United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Schell Field Office
HC33 Box 33500 (702 N. Industrial Way)
Ely, Nevada 89301-9408
http://www.blm.gov/nv/st/en/fo/ely_field_office.html

TAKE PRIDE IN AMERICA

In Reply Refer to:
NVL-0200
N-84217

MAR 23 2009

Dear Reader,

The Southern Nevada Water Authority (SNWA) has requested a right-of-way grant to construct up to six groundwater wells and four access roads in Dry Lake Valley. The proposed wells would be used to conduct hydraulic testing in Dry Lake Valley. After completion of the testing, the wells would be used for groundwater monitoring.

The Bureau of Land Management (BLM) has prepared an Environmental Assessment (EA) to evaluate and consider potential environmental impacts and mitigation measures regarding the proposed right-of-way grant. Based on the findings of the EA and proposed mitigation as identified in the EA, BLM has concluded that approval of the proposed action will not result in significant environmental impacts.

There will be a 30 day comment period from the date this letter is received. The EA and Decision Record, Finding of No Significant Impact (DR FONSI) will also be posted on the Ely BLM website. To access the EA and DR FONSI on the web, the documents can be downloaded at: http://www.blm.gov/nv/. Click on the "Ely" District and choose the document you wish to download.

Persons wishing to provide BLM with comments may do so in writing to:

Bureau of Land Management
Attn: Brenda Linnell
HC 33 Box 33500
Ely, NV 89301
Phone (775) 289-1808

This decision may be appealed to the Interior Board of Land Appeals, Office of the Secretary, in accordance with the regulations contained in 43 CFR, Part 4 and the enclosed Form 1842-1. If an appeal is taken, your notice of appeal must be filed in this office (at the above address) within 30 days from receipt of this decision. The appellant has the burden of showing that the decision appealed from is in error.

If you wish to file a petition (request) pursuant to regulation 43 CFR 2801.10 or 43 CFR 2881.10 for a stay (suspension) of the effectiveness of this decision during the time that your appeal is being reviewed by the Board, the petition for a stay must accompany your notice of appeal. A petition for a stay is required to show sufficient justification based on the standards listed below. Copies of the notice of appeal and petition for a stay must also be submitted to each party named in this decision and to the

Interior Board of Land Appeals and to the appropriate Office of the Solicitor (see 43 CFR 4.413) at the same time the original documents are filed with this office. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted.

Standards for Obtaining a Stay

Except as otherwise provided by law or other pertinent regulation, a petition for a stay of a decision pending appeal shall show sufficient justification based on the following standards:

(1) The relative harm to the parties if the stay is granted or denied,
(2) The likelihood of the appellant's success on the merits,
(3) The likelihood of immediate and irreparable harm if the stay is not granted, and
(4) Whether the public interest favors granting the stay.

If you have any questions regarding these documents, please contact Brenda Linnell at (775) 289-1808 or e-mail to Brenda_Linnell@nv.blm.gov.

Sincerely,

Mary D'Aversa

Mary D'Aversa
Field Manager
Schell Field Manager

Enclosures
1. Form 1842-1
2. Mailing List

MAILING LIST FOR
SNWA DRY LAKE PROJECT
N-84217

Representative Dean Heller
405 Idaho Street
Suite 214
Elko, NV 89801

Representative Shelley Berkly
2340 Paseo Del Prado
Suite D-106
Las Vegas, NV 89102

Honorable John Ensign (R-NV)
United States Senate
Contact: Kevin Kirkeby, Rural Coordinator
600 E. William, Suite 304
Carson City, NV 89701

Senator Harry Reid
United States Senate
Contact: Rebecca Lambe, Regional Director
333 Las Vegas Blvd. South.
Las Vegas, NV 89101

Honorable Jim Gibbons (R-NV)
U.S. House of Representatives
Contact: Betty Jo Vonerheide, Rural Coordinator
491 4th Street
Elko, NV 89801

Southern Nevada Water Authority
1001 S. Valley View Blvd.
Las Vegas, NV 89107

Lincoln County Commissioners
Box 539
Pioche, NV 89043

Brad Hardenbrook
NDOW
Southern Region
4747 Vegas Dr.
Las Vegas, NV 89108

Katie Fite
Western Watersheds Project
PO Box 2863
Boise, ID 83701-2863

NDOW
Steve Foree
60 Youth Center Rd.
Elko, NV 89801

Friends of Nevada Wilderness
PO Box 9754
Reno, NV 89507

US Fish and Wildlife Service
1340 Financial Blvd.
Reno, NV 89502

Curtis Baughman
NDOW
1218 N. Alpha
Ely, NV 89301

Representative John Porter
2470 St. Rose Pkwy, Ste. 204
Henderson, NV 89074

U.S. Department of the Interior
Bureau of Land Management

EA No. NV-040-08-01
March 24, 2009

DRY LAKE VALLEY GROUNDWATER TESTING WELLS

Location:
Dry Lake Valley, Lincoln County, Nevada
Applicant/Address:
Southern Nevada Water Authority
Groundwater Resources Department
P.O. Box 99956
Las Vegas, Nevada 89193-9956

U.S. Department of the Interior
Bureau of Land Management
Ely District Office
Phone: (775) 289-1800
Fax: (775) 289-191

TABLE OF CONTENTS

PROJECT NAME 1
CASE FILE # 1
LEGAL DESCRIPTION 1
CASE TYPE 1
APPLICANT 1
I. INTRODUCTION 2
A. Background Information 2
B. Purpose and Need 2
C. Relationship to Planning 2
D. Issues 3
II. DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVE(S) 3
A. Proposed Action 3
1. Well Construction 5
2. Hydraulic Testing 6
3. Monitoring 8
4. Data Collection 8
5. Rights-of-Way Termination 9
6. Environmental Protection Measures 9
B. No Action Alternative 10
C. Alternatives Considered But Eliminated From Detailed Analysis 10
III. AFFECTED ENVIRONMENT 10
A. Mandatory Items for Consideration 10
B. Potentially Affected Resources 13
1. Air Quality 13
2. Cultural Resources 13
3. Geology and Minerals 15
4. Land Use 16
5. Migratory Birds of Conservation Concern 16
6. Native American Concerns 17
7. Non-native, Invasive Species and Noxious Weeds 18
8. Paleontological Resources 18
9. Range/ Livestock Grazing 19
10. Recreation 21
11. Soils 22
12. Special Status Species (Federally Listed, Proposed and Candidate Species; State Protected Species; and BLM Sensitive Species) 22
13. Vegetation 23
14. Visual Resource Management 24
15. Water Resources (Water Rights) 24
16. Wetlands / Riparian 25
17. Wild Horses and Burros 25
18. Wildlife 26

IV. ENVIRONMENTAL CONSEQUENCES 26
A. Proposed Action ..... 261. Air Quality 26
2. Cultural Resources 26
3. Geology and Minerals 27
4. Land Use 27
5. Migratory Birds of Conservation Concern 27
6. Native American Concerns 27
7. Non-native, Invasive Species and Noxious Weeds 27
8. Paleontological Resources 28
9. Range/ Livestock Grazing 28
10. Recreation 29
11. Soils 30
12. Special Status Species – (Federally Listed, Proposed and Candidate Species; State Protected Species; and BLM Sensitive Species) 30
13. Vegetation 30
14. Visual Resource Management 30
15. Water Resources (Water Rights) 31
16. Wetlands / Riparian Zones 31
17. Wild Horses and Burros 32
18. Wildlife 32
B. No Action Alternative 32
C. Cumulative Impacts 32
1. Past, Present and Reasonably Foreseeable Future Actions 33
2. Issues and Resource Values 34
D. Proposed Mitigation Measures 36
E. Suggested Monitoring 36
V. REFERENCES 36
VI. GLOSSARY 37
VII. LIST OF PREPARERS/ REVIEWERS 37

PROJECT NAME: Dry Lake Valley Testing/Groundwater Wells

CASE FILE #: N-84217

LEGAL DESCRIPTION: Mt. Diablo Meridian, Nevada
Permanent Right-of-Way

Site DRY5003X: W½ of the NE¼ of the NW¼ of Section 30, Township 3 North, Range 65 East. The well site would be 166 feet wide by 263 feet long.

Site DRY5004X and access road: SE¼ of the NE¼ of the SE¼ and NE¼ of the SE¼ of the SE¼ of Section 31, SW¼ of the NW¼ of the SW¼ and NW¼ of the SW¼ of the SW¼ of Section 32, Township 2 South, Range 65 East. The well site would be 209 feet wide by 209 feet long and the access road would be 15 feet wide by 421 feet long.

Site DRY5005X and access road: SE¼ of the NE¼ of the NW¼ and S½ of the NE¼ of the NW¼ of Section 32, Township 2 South, Range 65 East. The well site would be 209 feet wide by 209 feet long and the access road and culverts would be 15 feet wide by 358 feet long.

Site DRY5006X and access road: SE¼ of the SE¼ of the SE¼ of Section 8, Township 2 South, Range 65 East. The well site would be 209 feet wide by 209 feet long and the access road and culverts would be 15 feet wide and 258 feet long.

Site DRY5007X, access road, and culverts: SW¼ of the SW¼ of the SE¼, W½ of the SW¼ of the SE¼, S½ of NW¼ of the SE¼, NE¼ of NW¼ of the SE¼, and NW¼ of NE¼ of the SE¼ of Section 20, Township 5 North, Range 64 East. The well site would be 209 feet wide by 209 feet long and the access road and culverts would be 15 feet wide by 2,856 feet long.

Total acres = 5.0 acres for well sites and 1.57 acres for access roads and culverts

Temporary Right-of-Way
Site DRY5003X: NE¼ of the NW¼ of Section 30, Township 3 North, Range 65 East. Dimensions of well site would be 330 feet wide by 330 feet long.

Site DRY5004X: SE¼ of the NE¼ of the SE¼ and NE¼ of the SE¼ of the SE¼ of Section 31, SW¼ of the NW¼ of the SW¼ and NW¼ of the SW¼ of the SW¼ of Section 32, Township 2 South, Range 65 East. Dimensions of the well site would be 330 feet wide by 330 feet long.

Site DRY5005X: SE¼ of the NE¼ of the NW¼ and SW¼ of the NW¼ of the NE¼ of Section 32, Township 2 South, Range 65 East. The well site would be 330 feet wide by 330 feet long.

Site DRY5006X: SE¼ of the SE¼ of the SE¼ of Section 8, Township 2 South, Range 65 East. The well site would be 330 feet wide by 330 feet long.

Site DRY5007X: SW¼ of the SW¼ of the SE¼ of Section 20, Township 5 North, Range 64 East. The well site would be 330 feet wide by 330 feet long.

Total acres = 7.5 acres for well sites

CASE TYPE: Federal Land Policy and Management Act Title V Section 501, Right-of-way

APPLICANT: Southern Nevada Water Authority

I. INTRODUCTION

A. Background Information

The Southern Nevada Water Authority (SNWA) has applied for rights-of-way (ROWs) to construct five or six groundwater wells and four access roads in Dry Lake Valley (Proposed Action). The application was originally submitted on October 9, 2007, and later amended on February 26 and May 30, 2008, to reflect this current project description. The proposed wells would be used to conduct hydraulic testing in Dry Lake Valley. After the completion of the testing, the wells would be used for groundwater monitoring. A permanent ROW grant, with a term of 30 years, and a temporary ROW grant, with a term of 2 years, is requested.

The Proposed Action would be located entirely on public land managed by the Bureau of Land Management (BLM). Each well site would be approximately 1.0 acre of permanent ROW and approximately 1.5 acres of temporary ROW. The total permanent ROW required for the access roads would be approximately 1.57 acres. Therefore, the total permanent ROW for the Proposed Action would be approximately 6.57 acres and the total temporary ROW would be approximately 7.5 acres. Maps and site photographs are provided in Attachment 1.

B. Purpose and Need

There is limited hydraulic testing information available in Dry Lake Valley. SNWA has proposed to construct new groundwater wells to gain information on aquifer properties, including transmissivity storage parameters and hydraulic conductivity.

The purpose and need for the Proposed Action is to provide public land for the construction of groundwater wells which would allow a better understanding of the carbonate and alluvial aquifers in this area. The data attained would be available to assist Federal, state, and local agencies in their current and future decision making in groundwater modeling analyses and impact assessments.

C. Relationship to Planning

The issuance of a ROW for the Proposed Action is in conformance with the following plan:

- Ely District Record of Decision and Approved Resource Management Plan (RMP) (August 2008) states the following:

  > *Land use authorizations (rights-of-way, permits, leases, easements, and unauthorized use) would be issued on a case-by-case basis.*

The issuance of a ROW for the Proposed Action is consistent with the terms, conditions, and decisions of the following documents:

- Master Plan for Lincoln County, Nevada (Adopted September 2007). The following policy standards are identified:

  > *CNR-1G: Proposed development should be designed to be compatible with riparian areas and playas to protect wildlife habitat, floodways, water quality and quantity and scenic values. New development should be consistent with adopted guidelines.*

CNR-*1M: New ground disturbance within designated habitat for endangered or threatened species areas of Lincoln County will require consultation by the applicant with affected agencies for any required conservation measures. This applies to all designated habitat areas and species either included or excluded in the Lincoln County Habitat Conservation Plan.*

- Title V of the Federal Land Policy and Management Act (1976) states the following:

  The Secretary, with respect to public lands and, the Secretary of Agriculture, with respect to lands within the National Forest System, are authorized to grant, issue, or renew right-of-way over, upon, under, or through such lands for – (7) such other necessary transportation of other systems of facilities which are in the public interest and which require rights-of-way over, upon, under, or through such lands.

D. Issues

The Ely and Caliente Field Offices National Environmental Policy Act (NEPA) Review Interdisciplinary Team reviewed the Proposed Action, and no specific issues were identified.

II. DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVE(S)

A. Proposed Action

The BLM proposes to issue SNWA a ROW grant for the purpose of constructing up to six groundwater wells within five 2.5 acre (each consisting of 1.0 acre permanent and 1.5 acre temporary) site locations in Dry Lake Valley. One groundwater well would be located at each site location for four of the sites and up to two groundwater wells would be located at the fifth site. The well sites were selected based upon proximity to hydrographic basin boundaries and geologic features, likely access to subsurface carbonate and alluvium rocks, and the ability to use existing access roads. The wells would be drilled to between 1,280 and 1,410 feet in depth, with the final depth dependant upon actual groundwater levels. The groundwater wells would be up to 20 inches in diameter. The permanent ROW for site DRY5003X would be 166 feet wide by 263 feet long. For the four sites, DRY5004X, DRY5005X, DRY5006X, and DRY5007X, the permanent ROW would be 209 feet wide by 209 feet long. The dimensions for the temporary ROW would be 330 feet wide by 330 feet long for sites DRY5003X, DRY5004X, DRY5005X, DRY5006X, and DRY5007X.

The groundwater wells would be drilled for the purpose of collecting hydraulic information in Dry Lake Valley. Approval of these wells for groundwater production is not part of the Proposed Action, although the wells may provide information that would assist with the siting of future groundwater production facilities. Any use of these wells other than for monitoring and testing would require separate authorization from the BLM, as well as any other necessary facilities including power supply, pipeline, and well equipping

Access to the well sites would be from both existing roads and new access roads. Site DRY5003X is located adjacent to an existing dirt road. Access to the site would be from this existing road and no road improvements are anticipated. Site DRY5004X is located within the vicinity of an existing dirt road. From the existing dirt road, approximately 421 feet of new access road would be needed to the site. The new access road may require grading, fill, and possibly installation of culverts. The access road would be 15 feet wide, therefore encompassing a total of 0.14 acre. Site DRY5005X is located within the vicinity of an existing dirt road. From the existing dirt road, approximately 308 feet of new access road would be needed to the site. The new access road may require grading and fill. At the intersection between the existing dirt road and the new access road a culvert may be installed in order to divert hydraulic testing discharge flows under the road, through the culvert, and into a natural wash. The installation of the culvert would require approximately an additional 50 feet in length to cross the road and install the culvert on the west side. Therefore, the entire length of the access road, including the culvert, would be 358 feet. The access road and culvert would be 15 feet wide, for a total of 0.12 acre. Site DRY5006X is located within the vicinity of an existing dirt road. From the existing dirt road, approximately 208 feet of new access road would be needed to the site. The new access road may require grading and fill. At the intersection between the existing dirt road and the new access road a culvert may be installed in order to divert hydraulic testing discharge flows under the road, through the culvert, and into a natural wash. The installation of the culvert would require an additional 50 feet in length to cross the road and install the culvert on the west side. Therefore, the entire length of the access road, including the culvert, would be 258 feet. The access road and culvert would be 15 feet wide, for a total of 0.09 acre. Site DRY5007X is located adjacent to an existing dirt road which would provide access to the site. Improvements to the existing dirt road are anticipated. The access road would be approximately 2,856 feet long and need to be widened to 15 feet and potentially graded and filled in some areas for a total of 0.98 acre. The installation of up to four culverts would be required. Each culvert would require approximately 50 feet by 50 feet of disturbance outside the road width for construction and maintenance, for a total of 0.24 acre. Therefore, the total acreage for the access road and culverts would total approximately 1.57 acres. The Proposed Action encompasses approximately 6.57 acres of permanent ROW and 7.5 acres of temporary ROW.

Improvements to other existing roads that would be traveled on to get to the proposed access roads are not anticipated to be needed for the Proposed Action. However, if an existing road requires repairs or stabilization, any activities would be confined to the existing road boundaries. Stabilization, if needed, could include use of gravel, dirt, or straw fill of ruts or unstable surfaces. Any organic materials used would be certified weed-free. If fill is required, clean fill would be used from a site free of noxious or invasive weeds. Grading of existing roads, except where identified, is not anticipated to be necessary, but if needed in localized areas would be confined to the existing road area.

The Proposed Action would comply with State of Nevada regulations. Well drilling permits would be obtained from the Nevada Division of Water Resources, Office of the State Engineer (State Engineer). A permit from the Nevada Division of Environmental Protection, Bureau of Water Pollution Control would be obtained for temporary discharge of groundwater during the hydraulic testing. Well abandonment and plugging would be in accordance with the Nevada Division of Water Resources requirements, set forth in the Nevada Administrative Code, sections 534.420 and 534.4365.

1. Well Construction

Prior to the initiation of construction, the boundaries of the Proposed Action would be staked. No ground disturbance would occur outside of the designated sites. Existing vegetation, primarily sagebrush scrub, would be crushed rather than bladed wherever possible. Blading to level work areas would be kept to the minimum necessary, and topsoil and vegetation that are scraped would be stockpiled within the site and re-spread at the completion of construction. Water would be applied as needed for dust suppression during any earthmoving activities. In the event that bedrock is encountered during the creation of a drilling pad, blasting and fill may be required. If blasting is necessary, all required permits would be obtained and the BLM would be notified in advance of any blasting activity. If fill is required during construction of the pad or during restoration as a result of blasting, clean fill would be used from a site free of noxious or invasive weeds.

Well sites DRY5003X, DRY5004X, DRY5005X, and DRY5006X are all located in areas of carbonate bedrock and DRY5007X is located in an alluvial area. A 12-inch diameter well would be installed at each of the sites and hydraulic testing would occur. If the results of the tests indicate that more extensive hydraulic testing can be conducted, the existing wells at sites DRY5003X, DRY5004X, DRY5005X, and DRY5006X would be converted from a 12-inch diameter well to a 20-inch diameter well in order to accommodate the second round of hydraulic testing. If initial testing for sites DRY5003X, DRY5004X, DRY5005X, and DRY5006X does not indicate more extensive testing is possible, the size of the wells would not be increased. For the DRY5007X site, a second 20-inch diameter well would be installed within the 1.0 acre permanent ROW area. The casing of the 12-inch well cannot be replaced with 20-inch casing while maintaining the borehole integrity due to the geologic setting. If the initial testing for site DRY5007X does not indicate more extensive testing is possible, the second well would not be installed.

Construction of the groundwater wells is anticipated to begin in the third quarter of 2008. Each well would require approximately 30 days for drilling and initial well development. Drilling activities would occur on a 12-24 hours/7 days-a-week basis. Equipment used to construct the wells would include a self-contained drilling rig, front loader/backhoe, flat bed trailer for bringing pipe and well casing material to the site, a water tanker, settling tank for containing drilling fluids, and pick-up trucks. A small construction trailer and portable restroom would also temporarily be located on-site during drilling and removed after construction.

