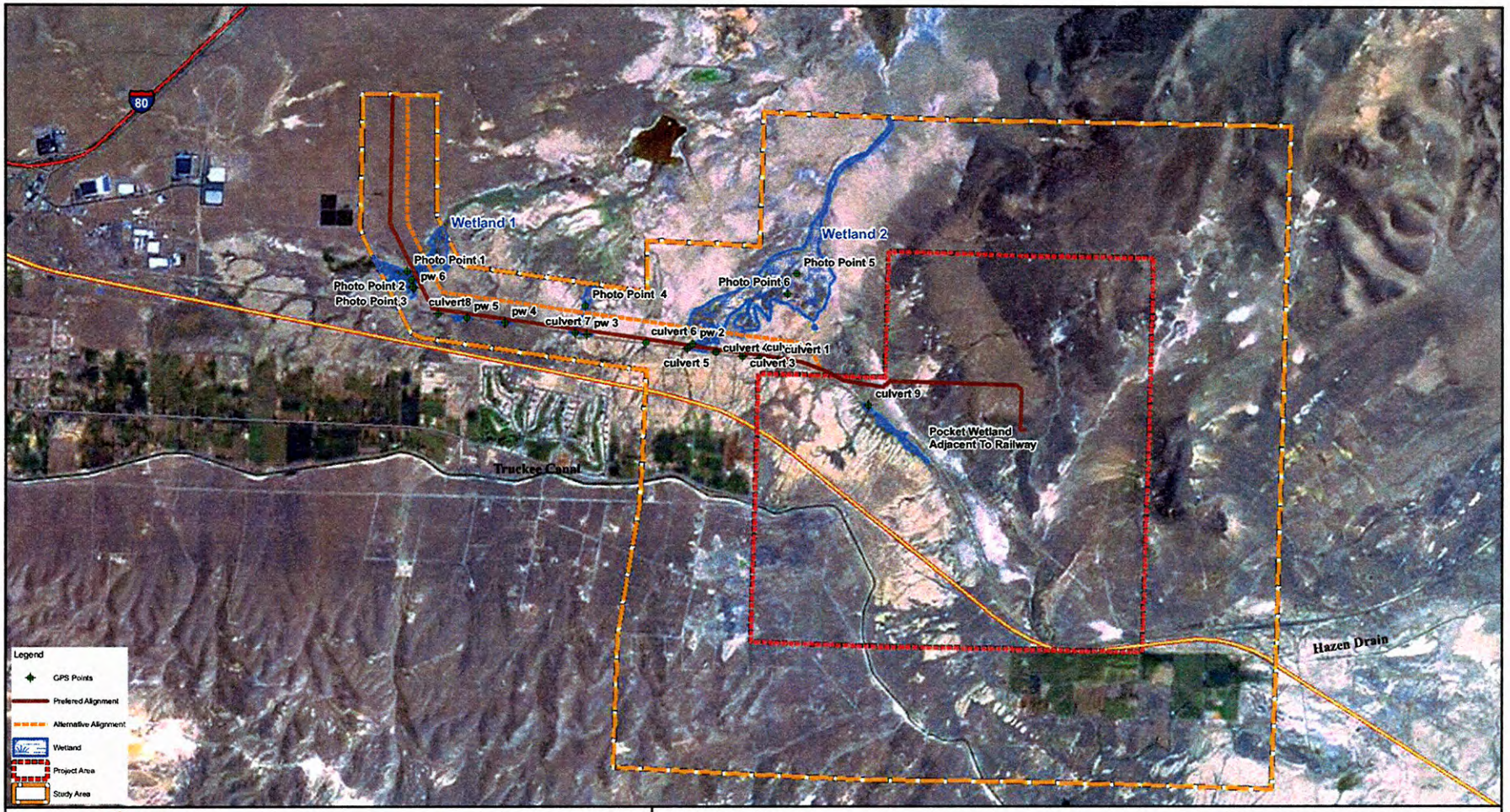
Figure 6: Overview of wetland areas



500 Damonte Ranch Pkwy, Suite 929
Reno, NV 89521 Tel: (775)8281991

Attachment 1, Figure 6
Wetland Areas Overview

Lyon & Churchill County, NV

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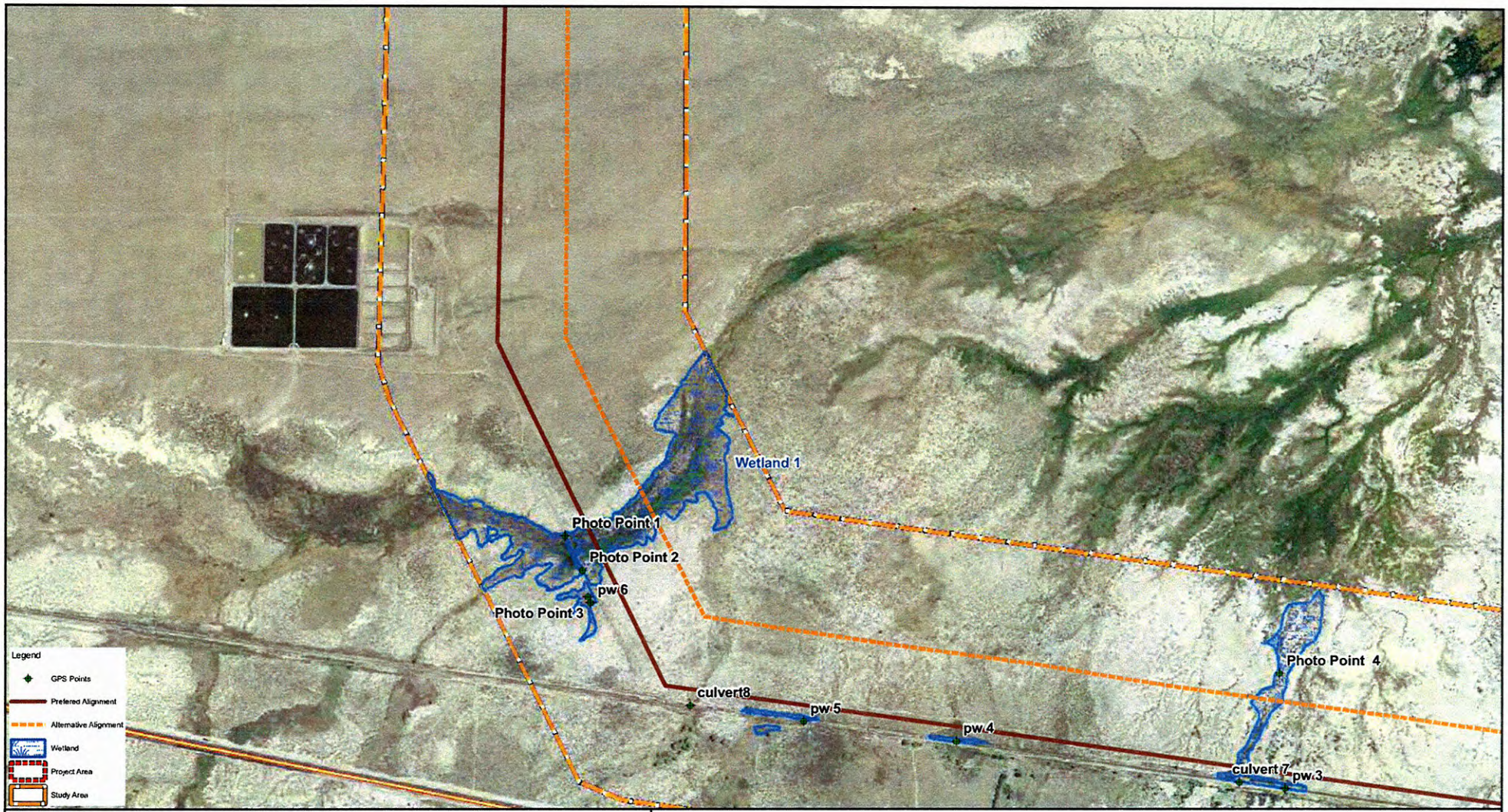
PW = Pocket wetlands associated with culverts

Figure 7_Wetland Areas West



Huffman & Carpenter Inc.

