United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Nevada State Office
1340 Financial Boulevard
Reno, Nevada 89502-7147
http://www.blm.gov/nv

MAY 2 3 2013

In Reply Refer To:
2800 (NV910)
N-78803

CERTIFIED MAIL 9171 9690 0935 0018 6450 23 - RETURN RECEIPT REQUESTED

Decision

06-04-13 06:56 RCVD

Southern Nevada Water Authority
P.O. Box 99956
Las Vegas, NV 89193-9956
Attn: Lisa Luptowitz

: Right-of-Way Issued,
: Clark, Lincoln and White Pine Counties
: Groundwater Development Project

Groundwater Development and Conveyance Right-of-Way N-78803 Issued
Monitoring Fee Determined
Rental Determined

Enclosed is a copy of your right-of-way, serial number N-78803, which allows the use of public land to construct, operate, maintain, and terminate the Clark, Lincoln and White Pine Counties Groundwater Development Project, including 258 miles of main and lateral pipeline, 241 miles of power lines, 3 pumping stations, 5 regulation tanks, 3 pressure reducing stations, a 40-million gallon buried storage reservoir, a water treatment facility, access roads, and temporary construction sites.

The monitoring fee for this right of way is determined to be a Category 6, cost recovery. Additional processing fees (administrative record maintenance) and monitoring fees (implementation of the programmatic agreement, BLM review of final POD, etc.) have been determined to be $575,730 for the period May 2013 through June 2014. This was received on May 22, 2013 and your receipt is enclosed.

The advance rental for this right-of-way (White Pine County portion only) is determined to be $32,245.62 for the period from June 1, 2013 to December 31, 2013. The advance rental was received on May 22, 2013.

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 regulations 43 CFR 2801.10 or 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 please contact Kim Dow at (775) 861-6681.

Amy L Lueders
State Director

Enclosure

Issuing Office
Nevada State Office

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
RIGHT-OF-WAY GRANT/TEMPORARY USE PERMIT

SERIAL NUMBER N-78803

1. A right-of-way is hereby granted pursuant to Title V of the Federal Land Policy and Management Act of October 21, 1976 (90 Stat. 2776; 43 U.S.C. 1761), Section 301(b) of the Lincoln County Conservation, Recreation, and Development Act of November 30, 2004 (LCCRDA) (118 Stat. 2403, 16 U.S.C 1241), and Section 4 of the Southern Nevada Public Land Management Act of October 19, 1998 (SNPLMA) (112 Stat. 2343, 31 U.S.C. 6901).

2. Nature of Interest:

a. By this instrument, the Holder: Southern Nevada Water Authority
P.O. Box 99956
Las Vegas, NV 89193

receives a right to construct, operate, maintain, and terminate the Clark, Lincoln, and White Pine Counties Groundwater Development Project on public lands managed by the Bureau of Land Management (BLM) as described in Exhibit A, attached hereto. This grant includes the construction, operation, and maintenance of a water conveyance pipeline and ancillary facilities on Federal lands in Clark, Lincoln, and White Pine Counties, Nevada as described and depicted in the Southern Nevada Water Authority (SNWA) November 2012 Conceptual Plan of Development (POD), Exhibit B. The final POD, as approved by BLM, will provide final engineering details regarding the permanent and temporary needs for construction and operation of the primary water and power conveyance facilities and ancillary facilities covered under this ROW grant. This grant also includes temporary workspaces required for construction.

b. The right-of-way granted herein is for the project facilities located on public lands managed by the BLM. The right-of-way for all pipelines is 100 feet wide temporary and 100 feet wide permanent, 258 miles long, and contains 3,124 permanent acres, more or less. The right-of-way for power lines is 100 feet wide for 241 miles and 60 feet wide for 20 miles, and contains 3,060 permanent acres, more or less. Permanent roads are located primarily within the boundaries of the pipeline and power line rights-of-ways; the right-of-way for access roads not encompassed within the pipeline and power line right-of-way is 20 feet wide, 42 miles, and 101 acres, more or less.

c. The right-of-way granted herein approves the following primary water and power conveyance facilities located on public lands managed by the BLM:

- Main and Lateral Pipelines – approximately 258 miles of buried water pipelines, between 16 and 84 inches in diameter – this includes a fiber-optic cable telemetry system;
- Pumping Stations – three (3) pumping station facilities;
- Regulation Tanks – five (5) regulating tanks, each approximately 3 to 10 million gallons in capacity;

- Pressure Reducing Stations – three (3) facilities;
- Buried Storage Reservoir – a 40 million gallon buried storage reservoir;
- Water Treatment Facility (WTF) – up to 110 million gallons per day facility;
- Power Facilities – approximately 261 miles of 230 kilovolt (kv), 69 kv, and 25 kv overhead power lines, two (2) primary electrical substations (230 to 69kv), and four (4) secondary substations (69 kv to 25 kv);
- Access Roads – approximately 300 miles of mostly existing roads; and
- Temporary Construction Sites -- staging areas (3-acre sites placed approximately every 3 miles), plant nursery sites, and seven (7) borrow pits.

d. This instrument is issued in perpetuity from its effective date unless, prior thereto, it is relinquished, abandoned, terminated, or modified pursuant to the terms and conditions of this instrument or of any applicable Federal law or regulation.

e. In the event of early relinquishment, abandonment, or termination, the provisions of this instrument, to the extent applicable, shall continue in effect and shall be binding on the Holder, its successors, or assigns, until they have fully satisfied the obligations and/or liabilities accruing herein before or on account of the expiration, or prior termination, of the grant.

3. For and in consideration of the rights granted, the Holder agrees to pay the BLM fair market value rental as determined by the authorized officer unless specifically exempted from such payment by regulation or statute. Provided, however, that the rental may be adjusted by the authorized officer, whenever necessary, to reflect changes in the fair market rental value as determined by the application of sound business management principles, and so far as practicable and feasible, in accordance with comparable commercial practices.

In accordance with the LCCRDA, Title III, Sec. 301 (b)(2), which states that rights-of-way granted under LCCRDA [sec.301(b)(1)]shall not require the payment of rental, those portions of this right-of-way (or grant) located in Lincoln and Clark counties are exempt from payment of a rental fee.

4. Terms and Conditions:

a. Prior to initiating any on-the-ground activities under this right-of-way, the Holder shall obtain a *Notice to Proceed* from the BLM Nevada State Office – Groundwater Projects Office.

b. This grant or permit is issued subject to the Holder's compliance with all applicable regulations contained in Title 43 Code of Federal Regulations part 2800.

c. Upon relinquishment or abandonment of the grant, termination by the authorized officer will require all improvements be removed from the public lands within 5 years, or otherwise disposed of as provided in the exhibits referenced in paragraph (4)(e) or as directed by the authorized officer.

d. Each grant issued pursuant to the authority of paragraph (1) for a term of 20 years or more shall, at a minimum, be reviewed by the authorized officer at the end of the 20th year and at regular intervals thereafter not to exceed 10 years. Provided, however, that a right-of-way or permit granted herein may be reviewed at any time deemed necessary by the authorized officer.

e. The stipulations, plans, maps, or designs set forth in Exhibit(s) B and C, attached hereto, are incorporated into and made a part of this grant instrument as fully and effectively as if they were set forth herein in their entirety. All Project maps are attached in Exhibit B (however, revised design maps will be submitted as part of the POD as provided in section 2(a).

f. This grant is issued subject to the Programmatic Agreement among the U.S. Department of the Interior, Bureau of Land Management, Nevada, the Nevada State Historic Preservation Officer, the Advisory Council on Historic Preservation, and the Southern Nevada Water Authority regarding National Historic Preservation Act Section 106 Compliance as set forth in Exhibit D attached hereto.

g. This grant is issued subject to the 2008 Ely Resource Management Plan (RMP) and the 1998 Las Vegas RMP and all applicable Best Management Practices contained therein or within any land use plan developed for the grant area that supersedes or amends these RMPs.

h. This grant is issued subject to BLM approval of a final Construction, Operation, Maintenance, Monitoring, Management, and Mitigation Plan (COM Plan) which provides a comprehensive monitoring, management and mitigation program. A completed, BLM-approved Final POD is required prior to completing a COM Plan. A framework of the COM Plan is found in Exhibit E attached hereto.

i. A variance to any term and condition or stipulation of this grant may be requested by the Holder and will be considered by the Authorized Officer on a case-by-case basis as prescribed in the COM Plan.

j. Failure of the Holder to comply with applicable law or any provision of this right-of-way grant or permit shall constitute grounds for suspension or termination thereof in accordance with applicable law.

k. The Holder shall perform all operations in a good and workmanlike manner so as to ensure protection of the environment and the health and safety of the public.

IN WITNESS WHEREOF, The undersigned agrees to the terms and conditions of this right-of-way grant or permit.

P Mulroy

(Signature of Holder)

Patricia Mulroy

General Manager

(Title)

5-16-13

(Date)

(Signature of Authorized Officer)

Amy L. Luedtke

State Director

(Title)

MAY 23 2013

(Effective Date of Grant)

SOUTHERN NEVADA WATER AUTHORITY
APPROVED AS TO FORM:

Dana Walsh

Dana R. Walsh, Deputy Counsel

Form 1842-1
(September 2006)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

INFORMATION ON TAKING APPEALS TO THE INTERIOR BOARD OF LAND APPEALS

DO NOT APPEAL UNLESS
1. This decision is adverse to you,
AND
2. You believe it is incorrect

IF YOU APPEAL, THE FOLLOWING PROCEDURES MUST BE FOLLOWED

1. NOTICE OF APPEAL.....

A person who wishes to appeal to the Interior Board of Land Appeals must file in the office of the officer who made the decision (not the Interior Board of Land Appeals) a notice that he wishes to appeal. A person served with the decision being appealed must transmit the *Notice of Appeal* in time for it to be filed in the office where it is required to be filed within 30 days after the date of service. If a decision is published in the FEDERAL REGISTER, a person not served with the decision must transmit a *Notice of Appeal* in time for it to be filed within 30 days after the date of publication (43 CFR 4.411 and 4.413).

2. WHERE TO FILE

NOTICE OF APPEAL.....

U.S. Department of Interior, Bureau of Land Management, Nevada State Office (NV-910.2), 1340 Financial Blvd, Reno, NV 89502

WITH COPY TO SOLICITOR...

U.S. Department of the Interior, Office of the Solicitor, Pacific Southwest Region, 2800 Cottage Way, Room E-2753, Sacramento, CA 95825-1890

3. STATEMENT OF REASONS

Within 30 days after filing the *Notice of Appeal*, file a complete statement of the reasons why you are appealing. This must be filed with the United States Department of the Interior, Office of Hearings and Appeals, Interior Board of Land Appeals, 801 N. Quincy Street, MS 300-QC, Arlington, Virginia 22203. If you fully stated your reasons for appealing when filing the *Notice of Appeal*, no additional statement is necessary (43 CFR 4.412 and 4.413).

WITH COPY TO SOLICITOR.....

U.S. Department of the Interior, Office of the Solicitor, Pacific Southwest Region, 2800 Cottage Way, Room E-2753, Sacramento, CA 95825-1890

4. ADVERSE PARTIES.....

Within 15 days after each document is filed, each adverse party named in the decision and the Regional Solicitor or Field Solicitor having jurisdiction over the State in which the appeal arose must be served with a copy of: (a) the *Notice of Appeal*, (b) the Statement of Reasons, and (c) any other documents filed (43 CFR 4.413).

5. PROOF OF SERVICE.....

Within 15 days after any document is served on an adverse party, file proof of that service with the United States Department of the Interior, Office of Hearings and Appeals, Interior Board of Land Appeals, 801 N. Quincy Street, MS 300-QC, Arlington, Virginia 22203. This may consist of a certified or registered mail "Return Receipt Card" signed by the adverse party (43 CFR 4.401(c)).

6. REQUEST FOR STAY.....

Except where program-specific regulations place this decision in full force and effect or provide for an automatic stay, the decision becomes effective upon the expiration of the time allowed for filing an appeal unless a petition for a stay is timely filed together with a *Notice of Appeal* (43 CFR 4.21). If you wish to file a petition for a stay of the effectiveness of this decision during the time that your appeal is being reviewed by the Interior Board of Land Appeals, the petition for a stay must accompany your *Notice of Appeal* (43 CFR 4.21 or 43 CFR 2801.10 or 43 CFR 2881.10). 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 (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 regulations, 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.

Unless these procedures are followed, your appeal will be subject to dismissal (43 CFR 4.402). Be certain that **all** communications are identified by serial number of the case being appealed.

NOTE: A document is not filed until it is actually received in the proper office (43 CFR 4.401(a)). See 43 CFR Part 4, Subpart B for general rules relating to procedures and practice involving appeals.

(Continued on page 2)

43 CFR SUBPART 1821--GENERAL INFORMATION

Sec. 1821.10 Where are BLM offices located? (a) In addition to the Headquarters Office in Washington, D.C. and seven national level support and service centers, BLM operates 12 State Offices each having several subsidiary offices called Field Offices. The addresses of the State Offices can be found in the most recent edition of 43 CFR 1821.10. The State Office geographical areas of jurisdiction are as follows:

STATE OFFICES AND AREAS OF JURISDICTION:

Alaska State Office ---------- Alaska
Arizona State Office --------- Arizona
California State Office ------- California
Colorado State Office -------- Colorado
Eastern States Office --------- Arkansas, Iowa, Louisiana, Minnesota, Missouri
and, all States east of the Mississippi River
Idaho State Office ------------ Idaho
Montana State Office --------- Montana, North Dakota and South Dakota
Nevada State Office ---------- Nevada
New Mexico State Office ---- New Mexico, Kansas, Oklahoma and Texas
Oregon State Office ---------- Oregon and Washington
Utah State Office ------------- Utah
Wyoming State Office -------- Wyoming and Nebraska

(b) A list of the names, addresses, and geographical areas of jurisdiction of all Field Offices of the Bureau of Land Management can be obtained at the above addresses or any office of the Bureau of Land Management, including the Washington Office, Bureau of Land Management, 1849 C Street, NW, Washington, DC 20240.

Exhibit A

Right-of-Way
NV-78803

Legal Description
Southern Nevada Water Authority

Township	Range	Section	Aliquot Part Descriptions
17N	64E	17	SWSW
17N	64E	18	SESE
17N	64E	20	W2NW, W2SW
17N	64E	29	W2NW, SW
17N	64E	32	E2NW, NWNW, E2SW
16N	64E	5	LOT 3, SENW, E2SW, SWSE
16N	64E	8	W2SWNE, W2NWNE, NENW, SWSE, S2NWSE, NWNWSE
16N	64E	17	W2NE, W2SE
16N	64E	20	NE, N2SE, SESE
16N	64E	29	E2NE, E2SE
16N	64E	32	E2NE, E2SE
16N	64E	33	W2SW
15N	64E	4	LOTS 1,2, SENE, E2SE
15N	64E	9	NENE
15N	64E	10	W2NW, SENW, NESW, W2SE, SESE
15N	66E	13	SWNE, E2SW, W2SE
15N	64E	14	W2NW, S2SE, NWSE
15N	64E	15	NENE
15N	64E	23	N2NE, SENE
15N	64E	24	W2NW, SENW, E2SW, NWSW, SWSE
15N	64E	25	N2NE
15N	66E	24	W2NW, NENW, W2SW
15N	66E	25	W2NW, NWSW
15N	66E	26	SENE, E2SE
15N	66E	35	E2NE, SE
14N	66E	2	LOT2, SWNE, S2SW, W2SE
14N	66E	3	S2SW, S2SE
14N	66E	4	LOT 7, SWSE
14N	66E	11	W2NE, E2NW, E2SW, SWSW
14N	66E	14	NW, W2SW
14N	66E	15	SESE
14N	66E	22	E2NE, E2SE

Township	Range	Section	Aliquot Part Descriptions
14N	66E	23	W2NW
14N	66E	27	NE, W2SE
14N	66E	33	LOTS 3, 7
14N	66E	34	W2NE, NENW, S2NW, N2SW, W2SWSWSW, N2SWSW
13N	66E	3	LOT 4, S2NW, W2SE, N2SW, SESW
13N	66E	4	LOT 1, SENE
13N	66E	10	NE, E2SE
13N	66E	11	SWSW
13N	66E	14	W2NW, SENW, SW
13N	66E	15	NENE
13N	66E	23	W2NE, E2NW, SE,
13N	66E	25	SWNW, W2SW, SESW
13N	66E	26	E2NE,NWNE, NESE
13N	66E	36	NW, E2SW, W2SE
12N	66E	1	LOT 2, S2NE, E2SE, NWSE
12N	66E	12	NE, SESW, W2SE
12N	66E	13	NWNE, E2NW, SW
12N	66E	23	SENE, E2SE
12N	66E	24	W2NW, W2SW
12N	66E	26	NE, SE
12N	66E	35	W2NE, E2NW, SWSW, E2SW
11N	66E	2	LOTS 3, 4, SWNW, W2SW
11N	66E	3	E2SE
11N	66E	10	E2NE, W2SE, NESE
11N	66E	15	W2NE, SENW, E2SW, NWSE
11N	66E	21	SESE
11N	66E	22	NW, W2SW, NESW
11N	66E	27	S2NW, NWNW, E2SW, NWSE, S2SE
11N	66E	28	NENE
11N	66E	34	E2NE, NWNE
11N	66E	35	SWNW, E2SW, NWSW, SWSE
10N	66E	1	UNSURVEYED
10N	66E	2	UNSURVEYED
10N	67E	6	UNSURVEYED
10N	67E	7	UNSURVEYED
10N	67E	8	UNSURVEYED
10N	67E	16	UNSURVEYED
10N	67E	17	UNSURVEYED
10N	67E	21	UNSURVEYED
10N	67E	27	UNSURVEYED

Township	Range	Section	Aliquot Part Descriptions
10N	67E	28	UNSURVEYED
10N	67E	34	UNSURVEYED
10N	67E	35	UNSURVEYED
9N	68E	31	UNSURVEYED
9N	67E	2	LOTS 3, 4, S2NW, E2SW, NWSW
9N	67E	3	LOT1, SENE
9N	67E	11	E2NW, E2SW, SWSE
9N	67E	13	SWSW
9N	67E	14	NWNE, S2NE,NENW, E2SE, NWSE
9N	67E	23	NENE
9N	67E	24	W2NW, SENW, E2SW, NWSW
9N	67E	25	W2NE, NENW, SE
9N	67E	36	E2NE
8N	68E	6	UNSURVEYED
8N	68E	7	UNSURVEYED
8N	68E	8	UNSURVEYED
8N	68E	16	UNSURVEYED
8N	68E	17	UNSURVEYED
8N	68E	20	UNSURVEYED
8N	68E	21	UNSURVEYED
8N	68E	28	UNSURVEYED
8N	68E	31	UNSURVEYED
8N	68E	32	UNSURVEYED
8N	68E	33	UNSURVEYED
8N	64E	27	NW, W2SW
8N	64E	34	W2NW, W2SW
7N	64E	3	LOT 3, 4, NWSW, SWNW, SWSW
7N	64E	4	E2SE, SWSE
7N	64E	9	NENE, W2NE, SENW, E2SW, NWSE
7N	64E	16	E2NW, SWNW, SW
7N	64E	20	E2SE
7N	64E	21	W2NW, W2SW
7N	64E	28	W2NW
7N	64E	29	E2NE, E2SE
7N	64E	32	NE, W2SE
7N	65E	9	UNSURVEYED
7N	65E	10	UNSURVEYED
7N	65E	14	UNSURVEYED
7N	65E	15	N2NE, SENE, N2NW
7N	65E	16	UNSURVEYED

Township	Range	Section	Aliquot Part Descriptions
7N	65E	17	UNSURVEYED
7N	65E	20	W2NE, SENW, SW, NWSE
7N	65E	23	UNSURVEYED
7N	65E	24	UNSURVEYED
7N	65E	29	UNSURVEYED
7N	65E	30	UNSURVEYED
7N	65E	31	UNSURVEYED
7N	66E	19	LOTS 1, 2, W2NE, E2NW, N2SE, SESE, SENE
7N	66E	20	UNSURVEYED
7N	66E	28	SWSW
7N	66E	29	SWNE, N2NW, SENW, N2SE, SESE
7N	66E	33	SWNE, NW, NESW, N2SE
7N	66E	34	N2SW, N2SE
7N	66E	35	SW. SE
7N	66E	36	SW, S2SE
7N	67E	1	UNSURVEYED
7N	67E	11	UNSURVEYED
7N	67E	12	UNSURVEYED
7N	67E	13	UNSURVEYED
7N	67E	14	UNSURVEYED
7N	67E	15	UNSURVEYED
7N	67E	21	UNSURVEYED
7N	67E	22	UNSURVEYED
7N	67E	28	UNSURVEYED
7N	67E	29	UNSURVEYED
7N	67E	31	UNSURVEYED
7N	67E	32	UNSURVEYED
7N	68E	6	UNSURVEYED
6N	63E	25	E2SE, SWSE
6N	63E	35	SESE
6N	63E	36	W2NE, E2NW, SW
6N	64E	1	E2SE
6N	64E	5	LOT 2, SWNE, E2SW, W2SE
6N	64E	8	E2NW, W2NW, W2SW
6N	64E	12	E2NE, SWNE, W2SE, NESE
6N	64E	13	W2NE, E2NW, SW
6N	64E	17	W2NW, W2SW
6N	64E	18	SENE, E2SE
6N	64E	19	E2NE, SWNE, SESW, W2SE, NESE
6N	64E	20	S2NE, NWNE, N2NW, SENW

Township	Range	Section	Aliquot Part Descriptions
6N	64E	21	S2NE, NENW, S2NW, N2SE
6N	64E	22	S2NW,SW
6N	64E	23	SENE, E2SE
6N	64E	24	W2NW, NWSW
6N	64E	26	NE, W2SW, SE
6N	64E	27	S2NE, NWNE, NENW, E2SE, NWSE
6N	64E	30	LOTS 1 - 3, E2NW
6N	64E	35	W2NE, E2NW, NWNW, E2SW, NWSE
6N	65E	6	UNSURVEYED
6N	65E	7	UNSURVEYED
6N	66E	1	LOTS 5, 6
6N	67E	6	LOTS 3, 4, SWNW
5N	63E	1	UNSURVEYED
5N	63E	2	UNSURVEYED
5N	63E	11	UNSURVEYED
5N	63E	14	UNSURVEYED
5N	63E	15	UNSURVEYED
5N	64E	2	UNSURVEYED
5N	64E	11	UNSURVEYED
5N	64E	14	UNSURVEYED
5N	64E	22	UNSURVEYED
5N	64E	23	UNSURVEYED
5N	64E	27	UNSURVEYED
5N	64E	33	UNSURVEYED
5N	64E	34	UNSURVEYED
4N	64E	4	UNSURVEYED
4N	64E	8	UNSURVEYED
4N	64E	9	UNSURVEYED
4N	64E	17	UNSURVEYED
4N	64E	20	UNSURVEYED
4N	64E	29	UNSURVEYED
4N	64E	30	UNSURVEYED
4N	64E	31	UNSURVEYED
4N	64E	32	UNSURVEYED
3N	64E	6	LOT 1, SENE, E2SE
3N	64E	7	E2NE, E2SE
3N	64E	8	SWNW, W2SW
3N	64E	17	W2NW, W2SW
3N	64E	18	E2NE
3N	64E	20	W2NW, W2SW

Township	Range	Section	Aliquot Part Descriptions
3N	64E	29	NW, E2SW, W2SE
3N	64E	32	NE, E2SE
3N	64E	33	W2SW
2N	64E	4	LOTS 3, 4, SWNE, SENW, SE
2N	64E	9	E2NE
2N	64E	10	W2NW, SW
2N	64E	14	SWSW
2N	64E	15	W2NE, E2NW, SESE, N2SE
2N	64E	22	NENE
2N	64E	23	W2NW, SW
2N	64E	26	W2NE, E2NW, SESE, W2SE
2N	64E	35	E2NE, NWNE, NESE
2N	64E	36	SWNW, W2SW
1N	64E	1	LOTS 3, 4, SWNE, SENW, SE
1N	64E	12	E2NE, NWNE, E2SE
1N	64E	13	E2NE, E2SE
1N	64E	24	E2NE, E2SE
1N	64E	25	E2NE, E2SE
1N	64E	36	E2NE, E2SE
1S	65E	6	LOTS 7, 10, 11
1S	65E	7	LOTS 5, 6, 11, 12, 14, 19
1S	65E	18	LOTS 6, 11, 14, 19
1S	65E	19	W2NE, W2SE
1S	65E	30	W2NE, E2NW, E2SW, W2SE
1S	65E	31	W2NE, E2NW, E2SW, W2SE
2S	65E	6	LOTS 2, 3, SENW, E2SW
2S	65E	7	NWNE, E2NW, E2SW
2S	65E	18	E2NW, E2SW
2S	65E	19	E2NW, E2SW
2S	65E	30	E2NW, E2SW
2S	65E	31	E2NW, E2SW
3S	64E	13	SENE, E2SE
3S	64E	24	NE, E2SW, NESE, W2SE
3S	64E	25	W2NE, S2NW, NENW, SW
3S	64E	35	E2NE, SE
3S	64E	36	W2NW, NWSW
3S	65E	6	LOT 3, SENW, E2SW
3S	65E	7	LOTS 1 - 4, E2NW, E2SW
3S	65E	18	LOTS 1 - 4, E2NW
4S	64E	2	LOTS 1 - 3, SWNE, SENW, E2SW, SWSW, W2SE
4S	64E	7	SENE, E2SE

Township	Range	Section	Aliquot Part Descriptions
4S	64E	8	S2NE, S2NW
4S	64E	9	N2NE, SWNE, NW
4S	64E	10	N2NE, N2NW, E2SE
4S	64E	11	NW, NESW, W2SW
4S	64E	14	NWNW
4S	64E	15	E2NE, SWNE, W2SE, NESE
4S	64E	18	NE, W2SE
4S	64E	19	W2NE, SENW, E2SW, SWSW, NWSE
4S	64E	22	W2NE, E2NW, SW
4S	64E	27	W2NW, NWSW
4S	64E	28	E2NE, E2SE, SWSE
4S	64E	30	LOTS 1 - 4, E2NW
4S	64E	31	LOTS 1 - 4
4S	64E	33	NENE, W2NE, E2SW, W2SE
5S	63E	12	UNSURVEYED
5S	63E	13	UNSURVEYED
5S	63E	24	UNSURVEYED
5S	63E	25	UNSURVEYED
5S	63E	36	UNSURVEYED
5S	64E	4	LOTS 1, 2, S2NE,E2SW, W2SE
5S	64E	6	LOT 3, SENW, E2SW
5S	64E	7	LOTS 1 - 4, E2NW
5S	64E	8	SESE
5S	64E	9	E2NW, SWNW, W2SW, NESW
5S	64E	16	NWNW
5S	64E	17	E2NE, SE
5S	64E	20	W2NE, E2NW, E2SW, SWSW
5S	64E	29	W2NW, NENW, W2SW
5S	64E	30	E2SE
5S	64E	31	NE, SESW, W2SE
6S	63E	1	UNSURVEYED
6S	63E	12	UNSURVEYED
6S	63E	13	UNSURVEYED
6S	63E	23	UNSURVEYED
6S	63E	24	UNSURVEYED
6S	63E	25	UNSURVEYED
6S	63E	26	UNSURVEYED
6S	63E	35	UNSURVEYED
6S	64E	6	Lots 3, 5 - 7, SENW, NESW
6S	64E	7	LOT 1

Township	Range	Section	Aliquot Part Descriptions
7S	63E	2	UNSURVEYED
7S	63E	3	UNSURVEYED
7S	63E	10	UNSURVEYED
7S	63E	15	UNSURVEYED
7S	63E	16	UNSURVEYED
7S	63E	21	UNSURVEYED
7S	63E	22	UNSURVEYED
7S	63E	28	UNSURVEYED
7S	63E	32	UNSURVEYED
7S	63E	33	UNSURVEYED
8S	63E	5	UNSURVEYED
8S	63E	7	UNSURVEYED
8S	63E	8	UNSURVEYED
8S	63E	17	UNSURVEYED
8S	63E	18	UNSURVEYED
8S	63E	19	UNSURVEYED
8S	62E	24	UNSURVEYED
8S	62E	25	UNSURVEYED
8S	62E	26	UNSURVEYED
8S	62E	34	UNSURVEYED
8S	62E	35	UNSURVEYED
8S	62E	36	UNSURVEYED
9S	62E	2	LOTS 3, 4, W2SWSW, W2NWSW
9S	62E	3	LOTS 1,2, S2NE, SE
9S	62E	10	NE, E2SE
9S	62E	11	SWNW, W2NWNW, SESW, W2SW
9S	62E	14	NW, E2SW
9S	62E	15	E2NE, E2SE
9S	62E	22	E2NE, E2SE
9S	62E	23	SWNE, E2NW, W2SW, NESW, W2SE
9S	62E	26	W2NE, W2NW, N2SW, SESW, W2SE, SESE
9S	62E	27	NENE
9S	62E	35	LOT 4, NE, NESE
10S	62E	1	LOT 4, SWNW, W2SW
10S	62E	2	LOT 1, SENE, NESE
10S	62E	12	W2NW, SENW, SW
10S	62E	13	LOTS 2, 7, 9, E2NW
10S	62E	24	LOTS 2, 3, W2SE
10S	62E	25	W2SESE
10S	62E	36	NENE, E2NWNE, S2NE, SE

Township	Range	Section	Aliquot Part Descriptions
11S	62E	1	LOT 1, SENE, E2SE
11S	62E	6	NWNW, SWSW
11S	62E	12	E2NE, E2SE
11S	62E	13	E2NE
11S	63E	7	LOTS 2, 3, 4
11S	63E	18	LOTS 1 - 4
11S	63E	19	LOTS 8-11, 17-20, SESW
11S	63E	30	LOTS 5 - 14, NENW
11S	63E	31	LOTS 7, 8, 9, 10, 13, 14, 15, 16, 17, 18
12S	63E	6	LOTS 6, 7, 11 - 14, 19, 21, 22, SESW
12S	63E	7	LOTS 6, 7, 11, 12, 15, 16, E2NW
12S	63E	18	LOTS 7, 11, 12, 16, 17, 18, 22, 23
12S	63E	19	LOTS 6, 7, 12, 13, 16, 17, 22, 23
12S	63E	29	LOT 14
12S	63E	30	LOTS 6, 7, 9, 16
12S	63E	31	E2NE
12S	63E	32	LOTS 2, 3, 6, 7
13S	63E	5	LOTS 6,7, 9, 12, 13, 16, 17
13S	63E	8	LOTS 3, 4, 7, 8, 12, 13, 17
13S	63E	17	LOTS 2, 3, 6, 7, SWNE, SENW, W2SE
13S	63E	20	LOTS 2, 7, 10, W2NE, SESE, NWSE
13S	63E	28	SWNW, W2SW
13S	63E	29	E2NE, E2SE
13S	63E	32	NENE
13S	63E	33	W2NW, SENW, W2SW
13.5S	63E	32	UNSURVEYED
13.5S	63E	33	UNSURVEYED
14S	63E	4	UNSURVEYED
14S	63E	9	UNSURVEYED
14S	63E	16	UNSURVEYED
14S	63E	21	UNSURVEYED
14S	63E	28	UNSURVEYED
14S	63E	33	UNSURVEYED
15S	63E	3	UNSURVEYED
15S	63E	4	UNSURVEYED
15S	63E	9	UNSURVEYED
15S	63E	10	UNSURVEYED
15S	63E	15	UNSURVEYED
15S	63E	22	UNSURVEYED
15S	63E	27	UNSURVEYED

Township	Range	Section	Aliquot Part Descriptions
15S	63E	34	UNSURVEYED
16S	63E	3	LOT 4, SWNW, NWSW
16S	63E	4	LOT 1, SENE, SE
16S	63E	9	NE, E2SW, W2SE
16S	63E	16	W2NE, SWNW, E2NW, SW
16S	63E	20	SENE, E2SE
16S	63E	21	NENW, W2NW, W2SW
16S	63E	28	NWNW
16S	63E	29	NE, SE
16S	63E	32	NENE, W2NE, E2SW, W2SE, SENW
17S	63E	8	SESE
17S	63E	9	LOTS 3, 4, S2NW, SW
17S	63E	16	W2NW, W2SW
17S	63E	17	E2NE, E2SE
17S	63E	20	E2NE, SE
17S	63E	21	W2NW
17S	63E	29	NE, W2SE, NESE
17S	63E	32	LOTS 7 - 10, 13 - 18, NW
18S	63E	5	LOTS 6 - 10, 14 - 18, W2SW, SWNW
18S	63E	8	LOTS 2 - 8, 11 - 16
18S	63E	17	LOTS 3 - 6, 11, 12
18S	63E	18	LOTS 5 - 8, E2NE
18S	63E	19	LOTS 5 - 12, NWSE
18S	63E	20	LOT 7
18S	63E	29	LOTS 3 - 6, 19, 21 - 23
18S	63E	30	LOTS 5, 6, 8, 9, SENE
18S	63E	31	LOTS 6 - 10, 14, 15
19S	62E	12	E2NE, E2SE, SWSE
19S	62E	13	N2NE, N2NW
19S	62E	14	NE, S2NW
19S	62E	18	LOTS 5, 16, 17, 24
19S	62E	19	LOT 5
19S	62E	20	N2NE, N2NW
19S	62E	7	SESE

EXHIBIT C - STIPULATIONS
Southern Nevada Water Authority
Clark, Lincoln, and White Pine Counties
Groundwater Development Project
N-78803

RIGHT-OF-WAY STANDARD STIPULATIONS

These Stipulations are required by the Clark, Lincoln, and White Pine Counties Groundwater Development Project (Project) Record of Decision (ROD). They include mitigation measures identified in the Final Environmental Impact Statement, Applicant-Committed Measures that the Holder agreed to implement, the Project Biological Opinion, conditions dictated by the Project's Ely District Weed Risk Assessment, and cadastral survey requirements. These Stipulations also include the Bureau of Land Management's (BLM) standard right-of-way (ROW) stipulations. The term "Holder" refers to Southern Nevada Water Authority (SNWA). The term "Authorized Officer" refers to the BLM official responsible for managing compliance with the terms and conditions of the ROW grant. Under the Project ROD, SNWA is required to prepare several detailed plans as part of the Final Plan of Development (POD) and BLM intends to issue a final Construction, Operation, Maintenance, Monitoring, Management, and Mitigation Plan (COM Plan), which will specify mitigation measures and other requirements that may supersede or supplement certain of the Stipulations below. Accordingly, the Stipulations below are applicable to this ROW, although a specific stipulation may not apply in whole or part to the extent that 1) the specified activity is not currently planned for the Project or 2) the stipulation has been supplemented or superseded by the relevant COM Plan or approved Final POD.