Since construction would be occurring up to 24 hours a day, lighting needed to conduct drilling operations at night would be limited to the basic requirements to conduct the work. Lighting would be shielded, and directed down towards the site and not into surrounding areas or onto roads.

A minimal amount of water would be generated during well drilling. The volume would depend upon subsurface conditions, but is anticipated to be less than 250 gallons per minute (gpm). Because of the limited duration and rate of discharge, temporary discharge permits from the Nevada Division of Environmental Protection, Bureau of Water Pollution Control are not anticipated to be required for the drilling operation (permits are not required if discharge is less than 250 gpm and 48 hours in duration); temporary discharge permits would be required for the hydraulic testing, as described below. Any water generated during drilling would be contained in a small (typically approximately 50 square feet) lined settling pit on-site or a tank,

to allow the drill cuttings and sediment to settle and drop out of suspension. The settling pits would be located adjacent to the drill rig (within the ROW) and dug with a front-end loader. After settling, the remaining water would be directed to flow into the natural drainage network around the site. Discharged water is not anticipated to extend more than 100 to 200 feet beyond the site, and would be directed to avoid existing roads. No hazardous or toxic substances would be released.

A SNWA monitor, or SNWA contractor, would be present daily during well construction to ensure compliance with ROW boundaries and other ROW grant conditions. Water needed for drilling operations during construction would be brought to each site by the drilling contractor. Pursuant to Nevada Revised Statute 534.050(4) adopted under SB 275, water may be withdrawn from the developed wells and used for drilling operations at the remaining well sites.

At the completion of construction, the settling pits would be re-filled with the on-site excavated materials. Drill cuttings and other sediments generated during drilling would be scattered around the well site in order to blend into the surrounding area. Stockpiled brush and topsoil would be re-spread over the site, and the ground surface would be left rough-graded. At the surface, the completed wells at sites DRY5003X, DRY5004X, DRY5005X, and DRY5006X would consist of either a 12 or 20-inch diameter capped steel casing approximately 2 to 4 feet high. At the surface of site DRY5007X, the completed well(s) would consist of either a 12-inch or a 12-inch and a 20-inch diameter capped steel casing each approximately 2 to 4 feet high. The wells would be a shade of gray or tan selected to conform to the surrounding landscape at each site. No equipment would be left on-site. If desired in the future, a small instrument housing may be attached to the wells .to house telemetry real time transmission equipment. An eight to ten feet tall transmission antenna staked to the ground next to the instrument housing would be installed to allow transmission.

Seeding would be conducted to maintain native plant composition and provide cover to stabilize soils and the watershed. A seed mixture would be applied to the disturbed areas within the sites at the completion of construction, with the exception of a small area for access around each well. The seed mixture would consist of Indian rice grass (*Oryzopsis hymenoides*) and annual rye grass (*Lolium multiflorum*) at 10 pounds per acre (ratio at 7:3lbs/acre) based upon 2008 field surveys. The seed would be applied in late fall or winter to increase potential success of germination. The seeding mixture would be approved by the BLM prior to restoration efforts based on seed availability and price and would be certified weed-free.

Well construction activities are anticipated to be completed by the second quarter of 2009.

2. Hydraulic Testing

The pumping unit shall be powered by a portable diesel engine generator, either trailer-mounted or on the bed of a truck. In addition to the drilling crew, a hydrologist would be present on-site for the duration of the hydraulic testing. BLM would be notified two days in advance of the hydraulic testing.

For the 12-inch groundwater wells hydraulic testing would include a pump development test, step-drawdown tests, and an 8 to 72-hour continuous aquifer test. Pump development includes pumping the well at increasing rates from 200 to 3,500 gpm to ensure the well is free of residual drilling effluent and the formation is fully developed. The step-drawdown test

involves pumping at different rates over a 12-hour period, while measuring water level changes. The groundwater discharge rate would be up to 3,500 gpm. The step-drawdown test is anticipated to last about one day at each well. For the continuous aquifer test, a submersible pump would be lowered into the well, to approximately 200-250 feet below the static water level. Groundwater would be continuously pumped for 8 to72 hours at a constant rate of up to 3,500 gpm. The total volume of water that may be discharged at each of the 12-inch wells during the hydraulic testing could range between 10 and 25 million gallons.

If the results of testing the 12-inch groundwater wells demonstrate that more extensive hydraulic testing can be conducted, either the 12-inch groundwater wells would be converted to 20-inch groundwater wells or a new 20-inch groundwater well would be installed. Hydraulic testing at the 20-inch groundwater wells would consist of pump development, a 12-hour step-drawdown test, and a 120-hour constant rate test. The pumps would be capable of pumping at discharge ranges between 1,000 gpm and 3,500 gpm. The total volume of water that may be discharged from each well during the second round of hydraulic testing could range between 30 and 40 million gallons.

A temporary discharge permit(s) for the hydraulic testing would be obtained from the Nevada Division of Environmental Protection, Bureau of Water Pollution Control. Water generated during the tests would be discharged into the natural drainage network around the site. A certified weed-free energy dissipater or other erosion control measures would be used to reduce discharge rates to prevent scouring. The discharged water would rapidly evaporate or percolate into the alluvial sediments in the area. No long-term ponding of water would result from the tests.

Additionally, infiltration tests may be conducted in the natural drainage channels while the water is being discharged. The infiltration tests would determine the volume of water lost over a certain area. SNWA hydrologists would determine if these tests are applicable while they are conducting hydraulic tests, dependant on site conditions. The tests would consist of measuring the discharge at several points, using stream gauging techniques and a flume. The stream gauging measurements would involve wading across the channel and taking measurements using a pygmy meter. The infiltration tests involving flume measurements would consist of installing a small portable flume at several locations along the discharge channel. Once the flume is placed in the channel, sand bags and dirt (both weed-free) would be placed around the flume to direct water into the apparatus. After the measurements are collected, the flume, sand bags, and dirt would be removed leaving the drainage channel in its original condition.

The discharged water would be directed to avoid existing roads and would not impact existing travel routes. Anticipated drainage for discharge water from each well site has been identified as follows:

<u>Site DRY5003X:</u> Water would be directed into natural washes on the north and/or south side of the site. Water in the washes run in a generally western direction. Coyote Wash is located approximately 4 miles southwest of the site. It is not anticipated that the runoff from the hydraulic testing would reach Coyote Wash due to the distance.

<u>Site DRY5004X:</u> Water would be directed into a natural wash that runs generally southwest toward the Dry Lake Valley floor where it would dissipate.

Site DRY5005X: Water from the well would be pumped into a pipe that would be laid along the access road. At the intersection of the access road and the existing dirt road (west of the well site), the pipeline would either be buried or a culvert would be installed. The pipeline would extend beyond the existing dirt road and the water would be directed into a natural wash that runs generally southwest toward the Dry Lake Valley floor where it would dissipate. Once the hydraulic tests are complete, the pipe would be removed and the road would be restored to its original condition. However, if the culvert is installed it would remain in place so the integrity of the road is not jeopardized.

Site DRY5006X: Water from the well would be pumped into a pipe that would be laid along the access road. At the intersection of the access road and the existing dirt road (west of the well site), the pipeline would either be buried or a culvert would be installed. The pipeline would extend beyond the existing dirt road and water would be directed into a natural wash and run west toward the Dry Lake Valley floor where it would dissipate. Whipple Road is located approximately 1.3 miles west of the site. In the event that runoff crosses Whipple Road, erosion control measures (i.e., straw bales, rock rip-rap, or a certified weed-free energy dissipater) would be used to reduce discharge rates to prevent scouring and diffuse water flow. Whipple Road would be restored to its pre-existing condition after the testing. Once the hydraulic tests are complete, the pipe would be removed and the road would be restored to its original condition. However, if the culvert is installed it would remain in place so the integrity of the road is not jeopardized.

Site DRY5007X: Water would be directed into a natural wash on the southeast side of the site. Water in the wash runs in a generally southeastern direction toward Coyote Wash located approximately 2 miles southeast of the site. It is not anticipated that the runoff from the hydraulic testing would reach Coyote Wash due to the distance. Mud Springs Road is located approximately 0.4 mile southeast of the site. In the event that runoff crosses Mud Springs Road, erosion control measures (i.e., straw bales, rock rip-rap, or a certified weed-free energy dissipater) would be used to reduce discharge rates to prevent scouring and diffuse water flow. Mud Springs Road would be restored to its pre-existing condition after the testing.

Hydraulic testing activities are anticipated to be completed by the third quarter of 2009. No other testing is anticipated during the 30 years of monitoring; however if other testing is necessary, additional approvals would be obtained first.

3. Monitoring

At the completion of the hydraulic testing, SNWA would conduct water level measurements at the wells, which would allow collection of baseline data in the area. Noxious and invasive weed populations would be monitored at the well sites. Seedling establishment, which would stabilize soils and minimize the introduction and spread of weeds, would also be monitored at the well sites.

4. Data Collection

Data and other information collected from the drilling and hydraulic testing would be compiled and submitted to the State Engineer. Copies would be provided to the BLM and other federal agencies as requested. Water level monitoring data would be submitted quarterly to the State Engineer and made available to the BLM, federal agencies, and the public.

5. Rights-of-Way Termination

ROWs at the five sites for drilling, testing, and monitoring are requested for a 30-year permanent and 2-year temporary term. Upon termination of the ROW grant, if these wells are desired for continued monitoring or testing, SNWA would request a ROW grant extension. If not desired for continued monitoring and testing by SNWA, the BLM, or other entities, SNWA would abandon the wells. Well abandonment and plugging would be in accordance with the Nevada Division of Water Resources requirements, set forth in the Nevada Administrative Code, including but not limited to sections 534.420 and 534.43. If the wells are desired for future groundwater production, a modification of the ROW grant along with additional ROWs for other necessary facilities would need to be obtained from the BLM. Prior to termination of the ROW grant, rehabilitation of the access roads would be coordinated between the BLM and SNWA, and an appropriate protocol would be decided on based on current land use in the area.

6. Environmental Protection Measures

Environmental protection measures would be implemented during the drilling and testing activities, as summarized below.

- Migratory Birds- If well construction activities occur during critical nesting periods, the area of disturbance would be flagged and a wildlife team would conduct breeding bird surveys no more than one week prior to site disturbance to identify if migratory bird breeding or nesting is occurring in the area. The BLM wildlife team would be notified and either the BLM wildlife team or the proponent would conduct the required survey. Authorization for construction during this breeding period would be contingent on the findings of the survey and guidance from the BLM.
- Non-native Invasive Species and Noxious Weeds- All drilling and earthmoving equipment would be washed prior to arrival at the Proposed Action sites, prior to moving between sites and prior to removal to prevent and minimize the introduction or spread of non-native vegetation. All washing would occur at the drilling sites, except for the initial washing which would occur off-site.
- Garbage- The Proposed Action sites would be kept free from any accumulation of trash and rubbish during construction. Trash would be placed in storage containers on-site and properly disposed of off-site.
- Wastes (Hazardous/Solids) - Hazardous and toxic materials such as fuels, solvents, and lubricants used during drilling would be controlled to prevent accidental spills. Spill cleanup kits would be available on-site, so that any accidental spills could be quickly cleaned up. Any soils or sediments affected by accidental spills would be dug up and properly disposed of at a permitted disposal facility.
- Fire- Fire suppression equipment, including extinguishers and shovels, would be available on-site during drilling activities.
- Erosion Control- During discharge of drilling or hydraulic water testing, certified weed-free straw barriers, or flexible hose or impoundments within approved ROWs, would be used to contain water flow as needed. Discharged water would be directed to avoid existing roads and not affect existing travel routes. If necessary, a certified weed-free energy dissipater, rock rip-rap, or other erosion control measures would be used to reduce discharge rates to prevent scouring.

B. No Action Alternative

Under the No Action Alternative, the ROW would not be issued, the Proposed Action would not occur and hydraulic test data would not be obtained for the Dry Lake Valley area. Without this data, there would be limited information to assess aquifer properties and to assist Federal, state, and local agencies in their current and future decision making in groundwater modeling analyses and impact assessments.

C. Alternatives Considered But Eliminated From Detailed Analysis

No additional site-specific alternatives are necessary for analysis as no unresolved conflicts concerning alternative uses of available resources have been identified.

III. AFFECTED ENVIRONMENT

The area affected by the Proposed Action is located in Dry Lake Valley in Lincoln County, Nevada. It is bound by the North Pahroc Range and Schell Creek Range on the west and by the Burnt Springs Range, West Range, and Fairview Range on the east. The topography in the area is typical of that found in the Basin and Range physiographic province of the western United States.

A. Mandatory Items for Consideration

The following items have been evaluated for the potential for significant impacts to occur, either directly, indirectly or cumulatively, due to implementation of the proposed action. Consideration of some of these items is to ensure compliance with laws, statues or Executive Orders that impose certain requirements upon all Federal actions. Other items are relevant to the management of public lands in general, and to the Ely BLM in particular.

The mandatory items for consideration are listed in Table 1. A brief rationale for either considering or not considering the issue or resource further is also provided. The resources, uses and issues considered in the EA are described in the Affected Environment section of this EA, and are analyzed in the Environmental Consequences section. Rationales for those issues that would be dismissed from analysis are also listed in Table 1. These items would not be considered further in this document.

Table 1. Mandatory Items for Consideration and Rationale for Detailed Analysis for the Proposed Action

Resource / Concern	Issue(s) Analyzed (Yes/No)	Rationale for Dismissal from Analysis or Issues(s) Requiring Detailed Analysis
Access	No	There are no access routes that would be blocked by the project activities.
Air Quality	Yes	Analyzed in Potentially Affected Resources and Environmental Consequences sections.
Areas of Critical Environmental Concern (ACECs)	No	There are no designated ACEC's near the project area.
Cultural Resources	Yes	Analyzed in Potentially Affected Resources and Environmental Consequences sections.

Table 1. Mandatory Items for Consideration and Rationale for Detailed Analysis for the Proposed Action (continued)

Resource / Concern	Issue(s) Analyzed (Yes/No)	Rationale for Dismissal from Analysis or Issues(s) Requiring Detailed Analysis
Environmental Justice	No	No minority or low-income groups would be affected by disproportionably high and adverse health or environmental effects.
Farmlands (Prime or Unique)	No	There are no prime or unique farmlands near the project area.
Floodplains	No	The Federal Emergency Management Agency's Flood Insurance Rate Maps for Lincoln County, Nevada (Unincorporated Areas) panels were reviewed. The Proposed Action sites are within Zone D, or "Areas of undetermined but possible, flood hazards". While flood hazards are possible, due to the small size and placement of the groundwater wells, the Proposed Action would have no effect on a large flood event if it should happen in the area.
Forest and Rangeland Health	No	The Proposed Action would have no impact on rangeland health based on an evaluation of the five Standards for Rangeland health namely (1) Watershed Function – Uplands, (2) Watershed Function – Riparian/Wetlands Areas, (3) Ecological Process, (4) Water Quality, and (5) Native, Threatened and Endangered, and Locally Important Species.
Geology and Minerals	Yes	Analyzed in Potentially Affected Resources and Environmental Consequences sections.
Land Use	Yes	Analyzed in Potentially Affected Resources and Environmental Consequences sections.
Migratory Birds	Yes	Analyzed in Potentially Affected Resources and Environmental Consequences sections
Native American Concerns	Yes	Analyzed in Potentially Affected Resources and Environmental Consequences sections
Non-Native, Invasive Species and Noxious Weeds	Yes	Analyzed in Potentially Affected Resources and Environmental Consequences sections
Paleontological Resources	Yes	Analyzed in Potentially Affected Resources and Environmental Consequences sections
Public Services and Utilities	No	N-63221 and N-20073 are authorized overhead power lines. Neither of these projects would be disturbed or blocked.

Table 1. Mandatory Items for Consideration and Rationale for Detailed Analysis for the Proposed Action (continued)

Resource/Concern	Issues Analyzed (Yes / No)	Rationale for Dismissal from Analysis or Issue(s) Requiring Detailed Analysis
Range/ Livestock	Yes	Analyzed in Potentially Affected Resources and Environmental Consequences sections
Recreation	Yes	Analyzed in Potentially Affected Resources and Environmental Consequences sections
Soils	Yes	Analyzed in Potentially Affected Resources and Environmental Consequences sections
Special Status Species	Yes	Analyzed in Potentially Affected Resources and Environmental Consequences sections
Vegetation	Yes	Analyzed in Potentially Affected Resources and Environmental Consequences sections
Vegetative Resources (Forest or Seed Products)	No	There are no forest or seed products in the project area.
Visual Resource Management	Yes	Analyzed in Potentially Affected Resources and Environmental Consequences sections
Wastes (Hazardous or Solid)	No	Visual inspections of the five well sites were conducted by SNWA personnel in the spring of 2008 and there are no known hazardous or solid wastes in the project area.
Water Resources (Water Rights)	Yes	Analyzed in Potentially Affected Resources and Environmental Consequences sections
Water Quality (Drinking and Ground)	No	The wells would be drilled using standard practices to protect ground water resources. Discharged groundwater would quickly percolate into the ground, and no impacts to surface waters or drainages would occur.
Wetlands / Riparian	Yes	Analyzed in Potentially Affected Resources and Environmental Consequences sections
Wild Horses and Burros	Yes	Analyzed in Potentially Affected Resources and Environmental Consequences sections
Wild and Scenic Rivers	No	There are no federally designated Wild and Scenic Rivers in the project area.

Table 1. Mandatory Items for Consideration and Rationale for Detailed Analysis for the Proposed Action (continued)

Resource/Concern	Issue(s) Analyzed Yes/No	Rationale for Dismissal from Analysis or Issue(s) Requiring Detailed Analysis
Wilderness	No	There are no designated Wilderness areas in the vicinity of the project area.
Wildlife	Yes	Analyzed in Potentially Affected Resources an Environmental Consequences sections

B. Potentially Affected Resources

Based on the review of existing baseline data or surveys conducted in preparation of this EA, BLM specialists have identified the following as potentially affected:

1. Air Quality

The Ely District is currently in attainment with local, state and Federal air quality standards. The area is designated as in attainment for particulate matter with a diameter of 10 microns or less (PM_{10}) and as unclassified for other criteria air pollutants, indicating that existing air quality is within applicable National Ambient Air Quality Standards. The air is primarily affected by particulate air matter produced by wildfire, prescribed burning, road or wind-blown dust, construction, mining, and vehicle use. Of these, the largest is smoke emissions from wildfires, consisting mostly of PM_{10}.

2. Cultural Resources

On April 8, 2008, Don W. Jolly (SNWA/Parsons archaeologist), under BLM Cultural Resource Use Permit Number N-83690 and FANV 04-08-21, conducted a site file search at the BLM Ely Field Office for the presence of previously recorded archaeological sites and previous studies located within a one-mile radius of the Proposed Action sites. In addition, a record search for previously recorded archaeological sites and previous studies was completed online on the Nevada Cultural Resource Information System website. Historic plats and maps were also examined online at two websites:

- Nevada BLM General Land Office (Electronic document, http://www.nv.blm.gov/LandRecords, accessed February 11, 2008),
- University of Nevada, Reno, DeLaMare Library, Nevada in Maps collection (Electronic document, http://www.delamare.unr.edu/maps/digitalcollections/nvmaps, accessed February 11, 2008).

A total of five archaeological surveys have been conducted within approximately one mile of the Proposed Action (Table 2). During these surveys, a total of eight isolated occurrences (26LN3485 at DRY5004X, 26LN3485 at DRY5005X, 26LN2384, 26LN2669, 26LN2671, 26LN2793, and 26LN2794 at DRY5006X, and 26LN1847 at DRY5007X) were recorded and a total of six archaeological sites (26LN2740 at DRY5003X, 26LN2385 at DRY5004X, 26LN2385 at DRY5005X, and 26LN2383, 26LN2385, and 26LN2679 at DRY5006X) were

recorded. None of the isolated occurrences or archaeological sites is located within the footprint of the Proposed Action or hydraulic testing flow path and none were identified as eligible for the National Register of Historic Places (Table 3).