500 Damonte Ranch Pkwy, Suite 929
Reno, NV 89521

N

0 1,200

Feet

1 inch = 1,000 feet

Attachment 1, Figure 6a
Wetland Areas West

Lyon & Churchill County, NV

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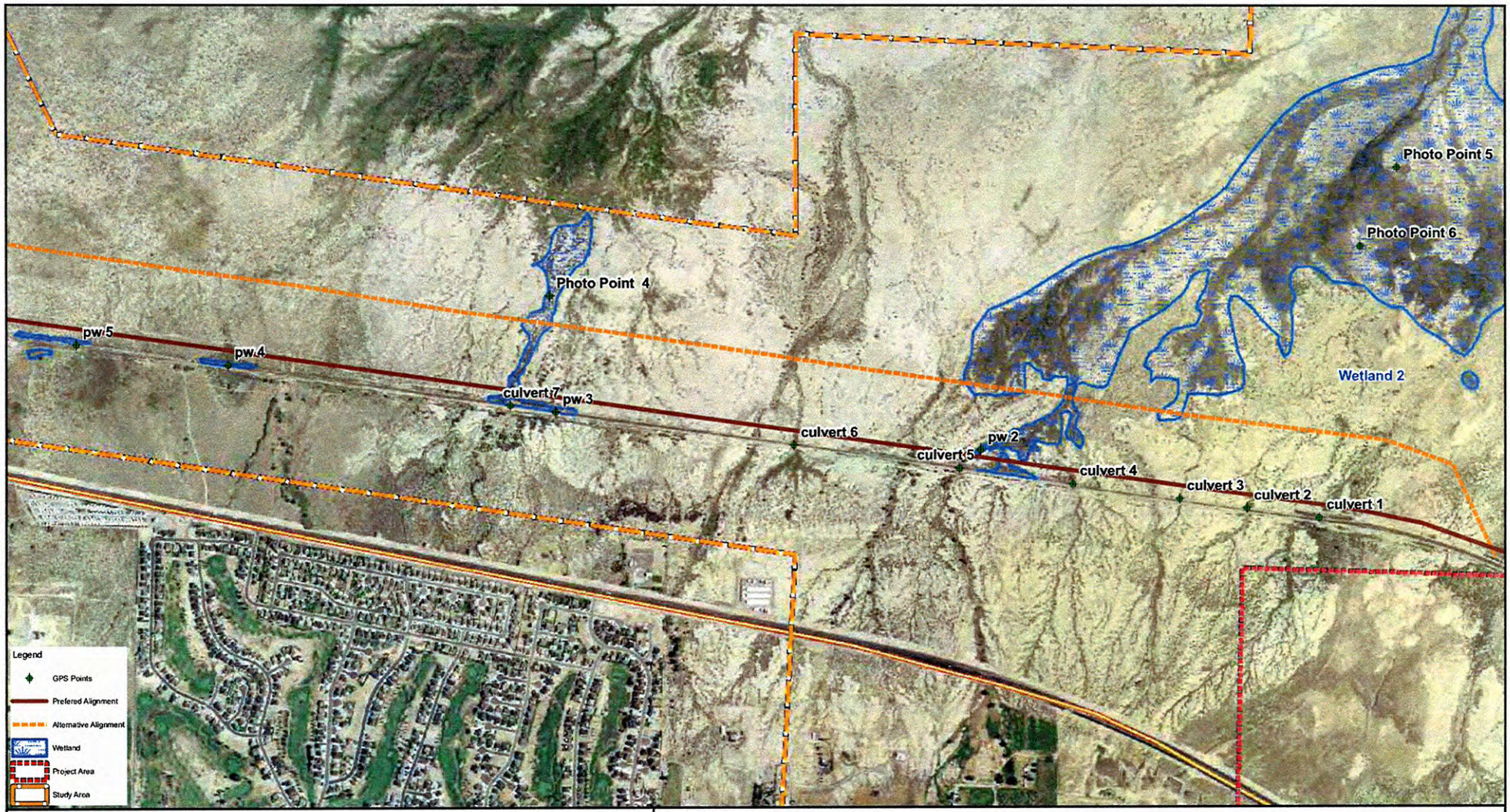
Figure 8_Wetland Areas Central