General

1. Prior to initiating any on-the-ground activities under this right-of-way, the Holder shall obtain a *Notice to Proceed* from the BLM Nevada State Office – Groundwater Projects Office.

2. To compensate for desert tortoise habitat loss, the applicant shall pay remuneration fees to offset the potential adverse effects of the Project. The Holder must pay these fees prior to being issued a Notice to Proceed for construction. Fees for disturbance of desert tortoise critical habitat will be calculated according to the formula identified in the document, Compensation for the Desert Tortoise (Hastey et al. 1991). The fees will be indexed for inflation based on the Bureau of Labor Statistics Consumer Price Index for All Urban Consumers (CPI-U) and becomes effective March 1 of each year. Information on the CPI-U can be found on the internet at: http://stats.bls.gov/news.release/cpi.nws.htm Fees would be collected following guidance in BLM's August 17, 2012 instruction memorandum (NV-2010-062). The Holder will initiate discussions with the BLM prior to requesting a Notice to Proceed in desert tortoise habitat; during these discussions BLM will determine if fees paid by the Holder will be paid directly to the general Section 7 Desert Tortoise Compensation Account and/or if the fees will be placed in a separate WBS code established specifically to accomplish on-site mitigation (to be identified at that time).

3. In case of change of address, the Holder shall immediately notify the BLM Authorized Officer.

4. This grant is subject to all valid rights existing on the effective date of this grant.

5. The Holder shall construct, operate, and maintain the facilities, improvements, and structures within this ROW in strict conformity with the final POD that will be approved by the BLM prior to issuance of a notice to proceed for construction. The final POD will be in conformance with the conceptual POD that accompanied the application and was approved and made part of the grant. Any relocation, additional construction, or use that is not in accord with the approved POD, shall not be initiated without the prior written approval of the Authorized Officer. A copy of the complete ROW grant, including all stipulations and approved POD, shall be made available on the ROW during construction, operation, and termination to the Authorized Officer. Noncompliance with the above will be grounds for immediate temporary suspension of activities if it constitutes a threat to public health and safety or the environment.

6. Holder may not construct or make new access roads or travel cross-county by vehicle to reach the grant area unless prior written approval is given by the Authorized Officer.

7. The Holder shall conduct all activities associated with the construction, operation, and termination of the ROW within the authorized limits of the ROW.

8. All design, material, and construction, operation, maintenance, and termination practices shall be in accordance with safe and proven engineering practices.

9. The Holder shall provide the Authorized Officer with data in a format compatible with the Bureau's Arc-Info Geographic Information System to accurately locate and identify the ROW, within 90 days of construction completion. Acceptable data formats are: (1) Corrected Global Positioning System files with sub-meter accuracy or better, in NAD 83; (2) A Shapefile or Geodatabase. Data may be submitted in any of the following formats: (1) ARCInfo export files on a CD ROM or DVD. Compressed or ZIPed data must include a copy of the UNZIP.EXE file on the disk. All data shall include metadata for each coverage, and conform to the Content Standards for Digital Geospatial Metadata Federal Geographic Data Committee standards.

Public Health & Safety Environmental Protection

10. To the fullest extent allowed under Nevada law, the Holder agrees to indemnify and hold harmless the United States for any and all liability, including injury to persons or damage of property, which may result directly from the use permitted under this grant.

11. The Authorized Officer may suspend or terminate in whole, or in part, any notice to proceed which has been issued when, in his/her judgment, unforeseen conditions arise which result in the approved terms and conditions being inadequate to protect the public health and safety or to protect the environment in accordance with applicable law.

12. The Holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the Holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 U.S.C. 2601 et seq. (1982) with regards to any toxic substances that are used, generated by, or stored on the ROW or on facilities authorized under this ROW grant. (See 40 CFR, Part 702-799 and especially,

provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, Section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the Authorized Officer concurrent with the filing of the reports to the involved Federal agency or State government.

13. During the period of May 1 through October 1 of each year, Holder should consider using spark arresters on vehicles and equipment in the project area, due to the potential for fire ignition from project related activities. This includes emission of hot carbon particles from diesel powered equipment, improperly equipped or poorly operating exhaust systems on gas powered vehicles and direct contact of wildland fuels with catalytic converters. Individuals, groups, businesses, or corporations found responsible for the ignition of a wildfire may be held liable for the costs associated with the suppression of that fire.

14. To the fullest extent allowed under Nevada law, the Holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act of 1976, 42 U.S.C. 6901 et seq.) on the ROW (unless the release or threatened release is wholly unrelated to the ROW Holder's activity on the ROW). This agreement applies without regard to whether a release is caused by the Holder, its agent, or third parties.

Cultural

15. The Holder shall comply with the terms of the Programmatic Agreement among the Department of the Interior, Bureau of Land Management, Nevada, the Nevada State Historic Preservation Officer, the Advisory Council on Historic Preservation, and the Southern Nevada Water Authority regarding National Historic Preservation Act Section 106 Compliance for the Groundwater Development Project in Clark, Lincoln, and White Pine Counties, Nevada executed on June 29, 2012 and any amendments and renewals thereto.

16. If Native American human remains, funerary objects, sacred objects, or objects of cultural patrimony are encountered during an undertaking involving BLM managed lands, the parties will comply with the Native American graves Protection and Repatriation Act (NAGPRA) and its implementing regulations at 43 CFR Part 10, Subpart B. Human remains and associated grave goods on private land will be handled according to the provisions of Nevada statute NRS 383.

Wildlife

17. In accordance with the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Act (BGEPA), take of migratory birds or eagles is not authorized and the Holder has the responsibility to be in compliance with these laws. Therefore, actions which

have the potential to affect migratory bird species of concern or eagles must be minimized or avoided. The Holder will comply with measures within a Bird Conservation Strategy that will be approved by the FWS; BLM will not issue a notice to proceed for construction until written concurrence is received from the FWS documenting their approval of the Bird Conservation Strategy. The Bird Conservation Strategy will include pre-construction surveys, design and avoidance measures, in accordance with additional stipulations within this document.

Transfer of Federal Ownership/Relinquishment/Assignment

18. In accordance with Federal regulations in 43 CFR 2807.21 any proposed transfer of any right or interest in the ROW grant shall be filed with the BLM Authorized Officer. An application for assignment shall be accompanied by a showing of qualifications of the Assignee. The assignment shall be supported by a stipulation that the Assignee agrees to comply with and to be bound by the terms and conditions of the grant to be assigned. No assignment shall be recognized unless and until it is approved in writing by the Authorized Officer.

19. In the event that the public land underlying the right-of-way encompassed in this grant, or a portion thereof, is conveyed out of Federal ownership and administration of the ROW or the land underlying the ROW is not being reserved to the United States in the patent/deed and/or the ROW is not within a ROW corridor being reserved to the United States in the patent/deed, the United States waives any right it has to administer the ROW, or portion thereof, within the conveyed land under Federal laws, statutes, and regulations, including the regulations at 43 CFR Part 2800, including any rights to have the Holder apply to BLM for amendments, modifications, or assignments and for BLM to approve or recognize such amendments, modifications, or assignments. At the time of conveyance, the patentee/grantee, and their successors and assigns, shall succeed to the interests of the United States in all matters relating to the ROW, or portion thereof, within the conveyed land and shall be subject to applicable State and local government laws, statutes, and ordinances. After conveyance, any disputes concerning compliance with the use and the terms and conditions of the ROW shall be considered a civil matter between the patentee/grantee and the ROW Holder.

20. Prior to termination of the ROW, the Holder shall contact the Authorized Officer to arrange a pre-termination conference. This conference will be held to review the termination provisions of the grant.

CONDITIONS OF APPROVAL

Air and Atmospheric Values

21. **ROW-AQ-1: Project Road Inspections to Reduce Wind and Water Erosion.** The SNWA and the BLM's Environmental Compliance Monitor will inspect project roads in areas prone to air and water erosion bi-weekly during construction, or more frequently during periods of adverse weather conditions. Repairs will be completed within 5 working days of notification to the SNWA or sooner depending on public safety and the nature of the issue detected. SNWA will make a photographic documentation of the road condition prior to and immediately after road repairs.

22. **ROW-AQ-2: Alternative Dust Control Measures.** Areas where soil tackifiers are prohibited (e.g., threatened and endangered species habitat, perennial stream drainages) will be determined in cooperation with the BLM and the U.S. Fish and Wildlife Service (USFWS or Service) prior to construction, and identified in both the Construction and Mitigation Plans. Other mitigation (e.g., gravel application) may be required to reduce impacts and to ensure protection of public safety. This measure would supplement SNWA ACM A.10.3 (Stipulation 348).

Water Resources

23. **ROW-WR-1: Stream Crossing Construction Plan.** A site-specific plan will be developed to detail the construction procedures, erosion control measures, and reclamation that will occur for pipeline construction across live (flowing) stream reaches. The plan will include site-specific designs using either open cut or jack and bore techniques and site-specific measures to minimize disturbance of the stream bed, and release of sediment from the construction area into the downstream stream reach. The plan will be reviewed and approved by the BLM and Nevada Department of Wildlife (NDOW) prior to initiation of any construction activities within the stream corridor.

24. **ROW-WR-2: Avoid Power Line Structures in Streams.** Power line structures will be designed to span all perennial streams and other ephemeral/intermittent streams or washes. No power line structures or ancillary facilities will be located within the active channels of these streams. Access roads constructed for the power line will be located to avoid or minimize disturbance to perennial and intermittent streams.

25. **ROW-WR-3: Construction Water Supply Plan**. A Construction Water Supply Plan will be provided to the BLM for approval prior to construction. The plan will identify the specific locations of water supply wells (whether existing or new wells) that will be used to supply water for construction of the water pipeline and ancillary facilities; identify specific groundwater aquifers that would be used; estimate effects to surface water and groundwater resources resulting from the groundwater withdrawal; define the methods of transport and delivery of the water to the construction areas; identify reasonable measures to reuse or conserve water; and any additional approvals that may be required. The BLM will review and approve the plan and, if necessary, include any monitoring or mitigation requirements required to minimize impacts prior to construction approval. SNWA will provide the drilling logs and water chemistry reports on water wells drilled for pipeline construction. BLM in consultation with State agencies and the grazing permittee will review the location of any new construction water wells and determine if any will be needed for multiple use management goals. If specific wells slated to be plugged and abandoned are determined to be a benefit to the BLM for multiple use management, the BLM will work with the SNWA to procure the rights to the wells and obtain appropriate water rights for the beneficial use(s). The BLM will not approve a plan that would result in adverse impacts to listed species or adverse effects to critical habitat associated with perennial springs, streams, wetlands, or artesian well flow. At locations of potential habitat but where species occurrence has not yet been determined, surveys will be conducted in accordance with appropriate protocol prior to approving the plan. The Construction Water Supply Plan will be a component of the SNWA POD. Prior to approval of the POD, BLM will coordinate

with the USFWS regarding portions of the POD relating to their regulatory role under the Endangered Species Act (ESA). This process will be used to determine if there are adverse impacts to listed species or adverse effects to critical habitat, as well as to identify mitigation (including conditions to avoid impacts to listed species and critical habitat) and monitoring requirements, if necessary.

26. **GW-WR-3a: Comprehensive Water Resources Monitoring Plan**. Prior to completion of subsequent National Environmental Policy Act (NEPA) analyses for groundwater production in Spring, Delamar, Dry Lake, or Cave valleys, the SNWA will develop a comprehensive water resources monitoring plan (WRMP). This plan will specify hydrologic monitoring requirements (i.e., meteorological and surface water and groundwater) to provide adequate data for an early warning system designed to distinguish between the effects of project pumping, natural variations, and other non-project related groundwater pumping activities. The WRMP also will identify monitoring requirements to be used to improve future calibration and predictive abilities of the numerical groundwater flow models (GW-WR-3b) used to estimate future effects associated with the groundwater development project. The WRMP will specify the siting, installation, monitoring frequency, and monitoring and testing methodology (including quality control and quality assurance procedures). Critical baseline data necessary to determine pumping effects will be collected for a period of at least 5 years prior to the initiation of pumping, if feasible. The WRMP will be developed, implemented, and maintained by the SNWA with approval by the BLM in coordination with other Federal and state agencies (as deemed appropriate by the BLM). The WRMP design will allow for reasonable modifications and adjustments to monitoring locations over the project life to account for the results of the monitoring, updated groundwater flow model predictions, and updated biological surveys and habitat/species monitoring.

    The WRMP will include surface water and groundwater monitoring sites that have been identified as critical to providing an early warning system for potential effects to Federal resources and Federal water rights identified by the BLM. The monitoring will include water sources essential for threatened or endangered species, and other BLM-identified sensitive species and related habitat determined to be at risk from the project pumping or ground disturbance related activities. The list of springs and streams with sensitive species or game fish on public lands, determined to be at risk from the project (where monitoring is likely to be required) under the preferred alternative, will include, as appropriate based on potential effects identified during development and implementation of the WRMP and prior to completion of subsequent NEPA analyses:1) Flag Springs Complex in White River Valley (207); 2) Pahranagat Creek in Pahranagat Valley (209); 3) Blind Spring, North Millick Spring, South Millick Spring, Pine Creek, Ridge Creek, and Spring Valley Creek in Spring Valley (184); Big Springs Creek, Big Wash, and Snake Creek in Snake Valley (195). Monitoring at specific surface water sites could include surface water flow monitoring and/or monitoring wells located near the surface water source designed to monitor changes in groundwater elevation.

    Groundwater Elevation Monitoring Sites
    The WRMP also will include a monitoring well network designed to track the magnitude and aerial extent of drawdown overtime resulting from the project pumping activities. It is anticipated that this monitoring well network will include monitoring

wells located in the following areas as appropriate based on potential effects identified during development and implementation of the WRMP and prior to completion of subsequent NEPA analyses.

- Wells sited in each pumping basin designed to monitor the magnitude and extent of the drawdown over time from project pumping. This would include wells designed to monitor the basin fill aquifer and carbonate aquifer systems; and in some areas, volcanic aquifers.
- Wells sited to monitor groundwater elevations (including wells both in the carbonate aquifer and basin fill aquifers) in the area between southern Spring Valley and southern Snake Valley and northern Hamlin Valleys.
- Wells sited in southern Snake Valley to monitor drawdown effects in southern Snake Valley due to pumping in Spring valley.
- Wells sited to monitor for propagation of drawdown from project pumping in Spring valley to major spring discharge areas in northern Snake Valley (e.g., Gandy Salt Marsh Complex, Bishop Spring Complex, Leland-Harris Spring Complex, and Twin Springs).
- Well(s) sited along the eastern margin of Steptoe Valley to monitor for the westward propagation of drawdown from project pumping in Spring Valley into Steptoe Valley beneath the Schell Creek Range.
- Well(s) sited in northeastern Lake Valley to monitor for the propagation of drawdown from project pumping in Spring Valley to the area of Geyser and Wambolt springs in Lake Valley.
- Well(s) sited on the west side of Lake Valley to monitor for the propagation of drawdown from project pumping in Cave Valley to the area of Geyser and Wambolt springs.
- Wells sited in Cave Valley and at the base of Shingle Pass in southern White River to monitor and track the westward propagation of drawdown from project pumping in Cave Valley towards the springs that discharge along the southeastern margin of White River Valley (i.e., Flag and Butterfield springs).
- Wells sited on the northern boundary between Delamar and Pahranagat valleys, and in northern Pahranagat Valley to monitor groundwater elevations between the project pumping in Dry Lake and Delamar valleys and the regional spring discharge in northern Pahranagat Valley (i.e., Hiko, Crystal and Ash springs).

Well(s) sited in the Pahranagat Shear Zone at the boundary between southern Delamar and southern Pahranagat valleys to monitor groundwater elevations between the groundwater production well field in Delamar Valley and the perennial water resources in southern Pahranagat Valley (i.e., Pahranagat National Wildlife Refuge).

The WRMP will include other springs and streams sites, and groundwater monitoring areas as deemed appropriate by the BLM. In addition to the sites listed previously, additional monitoring sites will be included as necessary to: a) track the extent and magnitude of the drawdown; b) monitor flows in perennial springs and streams determined to be at risk of effects from the groundwater development; and c) provide early warning monitoring of groundwater levels between the production well fields and Federal water rights and other water dependent resources identified as critical for management and protection of the BLM's water dependent resources.

Monitoring Results Reporting Requirements

The BLM-approved WRMP will specify the reporting requirements for the monitoring plan. At a minimum, the WRMP will require that SNWA provide the BLM with the following information upon implementation of the WRMP and over the life of the groundwater development project:

1. Quarterly reporting of the results of any meteorological, surface water, and groundwater monitoring required for the project (including all field and laboratory data and analysis).
2. An Annual Report that summarizes and evaluates all monitoring results. The report will minimally include:
   a. Drawdown maps identifying the change in groundwater levels from the previous year, and total drawdown since groundwater pumping was initiated;
   b. Hydrographs for groundwater monitoring wells indicating the change in groundwater levels since monitoring was initiated at each site;
   c. Hydrographs for surface water flow monitoring sites indicating changes in flow since monitoring was initiated at each site;
   d. Water quality sampling and testing results for each monitoring site (where water quality monitoring is required);
   e. Description of identified reductions in flow in any monitored surface water resources in the region;
   f. Evaluation of the likely causes for reductions in surface water flow identified in (e);
   g. Description of any significant changes in water quality identified in surface water or groundwater monitoring locations;
   h. Description of any deviations of the monitoring results from the current groundwater flow model predictions or anticipated from prior monitoring; and
   i. Proposed modifications to the monitoring plans based on the results of the monitoring or updated groundwater flow model predictions (i.e., changes to the monitoring well network, or network of springs and stream sites).

All data collected as part of the WRMP and quarterly and annual reports, will be accessible to the public and other Federal and state agencies via an internet site. The design and maintenance of the internet site will be the responsibility of SNWA and will be approved by the BLM.

27. **GW-WR-3b: Numerical Groundwater Flow Modeling Requirements**. The regional model will be updated or revised and recalibrated at least every 5 years (after pumping is initiated) or sooner if BLM identifies major differences between the model simulations and monitoring results (GW-WR-3a) and determines that model recalibration is necessary.

In addition to the regional groundwater flow model, the SNWA will develop more detailed (local scale) groundwater flow models designed to simulate the effects of pumping within each specific basin. These basin-specific models will be developed and approved by the BLM prior to completion of BLM's NEPA review of specific groundwater development activities proposed by the SNWA. The basin-specific models will be coupled with the regional model by constructing separate models, whose boundary conditions are linked to the regional model; constructing an "embedded"

model where the local model is coupled to the regional model; or using another method approved by the BLM. The BLM will utilize the basin-specific models and the regional groundwater model to conduct a more detailed NEPA evaluation of potential project-related pumping impacts once the location and pumping schedules for the production wells have been defined by SNWA. Additionally, the BLM will use the basin-specific models to critically evaluate the effectiveness of the proposed mitigation measures, ACMs, and other proposed adaptive management processes. The basin-specific models also will be recalibrated at least every 5 years (after pumping is initiated) or sooner if the BLM identifies major differences between the model simulations and monitoring results and determines that model recalibration is necessary.

The regional groundwater flow model and basin-specific models will be maintained through the life of the project. The BLM will establish a Technical Review Team to review the model on a periodic basis to provide recommendations to improve the calibration and predictive ability of the numerical groundwater flow model(s). The BLM, with input from their Technical Review Team, will determine if periodic updates of the groundwater flow model are no longer necessary or if other groundwater flow models or predictive tools should be used.

Vegetation Resources

28. **ROW-VEG-1: Native Seed Collection**. The SNWA, in consultation with the BLM, will develop a seed collection program for native plant species found within the ROW. These native plant seeds will be used along the ROW corridor in revegetation and reclamation activities, to the extent feasible, to enhance the rate and quality of recovery. Seed from locally adapted native sources will likely provide the greatest rates of establishment and subsequent growth, increasing the success of reclamation efforts. Target species and collection methods will be identified in the Restoration Plan.

29. **ROW-VEG-2: Temporary Fencing or Closure to Livestock Grazing.** The SNWA will conduct pre-construction surveys to determine areas of livestock use within and adjacent to the construction ROW where application of temporary fencing or closure will be needed for revegetation species establishment. The results of these surveys will be provided to the BLM for review and approval. Revegetation areas will be rested from grazing for two full years or until BLM determines that reclamation meets BLM Resource Management Plan standards.

30. **ROW-VEG-3: Green Stripping**. SNWA, in consultation with the BLM, will develop a green stripping revegetation prescription where BLM and SNWA preventive and control measures may be inadequate to mitigate risks of weed invasion and wildfire. Green stripping is defined as ROW revegetation with fast-growing herbaceous species that can outcompete annual and perennial weeds and can provide a green firebreak. Locations where this measure may be applied will be identified in the Restoration Plan, Integrated Weed Management Plan, and Fire Prevention Plan, and approved by the BLM Authorized Officer. For example, it will be applied primarily to Great Basin Desert low elevation bottomlands, with limited applications to open evergreen woodlands (due to low risk for weed invasion) and Mojave Desert lowlands (due to low risk as a fire disturbance ecosystem).

31. **ROW-VEG-4: Special Status Plant Species Establishment**. In addition to salvaging and transplanting special status species found in the ROW for tier 1 or subsequent tier construction activities, the SNWA will grow additional plants from seed (collected from individuals prior to salvage) or by grafting (from the salvaged plants) to enhance the new, transplanted populations. Seed collection for this effort will occur over multiple years prior to plant salvage. Specific special status plant species and collection methods will be identified in the Restoration Plan.

32. **ROW-VEG-5: Blaine's Fishhook Cactus Surveys**. The SNWA will begin Blaine's fishhook cactus (*Sclerocactus blainei*) surveys as soon as possible after project design and engineering is complete; conducting the surveys within known and potential habitat during the next appropriate season for plant identification. The goal of this mitigation measure is to allow for a minimum of two to three years of surveys, since this species may stay underground for several years. A 3-meter exclusion area will be established around any individuals found during the surveys.

33. **ROW-VEG-6: Blaine's Fishhook Cactus Transplantation**. If found during surveys, Blaine's fishhook cactus (*Sclerocactus blainei*) individuals will be transplanted to undisturbed BLM land that is as similar as possible to the habitat from which it was removed. Site selection requirements and details will be provided in the Restoration Plan.

34. **ROW-VEG-7: Blaine's Fishhook Cactus Compensation**. If enhancement measures fail to restore Blaine's fishhook cactus (*Sclerocactus blainei*) where it is found in the ROW prior to construction, SNWA will establish a compensatory mitigation fund for direct, indirect, and cumulative impacts to the species. A single payment of $10,000 will be made by the project applicant (SNWA) to the Center of Plant Conservation or other agency/entity as determined appropriate by the BLM. This funding will specifically be used for preserving the genetic material of this species in perpetuity. Details regarding the definition of success with regard to *Sclerocactus blainei* will be determined, in coordination with the USFWS and the BLM, in the COM Plan.

35. **GW-VEG-3: Wetlands Monitoring.** Prior to completion of subsequent NEPA analyses for groundwater production in Cave, Dry Lake, Delamar or Spring valleys, the SNWA will develop a wetlands monitoring plan. This plan will specify monitoring requirements and metrics for vegetation, soils, and hydrology to provide adequate data to provide input to an early warning system designed to distinguish between the effects of project pumping, natural variations, and other non-project related groundwater pumping activities. This measure is in concert with GW-WR-3a. Monitoring will be conducted for wetlands (as defined using USACE wetlands delineation criteria, irrespective of whether they are jurisdictional) in areas that contain sensitive Federal resources which have a moderate or high risk of being potentially affected by groundwater pumping. Specific monitoring locations would be identified in the COM Plans associated with subsequent NEPA tiers.

36. **GW-VEG-4: Phreatophytic Vegetation Monitoring.** Prior to completion of subsequent NEPA analyses for groundwater production in Cave, Dry Lake, Delamar or Spring valleys, the SNWA will develop a phreatophytic vegetation monitoring plan. This plan will specify monitoring requirements for quantifying the extent and

distribution of phreatophytic vegetation at sufficient resolution to detect changes in density and cover in areas that may be affected by groundwater pumping. Data derived from monitoring would provide input to an early warning system designed to distinguish between the effects of project pumping, natural variations, and other non-project related groundwater pumping activities. Specific monitoring locations would be identified in the COM Plans associated with subsequent NEPA tiers. This measure is in concert with GW-WR-3a.

Terrestrial Wildlife

37. **ROW-WL-1: Big Game Key Habitat Priority Restoration and Habitat Improvement**. If surface disturbing activities impact key big game habitats (crucial summer and winter ranges for antelope, Rocky Mountain elk, or mule deer, or occupied desert bighorn sheep habitat), the SNWA will improve 2 acres of comparable habitat for every 1 acre of disturbed habitat. The SNWA will coordinate with the BLM and NDOW to determine the specific areas for big game key habitat improvements.

38. **ROW-WL-2: USFWS Concurrence on Plans**. The SNWA will obtain concurrence from USFWS on any plans developed as part of the POD (ACM A.1.1 [Stipulation 142]) that address species protected under the MBTA or the BGEPA.

39. **ROW-WL-3: Raptor Nest Survey and Avoidance**. If SNWA requests to conduct surface disturbing construction activities (variance request) during raptor breeding and nesting seasons (as determined by the NDOW and the BLM), surveys for active raptor nests will be conducted by them within suitable habitat, within 2 weeks prior to the anticipated start the activities. Raptor nests found during surveys will be addressed under the Ely Resource Management Plan (RMP) SS-4 management action, as well as protected under provisions of the MBTA and BGEPA, as appropriate. (SS-4: Where appropriate, restrict permitted activities from May 1 through July 15 within 0.5 mile of raptor nest sites unless the nest site has been determined to be inactive for at least the previous 5 years.)

40. **ROW-WL-4**: **Specific Lek Avoidance – Burying Power Lines**. For the power line in Cave Valley, the SNWA will bury the portion of the 25-kV line within the 4-mile buffer of the active leks in Cave Valley. For the power line in Snake Valley, the portion of the 25-kV line within the 4-mile buffer of the active lek will be buried. If technology at the time of construction allows, lines greater than 25-kV will also be buried.

41. **ROW-WL-5**: **Specific Lek Avoidance –Siting of Power Lines**. Outside the LCCRDA corridor, the SNWA will site 230-kV power lines west of active leks at sufficient distances to avoid line-of-sight with leks.

42. **ROW-WL-6**: **Habitat Restoration to Benefit Greater Sage-grouse for Permanently Converted Habitat**. Restore greater sage-grouse habitat on public lands at a ratio of 2 acres for every acre of preliminary priority habitat (PPH) or preliminary general habitat (PGH) (or designated priority or general habitat) that is permanently converted. The SNWA will coordinate with the BLM and the NDOW to determine the specific areas and timing for restoration activities.

43. **ROW-WL-7**: **Habitat Restoration to Benefit Greater Sage-grouse for Other Disturbed Habitat**. Restore greater sage-grouse habitat on public lands for PPH and

PGH (or designated priority or general habitat) that is avoided by greater sage-grouse because of temporary habitat loss due to construction and presence of above ground structures. The SNWA will coordinate with the BLM and the NDOW to determine the specific areas, acres, and timing for restoration activities.

44. **ROW-WL-8: Greater Sage-grouse Monitoring**. In consultation with BLM, NDOW, and USFWS, SNWA will implement a monitoring program before, during, and after the construction phase for greater sage-grouse in the project area that addresses demographics, vital rates, and seasonal movement patterns, as recommended by the Nevada Energy and Infrastructure Standards to Conserve Greater Sage-Grouse (NGSCT 2010) or the most recent standards document approved prior to the start of the monitoring effort. The project area that is relevant to greater sage-grouse will be determined based on best available science at the time of the start of the monitoring effort. Currently, it will include birds using leks within 4 miles of the project area.

45. **ROW-WL-9: Greater Sage-grouse Timing Restriction Breeding, Nesting, and Early Brood-Rearing**. Restrict permitted activities within 4 miles of active greater sage-grouse leks during the breeding, nesting, and early brood-rearing periods (generally March 1 through July 31).

46. **ROW-WL-10: Greater Sage-grouse Timing Restriction Winter Range**. Restrict permitted activities from November 1 through March 31 within greater sage-grouse winter range.

47. **ROW-WL-11: Fence Marking for Greater Sage-grouse**. Fencing used by the project in greater sage-grouse habitat will be adequately marked following accepted methods and approved by BLM prior to installation.

48. **ROW-WL-12: Co-location of Power Lines**. Co-locate proposed utility lines where technically feasible.

49. **ROW-WL-13: Eagle Nest Avoidance.** Construction activities will be restricted within a 1-mile buffer zone, if a pair of breeding/nesting eagles is observed during raptor surveys. Construction may resume after eagles have fledged or the nest is abandoned.

50. **ROW-WL-14. Pygmy Rabbit Surveys and Passive Relocation**. Surveys will be conducted by qualified biologists prior to mowing and initial ground disturbance. Mowing to encourage passive relocation will be conducted between October 1 and February 15. Survey design will use the most recent BLM-approved pygmy rabbit survey and relocation protocol, and in coordination with NDOW and USFWS, include three key components: potential habitat survey; a subsequent pygmy rabbit sign survey conducted during best season for detection in Nevada; and a timeline for completion of these surveys that allows for passive relocation of rabbits ahead of initial ground-disturbing activities between October 1 and February 15.

51. **ROW-WL-15. Pygmy Rabbit Habitat Improvement**. For the direct loss of occupied pygmy rabbit habitat, 2 acres of comparable habitat for every 1 acre of disturbed habitat will be improved. SNWA will coordinate with the BLM and NDOW to determine the specific areas for pygmy rabbit habitat improvements.

52. **ROW-WL-16. Priority Reclamation Efforts in Pygmy Rabbit Habitat**. Areas of disturbance along the ROW where passive relocation activities are conducted will be

evaluated by the BLM in coordination with NDOW. Based on this evaluation, SNWA will prioritize reclamation, including but not limited to the planting of sagebrush seedlings, within the areas of disturbance to facilitate movement of rabbits across the ROW. These areas will be specifically identified in the Restoration Plan (ACM A.1.69; Stipulation 210) and considered in conjunction with efforts under ACM A.5.53 (Stipulation 301 -Enhance restoration for greater sage-grouse).

53. **ROW-WL-17. Unanticipated Nesting Pygmy Rabbits**. If nesting pygmy rabbits are found during construction despite efforts of passive relocation, construction activities will be restricted within an appropriate buffer zone as approved by BLM in coordination with NDOW and USFWS.

54. **ROW-WL-18**: **Coordination with NDOW on Conservation Measures for Dark Kangaroo Mouse**. The SNWA, prior to being issued the Notice to Proceed, will work with NDOW on developing research objectives, protocols, and implementation plan(s) to identify conservation measures for the SNWA project's potential effects on the dark kangaroo mouse and its habitat. The implementation plan(s) must address mitigation, minimization, or avoidance of impacts from this project on dark kangaroo mouse and its habitat for the duration of construction, maintenance, and operation. A Notice to Proceed will be issued upon receipt of confirmation by NDOW that this process has been completed and that conservation measures for the dark kangaroo mouse and its habitat have been developed.

55. **ROW-WL-19**: **Coordination with NDOW on Conservation Measures for Banded Gila Monster**. The SNWA, prior to being issued the Notice to Proceed, will work with NDOW on developing research objectives, protocols, and implementation plan(s) to identify conservation measures for the SNWA project's potential effects on the banded Gila monster and its habitat. The implementation plan(s) must address mitigation, minimization, or avoidance of impacts from this project on banded Gila monster and its habitat for the duration of construction, maintenance, and operation. A Notice to Proceed will be issued upon receipt of confirmation by NDOW that this process has been completed and that conservation measures for the gila monster and its habitat have been developed.

56. **ROW-WL-20: Banded Gila Monster Surveys**. Within potential habitat for banded Gila monster and chuckwalla, pre-construction surveys of the ROW will be conducted by qualified biologists to find and move individuals from project disturbance areas. The surveys will be conducted in accordance with NDOW's most current banded Gila monster survey protocol. All occupied burrows found in the construction zone will be examined and excavated as described for the desert tortoise. If a banded Gila monster is found, NDOW will be immediately contacted.

Aquatic Biological Resources

57. **ROW-AB-2: Avoidance of Instream Disturbance**. Construction of the power line at the Steptoe Creek crossing will avoid instream disturbance from equipment and vehicles.

Recreation

58. **ROW-REC-1: Enforce Recreational OHV Travel Restrictions**. (see Mitigation Measure ROW-T-1 under Transportation[Stipulation 61]) Identify construction zone

and construction vehicle access areas where restrictions to unauthorized off highway vehicle (OHV) travel shall be enforced.

59. **ROW-REC-2: Avoid Recreational Use Conflicts with Construction Activities**. SNWA ACM 1.28 (Stipulation 169) notes that a Construction Traffic Management Plan will be developed that takes into account recreation activities. The plan shall schedule construction activities (pipeline and aboveground ancillary facilities) to minimize conflicts with recreation activities such as race events, hunting, and elk viewing.

60. **ROW-REC-3: Avoid Recreational Trail Location Conflicts**. SNWA will coordinate with the BLM regarding future trail use where Special Recreation Management Areas (SRMAs) and Special Recreation Permit (SRP) areas are crossed.