Table 2. Previous Surveys Within One Mile of the Proposed Action Location

Proposed Action Location	Previous Survey	Report Title / Description	Reference
DRY5003X	4-386	BLM Cultural Resources Report No. 1-477. The Construction of a Haul Road in Connection with the Mineral Material Sale #235127.	Behrer, Remsen 1982
DRY5004X	4-386	BLM Cultural Resources Report No. 1-477. The Construction of a Haul Road in Connection with the Mineral Material Sale #235127.	Behrer, Remsen 1982
DRY5005X	4-386	BLM Cultural Resources Report No. 1-477. The Construction of a Haul Road in Connection with the Mineral Material Sale #235127.	Behrer, Remsen 1982
DRY5006X	4-386	BLM Cultural Resources Report No. 1-477. The Construction of a Haul Road in Connection with the Mineral Material Sale #235127.	Behrer, Remsen 1982
DRY5007X	4-500	Barger Spring Developments. BLM Cultural Resources Report No. 1-415, NSM Report No. 4-500.	Murphy 1981

Table 3. Previously Recorded Sites Within One Mile of the Proposed Action Location

Proposed Action Location	Previously Recorded Site	Description	Eligible for National Registry
DRY5003X	26LN2740	Obsidian Lithic scatter. Recorded by Behrer, Remsen, 1982.	Not eligible
DRY5004X	26LN3485	Isolated obsidian flake. Recorded by Behrer, Remsen, 1982.	Not eligible
	26LN2385	Historic insulators. Recorded by Behrer, Remsen, 1982.	Not eligible
DRY5005X	26LN3485	Isolated obsidian flake. Recorded by Behrer, Remsen, 1982.	Not eligible
	26LN2385	Historic insulators. Recorded by Behrer, Remsen, 1982.	Not eligible

Table 3. Previously Recorded Sites Within One Mile of the Proposed Action Location (continued)

Proposed Action Site	Previously Recorded Site	Description	Eligible for National Registry
DRY5006X	26LN2384	Isolated biface. Recorded by Behrer, Remsen, 1982.	Not eligible
	26LN2669	Isolated quartzite scraper. Recorded by Behrer, Remsen, 1982.	Not eligible
	26LN2671	Isolated obsidian biface. Recorded by Behrer, Remsen, 1982.	Not eligible
	26LN2793	Isolated chalcedony flake. Recorded by Behrer, Remsen, 1982.	Not eligible
	26LN2794	Isolated obsidian biface. Recorded by Behrer, Remsen, 1982.	Not eligible
	26LN2383	Historic trash scatter. Recorded by Behrer, Remsen, 1982.	Not eligible
	26LN2385	Historic insulators. Recorded by Behrer, Remsen, 1982.	Not eligible
	26LN2679	Lithic scatter. Recorded by Behrer, Remsen, 1982.	Not eligible
DRY5007X	26LN1847	Isolated Humboldt point, flake. Recorded by Murphy, 1981.	Not eligible

In addition to the file searches conducted by Mr. Jolly, HRA Inc. archaeologists conducted a visit to the Proposed Action locations on April 7 and 8, 2008. No archeological sites were identified.

3. Geology and Minerals

DRY5003X is located along a gentle slope several hundred feet away from carbonate outcrop. The outcrop is mapped as the Devonian Guilmette. The surface exposure is a dolomite with layers of quartzite. The majority of bedrock outcrop is also moderately to highly fractured with a moderate amount of calcite fracture filling. The geology of DRY5004X and DRY5005X is described as alternating layers of light and dark gray limestone and dolomite. DRY5006X is located to the south of a field identified normal fault. The nearby contact of the Pogonip Group and the Eureka quartzite indicates the site is located near the top of the section of the Pogonip Group. The anticipated lithology is alternating gray to brown thick bedded limestone and yellow to brown-gray thin bedded silty and shaly limestone. DRY5007X is located to the southeast of mapped Devonian Guilmette Limestone, Pennsylvanian-Permian Ely Limestone, and Scottie Wash Quartzite. The location was field sited in an area that had potential for high

energy deposition, which is conducive for depositing coarser grained deposits further from the source of the alluvium.

To determine if mining claims exist within the Proposed Action area a Mining Claim Geographic Report was conducted on March 21, 2008 through BLM's database LR 2000 (http://www.blm.gov/lr2000/). This type of report displays all claims by a specific geographic area. There are no active or pending mining claims at or within the vicinity of the Proposed Action sites. There are nine closed mining claims within the vicinity of the sites.

4. Land Use

To determine if any granted or pending ROWs utilize the federal land surrounding the Proposed Action, a Case Recordation Geo report with Customer search was conducted on March 19 and 20, 2008 through BLM's database LR 2000. Additionally, BLM's Master Title Plats were reviewed to determine if any encumbrances were depicted on the maps.

Two ROW grants have been issued at or within the vicinity of the Proposed Action sites.

- N-43923: ROW issued to MCI Worldcom Network Svc Inc on August 15, 1986 for an underground 10 foot total width optics line.
- N-49781: ROW issued to Idaho Power Co on December 8, 1994 for a 500kV 200 foot total width transmission line (Southwest Intertie Project).

5. Migratory Birds of Conservation Concern

Under the Migratory Bird Treaty Act of 1918 and subsequent amendments (16 U.S.C. 703-711), it is unlawful to take, kill, or possess migratory birds. Executive Order 13186 issued January 11, 2001 further defines the responsibilities of Federal Agencies to protect migratory birds. The issuance of a ROW grant for this project requires compliance with the Migratory Bird Treaty Act and avoidance of potential impacts to listed birds.

The BLM maintains the Bird Species of Conservation Concern List (USFWS Migratory Bird Program Strategic Plan 2004-2014), (per BLM guidance). This list is used by the BLM to prioritize migratory bird conservation actions. The species listed below were taken from the BLM's Bird Species of Conservation Concern List, and are expected to occur within Dry Lake Valley. These species are generally associated with Great Basin sagebrush habitats, with some overlap into other habitats such as pinyon juniper, or riparian habitat. These are all primarily passerine birds or raptors.

Migratory Birds of Conservation Concern

Black-throated Gray Warbler (BTGW) *Dendroica nigrescens*
Brewers Sparrow (BRSP) *Spizella breweri*
Burrowing Owl (BUOW) *Athene cunicularia*
Ferruginous Hawk (FEHA) *Buteo regalis*
Golden Eagle (GOEA) *Aquila chrysaetos*
Greater Sage-Grouse (GRSG) *Centrocercus urophasianus*
Grey Vireo (GRVI) *Vireo vicinior*
Horned Lark (HOLA) *Eremophila alpestrisI*
Loggerhead Shrike (LOSH) *Lanius ludovicianus*
Northern Harrier (NOHA) *Circus cyaneus*
Peregrine Falcon (PEFA) *Falco peregrinus*
Pinyon Jay (PIJA) *Gymnorhinus cyanocephalus*
Prairie Falcon (PRFA) *Falco mexicanus*
Sage Sparrow (SAGS) *Amphispiza belli*
Short-eared Owl (SEOW) *Asio flammeus*
Spotted Towhee (SPTO) *Pipilo maculatus*
Vesper Sparrow (VESP) *Pooecetes gramineus*
Yellow Warbler (YWAR) *Dendroica petechia*

Species that were on the BLM list were carried forward for analysis of probability of occurrence, and to ensure that construction timing and mitigation measures sufficiently protect and preserve breeding of these species. A predictive model created by the Great Basin Bird Observatory (GBBO) was used to analyze probability of occurrence. The model predicts probability of occurrence based on latitude, vegetation type, and elevation. It should be noted that use of predictive models comes with a degree of uncertainty; because the model generalizes probability across the landscape, species that are generalists may be over-predicted, whereas species that have highly specific habitat requirements may be under-predicted.

Application of the predictive model was accomplished in ArcMap, by overlaying well sites shapefiles with GBBO probability maps for each of the 18 species of conservation concern. Effects analysis was carried out where the probability of sensitive bird occurrence was 50 percent or greater. Five species met the 50 percent criterion: Brewers sparrow (*Spizella breweri*), horned lark (*Eremophila alpestris*), loggerhead shrike (*Lanius lucovicianus*), sage sparrow (*Amphispiza belli*), and vesper sparrow (*Pooecetes gramineus*)

The probability occurrence of the Brewers sparrow (*Spizella breweri*) was greater than 50 percent at all five of the proposed well sites. The Brewer's sparrow, a sagebrush specialist, is common and widespread in Nevada. It is however, one of the few species commonly found in salt desert scrub. Its earliest breeding date was documented April 20th and signs of breeding continued through August 2nd, with the last sign of fledged young.

The probability occurrence of the horned lark (*Eremophila alpestris*) was greater than 50 percent at all five of the proposed well sites. The horned lark is considered widespread and common in Nevada. They favor low or widely scattered vegetation with interstices of bare ground. The earliest breeding date for horned lark was documented as April 26th, with signs of breeding continuing until August 2nd.

The probability occurrence of the loggerhead shrike (*Lanius lucovicianus*) was greater than 50 percent at four of the five proposed well sites. Loggerhead shrike prefers arid open country with just a few perches or lookouts in desert shrublands, juniper and pinyon-juniper woodlands. The breeding period ranges from mid-April through early August.

The probability of occurrence of the sage sparrow (*Amphispiza belli*) was greater than 50 percent at all five of the proposed well sites. The sage sparrow is usually associated with sage brush and frequently occurs in salt desert scrub. The breeding period ranges from early May, although nest building has been noted as early as April, to early August.

The probability occurrence of the vesper sparrow (*Pooecetes gramineus*) was greater than 50 percent at two of the five proposed well sites, DRY5003X and DRY5007X. Vesper sparrow nests in various open shrub habitats (*Artemisia tridentata wyomingensis, A. t. vaseyana, A. t. spiciformis*) from 5,500 to 9,000 feet. Nests are generally placed on the ground in areas with a minimum of 20 percent native, perennial grass/forb cover. The breeding period ranges from mid-May through mid-August.

6. Native American Concerns

The Confederated Tribes of the Goshute Indian Reservation, Ely Shoshone Tribe, Southern Paiute Bands and Duckwater Shoshone Tribe are located near the project area. Native American resources located on the reservations are managed and protected by the tribes. Native American resources located off the reservations and on land administered by the BLM,

are managed and protected by the BLM; however, no Indian trust assets have been identified on BLM-administered lands within the Ely District.

7. Non-native, Invasive Species and Noxious Weeds

The BLM defines a weed as a non-native plant that disrupts or has the potential to disrupt or alter the natural ecosystem function, composition, and diversity of the site it occupies. The presence of a weed deteriorates the health of the site, makes efficient use of natural resources difficult, and may interfere with management objectives for that site. A weed is an invasive species that requires a concerted effort (manpower and resources) to remove from its current location, if it can be removed at all. "Noxious" weeds refer to those plant species which have been legally designated as unwanted or undesirable. This includes national, state, county, or local designations.

Botanical surveys of well sites DRY5003X, DRY5004X, DRY5005X, and DRY5006X, discharge drainage paths and along access roads that may be disturbed were conducted on November 14, 2007 by Wildland International. Similar botanical surveys of well site DRY5007X were conducted on April 22, 2008 by SWCA Environmental Consultants. The invasive non-native cheatgrass (*Bromus tectorum*) was found at sites DRY5003X, DRY5004X, DRY5005X, and DRY5007X and the invasive non-native Russian thistle (*Salsola kali*) was observed at site DRY5005X. The invasive non-native horehound (*Marrubium vulgare*) was observed at site DRY5007X. The official Nevada Department of Agriculture list of noxious weeds does not include these invasive non-natives as Nevada noxious weeds. No noxious weeds were found during the surveys. A Risk Assessment for Noxious & Invasive Weeds was completed for the Proposed Action and submitted to the BLM on May 22, 2008 (Attachment 2). The likelihood of noxious/invasive weed species spreading to the Proposed Action sites (Factor 1) rates as Moderate (4) and the consequences of noxious/invasive weed establishment at the Proposed Action sites (Factor 2) rates as High (8). The Risk Rating for the Proposed Action is Moderate (32).

8. Paleontological Resources

Paleontological resources or fossils are the imprints or remains of once-living plants and animals preserved in rocks and sediments. Paleontological resources on public lands are considered nonrenewable records of the history of life on earth, and so they represent important and critical components of America's natural history. Once damaged, destroyed, or improperly collected, their scientific value could be greatly reduced or lost forever.

The BLM manages paleontological resources under a number of federal laws including the FLPMA Sections 302(b) and 310, which direct the BLM to manage public lands to protect the quality of scientific and other values. In addition, the BLM provides management direction for the identification, evaluation, protection, and use of fossils in the Paleontological Resource Management Program. This program is described in *H-8270-1 - General Procedural Guidance for Paleontological Resource Management* (BLM, 1998b).

Fossils occur in sedimentary rocks and also in deposits found in caves, lake bottoms, and older alluvial surfaces. The BLM manual, *H-8270-1 - General Procedural Guidance for Paleontology Resource Management,* describes a classification system for ranking areas as to their potential for noteworthy occurrences of fossils. Two conditions described below may contain paleontological resources in the project area. The BLM Manual indicates unlikely

occurrence of paleontological resources in areas with igneous and metamorphic rocks; extremely young alluvium, colluvium or aeolian deposits; or deep soils.

Condition 1 – Areas that are known to contain vertebrate fossils or noteworthy occurrences of invertebrate or plant fossils. Consideration of paleontological resources would be if the BLM Field Office review of available information indicates that such fossils are present in the area.

Condition 2 – Areas with exposures of geologic units or settings that have high potential to contain vertebrate fossils or noteworthy occurrences of invertebrate or plant fossils. The presence of geologic units from which fossils have been recovered elsewhere may require further assessment of these same units where they are exposed in the area of consideration.

The BLM Ely Field office has not categorized specific geologic formations according to the ranking system described above in the project area; however, there are deposits and sedimentary rocks that have a greater potential to contain important fossils. A general list of formations or deposits that have a high sensitivity rating for fossil potential occurrence is presented in Table 4.

Devonian and Ordovician-aged sedimentary rocks may contain condont fauna and ancient corals that lived 488.3 to 359.2 million years ago (GEOLEX database, http://ngmdb.usgs.gov/Geolex/geolex.html, accessed, September 11, 2008). Areas where Devonian and Ordovician rocks are exposed may be considered moderate to high sensitivity for paleontological resources.

Table 4. General List of Paleontology Formations

Formation	Age (million years ago)	Fossil Types	Location
Guilmette limestones	Devonian (416 to 359.2)	Various corals	DRY5003X
Alluvium	Quaternary	Not applicable	DRY5004X
Alluvium	Quaternary	Not applicable	DRY5005X
Pogonip Group limestone	Early Ordovician (488.3 to 473)	Condont fauna (e.g., eel-like creatures)	DRY5006X
Alluvium	Quaternary	Not applicable	DRY5007X

Pleistocene deposits (i.e., Quaternary in age) in caves or fissures have a potential to contain wood/pack rat (*Neotoma* sp.) middens (i.e., concentrations of bone and fecal waste from wood rats (Scott, 2003)). Material in these middens is partially fossilized and contains a wealth of data on climatic and faunal biogeographical changes over the past 40,000 years. In addition, Pleistocene deposits near ancient springs often contain rich and diverse faunal assemblages. Pleistocene deposits found in caves and ancient springs would be considered highly sensitive for paleontological resources. Ancient spring and cave deposits have not been documented within the project area. Quaternary alluvium deposits rarely contain fossils.

9. Range/ Livestock Grazing

The BLM manages grazing under the authority and grazing and rangeland specific laws (Taylor Grazing Act of 1934, and Public Rangelands Improvement Act of 1978) and the mandates of the Federal Land Policy and Management Act of 1976 that stipulates management of public lands under the principles of sustainability and multiple uses. Under this management, ranchers may obtain permits for an allotment of public land on which a specified number of livestock may graze. Term permits authorize grazing use based on perennial vegetation. The

number of permitted livestock on a particular allotment is determined by how many animal unit months (AUMs) that land will support. An AUM is the amount of forage needed to sustain one 1,000-pound cow and her calf, five sheep, or five goats for a month. The BLM operates a program to stabilize or improve the ecological condition of the allotments. The program includes proper management of livestock grazing and such improvements as fences and water developments. The Proposed Action well sites would occur in the three grazing allotments of Wilson Creek, Cliff Spring, and Ely Spring.

Site DRY5003X would occur in the Dry Lake Valley Use Area of the Wilson Creek Grazing Allotment (Table 5). The Use Area is grazed from November 1 through April 15. Both cattle and sheep are permitted in the Use Area and may be found in the area proposed for site DRY5003X. The proposed site is approximately four miles from the Upper Reservoir and approximately five miles from Coyote Well.

Site DRY5007X would occur in the Muleshoe Use Area of the Wilson Creek Grazing Allotment (Table 5). The Use Area is grazed by cattle from November 1 through April 15. The proposed well site is located less than three miles from two major watering sources for livestock in the pasture.

Table 5. Allotment Information for Wilson Creek Grazing Allotment

Allotment/Use Area	Number of Livestock	Kind of Livestock	Type of Use	Period of Use	Percent Public Lands	Permitted Use(AUMS)
Wilson Creek/ Dry Lake Valley	(*)	Cattle	Active	11/01 to 04/15	100%	7,541
Wilson Creek/ Dry Lake Valley	4,764 4,764	Sheep Sheep	Active Active	11/01 to 2/28 03/01 to 04/15	100% 100%	3,722 1,447
Wilson Creek/ Muleshoe (01201)	680	Cattle	Active	11/01 to 4/15	100%	3,711
Wilson Creek/ Muleshoe (01201)	1,690 1,690	Sheep Sheep	Active Active	11/01 to 2/28 03/01 to 4/15	100% 100%	1,320 533

*Number of cattle varies by pasture, season, permittee, etc. so it is not defined in this table

Sites DRY5004X and DRY5005X would occur in the Cliff Spring Allotment (Table 6). The allotment is grazed on a year-round basis by cattle within a six allotment rest-rotation system. Sites DRY5004X and DRY5005X would occur within developed livestock watering areas. There are two watering sites within approximately two miles of the proposed sites also.

Table 6. Allotment Information for Cliff Spring Grazing Allotment

Allotment/UseArea	Number of Livestock	Kindof Livestock	TypeOf Use	Periodof Use	Percent Public Lands	Permitted Use(AUMS)
Cliff Spring (21016)	171	Cattle	Active	03/01 to 02/28	100%	2,052

Site DRY5006X would occur in the Ely Spring Cattle Allotment in Pasture 3 (Table 7). The allotment permits cattle use on a year-round basis. Grazing has been managed under a four pasture rest-rotation system. Soon the allotment would be grazed under a modified deferred rotation system as stated in the 2007 Final Decision which renewed the Federal grazing permit for the Ely Spring Cattle and Ely Spring Sheep Allotments. Under the existing rotation plan, cattle graze through three pastures each year, resting one pasture for one year. Under the modified plan, all pastures would be grazed each year, with spring use still being rotated through all four pastures. Site DRY5006X would be located within approximately one mile of the Black Canyon Reservoir, a large impoundment for stock watering purposes, and within approximately four miles of the Four Corners Corral and watering location.

Table 7. Allotment Information for Ely Spring Cattle Grazing Allotment

Allotment/Use Area	Number of Livestock	Kind of Livestock	Type of Use	Period of Use	Percent Public Lands	Permitted Use (AUMS)
Ely Spring Cattle (11028)	(*)	Cattle	Active	03/01 to 02/28	100%	4,248

*Number of cattle varies by pasture, season, permittee, etc. so it is not defined in this table

10. Recreation

Recreation through the BLM's Ely Field Office is managed through the designation of special recreation management areas (SRMA) and extensive recreation management areas (ERMA). A SRMA is an area where more intensive recreation management is needed. An ERMA includes all BLM managed land outside the SRMA and may include developed and primitive recreation sites with minimal facilities. The Proposed Action sites are currently within ERMAs, however two Proposed Action sites also occur within the proposed Chief Mountains SRMA, which is described in the Ely Resource Management Plan. Off highway vehicle (OHV) use is the primary recreational activity that occurs within this proposed SRMA.