Huffman & Carpenter Inc.

500 Damonte Ranch Pkwy, Suite 929
Reno, NV 89521

N

0 1,200

Feet

1 inch = 1,000 feet

Attachment 1, Figure 6b
Wetland Areas Central

Lyon & Churchill County, NV

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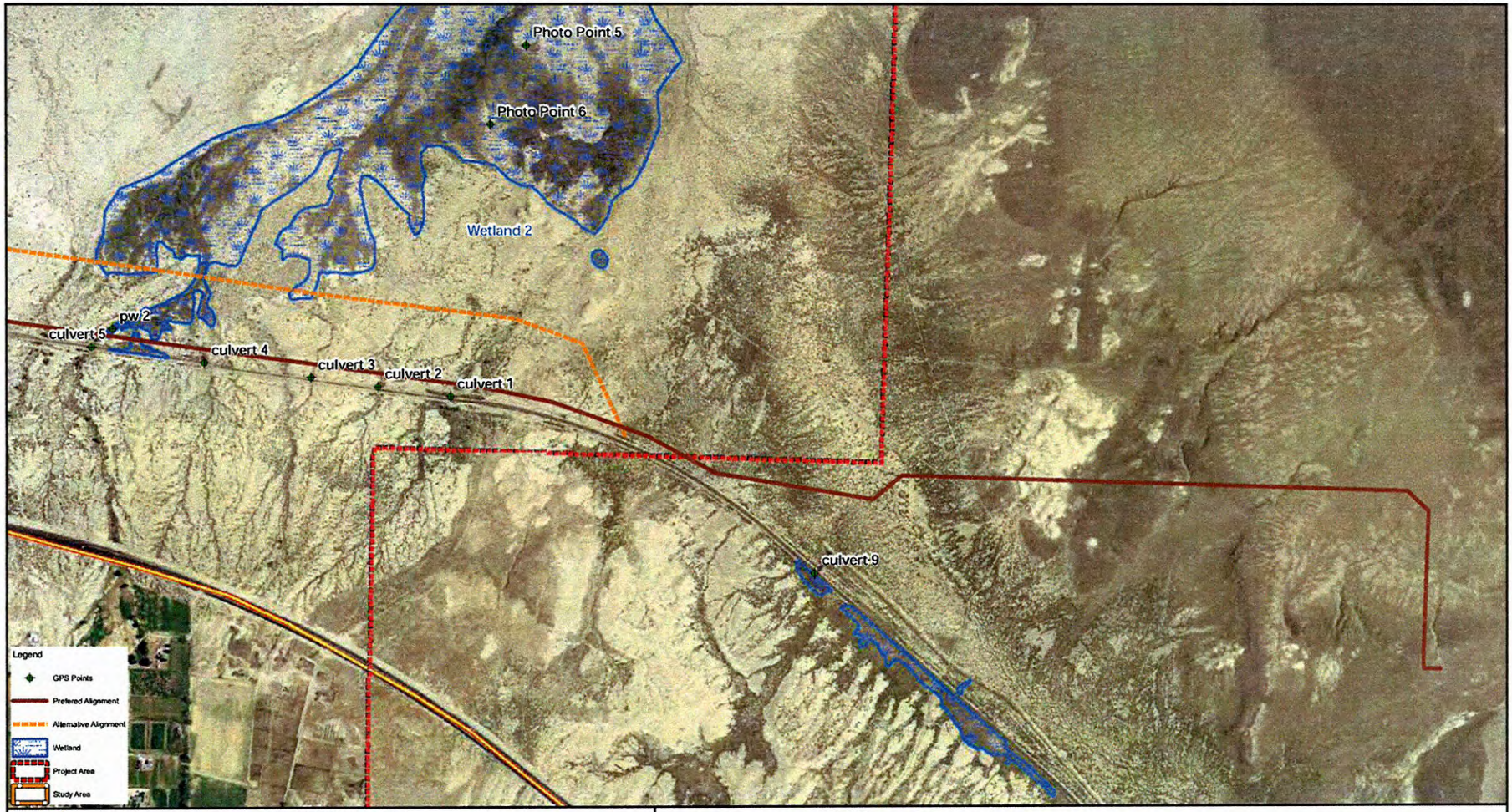