Transportation Resources

61. **ROW-T-1**: **Traffic Management Plan**. SNWA has committed in ACMs A.1.1 and A.1.28 (Stipulations 142 and 169) to prepare a detailed Traffic Management Plan that addresses operating procedures and coordination approaches with the BLM and other appropriate agencies to minimize traffic congestion, roads needing improvement and repair, and safety measures during construction. The Plan also will include:

    - An assessment of public road bridge weight restrictions and measures to reduce the risk of damage to existing bridges and road culverts.
    - A commitment to monitor and repair Federal, state, and county roads that are used for delivering construction materials.
    - Communication procedures for notifying the public and responsible agencies of anticipated construction-related traffic and transportation issues such as temporary road closures, movement of major equipment on public roadways, and unusual levels of construction-related traffic.
    - Measures to manage recreational OHV use during construction, information on how closed roadways will be managed (including signage), and how roadways will be restored to prevent unauthorized OHV uses.
    - Submittal of the Traffic Management Plan for review and approval by the BLM and responsible county and state agencies.

Rangelands and Grazing

62. **ROW-GRA-1: Temporary Fencing or Closure In Livestock Use Areas**. The SNWA will conduct pre-construction surveys to determine areas of livestock use in and adjacent to the construction ROW where application of temporary fencing or closure will be needed for revegetation species establishment. The results of these surveys will be provided to the BLM for review and approval. Reseeded areas that are temporarily fenced or closed will be monitored by the SNWA on a yearly basis until the BLM determines that reseeded areas are self-sustaining, and fencing removed. The time frame for reclamation monitoring is a minimum of two growing years or until the BLM determines that reclamation meets BLM Best Management Practices (BMP) standards.

Wild Horse and Burro Herd Management Areas

63. **ROW-WH-1: Shrub/tree Removal**. In the Eagle and Silver King Herd Management Areas (HMAs), where feasible, shrubs and trees within the power line ROW will be avoided during selection of power pole position and spur access road routes.

64. **ROW-WH-2: Pre-construction Consultation**. Pre-construction consultation with the BLM will occur to identify construction avoidance areas in HMAs between April and July.

65. **ROW-WH-3: Existing Water Supplies**. Pre-construction consultation with the BLM will occur to ensure that wild horses have access to existing water supplies or that temporary supplemental water is supplied until access to existing water supplies is restored.

Special Designations and Lands with Wilderness Characteristics

66. **ROW-SD-1: Construction Area Siting.** To the degree possible, avoid siting temporary construction areas within the boundaries of special designations and within designated ROW corridors.

Visual Resources

67. **ROW-VR-1: ROW Width Reduction**. SNWA, in consultation with the BLM, will reduce the width of permanent ROW and temporary construction ROW to the smallest width feasible in Pahranagat Canyon, Visual Resource Management (VRM) Class II areas, and within 1,000 feet adjacent to scenic byways (U.S. 50/6/93) to minimize visual contrasts where feasible. The permanent and temporary ROW width shall be reduced through narrower roads within the ROW, steeper trench walls, vertical trenching and/or trench boxes, and reducing the ROW width in relation to the size of the pipeline (e.g., a 16-inch pipeline would require less ROW than an 84-inch pipeline).

68. **ROW–VR-2: Power Line Structure Design**. Where locating new power lines adjacent to existing lines, the existing pole type, color, and span length will be matched to the extent feasible. In areas where there are no existing power lines, SNWA will consult with the BLM during project design to select the most appropriate structure design from the following: wood H-frame structures or single steel poles for 230-kV power lines and single wood poles or single steel poles for 69-kV and 25-kV. All steel poles will be surfaced with Shadow Grey paint in sage/creosote plant communities and self-weathering Corten in pinyon pine plant communities.

69. **ROW–VR-3: Power Line Conductor and Insulator Design**. Conductors will be non-specular and non-reflective. Insulators will be porcelain or polymer material to reduce reflection and refraction.

70. **ROW–VR-4: Surface Treatment of Project Structures and Buildings**. SNWA will consult with BLM on surface treatments. All aboveground, non-electric project structures and buildings will utilize architectural details and be painted or constructed of colored block to blend with the colors of the surrounding landscape, per BLM Manual 8400 – Visual Resources Management. Shadow Grey for sagebrush shrub and shrubland cover types and Beetle for pinyon-juniper woodland shall be selected from the BLM Standard Environmental Colors Chart CC-001. Ground surfaces of permanent storage yards that will not be revegetated shall have a top-dressing of 2 inches of dark colored aggregate to minimize color contrast. Non-reflective and non-glare paints will be utilized with proper treatment maintenance for the life of the project.

71. **ROW–VR-5: Facility Siting**. SNWA will review facility site locations with the BLM to determine if design features or adjustments shall be made to limit the visibility of

non-linear facilities. The colocation of facilities has been incorporated into the POD; however, further adjustments for the colocation of non-linear facilities with related project facilities or existing facilities will be reviewed with the BLM. Distance, terrain, and vegetation screening will be utilized to limit the visibility of non-linear facilities. Facility siting to minimize visibility will be subject to engineering and safety requirements that may constrain siting.

Native America Traditional Values

72. **ROW-NAM-1: Tribal Monitors**. In accordance with the Programmatic Agreement, tribal monitors will be appointed to monitor pipeline construction in the area of a site in which an Indian tribe attaches religious and cultural significance. The BLM will identify these sites in consultation with interested Indian tribes.

Public Safety and Health

73. **ROW-PS-1: Hazardous Material Surveys**. SNWA will conduct BLM-approved hazardous materials-contaminant surveys of the ROW before establishing final pipeline locations.

74. **ROW-PS-2**: **Five-year Review of Leak Detection Methodologies**. SNWA will review and implement best industry practices for leak detection.

BIOLOGICAL OPINION TERMS AND CONDITIONS

Impacts to Desert Tortoises (BO Reasonable and Prudent Measure 1)

75. 1-A: Applicant-committed measures—The BLM shall ensure that the SNWA and their contractors implement all the applicant-committed measures, as modified by the Service and BLM, and the BLM terms and conditions of the ROW grant, including those required in the Ely RMP (BLM 2008).

76. 1-B: Timing of construction—The BLM shall ensure that when possible, the SNWA schedules and conducts construction, operation, and maintenance activities within desert tortoise habitat during the less-active season (generally October 31 to March 1) and during periods of reduced desert tortoise activity (typically when ambient temperatures are less than 15.5 or greater than 35 °C [less than 60 or greater than 95 °F]).

    All vehicles and equipment that are not in areas enclosed by desert tortoise exclusion fencing will stop activities in desert tortoise habitat during rainfall events in the more-active season (generally March 1 to October 31), and if temperatures are above 15.5 but below 35 °C (above 60 but below 95 °F) for more than 7 consecutive days. The Field Contact Representative (FCR) or designee will determine, in coordination with the BLM and Service, when it is appropriate for project activities to continue.

77. 1-C: Field Contact Representative—The BLM shall ensure an FCR (also called a Compliance Inspection Contractor, or CIC) is designated for each contiguous stretch of construction activity. The FCR will serve as an agent of the BLM and the Service to ensure that all instances of noncompliance or incidental take are reported. The BLM has discretion over approval of potential FCRs; however, those who will also be acting as authorized desert tortoise biologists must also be approved by the Service (see Term and Condition 1D [Stipulation 78]).

The FCR and authorized desert tortoise biologist (see Term and Condition 1-D) shall have a copy of all stipulations when work is being conducted on the site and will be responsible for overseeing compliance with terms and conditions of the ROW grant, including those for listed species. The BLM shall ensure the FCR and authorized desert tortoise biologists have authority to halt any activity that is in violation of the stipulations. The FCR shall be on-site year-round during all project activities.

Within 3 days of employment or assignment, the SNWA and BLM shall provide the Service with the names of FCRs.

78. 1.D: Authorized desert tortoise biologist— In accordance with *Procedures for Endangered Species Act Compliance for the Mojave Desert Tortoise* (USFWS 2009a), an authorized desert tortoise biologist shall possess a bachelor's degree in biology, ecology, wildlife biology, herpetology, or a closely related field. The biologist must have demonstrated prior field experience using accepted resource agency techniques to survey for desert tortoises and desert tortoise sign. In addition, the biologist shall have the ability to recognize and accurately record survey results. Potential authorized desert tortoise biologists must submit their statement of qualifications to the Service's Nevada Fish and Wildlife Office for approval, allowing a minimum of 30 days for Service response. The statement form is available on the Internet at http://www.fws.gov/nevada/desert_tortoise/auth_dt_form.htm.

    During the desert tortoise more-active season (generally March 1 to October 31), and if temperatures are above 15.5 but below 35 °C (above 60 but below 95 °F) for more than 7 consecutive days, an authorized desert tortoise biologist shall be on-site. He/she will be assigned to each piece/group of large equipment (e.g., front-end loader, backhoe, excavator, water truck) engaged in activities that may result in take of desert tortoises (e.g., clearing, watering roads, blasting, grading, lowering in pipe, hydrostatic testing, backfilling, recontouring, and reclamation activities).

    An authorized desert tortoise biologist and FCR (see Term and Condition 1-C [Stipulation 77]) shall be responsible for 1) conducting and supervising desert tortoise clearance surveys; 2) enforcing the litter-control program; 3) ensuring that desert tortoise habitat disturbance is restricted to authorized areas; 4) ensuring that all equipment and materials are stored within the boundaries of the construction zone or within the boundaries of previously disturbed areas or designated areas; 5) ensuring that all vehicles associated with construction activities remain within the proposed construction zones; and 6) ensuring compliance with the conservation measures of this biological opinion and reporting actual take (see Reasonable and Prudent Measure (RPM) 4 [Stipulations 103-108]).

    An authorized desert tortoise biologist will serve as a mentor to train desert tortoise monitors (see Term and Condition 1.e.) and shall approve monitors to conduct specific activities based on the monitor's demonstrated skills, knowledge, and qualifications. An authorized desert tortoise biologist is responsible for errors committed by desert tortoise monitors.

    Biologists and monitors shall be visibly identifiable on the project site, wearing, for example, a uniquely designated hard hat color or safety vest color.

79. 1-E: Desert tortoise monitor—Desert tortoise monitors assist an authorized desert tortoise biologist during surveys and serve as apprentices to acquire experience. Desert tortoise monitors assist on project activities to ensure proper implementation of protective measures, and record and report desert tortoises and sign observations in accordance with Term and Condition 1-D. They will report incidents of noncompliance in accordance with RPM 4 (Stipulations 103-108).

    If a desert tortoise is immediately in harm's way (e.g., certain to immediately be crushed by equipment), desert tortoise monitors will move the desert tortoise and place it in a designated safe area until an authorized desert tortoise biologist assumes care of the animal.

    Desert tortoise monitors will not conduct field or clearance surveys or other specialized duties of an authorized desert tortoise biologist unless directly supervised by an authorized desert tortoise biologist; "directly supervised" means an authorized desert tortoise biologist has unaided direct sight of and unaided voice contact with the desert tortoise monitor.

    Within 3 days of employment or assignment, the SNWA and the BLM shall provide the Service with the names of desert tortoise monitors who will assist an authorized desert tortoise biologist.

80. 1-F: Desert tortoise education program—A desert tortoise education program shall be presented by an authorized desert tortoise biologist to all personnel on-site during construction activities. The Service, BLM, and appropriate State agencies shall approve the program. At a minimum, the program shall cover desert-specific Leave-No-Trace guidelines, the distribution of desert tortoises, general behavior and ecology of this species, sensitivity to human activities, threats including introduction of exotic plants and animals, legal protection, penalties for violation of State and Federal laws, reporting requirements, and the project measures presented in this Opinion. All field workers shall be instructed that activities must be confined to locations within the approved areas; they shall also be informed of their obligation to walk around and check underneath vehicles and equipment before moving them. In addition, the program shall include fire prevention measures to be implemented by employees during project activities. The program shall instruct participants to report all observations of desert tortoise and their sign during construction activities to the FCR and authorized desert tortoise biologist.

81. 1-G: Vehicle travel—Project personnel shall exercise vigilance when commuting to the project area to minimize risk for inadvertent injury or mortality of all wildlife species encountered on paved and unpaved roads leading to and from the project site. Speed limits will be clearly marked, and all workers will be made aware of these limits. On-site, personnel shall carpool to the greatest extent possible.

    During the desert tortoise less-active season, vehicle speed on project-related access roads and in the work area will not exceed 40 kph (25 mph). All vehicles and construction equipment will be tightly grouped.

    During the more-active season (generally March 1 to October 31), and if temperatures are above 15.5 but below 35 °C (above 60 but below 95 °F) for more than 7 consecutive

days, vehicle speed on project-related access roads and in the work area will not exceed 24 kph (15 mph). All vehicles and construction equipment will operate in groups of no more than 3 vehicles. An authorized desert tortoise biologist and desert tortoise monitor will escort or clear ahead of vehicles and equipment for ROW travel. The escort will be on foot and clear the area of tortoises in front of each traveling construction equipment group (see Term and Condition 1-I [Stipulation 83]). The escort will use a recreational/nonpassenger vehicle with ground visibility (e.g., utility terrain vehicle); however, at least 1 authorized desert tortoise biologist and 1 desert tortoise monitor must ride together and survey both sides of the vehicle. The speed/pace will be determined by an authorized desert tortoise biologist. The speed shall be slow enough to ensure adequate inspection.

New access road and spur road locations will be sited to avoid potentially active tortoise burrows to the maximum extent practicable.

82. 1-H: Unauthorized access—The BLM shall ensure that unauthorized personnel, including off-duty project personnel, do not travel on project-created access roads.

During the more-active season (generally March 1 to October 31), and if temperatures are above 15.5 but below 35 °C (above 60 but below 95 °F) for more than 7 consecutive days, project- and nonproject-related activities on all access roads that intersect the ROW will be monitored and logged. During construction, the ROW will be fenced at public roads that intersect the ROW. Signs will say that access on the ROW is strictly prohibited except by authorized personnel and that violators will be prosecuted.

83. 1-I: Desert tortoise clearance—Prior to surface-disturbing activities, an authorized desert tortoise biologist, potentially assisted by desert tortoise monitors, shall conduct a clearance survey to locate and remove all desert tortoises from harm's way or from areas to be disturbed (including areas of hydrostatic testing), using techniques that provide full coverage of all areas (USFWS 2009a). No surface disturbing activities shall begin until 2 consecutive surveys yield no individuals.

During the less-active season, clearance surveys will be conducted within 7 days prior to any surface-disturbing activity.

During the more-active season (generally March 1 to October 31), and if temperatures are above 15.5 but below 35 °C (above 60 but below 95 °F) for more than 7 consecutive days, clearance surveys will be conducted the day of any surface-disturbing activity.

An authorized biologist shall excavate all burrows that have characteristics of potentially containing desert tortoises in the area to be disturbed, with the goal of locating and removing all desert tortoises and desert tortoise eggs. During clearance surveys, all handling of desert tortoises and their eggs and excavation of burrows shall be conducted solely by an authorized desert tortoise biologist in accordance with the most current Service-approved guidance. If any tortoise active nests are encountered, the Service must be contacted immediately, prior to removal of any tortoises or eggs from those burrows, to determine the most appropriate course of action. Unoccupied burrows shall be collapsed or blocked to prevent desert tortoise re-entry. Outside of unfenced construction work areas, all potential desert tortoise burrows and pallets within 15 m (50 feet) of the edge of the construction work area shall be flagged. If the

burrow is occupied by a desert tortoise, the tortoise shall be temporarily penned (see Term and Condition 1-L [Stipulation 86]). No stakes or flagging shall be placed on the berm or in the opening of a desert tortoise burrow. Desert tortoise burrows shall not be marked in a manner that facilitates poaching. Avoidance flagging shall be designed to be easily distinguished from access route or other flagging, and shall be designed in consultation with experienced construction personnel and authorized biologists. All flagging shall be removed following construction activities.

An authorized desert tortoise biologist will inspect areas to be backfilled immediately prior to backfilling.

84. 1-J: Desert tortoise in harm's way—Any project-related activity that may endanger a desert tortoise shall cease if a desert tortoise is found on the project site. Project activities may resume after an authorized desert tortoise biologist or desert tortoise monitor (see restrictions in Term and Condition 1.E [Stipulation 79]) removes the desert tortoise from danger or after the desert tortoise has moved to a safe area on its own.

    During the more-active season (generally March 1 to October 31), and if temperatures are above 15.5 but below 35 °C (above 60 but below 95 °F) for more than 7 consecutive days, at least 1 monitor shall be assigned to observe spoil piles prior to excavation and covering.

85. 1-K: Handling of desert tortoises— Desert tortoises shall only be moved by an authorized desert tortoise biologist or desert tortoise monitor (see restrictions in Term and Condition 1.E [Stipulation 79]) solely for the purpose of moving the tortoises out of harm's way. During construction, operation, and maintenance, an authorized desert tortoise biologist shall pen, capture, handle, and relocate desert tortoises from harm's way in accordance with the most current Service-approved guidance.

    Desert tortoises that occur aboveground and need to be moved from harm's way shall be placed in the shade of a shrub, 50 to 100 m (150 to 300 feet) from the point of encounter. If desert tortoises need to be moved at a time of day when ambient temperatures could harm them (less than 5 °C [40 °F] or greater than 35 °C [95 °F]), they shall be held overnight in a clean cardboard box. These desert tortoises shall be kept in the care of an authorized biologist under appropriate controlled temperatures and released the following day when temperatures are favorable. All cardboard boxes shall be discarded after 1 use and never hold more than 1 tortoise at a time. If any tortoise active nests are encountered, the Service must be contacted immediately, prior to removal of any tortoises or eggs from those burrows, to determine the most appropriate course of action.

    During the less-active season (typically October 31 to March 1), desert tortoises located in the project area sheltering in a burrow will be temporarily penned at the discretion of an authorized biologist. Desert tortoises shall not be penned in areas of moderate-to-heavy public use; rather, they shall be moved from harm's way in accordance with the most current Service-approved guidance.

    Equipment that contacts desert tortoises shall be sterilized or changed before contacting another tortoise to prevent the spread of disease. If a tortoise contacts clothing, those clothes shall be washed before coming into contact with another desert tortoise. All

tortoises shall be handled using disposable surgical gloves, and each pair of gloves shall be disposed of after handling 1 tortoise. An authorized biologist shall document each tortoise handling with the following information: 1) narrative describing circumstances; 2) vegetation type; 3) dates of observations; 4) general conditions and health; 5) any apparent injuries and state of healing; 6) if the tortoise was moved, the global positioning system (GPS) location where it was captured and the location where it was released; 7) maps; 8) whether animals voided their bladders; and 9) diagnostic markings (e.g., identification numbers marked on lateral scutes).

86. 1-L: Penning—Penning shall be accomplished by installing a circular fence, approximately 7 m (20 feet) in diameter, to enclose and surround the tortoise burrow. The pen shall be constructed with 5-cm (2-inches) hardware cloth or 3-cm (1-inch) horizontal by 5-cm (2-inches) vertical, galvanized welded wire. Steel Tposts or rebar 0.5 to 1 m (2 to 3 feet) high shall be placed every 1.5 to 2m (5 to 6 feet) to support the pen material. Pen material will extend 0.5 m (18 inches) aboveground. The bottom of the enclosure will be buried 15 to 30 cm (6 to 12 inches) deep or bent toward the burrow, with soil mounded along the base, and other measures implemented to ensure zero ground clearance. Care shall be taken to minimize public visibility of the pen. An authorized desert tortoise biologist or desert tortoise monitor shall check the pen at least daily and ensure that 1) the desert tortoise is in the burrow or pen, 2) the tortoise is healthy, and 3) the pen is intact. Because this is a new technique, all instances of penning or issues associated with penning shall be reported to the Service within 3 days.

87. 1-M: Temporary tortoise-proof fencing—All construction areas, including open pipeline trenches, hydrostatic testing locations, and tie-in work, shall be fenced with temporary tortoise-proof fencing (e.g., silt fencing) or inspected by an authorized desert tortoise biologist periodically throughout the day, at the end of the day, and immediately the next morning.

    Fencing will be designed in a manner that reduces the potential for desert tortoises and hatchlings to access the construction areas. Thus, the lower 15 to 30 cm (6 to 12 inches) of fencing will be folded outward (i.e., away from the construction area) and covered with enough soil, rocks, and staking to maintain zero ground clearance and secure the bottom section of material. After the fencing is erected and secure, the work area inside the fencing will be cleared by an authorized biologist. The fencing must remain closed during any construction activities.

    During the more-active season (generally March 1 to October 31), and if temperatures are above 15.5 but below 35 °C (above 60 but below 95 °F) for more than 7 consecutive days, an authorized biologist will check the integrity of the fencing every 2 hours to ensure that no breaches in the fencing have occurred and no desert tortoises are pacing the fence.

88. 1-N: Permanent tortoise-proof fencing—Tortoise-proof fencing shall be installed around the boundary of permanent aboveground facilities that require regular monitoring and maintenance. Fence specifications will be consistent with those approved by the Service (USFWS 2009a). Tortoise guards shall be placed at all road access points, where desert tortoise-proof fencing is interrupted, to exclude desert tortoises from the facility. Gates shall provide minimal ground clearance to deter ingress by desert tortoises. Permanent

tortoise-proof fencing along the project area shall be appropriately constructed, monitored, and maintained.

During the desert tortoise less-active period and after major storm events, fencing will be checked at least monthly.

During the more-active season (generally March 1 to October 31), and if temperatures are above 15.5 but below 35 °C (above 60 but below 95 °F) for more than 7 consecutive days, fencing will be checked at least once per day during construction activities to ensure that tortoises are not pacing the fence, litter and sediment has not piled up, breaches or holes have not occurred in the fence, and no tortoises are caught in the fence.

Following project construction, the fence, tortoise guards, and gates shall be inspected at least quarterly unless the timing is modified by the Service. Maintenance shall include regular removal of trash and sediment accumulation and restoration of zero ground clearance between the ground and the bottom of the fence, including re-covering the bent portion of the fence if it is no longer buried.

During the desert tortoise less-active period repairs to damaged fence or gates will be completed within 7 days.

During the more-active season (generally March 1 to October 31), and if temperatures are above 15.5 but below 35 °C (above 60 but below 95 °F) for more than 7 consecutive days, repairs to damaged fence or gates will be completed within 72 hours.

89. 1-O: Open trenches—Earthen plugs, with wildlife escape ramps on either side of each plug, will be provided in open trench segments at intervals of no more than 0.8 km (0.5 miles). These distances will be reduced if the FCR and authorized desert tortoise biologist determine that the plug/escape ramp spacing is insufficient to facilitate animal escape from the trench. Any tortoise that is found in a trench or excavation shall be promptly removed by an authorized desert tortoise biologist in accordance with the most current Service-approved guidance. If the authorized desert tortoise biologist is not allowed to enter the trench for safety reasons, the alternative method of removal must have prior approval by the Service. During the more-active season (generally March 1 to October 31), and if temperatures are above 15.5 but below 35 °C (above 60 but below 95 °F) for more than 7 consecutive days, the amount of open trench, at any one time, will not exceed 5 km (3 miles). An authorized desert tortoise biologist or desert tortoise monitor will be responsible for monitoring each 1,000-foot section of open trench (on both sides) during daylight hours. In sections of the project where the desert tortoise observations increase, the FCR will appropriately increase the number of monitors and authorized desert tortoise biologists. Adjacent to open trenches, an authorized desert tortoise biologist or desert tortoise monitor will thoroughly check under sections of propped pipeline to inspect for tortoises that may be taking advantage of the shade.

90. 1-P: Dust control—Water applied to the construction ROW and topsoil piles for dust control shall not be allowed to pool outside tortoise-proof fencing areas, because it can attract desert tortoises. Similarly, leaks on water trucks and water tanks will be repaired to prevent pooling water. During the more-active season (generally March 1 to October 31), and if temperatures are above 15.5 but below 35 °C (above 60 but below 95 °F) for

more than 7 consecutive days, an authorized biologist will be assigned to patrol each area being watered, both immediately after the water is applied and at approximate 60-minute intervals, until the ground is no longer wet enough to attract tortoises.

91. 1-Q: Blasting—If blasting is required in desert tortoise habitat, detonation shall only occur after the area has been surveyed and cleared by an authorized desert tortoise biologist. A 61-meter (200-foot) radius area around the blasting site shall be surveyed, and all desert tortoises aboveground within this 61-meter (200-foot) radius of the blasting site shall be moved 150 meter (500 foot) from the blasting site, placed in unoccupied burrows, and temporarily penned (see Term and Condition 1-L [Stipulation 86]) to prevent tortoises from returning to the site. Tortoises in burrows will be left in their burrows. All burrows, regardless of occupied status, will be stuffed with newspapers, flagged, and recorded using a GPS unit. Immediately after blasting, newspaper and flagging will be removed. If a burrow or coversite has collapsed and there is a possibility that it could be occupied, it shall be excavated to ensure that no tortoises have been buried and are in danger of suffocation.

Predator Control (BO Reasonable and Prudent Measure 2)

92. 2-A: Litter control—A litter-control program shall be implemented to reduce the attractiveness of the area to opportunistic predators such as desert kit foxes, coyotes, and common ravens. Trash and food items will be disposed of properly in predator-proof containers with predator-proof lids. Trash containers will be emptied and construction waste will be removed daily from the project area and disposed of in an approved landfill.

93. Deterrence—The applicant will implement BMPs to discourage the presence of predators on-site (coyotes, ravens, etc.). Measures will include eliminating available water sources, designing structures to discourage potential nest sites, and using hazing to discourage raven presence.

94. Monitoring and predator control—The applicant will inspect structures annually for nesting ravens and report observations of raven nests to the Service. If sign of predation is found under a nest, a control plan will be implemented. All raven nests will be removed from the transmission line by authorized personnel when desert tortoises are least active, and the nesting material will be disposed of.

95. Pets—Dogs will be prohibited in all project work areas.

Impacts to Desert Tortoise Habitat (BO Reasonable and Prudent Measure 3)

96. 3-A: Habitat protection plans—The BLM shall ensure that the applicant develop and implement an approved fire prevention and response plan, an erosion control plan, and a weed management plan.

97. 3-B: Interim reclamation and restoration plan—The BLM shall ensure that the applicant develop and implement a restoration plan. The plan will adaptively manage the area to restore the physical or biological features essential to the conservation of the species (Primary Constituent Elements [PCEs]). The plan must be approved by the Service. The plan will describe objectives and methods to be used, species of plants and/or seed mixture to be used, time of planting, success standards, and follow-up monitoring. The

plan will be prepared within 60 days following completion of the surface disturbance phase of the project. Reclamation will be addressed on a case-by-case basis.

98. 3-C: Minimizing new disturbance—Cross-country travel and travel outside designated areas shall be prohibited. All equipment, vehicles, and construction materials shall be restricted to the ROW, and new disturbance will be restricted to the minimum necessary to complete the task (e.g., construction of 1-lane access roads with passing turnouts every mile rather than a wider, 2-lane road). All work area boundaries shall be conspicuously staked, flagged, or otherwise marked to minimize surface disturbance activities.

99. 3-D: Weed prevention—Vehicles and equipment shall be cleaned with a high-pressure washer prior to arrival on the ROW and prior to departure from areas of known invasive weed and nonnative grass infestations to prevent or at least minimize the introduction or spread of these species.

100. 3-E: Chemical spills—Hazardous and toxic materials such as fuels, solvents, lubricants, and acids used during construction will be controlled to prevent accidental spills. Any leak or accidental release of hazardous and toxic materials will be stopped immediately and cleaned up at the time of occurrence. Contaminated soils will be removed and disposed of at an approved landfill site.

101. 3-F: Residual impacts from disturbance—The BLM shall ensure remuneration fees are paid to offset residual impacts to desert tortoises from project-related disturbance to desert tortoise habitat.

    Remuneration fees will be used for management actions expected to promote recovery of the desert tortoise over time, including management and recovery of desert tortoise in Nevada. Actions may involve habitat acquisition, population or habitat enhancement, research to increase knowledge of the species' biological requirements, reducing loss of individual animals, documenting the species' status and trend, and preserving distinct population attributes. Fees will be used to fund the highest-priority recovery actions for desert tortoises in Nevada.

    The current rate is $810 per acre of disturbance, as indexed for inflation. The fee rate will be indexed for inflation based on the Bureau of Labor Statistics Consumer Price Index for All Urban Consumers (CPI-U) on January 31 of each year. Fees assessed or collected for projects covered under this biological opinion will be adjusted based on the current CPI-U for the year they are collected. Information on the CPI-U can be found on the Internet at http://stats.bls.gov/news.release/cpi.nws.htm.

102. 3-G: Green stripping—BLM shall avoid using crested wheatgrass (*Agropyron cristatum*) and forage kochia (*c*) as reclamation candidates for degraded habitats and green stripping. In emergency circumstances, such as severe erosion and headcutting, the BLM may use crested wheatgrass and forage kochia to stabilize soil. A detailed rationale for potential seeding with selected nonnative species must be submitted to the BLM and approved by the Service. Once the soil is stabilized, the BLM shall overseed with native seed.

Compliance and Reporting (BO Reasonable and Prudent Measure 4)

103. 4-A: Desert tortoise deaths— The deaths of desert tortoises shall be investigated as thoroughly as possible to determine the cause of death. The Service and appropriate State wildlife agency must be informed immediately verbally and within 5 business days in writing (electronic mail is sufficient). See *Care for Dead or Injured Desert Tortoises* (section 6.5.4) and Table 6-5 of the Biological Opinion.

104. 4-B: Noncompliance—Any incident occurring during project activities that was considered by the FCR, authorized desert tortoise biologist, or desert tortoise monitor to be in noncompliance with this Opinion shall be immediately documented by an authorized desert tortoise biologist and immediately reported to the BLM and the Service at (702) 515-5230.

105. 4-C: Fence inspection—Quarterly reports for monitoring and repair of tortoise-proof fencing shall be submitted to the Service's Nevada Fish and Wildlife Office in Las Vegas. Reports are due within the first 10 days of the beginning of each quarter.

106. 4-D: Phase completion—Within 60 days following completion of each phase of construction, a written assessment report shall be submitted to the Service, outlining the schedule that was followed for implementing the minimization measures. The report shall also include biological observations and the general success of each of the minimization measures and the maintenance activities that occurred over that phase of construction. The following information will be included in the report: location (Geographic Information System [GIS] shapefile); date and time of observation; documentation of desert tortoise handling (see Terms and Conditions 1-D and 1-K [Stipulations 78 and 85]); any actions taken to protect the desert tortoise, such as penning or temporarily holding; unique physical characteristics of each desert tortoise; raven and predator monitoring; fence monitoring; reports of noncompliance; chemical spills; unauthorized access; GIS shapefiles; acreage of final habitat disturbance; and any other information useful to the Service.

    See Table 6-5. Example compliance reporting table in the Biological Opinion.

107. 4-E: Construction completion—A comprehensive final construction report shall be submitted to the Service's Nevada Fish and Wildlife Office in Las Vegas within 90 days of completion of construction of all phases of the project.

108. 4-F: Operation—A written assessment report shall be submitted to the Service, outlining the maintenance activities that occurred over the past year. It will include frequency of implementation of minimization measures, biological observations, general success of each of the minimization measures and Terms and Conditions, and recommendations for future minimization measures. All deaths, injuries, and illnesses of endangered or threatened species within the project area, whether associated with project activities or not, will be summarized in the annual report, which is due April 1 of each year. We recognize that the procedures we are likely to develop in the future, in close cooperation with the BLM and SNWA, will include a more efficient way of collecting this information; we welcome recommendations to improve the reporting method, provided that any new method meets the requirements of the implementing regulations for section 7(a)(2) of the ESA (50 CFR 402.14(i)(3)).

RISK ASSESSMENT FOR NOXIOUS AND INVASIVE WEEDS

109. Continue to use integrated weed management to treat weed infestations and use principles of integrated pest management to meet management objectives and to reestablish resistant and resilient native vegetation communities. This includes at a minimum, annual treatments for any noxious weed infestations.

110. Develop weed management plans that address weed vectors, minimize the movement of weeds within public lands, consider disturbance regimes, and address existing weed infestations.

111. When manual weed control is conducted, remove the cut weeds and weed parts and dispose of them in a manner designed to kill seeds and weed parts.

112. All straw, hay, straw/hay, or other organic products used for reclamation or stabilization activities, must be certified that all materials are free of plant species listed on the Nevada noxious weed list or specifically identified by the Ely District Office.

113. Where appropriate, inspect source sites such as borrow pits, fill sources, or gravel pits used to supply inorganic materials used for construction, maintenance, or reclamation to ensure they are free of plant species listed on the Nevada noxious weed list or specifically identified by the Ely District Office. Inspections will be conducted by a weed scientist of qualified biologist.

114. Where appropriate, vehicles and heavy equipment used for the completion, maintenance, inspection, or monitoring of ground disturbing activities; for emergency fire suppression; or for authorized off-road driving will be free of soil and debris capable of transporting weed propagules. Vehicles and equipment will be cleaned with power or high pressure equipment prior to entering or leaving the work site or project area. Vehicles used for emergency fire suppression will be cleaned as a part of check-in and demobilization procedures. Cleaning efforts will concentrate on tracks, feet and tires, and on the undercarriage. Special emphasis will be applied to axels, frames, cross members, motor mounts, on and underneath steps, running boards, and front bumper/brush guard assemblies. Vehicle cabs will be swept out and refuse will be disposed of in waste receptacles. Cleaning sites will be recorded using global positioning systems or other mutually acceptable equipment and provided to the Ely District Office Weed Coordinator or designated contact person.

115. Prior to entry of vehicles and equipment to a planned disturbance area, a weed scientist or qualified biologist will identify and flag areas of concern. The flagging will alert personnel or participants to avoid areas of concern.

116. To minimize the transport of soil-borne noxious weed seeds, roots, or rhizomes, infested soils or materials will not be moved and redistributed on weed-free or relatively weed-free areas. In areas where infestations are identified or noted and infested soils, rock, or overburden must be moved, these materials will be salvaged and stockpiled adjacent to the area from which they were stripped. Appropriate measures will be taken to minimize wind and water erosion of these stockpiles. During reclamation, the materials will be returned to the area from which they were stripped.