The mountains and desert valleys surrounding the project area offer a variety of dispersed recreational opportunities on BLM-administered public lands. Recreational activities in the project area typically include OHV use on existing roads, trails, and dry washes; big and small game hunting (including migratory birds); hiking; sightseeing; photography; and camping. The nearest BLM-administered OHV area is the Silver State OHV Trail. The Silver State OHV Trail provides a backcountry off-roading experience along 260 miles of designated trails. The Silver State OHV trail is approximately 1.3 miles northwest of site DRY5007X, 2.8 miles east of site DRY5004X, 3.0 miles east of site DRY5005X, and 4.0 miles east of site DRY5006X. The Silver State OHV proposed new safety crossing trail which would provide loop opportunities and designated routes to reach points of interest and return to trailheads, is located approximately 1.0 mile south of well site DRY5003X. At the Silver State OHV trailheads, trail users would have facilities and amenities to park, unload ATVs, gather and camp. A proposed new Silver State OHV trailhead is located approximately 4.0 miles west of site DRY5003X.

There are no state parks or state recreation areas in the project area. The nearest state park is Kershaw-Ryan State Park, located approximately 15 miles southeast of sites DRY5004X and DRY5005X, which offers a picnic area, restrooms, and developed hiking trails. In addition,

Bristol Wells, a historic site, is approximately 2.4 miles northeast of site DRY5003X and approximately 14 miles southeast of DRY5007X.

The mountains and valleys surrounding the project area offer a variety of seasonal hunting opportunities on BLM-administered public lands. According to the 2008 Nevada Hunt Book (for the 2008-2009 season), all of the proposed project sites are within Hunt Area 22.

Proposed site DRY5007X is located in Unit Group 222 between 5,800 - 5,840 feet in elevation. For this reason, the site is within hunting range for pronghorn antelope, elk, and mule deer between August 1 and December 5.

Proposed sites DRY5003X, DRY5004X, DRY5005X, and DRY5006X are all located in Unit Group 223 between 4,880 - 5,350 feet in elevation. For this reason, they are within the hunting range for Desert bighorn sheep, pronghorn antelope, and mule deer between August 1 and December 10.

All five of the proposed sites are located within the hunting range (2008-2009 season) for other furbearer animals, upland game, and mountain lion according to Nevada Division of Wildlife (http://www.ndow.org/hunt/seasons/mig/index.shtm). The hunting season for furbearer animals and upland game species extends from September 1 to April 15 and the hunting season for mountain lion is year long.

11. Soils

According to the Natural Resources Conservation Service, soils around site DRY5003X are mapped as Ursine-Messer Armespan association (map unit symbol 1032) (http://soildatamart.nrcs.usda.gov/Report.aspx?Survey=NV779&UseState=NV, accessed on January 14, 2008). This map unit is characterized as having a 2-8% slope, well drained drainage class, very low to high capacity of the most limiting layer to transmit water, and no to rare frequency of flooding and no ponding. The soils within site DRY5003X are gravelly loam to gravelly fine sandy loam. Soils around sites DRY5004X, DRY5005X, and DRY5006X are mapped as Tybo-Leo association (map unit symbol 1473) (http://soildatamart.nrcs.usda.gov/Report.aspx?Survey=NV754&UseState=NV, accessed January 14, 2008). This map unit is characterized as having a 2-4% slope, well to excessively drained drainage class, very low to high capacity of the most limiting layer to transmit water, and no to rare frequency of flooding and no ponding. The soils within these sites are gravelly coarse sandy loam to gravelly sandy loam to stratified extremely gravelly coarse sand to gravelly fine sandy loam. Soils around site DRY5007X are mapped as Ursine association (map unit symbol 1034) (http://soildatamart.nrcs.usda.gov/Report.aspx?Survey=NV754&UseState=NV, accessed February 12, 2008). This map unit is characterized as having a 4-15% slope, well drained drainage class, very low capacity of the most limiting layer to transmit water, and no frequency of flooding or ponding. The soils within site DRY5007X are very gravelly loam to gravelly loam.

12. Special Status Species (Federally Listed, Proposed and Candidate Species; State Protected Species; and BLM Sensitive Species)

Biological surveys of well sites DRY5003X, DRY5004X, DRY5005X, and DRY5006X, discharge drainage paths, and along access roads that may be disturbed were conducted on November 14, 2007 by Wildland International. Biological surveys of well site DRY5007X, discharge drainage paths, and along the access road that may be disturbed were conducted on

April 22, 2008 by SWCA Environmental Consultants. No federally listed, proposed or candidate plant or animal species and no sensitive plant or wildlife habitat were observed within the proposed areas of disturbance during either survey.

Biological shape files created by NDOW indicate that site DRY5003X is located within potential Sage Grouse range habitat and potential Sage Grouse summer habitat. However, there are no known leks within two miles of the Proposed Action sites or the pump test hydraulic discharge paths and sage grouse are not known to use the area.

Species observed within the vicinity of the Proposed Action sites during SNWA's 2005-2007 Winter Raptor Surveys include the Ferruginous Hawk (*Buteo regalis*) (Nevada state protected and BLM Sensitive Species), Golden Eagle (*Aquila chrysaetos*) (Nevada state protected and BLM Sensitive Species), and Prairie Falcon (*Falco mexicanus*) (Nevada state protected and BLM Sensitive Species). During the 2006 Great Basin Bird Observatory Nevada Bird Count the Gray Vireo (*Vireo vicinior*) (Nevada state protected and BLM Sensitive Species) was observed within the vicinity of the Proposed Action sites.

13. Vegetation

Botanical surveys of well sites DRY5003X, DRY5004X, DRY5005X, and DRY5006X and the associated access roads and discharge drainage paths that may be disturbed were conducted on November 14, 2007 by Wildland International. A survey of well site DRY5007X and the associated access road and discharge drainage path that may be disturbed were conducted on April 22, 2008 by SWCA Environmental Consultants.

Site DRY5003X is characterized as Great Basin Xeric Mixed Sagebrush Shrubland. Dominant vegetation observed included Wyoming sage (*Artemisia tridentata wyomingensis*), winterfat (*Krascheninnikovia lanata*), fourwing saltbush (*Atriplex canescens*), yellow rabbitbrush (*Chrysothamnus viscidiflorus puberulus*), Nevada jointfir (*Ephedra nevadensis*), Anderson's boxthorn (*Lycium andersonii*), and grasses such as Indian rice grass and James' galleta grass (*Hiliaria jamesii*). Silver cholla (*Cylindropuntia echinocarpa*) were relatively abundant with a total of 40 observed, one of which was over three feet in height. One hedgehog cactus (*Echinocereus engelmannii*) was observed. Banana yucca (*Yucca baccata*) density was fairly high with 177 yuccas and 25 clumps observed at this location.

Site DRY5004X is characterized as Inter-Mountain Basins Semi-Desert Shrub Steppe. Dominant vegetation observed included fourwing saltbush, matchweed (*Gutierrezia sarothrae*), winterfat, Anderson's boxthorn, horsebrush (*Tetradymia glabrata*) and common grasses such as James's galleta grass and Indian rice grass. Four silver chollas and three grizzlybear pricklypears (*Opuntia polyacantha var. erinacea*) were observed.

Site DRY5005X is characterized as Inter-Mountain Basins Semi-Desert Shrub Steppe. Dominant vegetation observed included yellow rabbitbrush, fourwing saltbush, matchweed, winterfat, Anderson's boxthorn, horsebrush and common grasses such as James's galleta grass and Indian rice grass. Eight silver chollas, one grizzlybear pricklypear, and one hedgehog were observed.

Site DRY5006X is characterized as Inter-Mountain Basins Semi-Desert Shrub Steppe along with a mosaic of Inter-Mountain Basins Semi-Desert Shrub Steppe and Mojave Mid-Elevation Mixed Desert Scrub in the general surrounding area. The site is dominated by yellow rabbitbrush, shadscale saltbush (*Atriplex confertifolia*), matchweed, Anderson's boxthorn,

horsebrush with common grasses such as James's galleta grass and Indian rice grass. Three grizzlybear pricklypear and one beehive cactus (*Coryphantha vivipara*) were observed.

Site DRY5007X is characterized as Great Basin Pinyon-Juniper Woodland. Utah juniper (*Juniperus osteosperma*) and pinyon pine (*Pinus monophylla*) were the dominant species observed. Ten Mojave prickly pear (*Opuntia erinacea*) were identified.

14. Visual Resource Management

For lands managed by the BLM, Visual Resource Management (VRM) objectives have been developed to protect the most scenic public lands, especially those lands that receive the greatest amount of public viewing. The VRM system is the basic tool used by the BLM to inventory and manage visual resources on public lands. VRM classes are objectives that outline the amount of disturbance an area can tolerate before it no longer meets the visual quality of that class. The VRM classifications range from Class 1, the most restrictive, to Class 4, the least restrictive. The VRM takes visual values for an area into account in order to establish management objectives and actions. Visual resources contribute to peoples' enjoyment when using an area and may be unique or unusual landscapes of natural scenic value.

The Proposed Action area is located in the Great Basin Desert, Dry Lake Valley. The area is characterized by clear skies and broad, open landscapes of the flat valley bottom bounded by mountain ranges. The valley vegetation has little variety and the color variation is subtle and generally muted shades. The vegetation cover is low and fairly common within the region. The landscapes do not contain any significant scenic vistas, features or landforms and are common to the well site areas; however, the natural setting is an important aspect of the Dry Lake Valley terrain.

The well sites are all located within a remote and natural area that is nearly free from man-made facilities or structures. Evidence of human modification includes unimproved and two-track roads and utility infrastructure associated with electric and gas transmission lines. The well sites would be located near or adjacent to existing roads, which receive sporadic visitation by motorized vehicles. The well site areas have a low volume of dispersed use and visitors would have nearly zero social encounters per day. Once construction was complete, the social setting at the sites would return to pre-construction levels. During the night, construction activities at the well site would be seen throughout the valley which may lead to increased social encounters from curious recreationists traveling off of the nearby OHV trails. Once constructed, the short (two to four feet) well heads would be a shade of gray or tan selected to conform to the surrounding landscape at each site. All five well sites are considered to be in a VRM Class 3. The VRM classes describe the different degrees of modification allowed to the basic elements of the landscape. For VRM Class 3, contrasts to the basic elements caused by an activity are evident, but should remain subordinate to the existing landscape.

15. Water Resources (Water Rights)

Groundwater in Dry Lake Valley occurs in both a shallower basin-fill (alluvial) aquifer, a volcanic rock aquifer, and a deeper carbonate rock aquifer. To date there has been limited groundwater pumping in Dry Lake Valley.

There are no streams located within the vicinity of the Proposed Action sites. Fairview Wash, Silverhorn Wash, Coyote Wash, Scotty Wash, and Bailey Wash are approximately 0.5 mile southeast, 1.5 miles west, 4 miles southwest, 1.3 miles northeast, and 5.9 miles northwest of site DRY5003X, respectively. Porphyry Wash is approximately 0.1 mile northwest of site DRY5004X and approximately 0.1 mile south of site DRY5005X. Coyote Wash and Bailey Wash are approximately 1.9 miles east and 7.4 miles south of site DRY5007X, respectively. There are no other major washes located within the vicinity of the Proposed Action sites.

There are several permitted groundwater monitoring wells in the vicinity of the Proposed Action. These wells are owned by SNWA and located on federal land managed by the BLM (N-78670).

Several springs are located within the vicinity of the Proposed Action sites. Big Mud Springs is located approximately 2.0 miles northwest of site DRY5007X. Big Mud Springs flows from a thin layer of alluvial material overlaying Lower Pennsylvanian Sedimentary Rocks. The out crops observed near the spring consisted of a flaggy limestone containing fossils below the spring and sandy fossiliferous limestones with beds of chert above the spring. A discharge of approximately 0.006 cubic feet/second was measured in May 2008. The spring is located at an approximate elevation of 6,280 feet.

Porphyry Spring is located approximately 2.4 miles southeast of site DRY5005X and approximately 2.6 miles southeast of site DRY5004X. Investigations upstream of the spring revealed a partially rusted pipeline that was abandoned and no vegetation. The bed material in the spring channel was angular to sub-angular. The anticipated water level at DRY5004X and DRY5005X is approximately 900 feet lower in elevation than the spring area.

Rabbit Spring is located approximately 3.9 miles southeast and Cliff Springs is located approximately 4.0 miles southeast of DRY5004X. Both Rabbit Spring and Cliff Springs are located in the mountain block at a significantly higher elevation than the estimated water level at DRY5004X.

16. Wetlands / Riparian

As stated in the section above on water resources, the springs in the vicinity of the Proposed Action sites include Big Mud Springs, Porphyry Spring, Rabbit Spring, and Cliff Spring. These areas are the only areas near the project area that have the potential to host wetlands and riparian species. The vegetation at all the sites varies greatly throughout the year depending on the season and precipitation levels because all the springs are in the mountain block and not hydrologically connected to the principal aquifer. They are all fed by local precipitation. Big Mud Springs was last observed on October 9, 2008. The vegetation around the spring head was consistent with the surrounding area as the spring was very low on water and mostly mud. Porphyry Spring was last surveyed on May 8, 2008. The spring was dry and there were no wetland or riparian species in the area. Rabbit Spring and Cliff Spring have been monitored through recent aerial imagery of the area. Aerial imagery does not indicate wetlands or riparian species around the springs, which is consistent with expectations based on the water source.

17. Wild Horses and Burros

On December 15, 1971, Congress enacted the Wild and Free-Roaming Horse and Burro Act (Public Law 92-195), authorizing the BLM to manage wild horses and burros on public lands. BLM's policy is to protect and manage wild horses and burros in Herd Management Areas

(HMAs). Both site DRY5003X and DRY5007X are located within the Silver King HMA. Site DRY5006X is located approximately 5 miles east and 4 miles west of the Silver King HMA. Sites DRY5004X and DRY5005X are located approximately 6.0 miles southeast of the Silver King HMA.

18. Wildlife

The diversity of wildlife resources around the Proposed Action sites is typical of Great Basin ecological systems. The vegetation types or communities that comprise the primary wildlife habitats in the Proposed Action areas consist of Great Basin Xeric Mixed Sagebrush Shrubland, Inter-Mountain Basins Semi-Desert Shrub Steppe, and Great Basin Pinyon-Juniper Woodland habitats.

Big game species in these habitat zones primarily consist of Rocky Mountain elk, mule deer, pronghorn antelope, and desert bighorn sheep. All of the sites are either located near or within mule deer habitat. All of the sites except DRY5007X are within pronghorn habitat. Site DRY5007X is near pronghorn, desert bighorn sheep, and elk habitat.

Small game and nongame species are also found in the Proposed Areas. Small game species include mourning dove. Nongame species include a diversity of small mammals, raptors, passerines, amphibians, and reptiles. Examples include a variety of bats, ground squirrels, rabbits, mice, coyote, fox, badger, skunk, and raptors.

While sensitive species biological surveys were conducted by Wildland International on November 14, 2007 and SWCA Environmental Consultants on April 22, 2008, wildlife species and wildlife species sign were also noted. While these surveys only represent a snapshot in time, species included in the reports include mule deer (*Odocoileus hemionus*), black-tailed jackrabbit (*Lepus californicus*), white-tailed antelope squirrel (*Ammospermophilus leucurus*), desert kit fox (*Vulpes macrotis*), American badger (*Taxidea taxus*), desert horned lizard (*Phrynosoma platyrhinos*), Horned Lark (*Eremophila alpestris*), Western Kingbird (*Tyrannus verticalis*), Brown-headed Cowbird (*Molothrus ater*), and Common Raven (*Corvus corax*).

IV. ENVIRONMENTAL CONSEQUENCES

A. Proposed Action

The following resources have been analyzed and may be potentially affected by the Proposed Action.

1. Air Quality

Any dust generated during construction activities would be minimal and short term in duration. The use of water for dust suppression would minimize fugitive dust. Thus the Proposed Action would have little, if any, impacts to air quality.

2. Cultural Resources

Based on the file search and survey results, no adverse impacts to National Register of Historic Places eligible historic properties would occur as a result of the Proposed Action. In the event of an unanticipated discovery of cultural resources as a result of Proposed Action-related activities all work within the vicinity of the discovery would immediately cease and the BLM District Manager would be directly informed.

3. Geology and Minerals

There are no active or pending mining claims at any of the Proposed Action sites. Thus, no impact on geology and minerals by the Proposed Action is anticipated.

4. Land Use

The Proposed Action would not impact the existing underground fiber optics line or transmission line ROWs. The location of the existing buried fiber optics line, associated with ROW N-43923, would be verified prior to any Proposed Action ground disturbance. Drilling operations are not anticipated to affect any existing fences or cattle guards. No long-term ponding of water would occur during the pump tests. The discharged water would be directed into natural washes near the sites and would avoid existing roads and travel routes.

5. Migratory Birds of Conservation Concern

Based on BLM's list of migratory bird species of conservation concern, five species were determined to have 50 percent probability of occurrence or greater. These species were Brewers sparrow, horned lark, loggerhead shrike, sage sparrow, and vesper sparrow. The breeding period for these birds extends from April to mid-August in the Great Basin Desert. No construction activity would occur at the Proposed Action site during critical nesting periods for the affected species (April through mid-August) unless a biological survey is conducted to determine if migratory bird breeding or nesting is occurring. These surveys would be conducted by the Ely BLM Field Office wildlife team or an authorized biologist, no more than one week prior to site disturbance. The BLM wildlife team would be notified a minimum of 30 days prior to construction in order for the required survey to be conducted. Authorization for construction during this breeding period would be contingent on the findings of the survey and guidance from the BLM. Since no construction activity would occur within the nesting season without guidance from the BLM, no impacts are expected to individual migratory birds.

The total amount of bird habitat potentially affected at the Proposed Action five sites (DRY5003X, DRY5004X, DRY5005X, DRY5006X, and DRY5007X) would be 6.57 acres permanent ROW and 7.5 acres temporary ROW. The amount of habitat that would be disturbed by the Proposed Action is negligible compared with the total available habitat in Dry Lake Valley. Thus, there would be a negligible impact to migratory bird habitat resulting from the Proposed Action.

Since there would be no effect on individual migratory bird species and negligible impact to migratory bird habitat from the Proposed Action, there would be no impact to migratory bird populations.

6. Native American Concerns

On June 26, 2008, consultation letters were mailed to tribes within the project area concerning the proposed land action by the District Manager of the BLM Ely District Office and no issues or concerns were identified.

7. Non-native, Invasive Species and Noxious Weeds

Proposed Action site surveys observed the invasive weed cheatgrass at sites DRY5003X, DRY5004X, DRY5005X, and DRY5007X, Russian thistle at site DRY5005X, and horehound at site DRY5007X. Since no noxious weed populations were observed at any of the Proposed

Action sites, any new noxious weed introductions could adversely impact the current native plant community. Also, any increase in cheatgrass could alter the fire regime in the area.

To minimize the potential impact, environmental protection measures included in the Proposed Action would reduce the potential for spread of noxious and invasive weeds. All drilling equipment would be washed prior to arrival on the site, prior to moving between sites, and prior to removal to prevent and minimize the introduction or spread of non-native vegetation. All washing would occur at the drilling sites, except for the initial washing which would occur off-site. Each Proposed Action site would be staked and flagged and no ground disturbance would occur outside of the designated site. Existing vegetation, primarily sagebrush scrub, would be crushed rather than bladed wherever possible. Any topsoil and vegetation that are scraped would be stockpiled within the site and re-spread at the completion of construction. Ground disturbance at each site would be kept to a minimum. Additionally, any backfill used for the Proposed Action would consist of native material directly from the sites themselves, any necessary erosion control material would be certified weed-free, and the sites would be monitored for noxious and invasive weeds as part of the re-vegetation effort. If any populations of noxious weeds are observed, the Ely District Noxious and Invasive Weeds Coordinator would be notified and SNWA would treat the infestations accordingly.