Huffman & Carpenter Inc.

500 Damonte Ranch Pkwy, Suite 929
Reno, NV 89521

N

0 1,200

Feet

1 inch = 1,000 feet

Attachment 1, Figure 6c
Wetland Areas East

Lyon & Churchill County, NV

I:\Projects\Vulcan Power\Mapping\MapDoc\Patua Report att1 fig6c Wetland Areas East.mxd - 11/19/2009 @ 1:41:39 PM

Figure 9_Photographs(a)

Photo points 1and 2: (Wetland 1) Fernley Wildlife Management Area, East of the City of Fernley, and South of the Fernley East Wastewater Treatment Facilities

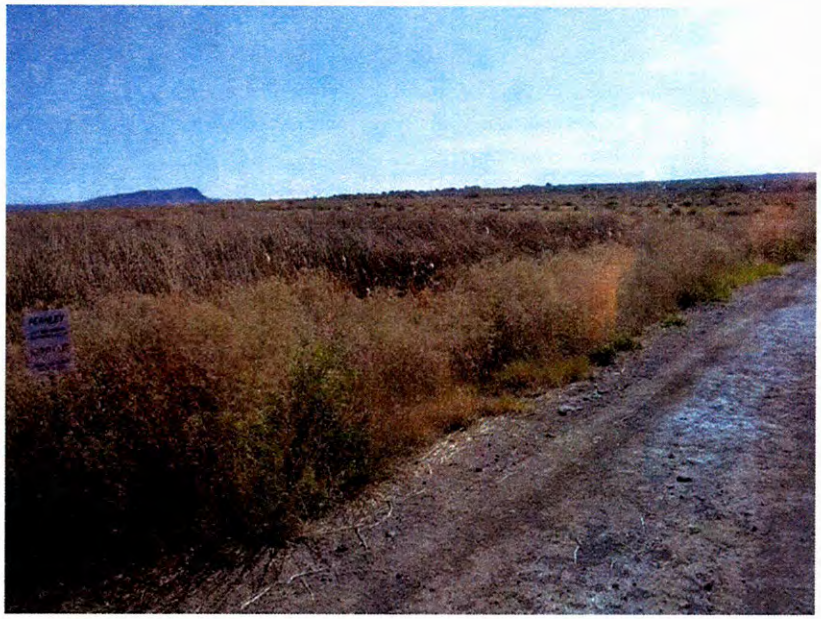


Figure 10_Photographs(b)

Photo Point 2: (Wetland 1) Fernley Wildlife Management Area, East of the City of Fernley, and South of the Fernley East Wastewater Treatment Facilities