117. A site-specific weed survey and a weed risk assessment were completed as part of the NEPA process. The Weed Risk Assessment for this Project is provided in the Final EIS, Appendix F3.5 beginning on page F3.5-15. The Weed Risk Assessment should be reviewed and updated as new data, guidance and regulations become available, as described on page 2 of the assessment. Monitoring by BLM will be conducted for a period no shorter than the life of the permit or until release by BLM and monitoring reports will be provided to the Ely District Office. If the presence and/or spread of noxious weeds is noted, appropriate weed control procedures will be determined in consultation with Ely District Office personnel and will be in compliance with the appropriate BLM Handbook sections and applicable laws and regulations. All weed control efforts on BLM-administered lands will be in compliance with BLM Handbook H-9011, H-90111 Chemical Pest Control, H-90 14 Use of Biological Control Agents of Pests on Public Lands, and H-9015 Integrated Pest Management. **Submission of Pesticide Use Proposals and Pesticide Application Records will be required**.

118. Determine seed mixes on a site specific basis dependent on the probability of successful establishment. Use native and adapted species that compete with annual invasive species or meet other objectives.

119. For soil disturbing actions which will require reclamation, salvage and stockpile all available growth medium prior to surface disturbances. Seed stockpiles if they are to be left for more than one growing season. Re-contour all disturbance areas to blend as nearly as possible with the natural topography prior to re-vegetation. Rip all compacted portions of the disturbance to an appropriate depth based on site characteristics. Establish an adequate seed bed to provide good seed-to-soil contact.

120. Prior to use on lands administered by the Ely District Office, all fire suppression equipment from outside the planning area utilized to extract water from lakes, streams, ponds, or spring sources (e.g. helicopter buckets, draft hoses, and screens) will be thoroughly rinsed to remove mud and debris and then disinfested to prevent the spread of invasive aquatic species. Rinsing equipment with disinfectant solution will not occur within 100 feet of natural water sources (i.e. lakes, streams, or springs). Ely suppression equipment utilized to extract water from water sources known to be contaminated with invasive aquatic species, as identified by the USFWS and NDOW, also will be disinfected prior to use elsewhere on lands administered by the Ely District Office.

121. Conduct mixing of herbicides and rinsing of herbicide containers and spray equipment only in areas that are a safe distance from environmentally sensitive areas and points of entry to bodies of water (storm drains, irrigation ditches, streams, lakes, or wells).

122. Keep removal and disturbance of vegetation to a minimum through construction site management (e.g. using previously disturbed areas and existing easements, limiting equipment/materials storage and staging area sites, etc.).

123. Generally, conduct reclamation with native seeds that are representative of the indigenous species present in the adjacent habitat. Document rationale for potential seeding with selected nonnative species. Possible exceptions would include use of nonnative species for a temporary cover crop to out-compete weeds. Also for green stripping to prevent weed spread and fire. In all cases, ensure seed mixes are approved by the BLM Authorized Officer prior to planting.

124. Certify that all interim and final seed mixes, hay, straw, and hay/straw products are free of plant species listed on the Nevada noxious weed list.

125. Respread weed-free vegetation removed from the ROW to provide protection, nutrient recycling, and seed source.

126. When managing in areas of special status species, carefully consider the impacts of the treatment on such species. Wherever possible, hand spraying of herbicides is preferred over other methods.

127. Do not conduct noxious and invasive weed control within 0.5 mile of nesting and brood rearing areas for special status species during the nesting and brood rearing season.

128. When maintaining unpaved roads on BLM-administered lands, avoid the unnecessary disturbance of adjacent native vegetation and spread of weeds. Grade roads shoulders or barrow ditches only when necessary to provide for adequate drainage. Minimize the width of grading operations. The BLM Authorized Officer will meet with equipment operators to ensure that they understand this objective.

129. Consider nozzle type, nozzle size, boom pressure, and adjuvant use and take appropriate measures for each herbicide application project to reduce the chance of chemical drift.

130. All applications of approved pesticides will be conducted only be certified pesticide applicators or by personnel under the direct supervision of a certified applicator.

131. Prior to commencing any chemical control program, and on a daily basis for the duration of the project, the certified applicator will provide a suitable safety briefing to all personnel working with or in the vicinity of the herbicide application. This briefing will include safe handling, spill prevention, cleanup, and first aid procedures.

132. Store all pesticides in areas where access can be controlled to prevent unauthorized/untrained people from gaining access to chemicals.

133. Do not apply pesticides within 440 yards (0.25 mile) of residences without prior notification of the resident.

134. Areas treated with pesticides will be adequately posted to notify the public of the activity and of safe re-entry dates, if a public notification requirement is specified on the label of the product applied. The public notice signs will be at least 8.5" x 11" in size and will contain the date of application and the date of safe re-entry.

135. No noxious weeds will be allowed on the site at the time of reclamation release. Any noxious weeds that become established will be controlled.

136. Prior to entering public lands, the contractor, operator, or permit Holder will provide information and annual training regarding noxious weed management and identification to all personnel who will be affiliated with the implementation of the project. The importance of preventing the spread of weeds to uninfested areas and importance of controlling existing populations of weeds will be explained.

137. Whenever possible, hand spraying of herbicides is preferred over other methods at heavily used recreation sites (i.e. campgrounds, railheads, etc.).

138. Proponent would be responsible for weeds within the right of way, and any infestations spreading from the ROW including costs for treatments, reclamation, surveys, monitoring, compliance inspections and regulatory requirements.

139. Utilize new technologies and treatments as they become available and are approved by BLM to minimize pad/road/pipeline/ancillary facility footprints with regard to noxious and invasive weeds.

140. Green stripping needs to be considered as part of an integrated weed management plan. Green stripping would prevent wildfires caused on the ROW, and prevent other wildfires from reaching the ROW. It would also help prevent annual invasives from spreading, since the species used for green stripping usually outcompete the annuals for resources. Per Mike Pellant -History and Application of the Intermountain Green Stripping Program, greenstripping can reduce loss of plant diversity and shrub cover on sagebrush-steppe and salt-desert shrub lands. Reduce loss of private structures and properties…… Reduced fire suppression and rehabilitation costs. There are visual impacts that can be reduced by avoiding straight-line seedings and increasing plant and structural diversity in greenstrip plantings." Grazing by wildlife, horses and livestock can be discouraged and reduced on greenstrips by using plants less desirable for grazing. Green stripping should also be considered for the Mojave landscapes to prevent the spread of fire and the impacts of the increases of red brome.

PROTECTION OF SURVEY CORNER AND BOUNDARY LINE MARKERS

141. Evidence of the Public Land Survey System (PLSS) and related Federal property boundaries[1,2] will be identified and protected prior to commencement of any ground-disturbing activity[3]. This will be accomplished by contacting Bureau Land Management (BLM) Cadastral Survey to coordinate data research, evidence examination and evaluation, and locating, referencing or protecting monuments of the PLSS and related land boundary markers from destruction. In the event of obliteration or disturbance of the Federal boundary evidence the responsible party shall immediately report the incident, in writing, to the Authorizing Official. BLM Cadastral Survey will determine how the marker is to be restored. In rehabilitating or replacing the evidence the responsible party will be instructed to use the services of a Certified Federal Surveyor (CFedS), procurement shall be per qualification based selection[4], or reimburse the BLM for costs. All surveying activities will conform to the Manual of Surveying Instructions (Manual) and appropriate State laws and regulations. Local surveys will be reviewed by Cadastral Survey before being finalized or filed in the appropriate State or county office. The responsible party shall pay for all survey, investigation, penalties, and administrative costs.[5]

[1] The costs to replace PLSS monuments can vary substantially, and in extreme cases could cost as much as $10,000 per single monument. One PLSS corner can determine the location of boundary lines from 2 to 2 dozen parcels (in developed and high value areas more than 2 dozen separate land parcels). It is difficult to quantify damages because a PLSS corner is obliterated or lost to public and private landowners when transactions or projects are based on approximate boundaries. The damage done is

usually in direct proportion to the amount of capital investment/value of natural resources and capital investment on each parcel.

[2] As directed in 43 CFR 3809.420 - Surface Management - (b)(9) Protection of survey monuments. To the extent practicable, all Holders shall protect all survey monuments, witness corners, reference monuments, bearing trees and line trees against unnecessary or undue destruction, obliteration or damage. If, in the course of operations, any monuments, corners, or accessories are destroyed, obliterated, or damaged by such operations, the Holder shall immediately report the matter to the authorized officer. The authorized officer shall prescribe, in writing, the requirements for the restoration or reestablishment of monuments, corners, bearing and line trees.

[3] It is unlawful for the unauthorized alteration or removal of any Government survey monument or marked trees: "Whoever willfully destroys, defaces, changes, or removes to another place any section corner, quarter-section corner, or meander post, on any Government line of survey, or willfully cuts down any witness tree or any tree blazed to mark the line of a Government survey, or willfully defaces, changes, or removes any monument or bench mark of any Government survey, shall be fined under this title or imprisoned not more than six months, or both" (108 Stat. 1796, 2146; 18 U.S.C. 1858). The willful destruction of monuments and corners of an official mineral survey is within the purview of this statute.

[4] Procurement of surveying services shall be per the Federal Acquisition Regulations and the Brooks Act governing Federal procurement of certain architectural and engineering services.

[5] Applicable to collection of costs from responsible parties is indirect costs. Each year a new indirect cost rate is determined that typically ranges from 17-19%. This cost is applied to all collections related to unauthorized use.

APPLICANT-COMMITTED MEASURES

General Construction Practices

Planning and Permitting

142. A.1.1: SNWA will complete a detailed POD for the final project approved by the BLM. More than one POD may be developed if the project is constructed in phases. The detailed POD(s) will incorporate mitigation contained in the ROD and provide detailed project design and construction specifics, including but not limited to construction contract timing and phasing, construction access roads and ROW entry points, locations of refueling and equipment maintenance, hydrostatic discharge locations, areas of fencing for special status species, and other details. The POD(s) shall contain detailed plans, including, but not limited to, those listed below. The BLM will review and approve the POD(s) prior to notice to proceed for any surface disturbance activity, and will coordinate with other agencies (NDOW, USFWS), as relevant to their agency responsibilities.

- Agency Coordination Plan –primary contacts including BLM authorized officer, SNWA, construction management, environmental compliance inspection contractor, and construction contractors; identification of reporting procedures and frequency.
- Bird Conservation Strategy – measures to reduce impacts to migratory birds, bald and golden eagles, and other sensitive birds; the plan will identify measures to be implemented during construction, including, but not limited to, the identification of critical nesting periods for bird species anticipated to be within the ROW, pre-construction surveys to be conducted for nesting raptors and migratory birds, and the construction avoidance buffer size and time duration for active raptor and migratory bird nests; the plan will also identify design features and measures to be implemented during operation, including description of design standards (see measure A.5.66 [Stipulation 314]), any post-construction monitoring, and adaptive measures such as marking of power lines to avoid or minimize impacts; the bird conservation strategy will be developed in coordination with the USFWS for compliance with MBTA and BGEPA.
- Blasting Plan – identification of areas where blasting may be needed, blasting procedures, control of explosives, necessary permits, pre-blasting noticing, and reporting.
- Construction Plan – construction schedule and sequencing, temporary use areas, maintenance and refueling areas, access roads, borrow pits, handling of unanticipated discoveries, BMPs, vehicle/equipment washing locations, etc.
- Construction Traffic Management Plan – measures to reduce and manage construction traffic.
- Dust Control Plan – air quality standards and permits, dust control measures, water sources, air quality monitoring, and reporting.
- Emergency Response Plan – emergency contacts, notification procedures, available resources, and emergency procedures.
- Fire Prevention Plan – measures to prevent accidental fire during all phases of construction, and initial response actions.
- Hydrostatic Discharge Plan – sources and volumes of water, discharge locations and quantities, erosion and flow control measures, necessary permits, and reporting.
- Integrated Weed Management Plan – identification of areas with noxious/invasive weeds, treatment and control measures, monitoring, and reporting.
- Mitigation Plan – summary of environmental commitments and mitigation measures, responsible parties, timing, and reporting.
- Public Information Plan – public notification measures.
- Restoration Plan – topsoil (growth medium) and vegetative cover salvage, stockpiling and replacement; plant salvage, maintenance and replacement, seeding, soil stabilization, and post-construction monitoring.
- Spill Prevention, Control, and Countermeasure Plan – procedures for storage and handling of hazardous and toxic materials, necessary permits, spill response and cleanup.
- Stormwater Pollution Prevention Plan – erosion and sediment control measures, compliance inspections and reporting.

The Construction Plan shall describe a process under which changes from the POD can be requested in the field during construction. SNWA may make a written request to the BLM for a site-specific variance, and BLM shall respond to SNWA's request for a variance within five business days. Changes may require additional clearances and environmental compliance to be completed, and would be authorized by BLM's Authorized Officer.

143. A.1.2: SNWA will provide a CIC for the project. The CIC will provide environmental oversight and compliance/regulatory activities on behalf of the BLM during construction activities of the project. The CIC will be responsible for ensuring that the ROW Holder complies with all terms, conditions, stipulations and other measures required for the project, and will have the authority to halt activities that are in non-compliance. A pre-construction meeting between the BLM, SNWA, CIC, and construction contractor will be required prior to any surface disturbing activity occurring. The CIC will provide reports to the BLM on a schedule deemed appropriate by the BLM based upon the type of ongoing construction activity, and as described in the approved Agency Coordination Plan.

144. A.1.3: All activities directly or indirectly associated with the construction, operation, and maintenance of the project on Federal lands will be conducted within the authorized limits of the ROW grant. Any facility relocation, additional construction area, or other use that is not in accord with the ROW grant will not be initiated without prior written approval of the BLM. Cross-country vehicular travel outside of the ROW is prohibited, unless prior approval is obtained from the BLM.

145. A.1.4: In accordance with the Ely BLM RMP (Ely RMP) (2008), SNWA will notify the BLM at least 10 days before initiation of the project. Notification will be made to the designated BLM representative as well as the BLM biologists in the Las Vegas, Caliente, and Ely BLM offices.

146. A.1.5: A worker education program will be developed by SNWA and used during construction and operation. It will be presented to all personnel who will be onsite, including but not limited to contractors, contractors' employees, supervisors, inspectors, and subcontractors. A handout will be developed addressing environmental protection measures incorporated into the proposed project, and the responsibility of each worker in environmental protection. Each worker will be briefed on his or her environmental compliance responsibilities, provided a handout, and required to sign a certification that he or she understands and will comply with those environmental protection measures. Specifics of the program will include, but are not limited to:

- General site maintenance (i.e., trash disposal),
- Prohibiting driving off the cleared corridor or existing roads,
- Importance of speed limits and other traffic regulations on access roads
- Prohibiting dogs or hunting on the construction and facility sites
- Terms and conditions of project Biological Opinion
- Desert tortoise conservation measures, including:
  -Biology, distribution, and identification
  -Legal status and occurrence in the project area
  -Prevention of desert tortoise handling

-Checking under vehicles for desert tortoises and adhering to vehicle speed limits
-Purpose of desert tortoise fencing and reporting procedures for damaged fencing
-Reporting procedures if a desert tortoise is observed in a work area
-Reporting procedures if a desert tortoise injury occurs
-Procedure if a desert tortoise is in harms way (imminent danger)
-Definition of "take", consequences of harassment, and the penalties for violation of state and Federal laws

- Identifying and reporting procedures for other sensitive wildlife, including Gila monster, chuckwalla, western burrowing owl, kit fox, greater sage-grouse, pygmy rabbit, and migratory birds (including raptors)
- Cultural and paleontological resource identification and protection
- Noxious weed management and identification
- Prohibiting collection of wildlife, plants, or cultural/paleontological resources, unless the collection is part of a mitigation plan approved by the BLM
- Workers will receive a sticker or certificate that they have completed the training; a laminated card that can be used for reference, including applicable contact phone numbers, may also be used
- Training seasons will be held for new contractors throughout the life of the project

147. A.1.6: A Public Information Plan will be developed by SNWA in coordination with the BLM to notify the public and appropriate agencies in advance of the start of each construction phase. Measures that will be implemented to inform the public may include public notices, public meetings, letters to nearby residents, road signs, and other measures.

Surveying

148. A.1.7: To the extent possible, SNWA will protect all survey monuments found within the ROW. Survey monuments include, but are not limited to General Land Office and BLM Cadastral Survey Corners, reference corners, witness points, US Coast and Geodetic Survey benchmark and triangulation stations, military control monuments, and recognizable civil (both public and private) survey monuments.

149. A.1.8: In the event disturbance or destruction of survey monuments is unavoidable, SNWA will report the incident, in writing, to the BLM and the installing authority, if known. If General Land Office or BLM ROW monuments or references are destroyed during operations, SNWA will secure the services of a registered land surveyor to restore the disturbed monuments and references, using surveying procedures found in the Manual of Instructions for the Survey of the Public Lands of the United States, latest edition. SNWA will record such survey in the appropriate office and send a copy to the authorized officer.

150. A.1.9: SNWA will conduct boundary surveys of the edges of the ROW prior to the start of construction. The outer boundaries will be clearly marked with stakes and colored flagging, placed about 100 feet apart or within sight of each adjacent flag. All ground-disturbing activities will be confined to the designated ROW.

151. A.1.10: If any exclusion zones within the ROW are required by the BLM for resource protection (i.e. biological or cultural resources, protected plants, nesting birds, etc.),

those areas will be staked, flagged or fenced, and signed to ensure avoidance during construction, and if necessary during operation and maintenance.

152. A.1.11: Survey crew vehicles will remain on existing roads or within the previously cleared construction ROW. If off-road travel within the designated ROW is necessary, a biologist will first clear the proposed route. In desert tortoise habitat, a BLM and USFWS approved biological monitor will accompany survey crews into the field. Off-road travel for surveying will be restricted to the ROW, and be the minimum necessary to complete the task. Survey crews traveling on foot must have attended the worker education program, but are not required to be accompanied by a biologist.

Fencing

153. A.1.12: Temporary security fencing may be used to enclose staging areas, nursery sites, and facility sites during construction. This fencing will consist of standard 6 to 8 foot high chain-link fencing and it will be removed at the completion of construction activities. Security fencing of the entire pipeline ROW during construction is not anticipated, but may be used in specific areas for security or safety concerns.

154. A.1.13: Permanent site security fencing will be used to enclose facility sites, including water treatment facility, buried storage reservoir, pumping stations, regulating tanks, and pressure reducing stations. This fencing will generally consist of standard 6 to 8 foot high chain-link fencing. Block walls may be constructed at some facility sites instead fencing, depending on site requirements.

155. A.1.14: Within desert tortoise habitat, temporary desert tortoise exclusion fencing will be used to enclose active pipeline, staging area, and facility site construction areas. The tortoise exclusion fencing may be installed with site security fencing or separately, and may be installed in phases to match construction activity; unless it is determined by the BLM authorized officer and/or the USFWS that the project area should not be fenced. In accordance with current specifications (USFWS, 2009), fencing will consist of 1-inch horizontal by 2-inch vertical galvanized welded wire, 36 inches in width. The mesh will extend at least 12 inches below ground, leaving 22-24 inches above ground. In situations where it is not feasible to bury the fence (bedrock or caliche substrate), the lower 12 inches of the fence will be bent at a 90 degree angle towards potentially approaching tortoises and covered with cobble or other suitable material to ensure that tortoise or other animals cannot dig underneath. Gates with tortoise-proof guards of no more than one-inch ground clearance will be installed at all access points. The temporary desert tortoise exclusion fencing will be maintained in place for the duration of construction, until initial restoration activities (replacement of cactus and yucca) are completed.

156. A.1.15: Temporary tortoise exclusion fencing will be routinely inspected and promptly repaired. During the desert tortoise active season from March 1 through October 31, the fence will be inspected at least twice daily and any repairs completed within 3 days. During the desert tortoise inactive season from November 1 through February 28/29, the fence will be inspected at least monthly and any repairs completed within 7 days. The biological monitor(s) will also inspect the fencing after major precipitation events to ensure zero ground clearance. Monitoring and maintenance will include regular removal of trash and sediment accumulation and restoration of zero ground clearance

between the ground and the bottom of the fence, including re-covering the bent portion of the fence if not buried. Fencing will be removed upon termination and reclamation of the project, or when it is determined by the BLM authorized officer and USFWS that the fence is no longer necessary. The biological monitor(s) will update their daily field notes with dates of inspections and conditions found. The results will be sent to the BLM on a quarterly basis.

157. A.1.16: Permanent tortoise exclusion fencing will be installed along with site security fencing around the above-ground facility sites within desert tortoise habitat, including the water treatment facility/buried storage reservoir and Coyote Spring Valley pressure reducing station. In accordance with current specifications (USFWS, 2009), permanent tortoise exclusion fencing will consist of the same fencing material as described above for temporary tortoise fencing, with the tortoise exclusion fencing being attached to the site security fencing. Permanent tortoise exclusion fencing will be inspected on an at least quarterly basis, and any repairs completed within 3 days from March 1 through October 31, and within 7 days from November 1 through February 28/29.

158. A.1.17: For active construction areas not enclosed by site security or tortoise-exclusion fencing, 4-foot high orange plastic snow fencing will be used to enclose the work area. This fencing will provide construction site visibility for public safety, and also will ensure construction activities stay within the authorized ROW. Wildlife escape opportunities will be provided at an interval of approximately every 1,000 feet, depending on terrain, for linear exclusion areas and at the corners of staging areas.

159. A.1.18: Fencing may be installed along segments of open trench in areas of seasonal big game movement. The type and location of fencing will be coordinated with the NDOW and the BLM.

Clearing and Grading

160. A.1.19: Within desert tortoise habitat, clearing will occur only within the fenced boundaries of the permanent and temporary ROWs. Clearing will include removal of materials that will interfere with construction activities, create hazards or unsafe conditions, or impair subsequent site work. Outside of the desert tortoise habitat, clearing will only occur after boundaries of the permanent and temporary ROW have been staked.

161. A.1.20: Where possible, vegetation within the ROW will be crushed instead of removed by blading, to minimize impacts to vegetation and soils.

162. A.1.21: Trash and debris will be removed from the ROW before clearing and grading activities begin, and properly disposed of in a permitted landfill facility. This is limited to existing surface debris foreign to the natural, native community.

163. A.1.22: Boulders greater than 18 inches in diameter found on the soil surface will be moved to the edge of the ROW. This will be done carefully to leave as much of the natural patina or desert varnish on the boulders as possible. The boulders will be placed back on the ROW at the completion of construction as part of restoration activities. Boulders uncovered during construction will either be placed within the ROW if it can be done in a natural manner as part of the restoration activities or used as part of trench or borrow pit backfill.

164. A.1.23: For soil disturbing actions which will require reclamation, all available growth medium (topsoil) will be salvaged prior to surface disturbances. After completion of clearing and plant salvage activities, the available growth medium and remaining plant material will be windrowed along the edge of the ROW or placed in stockpiles no greater than 6 feet in height. Vegetation will be ground or chipped to a mulching consistency and stockpiled adjacent to the topsoil. Topsoil stripped from areas with different surface conditions will be stockpiled separately and later used to restore the same areas. Topsoil left in place over 120 days will be fenced and signed, and a tackifier, water, or other BLM-approved erosion control measure will be applied to prevent wind or rain erosion.

165. A.1.24: If a tackifier is used, it will be derived from natural organic plant sources containing no growth- or germination-inhibiting materials. The tackifier will be designed to become inactive in the soil after a period of time, so as not to otherwise affect the success of transplanting and seeding efforts. Tackifiers will be approved by BLM prior to use.

166. A.1.25: Stockpiled soil will be seeded with an interim seed mix if it is left for more than one growing season. The seed mix and application rate will be approved by the BLM. The seed mixture: 1) will be obtained from a BLM-approved commercial seed vendor, 2) will not include any species specifically identified by the BLM, and 3) will be certified free of plant species listed on the Nevada noxious weed list. Vegetable-based soil binders and/or hydromulch may be used on stockpiled soil to reduce seed movement and erosion.

167. A.1.26: For areas within the ROW where noxious and non-native invasive weed infestations are noted, topsoil and cleared vegetation will be stockpiled separately and signed, to avoid mixing with topsoil salvaged from other areas. During restoration this topsoil and cleared vegetation will be placed in the area from which it was removed. If topsoil and cleared vegetation are removed from an area with noxious weed infestations, the stockpiled topsoil will be treated with herbicides prior to seeding the area. Areas with noxious and non-native invasive weeds will be treated and/or monitored in accordance with the BLM-approved Integrated Weed Management Plan.

168. A.1.27: A record will be maintained of when construction-related major ground-disturbing activities begin and are completed, and when restoration activities are initiated. SNWA will provide this information in annual reports to the BLM.

Access Roads

169. A.1.28: A Construction Traffic Management plan will be developed and coordinated with the BLM and other relevant state and local authorities prior to the start of construction for each major phase of the project. The plan will include measures to reduce the number of construction trips by use of car-pooling and/or construction shuttles, scheduling of work shifts and materials deliveries, designation of access routes, and other measures to minimize traffic effects. The plan will also take into account active seasons for hunting, camping, and/or other recreational activities that occur within the same time and place as each phase of construction.

170. A.1.29: While driving on paved roads or marked dirt roads, posted speed limits will be maintained. While driving within the construction area, on un-posted dirt roads, and

within desert tortoise habitat a maximum speed limit of 25 miles per hour will be maintained to reduce dust and allow for observation and avoidance of desert tortoise, livestock, wild horses, visitors to the public land, or other wildlife in the road.

171. A.1.30: Public access routes within or crossing the ROW will be maintained or detour routes will be identified during construction activities. Detours needed for temporary road closures due to safety concerns will be established in coordination with the BLM and local authorities.

172. A.1.31: Signing and traffic controls will be placed well in advance of the construction area to warn motorists of detour routes available during construction.

173. A.1.32: Signs and persons with flags will be used within the construction area as necessary to direct traffic in accordance with all applicable Nevada Department of Transportation, county, and local rules and ordinances.

174. A.1.33: Designated construction entry locations into the ROW will be identified from existing roads. These entry locations will be stabilized with crushed rock underlain by geotextile filter fabric, or temporary asphalt pavement to prevent sediment from being tracked onto asphalt, concrete, or improved road surfaces and to limit other damage such as road shoulder rutting.

175. A.1.34: Sediment transported onto a public paved road surface by construction equipment or other vehicles will be removed immediately by shoveling and sweeping. This material will be disposed at an approved area, within the ROW. Road washing will be allowed only after the sediment is removed in the above manner.

176. A.1.35: Wheel washers will be installed at vehicles ingress and egress locations between unpaved roads (within the permanent and temporary ROW) and paved roads (outside the permanent and temporary ROW). Trucks and all equipment will be washed every time they leave the site. Excess dirt on the wheels, undercarriage, and bodies of trucks exiting work areas will be removed prior to allowing the trucks to exit onto paved roads, to reduce track-out of soils, debris, and invasive and noxious weeds. SNWA's Construction Inspector and the Environmental Compliance Representative will supervise and monitor use of the wheel washing stations.

177. A.1.36: During construction, all unpaved access roads used by construction personnel, equipment, and materials deliveries will be maintained in coordination with local county and BLM requirements. This maintenance may include use of additional road base materials to maintain road integrity.

178. A.1.37: At the completion of construction, previously existing access roads will be restored to pre-construction conditions or better. Improvements made for construction will be left in place. In areas of silty soils, the roads will be restored to pre-construction conditions or better.

Construction

179. A.1.38: Construction contractors will provide site security for equipment and materials, and to limit access to construction sites to authorized personnel. This may be accomplished through use of security personnel, signage, and/or fencing of facility sites as needed.

180. A.1.39: Firearms and domestic dogs will be prohibited from the ROW, except as used by authorized law enforcement personnel.

181. A.1.40: The ROW will be kept free from any accumulation of construction waste, trash, and debris, to reduce the attractiveness of the area to opportunistic predators such as desert kit fox, coyotes, and common ravens. Food-related trash, also including cigarettes, cigars, gum wrappers, tissue, cans, paper, and bags, will be disposed of promptly in predator-proof containers with resealable lids. Trash containers will be removed regularly (following the close of each work day). Trash, debris, and/or waste will not be buried or burned. Disposal of trash and debris will be off-site, at a State of Nevada approved sanitary landfill site. Upon construction completion, all construction refuse, including but not limited to broken equipment parts, wrapping material, cords, cables, wire, rope, strapping, twine, buckets, metal or plastic containers, and boxes will be removed from the ROW and disposed of properly.

182. A.1.41: Sanitary waste will be contained within portable toilet facilities. Portable toilets will be obtained by construction contractors and sited in designated locations in the construction area. The toilets will be maintained and serviced as needed for the duration of construction, and removed at the completion of construction.

183. A.1.42: In areas not enclosed by security fencing, escape ramps will be placed at each end and every ¼-mile of any trench or other excavation deeper than one foot to allow escape of wildlife, wild horses, or livestock that may become entrapped. The spacing of escape ramps may be adjusted upon approval of the CIC to ensure ramps are placed in areas near water sources and visible livestock/wildlife trails. The escape ramps will consist of loose dirt at a 2:1 or shallower slope. Excavation areas that are left open overnight will be checked by a biological monitor every morning and evening, prior to backfilling. They will also be checked periodically throughout the day as the biological monitor patrols the construction zone.

184. A.1.43: Hazardous and toxic materials such as fuels, solvents, lubricants, and acids used during construction will be controlled to prevent accidental spills. Toxic and hazardous materials will be stored in secondary containment structures to prevent any spilled material from leaving the area. Specific areas for equipment maintenance and refueling will be designated and identified in the detailed POD(s). Vehicle and equipment refueling and hazardous materials storage will not be allowed within 100 feet of any jurisdictional wash or stream.

185. A.1.44: Spill cleanup kits will be available on equipment and maintained so that any spill of fuels, solvents, lubricants, or acids can be quickly cleaned up. Construction and maintenance personnel will be trained in the proper use of the spill kit materials and correct disposal procedures.

186. A.1.45: Any leak or accidental release of hazardous and toxic materials will be stopped immediately and cleaned up at the time of occurrence. Contaminated soils will be removed and disposed of at a State of Nevada approved landfill site.

187. A.1.46: Any release of hazardous and/or toxic materials in excess of a reportable quantity established by 40 CFR, Part 117 will be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, Section

102b. A copy of any report required or requested by any Federal agency or state government as a result of a reportable release or spill of any toxic substances will also be submitted to the BLM.

188. A.1.47: For every active phase of construction, a water truck and other fire suppression equipment such as extinguishers and shovels will be available on-site during construction. A designated individual on each construction site will be responsible for fire watch and fire suppression. For welding crews, one team member will be responsible for fire watch, in addition to the individual designated for the construction site fire watch and fire suppression. When welding at field locations, all flammable materials (i.e., brush, litter) will be cleaned for a distance of 15 feet around the area.

189. A.1.48: Where the construction ROW crosses beneath existing power lines, warning signs will be installed with identified height restrictions. A construction watchman will be designated during construction activities beneath power lines, to ensure equipment keeps specified distances from the power line conductor cables.

190. A.1.49: When construction practices overlap with a previously authorized ROW on BLM land, at the request of the other ROW Holder, SNWA will notify the ROW Holder of construction specifics as they relate to the authorized ROW.

191. A.1.50: If blasting is determined to be necessary based on project design, a Blasting Plan will be prepared and submitted to the BLM for approval in advance of construction. Any blasting will be conducted as unobtrusively as possible and managed to avoid damage to nearby facilities or properties. Blast noise monitoring will be conducted if blasting will be in the vicinity of occupied properties or sensitive public uses such as campgrounds or visitor facilities.

192. A.1.51: Dewatering is not anticipated to be required for project construction. If subsequently determined to be needed based on detailed geotechnical investigations, a dewatering plan will be prepared and submitted to the BLM for approval in advance of construction. Should dewatering be necessary, discharge water will be directed to prevent flow from entering streams, wetlands, or sensitive environmental areas. Erosion and sediment control will be conducted the same as described for stormwater practices.

193. A.1.52: When crossing intermittent, ephemeral, or perennial drainages, pipeline construction will follow industry standards and permit requirements, as well as BLM's guidance practices laid out in the document titled Hydraulic Considerations for Pipelines Crossing Stream Channels (ftp://ftp.blm.gov/pub/nstc/TechNotes/TechNote423.pdf).

Stormwater and Erosion Control

194. A.1.53: A General Permit for Stormwater Discharges Associated with Construction Activity (NVR100000) will be obtained prior to any surface disturbance that includes clearing, grading, excavation, and/or stockpiling.

195. A.1.54: A site specific Stormwater Pollution Prevention Plan (SWPPP) will be prepared and implemented for each construction contract. The SWPPP will identify all potential sources of pollution which could affect the quality of stormwater discharges from the construction site, describe the construction activities that disturb soils at the site,

provide an estimate of the total disturbance area, and identify waters of the United States within 1 mile of the site. A copy of the SWPPP will be kept on site and updated as needed to manage pollutants or reflect changes in site conditions.

196. A.1.55: A Spill Prevention, Control and Countermeasure Plan (40 CFR 112) will be prepared and submitted to the BLM. The plan will describe measures that will be taken to properly store, handle, and prevent hazardous materials from being picked up in stormwater and transported offsite. It will also contain measures related to clean up procedures and time frames, notification procedures, and restoration efforts for the affected area.

197. A.1.56: Construction sequencing will be designed and scheduled to create the shortest construction window practicable and the least amount of potential stormwater runoff. Construction, cleanup, and reclamation will be sequenced to minimize the time between ground disturbance and final restoration.

198. A.1.57: Erosion and sediment control will be implemented using both non-structural and structural BMPs. Non-structural BMPs are methods or programs such as education, management and development practices, good housekeeping, and construction sequencing. Structural BMPs are physical devices or means for removing, reducing, retarding, or preventing targeted stormwater runoff constituents, pollutants, and contaminants from reaching receiving waters, and will be identified in the detailed POD(s).

199. A.1.58: Temporary erosion and sediment controls will be installed as necessary prior to initial soil disturbance activities and will be maintained throughout construction and reclamation. These controls will be designed to retain sediment on site to the maximum extent practicable. Typical erosion and sediment control BMPs include:

    - Siltation or filter berms;
    - Filter or silt fencing;
    - Sediment barriers, e.g., sand bags, hay bales, straw wattles (straw bound into rolls or bales);
    - Rock or gravel mulches, wood chip, straw & bark mulches; and
    - Jute and synthetic netting.

    Any hay or straw used for erosion control will be certified weed-free. Temporary erosion and sediment controls will be inspected after major precipitation events, and will be removed after construction and/or when they are no longer needed.