To eliminate the transport of vehicle-borne weed seeds, roots, or rhizomes all vehicles and heavy equipment used for the completion, maintenance, inspection, or monitoring of ground disturbing activities or for authorized off-road driving would be free of soil and debris capable of transporting weed propagules. All such vehicles and equipment would be cleaned with power or high pressure equipment prior to entering or leaving the work site or project area. Cleaning efforts would concentrate on tracks, feet and tires, and on the undercarriage. Special emphasis would be applied to axels, frames, cross members, motor mounts, on and underneath steps, running boards, and front bumper/brush guard assemblies. Vehicle cabs would be swept out and refuse would be disposed of in waste receptacles. Cleaning sites would be recorded using global positioning systems or other mutually acceptable equipment and provided to the Ely District Noxious and Invasive Weeds Coordinator or designated contact person.

8. Paleontological Resources

No paleontological sites have been identified within or immediately adjacent to the project area. However, formations known to contain paleontological resources are located in the vicinity. One well site would be located in the Pogonip Group, and one within the Guilmette Formation. Therefore, there is the potential that previously undiscovered paleontological resources may be encountered during Proposed Action activities.

9. Range/ Livestock Grazing

Well construction would disturb relatively little area (approximately 6.57 acres) and would limit the impacts to livestock grazing and rangeland resources. Construction of access roads would add to the impacts through the loss of vegetation and ground cover. However, no reduction of Animal Unit Months would be necessary due to the small amount of forage which may be lost compared to the size of the allotments overall.

Livestock management would not be greatly affected by disturbances related to the construction and testing of the wells. Livestock would become accustomed to the presence of equipment and any noise associated with drilling. However, site DRY5007X in Muleshoe

Valley is located approximately three miles from two main water sources for livestock. The grazing permittees for the Muleshoe Use Area would be notified in advance of construction activities so they are prepared for cattle movement and straying as cattle avoid the site.

Due to the temporary nature of the proposed construction and testing activities, no affect on range or livestock grazing is anticipated.

10. Recreation

Public use of the landscapes in the project area is low, and because the area receives low levels of dispersed recreation use, visitors would have nearly zero social encounters per day at the well site. During construction, the extent of traffic is anticipated to be approximately 6-8 construction and support vehicles traveling to the site each day. Increased traffic in the area would result in an increase in social encounters per recreation visit to approximately 1-2 per day. Once construction was complete, the social setting at the sites would return to pre-construction levels with low levels of dispersed use and nearly zero social encounters per day for recreationists. The temporary noise increase would contribute to the decrease in opportunities for solitude in the immediate area; however, noise levels would return to pre-construction levels following completion of drilling. During construction, the abundance of public land similar in nature to the project area would provide other opportunities for solitude and minimal encounters for recreationists. The Proposed Action would result in the installation of wells, concrete pads and access roads that would change the physical setting and decrease the naturalness of the immediate area. The change to the physical setting combined with the change to the social setting would have minimal impacts to recreation in the immediate area.

The Silver State OHV trail receives low levels of recreation use and visitors enjoy wildlife viewing from the trail, low social encounters and panoramic vistas of mountain peaks and the broad valley floor. None of the well sites would detract from the visitor's Silver State OHV trail recreational experience because the sites would not be visible from the trails or trailheads. The social setting for Silver State OHV users would be the most affected if they drove off the trail and visited the well sites. For curious OHV traffic visiting the well sites, the social setting is anticipated to increase to approximately 1-2 encounters per day. However, the social encounters would return to pre-construction levels once construction was completed.

The Proposed Action sites DRY5006X, DRY5003X, and DRY5007X would be located within an ERMA. Management practices for ERMAs are primarily to provide basic recreation information to the public and to allow public access. Since the Proposed Action would not hinder either of these management practices, the Proposed Action is not expected to have an impact on recreation as they are currently permitted.

Two Proposed Action sites, DRY5004X and DRY5005X, would be located within the Chief Mountains SRMA. The Chief Mountains SRMA is 110,839 acres and managed for motorized activities. The Proposed Action would result in two well sites (each consisting of a 1.0 acre permanent and 1.5 acre temporary site) that would change the physical setting of the area. The change in physical setting combined with the potential change in social setting resulting in an increase of 1-2 encounters per day would have only minimal impacts to recreation during the construction period. After construction was complete, periodic monitoring activities are not anticipated to have any affect on the social encounters for recreationists utilizing the area.

All of the proposed sites are located within the hunting range furbearer animals, upland game, and mountain lions. The hunting seasons for these animals are primarily in the fall, winter, and early spring. Construction of the proposed project would likely occur within this time period and would potentially have a temporary impact on the recreational sport due to human activities in the area. Discharge water may attract animals to the sites; however, the noise from the drilling operation would likely deter the animals as well. Hunters in the area may also encounter additional vehicles on backcountry dirt roads. After the construction period, only monitoring of the sites would occur. Monitoring activities are not expected to have any affect on animals or hunters.

11. Soils

Due to the low slope, well-drained nature of the soils, lack of or rare frequency of flooding, lack of ponding, and low potential for erosion at the sites, the Proposed Action is not expected to have a significant impact on soils. Measures have been included in the Proposed Action to reduce discharge rates to prevent scouring and erosion. The site would be restored at the completion of construction, including replacement of topsoil and reseeding, which would stabilize the site and minimize the potential for any future erosion.

12. Special Status Species – (Federally Listed, Proposed and Candidate Species; State Protected Species; and BLM Sensitive Species)

Threatened, endangered, or other special status species or habitat is not located around the Proposed Action, therefore the Proposed Action would have no impacts on special status species.

13. Vegetation

The Proposed Action would disturb the individual plants at the well sites, but would not impact the plant populations, species, or landscape composition. Since the existing vegetation would be crushed rather than bladed whenever possible and the site would be restored and reseeded after construction is complete, impacts to vegetation is expected to be minor.

14. Visual Resource Management

The Proposed Action occurs within VRM Class 3. Management objectives for Class 3 views revolve around partial retention of the existing character of the landscape. Accordingly, management activities and uses should not dominate the view, but may attract the attention of the casual observer. This Proposed Action is consistent with uses within VRM Class 3.

While the Proposed Action may dominate the view of the landscape and be the major focus of viewer attention during the construction period, the short-term impacts to visual resources would be temporary. Also, there would be a temporary social setting change during construction and drilling activities, due to the presence of the drill rig and associated vehicles and equipment traveling on dirt roads and working at the site which would likely increase the number of contacts with other groups to 1-2 encounters per day. During the night, the lighting needed for construction activities at the well site would be visible from the valley and surrounding roads, which may lead to increased social encounters from recreationists who travel off of the nearby OHV trail to visit the site. Measures included in the Proposed Action for night lighting require the lighting be shielded and directed down towards the site and not into surrounding areas or onto roads to minimize visual effects at night. At the completion of the 30-day drilling and testing activities, the vehicles, equipment, and lighting would be

removed from the sites and the visual and social setting would return to pre-construction levels of nearly zero encounters per day.

At the completion of construction, the physical setting of the area would be permanently changed. The visible facilities on site would consist of a short (approximately 2 to 4 feet), capped steel casing on a small concrete pad. If desired in the future, a small instrument housing and transmission antenna may be installed at the well head. The color of the well head would be a shade of gray or tan and would be selected to conform to the surrounding landscape at each site. The completed well sites would be seldom seen from the dirt access roads and would blend with the natural environment due to their size and color. Their presence would not substantially alter the character of the existing landscape. Contrasts to the basic landscape would be evident, but would remain subordinate to the existing landscape.

Viewer exposure to the wells sites DRY5004X, DRY5005X, and DRY5006X, located in a proposed utility corridor, would be low because public use of the lands within the corridor is low. In addition, the corridor is isolated from views of sensitive viewing areas, such as residences, recreation sites, and major transportation routes, by both distance and the surrounding mountains. The constructed well sites would be seldom seen by the Silver State OHV trail users and recreationists in the area.

15. Water Resources (Water Rights)

There are four major springs located within the vicinity of the Proposed Action sites. Big Mud Springs is located at an approximate elevation of 6,280 feet, over approximately 900 feet higher in elevation than the predicted water level of site DRY5007X. Site DRY5007X is also planned to be completed in alluvial material and not carbonate rock. Porphyry Spring was dry during a SNWA field visit in May 2008 and there didn't appear to be any flow at the spring as shown on topographic maps. The abandoned partially rusted pipeline and lack of vegetation upstream of the spring indicated a permanent spring was not present. The angular to sub-angular bed material in the spring channel indicated that when water is present it is only for a short duration. The anticipated water level at DRY5004X and DRY5005X is approximately 900 feet lower in elevation than the spring area. Rabbit Spring and Cliff Springs are both located in the mountain block at a significantly higher elevation than the estimated water level at DRY5004X. There are no anticipated impacts on Big Mud Springs, Porphyry Spring, Rabbit Spring, and Cliff Springs from the Proposed Action.

The amount of groundwater pumped for the hydraulic testing would have no measurable impact on groundwater resources. There may be localized groundwater drawdowns in the immediate vicinity of the testing wells. These drawdowns would quickly recover at the termination of testing. Temporary discharges of water during drilling and testing would be managed to avoid erosion or scouring.

16. Wetlands / Riparian Zones

The wetlands and riparian areas have not been observed around the springs in the area, mainly because the springs are in the mountain block and fed by precipitation. In years of high precipitation, more wetland and riparian species may grow around the springs. The Proposed Action is not expected to have an effect on these areas since the springs are not hydrologically connected to the proposed wells.

17. Wild Horses and Burros

Wild horses and burros within the Silver King HMA may be temporarily frightened away from the two well sites during construction and well development activities, but drawn to the water in the discharge paths resulting from the hydraulic testing. However there would be increased human activity in the area when the water is available, the discharged water would rapidly evaporate or percolate into the alluvial sediments surrounding the area, and no long-term ponding of water would result from the tests. Additionally, water resources in the area are not expected to be impacted, therefore the wild horses and burros would not lose a watering source. For these reasons, impacts to wild horses and burros are not anticipated.

18. Wildlife

Larger wildlife common to the project area and various bird species could temporarily be frightened away from the Proposed Action sites as a result of the increased activity and equipment. Smaller species of wildlife, such as lizards or small mammals, would also likely be frightened away from the sites during construction, but some may inadvertently be killed during ground disturbance. Wildlife may be drawn to discharged water during hydraulic testing and well development; however there would be increased human activity in the area when the water is available, the discharged water would rapidly evaporate or percolate into the alluvial sediments surrounding the area, and no long-term ponding of water would result from the tests. For these reasons, impacts to wildlife species are not anticipated.

The total amount of wildlife habitat potentially affected at the Proposed Action five sites (DRY5003X, DRY5004X, DRY5005X, DRY5006X, and DRY5007X) would be 6.57 acres permanent ROW and 7.5 acres temporary ROW. The amount of habitat that would be disturbed by the Proposed Action is negligible compared with the total available habitat in Dry Lake Valley. Thus, there would be no impact to wildlife habitat resulting from the Proposed Action.

B. No Action Alternative

Under the No Action alternative selection, none of the above-described impacts would occur.

C. Cumulative Impacts

Cumulative impacts are those that result from the incremental impact of the Proposed Action when added to other past, present, and reasonably foreseeable future actions. The purpose of the cumulative analysis in the EA is to evaluate the significance of the Proposed Action's contributions to cumulative impacts. A cumulative impact is defined under federal regulations as follows:

> "…the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time." (40 CFR 1508.7).

A cumulative impacts analysis is limited to those past, present, and reasonably foreseeable future actions that involve effects on a resource value that overlaps with the Proposed Action's effects on that same resource value. A watershed level of analysis has been completed for the cumulative impact analysis.

1. Past, Present and Reasonably Foreseeable Future Actions

Past/Present: Lincoln County conducts periodic maintenance of county roads in Dry Lake Valley. This maintenance is conducted as needed, and includes grading and leveling of the existing roads.

Past/Present/Reasonably Foreseeable Future: The BLM currently manages grazing allotments in the Dry Lake Valley. Permittees utilize several grazing allotments in Dry Lake Valley for sheep and cattle. The Bureau will manage livestock grazing on public lands under the principle of multiple use and sustained yield, and in accordance with applicable land use plan.

Reasonably Foreseeable Future: In accordance with the Lincoln County Conservation, Recreation, and Development Act (LCCRDA), the Secretary of Interior established a 2,640-foot wide (0.5 mile wide) utility corridor on public lands in Lincoln and Clark Counties. Construction and maintenance activity within the utility corridor would possibly occur at the same time as construction of the proposed action well sites which are approximately one half mile to four miles away from the corridor.

Reasonably Foreseeable Future: SNWA anticipates that additional hydraulic monitoring and testing wells may be requested in Dry Lake Valley as a result of the Stipulated Agreement between the Department of Interior and SNWA, concerning water rights in Delamar, Dry Lake, and Cave Valley. However, the specific location and schedule for these other wells is not currently known. These reasonably foreseeable future drilling and testing activities would not overlap in the same geographic area or time as the hydraulic testing under the Proposed Action.

Reasonably Foreseeable Future: SNWA has applied to the BLM for ROWs to construct and operate a groundwater development project. The SNWA Clark, Lincoln, and White Pine Counties Groundwater Development (GWD) Project is currently undergoing environmental analysis. Information obtained from the hydraulic testing under the Proposed Action may be used in future groundwater modeling and impact analysis. Construction of this project would not overlap in time with the Proposed Action. However, the Proposed Action sites could be used for future hydraulic monitoring of the GWD Project.

Reasonably Foreseeable Future: A preliminary environmental assessment has been submitted to make alternations to the original Silver State OHV Trail. The project is currently undergoing review. The proposed action is to allow for the construction of short sections of road and trail to avoid a riparian area, as well as for convenient access routes and spurs to reach trailheads and new safety crossings to connect main sections of the trail. Construction of the new Silver State OHV trailheads and trail alignments would possibly occur during the time of the Proposed Action. However, the Proposed Actions sites would be located approximately one to five miles from the new Silver State OHV trail and trailheads and would use separate access roads to reach the sites.

Reasonably Foreseeable Future: A ROW N-49781 has been issued to Idaho Power Co on December 8, 1994, for a 500 kilovolt north–south transmission line (Southwest Intertie Project (SWIP)). Construction of the SWIP would possibly occur during the time of the Proposed Action drilling and testing. Three of the five Proposed Action sites would be located in the vicinity of the SWIP and would potentially use the same access roads to reach the sites.

Reasonably Foreseeable Future: A temporary ROW N-84618 has been requested by SNWA to conduct a geotechnical study that includes 574 soil borings, six trenches, soil grab samples and

new access routes needed to evaluate the general soil conditions and fault crossings in Clark and Lincoln Counties, Nevada. The project would extend 105 miles north from Nellis Air Force Base in Clark County to the very southern end of Dry Lake Valley. Construction of this project would not occur during the same timeframe as the Proposed Action. Although located in the same valley, the Proposed Action sites would be located north of the geotechnical studies.

Reasonably Foreseeable Future: Following completion of the southern half of the geotechnical study (ROW N-84618), SNWA plans to submit a temporary ROW request to conduct Phase II of the geotechnical study (northern portion of study area). The study is needed to evaluate the general soil conditions and fault crossings in Lincoln and White Pine Counties, Nevada. The geotechnical study would include soil borings, trenches, soil grab samples and new access roads and would extend approximately 205 miles north from the southern end of Dry Lake Valley to White Pine County. Construction of this project would not occur during the same timeframe as the Proposed Action. The Proposed Action well sites would be located in the vicinity of the geotechnical study and would potentially use the same access roads to reach the sites.

2. Issues and Resource Values

Issues and resource values that potentially may cumulatively be affected by the Proposed Action in conjunction with other past, present, and reasonably foreseeable future actions include air quality, non-native, invasive species and noxious weeds, range/livestock grazing, recreation, soils, threatened, endangered, and special status species, vegetation, visual resource management, and water resources,. The following resources are not cumulatively affected: access, areas of critical environmental concern, cultural resources, environmental justice, farmlands, floodplains, forest and rangeland health, geology and minerals, land use, migratory birds, Native American concerns, paleontological resources, public services and utilities, wetlands/riparian, wild horses and burros, wild and scenic rivers, wilderness, and wildlife.

Air Quality: The resource analysis area for air quality is the Dry Lake Valley air shed. Road maintenance activities and construction of the Silver State OHV trail and SWIP, if occurring at the same time as ground disturbance under the Proposed Action, could result in a temporary cumulative increase in dust emissions. All four activities would implement dust control measures such as watering, and are not anticipated to affect the current attainment status of the air shed.

Non-native, Invasive Species, and Noxious Weeds**:** The cumulative resource analysis area for weeds is the Dry Lake Valley watershed. The Proposed Action, along with past, present, and future SNWA granted ROWs, and county road maintenance, has the potential to increase the spread of noxious or invasive weeds. Measures to minimize the spread of invasive and non-native vegetation would be implemented in accordance with approved ROW grants and roadwork authorizations. Therefore, no cumulative increase in noxious or invasive weeds is anticipated.

Range / Livestock Grazing: The cumulative resource analysis area for range and livestock grazing is the Dry Lake Valley watershed. While the five well sites and access roads would displace a small amount of potential grazing land (approximately 6.57 acres), the total acreage is minimal compared to the total size of the grazing allotments. Also, three of the wells sites are located on vacant land in association with the designated SWIP utility corridor, and as such will accommodate and consolidate existing or future projects in the area. During construction,

increased use of existing dirt roads in the area may increase habitat fragmentation in the project area affecting livestock distribution; however, the affects would be temporary returning to pre-construction livestock distribution following construction completion. None of the other past, present or reasonably foreseeable future projects would result in impacts on range/ livestock grazing within this cumulative resource analysis area. As a result, no cumulative impacts on range and livestock grazing would occur.

Recreation: The cumulative resource analysis area for recreation is the Dry Lake Valley watershed. Construction of the Silver State OHV trail, if occurring at the same time as drilling activities under the Proposed Action, could result in a temporary cumulative increase in social setting encounters from visitors to the construction site. However, following construction completion, the social setting would return to pre-construction levels and no cumulative impacts on recreation are anticipated. While the five well sites and access roads would displace a small amount of potential recreation use area, the wells DRY5004X, DRY5005X and DRY5006X would be located on vacant land in association with the designated SWIP utility corridor. Therefore, the cumulative impacts to existing recreational areas are anticipated to be minimal.

Soils: The cumulative resource analysis area for soils is the Dry Lake Valley watershed. The sites would be restored at the completion of construction, including replacement of any removed topsoil which would stabilize the site and minimize the potential for any future erosion. The drill rig would be truck-mounted and driven directly to and from the location for well installation only. Soil compaction would be minimal, occurring primarily under the truck tires only. All project activities would remain within the boundaries of the approved ROW grant. Discharges from the hydraulic testing under the Proposed Action would be directed to avoid existing roads. None of the other past, present, or reasonably foreseeable future actions would result in impacts on soils within this cumulative resource analysis area since measures to minimize soil compaction and erosion would be implemented in accordance with approved ROW grants and roadwork authorizations. As a result, no cumulative impacts on soils would occur.

Special Status Species (Federally Listed, Proposed and Candidate Species; State Protected Species, and BLM Sensitive Species): The cumulative resource analysis area for special status species which may be affected by the Proposed Action is the Dry Lake Valley watershed.. No impacts on Sage Grouse habitat or any bird species' nests, sensitive raptors or other sensitive bird species would occur from the Proposed Action. Other past, present, or reasonably foreseeable future projects would include mitigation measures as part of approved ROW grants that eliminate or reduce impacts to sensitive species and their habitat. Therefore, no cumulative impacts to threatened, endangered or special status species are anticipated.

Vegetation: The cumulative resource analysis area for vegetation is the Dry Lake Valley watershed. None of the other past, present, or reasonably foreseeable future projects would result in a net loss of vegetation due to the implementation of restoration mitigation measures within this cumulative resource analysis area, thus no cumulative impacts on vegetation would occur.

Visual Resource Management: The cumulative resource analysis area for visual is the Dry Lake Valley watershed including the immediate vicinity of the well sites. Since the Proposed Action wells would blend into the surrounding landscape, they would not discernibly increase

the visual alteration of the area. New access roads and improvements to existing roads required for this project as well as past, present, and reasonably foreseeable future projects, including the existing county roads has the potential to visually alter the analysis area. Upon termination of SNWA granted ROWs, rehabilitation of improved existing and new access roads would be determined in accordance with BLM requirements. Since rehabilitation would decrease visual alterations in the well site vicinity, cumulative impacts to visual resources are not anticipated.