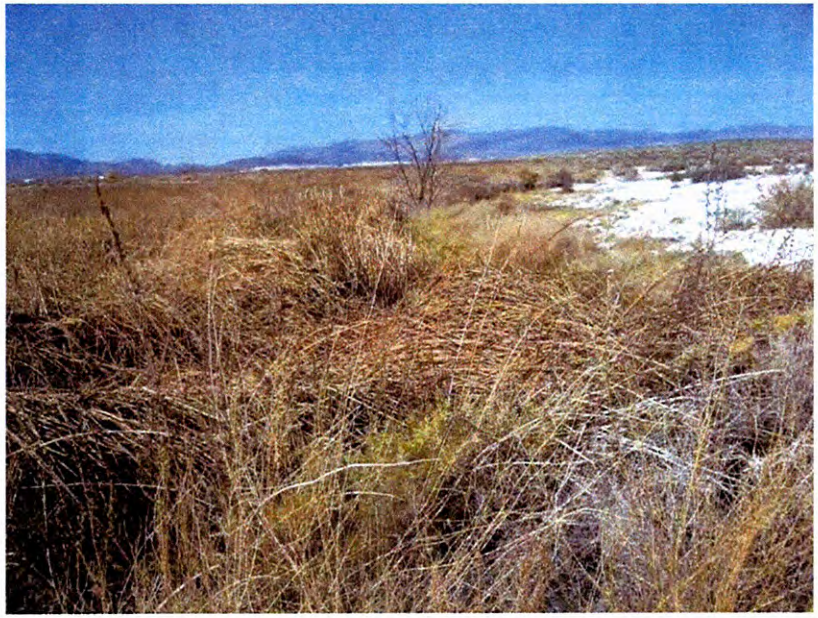


Figure 11_Photographs(c)

Photo Point 2: (Wetland 1) Fernley Wildlife Management Area, East of the City of Fernley, and South of the Fernley East Wastewater Treatment Facilities

Figure 12_Photographs(d)

Photo Point 3: (Wetland 1) Adjacent to Fernley Wildlife Management Area, East of the City of Fernley, and South of the Fernley East Wastewater Treatment Facilities

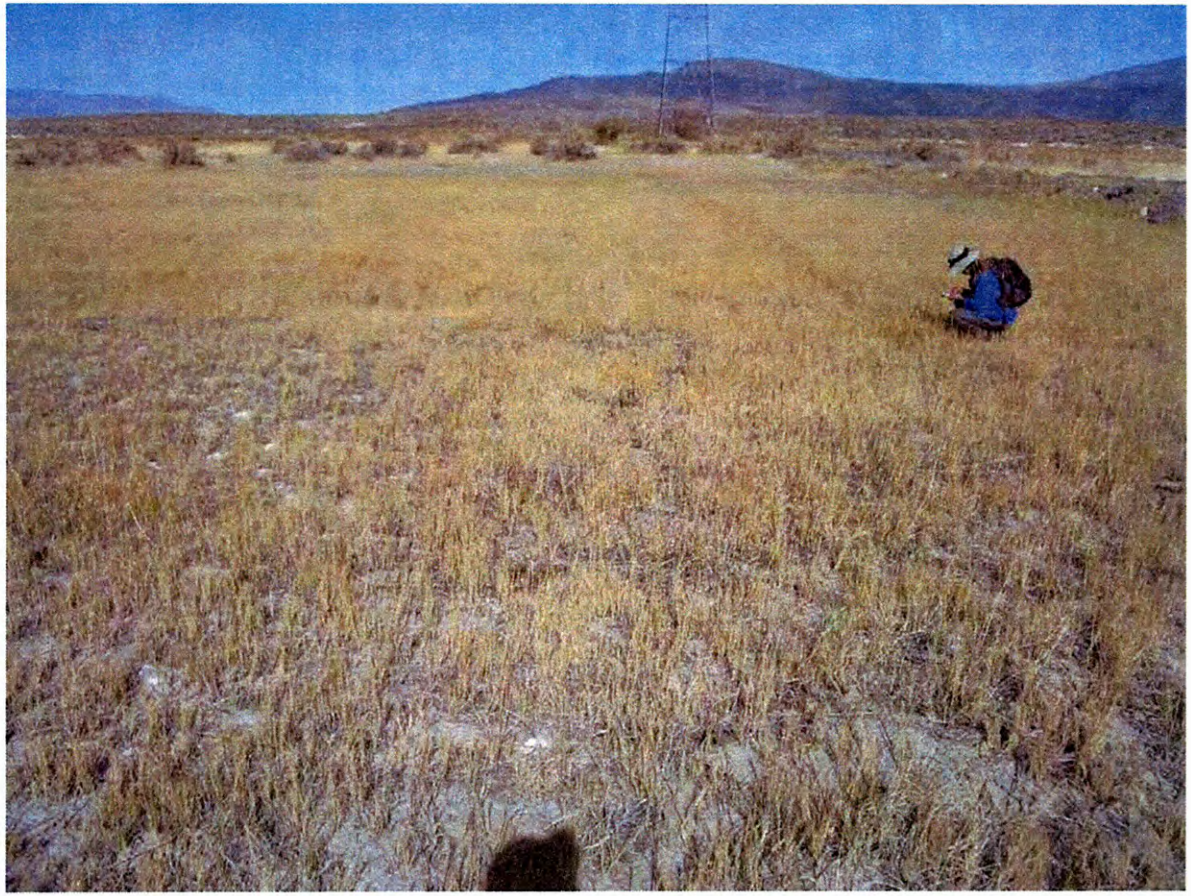
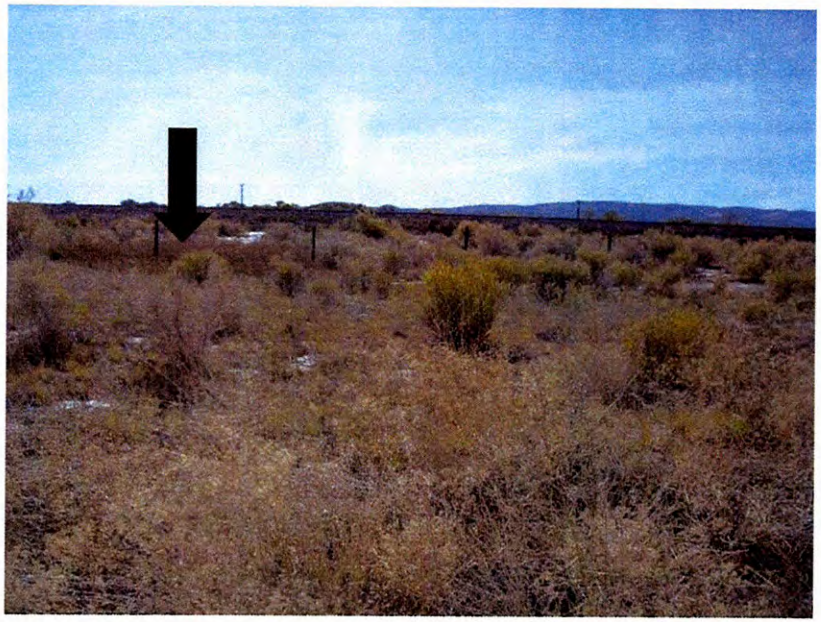