200. A.1.59: During construction, broken structural erosion controls will be replaced or restored as soon as practicable but before the next forecasted precipitation event. Sediment will be removed from structures when sediment reaches 50 percent of the barrier capacity.

201. A.1.60: For construction activities crossing a dry wash, soil and spoil stockpiles will be pushed away from jurisdictional dry washes and stored a minimum of 10 feet above the ordinary high-water mark if silt fencing is used to limit sedimentation of these areas; otherwise, stockpiles will be located 100 feet away from dry washes. All stockpiles will be kept within project ROW.

202. A.1.61: At a minimum, a 10-foot long vegetation buffer strip or other erosion control measure such as straw bales or wattles (certified weed free) will be maintained between the cleared ROW and an adjacent drainage high-water mark of jurisdictional drainages if the time between clearing/grading and trenching/pipe installation is expected to exceed 10 days or if a precipitation event is forecast. The length of the buffer strip will cover the disturbance length, plus an additional 10 feet on each end, or longer as determined by the construction contractor, SNWA, or the BLM, to be necessary.

203. A.1.62: Non-stormwater discharges, including water from pipeline and facility hydrostatic testing and trench dewatering if needed, will be directed into existing dry washes or other downstream project facilities as feasible. BMPs such as diffusers or other energy dissipaters, straw bales (certified weed free), or minor earthwork impoundments within the ROW will be used to control the flow of water and reduce erosion. Discharges will be managed and monitored so that they do not exceed the typical 2 to 5 year flood event of the existing washes. Water used for vehicle washing and similar purposes will be contained within designated areas using berms and allowed to percolate into the ground surface.

204. A.1.63: Stormwater compliance inspections will be conducted by SNWA throughout construction to ensure compliance with the SWPPP and Nevada Division of Environmental Protection (NDEP) permits. Inspections will include disturbed areas of the project that have not been stabilized, material and equipment storage areas that are exposed to precipitation, all erosion and sediment control measures installed within the ROW, all structural control measures, and all locations where vehicles enter and/or exit the ROW. Inspectors will notify the construction manager to suspend or redirect work activities where requirements of the SWPPP are not being followed, and implement corrective action as required to achieve compliance. Inspection reports will be maintained on file and submitted to the BLM and NDEP upon request.

205. A.1.64: A Hydrostatic Discharge Plan will be submitted to the BLM for approval, prior to the start of any discharges at the completion of construction.

206. A.1.65: Water quality of the non-stormwater discharges will be tested prior to discharge in accordance with NDEP permit requirements. If the hydrostatic testing water is not discharged into a body of water, the water will be tested for chlorine residual. If chlorine is found, it will be treated prior to discharge in accordance with discharge permit requirements. If the hydrostatic testing water is discharged into a water body with designated beneficial uses, the water quality standards to maintain those beneficial uses will be tested for. These standards are specific to each particular water body, and will be tested for accordingly. If there is a constituent that exceeds the water quality standard, the water will be treated in accordance with National Pollutant Discharge Elimination System permit requirements or hauled off site for disposal.

207. A.1.66: At the completion of construction, all non-natural berms, ditches, temporary erosion and sediment controls, bales, wattles, and other energy dissipating/filtering devices not required for protection of facilities will be removed, and drainages restored to their original form. Soils used for erosion control structures and soils captured by those structures will be utilized in the ROW for permanent facilities construction, or disposed in the borrow pits that are approved for the project. Bales, wattles, and other

energy dissipating/filtering devices will be disposed of in approved trash receptacles. The ground surface will be graded to match the surrounding topography and/or slopes as closely as possible.

208. A.1.67: Desert washes and ephemeral drainages will be restored to pre-existing conditions. Soils will be compacted, and additional stabilization measures such as rip rap may be required to protect the facilities and prevent increased erosion in the wash. If armoring of the channel crossing with rip-rap or concrete due to high erosion potential is necessary, those areas would be identified in the POD for BLM approval.

209. A.1.68: Post-construction stormwater management will consist of permanent erosion control measures installed as necessary at the completion of construction to protect areas disturbed by SNWA activities. These could include vegetation restoration, tracking and matting of steep slopes to maintain stability, berming, and/or placement of riprap. Final stabilization of soil disturbed areas will be achieved when vegetation restoration is completed in accordance with the BLM-approved Restoration Plan and NDEP stormwater permit requirements.

Restoration

210. A.1.69: A detailed Restoration Plan will be prepared and submitted to the BLM for approval prior to the start of construction. The portion of the plan pertaining to restoration in listed species or technical assistance species habitat will also be submitted to the USFWS for approval. The Restoration Plan will describe reclamation and rehabilitation objectives and methods to be used, species of plants and/or seed mixture to be used, time of planting, success standards, and follow-up monitoring. Reclamation will range from re-contouring, to rehabilitation and restriction of access points, to intensive reclamation over the entire area of surface disturbance.

211. A.1.70. Vegetation conditions of the ROW and adjacent reference site locations will be documented in the Restoration Plan prior to construction, to establish baseline conditions for restoration. SNWA shall use the Nevada Guidelines for Successful Revegetation prepared by the Nevada Division of Environmental Protection, the BLM, and the U.S. Department of Agriculture Forest Service (or most current revision or replacement of this document) to determine if revegetation is successful, unless otherwise approved by the BLM. Restoration will focus on restoring pre-existing habitat conditions, with the exception of pinyon-juniper habitat which has encroached on sagebrush habitat within some portions of the ROW. Soil data maps from the Natural Resources Conservation Service will be used, in consultation with BLM, to determine which ecological pinyon-juniper sites will be restored to sagebrush habitat.

212. A.1.71: All cacti and yucca within the ROW that will be disturbed in the Mojave Desert habitat portion of the project will be salvaged, with the following exceptions:

    - Cholla, including silver or golden cholla (*Opuntia echinocarpa*) and pencil cholla (*Opuntia ramosissima*), equal to or greater than 3 feet tall or less than 1 foot tall (i.e., only these species of cholla between 1 foot and less than 3 feet tall will be salvaged)

- All cacti and yucca whose vegetative mass is more than 40% dead (i.e., apical leaves, brown or significantly chlorotic, stems rotten or significantly desiccated, etc.)
- All cacti and yucca less than 1 foot tall (excluding barrel cactus [*Ferocactus cylindraceus*], cottontop cactus [*Echinocactus polycephalus*], and hedgehog cactus [*Echinocereus* sp.])
- All yucca, including Joshua tree (*Yucca brevifolia*), that are over 6 feet in height
- Any cacti or yucca that cannot be accessed safely due to steep slopes or very rocky areas
- All cacti and yucca not salvaged will be left on-site to become part of the vegetative mulch.

213. A.1.72: Within the portion of the ROW located within special designation areas (e.g., critical habitat, areas of critical environmental concern) identified in BLM RMPs or other Federal policies or directives, additional shrub salvage or enhanced seed application will be conducted to enhance restoration efforts. Additional shrub salvage may be accomplished by either 1) salvaging from BLM lands within the ROW, 2) salvaging from an approved off-site harvest site, and/or 3) propagation of shrubs from native seed in an approved nursery.

214. A.1.73: Salvaged cacti, yucca, and shrubs will be transported to designated temporary nursery sites within the ROW until restoration activities commence. Upon approval from the BLM, salvaged vegetation may also be stored at designated off-site nurseries. Salvaged plants from the same general areas will be grouped together and identified for future replanting in the areas from which they were salvaged. All salvaged plant material will be approved by the BLM or on-site biologist prior to transplanting into the nursery sites. A list will be developed for each nursery site to verify that the quantities of plant material match what and where it was extracted.

215. A.1.74: Plant salvage will occur only within the permanent and temporary ROW, as indicated in Restoration Plan. Salvaging will not begin until the permanent and temporary ROW has been clearly staked and flagged. As feasible, salvage operations will not be performed during periods of high temperatures or other unfavorable environmental conditions. All salvaged plants will be documented and catalogued.

216. A.1.75: Prior to commencing any plant salvage operations, a Free Use Permit, Flora transportation tags, or any other required permits will be obtained to transport salvaged plants as part of restoration activities.

217. A.1.76: Salvaged plants will be maintained for the duration of construction activities, until replanted within the ROW as part of site restoration. Maintenance will include necessary watering and other care to ensure reasonable survival of the salvaged plants.

218. A.1.77: At the completion of construction, in areas where there are no above-ground facilities, permanent access roads, or facilities no less than 12 inches below the ground surface, the ground surface will be ripped to an appropriate depth based on site characteristics to help relieve compaction, to establish an adequate seed bed to provide good seed-to-soil contact, and facilitate water penetration and plant establishment. Topsoil, mulched vegetation and boulders salvaged at the start of construction will be

re-spread across the ROW at the completion of construction. Boulders will be respread in density and patterns similar to adjacent undisturbed areas.

219. A.1.78: Upon the completion of topsoil replacement, salvaged plants will be removed from the nursery sites and transplanted within the ROW, in areas not occupied by above-ground facilities or access roads. Efforts will be taken to restore plants to the same general area from which they were salvaged. Plants will be replanted in a random and non-uniform pattern, in an effort to mimic the adjacent non-disturbed native plant communities. Planting holes will be two times the size of the plant material to be transplanted and will be pre-watered. All backfill will be free of debris, foreign objects, rocks large enough to obstruct root growth or watering, and noxious weeds. As feasible, transplanting will not occur during periods of high temperatures or other unfavorable environmental conditions.

220. A.1.79: A comprehensive seeding program will be applied after completion of topsoil and plant replacement. The seed mix, application rate, and application method will be described in the Restoration Plan and approved by the BLM. Vegetable-based soil binders and/or hydromulch may be used on steep slopes to reduce seed movement and erosion. Seeds for restoration will be obtained from native local seed and/or a BLM-approved commercial seed vendor, and will be certified free of plant species listed on the Nevada noxious weed list or specifically identified by the BLM.

221. A.1.80: A final watering will be conducted approximately 2 weeks after completion of seeding, to help remove air pockets and compact soils in and around the roots of transplanted vegetation. Additional supplemental watering may be conducted, if practicable based on access, and if needed to enhance restoration.

222. A.1.81: Signs indicating restoration activities are being conducted may be installed where needed to deter public off-road vehicular damage to restored areas. Placement and design of signs will be coordinated with the BLM and identified in the Restoration Plan.

Noxious Weeds

223. A.1.82: An Integrated Weed Management Plan will be prepared and submitted to the BLM for approval prior to the start of construction. The portion of the plan pertaining to restoration in listed species or technical assistance species habitat will also be submitted to the USFWS. Noxious weed control will be implemented to minimize the spread of noxious weeds during and following construction activities. All weed control efforts on BLM-administered lands will be in compliance with BLM Handbook H-9011, H-9011-1 Chemical Pest Control, H-9014 Use of Biological Control Agents of Pests on Public Lands, and H-9015 Integrated Pest Management.

224. A.1.83: Areas within the ROW that have pre-existing noxious weed infestations will commence to be treated with a BLM-approved control method (i.e., chemical, mechanical, and/or biological controls) two to three years prior to the start of construction activities, as feasible.. If noxious weed infestations still exist within the ROW at the start of construction, topsoil and fill will be kept segregated and not transported to other areas within the ROW.

225. A.1.84: Prior to the import of borrow or fill from outside the ROW, the source material location will be inspected by a qualified biologist or weed scientist to ensure it is free of noxious weeds or specifically identified in the BLM approved Integrated Weed Management Plan for the project.

226. A.1.85: Any hay, straw, or other organic products used during construction, restoration, operations, maintenance, or for stabilization will be certified free of plant species listed on the Nevada noxious weed list or specifically identified in the BLM approved Integrated Weed Management Plan for the project.

227. A.1.86: Vehicles and equipment will be cleaned with a high pressure washer prior to arrival on the ROW and prior to departure from areas of known noxious weed infestations to prevent or at least minimize the introduction or spread of noxious weeds. Cleaning efforts will concentrate on tracks, tires, and vehicle undercarriage, with special emphasis on axles, frames, cross members, motor mounts, on and underneath steps, running boards, and front bumper/brush guard assemblies. Vehicle cabs will be swept out and refuse will be disposed of in waste receptacles. Cleaning sites will be recorded using global positioning systems or other mutually acceptable equipment and provided to the BLM Weed Coordinator or designated contact person.

228. A.1.87: Specific vehicle washing stations will be designated within the ROW for vehicle and equipment washing. These areas will be identified in the detailed POD(s) and approved by the BLM. Cleaning areas will be monitored for growth of noxious weeds and treated accordingly.

229. A.1.88: SNWA or its certified licensed contractor will submit a Pesticide Use Proposal to the BLM prior to the planned application of any herbicide and a Pesticide Application Record after the planned application of the herbicide. The pesticide use proposal will identify areas of planned herbicide application for BLM use in consultation with Native American tribes, if necessary. No herbicide mixing or rinsing of containers or application equipment will occur within 100 feet of natural water sources (i.e., lakes, streams, or springs). An annual report on herbicide application on public lands within the ROW will be provided to the BLM.

230. A.1.89: Herbicides will not be sprayed within or around an exclusion area containing sensitive resources. These areas will be delineated with orange snow fencing during construction or by GPS data. Removal of noxious and invasive weeds in these areas shall be accomplished by alternative method(s) approved by the BLM.

General Operation Practices

231. A.2.1: Facility inspection and maintenance will only use established access roads, and no off-road travel will be allowed. While driving on paved roads or marked dirt roads, posted speed limits will be maintained. While driving on un-posted dirt roads, a maximum speed limit of 25 miles per hour will be maintained to reduce dust and allow for observation of desert tortoise, livestock, wild horses, or other wildlife in the road.

232. A.2.2: The ROW will be maintained in a clean condition, and any waste material, including human waste, trash, garbage, refuse, oil drums, petroleum products, ashes, and equipment that may be deposited in the ROW will be disposed of promptly at a State of Nevada approved landfill site.

233. A.2.3: Hazardous materials at the WTF will be stored in secondary containment structures, in compliance with Clark County and Occupational Safety and Health Administration (OSHA) standards.

234. A.2.4: Pipelines and facilities will be equipped with pressure and flow sensors that will immediately indicate a major system failure or break. The system will begin an automatic shutdown process to isolate the affected area. Valve placement and storage capacity are planned to allow isolation of pipeline segments to minimize drainage volumes as much as possible. Personnel will be promptly mobilized to evaluate and repair any failure as quickly as possible.

235. A.2.5: Stormwater discharges will be managed during facility operation by conducting regular inspection and maintenance of any permanent erosion control structures. Inspections will be conducted prior to and immediately following a rain event. Maintenance will be performed on the permanent structures as needed.

236. A.2.6: Pipeline or other facility repairs that may be needed will be accomplished within the ROW, following all environmental requirements of this plan. If additional temporary ROW is required for pipeline or facility repair, prior written approval will be obtained from the BLM. If additional area is required for emergency repairs, such as in the case of a major system failure or break, SNWA will obtain BLM verbal or written permission prior to any disturbance outside of the permitted ROW.

237. A.2.7: Limit maintenance of existing roads to the existing disturbance, and perform maintenance in accordance with specifications provided by the Ely District Office in consultation with the USFWS.

238. A.2.8: If major infrastructure replacements or improvements are required, additional temporary ROWs may be required. Notification and prior approval for said additional temporary ROWs will be obtained from the BLM as required.

Restoration Monitoring

239. A.2.9: Vegetation restoration success will be monitored by SNWA and reported to the BLM, as defined in the approved Restoration Plan for BLM lands. Monitoring will include both qualitative and quantitative data collection and analysis. Restoration will be considered successful when the area meets a specified percentage of vegetation cover and species density compared to adjacent reference sites. Vegetation restoration success on non-BLM lands will be coordinated with the respective landowners.

240. A.2.10: Annual restoration monitoring reports will be submitted to the BLM for seven years documenting post-construction monitoring, and will include but not be limited to activities conducted, current status, recommended future activities, and lessons learned. Along with the annual report in the fifth and seventh years, SNWA will include a quantitative analysis, to allow opportunity following the fifth-year report to correct any issues that may prevent restoration site release within the subsequent two years. If monitoring indicates that restoration is not trending towards meeting or has not met designated success criteria, the restoration activities may be revised and remedial measures implemented, subject to BLM approval. Restoration activities and annual reporting shall continue until the restoration fulfills the requirements of the BLM-approved Restoration Plan, and SNWA receives written release from BLM. Since

successful restoration may be achieved in some areas more quickly than other sites, written approval shall identify the area released.

241. A.2.11: In the unlikely event of a major system rupture resulting in discharge of water greater than 5,000 gallons or off-site erosion, SNWA will notify BLM and other appropriate government entities as identified in the Emergency Response Plan. SNWA will coordinate with the BLM to develop and implement incident-specific restoration measures as directed by the BLM.

242. A.2.12: The ROW and primary unpaved access routes used for facility inspections will be monitored for noxious weeds from the start of construction until termination of the ROW. Noxious weeds will be treated with a BLM-approved control method (i.e., chemical, mechanical, and/or biological controls) as needed. A Pesticide Use Proposal will be submitted to the BLM prior to any planned noxious weed herbicide application, and a Pesticide Application Record will be submitted after weed herbicide use. All applications of herbicides shall comply with BMPs, Standard Operating Procedures (SOPs), and Conditions from the Vegetation Treatments Using Herbicides on BLM Lands in 17 Western States Programmatic EIS (BLM, 2007).

243. A.2.13: An annual report on noxious weeds conditions and control activities within the ROW will be submitted to the BLM.

Geologic Hazards and Soils

244. A.3.1: If fault crossings of the pipeline are identified during detailed geotechnical investigations, additional design features will be added to ensure pipeline integrity (e.g., flexible couplings, increased pipe wall thickness, pipe sleeves).

245. A.3.2: In the "fissures" area of Dry Lake Valley, in addition to design features, over-excavation of existing soils and replacement with engineered fill, grouting of fissures, and/or use of geo-textile fabric will be utilized as needed to ensure pipeline stability.

246. A.3.3: Soils unsuitable for use as pipeline backfill will be used to refill borrow pits identified as part of the project and will not be exported from Federal lands.

Water Resources

247. A.4.1: In accordance with Clean Water Act permitting requirements, BMPs will be implemented for the pipeline crossing of perennial water flows. The BMPs will utilize industry-accepted procedures.

248. A.4.2: The project has been sited to avoid wetlands, and no construction is currently planned to occur in wetlands.

Biological Resources

249. A.5.1: The portion of the project within private property in Clark County, will comply with the Clark County Multiple Species Habitat Conservation Plan. SNWA will pay applicable fees and obtain necessary permits prior to the start of construction.

250. A.5.2: Qualified biologists will act as biological monitors and be present on-site during project-related actions that may impact sensitive biological resources. The authorized BLM officer will approve the selected consulting firm/biologists to be used to implement the terms and conditions of the Biological Opinion or other agreements between SNWA, the BLM, and other Federal or state agencies. Any biologist and/or

firm not previously approved will submit a curriculum vitae and be approved by the BLM authorized officer. Other personnel may assist with implementing terms and conditions that do not involve tortoise handling, monitoring, or surveys, but only under direct field supervision of the BLM-approved biologists.

251. A.5.3: All necessary Federal and state handling permits will be obtained and will comply with Nevada Revised Statutes (NRS) 503.597.

252. A.5.4: The biological monitors will be responsible for determining compliance with measures as defined by the Biological Opinion or other agreements between SNWA, the BLM, and other Federal or state agencies. Biological monitors will have the authority to halt non-emergency construction activities that are not in compliance with these measures. Stop work directives will be effective long enough to remedy the immediate situation, and will be limited to the equipment and parties involved in the situation. All action of non-compliance or conditions of threat to protected species will be recorded immediately by the biological monitor and reported to SNWA. SNWA will immediately report all such action and conditions to BLM for reporting to the USFWS and/or NDOW.

253. A.5.5: No intentional harassment or harming of animals will be allowed. Animals found entrapped in open holes, open pipes/culverts, or excavations will be reported to the biological monitor. Before any pipe with a diameter of 3 inches or greater is buried, capped, or moved it will first be inspected for animals. If the wildlife is unable to escape on its own, it will be moved from the construction area by the biologists, in accordance with applicable Federal and state guidelines. The Environmental Compliance Representative will report to the BLM and other Federal or state agencies, in accordance with permit requirements, any entrapment, death, or injury to Federal or state listed threatened or endangered, or special status species.

254. A.5.6: Prior to discharge of water used for hydrostatic testing of the pipeline and other facilities, all appropriate discharge and biological permits will be obtained and the drainage locations will be surveyed for special status species and nesting migratory birds. BLM will be notified of any special status species or nesting migratory birds found in the drainage area, and will determine whether additional measures need to be implemented prior to the discharge, beyond those identified in project permits and any other applicable agreements or requirements between SNWA and the BLM, USFWS, or NDOW.

255. A.5.7: Biological resource monitoring and compliance updates will be provided to the BLM throughout the construction period for record keeping and project documentation purposes. These will include information on ongoing construction activities, monitoring, wildlife and special status species observations, species relocations, entrapped special status species, and any other pertinent biological issues. Updates may be written or oral, as agreed upon by the BLM and SNWA biologists. An annual written report will be provided to the BLM.

256. A.5.8: Perch discouraging devices will be installed on new power lines in areas identified by the BLM and USFWS as having increased predation risk to sensitive species from perching raptors and Corvids (birds of the crow family). Perch

discouraging devices will manage where the birds perch, but cannot entirely prevent perching (APLIC, 2006).

Special Status Plants

257. A.5.9: In areas where sensitive plant species were identified in previous surveys either within or adjacent to the ROW, pre-construction surveys will be conducted during the blooming or fruiting season as needed to verify plant identification. Specific locations of sensitive plants, based on the BLM sensitive plant list in effect at the time, will be recorded for subsequent salvage or seed collection. To date, sensitive plant species that have been identified within the ROW include:

    - Rosy twotone beardtongue (*Penstemon bicolor* spp. R*oseus),*
    - Blaine's fishhook cactus (*Sclerocactus spinosior* ssp. *Blainei),*
    - Eastwood milkweed (*Asclepias eastwoodiana*),
    - Las Vegas buckwheat (*Eriogonum corymbosum* var. *nilesii),*
    - Long-calyx egg milkvetch (*Astragalus oophorus* var. *lonchocalyx*),
    - Nachlinger catchfly (*Silene nachlingerae),*
    - White bearpoppy (*Arctomecon merriamii*).

258. A.5.10: SNWA will adjust construction activities as feasible to avoid any identified sensitive plant populations within the ROW. Orange snow fencing will be used to mark the avoidance area including a reasonable buffer, alerting construction personnel to avoid the area. The onsite Environmental Compliance Representative will ensure these areas are properly monitored and protected. When individual sensitive plant locations are known (coordinates have been surveyed with GPS equipment) prior to construction drawings being prepared, the sensitive plants will be included in the construction drawings.

259. A.5.11: If the sensitive plant species cannot be avoided, SNWA will implement plant or seed salvage prior to the start of construction. Seeds will be collected from sensitive plants that are located within the ROW. Collection, storage, and handling of seeds will be in accordance with commonly accepted scientific practices. Collected sensitive plant seed will be applied with the seeding program as part of restoration at the completion of construction, and in the same general area as the seeds were initially collected, as appropriate.

260. A.5.12: If previously unknown special status plant species are discovered within the ROW prior to start of construction, SNWA will consult with the BLM on appropriate plant and/or seed salvage.

261. A.5.13: If Federal or state protected plant species are discovered within the ROW during construction, the on-site biological monitor will have the authority to temporarily halt non-emergency construction activities in order to: 1) mark the area with orange snow fencing, including a reasonable buffer, to alert construction personnel to avoid the area, or 2) allow time for SNWA to consult with the BLM on appropriate plant and/or seed salvage.

262. A.5.14: SNWA will avoid exclusion areas created for sensitive plants when spraying herbicides.

263. A.5.15: Construction practices such as steeper trench walls, narrower roads within the ROW, and adjusting power pole spacing will be employed to avoid to the extent feasible Blaine's fishhook cacti identified within the ROW in Dry Lake Valley based upon pre-construction surveys (currently 10 known plants are anticipated to be avoidable). Orange snow fencing will be used to delineate a 3 meter exclusion area around the plants. Other Blaine's fishhook cacti which cannot be reasonably avoided will be salvaged and transplanted (currently 3 known plants anticipated to be unavoidable and requiring salvage). Salvage and transplant methodology, location, and subsequent monitoring will be identified in the Restoration Plan (see measure A.1.69 [Stipulation 210]) approved by the BLM and USFWS. Transplant will be into either suitable adjacent habitat on BLM land that will not be disturbed by construction activities, or captive propagation. Salvage will use a wet rootball method, or other method with a higher success rate based upon current research. If these measures cannot be feasibly implemented, SNWA will consult with BLM and USFWS on appropriate additional measures.

Desert Tortoise

The applicant-committed measures for desert tortoise listed below (Stipulations264-284) were developed prior to completion of the USFWS's Biological Opinion. If there is any conflict between these measures and those associated with the USFWS' Biological Opinion (Stipulations75-108), the measures associated with the Biological Opinion will apply.

264. A.5.16: Appropriate state and Federal permits or letters of authorization will be acquired prior to handling desert tortoises and their parts, and prior to initiation of any activity that may require handling tortoises. Desert tortoise will only be handled by BLM and USFWS approved biologists and solely for the purpose of moving them out of harm's way. If a tortoise is found onsite during project activities, which may result in take of the tortoise (i.e., in harm's way), such activities shall cease until the tortoise moves, or is moved, out of harm's way.

265. A.5.17: Biologists, monitors, or anyone responsible for conducting desert tortoise monitoring or desert tortoise field activities associated with the project will complete the USFWS's Qualifications Form and submit it to the USFWS for review and approval as appropriate. The USFWS should be allowed 30 days for review and response.

266. A.5.18: For construction of desert tortoise exclusion fencing (measure A.1.14), the biologists will survey the fence construction area for desert tortoises and their burrows using USFWS approved protocols. If construction occurs during the desert tortoise active season (March 1 through October 31), or when temperatures and environmental conditions are conducive to tortoise activity as determined by an authorized biologist, two surveys would occur. The first survey would be conducted within 7 days prior to surface-disturbance; and the second survey would occur within 24 hours of surface disturbance. A biological monitor will remain onsite during construction of the tortoise exclusion fencing to ensure that no tortoises are harmed. If the fence is constructed during the inactive season (November 1 through February 28/29, except as noted above) when conditions are not conducive to tortoise activity as determined by an authorized biologist, one survey would occur within 72 hours of surface disturbance. Tortoise

burrows that occur immediately outside of the fence alignment that can be avoided by fence construction activities will be clearly marked to prevent crushing.

267. A.5.19: For areas within desert tortoise habitat not enclosed by tortoise exclusion fencing, prior to ground disturbing activities within the ROW, the biologists will survey for desert tortoises and their burrows using USFWS approved protocols. If construction occurs during the desert tortoise active season (March 1 through October 31), or when temperatures and environmental conditions are conducive to tortoise activity as determined by an authorized biologist, two surveys would occur. The first survey would be conducted within 7 days prior to surface-disturbance; and the second survey would occur within 24 hours of surface disturbance. During the inactive season (November 1 through February 28/29, except as noted above) when conditions are not conducive to tortoise activity as determined by an authorized biologist, one survey would occur within 72 hours of surface disturbance. All potential desert tortoise burrows will be examined to determine occupancy of each burrow by desert tortoises in accordance with USFWS-approved protocol.

268. A.5.20: For areas enclosed by tortoise exclusion fencing, clearance surveys will be conducted no more than 7 days before the start of any construction activity. These clearance surveys will follow standard USFWS protocol, to facilitate discovery of all burrows, regardless of orientation.

269. A.5.21: All burrows found in the construction area, whether occupied or vacant, will be excavated by the biologists and collapsed or blocked to prevent desert tortoise re-entry. All burrows will be excavated by hand, with hand tools, to allow removal of desert tortoises or desert tortoise eggs. All desert tortoise burrows, other species' burrows, and natural excavations that may be used by tortoises where the burrow end cannot be seen or occupancy cannot be determined, will be examined with a fiber-optic scope or miniature closed-circuit video probe to determine occupancy by desert tortoises.

270. A.5.22: All desert tortoises and desert tortoise eggs found within the construction area will be relocated by the biologists 300 to 1,000 feet from the construction area into adjacent, undisturbed habitat. Tortoises and nests that are found will be handled and moved out of harm's way by the biologists in accordance with USFWS-approved protocol. Burrows containing tortoises or nests will be excavated by hand, with hand tools, to allow removal of the tortoise or eggs. Desert tortoises moved during the tortoise inactive season or those in hibernation, regardless of date, will be placed into an adequate burrow; if one is not available, one will be constructed in accordance with Desert Tortoise Council protocol. During mild temperature periods in the spring and early fall, tortoises removed from the site may not necessarily be placed in a burrow; if not placed in a burrow, tortoises will be placed under a shrub or other shelter. Tortoises and burrows will only be relocated to Federally managed lands. All burrows found in the construction area, whether occupied or vacant, will be excavated by the biologists and collapsed or blocked to prevent desert tortoise re-entry.

271. A.5.23: Desert tortoises moved in the winter (i.e., November 1 through February 28/29), or those in hibernation regardless of date, will be placed into an adequate burrow; if one is not available, one will be constructed utilizing the protocol for burrows in Section B.5.f. of the USFWS-approved guidelines (same as Desert Tortoise Council protocol).

272. A.5.24: Tortoises found above ground will be placed under a shrub in the shade. Desert tortoises moved during inactive periods will be monitored for at least two days after placement in the new burrows to ensure their safety. The biologists will be allowed sufficient judgment and discretion to ensure that survival of the desert tortoise is likely.

273. A.5.25: Desert tortoises will be treated in a manner to ensure that they do not overheat, exhibit signs of overheating (e.g., gaping, foaming at the mouth, etc.), or are placed in a situation where they cannot maintain surface and core temperatures necessary to their well-being. Desert tortoises will be kept shaded at all times until it is safe to release them. No desert tortoise will be captured, moved, transported, released, or purposefully caused to leave its burrow for whatever reason when the ambient air temperature is above 95ºF. Ambient air temperature will be measured in the shade, protected from wind, at a height of 2 inches above the ground surface. No desert tortoise will be captured if the ambient air temperature is anticipated to exceed 95ºF before handling and relocation can be completed. If the ambient air temperature exceeds 95ºF during handling or processing, desert tortoises will be kept shaded in an environment that does not exceed 95ºF and the animals will not be released until ambient air temperature declines to below 95ºF.

274. A.5.26: Any desert tortoise found within one hour before nightfall or when ambient temperatures reach or exceed 95º F will be placed in a separate clean cardboard box and kept upright in a predator-free location under appropriately controlled temperatures to minimize stress to the desert tortoise. Each box will be used once and then disposed of properly. The desert tortoise will be released the following day in the area from which it was collected and using the procedures described above.

275. A.5.27: Each desert tortoise will be handled with a different pair of disposable latex gloves. After each use, the gloves will be properly discarded and a fresh set used for each subsequent desert tortoise handling.

276. A.5.28: If the biologists identify any desert tortoises to be at high risk for death or injury, they will contact the USFWS for translocation direction. High risk conditions may include crushed or injured limbs or shell, signs of overheating, or disease.

277. A.5.29: Where appropriate, restrict permitted activities from March 1 through October 31 within desert tortoise habitat (Ely RMP measure SS-32).

278. A.5.30: BLM and USFWS approved biologists will monitor construction activities in desert tortoise habitat using techniques approved by the USFWS and BLM. The level of monitoring will depend upon whether the area is enclosed by tortoise exclusion fencing or not, and whether the activity is taking place within the tortoise active period (March 1 through October 31) or inactive period (November 1 through February 28/29).

    - If any construction-related activities occur in an area not totally enclosed by tortoise exclusion fencing during the active tortoise period, a biological monitor will be assigned to each work crew or piece of ground-disturbing equipment and will clear the vehicle ingress/egress path and parking or work areas before allowing the construction activity to commence. Prior to starting operations each day, the biological monitor will inspect the following locations: around and under all equipment and vehicles; in and around all disturbed areas including stockpiles and

reject materials areas; in and around all routes of ingress and egress; and in and around all other areas where the operation might expand to during that day.

- If any construction-related activities occur in an area not totally enclosed by tortoise exclusion fencing during the inactive tortoise period, a clearance survey will be conducted (as described in measure A.5.19 [Stipulation 267]). Subsequent desert-tortoise monitoring will not be required, however, biological monitoring for compliance with other environmental stipulations will still occur.
- If construction activities are completely enclosed by tortoise exclusion fencing, biological monitoring will not be required other than periodic inspections of the exclusion fencing.
- For access roads outside the ROW, other than state and Federal highways which are not enclosed by tortoise exclusion fencing, a biological monitor will be assigned to every 5 miles of access road during the active season.

279. A.5.31: If any construction pipe, culverts, or similar structures with a diameter of 2 inches or greater are stored in areas of desert tortoise habitat not enclosed by tortoise exclusion fencing, they will be inspected by a biological monitor for the presence of tortoises before the material is moved, buried, or capped. Alternatively, all such structures may be capped before being stored.

280. A.5.32: In desert tortoise habitat, any time a vehicle is parked in an area not enclosed by tortoise exclusion fencing, whether the engine is engaged or not, the ground around and under the vehicle will be inspected for desert tortoise prior to moving the vehicle. If a desert tortoise is observed, a biologist will be contacted to safely move the animal. If possible, the desert tortoise will be left to move on its own. If the desert tortoise does not move within 15 minutes, the desert tortoise will be removed and moved out of harm's way by the biologist. Checking under parked vehicles is also recommended, but not required, for areas enclosed by tortoise exclusion fencing.

281. A.5.33: The biologists will record each observation of handled desert tortoises. Data will be collected, including: GPS location, date, time of observation, whether the tortoise was handled, the general health of the tortoise, whether it voided its bladder, the location the tortoise moved from and the location it moved to, and any unique physical characteristics. This information will be provided to the BLM in an annual report.