Water Resources (Water Rights): The cumulative resource analysis area for water resources is the Dry Lake Valley watershed. The Proposed Action, in conjunction with the past, present, and reasonably foreseeable future actions, would result in more information about the geology and hydrology of Dry Lake Valley and the surrounding area. Since the hydraulic testing for Proposed Action would not result in a measurable impact on groundwater elevations or quantity, and would not overlap in time with potential future groundwater development under the SNWA GWD Project, there would be no cumulative water resources impacts. Use of these wells for future monitoring would not have cumulative resource impacts.

D. Proposed Mitigation Measures

If fence lines or cattle guards are damaged as a result of implementing the Proposed Action, the damaged portion would be rebuilt to BLM specifications.

Environmental Protection Measures have been identified for the Proposed Action. Appropriate mitigation has been included as part of the Proposed Action and no additional mitigation is proposed based on this environmental analysis.

E. Suggested Monitoring

BLM and SNWA would monitor the Proposed Action sites for the continued operation of groundwater monitoring equipment until the wells have been plugged and abandoned. Noxious and invasive weed populations would be monitored at the well sites. Seedling establishment, which would stabilize soils and minimize the introduction and spread of weeds, would also be monitored at the well sites prior to termination of the ROW grant.

V. REFERENCES

HRA, Inc. 2008. A Class III Inventory of Seven Monitoring Well Locations (N-84217 and N-84720) for the Southern Nevada Water Authority in Lincoln County, Nevada.

Executive Order 13186. 2001. Responsibilities of Federal Agencies to Protect Migratory Birds.

SWCA Environmental Consultants. 2008. Southern Nevada Water Authority Spring Valley, Hamlin Valley, Delamar Valley, and Dry Lake Valley Groundwater Monitoring and Testing Well Sites, Lincoln and White Pine Counties, Nevada Biological Survey/Inventory Report.

Wildland International, Inc. 2007. Dry Lake Valley Test Well Locations Well Sites 181W118, 181W121, 181W120, & 181W119 Terresrial Biological Findings Report.

VI. GLOSSARY

Alluvium – a general term for clay, silt, sand, gravel or similar unconsolidated, eroded material deposited during comparatively recent geologic time by stream or other body of moving water.

Angular - having sharp angles or borders.

Encumberances – an interest, right, burden, or liability attached to a title of land.

Flaggy limestone – Limestone bedrock that is splitting or tending to split into layers along distinct bedding planes.

Herpetofauna –A branch of science concerned with the study of amphibians and reptiles.

Hydrologic basin - a defined geographic area encompassing the drainage area or catchment area of a stream, its tributaries or portion thereof. For the purpose of this report, the basins are defined by the State Engineer's Office, Department of Conservation and Natural Resources, Division of Water Resources.

Hydraulic conductivity - the property of a water bearing formation as it relates to a measurement of the formations capacity to transmit water through its porous or fractured media.

Limestone - a sedimentary rock consisting chiefly of calcium carbonate, primarily in the form of calcite.

Lithology – the character of a rock described in terms of it's color, structure, mineral composition, grain size, and arrangement of it's component parts.

Passerine – of or relating to the largest order (Passeriformes) of birds which includes over half of all living birds and sometimes known as perching birds.

Propagule – Any plant material used for the purpose of plant propagation, such as a seed, spore, or a part of the vegetative body capable of independent growth if detached from the parent.

Subangular – somewhat angular, free from sharp edges but not smoothly rounded.

Transmissivity – The rate at which water is transmitted through a measured width of an aquifer under a correlative hydraulic gradient.

VII. CONSULTATION & COORDINATION

This EA was prepared at the direction of the BLM, Ely and Caliente Field Offices, Nevada, by SNWA. The following is a list of individuals responsible for preparation of the EA.