Figure 13_Photographs(e)

Photo Point 4: (Wetland 1) Adjacent to Fernley Wildlife Management Area, East of the City of Fernley, and South of the Fernley East Wastewater Treatment Facilities



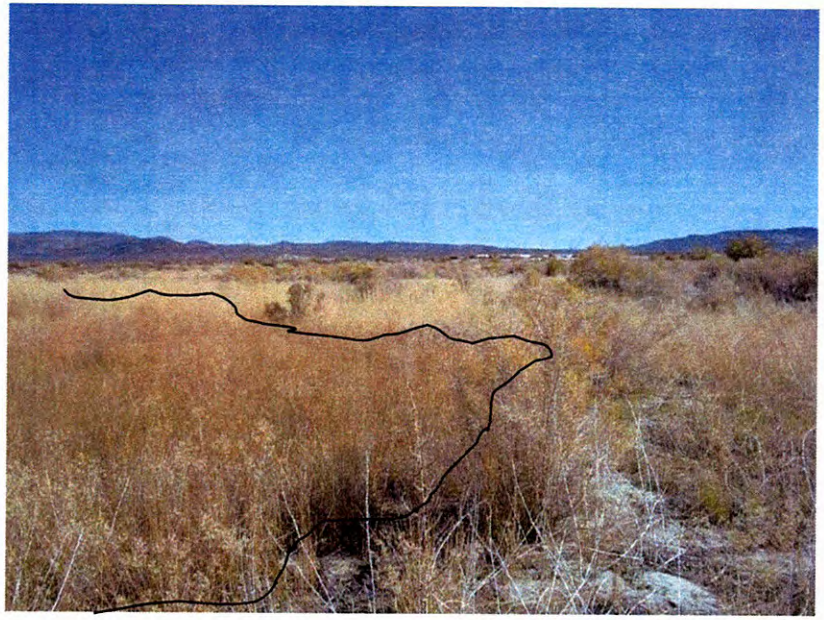


Figure 14_Photographs(f)

Photo Point 5: (Wetland 2) Hotsprings located throughout Wetland 2.

Figure 15_Photographs(g)

Photo Point 6: (Wetland 2) Hotsprings located throughout Wetland 2.