282. A.5.34: In the event that blasting is required in desert tortoise habitat, a 200-foot-radius area around the blasting site would be surveyed for desert tortoises prior to blasting, using 100-percent-coverage survey techniques. All tortoises found above ground or in pallets within this 200-foot-radius of the blasting site would be moved 500 feet from the blasting site. Additionally, tortoises in burrows within 75 feet of the blasting would be placed into an artificial or unoccupied burrow 500 feet from the blasting site. This would prevent tortoises that leave their burrow upon translocation from returning to the blasting site. Tortoises in burrows at a distance of 75 to 200 feet from the blasting site would be left in their burrows. Burrow locations would be flagged and recorded using a GPS unit and burrows would be stuffed with newspapers. Immediately after blasting, newspaper and flagging would be removed. Detonation would only occur after an area has been cleared by a biologist and within a short enough time period to prevent tortoises that have been relocated from returning to the site prior to the completion of

detonation. Effects of blasting on desert tortoise and their burrows shall be reported to the BLM and USFWS.

283. A.5.35: BLM's wildlife staff in Caliente or Ely and the USFWS's Southern Nevada District Office will be notified of any desert tortoise death or injury resulting from project activities by close of business on the following work day.

284. A.5.36: SNWA will submit a document to the BLM within 30 days of completion of the project, showing the number of acres disturbed, remuneration fees paid, and the number of tortoises taken during project activities, which includes capture and displacement, killed, injured, and harassed by other means, during project activities.

Banded Gila Monster and Chuckwalla

285. A.5.37: Within potential habitat for Gila monster and chuckwalla, pre-construction surveys of the ROW will be conducted by qualified biologists to find and move individuals out of harm's way. These surveys may be conducted in accordance with NDOW's Gila monster protocol. All occupied burrows found in the construction zone will be examined and excavated as described for the desert tortoise. If a Gila monster is found, NDOW will be immediately contacted.

286. A.5.38: Gila monster and chuckwalla will be moved only by qualified biologists and solely for the purpose of moving them out of harms way. The onsite biologists will follow the NDOW Gila monster protocol and specifically will know how to: 1) identify Gila monsters and be able to distinguish it from other lizards such as chuckwallas and western banded geckos, 2) report any observations of Gila monsters to NDOW, 3) be alerted to the consequences of a Gila monster bite; and 4) be aware of protective measures provided under state law.

287. A.5.39: All Gila monster and chuckwalla observed by project workers will be reported immediately to the biological monitor. A report of the Gila monster sighting will be filed with NDOW. The report will include information on the animal's size and condition, location (with GPS coordinates), date and time, habitat (including plant species present), photo-documentation (if possible), and circumstances under which it was found.

Burrowing Owls and Kit Fox

288. A.5.40: Burrowing owls are migratory birds. As such, the measures presented in the migratory bird section are in addition to the ones listed here.

289. A.5.41: Surveys of suitable habitat in the ROW for active burrowing owl will be conducted by qualified biologists during nesting season (March 1 through August 31) and no more than 30 days prior to the start of construction. Surveys for active kit fox burrows can be conducted at the same time. The presence of active burrows or dens will be verified through non-invasive means including motion cameras, fiber-optic scope or miniature closed-circuit video probe; the surveys will consider that dens can be very diverse with several tunnels and entrance and exit burrows. The locations of active burrows within the ROW will be determined using a GPS unit to enable accurate relocation during subsequent mitigation actions.

290. A.5.42: If feasible, active nesting burrows or natal dens within the ROW will be avoided by modifying construction activities in the immediate area. Orange construction fencing will be used to mark the avoidance area, which will include a buffer of at least 250 feet. The fencing will be installed in a manner to allow for ingress and egress of the animals. The avoidance area will also be signed to inform construction personnel to avoid the area.

291. A.5.43: When destruction of occupied burrowing owl burrows within the ROW is unavoidable, existing unsuitable burrows on adjacent BLM land outside of the ROW will be enhanced (enlarged or cleared of debris) or new burrows created (by installing artificial burrows) at a ratio of 2 enhanced or new burrows to each 1 active burrow that will be destroyed.

292. A.5.44: Burrowing owls in active burrows which cannot be avoided will be passively relocated during the fall to winter season prior to the start of construction, in coordination with BLM, NDOW, and USFWS. One-way doors (e.g., modified dryer vents) will be installed at active burrow entrances, and left in place for at least 48 hours to ensure all owls have left the burrow. The project area should be monitored daily for one week, to confirm the owls' use of enhanced or new replacement burrows. If burrowing owls need to be handled for relocation, a permit will be obtained from the USFWS.

293. A.5.45: When destruction of occupied kit fox dens within the ROW is unavoidable, kit fox will be encouraged to leave the dens on their own volition (passive relocation). Occupied dens will be collapsed after kit fox emerge.

294. A.5.46: After burrowing owl and kit fox have been removed from harm's way, their burrows or dens located within the ROW will be excavated using hand tools and refilled to prevent reoccupation. Clearing and collapsing of burrows or dens within the ROW will be done by qualified biologists prior to the start of construction.

295. A.5.47: Occupied burrowing owl burrows will not be disturbed during the active nesting season (February 1 to August 31) unless a qualified biologist verifies through non-invasive means that either: 1) the birds have not begun egg laying and incubation, 2) juveniles from the occupied burrows are foraging independently and are capable of independent survival, or 3) the birds are no longer displaying evidence of nesting (i.e., mated pairs, territorial defense, carrying nesting material, transporting food).

296. A.5.48: Occupied kit fox dens will not be disturbed during the active denning and weaning season (February 15 to May 15), unless a qualified biologist verifies through non-invasive means that either: 1) there are no newborn pups in the den, or 2) pups have been weaned and are capable of independent survival. Alternatively, upon approval of the BLM and in coordination with NDOW, pups may be relocated to an adjacent natural or man-made den.

Greater Sage-Grouse

297. A.5.49: In accordance with the National Greater Sage-Grouse Conservation Measures report (2011), the Project facilities will be sited as much as possible to limit disturbance in priority sage grouse habitat, be within designated utility corridors, and be co-located along existing ROWs including power lines and roads.

298. A.5.50: In consultation with BLM, NDOW, and USFWS, implement a monitoring program for sage-grouse in priority habitat in the project area that addresses demographics vital rates, and seasonal movement patterns, as recommended by the Nevada Energy and Infrastructure Standards to Conserve Greater Sage-Grouse (2010).

299. A.5.51: As feasible, limit activities within 4 miles of active sage-grouse leks during the breeding, nesting, and early brood-rearing periods (generally March through June).

300. A.5.52: If placement of an electrical transmission line within 3 miles of an active sage-grouse lek cannot be avoided, the line will be sited and designed in accordance with the Nevada Energy and Infrastructure Standards to Conserve Greater Sage-Grouse (2010), including:

- Place the line within the least suitable habitat within a 3-mile radius of the nearest active lek
- Consider placing the line to the west of the nearest active lek so that avian predators are at a disadvantage in the early morning hours
- Construct structures with the least amount of perching or nesting substrate possible by avoiding things such as external ladders and platforms
- Use tubular tower designs with pointed tops rather than lattice designs
- Use perch and nesting deterrents (measure A.5.8 [Stipulation 256])
- Avoid removing sagebrush cover whenever feasible, especially in identified winter habitats
- Avoid use of guy wires whenever possible.

301. A.5.53: For the portion of the disturbed ROW within greater sage-grouse priority habitat areas, enhanced restoration efforts specifically tailored to restore sagebrush habitat as quickly as possible will be implemented. These restoration measures will be identified in consultation with the BLM, NDOW, and USFWS, and be specifically identified in the Restoration Plan (measure A.1.69 [Stipulation 210]).

302. A.5.54: Supporting the National Greater Sage-Grouse Conservation Measures report (2011) goals and objectives, which identified the need for collaborative conservation efforts among private and Federal partners to conserve sage-grouse, SNWA will enhance greater sage-grouse habitat on its private properties in Spring Valley by managing of agricultural and livestock operations. Measures will be developed in consultation with the BLM, NDOW, and USFWS and may include:

- Maintaining and cutting existing alfalfa fields in a manner to avoid harm to greater sage-grouse.
- Managing livestock operations to promote riparian area and meadow utilization by greater sage-grouse, which could include developing alternate water sources for livestock, and placing supplements and conducting supplemental feeding outside of high quality greater sage-grouse habitat.
- Control predator populations (e.g., ravens) on SNWA properties to minimize predation on greater sage-grouse, in coordination with Nevada State predator control program and in accordance with Nevada State and Federal regulations.

303. A.5.55: SNWA will coordinate with BLM, NDOW, and USFWS on greater sage-grouse habitat enhancement measures within grazing allotments held by SNWA. In

accordance with the National Greater Sage-Grouse Conservation Measures report (2011), measures may include:

- Design new structural range improvements and location of supplements to conserve, enhance, or restore sage-grouse habitat; consider, monitor and treat potential for invasive species establishment or increase following construction of new range improvements
- Use BMPs to mitigate potential impacts from West Nile virus when developing or modifying water developments
- Evaluate existing structural range improvements and location of supplements to make sure they conserve, enhance, or restore sage grouse habitat, such as: 1) remove, modify, or mark fences in high risk areas within priority sage-grouse habitat based on proximity to lek, lek size, and topography; and 2) monitor for and treat invasive species associated with existing range improvements

304. A.5.56: In addition to habitat enhancements made on SNWA private lands (measure A.5.54 [Stipulation 302]), SNWA will assist with BLM habitat treatments to benefit greater sage-grouse on Federal lands outside of the ROW, equal to the acreage of sagebrush habitat disturbed by construction of the Project. Habitat treatments could include, but are not limited to sagebrush shrublands restoration, pinyon-juniper removal by mechanical or herbicide treatments methods, and/or seeding. This treatment will also benefit other sagebrush-dependent species, such as pygmy rabbit.

Pygmy Rabbit

305. A.5.57: For areas of the ROW where pygmy rabbit have been recently documented or their sign observed, surveys will be conducted by qualified biologists prior to initial ground disturbance. The surveys will be conducted according to the Ely RMP guidelines for pygmy rabbits (SS-43). Survey data on pygmy rabbit (habitat, type and construction of burrow, etc.) will be collected and made available to the BLM and NDOW for the advanced understanding of the species.

306. A.5.58: For the direct loss of occupied pygmy rabbit habitat, 2 acres of comparable habitat for every one acre of lost habitat will be improved. SNWA will coordinate with the BLM and NDOW to determine the specific areas for pygmy rabbit habitat improvements.

307. A.5.59: SNWA may enhance pygmy rabbit habitat on its private properties and permitted grazing allotments in Spring, Lake, Patterson, and Dry Lake valleys by managing of livestock operations. Measures may include:

- Managing livestock operations to promote upland sage brush community utilization by pygmy rabbit, which could include developing alternate water sources for livestock, installation of new fences, modification of grazing time and duration, and placing supplements and conducting supplemental feeding outside of high quality pygmy rabbit habitat.
- Controlling coyote and other predator populations on SNWA properties to minimize predation on pygmy rabbits, in accordance with Nevada State and Federal regulations.

308. A.5.60: For the portion of the disturbed ROW which had higher densities of pygmy rabbit as determined by preconstruction surveys, passive relocation efforts in accordance with NDOW protocols would be implemented as feasible prior to construction; following construction, a seed mix with a higher concentration of plants preferred by pygmy rabbit will be used and restoration efforts specifically tailored to restore sagebrush habitat as quickly as possible will be implemented.

Desert Valley Kangaroo Mouse

309. A.5.61: For areas within the ROW in Dry Lake Valley with documented desert valley kangaroo mouse occurrence, silt fencing will be placed along the edges of the ROW for the duration of active construction activities to keep the mouse out of the ROW. BLM and NDOW will be consulted on the efficacy of relocating desert valley kangaroo mice within the construction ROW out of harm's way. After consideration of territorial affects to other mice, if movement out of harm's way is determined appropriate, live trapping will be conducted within the ROW after the fence is installed, to remove the mice prior to construction. Mice, or any other animal captured by the live trapping will be relocated onto adjacent BLM land.

Migratory Birds (which include Raptors)

310. A.5.62: A predictive model created by the Great Basin Bird Observatory will be used to predict the probability of occurrence of migratory birds on BLM's list, Bird Species of Conservation Concern List (IM2008-050_att2[1].pdf). The predictive model will be applied to individual project construction segments to determine species with the highest probability of occurrence in the construction areas, and to identify the critical nesting periods for those bird species. Critical nesting periods for bird species anticipated to be within the ROW will be identified in the Bird Conservation Strategy (see measure A.1.1).

311. A.5.63: As feasible, SNWA will conduct initial ground clearing outside of the critical nesting period for migratory birds.

312. A.5.64: If initial ground clearing will occur during the critical nesting period, pre-construction surveys for nesting migratory birds will be conducted by qualified biologists no more than 5 days prior to the start of ground clearing; the surveys will include a buffer adjacent to the areas to be disturbed by ground clearing; the adjacent buffer area will be identified in the Bird Conservation Strategy (see measure A.1.1 [Stipulation 142]).

313. A.5.65: If nesting migratory birds are found during the pre-construction surveys, SNWA will follow measures identified within the Bird Conservation Strategy (see measure A.1.1 [Stipulation 142]). If feasible, the bird nests will be avoided until the birds have fledged. Orange construction fencing will be used to mark the avoidance areas, which will also be signed to inform construction personnel to avoid the area. If avoidance is not feasible, SNWA will consult with the BLM to avoid take of migratory birds.

314. A.5.66: Power poles and lines will be designed and constructed in accordance with the recommendations of the Avian Power Line Interaction Committee (APLIC, 2006), in order to reduce the potential to electrocute or otherwise harm raptors.

315. A.5.67: SNWA will continue working with NDOW through Partners in Flight and other associated monitoring programs to support on-going surveys for eagles, ferruginous hawks, and other raptors within the general project vicinity.

316. A.5.68: If trees located within the ROW cannot be avoided and must be removed for construction, the trees will be removed outside of the nesting period for raptors or other migratory birds, as feasible. If removal of a tree during the nesting period is required, the tree will first be surveyed by a qualified biologist to ascertain the presence of any nests. Should active nests of raptors or migratory birds be present, the tree will not be removed until the birds have fledged. If active or inactive bald or golden eagle nests are identified within the ROW, SNWA will follow measures identified within the Bird Conservation Strategy (see measure A.1.1 [Stipulation 142]); no bald or golden eagle nests would be removed without obtaining any necessary permits and in compliance with all applicable regulations.

317. A.5.69: Where appropriate, restrict permitted activities from May 1 through July 15 within 0.5 mile of raptor nest sites unless the nest site has been determined to be inactive for at least the previous 5 years (Ely RMP measure SS-4); the specific avoidance buffer distance and time period for raptor species may be refined in the Bird Conservation Strategy (see measure A.1.1 [Stipulation 142]).

Big Game and Wild Horses

318. A.5.70: There will be no permanent site fencing along the pipeline alignment, in order to avoid restricting seasonal movement patterns of big game and the free-roaming behavior of wild horses. If temporary barbed wire or electric fencing is used to protect wild horses and wildlife, the new fences will be flagged every 16 feet with white flagging that is at least 1 inch wide and has at least 12 inches hanging free from the top wire of the fence (Ely RMP BMP measure Wild Horses No. 1).

319. A.5.71: SNWA will coordinate with ranchers and land permittees within the project hydrographic basins to ensure that existing water sources continue to be available during construction for big game and wild horses. In consultation with BLM and NDOW, a plan will be developed to either turn existing sources of water on or off to aid in animal distribution away from active construction areas. If construction is within two miles of an existing water source, supplemental temporary stock water tanks will be placed in a suitable location away from the construction area. The location of the temporary stock water tanks will be selected in consultation with appropriate ranchers and land permittees, BLM, and NDOW. Water tanks will be filled using water trucks, and maintained for the duration of construction in this area.

320. A.5.72: For the duration of pipeline construction through Lake and southern Spring valleys, two temporary water hauls will be established. The water hauls will consist of placement of an aluminum water trough (with escape ramps for small wildlife and bats, with a design approved by the BLM), which will be filled as needed by water truck. The water hauls will be sited in southeast Spring Valley and the foothills of the west side of the Fortification Range. This will provide water for wild horses in the Eagle Herd Management Area whose migration patterns through the construction area may be temporarily disrupted. Specific sites for the water hauls will be selected in conjunction with BLM, NDOW, and interested grazing permittees.

321. A.5.73: For the duration of pipeline construction through northern Dry Lake Valley, two temporary water hauls as described above will be established. The water hauls will be sited on the west side of the pipeline, in the Muleshoe Use Area, to provide water for wild horses in the Silver King Herd Management Area whose access to existing water sources may be temporarily disrupted by construction.

322. A.5.74: Where appropriate, restrict permitted activities in big game calving/fawning/kidding/lambing grounds and crucial summer range from April 15 through June 30 (Ely RMP measure WL-6).

323. A.5.75: Where appropriate, restrict permitted activities in crucial winter range from November 1 through March 31 (Ely RMP measure WL-7).

324. A.5.76: Where appropriate, restrict permitted activities within occupied bighorn sheep habitat from March 1 through May 31 and from July 1 through August 31 (Ely RMP measure WL-13).

Game Fish

325. A.5.77: During pipeline construction, BMPs will be implemented to minimize effects to fish from the temporary rerouting of perennial flow if construction occurs in a high water year and water is present. Practices will comply with NDOW and Clean Water Act permitting requirements.

326. A.5.78: Two acres of comparable habitat for every 1 acre of lost habitat will be improved if construction across Big Wash occurs in a high water year and water is present, potentially resulting in a loss of aquatic habitat as a result of project construction.

Paleontological Resources

327. A.6.1: A field survey will be conducted of areas within the ROW identified as having a high potential for paleontological resources, based upon a paleontological records search (following BLM Instruction Manual 2008-009, Potential Fossil Yield Classification System for Paleontological Resources on Public Lands). The field survey will identify if there are any surface exposures containing visible fossils and if there is a potential for buried fossils within the construction footprint. If any important fossils or middens are found during the field survey, a program will be developed and implemented to remove any exposed fossils prior to construction.

328. A.6.2: Areas identified as having a high potential for buried paleontological resources based upon the field survey will be monitored by a qualified paleontologist during construction activities involving ground disturbance, including grading, excavation, and trenching.

329. A.6.3: Any fossils recovered during the field survey or construction monitoring will be prepared in accordance with standard professional paleontological techniques. The fossils will be curated in a BLM-approved facility. A report on the findings and significance of the salvage program, including a list of the recovered fossils, will be prepared following completion of the program. A copy of this report will accompany the fossils, and a copy will be submitted to the Nevada State Museum.

Cultural Resources

330. A.7.1: A Class I literature review will be conducted to identify cultural resources within one mile of the Project centerline. The findings will be incorporated into a report and submitted to the BLM for review and approval.

331. A.7.2: A Class III (intensive) pedestrian survey will be conducted of the Area of Potential Effects for direct effects (Project ROW) to identify cultural resources. Indirect effects will be considered as outlined in the Programmatic Agreement. Cultural resources identified as a result of the survey will be incorporated into a report and submitted to the BLM for review and submittal to the Nevada State Historic and Preservation Officer.

332. A.7.3: All ranch complexes located in the project APEs for visual and direct effects that are more than 40 years old will be inventoried and recorded. SNWA will provide treatment for each such ranch complex that the BLM determines will be adversely affected by the project and meets the criteria for National Register of Historic Places (NRHP) eligibility for state or local significance.

333. A.7.4: Effects on properties eligible to the NRHP will be avoided, as feasible. If effects cannot be avoided, a historic properties treatment plan will be developed to minimize or mitigate Project-related effects. Treatment will be implemented prior to the initiation of construction, upon BLM approval of the plan and consultation in accordance with the Programmatic Agreement.

334. A.7.5: All records and materials resulting from identification and treatment efforts will be curated in accordance with Federal requirements in BLM-approved facilities.

335. A.7.6: If previously unidentified cultural resources, except isolates as identified by a qualified archaeologist, are discovered during construction of the Project, all project ground-disturbing activity within 100 meters (325 feet) of the discovery will cease immediately. SNWA or its Environmental Compliance Representative will secure the location of the discovery to prevent vandalism or other damage. Ground-disturbing activity in that area will be suspended until BLM has evaluated the discovery and, for sites eligible for the NRHP, assured the completion of any necessary mitigation or treatment measures and issued a written Notice to Proceed. Discovered isolates will be reported to BLM in the final monitoring report. Native American human remains found as a result of construction activities, including grading, excavation, and trenching, will be guided by Native American Graves Protection and Repatriation Act procedures and by measures outlined in the Programmatic Agreement.

336. A.7.7: BLM will be notified if Native American human remains, funerary objects, items of cultural patrimony, or sacred objects are encountered during construction or operations. The BLM will ensure that the findings are treated with the respect due such materials. Native American human remains and associated grave offerings found on public land will be handled according to the provisions of Native American Graves Protection and Repatriation Act and its implementing regulations (43 CFR 10). Native American human remains and associated grave offerings found on state or private land will be handled according to the provisions of NRS Chapter 383. All other instances of discovered human remains not addressed by Federal or state laws will be managed as

determined by BLM, in consultation with Nevada State Historic and Preservation Officer, ensuring treatment with respect due such materials.

337. A.7.8: SNWA will ensure that any treatment work that is initiated for adversely affected historic properties will be fully completed, including post-fieldwork analysis, reports, documentation, and curation of artifacts, regardless of the status of the Project. SNWA will provide assurance acceptable to the BLM that such treatment work will be completed, prior to BLM issuance of a Notice to Proceed allowing start of the relevant construction.

Land Use and Range Management

338. A.8.1: SNWA will coordinate in advance of construction with BLM and grazing permit Holders that will be affected, to minimize access conflicts. This coordination will allow for advance planning of grazing practices to ensure continued use of the range.

339. A.8.2: Range improvements, including fence lines and cattle guards, located within the ROW and along designated access roads will be documented prior to the start of construction. If range improvements are temporarily removed or damaged as a result of construction, they will be repaired to BLM standards and be functional upon completion of construction.

340. A.8.3: If livestock is struck by a vehicle directly associated with construction activities, SNWA will ensure that the property owner is compensated for the livestock at market value.

341. A.8.4: If access to livestock watering sources or facilities is temporarily restricted during construction, alternate water source(s) will be made available for the duration that access is restricted. If livestock watering sources or facilities are damaged during construction, they will be repaired to BLM standards and be functional upon completion of construction.

Noise

342. A.9.1: All construction equipment will be equipped with manufacturer's standard noise control devices (i.e., mufflers, acoustical lagging, and/or engine enclosures). All construction equipment will be inspected at periodic intervals to ensure proper maintenance and presence of noise control devices.

343. A.9.2: Pumping stations will be enclosed and utilize design features to minimize operational noise levels. Pressure reducing station valves will be fully enclosed in vaults. Potential facility noise levels will be estimated during facility design, and features incorporated to minimize normal operational noise levels with an objective of 70 dBA or less at 500 feet from the facility.

344. A.9.3: Equipment will be operated conservatively, which means the operator will take special care not to throttle the engine excessively and will keep engine speed as low as possible. In addition, the operator will not leave the equipment running or idling needlessly.

345. A.9.4: When construction occurs in the vicinity of an occupied residence located within 0.5 mile of the project, the occupant will be notified of the construction schedule with a written letter. To the extent possible, construction will occur during daytime hours within 0.5 mile of the residence to minimize the impacts from construction noise.

Although there are no existing campgrounds within 0.5 mile of the project, if a new campground is established signage will be posted indicating the construction schedule.

Air Quality

346. A.10.1: Dust control permits will be obtained for each construction contract in accordance with local, county and/or state requirements. These will be a Dust Control Permit in Clark County, and a Surface Area Disturbance permit in Lincoln and White Pine Counties. The permits will contain a Dust Control Plan listing all construction activities that will occur and the BMPs that will be used to mitigate construction dust. The BMPs will include site-specific dust control measures that are based on each project soil type, specific construction activities, phases and stages. They may include:

    - Watering, pre-watering to maintain moisture or to form crust,
    - Applying clean gravel, paving, applying and maintaining a dust palliative or dust suppressant, covering or enclosing material,
    - Covering or stabilizing soil with vegetation,
    - Using phased construction,
    - Limiting size of ingress and egress points,
    - Limiting size of staging areas,
    - Limiting vehicle speeds on the work site,
    - Cessation of operations when winds make fugitive dust control difficult,
    - Berming or fencing to prevent unauthorized access to disturbed areas, and
    - Application of track-out controls.

347. A.10.2: In accordance with dust control permits, SNWA will conduct air quality readings (wind speed, emissions, etc.). The readings will occur on an as-need be basis, as defined by the appropriate permits. Generally, it is anticipated that measurements will be taken during windy periods and construction practices altered as needed to stay within attainment.

348. A.10.3: Any dust palliative, dust suppressant, or tackifier used within threatened and endangered species habitat or active drainages will be approved by the BLM and USFWS prior to use.

349. A.10.4: Operating permits will be obtained for stationary sources as necessary, such as aggregate rock handling equipment, rock crushers, conveyors, and screening equipment which may emit particulate matter. The operating permit will be obtained from the local county and/or the state, and will include operating requirements, reporting requirements and pollutant emission limits. Fugitive dust control measures will be used during material transfer operations, such as pre-watering, water sprays at drop points and covered conveyors.

350. A.10.5: Operating permits will be obtained for combustion equipment such as stationary internal combustion engines (greater than 250 horsepower) used during construction or operation of the project. The Operating Permit will include operating requirements, reporting requirements and pollutant emission limits.

351. A.10.6: Active construction sites and unpaved roads used for construction will be watered daily or chemical dust suppression approved by the BLM will be applied, as needed, to maintain effective dust control.

352. A.10.7: In periods of excessive wind speed (sustained over 40 miles per hour), excavation and grading activities will be suspended or additional watering applied to maintain dust control.

353. A.10.8: Soil stockpiles will be covered, and a tackifier, water, or other BLM-approved erosion control measure will be applied as needed to maintain effective dust control.

Visual Resources

354. A.11.1: Pumping stations, the water treatment facility/buried storage reservoir, and pressure reducing stations will utilize architectural details and be painted or constructed of colored block to blend with the colors of the surrounding landscape, per BLM Manual 8400 – Visual Resources Management. Architectural details will be approved as part of local building permit approvals.

355. A.11.2: Lighting needed to conduct construction at night will be limited to the basic requirements to conduct the work. Lighting will be shielded, and directed down towards the site and not into surrounding areas or onto roads.

356. A.11.3: Nighttime lighting during project operations at the pumping stations, pressure reducing stations, regulating tanks, and electrical substations will either be manually controlled and used only when occupied or be motion activated if needed for safety and security. Lighting will be shielded and directed downwards and towards the facility site.

357. In the Pahranagat Canyon area, rock faces within the ROW that are cut for construction will be painted with an artificial desert varnish, such as Permeon®, to reduce the visual contrast and restore the appearance of natural desert varnish. Application rates and color tint will be site-specific. Any artificial desert varnish used for visual resource purposes will be approved by the BLM prior to use.

Socioeconomics

358. A.12.1: SNWA will hire local companies and utilize local community resources as available for construction management support services. Bidding of work or services will be in compliance with NRS 332 and 338.

359. A.12.2: SNWA will pay White Pine County for property taxes and other lost revenue associated with purchase of private property in Spring Valley, as identified in an August 2008 agreement. SNWA will provide for a one-time payment in lieu of the County's portion of real property transfer tax on ranches acquired by SNWA, as well as an annual payment to cover other potential revenue impacts. SNWA will pay $69,000 annually for property tax, a one-time $77,000 payment for real-property transfer tax, and $10,000 annually, indexed for inflation to replace any additional revenues.

360. A.12.3: SNWA will use a Project Labor Agreement to cover the construction of the pipeline. Under the Project Labor Agreement, SNWA will require contractors to pay Clark County prevailing wage rates and a ratio of use of union employees as defined.

361. A.12.4: SNWA will work with labor unions and rural governments to encourage development of trade apprenticeship programs, with the objective of developing a local skilled trade base that could be utilized during construction of the project.

Future Groundwater Development

362. B.3.2: Groundwater development in Cave Valley would be subject to staged development, construction of additional monitoring wells, and the establishment of trigger levels.

1) Staged groundwater development in Cave Valley: SNWA would develop its 5,235 afy of permitted water rights in Cave Valley in staged development. A staged-development approach of the Cave Valley permits would allow for the collection of data while ensuring that pumping effects are confined to Cave Valley and do not propagate across the hydrographic basin boundary to springs supporting habitat for the White River spinedace. Specific details regarding the staged development, such as production well locations, would be developed in consultation with, and approved by, the BLM and the USFWS prior to and as part of future tiered Section 7 consultations and NEPA processes. Development phases would be implemented essentially as follows:

a. Stage 1 Development: Pumping pursuant to the water right permit shall be limited to 2,600 afy, which is approximately one-half of the permitted rights. This would provide for a pumping stress that will allow for the collection of reliable transient-state data and effective calibration of a groundwater flow model. Before the increase in pumping associated with Stage 2 development can occur, SNWA would pump at least 85% but not more than 100% of the Stage 1 development amount (2,210 - 2,600 afy) for a period of five years. Data from those five years of pumping would be submitted to the BLM and the USFWS as part of the annual hydrologic-monitoring report prepared by SNWA. The data would be reviewed by the BLM and the USFWS, and SNWA may increase pumping to the Stage 2 development at the end of the fifth year of pumping if the BLM and the USFWS determine the risk to the White River spinedace remains at an acceptable level and/or can be mitigated.

b. Stage 2 Development: Pumping pursuant to the water right permits shall be limited to a total of 3,900 afy, which is the Stage 1 development level plus 1,300 afy. The 1,300 afy is approximately one half of the permitted amount of 2,635 afy remaining after Stage 1 development. This pumping would provide additional pumping stresses that would allow for collection of more reliable transient-state data and continued calibration of the groundwater flow model. SNWA would be required to pump at least 85% but not more than 100% of the combined Stage 1 and Stage 2 development amounts (3,315- 3,900 afy) for a period of five years. Data from those five years of pumping would be submitted to the BLM and the USFWS as part of the annual hydrologic-monitoring report prepared by SNWA. The data would be reviewed by the BLM and the USFWS, and SNWA may increase pumping to the Stage 3 development at the end of the fifth year of pumping if the BLM and the USFWS determine the risk to the White River spinedace remains at an acceptable level and/or can be mitigated.

c. Stage 3 Development: Pumping pursuant to the water right permits shall be limited to the full permitted amount of 5,235 afy. SNWA would continue to conduct monitoring and provide information as required under the Delamar, Dry Lake, and Cave valleys (DDC) Stipulated Agreement, Section 7 consultations, and NEPA processes. Hydrologic and biological monitoring data collected

from the beginning and throughout the life of the project would continue to be provided to the BLM and the USFWS as required by the BLM and USFWS in future tiered NEPA and ESA processes and as described in the DDC Stipulated Agreement.

2) Additional monitoring wells: SNWA would install two (2) additional groundwater monitoring wells to monitor for the potential of groundwater drawdown propagating from southern Cave Valley towards Flag Springs and other springs supporting habitat for the White River spinedace in White River Valley. The specific location of, and details for these wells, would be determined following input by the DDC Stipulated Agreement Technical Review Panel (TRP), and would be approved by the BLM and USFWS.

These two additional monitoring wells would be in addition to the monitoring well required under the Stipulated Agreement, which has been sited by the TRP near Shingle Pass, but has not yet been installed. The above three monitoring wells would be installed such that baseline data could be collected for a minimum of five years prior to the initiation of groundwater pumping in Cave Valley.

This commitment is not intended to preclude the potential for additional monitoring wells, and/or other hydrologic monitoring such as discharge monitoring, that may be determined necessary by the BLM and/or USFWS as part of future tiered NEPA or ESA processes. SNWA anticipates that the BLM and USFWS would conduct site-specific analyses of future groundwater production locations during the tiered NEPA and ESA processes and, as part of those processes, would review existing monitoring to determine if it is adequate or whether additional monitoring is needed.

3) Establishment of trigger levels: SNWA would agree to develop and commit to triggers (early warning indicators) for management action associated· with Project pumping in Cave Valley, to ensure the long-term protection of the White River spinedace. These triggers would be developed in consultation with, and approved by, the BLM and USFWS, and would be developed prior to and included in future Section 7 consultations and NEPA analyses prior to initiation of groundwater pumping in Cave Valley. The triggers would apply to any level of groundwater development, from the initiation of groundwater development through the life of the project.

The purpose of the triggers would be to ensure that groundwater pumping would be modified, reduced, or ceased if necessary to ensure the long-term protection and survival of the White River spinedace. Other management actions could include biological measures, or other site- and species-specific measures as determined necessary and as approved by the BLM and the USFWS. SNWA understands that the triggers may include an agreed process to receive input from external parties with specific expertise, such as the USGS or NDOW.