VII. LIST OF PREPARERS/ REVIEWERS

<u>BLM Ely and Caliente Field Offices</u>

Brenda Linnell – Realty Specialist

Lynn Wulf – Archeology/Historical/Paleontological

Kari Harrison – Soils/Wetlands and Riparian/Floodplains/Water Quality

Bonnie Million – Non-Native, Invasive Species and Noxious Weeds

Shirley Johnson – Rangeland Management

Chelsy Simmerson – Rangeland Management

Cody Coombs – Fire

Ben Noyes – Wild Horse and Burros

Paul Podborny – Wildlife

Dave Jacobson – Outdoor Recreation Planner/Wilderness

Kalem Lenard – VRM/Recreation

Melanie Peterson – Safety, Washes

Elvis Wall – Native American Coordinator

Chris Hanefeld – Public Affairs

Joe David – NEPA Specialist

Alan Kunze – Geology_

Zach Peterson – Forester/ NEPA

Vanessa Hice – Las Vegas Contact

Dave Jacobson –Outdoor Recreation Planner/Wilderness

SNWA and Parsons Water & Infrastructure

Lisa Luptowitz – Environmental Planner

Kimberly Reinhart – Environmental Planner

Chiaki Brown – Environmental Planner

Andrea Randall – Environmental Planner

Jason Mace – Hydrologist

Don Jolly – Principal Archaeologist

Audrey Bennett – Biologist

Stephanie Harris – Biologist

Carol Watson– Biologist

Attachment 1
Maps and Site Photographs

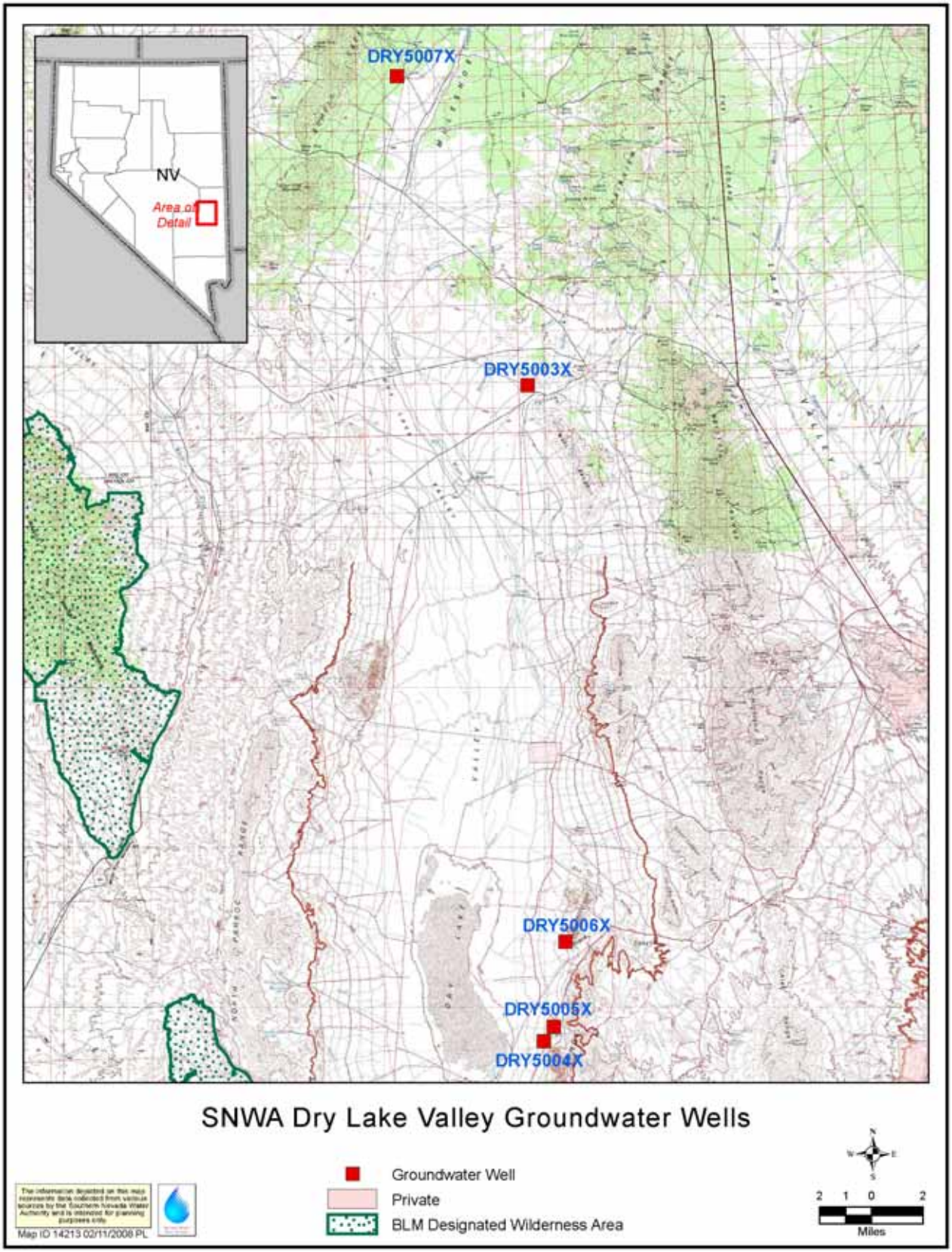

Figure 1: General Location Map

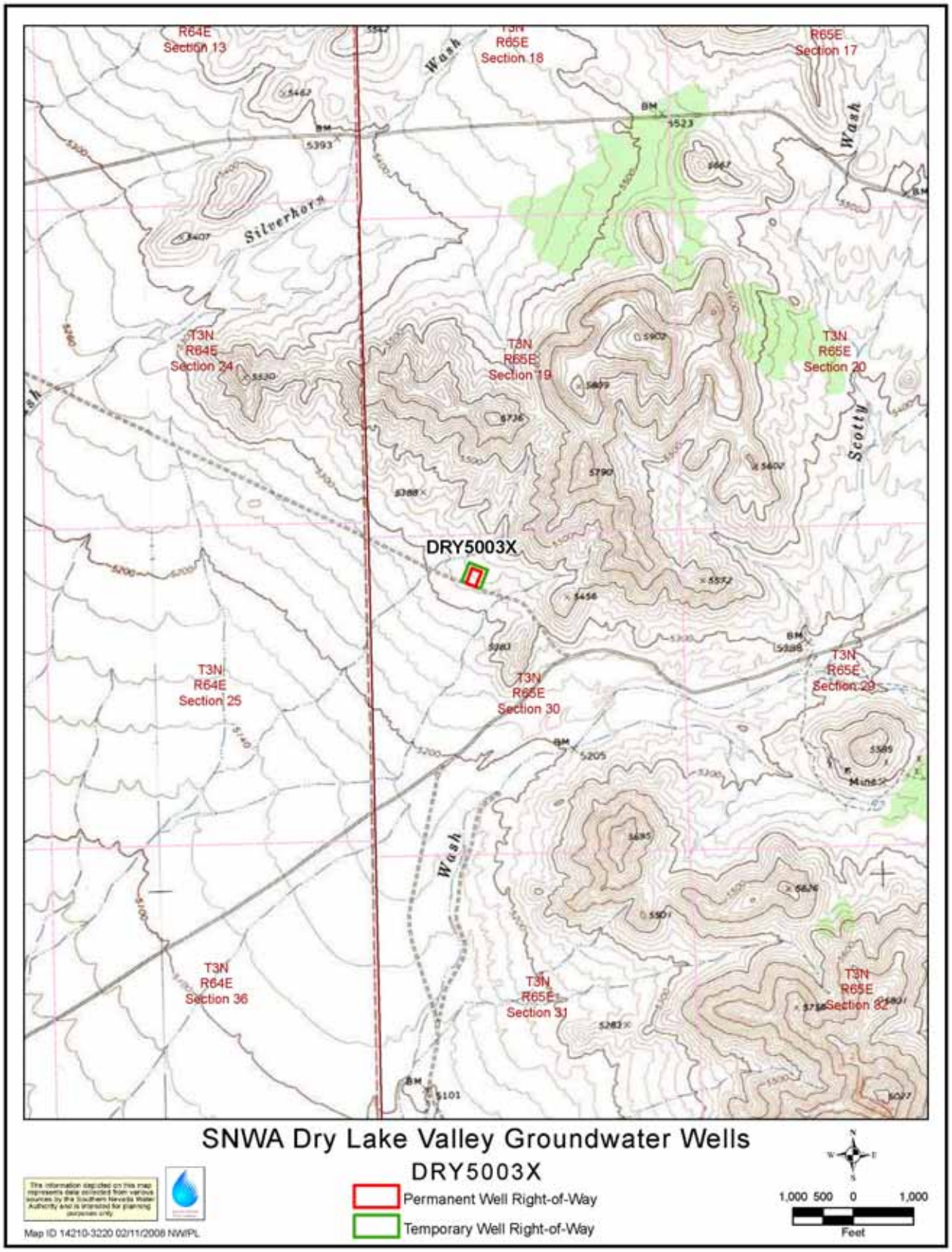

Figure 2: Site DRY5003X Topo View

Figure 3: Site DRY5003X Aerial View

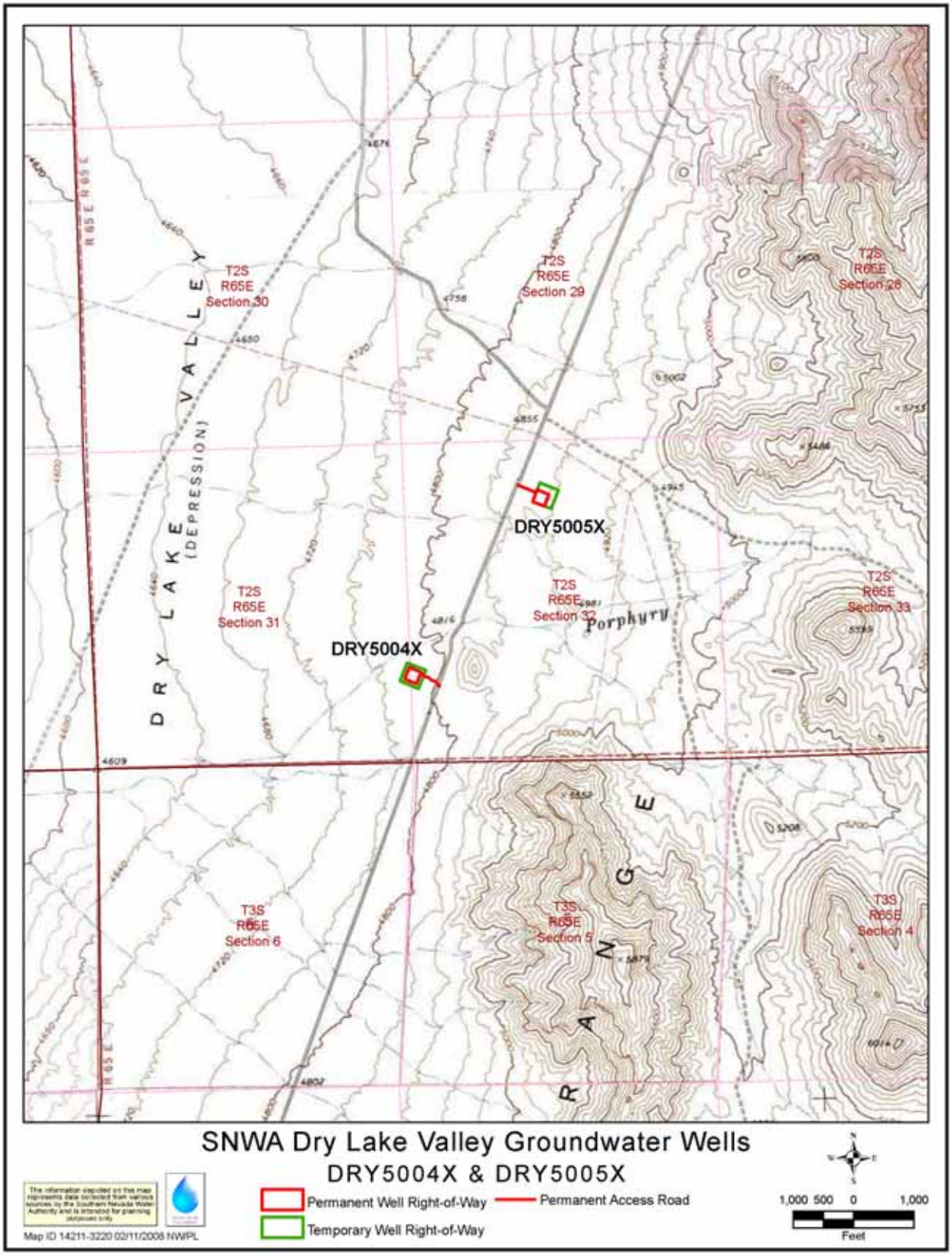

Figure 4: Site DRY5004X and Site DRY5005X Topo View

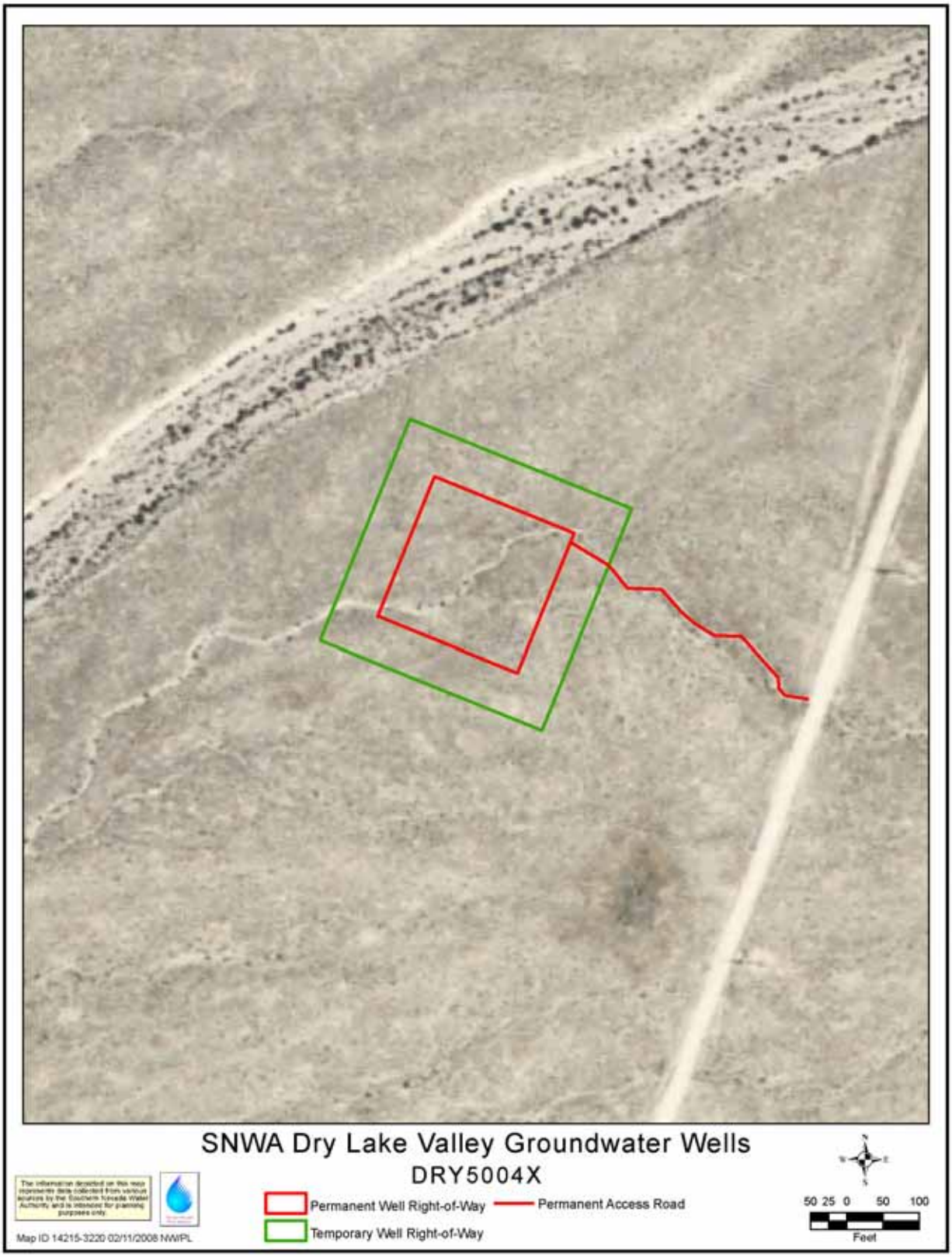

Figure 5: Site DRY5004X Aerial View

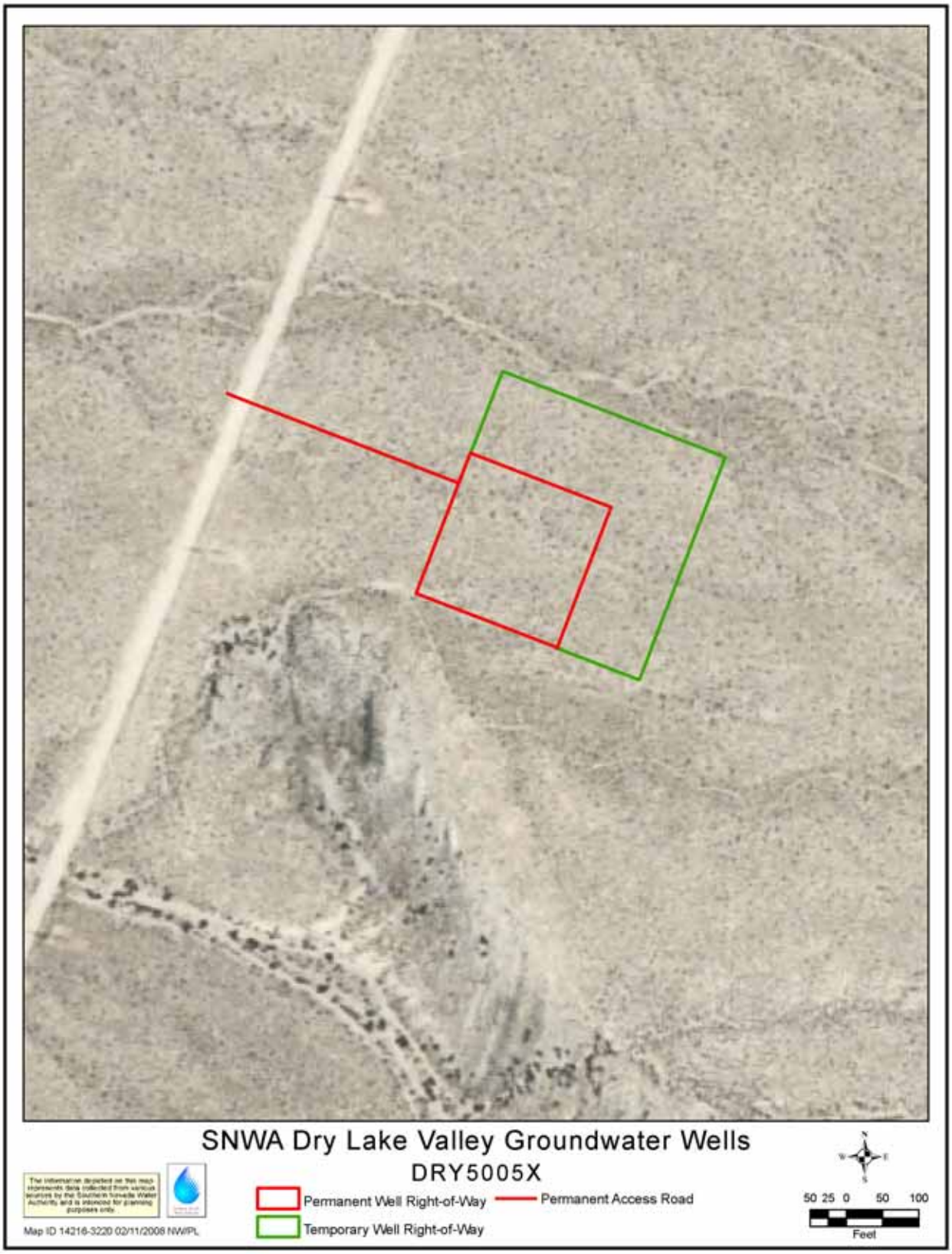

Figure 6: Site DRY5005X Aerial View

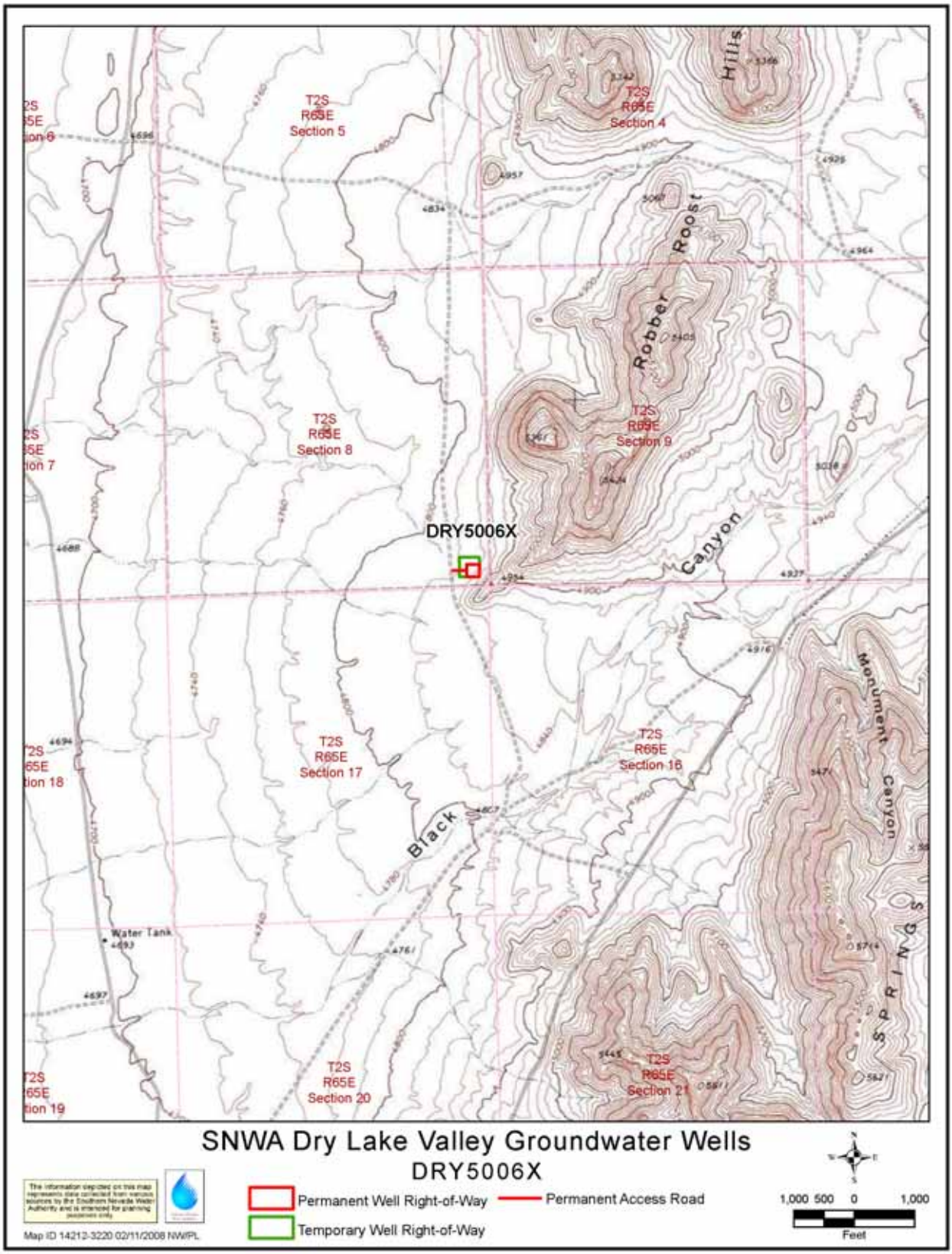

Figure 7: Site DRY5006X Topo View

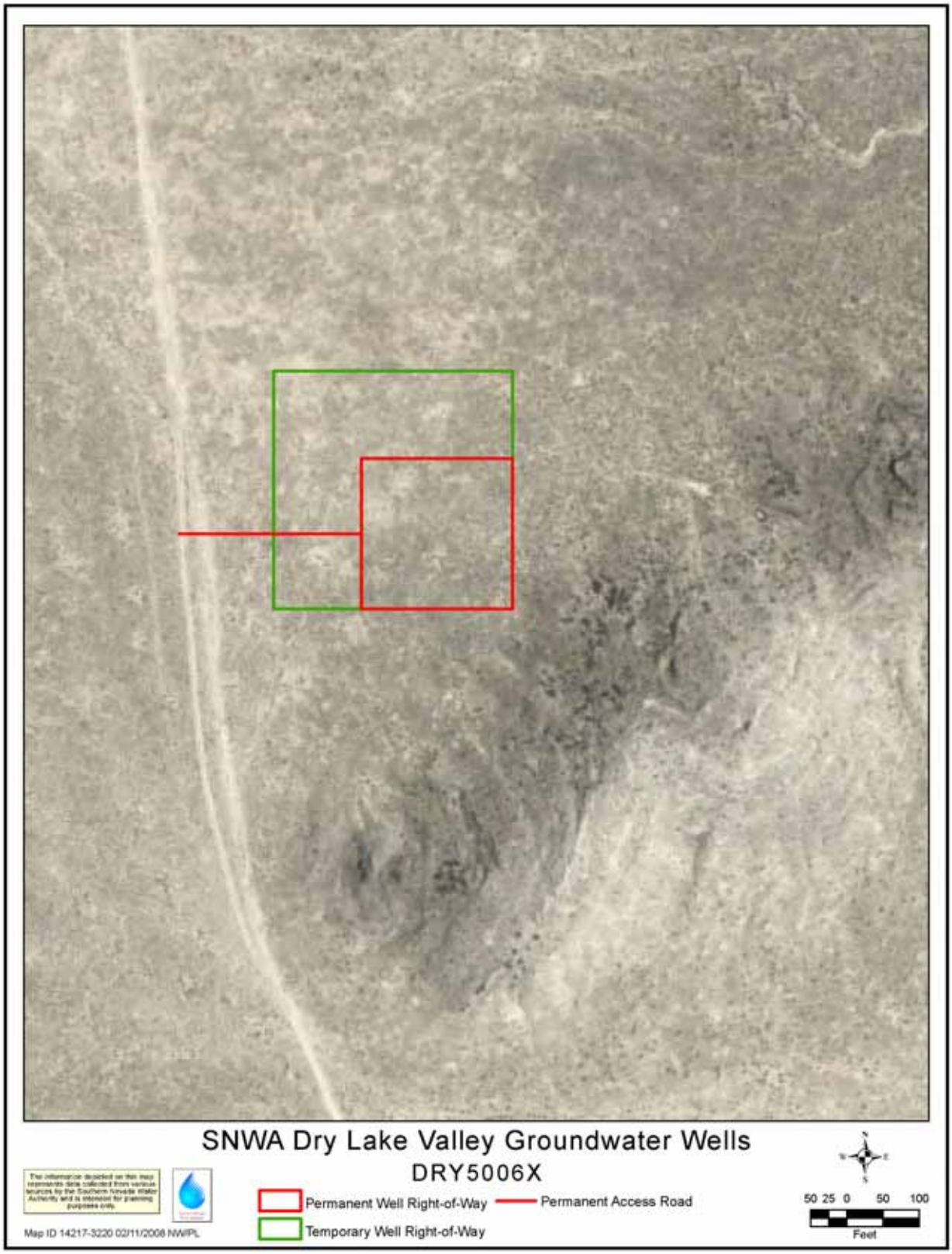

Figure 8: Site DRY5006X Aerial View

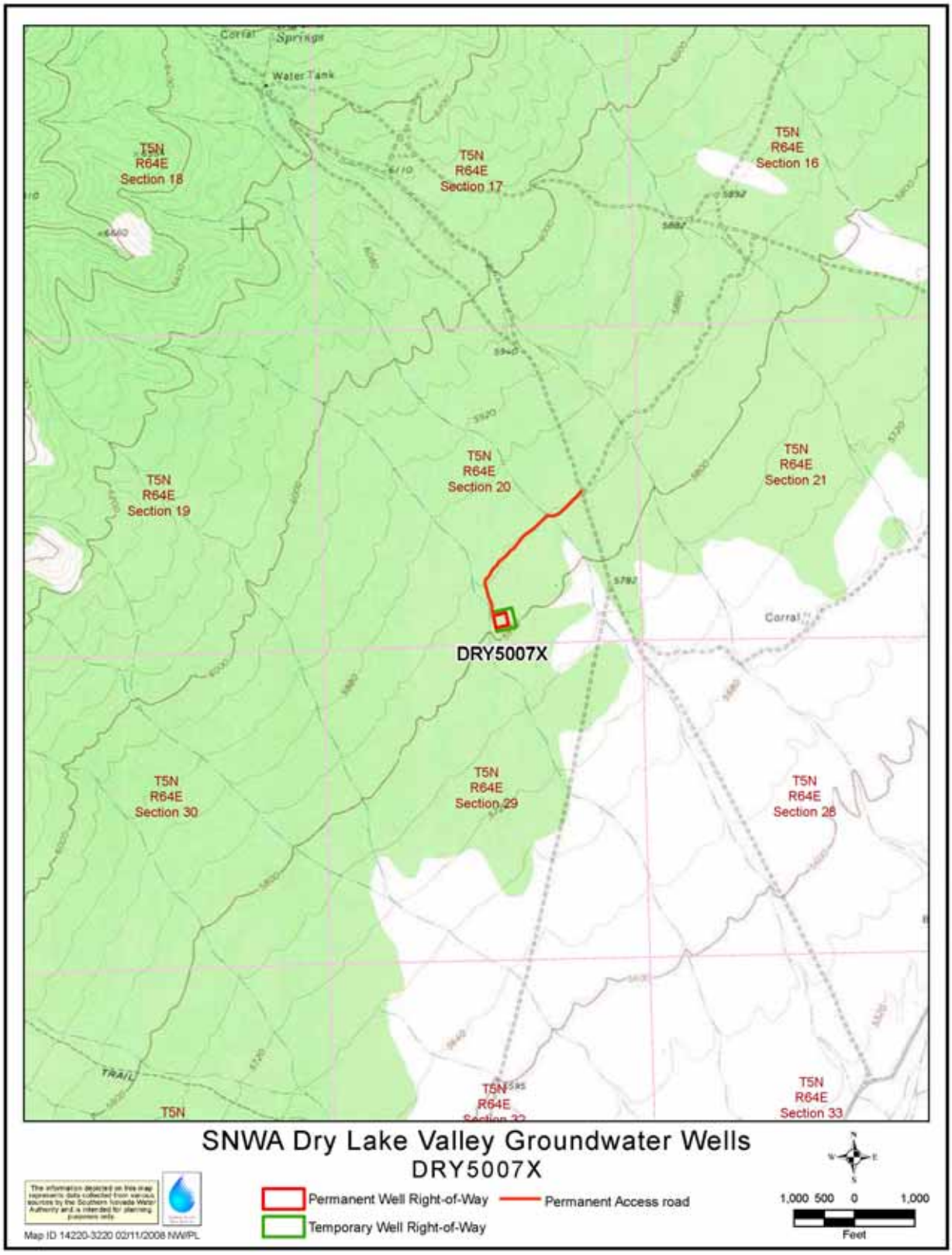

Figure 9: Site DRY5007X Topo View

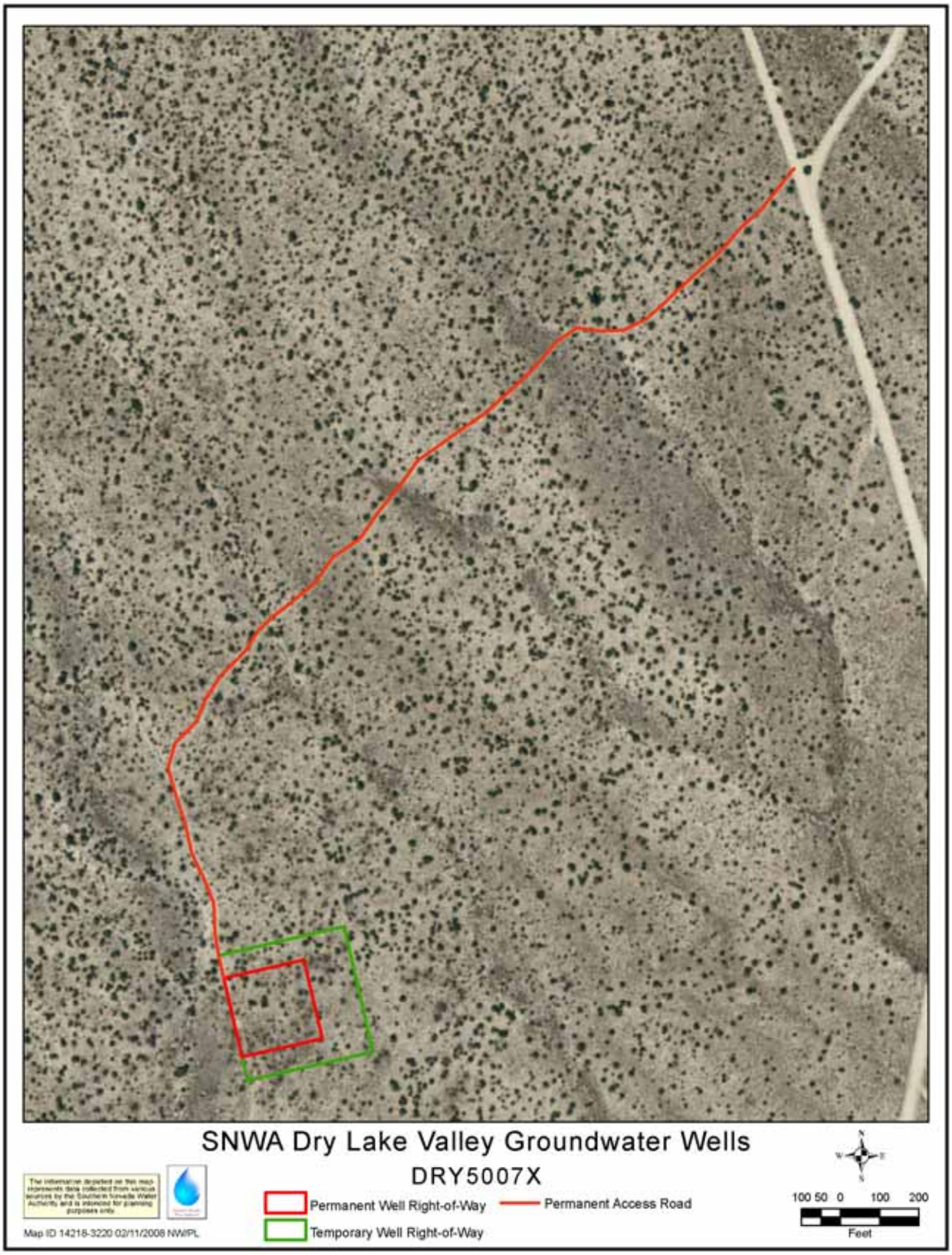

Figure 10: Site DRY5007X Aerial View

Figure 11: Site DRY5003X May 2008

Figure 12: Site DRY5004X June, 2008

Figure 13: Site DRY5005X May 2008

Figure14: Site DRY5006X May 2008

Figure 15: Site DRY5007X June 2008

Attachment 2
Risk Assessment for Noxious & Invasive Weeds

RISK ASSESSMENT FOR NOXIOUS & INVASIVE WEEDS

N-84217, Dry Lake Valley Groundwater Wells

The Southern Nevada Water Authority (SNWA) proposes to construct five groundwater wells and four access roads in Dry Lake Valley, Lincoln County (Proposed Action). On November 14, 2007, site habitat and weed evaluations were completed by Wildland International, Inc. for SNWA for groundwater well sites DRY5003X, DRY5004X, DRY5005X, and DRY5006X and the associated access roads and discharge drainage areas that may be disturbed Proposed Action. On April 22, 2008, similar site habitat and weed evaluations were completed by SWCA Environmental Consultants for groundwater well site DRY5007X and the associated access road and discharge drainage area. Noxious and invasive weed surveys were not completed for the surrounding area but instead the Ely District weed inventory data was consulted.