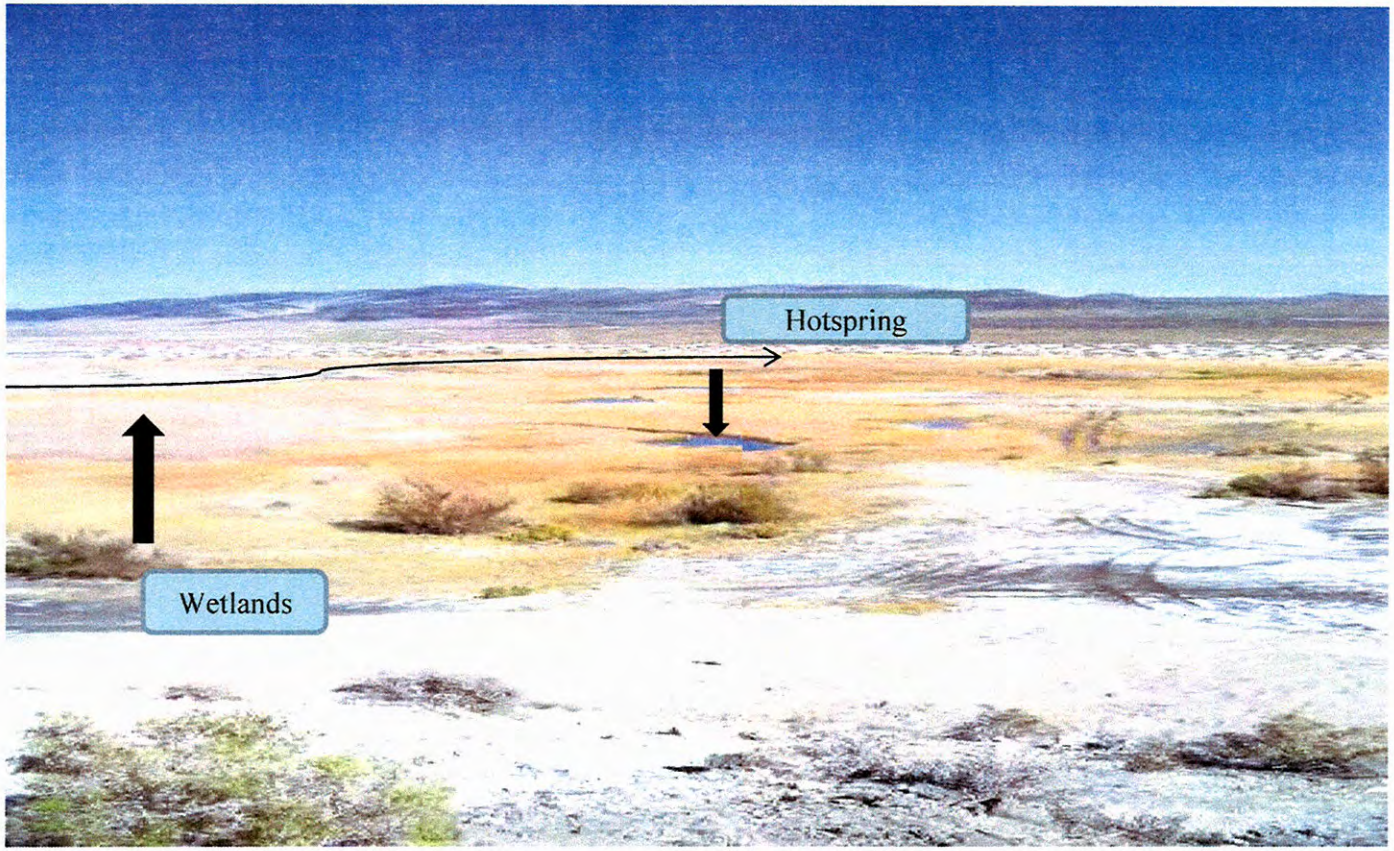


Figure 16_Photographs(h)

Culvert 1. Looking North

Culvert 2. Looking North

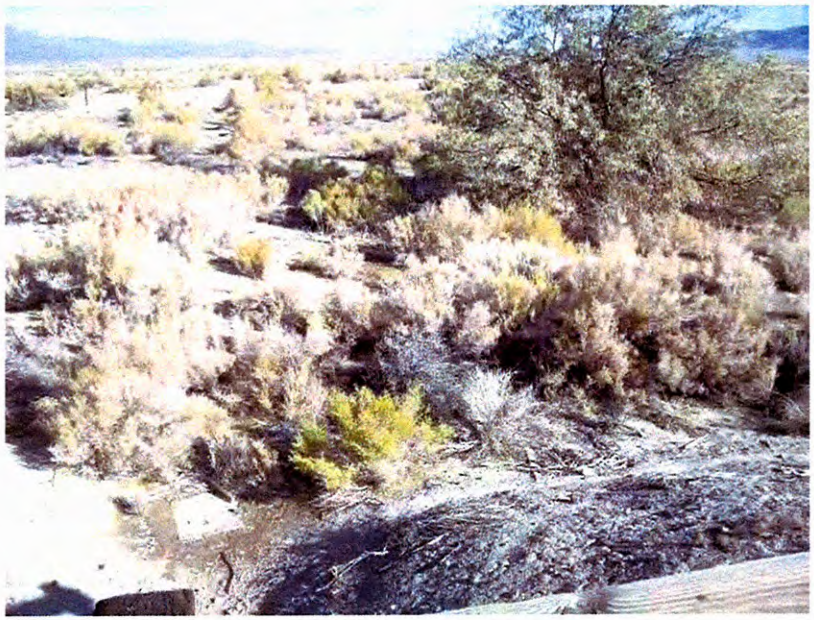
Figure 17_Photographs(i)

Culvert 3. Looking North

Culvert 4. Looking North

Figure 17_Photographs(j)

Culvert 5. Looking North



Culvert 6. Looking North

Figure 18_Photographs(k)