PROGRAMMATIC AGREEMENT
AMONG
THE DEPARTMENT OF THE INTERIOR,
BUREAU OF LAND MANAGEMENT, NEVADA,
THE NEVADA STATE HISTORIC PRESERVATION OFFICER,
THE ADVISORY COUNCIL ON HISTORIC PRESERVATION, AND
THE SOUTHERN NEVADA WATER AUTHORITY

REGARDING NATIONAL HISTORIC PRESERVATION ACT SECTION 106
COMPLIANCE for the
GROUNDWATER DEVELOPMENT PROJECT
in CLARK, LINCOLN, and WHITE PINE COUNTIES, NEVADA

WHEREAS, the Southern Nevada Water Authority ("SNWA" or "proponent"), a joint powers authority and political subdivision of the State of Nevada, proposes to construct and operate a system of regional water supply and distribution facilities in central and eastern Nevada, through a project known as the Clark, Lincoln, and White Pine Counties Groundwater Development Project ("GWD Project" or "Project" or "Undertaking"); and

WHEREAS, the effects of the Project on historic properties cannot be fully determined prior to approval of the Undertaking, and the Bureau of Land Management ("BLM"), as the lead federal agency, is using the regulations at 36 C.F.R. 800.14(b)(1)(i)–(ii) to create this Programmatic Agreement ("Agreement"), and the signatories hereto have determined that the review of this Project under section 106 of the National Historic Preservation Act of 1966 ("NHPA") (16 U.S.C. § 470f) ("section 106") and the regulations implementing section 106 at 36 C.F.R. Part 800, may properly and appropriately be governed by this Agreement, negotiated and executed as authorized by 36 C.F.R. § 800.14(b); and

WHEREAS, a substantial portion of the GWD Project will be located on public lands managed by the Ely District Office ("BLM Ely") and the Southern Nevada District Office ("BLM Southern Nevada") of the Nevada Bureau of Land Management of the U.S. Department of the Interior ("BLM Nevada") (together, "BLM"); and

WHEREAS, SNWA has applied to BLM Nevada for issuance of rights-of-way ("ROWs") over said BLM-managed lands in order to construct and operate the main conveyance pipeline, power line, and associated facilities which are described as "Tier 1" of the GWD Project; and

WHEREAS, SNWA has indicated details of future phases ("Future Tiers") of the Project, including future groundwater development and the necessary number and locations of wells, are currently unknown and cannot be determined at this time; and

WHEREAS, the BLM has determined that, because Tier 1 and Future Tiers of the GWD Project will require BLM-issued ROWs, this Project is a federally permitted undertaking subject to the requirements of section 106; and

WHEREAS, in accordance with the National Environmental Policy Act ("NEPA"), the BLM is evaluating SNWA's request for ROW for Tier 1 of the GWD Project along with a range of alternatives which are described in the Draft Environmental Impact Statement (DEIS) for the GWD Project and in Appendix B of this Agreement, and the particular alternative the agency will select is unknown at the time this Agreement was executed and thus effects on historic properties cannot be fully determined prior to the approval of the Tier 1 of the Project; and

WHEREAS, BLM has determined that a phased process for compliance with section 106 is appropriate for the GWD Project, as specifically allowed under 36 C.F.R. § 800.4(b)(2) and 36 C.F.R. § 800.5(a)(3), such that completion of the identification and evaluation of historic properties, determinations of effect on historic properties, and consultation concerning measures to avoid, minimize, or mitigate any adverse effects will be carried out in phases, as set forth in this Agreement, as part of planning for and prior to any Notice to Proceed ("NTP") and Undertaking implementation; and

WHEREAS, the BLM is the lead federal agency for compliance with the requirements of section 106 for the GWD Project and BLM has identified the BLM Nevada State Director as the agency official for the Project, having jurisdiction over the Undertaking, and having taken legal and financial responsibility for section 106 compliance in accordance with the Advisory Council on Historic Preservation's ("ACHP") regulations, and further, who may delegate to one or more appropriate BLM officials any responsibility or action required or allowed of an agency official under those regulations; and

WHEREAS, BLM has determined that construction, installation, operation or maintenance of the GWD Project may cause effects to historic properties and accordingly, prior to issuing to the proponent any ROW over BLM-managed lands, BLM will take into account such effects and comply with section 106, through the procedures described in this Agreement, as authorized by and consistent with the BLM's nationwide programmatic agreement titled *Programmatic Agreement Among The Bureau of Land Management, The Advisory Council On Historic Preservation, And the National Conference of State Historic Preservation Officers Regarding the Manner In Which BLM Will Meet Its Responsibilities Under the National Historic Preservation Act*, dated February 9, 2012 ("BLM 2012 NPA"), and the Nevada Protocol Agreement titled *The State Protocol Agreement Between the Bureau of Land Management Nevada and the Nevada State Historic Preservation Office for Implementing the National Historic Preservation Act Protocol (as amended 2012)*, dated February 3, 2012 (the "Nevada Protocol") between the BLM Nevada and the Nevada State Historic Preservation Officer ("SHPO"), all of which documents, or any valid successor to any of these documents, are incorporated herein by reference; and

WHEREAS, BLM acknowledges that it has consultation responsibilities to Indian tribes regardless of whether the tribe(s) execute concurrence to this Agreement; and

WHEREAS, although no part of the GWD Project will be located on tribal lands, in developing this Agreement in compliance with 36 C.F.R. § 800.14(b)(2)(i) and (f), BLM has made a reasonable and good faith effort to identify and seek consultation with every federally recognized Indian tribe that has religious or cultural ties to, or whose direct ancestors had historic or pre-historic religious or cultural ties to the Project area, and that, because of such ties, may attach religious and cultural significance to historic properties that may be affected by the GWD

Project, (16 U.S.C. § 470a(d)(6)(A) ("Properties of traditional religious and cultural importance to an Indian tribe . . . may be determined to be eligible for inclusion on the National Register.")), and BLM has identified under those criteria the following tribes: Chemehuevi Indian Tribe, Colorado River Indian Tribes, Confederated Tribes of the Goshute Reservation, Death Valley Timbisha Shoshone Band, Duckwater Shoshone Tribe, Ely Shoshone Tribe, Fort Mojave Indian Tribe, Hualapai Indian Tribe, Kaibab Band of the Paiute Indians, Las Vegas Tribe of Paiute Indians, Moapa Band of Paiute Indians, Paiute Indian Tribe of Utah (consisting of the Cedar City Band of Paiutes, Kanosh Band of Paiutes, the Koosharem Band of Paiutes, Indian Peaks Band of Paiutes, and Shivwits Band of Paiutes), Shoshone-Paiute Tribes of the Duck Valley Reservation, Te-Moak Tribe of Western Shoshone Indians (consisting of the Battle Mountain Band, Elko Band, South Fork Band, and Wells Band), and Yomba Shoshone Tribe (the "Identified Indian Tribes"); and

WHEREAS, on February 23, 2007, BLM sent to each of the Identified Indian Tribes a letter explaining the nature of the proposed GWD Project, asking each of those tribes to provide any information they have about properties of traditional religious and cultural significance ("PRCSs"), cultural resources, and historic properties which might be affected by the construction and operation of the GWD Project, and providing with that letter Project maps and contact information for the appropriate BLM contacts; and

WHEREAS, the BLM has initiated formal government-to-government section 106 consultation with each Identified Indian Tribe through the appropriate BLM manager(s) contacting that tribal government, or a person authorized by such government to speak for the tribe on section 106 compliance, offering meetings between a BLM manager and that tribe's designated tribal representative and/or governing body to discuss any concerns the tribe may have regarding: (1) the GWD Project; (2) any historic properties and cultural resources, including PRCSs, that may be affected by the Project; and (3) the tribe's desires to protect any such property(ies) from imprudent or unnecessary public identification or disclosure; and

WHEREAS, the BLM reaffirms its offer to consult regarding the GWD Project with each Identified Indian Tribe that desires to do so, in a manner respectful of both tribal sovereignty and the unique government-to-government relationship between Indian tribes and the United States government; and

WHEREAS, in order to assist BLM's tribal consultation and preparation of the DEIS for the Project, BLM had an ethnographic assessment prepared for the GWD Project by persons meeting the Secretary of the Interior's Standards for ethnography, which included interviews and targeted site visits with the assistance and cooperation of the Identified Indian Tribes, in order to identify cultural resources, PRCSs, and potential PRCSs located in the Project's potential Areas of Potential Effects ("APEs") for direct and indirect effects, as described in the Ethnographic Report, the consultants having conducted such studies, interviews and site visits in 2008 and 2009, and prepared an Ethnographic Report on their work, which has been circulated among the Identified Indian Tribes; and

WHEREAS, BLM has provided to each Identified Indian Tribe a draft copy of this Agreement and has invited each such tribe to comment on and suggest changes to any part of the draft, prior to its being finalized or executed; representatives of several tribes having met with BLM

managers to discuss this Agreement at duly noticed Project-specific consultation meetings on January 12, 2011 in Ely, Nevada, and February 15, 2011 in Las Vegas, Nevada; BLM received comment letters regarding this Agreement from several Identified Indian Tribes during the public comment process for the DEIS for the Project, and has considered those comments during the development of this Agreement; and the Identified Indian Tribes have each been afforded a reasonable opportunity to participate in the development and finalization of this Agreement as it may apply to historic properties of religious and cultural significance to each of those tribes; and

WHEREAS, BLM has invited and encouraged each Identified Indian Tribe to be a concurring party ("Concurring Party") for this Agreement; and

WHEREAS, BLM recognizes that (i) BLM has separate duties (apart from those under the NHPA) to consult with Indian tribes regarding a broad range of traditional religious and cultural locations and resources, including gathering areas, prayer sites, and sacred/ceremonial places, which might be affected by the GWD Project; (ii) such duty to consult exists without regard to eligibility of such properties or resources for inclusion on the National Register of Historic Places (NRHP); and (iii) formal and informal consultation regarding the same has occurred and will continue to occur apart from the consultation and other activities contemplated in this Agreement; and

WHEREAS, BLM sought the views of the public in the development of this Agreement by providing notice and information regarding the Undertaking and its anticipated effects on historic properties, solicited public comment and input on the Agreement during and concurrent with the public comment process for the DEIS for the Project, and has considered those public comments during the development of this Agreement; and

WHEREAS, BLM, in consultation with the SHPO, has identified organizations and agencies with a demonstrated interest in the GWD Project and its potential effects to historic properties, and has invited these organizations and agencies to participate in this section 106 compliance, the following organizations and agencies having responded and expressed their desire to participate: Archeo-Nevada Society, Bureau of Indian Affairs, Great Basin National Heritage Area, National Park Service, Nevada Division of State Lands, Nevada Rock Art Foundation, Preserve Nevada, U.S. Fish and Wildlife Service, and White Pine County, and BLM therefore having designated those organizations and agencies as consulting parties in this review ("Invited Consulting Parties"), consulted with them in the development of this Agreement, and invited them to sign this Agreement as Concurring Parties; and

WHEREAS, BLM has invited representatives of local governments with jurisdiction over the area in which direct effects to historic properties caused by the Undertaking may occur to participate in the development of this Agreement, and invited them to sign this Agreement as Concurring Parties; and

WHEREAS, pursuant to the Nevada Protocol, BLM has consulted with the SHPO in the development of this Agreement, and SHPO will be a signatory ("Signatory"); and

WHEREAS, BLM has invited the ACHP to consult in the development of this Agreement and the ACHP has agreed to participate, has consulted on and been involved in the development hereof, and will be a Signatory; and

WHEREAS, this Agreement assigns substantial section 106 compliance duties to Project proponent SNWA, and the BLM has invited SNWA both to consult in the development of this Agreement and to be an invited signatory ("Invited Signatory"); and

WHEREAS, SNWA will ask the U.S. Army Corps of Engineers ("Corps") to issue permits under the Clean Water Act for the GWD Project, the Corps has designated BLM as the lead agency for section 106 compliance of the GWD Project, the Corps will require as part of permit conditions that section 106 compliance for the GWD Project be discharged by the BLM under this Agreement, and the Corps has consulted in the development of this Agreement; and

WHEREAS, SNWA has identified known historic and prehistoric cultural resources within the areas of the Project's APEs for visual and direct effects for Tier 1 of the Project by completing and providing to the BLM a Class I inventory of such areas, the report for which is titled "*The Class I Cultural Resources Inventory for the Southern Nevada Water Authority, Clark, Lincoln, and White Pine Counties Groundwater Development Project, Nevada*" (ICF Jones and Stokes, August 2008) ("Class I Inventory"); and

WHEREAS, this Agreement covers all aspects of the construction, installation, operation and maintenance of the facilities of the Tier 1 and Future Tiers of the GWD Project, as such facilities are referenced herein in Stipulation B and more fully described in Appendix B attached hereto, including facilities identified but not yet designed, or whose location has yet to be determined, and those that may be added in the future, all of which facilities will be treated as described herein;

NOW THEREFORE, the Signatories and Invited Signatory agree that the GWD Project shall be implemented in accordance with the following stipulations in order to take into account the effect of the GWD Project on historic properties.

STIPULATIONS

BLM shall ensure that the following measures are carried out:

A. Roles and Responsibilities

1. Reports. BLM will be responsible for reviewing reports, including but not limited to, inventory reports, recommendations of eligibility for the NRHP, treatment options, and assessments of effects and for completing section 106 compliance for the GWD Project, regardless of the ownership of the lands on which portions or facilities of the Project may be located.

2. Eligibility, Effect, and Treatment/Mitigation. BLM will make determinations of eligibility and findings of effect, and will consult with Identified Indian Tribes, Invited Consulting Parties, and other consulting parties (as defined in Stipulation A.4, below) as part of that process. BLM will document its findings and determinations per 36 C.F.R. § 800.11(e).

BLM will also oversee all cultural resource work; assemble and make all submissions to the SHPO, including reports, determinations of eligibility and effect, and treatment or mitigation, such as data recovery plans; submit copies thereof to Identified Indian Tribes and Invited Consulting Parties as appropriate, and seek SHPO concurrence with all compliance determinations.

a. BLM Ely and BLM Southern Nevada will make determinations regarding NRHP eligibility, Project effects and treatment for their respective areas.

b. BLM Southern Nevada will convey its determinations to BLM Ely.

c. BLM Ely will ensure that all data are compiled and submitted to the appropriate parties and otherwise assure proper conduct of actions described in Stipulations A.1 to A.4.

3. Tribal Consultation. BLM is responsible for consultation with Indian tribes in connection with the GWD Project, including: (1) identifying each federally recognized Indian tribe that attaches religious and cultural significance to historic properties potentially affected by the GWD Project; (2) consulting with all Identified Indian Tribes willing to do so concerning historic properties, including the tribe's eligible PRCSs potentially affected by the GWD Project, and with any other tribes that the BLM identifies in the future; and (3) through consultation, providing all Identified Indian Tribes a full opportunity to identify any concerns about the Project, their views on identification and NRHP eligibility for any historic properties including PRCSs, and allowing that tribe to express its views on the assessment of effects and resolution of adverse effects to such PRCS's that are NRHP eligible, consistent with the procedures contained in the BLM Manual 8120 and the BLM Manual Handbook, H-8120-1: Guidelines for Conducting Tribal Consultation (together, the "BLM 8120 Manual and Handbook"), and, if the BLM 8120 Manual and Handbook are revised or replaced, then consistent with the revised or replaced procedures beginning on their effective date.

4. Other Consulting Parties. BLM will be responsible for identifying individuals and organizations with a demonstrated or known interest and expertise in historic properties and preservation issues in the Project area and consulting with them about the section 106 compliance of the Project ("Other Consulting Parties"). BLM shall invite such persons or organizations it identifies to comment on the Project and participate in the section 106 compliance. BLM may grant consulting party status to any such person or organization that requests such in writing, according to BLM's evaluation of the nature of their legal or economic relation to the Project or affected properties, or their concern for the Project's effects on historic properties.

5. SNWA. SNWA will be responsible for funding, supporting, assisting and conducting, either directly or through qualified consultants or contractors, the procedures for section 106 compliance of the GWD Project as those procedures are provided herein and as directed by BLM, including identification and evaluation of historic properties, records research, inventory, archaeological and above-ground surveys, assessments of effects, treatment as set forth in Stipulation H, required monitoring of construction, and ensuring that all such activities are conducted in a professional manner, consistent with this Agreement and the Nevada Protocol.

a. SNWA will ensure that persons supervising cultural resources work on SNWA's behalf for the Project hold a Nevada BLM cultural resources use permit as appropriate for archaeological inventory and other archaeological investigations.

b. As appropriate, personnel must meet the Secretary of the Interior's Professional Qualifications Standards for Archaeology and Historic Preservation in the relevant area(s) of expertise, such as for archaeology, architectural history, or cultural anthropology.

6. Phased Evaluation. As more fully set forth in Appendix B and the DEIS for this Project, the GWD Project consists of Tier 1 facilities and facilities to be built in Future Tiers. Consequently, SNWA may apply for ROWs, NTPs, or other land-use or Project approvals, for individual GWD Project facilities, or groups or portions of facilities, on a phased basis. The BLM may initiate and complete section 106 compliance for any such phase, and thereafter issue NTPs therefore, separately from, and regardless of the initiation or completion of the section 106 compliance of any other phase of the Project, so long as all such activities are conducted in accordance with this Agreement.

7. Signatories and Concurring Parties. As provided in the ACHP's regulations and herein, the Signatories shall have authority to execute, amend or terminate this Agreement. The Invited Signatory has authority to amend or terminate this Agreement as provided herein. Concurring Parties will concur in the terms of this Agreement and may participate in and benefit here from. The failure or refusal of any party invited to become a Concurring Party will not invalidate or otherwise affect this Agreement. Upon and after execution of this Agreement, each Signatory, Invited Signatory, and Invited Consulting Party, and Identified Indian Tribes that signed or signs this Agreement is a signing party hereto, collectively referred to as the "Signing Parties."

8. Definitions. The definitions set forth in 36 CFR § 800.16 are incorporated herein by reference and apply throughout this Agreement. Any terms not defined in 36 CFR § 800.16 shall carry the meaning provided in Appendix A attached hereto, or if not defined therein then in the BLM 2012 NPA and Nevada Protocol, or if not defined in any of these sources, the BLM Manual 8100 Series.

B. The GWD Project

1. Tier 1. Tier 1 of the GWD Project consists of the main pipeline and associated facilities, as more particularly described in Appendix B attached hereto. The majority of these facilities will be located on public lands managed by the BLM, while some will be located on state-owned or privately-owned lands.

2. Future Tiers. Future Tiers of the Project include groundwater development that will include the installation of groundwater wells, collector pipeline facilities, distribution power lines, and other facilities.

3. Definition of Undertaking. The Undertaking for the GWD Project is defined as the construction, installation, operation and maintenance of those Tier 1 and Future Tier facilities described in Appendix B.

C. Areas of Potential Effects ("APEs")

1. Tier 1 APEs. The BLM, in consultation with the SHPO, has determined the APEs for Tier 1 of the Project.

2. Future Tier APEs. The BLM, in consultation with the SHPO, will determine the APEs for Future Tiers of the Project. For Future Tiers, the BLM will also, as it deems appropriate, seek information from Invited and Other Consulting Parties likely to have knowledge of, or concerns with, historic properties in the Future Tier APEs, as provided in Stipulation A. In addition, for Future Tiers, the BLM will seek to gather information from Identified Indian Tribes, as provided in Stipulation A.3, to assist in identifying PRCSs, recognizing that such Indian tribes may be reluctant to divulge specific information regarding the location, nature or activities associated with such sites or properties.

3. Types of APEs. This Agreement addresses the following four types of effects that may be deemed adverse to historic properties: (1) direct effects; (2) visual, audible, or atmospheric effects; (3) indirect effects; and (4) cumulative effects. Examples of adverse effects in 36 C.F.R. § 800.5(a)(2) could be considered as either direct or indirect as defined in this Agreement. The APEs for the GWD Project cover all areas where the GWD Project may directly, visually, indirectly, or cumulatively cause an adverse effect as defined in this Agreement to one or more historic properties.

4. The APE for Direct Effects. The APE for direct effects, including determination of the APE for direct effects as Future Tiers of the Project are defined, will include the areas within the temporary and permanent ROWs granted by the BLM over public lands, or any area of easement, lease, purchase or ROW granted to SNWA on state, private or other federal lands, where any element of the GWD Project is to be located, or where ground-disturbing activities or construction are planned for the GWD Project, which may include but are not limited to: (1) newly constructed or graded access roads; (2) areas identified for the staging of materials or storage of heavy equipment; and (3) areas identified for the excavation or deposition of borrow material.

5. The APE for Visual Effects. The APE for visual effects, including determination of the APE for visual effects as Future Tiers of the Project are defined, to historic properties will be the area from which above-ground Project facilities less than 100 feet in height may be visible,[1] measured as follows: (1) for linear facilities or roads, an area extending outward one mile on either side of the centerline of the ROW, easement or other right of possession granted for such facility or road; and (2) for non-linear facilities, a circular area with a radius of one mile from the center point of such facility.

[1] No structures in excess of 100 feet in height are currently in the plans for the GWD Project, and none are expected in the future.

6. The APEs for Indirect and Cumulative Effects. The APEs for any indirect or cumulative effects (e.g., areas of possible subsidence caused by groundwater pumping), including determination of the APE for indirect or cumulative effect as Future Tiers of the Project are defined, shall be determined by the BLM, in consultation with the SHPO, taking into account the nature, scope and intensity of the potential indirect or cumulative effects to historic properties.

7. Changes to APEs. In consultation with SHPO, the BLM may modify the APE for a given GWD Project facility as BLM determines is reasonable and appropriate under the terms of this Agreement, consistent with the standards of the BLM 2012 NPA, the Nevada Protocol, and the BLM Manual 8100 Series. BLM will provide reasonable prior notification of such action to all Signing Parties and Identified Indian Tribes.

D. Indian Tribes, Consulting Parties and Public Participation

1. Indian Tribes. The BLM has made a reasonable and good faith effort to identify each Indian tribe that has cultural ties to, or whose direct ancestors had historic or prehistoric ties to, GWD Project areas, such that the tribe may attach religious and cultural significance to historic properties in Project APEs as determined by BLM in accordance with the BLM 8120 Manual and Handbook, and the BLM has listed the tribes identified in a Whereas clause above.

a. BLM shall continue to consult with any Identified Indian Tribe, irrespective of whether or not such tribe(s) signed this Agreement, with regard to any historic property(ies) to which such tribe attaches religious and cultural significance that may be affected by the Project. Such consultations may include site visits that BLM determines are reasonably necessary in the scope of this section 106 compliance.

b. BLM will designate those BLM managers who are authorized to speak for and commit the BLM and consult with Indian tribes for section 106 compliance for the Project. Designated BLM managers will contact the Identified Indian Tribes and request that each such tribe identify to the BLM in writing one or more tribal members whom the tribal government authorizes to speak for and commit the tribe and consult with BLM for section 106 compliance involving the Project.

c. The BLM will seek to determine, with the assistance of each Identified Indian Tribe, whether such Identified Indian Tribe attaches religious and cultural significance to one or more historic properties, including PRCSs that may be affected by the GWD Project, and will further seek in consultation with such tribe to identify and assess the eligibility of each such property.

d. The BLM in its discretion may designate as a consulting party any Indian tribe, even if such tribe does not attach religious and cultural significance to a historic property that may be affected by the Project, pursuant to 36 C.F.R. § 800.2(c)(5). Any Indian tribe that is not designated a consulting

party may nevertheless participate in the section 106 compliance by submitting comments to the BLM regarding the Project, by discussing the Project with BLM representatives, by responding to inquiries from BLM managers or staff, or by providing information and the views of that tribe concerning cultural resources or historic properties that will or may be affected by the Project. Any Indian tribal government, or its authorized representative, that expresses to BLM in writing that the tribe does not wish to participate as a consulting party in the section 106 compliance for the GWD Project shall thereafter not be a consulting party for the Project, except that the tribe may rejoin the section 106 compliance as a consulting party at any time by written notice to the BLM.

e. BLM recognizes that Indian tribes may be reluctant to divulge specific information regarding the location, nature or activities associated with historic, prehistoric or spiritual sites and properties. BLM shall address concerns raised by any tribe about confidentiality pursuant to section 304 of the NHPA (16 U.S.C. § 470w-3). BLM will protect such information from public release to the extent allowed by law.

f. Subject to prior BLM authorization, and as allowed by the relevant Indian tribe(s), SNWA, or cultural resource consulting firms working for SNWA, may make contacts with tribes in order to collect information from such tribes for purposes such as identification of historic properties, including PRCSs, for section 106 compliance, but neither SNWA nor any of its consulting firms shall negotiate or make commitments for the BLM, or otherwise exercise, or give the appearance of exercising, BLM's tribal consultation authority, without BLM having obtained express written consent from the relevant tribal government.

g. BLM has invited all Identified Indian Tribes to execute this Agreement as Concurring Parties. Execution of this Agreement as a Concurring Party does not imply endorsement or approval of the GWD Project itself, or limit or restrict in any way the Concurring Party's right to object to, petition against, litigate against or in any other way express or advance critical or negative comments toward, the GWD Project or its proponent.

2. Other and Invited Consulting Parties. BLM will identify and notify persons and organizations interested in the Project's effects to historic properties as provided in Stipulation A.4. In addition, pursuant to the Nevada Protocol (Section IV.F.), and the regulations at 36 C.F.R. § 800.3(f), and in coordination with the processes of Project review under NEPA, the BLM shall: (1) consider all written requests from such individuals and organizations to participate as Other Consulting Parties; and (2) determine which should become Invited Consulting Parties and the scope of consultation, considering the scale of the Undertaking, the intensity and scope of the Project's effects to identified historic properties of expressed interest to the individual or organization, and the scope of federal involvement in the relevant portion or facility of the Project.

3. Public Participation. The public will be afforded an opportunity to participate in the section 106 compliance of the GWD Project, and the BLM shall seek and consider the views of the public when considering effects to historic properties in this review. The public participation process and any release of information shall be conducted in strict conformance with the confidentiality requirements of section 304 of the NHPA (16 U.S.C. § 470w-3), as well as 36 C.F.R. §§ 800.2(d)(1)–(2) and 800.11(c)(1), (3).

a. Development of this Agreement. The BLM directed SNWA to publish at least once per week for two successive weeks a public notice for the GWD Project in the Las Vegas Review Journal and the Ely Times, newspapers of general circulation in the State of Nevada, describing the general nature and scope of the Project, identifying a contact person from whom copies of this Agreement and detailed descriptions of the GWD Project could be obtained, and sought comment from the public on: (1) this Agreement; (2) the identification and assessment of any historic properties that may be affected by the construction or operation of the GWD Project; and (3) potential effects to any historic properties there from. BLM also included a copy of this Agreement and solicited for public comments in the DEIS for this Project (76 Fed. Reg. 34,097). BLM has considered comments received in the development of this Agreement.

b. Sharing Sensitive Information. At the discretion of the BLM, proprietary or sensitive location or other information about historic properties discovered in connection with the GWD Project may be shared with appropriate parties. The BLM shall ensure appropriate protection of sensitive information deemed confidential in accordance with section 304 of the NHPA (16 U.S.C. § 470w-3). BLM may withhold such information. BLM may also enter into information-sharing agreements with any person, group, Indian tribe or entity prior to the release to that party of sensitive information determined to be entitled to such confidential treatment.

E. Identification of Historic Properties

1. Research Design and/or Historic Context. BLM, in consultation with the SHPO, shall ensure that consulting archaeologists and other qualified professionals perform all necessary section 106 identification activities for the GWD Project, and SNWA or its consultant(s) shall prepare a research design and/or historic context consistent with the Secretary of the Interior's Standards and Guidelines.

2. Role of Tribal Consultation in Identification. The BLM will gather information from each Identified Indian Tribe to assist in identifying PRCSs which may be eligible for the NRHP and which may be affected by the GWD Project, or a portion thereof.

3. Role of Other Consultation in Identification. The BLM will solicit information from Other Consulting Parties likely to have knowledge of, or concerns with, historic properties in the APE that may be affected by the GWD Project, or a portion thereof.

4. Class I Inventory. SNWA has identified known historic and prehistoric resources within the APEs for Tier 1 of the Project by completing the Class I Inventory. BLM will ensure that additional or updated Class I inventory is conducted as necessary for the APEs for Future Tiers or phased identification of historic properties in compliance with this Agreement.

5. Ranch Complexes. BLM will ensure that SNWA will inventory and record all ranch complexes more than 40-years old located in the Project APEs for visual and direct effects. For each such ranch complex that the BLM determines, in consultation with the SHPO, will be adversely affected by the Project and meets the criteria for NRHP-eligibility for state or local significance (Class I surveys have not identified any ranch complex in the Tier 1 GWD Project APEs that is of national significance), SNWA will provide treatment by producing full descriptions and photo documentation per standards in Appendices D and/or G of the Nevada Protocol, as may be applicable. Information obtained as a result of the inventory of ranch complexes will be compiled in a stand-alone report.

6. Class III Survey. To build on the identification efforts from the Class I inventory performed by SNWA, BLM, in consultation with the SHPO, shall ensure that SNWA will complete a Class III survey of the Project APEs for direct effects prior to initiation of construction of a given Project facility or phase.

a. Facilities added to the GWD Project in the Future Tiers that will be located completely within areas previously inventoried by a Class III survey for the Project will not require additional survey or identification work, provided the age of such Class III survey is consistent with the requirements of the Nevada Protocol, except for any assessment of effects, mitigation and treatment that may be required or in discovery situations.

b. Facilities added to the GWD Project in the Future Tiers that will be located partially or totally outside of areas previously covered by a Class III survey for the Project must be the subject of a full Class III survey and section 106 compliance under the terms of this Agreement (including development and implementation of evaluation and treatment options, as appropriate) prior to construction of the relevant facilities.

7 Other Types of Identification. BLM may require that SNWA conduct other types of identification, such as field reconnaissance, windshield surveys, and historical research, within the APEs for indirect and cumulative effects for Future Tiers, in consultation with the SHPO.

8. Geomorphology. During the Class III surveys, in areas within the Project APEs for direct effects, a qualified archaeologist with professional experience in geomorphological analysis will assess the potential for buried cultural materials in areas that will be impacted by construction of any GWD Project facility or other planned excavation deeper than two feet. The assessment will attempt to identify areas that contain thick sequences of post-14,000 B.P. deposits that are of a suitable geologic character to bury and preserve cultural zones and thick enough to hide any surface evidence, considering geomorphological evidence and other surface indicators. If the qualified archaeologist determines that a given area showed indication of a high likelihood of buried significant cultural deposits, the archaeologist will make

recommendations to the BLM for additional geomorphological evaluation, or archaeological testing, as may be reasonably indicated. The BLM, in consultation with the SHPO, will determine if additional geomorphological evaluation or archaeological testing is warranted.

9. Private Ownership. Section 106 compliance and reasonable identification efforts shall be performed regardless of the ownership (public or private) of the lands involved, and SNWA shall be responsible for attempting to gain access to non-BLM lands. Where SNWA cannot gain access to such lands for purposes of identification of historic properties in any of the Project's APEs, identification efforts on those lands shall be deferred until access is gained. Failure to gain access to accomplish necessary or appropriate identification, treatment or mitigation may require BLM to consider alternative treatment or mitigation, or to allow deferral of such until access is gained, as provided in 36 C.F.R. § 800.4(b)(2).

10. Disturbed or Dangerous Conditions. In any area in the APEs for direct effects where the ground has been heavily disturbed, or in areas where access is prevented or may be dangerous to survey personnel, the BLM may exempt those portions of the APEs from Class III survey requirements. Notification of these exempted areas will be submitted to SHPO for their information.

11. Non-Linear Sites. Non-linear sites extending out of the APEs for direct effects shall be recorded in their entirety with the exception of very large sites such as town sites, mining complexes, continuous stream/lake terrace sites, or extensive prehistoric quarries or habitation sites. These exceptions shall be approved in advance by BLM Ely and BLM Southern Nevada districts, which will consult with other BLM districts as appropriate.

12. Linear Resources. Linear resources (e.g., railroads, roads, trails, ditches, utility lines, etc.) crossing and extending beyond the APEs for direct effects shall be inventoried 100 meters beyond the project boundaries in each direction, and shall be either recorded or not according to the following criteria:

a. Roads or linear features with: (i) no mention in the BLM Field Office records or not shown on General Land Office ("GLO") plats or other historic maps; (ii) no associated features or dateable artifacts; or (iii) which have lost all integrity through extensive blading, will not be recorded;

b. Roads, linear features, or other resources included on GLO plats but which are not associated with features or dateable artifacts, and do not appear to be significant on the basis of archival data shall be treated as "isolated linear segments." These resources shall be recorded in tabular form and collected data shall include a minimum of two (2) separate GPS points at each end of the linear feature within the APE. Additional data regarding specific "isolated linear segments" encountered during report preparation will be recorded on Intermountain Antiquities Computer System ("IMACS") site forms;

c. Roads or other linear features included on GLO plats (especially named roads) or features known from other archival data to be potentially significant, or which have associated features or dateable artifacts, shall be recorded on IMACS site forms.

13. Crew Chiefs and Supervisors. Archeological crew chiefs and higher-level supervisors will be familiar with the inventory research design and locations of expected historic resources identified in the Class I overview. SNWA will document in the Class III reports efforts made to locate expected but not-encountered sites.

14. Phased Identification and Evaluation. The BLM may use a phased process to conduct identification and evaluation efforts for the review of this Project, because alternatives under consideration for the Project consist of corridors and large land areas, because Future Tiers of the Project as described in Appendix B have not been defined, and because access to some properties is restricted. All identification and evaluation efforts determined and required by BLM as provided in Stipulation K for a given Project portion or area shall be completed prior to issuance of a NTP for construction on that portion or in that area.

15. Deferral of Final Identification and Evaluation. BLM may defer final identification and evaluation of historic properties for alternatives or inaccessible areas as provided herein. SNWA shall first establish the likely presence of historic properties within the APEs for each such alternative or inaccessible area through background research, appropriate consultation and an appropriate level of field investigation as determined by BLM, taking into account the number of alternatives under consideration, the magnitude of the Undertaking and its likely effects, and the views of the SHPO. As specific aspects or locations of an alternative are refined, or as access is gained to an inaccessible area, BLM shall proceed with the identification and evaluation of historic properties in accordance with this Agreement. All identification and evaluation efforts for a given Project portion or area that are deferred under this Stipulation shall be completed prior to issuance of a NTP for construction for that portion or area as provided in Stipulation K.

a. BLM may also use a phased process for identifying and evaluating PRCSs. The Ethnographic Assessment, which BLM used as a resource in the agency's efforts to identify historic properties including PRCSs, identified 76 such locations, 48 of which are in the vicinity of a Project alternative (Appendix B). BLM recognizes that additional PRCSs may be identified during ongoing consultation or through additional research. BLM will further identify and evaluate those locations for NRHP eligibility using a phased process, if the location is in the APE(s) of an alternative ultimately selected for additional Project facilities.

b. Four PRCSs identified in the Ethnographic Assessment or otherwise are within the Tier 1 APEs: Snake Creek Burial Cave, Spring Creek Spring, *Basonip* Village, and Kane Springs. If these PRCSs are in the alternative selected by BLM, these sites must be further defined and be evaluated for NRHP eligibility. No NTP for activities affecting these sites will be

issued until the section 106 compliance process, as set forth in this Agreement, is complete.

F. Evaluation of NRHP Eligibility

1. Evaluation Prior to Ground Disturbance. BLM, in consultation with the SHPO, shall ensure that all cultural resources identified within the ROW are evaluated for eligibility to the NRHP prior to the initiation of ground-disturbing activities that may affect those historic properties. Eligibility will be determined in a manner compatible with the Nevada Protocol.