Under Title V of the Federal Land Management Policy Act, SNWA has requested a BLM right-of-way (ROW) to construct five groundwater well sites. Water level measurements would be collected quarterly to annually from each well site and the ROW for the groundwater wells is requested for a 30-year term.

The purpose of the Proposed Action is to gain information to assess aquifer characteristics, including storage parameters and hydraulic conductivity to better understand carbonate and alluvial aquifers in the Dry Lake Valley area. The need for the proposal is to acquire data which would be made available to assist Federal, state and local agencies in their current and future decision making. The wells would be used to conduct hydraulic testing after which the wells would be converted to monitoring wells and would continue to be used for groundwater monitoring.

Access to the sites would be from both new access roads and existing roads. Site DRY5003X would be accessed from an existing road and no road improvements are anticipated. Site DRY5004X would be accessed from a new access road approximately 0.14 acre in size and an existing dirt road. Access to site DRY5005X would be from a new access road approximately 0.12 acre in size and an existing dirt road. Site DRY5006X would be accessed from a new access road approximately 0.09 acre in size and an existing dirt road. Access to site DRY5007X would be from an existing road that needs improvements approximately 0.98 acre in size. Each groundwater well site would be 1.0 acre in permanent ROW and 1.5 acres in temporary ROW. Total, the well sites and access roads would encompass approximately 6.57 acres permanent ROW and the well sites would encompass approximately 7.5 acres temporary ROW.

Botanical Information:

The Proposed Action sites were surveyed and the Ely District weed inventory data was consulted in order to determine the presence of noxious and/or invasive weed populations within the surrounding area of the sites. When comparing the Proposed Action site locations to the Ely District weed inventory, the following standards have been applied:

- If the weed inventory documented a weed at ≤ 0.5 mile from the Proposed Action site, the weed was considered within the surrounding area.
- If the weed inventory documented a weed ≤ 1.0 mile but > 0.5 mile from the Proposed Action site, the weed was considered within the surrounding area, but the distance to the nearest weed population to the Proposed Action site is provided.
- If the weed inventory documented a weed > 1.0 mile from the Proposed Action site, the weed was not included as being within the surrounding area.

DRY5003X: The November 14, 2007 Wildland International survey observed no noxious weeds at this site, but the invasive non-native grass, cheatgrass (*Bromus tectorum*), was observed at the site. The Ely District weed inventory documented no noxious or invasive weeds within the surrounding area.

DRY5004X: The November 14, 2007 Wildland International survey observed no noxious weeds at this site, but the invasive non-native grass, cheatgrass, was observed at the site. A survey conducted in the summer of 2006 by Tri-County Weed Group also observed cheatgrass approximately 0.7 mile away from the site. The Ely District weed inventory documented no noxious or invasive weeds within the surrounding area.

DRY5005X: The November 14, 2007 Wildland International survey observed no noxious weeds at this site, but cheatgrass and Russian thistle (*Salsola kali*) was observed at the site. The Ely District weed inventory documented no noxious or invasive weeds within the surrounding area.

DRY5006X: The November 14, 2007 Wildland International survey observed no noxious or invasive weeds at the site. The Ely District weed inventory documented no noxious or invasive weeds within the surrounding area.

DRY5007X: The April 22, 2008 SWCA Environmental Consultants survey observed no noxious weeds at the site. The invasive weeds horehound (*Marrubium vulgare*) and cheatgrass were identified. The Ely District weed inventory documented no noxious or invasive weeds within the surrounding area.

Factor 1 assesses the likelihood of noxious/invasive weed species spreading to the project area.

None (0)	Noxious/invasive weed species are not located within or adjacent to the project area. Project activity is not likely to result in the establishment of noxious/invasive weed species in the project area.
Low (1-3)	Noxious/invasive weed species are present in the areas adjacent to but not within the project area. Project activities can be implemented and prevent the spread of noxious/invasive weeds into the project area.
Moderate (4-7)	Noxious/invasive weed species located immediately adjacent to or within the project area. Project activities are likely to result in some areas becoming infested with noxious/invasive weed species even when preventative management actions are followed. Control measures are essential to prevent the spread of noxious/invasive weeds within the project area.
High (8-10)	Heavy infestations of noxious/invasive weeds are located within or immediately adjacent to the project area. Project activities, even with preventative management actions, are likely to result in the establishment and spread of noxious/invasive weeds on disturbed sites throughout much of the project area.

This Proposed Action rates as Moderate (4) for Factor 1 at the present time. During the November 2007 and April 2008 surveys, no noxious weeds were observed at any of the sites. The invasive weed, cheatgrass, was observed at four of the five sites, Russian thistle was observed at one site, and horehound was observed at one site. A survey conducted by Tri-County Weed Group in the summer of 2006 observed cheatgrass approximately 0.7 mile away from site DRY5004X. Another survey completed by Tri-County Weed Group in the summer of 2007 identified the invasive weed cheatgrass within the surrounding area of site DRY5006X with the closest population at approximately 0.3 mile to the site. The Ely District weed inventory documented no noxious or invasive weeds within the surrounding area of any of the sites.

All drilling and earthmoving equipment would be washed prior to arrival on the site, prior to moving between sites, and prior to removal to prevent and minimize the introduction or spread of non-native vegetation. All washing would occur at the drilling sites, except for the initial washing which would occur off-site. The Proposed Action site would be staked and flagged and no ground disturbance would occur outside of the designated site. Existing vegetation, primarily sagebrush scrub, would be crushed rather than bladed wherever possible. Any topsoil and vegetation that are scraped would be stockpiled within the site and re-spread at the completion of construction. Ground disturbance at each site would be kept to a minimum.

Factor 2 assesses the consequences of noxious/invasive weed establishment in the project area.

Low to Nonexistent (1-3)	None. No cumulative effects expected.
Moderate (4-7)	Possible adverse effects on site and possible expansion of infestation within the project area. Cumulative effects on native plant communities are likely but limited.
High (8-10)	Obvious adverse effects within the project area and probable expansion of noxious/invasive weed infestations to areas outside the project area. Adverse cumulative effects on native plant communities are probable.

This Proposed Action rates at High (8) for Factor 2 at the present time. Since no noxious weed populations were observed within any of the Proposed Action sites, any new noxious weed introductions could adversely impact the current native plant community. Also, any increase in cheatgrass could alter the fire regime in the area.

The Risk Rating is obtained by multiplying Factor 1 by Factor 2.

None (0)	Proceed as planned.
Low (1-10)	Proceed as planned. Initiate control treatment on noxious/invasive weed populations that get established in the area.
Moderate (11-49)	Develop preventative management measures for the proposed project to reduce the risk of introduction of spread of noxious/invasive weeds into the area. Preventative management measures should include modifying the project to include seeding the area to occupy disturbed sites with desirable species. Monitor the area for at least 3 consecutive years and provide for control of newly established populations of noxious/invasive weeds and follow-up treatment for previously treated infestations.
High (50-100)	Project must be modified to reduce risk level through preventative management measures, including seeding with desirable species to occupy disturbed site and controlling existing infestations of noxious/invasive weeds prior to project activity. Project must provide at least 5 consecutive years of monitoring. Projects must also provide for control of newly established populations of noxious/invasive weeds and follow-up treatment for previously treated infestations.

The Risk Rating for the Proposed Action is Moderate (32) at the present time. The following measures would be taken to control and manage invasive and noxious weeds.

Preventive Measures:

- All vehicles and equipment used for the completion or monitoring of the Proposed Action would be free of soil and debris capable of transporting weed propagules. All such vehicles and equipment would be cleaned with power or high pressure equipment prior to entering or leaving the Proposed Action site.
- Any backfill would consist of native material directly from the Proposed Action site itself.
- Any necessary erosion control material would be certified weed-free.

Monitoring Measures:

- When the sites are visited quarterly or annually, the crew would monitor for any new infestations of noxious or invasive weeds.

Treatment Measures:

- If any populations of noxious weeds are observed, the Ely District Noxious & Invasive Weeds Coordinator would be notified.

Reviewed by: _____ _____

Bonnie Million Date

Ely District Noxious & Invasive Weeds Coordinator _____

U.S. Department of the Interior
Bureau of Land Management

Decision Record NV-040-08-01
March 24, 2009

Dry Lake Valley Groundwater Testing Wells

Location:
Dry Lake Valley, Lincoln County, Nevada
Applicant/Address:
Southern Nevada Water Authority
Groundwater Resources Department
P.O. Box 99956
Las Vegas, Nevada 89196

U.S. Department of the Interior
Bureau of Land Management
Ely District Office
Phone: 775-289-1800
Fax: 775-289-1910

Decision Record
For
Dry Lake Valley Groundwater Testing Wells
EA No. NV-040-08-01

DECISION:

It is my decision to authorize the proposed Right-of-Way Grant NVN-84217 to Southern Nevada Water Authority (SNWA), as described in the Proposed Action of the Environmental Assessment (EA) for the Dry Lake Valley Groundwater Wells Project (NV-040-08-01). I have reviewed the Right-of-Way (ROW) application and the EA. Based on that review and the record as a whole, I approve the proposed project for groundwater wells in Dry Lake Valley. This is the decision of the Bureau of Land Management.

The Proposed Action consists of installing and operating up to six groundwater wells and four access roads and culverts in Dry Lake Valley, Lincoln County, Nevada. The groundwater wells will be used to collect hydrologic information. Water from the wells will be discharged to the ground surface to existing drainings where it will readily evaporate or percolate into the ground. The permanent right-of-way (ROW) for this project consists of approximately 5.0 acres for the well sites and 1.57 acres for the new access roads and culverts; therefore totaling 6.57 acres of permanent ROW. The temporary ROW for the Proposed Action consists of 7.5 acres for construction of the well site. The ROW would be issued for 30 years, and would be renewable.

The Proposed Action would comply with State of Nevada regulations. Well drilling permits would be obtained from the Nevada Division of Environmental Protection, Bureau of Water Pollution Control. A permit from the Nevada Division of Environmental Protection, Bureau of Water Pollution Control would be obtained for temporary discharge of groundwater.

Mitigation and monitoring measures as outlined in the EA will apply.

Mitigation: Environmental protection measures will be implemented during the drilling and testing activities, as summarized below:

- Migratory Birds- If well construction activities occur during critical nesting periods, the area of disturbance will be flagged and a wildlife team will conduct breeding bird surveys no more than one week prior to site disturbance to identify if migratory bird breeding or nesting is occurring in the area. The BLM wildlife team will be notified and either the BLM wildlife team or the proponent will conduct the required survey. Authorization for construction during this breeding period will be contingent on the findings of the survey and guidance from the BLM.
- Non-native Invasive Species and Noxious Weeds- All drilling and earthmoving equipment will be washed prior to arrival on the Proposed Action sites, prior to moving between sites, and prior to removal to prevent and minimize the introduction or spread of non-native vegetation. All washing will occur at the drilling site, except for the initial washing which will occur off-site.

- Garbage - The Proposed Action site will be kept free from any accumulation of trash and rubbish during construction. Trash will be placed in storage containers on-site and properly disposed of off-site.

- Wastes (Hazardous/Solids) - Hazardous and toxic materials such as fuels, solvents, and lubricants used during drilling will be controlled to prevent accidental spills. Spill cleanup kits will be available on-site, so that any accidental spills could be quickly cleaned up. Any soils or sediments affected by accidental spills will be dug up and properly disposed of at a permitted disposal facility.

- Fire- Fire suppression equipment, including extinguishers and shovels, will be available on-site during drilling activities.

- Erosion Control- During discharge of drilling or hydraulic water testing, certified weed-free straw barriers, or flexible hose or impoundments within approved ROWs, will be used to contain water flow as needed. Discharged water will be directed to avoid existing roads and not affect existing travel routes. If necessary, a certified weed-free energy dissipater, rock rip-rap, or other erosion control measures will be used to reduce discharge rates to prevent scouring.

Monitoring: Periodic monitoring will consist of the following:

- When the sites are visited quarterly or annually, the crew will monitor any new infestation of noxious or invasive weeds.

- The crew will also monitor seedling establishment.

- BLM and SNWA will monitor the sites for the continued operation of groundwater monitoring equipment until the wells have been plugged, abandoned and reclaimed.

In summary, taking into account the context and intensity of the environmental impacts that will result from the ROW, State Permits, and the mitigation measures that will be required as conditions of approval, it is my determination that there will not be significant direct, indirect or cumulative impacts and that no EIS is required.

RATIONALE:

The need for the proposal is to provide public land for the construction of groundwater wells which would allow a better understanding of the carbonate and alluvial aquifers in this area.

The Proposed Action is in conformance with the Ely Resource Management Plan (September 2008). The proposed ROW is consistent with the terms, conditions, and decisions of the Master Plan for Lincoln County, Nevada (adopted September 2007) and meets the criteria set down in Title V of the Federal Land Policy and Management Act (FLPMA). The Proposed Action would comply with the Nevada Division of Environmental Protection, Bureau of Water Pollution Control, and Nevada Division of Environmental Protection, Bureau of Water Pollution Control.

PUBLIC INVOLVEMENT

This EA will be sent to the Ely's public mailing list and will be posted on the Ely web site at http://www.blm.gov/nv/ and then click on the "Ely" District and choose the document you want to download.

APPEALS:

If you wish to file a petition (request) pursuant to regulation 43 CFR 2801.10 or 43 CFR 2881.10 for a stay (suspension) of the effectiveness of this decision during the time that your appeal is being reviewed by the Board, the petition for a stay must accompany your notice of appeal. A petition for a stay is required to show sufficient justification based on the standards listed below. Copies of the notice of appeal and petition for a stay must also be submitted to each party named in this decision and to the Interior Board of Land Appeals and to the appropriate Office of the Solicitor (see 43 CFR 4.413) at the same time the original documents are filed with this office. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted.

Standards for Obtaining a Stay

Except as otherwise provided by law or other pertinent regulation, a petition for a stay of a decision pending appeal shall show sufficient justification based on the following standards:

(1) The relative harm to the parties if the stay is granted or denied,

(2) The likelihood of the appellant's success on the merits,

(3) The likelihood of immediate and irreparable harm if the stay is not granted, and

(4) Whether the public interest favors granting the stay.

Approved by:

_____ _____

Mary D'Aversa Date
Field Manager
Schell Field Office

U.S. Department of the Interior
Bureau of Land Management

Finding Of No Significant Impacts
NV-040-08-01
March 24, 2009

DRY LAKE VALLEY GROUNDWATER TESTING WELLS

Location:
Dry Lake Valley, Lincoln County, Nevada
Applicant/Address:
Southern Nevada Water Authority
Groundwater Resources Department
P.O. Box 99956
Las Vegas, Nevada 89196

U.S. Department of the Interior
Bureau of Land Management
Ely District Office
Phone: 775-289-1800
Fax: 775-289-1910

Finding of No Significant Impact
For
Dry Lake Valley Groundwater Testing Wells
EA No. NV-040-08-01

Introduction

The proposed action is the issuance of up to six groundwater wells within five 2.5 acres (each consisting of 1.0 acre permanent and 1.5 acres temporary) site locations in Dry Lake Valley. One groundwater well could be located at the site locations for four of the sites and up to two groundwater wells would be located the fifth site. The well sites were selected based upon proximity to hydrographic basin boundaries and geologic features and likely access to subsurface carbonate and alluvium rocks. Access to well sites would be from both existing roads and new access roads. The wells would be up to 20 inches in diameter. The groundwater wells hydraulic testing would include a pump development test, step-drawdown test, and an 8 to 72-hour continuous aquifer pump. The proposed action encompasses approximately 6.57 acres of permanent ROW and 7.5 acres of temporary ROW. Any use of these wells other than for monitoring and testing would require separate authorization from the BLM, as well as any other necessary facilities including power supply, pipeline, and well equipping. The Proposed Action would comply with State of Nevada regulations. A permit from the Nevada Division of Environmental Protection, Bureau of Water Pollution Control would be obtained for temporary discharge of groundwater during the hydraulic testing.

The EA analyzes and discloses the potential environmental effects associated with the proposed 30-year permanent, and 2-year short term ROW, to support the construction of up to six groundwater monitoring wells and associated ancillary facilities. The EA considers the quality of the human environment based on the physical impacts to public and private lands that may result from implementation of the proposed action.

Finding of No Significant Impact

Based on the analysis of potential environmental impacts contained in EA NV-040-08-01, I have determined that the proposed action, as described in the EA, will not significantly affect the quality of the human environment and that an Environmental Impact Statement (EIS) is not required prior to approval of the proposed construction of up to 6 groundwater monitoring wells and associated ancillary facilities.

This finding is based on my consideration of the Council on Environmental Quality's (CEQ) criteria for significance (40 CFR 1508.27 with regard to the context and the intensity of impacts as discussed in the EA.

Context

The Bureau of Land Management (BLM) has the authority under the Federal Land Policy and Management Act of 1976 (43 United States Code 1761 et seq.) (FLPMA) to grant, issue, or renew rights-of-way over, upon, under or through such lands for the proposed monitoring wells and access roads.

Intensity:

1) *Impacts that may be both beneficial and adverse:* The Environmental Assessment has analyzed and disclosed both beneficial and adverse impacts of the proposed action. These impacts combined do not amount to any significant impacts.

2) *The degree to which the proposed action affects public health or safety:* The proposed action does not affect public health or safety either adversely or in a significantly beneficial manner. The subsequent land use would be regulated by local, state, and federal regulations as applicable; therefore, no adverse affects to public health or safety are anticipated.

3) *Unique characteristics of the geographic area such as proximity to historical or cultural resources, parks lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas:* There are no parks lands, prime farmlands, wild and scenic rivers, known wetland/riparian areas, or ecologically critical areas on the project sites. Cultural inventories have been performed and no sites eligible for nomination to the National Register of Historic Places are located at the proposed monitoring well and access road sites.

4) *The degree to which the effects on the quality of the human environment are likely to be highly controversial:* Effects on the quality of the human environment from the proposed action are not likely to be controversial. The proposed exercises would primarily occur in remote and low-use areas, would not interfere with the current use of public lands in the region and is consistent with designated land uses. Conflicts with cattle grazing would be avoided through the implementation of Standard Operating Procedures that restrict access to active watering areas. The subsequent land use is not expected to be highly controversial.

5) *The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks:* No known risks exist on the proposed well and access road sites. It is highly unlikely that any unknown, unique, or uncertain risks exist.

6) *The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration:* Use of the sites would occur for a 30-year period. It is not expected to result or establish a precedent for further use of additional sites in the region. No precedent will be set due to the lease of these parcels.

7) *Whether the action is related to other actions with individually insignificant, but cumulatively significant impacts:* Based on the conditions set forth in this Finding of No Significant Impact and Decision Record, no significant impacts will occur due to the proposed action. The subsequent land use would be regulated by local, state, and federal regulations as applicable; therefore, no significantly cumulative impacts are anticipated.

8) *The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing on the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historic resources:* No sites eligible for nomination to the National Register of Historic Places are located at the proposed well and access road sites. Because the needs assessment identified no sites would be damaged, so significant impacts are suspected.

9) *The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973:* The proposed action would not adversely affect endangered or threatened species or their habitat. No T&E species were identified, so no significant impacts are expected.

10) *Whether the action threatens a violation of Federal, State, local or tribal law or requirements imposed for the protection of the environment:* This action is consistent with federal, state, local, and tribal laws and other requirements for the protection of the environment. All agencies were properly notified of the proposed action and given appropriate comment time to respond.

Rationale for Decision

1) The proposal for public land rights-of-way are made under the authority of Section 501 of the FLPMA (43 Code of Federal Regulations [CFR] 2801).

2) The proposed action is consistent with the Ely District Resource Management Plan (RMP) and Record of Decision signed in August of 2008.

3) It is also consistent with all other federal, state, local, and tribal policies and plans to the maximum extent possible.

State, county, and local agencies, tribal agencies, adjacent landowners, and various organizations were informed about the proposed SNWA Dry Lake Monitoring Wells and Access roads, in White Pine County, Nevada The Draft EA was posted on the Ely BLM website for two weeks for public information and comments.

This document is available upon request to the Shell Field Office, U.S. Highway 93, 702 North Industrial Way, Ely, NV 89301.

Approved by:

_____ _____

Mary D'Aversa Date
Field Manager
Schell Field Office