Culvert 7. Looking North

Road Culvert. Looking North

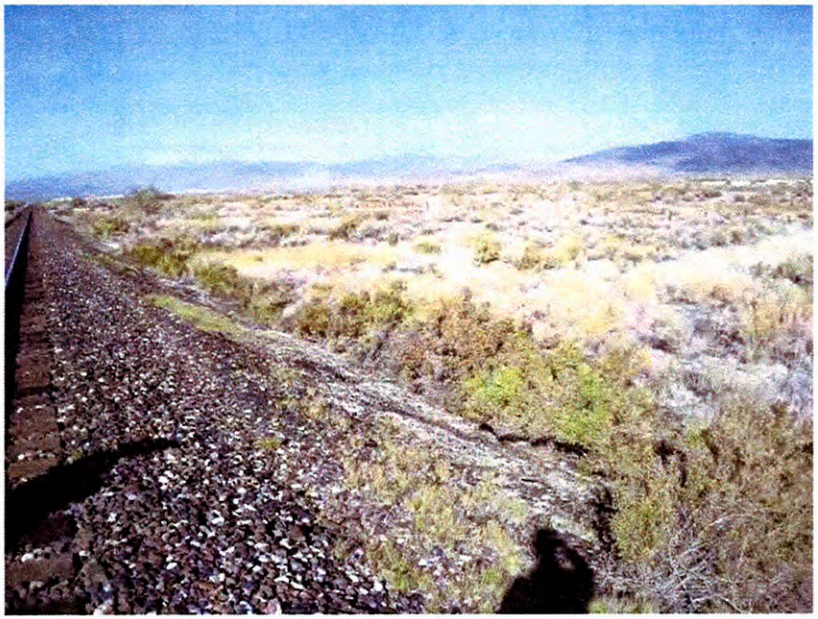
Figure 19_Photographs(I)

Culvert 8. Looking North

Culvert 9. Looking North

Figure 20_Photographs(m)

PW 2. Looking Northwest



PW3. Looking Northeast

Figure 21: Photographs(n)

PW 4. Looking Northwest

PW5. Looking Northwest

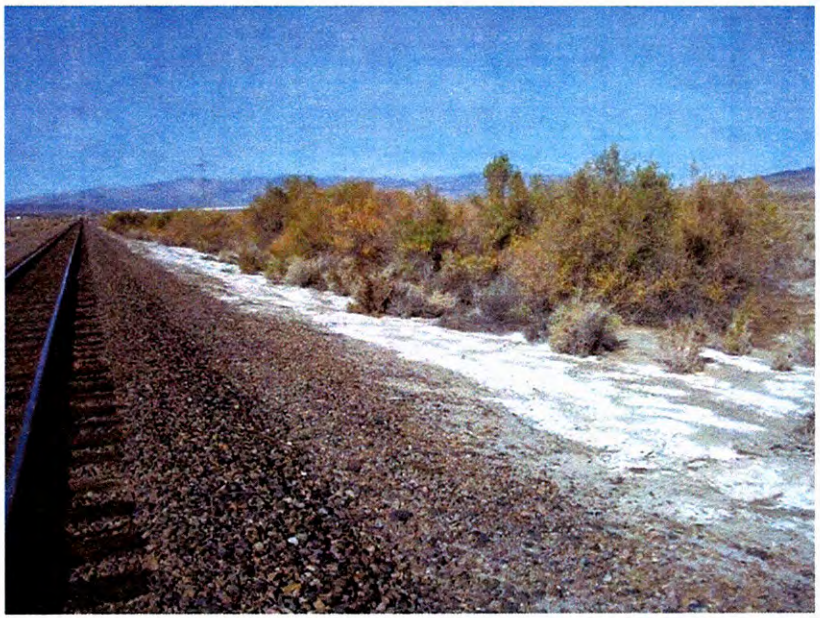
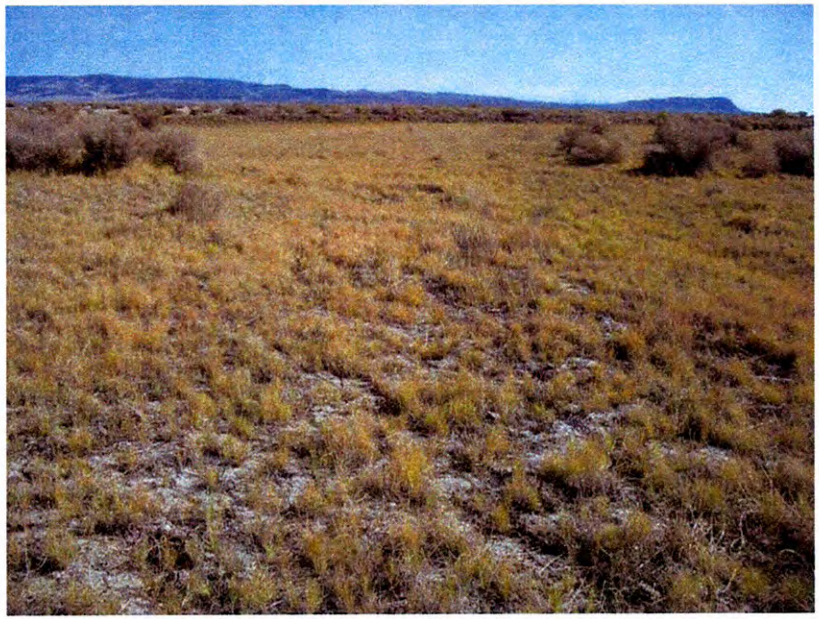


Figure 22

PW 6. Looking Northwest Bordering Wetland 1



PW7. Looking Southeast

Figure 23

Man-Made Ditch located North of Railroad Sections 10 and 20.