2. Evaluation of Properties Visually Affected. For those resources within the APE for visual effects, which have not previously been evaluated for eligibility in the NRHP, except for resources that are or may be eligible for the NRHP only under eligibility Criterion D, SNWA will document, assess, and make recommendations to the BLM regarding the eligibility of such inventoried resources for the NRHP under Criteria A, B and C.

3. Evaluation Data. To the extent practicable, eligibility determinations shall be based on inventory information. If the information gathered in the inventory for archaeology is inadequate to determine eligibility, BLM or GWD Project contractors may conduct limited subsurface probing, or other evaluative techniques, to determine eligibility. Subject to approval by BLM, evaluative testing of archaeological sites is intended to provide the minimum data necessary to define the nature, density, and distribution of materials in potential historic properties, to make final evaluations of eligibility, and to devise treatment options responsive to the information potential of the property.

4. Withdrawal or Disapproval of Project. Should the BLM disapprove Tier 1 or Future Tiers ROW applications, or should SNWA abandon the GWD Project and withdraw the ROW application(s) prior to BLM approval, then any further evaluative testing shall cease, except for completing all post-fieldwork activities that are ongoing as of the date of the withdrawal or disapproval, as determined by BLM.

5. Tribal Consultation. BLM shall seek to consult with each Identified Indian Tribe in accordance with the BLM 8120 Manual and Handbook, concerning the NRHP eligibility of any potentially eligible cultural resource that would be affected by the Project, to which that Indian tribe attaches religious and cultural significance.

6. Eligibility. If BLM determines, in consultation with SHPO, that a property not already listed in, or determined eligible for, the NRHP meets the criteria for NRHP eligibility that property shall be considered eligible for purposes of this section 106 compliance. If BLM determines, in consultation with SHPO, that the eligibility criteria are not met for a given property, that property shall be considered not eligible for the NRHP.

7. Disagreements Regarding Eligibility. Any disagreements regarding eligibility shall be handled in accordance with Stipulation O.3.

8. Consulting Party and Public Comments. Other Consulting Parties and members of the public may at any time submit to BLM comments regarding conclusions,

recommendations or consensus determinations made pursuant to this Stipulation F regarding NRHP eligibility for properties potentially affected by the GWD Project.

G. Assessment of Effects

1. Assessment. BLM, in consultation with the SHPO and any Identified Indian Tribe, shall apply the criteria of adverse effect to historic properties within the Project APEs in accordance with the terms of 36 C.F.R. § 800.5. BLM shall consider any views concerning such effects that have been provided by Other Consulting Parties and the public.

2. Phased Assessment. BLM may use a phased process in applying the criteria of adverse effect, consistent with phased identification and evaluation efforts provided in Stipulations E.14 and 36 C.F.R. § 800.5(a)(3), because alternatives under consideration in this review consist of corridors and large land areas, the alternative for Tier 1 of the Project has not yet been selected, Future Tiers of the Project as described in Appendix B have not yet been defined, and access to some potentially affected properties may be restricted.

H. Treatment of Adversely Affected Historic Properties

1. Consultation. In avoiding, minimizing or mitigating adverse effects to historic properties from the GWD Project, or any facility or portion thereof, BLM, in consultation with SHPO, any Identified Indian Tribe that attaches religious and cultural significance to the adversely affected historic property, and Invited and/or Other Consulting Parties, shall develop and evaluate alternatives or modifications to the undertaking that could avoid, minimize or mitigate adverse effects on historic properties consistent with the terms of 36 C.F.R. § 800.6. All treatment for adversely affected historic properties shall be done in a manner consistent with the Nevada Protocol.

2. Preference for Avoidance. BLM, in consultation with the SHPO, shall ensure that, to the extent reasonably practicable, SNWA will avoid effects to historic properties through project design, redesign, relocation of facilities, or by other means.

3. Historic Properties Treatment Plan ("HPTP"). When avoidance is not feasible or reasonably practicable, BLM, in consultation with the SHPO and in coordination with SNWA, affected Identified Indian Tribes and Invited and/or Other Consulting Parties, shall ensure that an appropriate historic properties treatment plan ("HPTP") is developed to minimize, mitigate or otherwise resolve Project-related effects to historic properties.

a. Consistent with this Agreement, the HPTP will establish an overall approach for mitigation and treatment, identifying key aspects and issues, including programmatic NRHP eligibility issues, post-construction data recovery, tribal consultation and participation, and reporting measures, that will prove crucial in its implementation. The HPTP will review site significance issues and research domains for both prehistoric and historic-era resources, and will identify data recovery treatment options based on site type for prehistoric resources, and theme-specific property type for historic-era resources. The HPTP will present both pre- and post-construction data recovery plans, the latter recognizing that post-

construction data recovery is appropriate for historic properties or portions of historic properties that will not be directly impacted by the Project. The HPTP will propose field and laboratory methods, and will also address cultural resources monitoring procedures and unanticipated discovery situations. The discovery plan in the HPTP will be consistent with, but may expand on, the procedures provided herein and describe the identification, protection, recording, treatment, notification, and reporting procedures associated with unanticipated archaeological finds. The discovery plan will provide a separate discussion for discovery situations involving human remains.

b. For properties eligible under Criteria A through C (36 C.F.R. § 60.4), mitigation and treatment activities other than archaeological data recovery will be considered in the HPTP including, but not limited to, Historic American Building Survey/Historic American Engineering Record/Historic American Landscapes Survey (HABS/HAER/HALS) or other appropriate recordation or preparation of an oral history, historic markers, exhibits, interpretive brochures or publications, or similar historic or educational materials. Where appropriate, the HPTP shall include provisions describing the content and number of copies for a publication of treatment materials for the general public.

4. Criteria for Data Recovery. When data recovery is required as a condition of approval, BLM, in consultation with SHPO, shall develop, or ensure that SNWA develops treatment plans that are consistent with the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation, as revised and updated and *Section 106 Archaeology Guidance* (ACHP, 2009).

5. Curation. BLM shall ensure that all records and materials resulting from identification and treatment efforts are curated in accordance with 36 C.F.R. Part 79, in BLM-approved facilities in Nevada if possible, or if applicable, in accordance with NAGPRA regulations set forth in 43 C.F.R. Part 10, or any Plan of Action ("POA") pursuant to and in accordance with those regulations that may be executed after this Agreement. All materials slated for curation will be maintained in accordance with 36 C.F.R. Part 79 until the relevant final treatment report is complete and collections are curated or returned to their owners. The BLM and SNWA shall encourage private owners to donate collections obtained from their lands to an appropriate BLM-approved curation facility in Nevada if possible. For ease of future research, BLM will encourage all artifacts collected from this Project to be curated at the same facility in Nevada if possible.

6. Treatment of Properties Visually Affected. For those historic properties which are in the visual APE that the BLM determines, in consultation with the SHPO, are eligible for the NRHP under one or more of those three criteria and are either previously undocumented or insufficiently documented, SNWA will record each such property with full descriptions and photo documentation to current standards, including SHPO standards or Appendices D and/or G of the Nevada Protocol, as may be applicable.

7. Tribal Consultation. BLM shall consult with each Identified Indian Tribe in accordance with the BLM 8120 Manual and Handbook, and with the SHPO, to develop treatment options for adversely affected historic properties, including PRCSs.

8. Final Reports. BLM shall ensure that all final reports resulting from treatment will be provided to the SHPO, and made available to Identified Indian Tribes that attach religious and cultural significance to the treated property, and to Concurring Parties. All such reports shall be consistent with contemporary professional standards and the Department of Interior's Format Standards for Final Reports of Data Recovery Programs (42 Fed. Reg. 5,377–79).

I. Unanticipated Discoveries

1. Construction-Related Unanticipated Discoveries.

a. Authorized Personnel. Prior to initiating construction of the GWD Project or portion thereof, SNWA will provide to BLM, and to other Signing Parties that so request, a list of its employees and contractors authorized to halt ground-disturbing activities in specified areas in discovery situations. At least one such authorized person will be present in the area during all ground-disturbing activities for the GWD Project, and that person will be responsible for notifying BLM of any qualifying discoveries.

b. Cessation of Activities. If previously unidentified cultural resources, other than isolates as identified by a qualified archaeologist, are discovered during construction of the GWD Project, all Project ground-disturbing activity within 100 meters (325 feet) of the discovery shall cease immediately, SNWA or its authorized representative shall immediately secure the location of the discovery to prevent vandalism or other damage. Ground-disturbing activity in that area shall be suspended until BLM has evaluated the discovery, notified Signing Parties, assured the completion of any necessary mitigation or treatment measures for historic properties, and issued a written NTP.

c. Notification. SNWA shall notify BLM of the discovery immediately either by written or electronic communication (email or fax), or orally followed by written or electronic confirmation.

d. Evaluation. Upon notification of a discovery, BLM shall make an assessment of the discovery's significance, integrity and eligibility for the NRHP (including pertinent criteria) within 48 hours of notification, or sooner if feasible. The BLM may make the eligibility assessment, and a determination of appropriate course of action, based upon a concise preliminary description and recommendation for the discovery from a qualified archaeologist. Alternatively, the BLM, in consultation with SHPO, may assume the newly discovered property is eligible for the NRHP and will specify the pertinent NRHP significance criteria.

i. If BLM determines the discovery is not a historic property, BLM shall notify SHPO and Identified Indian Tribes that the BLM determines may attach traditional religious and cultural significance to the affected property of the discovery by email, fax or telephone within 48 hours of discovery, including BLM's determination of non-eligibility for the NRHP. The SHPO and Identified Indian Tribe(s) shall have 48 hours to respond to BLM to notification with any objections. The BLM must take any objections received during that time into account in determining how to proceed.

ii. If BLM determines the discovery is a historic property, BLM shall notify SHPO and Identified Indian Tribes that the BLM determines may attach traditional religious and cultural significance to the affected property of the discovery by email, fax or telephone within the 48 hours of discovery including BLM's determination of eligibility for the NRHP (including significance criteria, if eligible), and of BLM's determination of options for avoidance, minimization of adverse effects and proposed actions to resolve adverse effects to historic properties. The SHPO and Identified Indian Tribe(s) shall have 48 hours to respond to the notification from BLM. The BLM shall take into account comments and recommendations received within the specified time period from SHPO and Identified Indian Tribe(s) regarding eligibility and proposed actions, and then determine the appropriate actions to avoid, minimize or resolve adverse effects.

e. Implementation of Measures to Avoid, Minimize or Resolve Adverse Effects. The BLM shall ensure those measures it deems appropriate to avoid, minimize or resolve adverse effects are implemented. The SHPO and Identified Indian Tribes that the BLM determines may attach traditional religious and cultural significance to the affected property shall be provided with a report of actions taken after completion.

f. Resumption of Activities. After notification and consideration of comments from SHPO, SNWA, and affected Identified Indian Tribes, the BLM shall ensure actions to resolve adverse effects to any discovered historic property are implemented. The BLM shall provide to the SHPO and Identified Indian Tribe(s) a report of the actions after completion.

i. After notification and consideration of comments from SHPO and affected Identified Indian Tribes, if BLM determines the discovery does not involve a historic property, the BLM shall issue written authorization for resumption of activities.

ii. BLM may request or gather additional information as it deems necessary, and may approve the restarting of some or all suspended

activities based upon the information and recommendation received, and BLM may condition the restarting of suspended activities as it deems appropriate.

iii. Suspended construction activities in the area of the discovery may resume when BLM notifies SNWA either by written or electronic communication (email or fax), or orally followed by written or electronic confirmation, that objectives of the fieldwork phase of mitigation are achieved and activities can resume.

g. Reporting.

i. For discovered isolates, SNWA will provide documentation to BLM in the final monitoring report.

ii. For unanticipated discoveries, the reporting archeologist will prepare and transmit to BLM a written report of the discovery and recommendations within 30 days or as otherwise determined by the BLM.

iii. BLM shall require that reports of mitigation efforts are completed in a timely manner and that they conform to the standards of the Department of Interior's Format Standards for Final Reports of Data Recovery Program (42 Fed. Reg. 5,377–79). Drafts of such reports shall be submitted to the SHPO, for a 45-day review and comment period as stipulated in Stipulation J and as provided in the Nevada Protocol. BLM shall submit final reports to the SHPO, Identified Indian Tribes that attach traditional religious and cultural significance to the affected property, and Concurring Parties for informational purposes.

2. Post-Construction-Related Unanticipated Discoveries.

a. Maintenance and Repair. If previously unidentified cultural resources, except isolates as identified by a qualified archaeologist, are discovered as a result of ground-disturbing maintenance and repair within the GWD Project ROWs, the process identified in paragraphs I.1.a through I.1.g above will be implemented.

b. Groundwater Development. If unanticipated indirect effects to cultural resources known or determined to be historic properties are indicated from SNWA's groundwater development (e.g., possible subsidence caused by groundwater pumping), BLM shall determine whether such effects are reasonably attributable to the GWD Project. If adverse effects to cultural resources known or determined to be historic properties are determined by BLM to be attributable to the GWD Project, BLM shall conduct consultation seeking to avoid, minimize, mitigate or resolve those adverse effects.

J. Procedures and Time Frames

1. SNWA Submissions to BLM. BLM shall review and comment on any report submitted by SNWA within 35 calendar days of receipt, unless BLM agrees to comment in a shorter time, or requests additional time. BLM may issue a NTP for a given GWD Project element or portion immediately after BLM finds that the conditions in Stipulation K are met.

2. Final Report Deadlines. Unless otherwise agreed, SNWA shall submit final reports to BLM by the following deadlines:

a. A draft final report of all identification/inventory and evaluation efforts within nine (9) months of the completion of the fieldwork associated with the activity.

b. A draft final report of all supplementary evaluation activities within twelve (12) months of the completion of the fieldwork associated with the activity.

c. A draft final report of all treatment or other treatment activities within twenty-four (24) months of the completion of the fieldwork associated with the activity.

3. SHPO Consultation. Except for unanticipated discovery situations, BLM shall submit the results of all identification or evaluation reports, treatment plans, and final draft reports to the SHPO for a 45-calendar day review and comment period, measured from the date of SHPO receipt. This review period includes 10 calendar days for SHPO to review and consider comments provided by Identified Indian Tribes and Concurring Parties, as identified in Stipulation J.4, below.

4. Identified Indian Tribes and Concurring Parties. Concurrent with any SHPO submission (except in unanticipated discovery situations), BLM shall provide copies of draft reports to Identified Indian Tribes and Concurring Parties which have information-sharing agreements with BLM Nevada and attach religious and cultural significance to the affected property, for a 35-calendar day review and comment period. BLM will consider any comments received within the 35-calendar-day comment period, and will provide copies of those comments to SHPO. BLM shall provide to all Identified Indian Tribes and Concurring Parties copies of the final report within 45 days after it is received from SNWA, consistent with Stipulation D.3.b.

5. Timeline for Curation. Materials and artifacts to be curated (defined in Stipulation H.5) will be sent to a facility in Nevada, if possible, approved by the BLM that reasonably meets the procedural, security and quality standards in 36 C.F.R. Part 79, or to the owner, within 15 days of when the final report associated with that activity is accepted by the BLM. If materials and artifacts are subject to NAGPRA, BLM will manage those materials and artifacts in accordance with 43 C.F.R. Part 10, or according to any applicable POA executed after this Agreement. SNWA will provide to BLM copies of records confirming curation or transfer of possession within five business days of acceptance by the curatorial facility or owner.

K. Notices to Proceed ("NTPs")

When the BLM issues a ROW for the GWD Project or for any facility, element or portion thereof, the ROW issued for such application shall provide for the issuance of a NTP. The NTP may be issued for the entire Project or portions thereof, after fulfillment of one of the following conditions:

1. BLM, in consultation with the SHPO, determines that no historic properties will be affected by construction of the facility or project portion described in the ROW application; or

2. BLM, in consultation with the SHPO, determines that construction of the GWD Project facility or Project portion described in the ROW application will have no adverse effect to historic properties; or

3. BLM, in consultation with the SHPO, Identified Indian Tribes, and Concurring Parties, determines that an appropriate treatment plan for the facility or portion described in the ROW application has been implemented, and the following have all occurred:

   a. The fieldwork phase of the treatment plan has been completed; and

   b. BLM has accepted a summary description of the fieldwork performed and a reporting schedule for that work; and

   c. BLM shall provide a copy of the summary to SHPO; and

   d. The SHPO shall review the summary. If the SHPO concurs or does not respond within two working days of receipt, BLM shall assume concurrence and issue the NTP.

L. Monitoring and Tribal Monitoring

1. BLM/SHPO Monitoring. BLM and the SHPO may monitor actions carried out pursuant to this Agreement. BLM at its discretion may also allow monitoring by Invited or Other Consulting Parties.

2. Archaeologist Monitoring. BLM, in consultation with the SHPO, may identify areas of construction for facilities or portions of the Project that will require monitoring by a BLM-approved archaeologist. Areas requiring archeological monitoring shall be identified in the Class III survey and the geomorphological study. Work in areas so identified cannot proceed without a monitor in place, and the monitor shall be empowered to stop work as necessary to protect historic properties.

3. Tribal Monitoring. In recognition of requests by several Identified Indian Tribes in the development of this Agreement to provide for tribal monitoring, an Identified Indian Tribe which attaches religious and cultural significance to a historic property in the APEs for direct effects, including eligible PRCSs that may be directly and adversely affected by construction of the GWD Project in Tier 1 or Future Tiers, will be provided an opportunity to monitor that construction. A tribal monitor shall be designated by an Identified Indian Tribe which attaches

religious and cultural significance to a historic property in the APEs, and shall satisfy safety requirements and other appropriate qualifications. Tribal monitors shall report any concerns to the on-site archaeologist or the SNWA employee or contractor authorized to halt ground-disturbing activities. Tribal monitors shall provide weekly written reports to the BLM.

M. Contact Persons

BLM will maintain a current list of contact persons for the Signing Parties and Identified Indian Tribes and will provide it to any of the parties if requested.

N. Other Considerations

1. Qualified Persons to Perform or Supervise Work. BLM shall ensure that historic, architectural, ethnographic, and archaeological work conducted pursuant to this Agreement is carried out by, or under the direct supervision of, persons meeting qualifications set forth in the Secretary of the Interior's Professional Qualification Standards or who have been permitted for such archaeological work on public lands by the BLM.

2. Personnel Shall Not Engage in Illegal Collection or Damage to Historic Resources. SNWA, in cooperation with BLM and the SHPO, shall ensure that all its personnel, and all the personnel of its contractors and their subcontractors, that will perform work on the GWD Project, including any visitors, are directed not to engage in the illegal collection, damage or vandalism of historic and prehistoric resources. SNWA shall cooperate with the BLM to ensure compliance with Archaeological Resources Protection Act (ARPA) for facilities and portions of the Project located on public lands, and with Nevada Revised Statutes 381.195 to .227 (Nevada State Antiquities Law of 1959) for facilities and portions of the Project located on state lands.

3. Mitigation Costs and Possible Enforcement Action for Unauthorized Damage to Historic Properties. Should damage to historic properties occur during the period of construction, installation, operation or maintenance of the Project due to any unauthorized intentional, inadvertent or negligent actions on the part of the SNWA, their employees, contractors or any other Project personnel, SNWA shall be responsible for costs of required rehabilitation or mitigation. In addition, BLM may refer or pursue any investigative or enforcement action allowed or required under federal law, including under ARPA.

4. SNWA's Responsibilities in Case of ROW Application Withdrawal Prior to Decision. If the BLM disapproves an application(s) for a ROW, or if SNWA abandons or withdraws any pending application for ROW prior to a BLM decision, then SNWA shall incur no further expense for evaluation or treatment for any cultural properties, except SNWA must complete, and submit a report for any inventory, treatment or post-fieldwork activities already initiated and ongoing at the time of the withdrawal, termination or disapproval, as identified by the BLM. In the case of inventory, a complete report with completed site forms would be required. For evaluation, mitigation or treatment, a report on the completed work with full analysis and curation of materials would be required.

5. SNWA's Responsibilities in Case of Project Termination after Issuance of NTP(s). In the event SNWA terminates the GWD Project after BLM has issued one or more

NTPs, SNWA shall complete and submit reports for any inventory or treatment activity already initiated and ongoing for a given Project portion at the time of termination where such completion is expressly required under the terms of the applicable NTP.

6. Activities Outside the ROW. Identification, evaluation, assessment, mitigation and treatment efforts may extend beyond the geographic limits of the ROW as described herein when the historic property being considered extends beyond the ROW, and that area is reasonably, legally and safely accessible to SNWA and its consultants for any such activity. In most cases, no identification, evaluation, assessment, mitigation or treatment efforts will be required in areas outside of the ROW, beyond that necessary to review records and gather historic data for the completion of the section 106 compliance process as provided herein. In cases involving historic properties eligible for the NRHP under Criteria A, B, or C, mitigation may extend beyond the ROW or easement boundary, but only as provided herein, and such treatment or mitigation may be conducted after commencement or conclusion of construction, as BLM in its discretion may approve.

7. Discovered Human Remains or NAGPRA Cultural Items. The BLM shall ensure that any human remains, funerary objects, items of cultural patrimony, or sacred objects, encountered during the GWD Project are treated with the respect due such materials. Native American human remains and associated grave offerings found on federal land will be handled according to the provisions of NAGPRA and its implementing regulations (43 C.F.R. Part 10), or any applicable POA pursuant to and in accordance with those regulations executed after this Agreement. Native American human remains and associated grave offerings found on state or private land will be handled according to the provisions of Nevada Revised Statutes Chapter 383 (Historic Preservation and Archaeology). All other instances of discovered human remains not addressed by Federal or state laws will be managed as determined by BLM, in consultation with SHPO, ensuring treatment with respect due such human remains and related materials.

O. Dispute Resolution

1. Consultation to Resolve Disputes. If any Signing Party to this Agreement objects to any activities proposed pursuant to the terms of this Agreement, BLM shall consult with the objecting party, SNWA, and the other Signatories to resolve the issue.

2. State Director. The BLM Nevada State Director will have the authority to make a final determination for any objection (except for disagreements on NRHP eligibility, findings of effect, or treatment) that cannot be resolved by local consultation.

3. Keeper of the National Register ("Keeper"). Disagreements on recommendations, conclusions or consensus determinations, of NRHP eligibility that cannot be resolved through the dispute resolution process will be resolved by the Keeper. The Signatories acknowledge that any Identified Indian Tribe that disagrees with the BLM and SHPO determination regarding NRHP eligibility may ask the ACHP to request BLM obtain a determination by the Keeper.

4. ACHP. Issues relating to BLM's findings of effect, resolution of adverse effects or their treatment, which cannot be resolved with BLM to the satisfaction of the disputing party(ies), may be referred to the ACHP for review and comment.

5. Pending Resolution. Pending resolution of a dispute addressed under this stipulation, the Signatories shall continue with those actions under this PA that are not the subject of dispute.

P. Two-Year Review Discussions

1. Schedule of Review Discussions. BLM shall invite the Signing Parties to discuss this Agreement at least once every two years on or about the anniversary of the effective date of this Agreement, or more frequently as may be determined by the BLM to be necessary or appropriate. At the request of a Signing Party, the BLM may convene a discussion in less than two years. Discussions may be deferred if there are no active cultural resources-related activities associated with the Project, as agreed by the Signatories.

2. Purpose of Review Discussions. Each such discussion will assess and evaluate the performance of this Agreement in: (1) completing the section 106 compliance process for the GWD Project as provided in this Agreement; (2) identifying and protecting historic properties, including historic properties or PRCSs of religious and cultural significance to one or more Identified Indian Tribes, potentially affected by the Project; and (3) facilitating the participation and involvement of Identified Indian Tribes, interested parties and the public, and further, such discussion may address the possible improvement or streamlining of procedures under this Agreement, or any other issues of concern or implementation regarding this Agreement.

Q. Amending This Agreement

Any Signing Party that determines that any term of this Agreement will not be, is not being, or cannot be carried out, or that sees the need for an amendment to improve or clarify the functioning of this Agreement or for any other reason, may consult with the Signatories to attempt to develop an amendment or agree on another way to resolve the issue. If after 30 days from initiation of consultation, agreement among the Signatories on an amendment cannot be reached, consultation on the amendment may be abandoned with no effect on this Agreement, or any Signatory or Invited Signatory may terminate the Agreement upon 30-day's written notification to the other Signatories as provided in Stipulation R. This Agreement will remain in effect, and the section 106 compliance process for the GWD Project will be unaffected, during the period of consideration of a proposed but unadopted amendment.

R. Terminating This Agreement

Any Signatory or Invited Signatory to this Agreement may terminate the Agreement by providing 30-days written notice to the other Signatories and Invited Signatory, provided that the Signatories and Invited Signatory shall consult during the period prior to termination to seek agreement on amendments or other actions that would avoid termination.

S. Execution and Duration

1. Effect. Execution and implementation of this Agreement evidences that the BLM has satisfied its section 106 responsibilities for all actions associated with the construction, installation, operation or maintenance of the GWD Project.

2. Alternative. In the event that the Signatory or Invited Signatory does not carry out the requirements of this Agreement, or if it is terminated, section 106 compliance for any portion of the GWD Project requiring a BLM ROW shall be governed by the provisions of the Nevada Protocol.

3. Effective and Expiration Dates. This Agreement shall become effective on the date on which the Agreement has been executed by all Signatories, and shall remain in effect up to a term of 50 years, or until terminated as provided in Stipulation R. This Agreement shall be reviewed a minimum of every 10 years as described in Stipulation S.8 below. The failure or refusal of any Invited Indian Tribe or Invited Consulting Party to sign this Agreement will not invalidate or otherwise affect this Agreement.

4. Signatures in Counterpart. This Agreement may be signed in counterparts and the executed Agreement, and each signature, will be effective and binding just as if all Signing Parties had signed the same document. Each Signatory and the Invited Signatory shall transmit five counterpart copies of the respective signature page signed by that party to BLM. BLM will provide the ACHP with the Agreement and an original copy of other Signatories and the Invited Signatory signature pages. The ACHP may then execute the Agreement and shall transmit four copies of its signature page signed by the ACHP to BLM.

5. Copies of Signature Pages. After all Signatories and the Invited Signatory have signed the final Agreement, BLM shall prepare and distribute to each Signatory, other than the ACHP, and to the Invited Signatory one copy of the final Agreement containing the original counterpart signatures of all Signatories and the Invited Signatory.

6. Signatures by Concurring Parties. Each Concurring Party may sign a counterpart copy of the final Agreement and transmit one copy of the Agreement originally signed by that party to BLM. BLM will notify each Signing Party when any Identified Indian Tribe or Invited Consulting Party becomes a Concurring Party by signing this Agreement. BLM will transmit to each Signing Party a copy of this Agreement containing photocopy(ies) of the signatures of all Signing Parties as of that time. A Concurring Party can terminate its participation and concurrence in this Agreement by notifying BLM in writing. BLM will notify each Signing Party of that termination.

7. Master Copy. BLM will maintain at least one master copy (or set of copies) of this executed Agreement with all of the original signatures of all Signing Parties. BLM shall prepare and distribute to all Signing Parties a copy of the full Agreement containing a copy of each signed signature page of any of the Signing Parties.

8. Review. The Signatories shall review this Agreement at a minimum of every ten (10) years to determine if any amendments are necessary. Six months before each tenth anniversary of the execution of this Agreement, BLM will invite the Signing Parties, Identified Indian Tribes, and Concurring Parties to discuss this Agreement. If changes to this Agreement are necessary, it shall be amended as described in Stipulation Q or can be terminated as described in Stipulation R.

9. Renewal. The Signatories may renew this Agreement, either with or without any amendments that may be adopted as provided in Stipulation Q, by written agreement executed by the Signatories. SNWA will be invited to be an Invited Signatory for any renewal of this Agreement. All Signing Parties, Identified Indian Tribes, and Invited Consulting Parties will be invited to concur in any renewal of this Agreement. One year prior to the end of the term of this Agreement, BLM will invite the Signing Parties, Identified Indian Tribes, and Concurring Parties to discuss whether this Agreement should be renewed.

SIGNATORIES

BUREAU OF LAND MANAGEMENT

By: _____ Date: June 8 2017
Name: Amy Lueders
Title: BLM Nevada State Director

ADVISORY COUNCIL ON HISTORIC PRESERVATION

By: _____ Date: 6/29/12

Name: John M. Fowler

Title: Executive Director

NEVADA STATE HISTORIC PRESERVATION OFFICER

By: _____ Date: 6-15-2012

Name: Ronald M. James

Title: Nevada State Historic Preservation Officer

INVITED SIGNATORY

SOUTHERN NEVADA WATER AUTHORITY

By: P Mulroy Date: 5-17-12
Name: Pat Mulroy
Title: General Manager

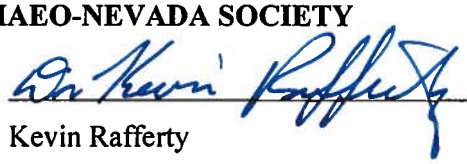
APPROVED AS TO FORM:

Dana Walsh
Dana Walsh, Deputy Counsel

CONCURRING PARTIES

BLM has invited the Identified Indian Tribes and Invited Consulting Parties to concur in this Agreement. Those that agree to do so will sign this Agreement and be acknowledged as a Concurring party.

ARCHAEO-NEVADA SOCIETY

By:  Date: 9/5/12

Name: Kevin Rafferty

Title: Chair

BUREAU OF INDIAN AFFAIRS, WESTERN REGIONAL OFFICE

By: _____ Date: _____
Name: Bryan Bowker
Title: Regional Director

CHEMEHUEVI INDIAN TRIBE OF THE CHEMEHUEVI RESERVATION

By: _____ Date: _____
Name: Charles Wood
Title: Chair

COLORADO RIVER INDIAN TRIBES OF THE COLORADO RIVER INDIAN RESERVATION

By: _____ Date: _____
Name: Eldred Enas
Title: Chair

CONFEDERATED TRIBES OF THE GOSHUTE RESERVATION

By: _____ Date: _____
Name: Ed Naranjo
Title: Chair

DEATH VALLEY TIMBISHA SHOSHONE BAND OF CALIFORNIA

By: _____ Date: _____
Name: George Gholson
Title: Chair

DUCKWATER SHOSHONE TRIBE OF THE DUCKWATER RESERVATION

By: _____ Date: _____
Name: Virginia Sanchez
Title: Chairwoman

ELY SHOSHONE TRIBE OF NEVADA

By: _____ Date: _____
Name: Alvin Marques
Title: Chair

FORT MOJAVE INDIAN TRIBE OF ARIZONA, CALIFORNIA AND NEVADA

By: _____ Date: _____
Name: Tim Williams
Title: Chair

GREAT BASIN NATIONAL HERITAGE AREA PARTNERSHIP

By: Dan Gooch Date: 7-16-2012

Name: Dan Gooch

Title: Director

GREAT BASIN NATIONAL PARK

By: _____ Date: 7/18/12

Name: Andrew Ferguson

Title: Park Superintendent

HUALAPAI INDIAN TRIBE OF THE HUALAPAI INDIAN RESERVATION, ARIZONA

By: _____ Date: _____
Name: Wilfred Whatoname, Sr.
Title: Chair, Hualapai Tribal Council

KAIBAB BAND OF THE PAIUTE INDIANS OF THE KAIBAB INDIAN RESERVATION

By: _____ Date: _____
Name: Manuel Salva
Title: Chair

LAS VEGAS TRIBE OF PAIUTE INDIANS OF THE LAS VEGAS INDIAN COLONY

By: _____ Date: _____
Name: Tonia Means
Title: Chair

MOAPA BAND OF PAIUTE INDIANS OF THE MOAPA RIVER INDIAN RESERVATION

By: _____ Date: _____
Name: William Anderson
Title: Chair

NEVADA DIVISION OF STATE LANDS

By: _____ Date: _____
Name: James R. Lawrence
Title: Administrator

NEVADA ROCK ART FOUNDATION

By: _____ Date: 9/13/12

Name: Angus Quinlan

Title: Executive Director

PAIUTE INDIAN TRIBE OF UTAH

By: _____ Date: _____
Name: Jeanine Borchardt
Title: Chairwoman

PRESERVE NEVADA

By: _____ Date: _____
Name: Senator Richard Bryan
Title: Chair

SHOSHONE-PAIUTE TRIBES OF THE DUCK VALLEY RESERVATION

By: _____ Date: _____
Name: Robert Bear
Title: Chair

TE-MOAK TRIBE OF WESTERN SHOSHONE INDIANS OF NEVADA

By: _____ Date: _____
Name: Bryan Cassadore
Title: Chair

U.S. FISH AND WILDLIFE SERVICE

By: _____ Date: 7/6/12

Name: Ted Koch

Title: Nevada State Supervisor

YOMBA SHOSHONE TRIBE OF THE YOMBA RESERVATION

By: _____ Date: _____
Name: David Smith
Title: Vice-Chair

WHITE PINE COUNTY

By: _____ Date: 8/21/12

Name: Gary Perea

Title: Commissioner

Appendix A

Glossary of Terms

1. **Adverse effect.** An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the NRHP in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Consideration shall be given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of the property's eligibility for the NRHP.

2. **Archaeological site.** *See* "Site."

3. **Area of potential effects (APE).** The geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. The area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking.

4. **ARPA.** The Archaeological Resources Protection Act of 1979 (16 U.S.C. §§ 470aa–470mm).

5. **Class I Inventory.** A Class I inventory comprises a review of agency and SHPO database records (including the Nevada Cultural Resources Inventory System ("NVCRIS")), GLO plat maps, the BLM's Master Title Plats/Historic Index, the National and State Registers of Historic Places, National Historic Trails and historic maps, and an intensive review of agency archives, pertinent historic records and publications.

6. **Class III survey.** A continuous, intensive survey of an entire target area, aimed at locating and recording all archaeological properties that have surface indications, by walking close-interval parallel transects until the area has been thoroughly examined. Class III methods vary geographically, conforming to the prevailing standards for the region involved.

7. **Concurring Party/Parties**. Singularly or collectively, any Identified Indian Tribe and Invited Consulting Party that has chosen to sign this Agreement.

8. **Consultation.** The process of seeking, discussing, and considering the views of other participants, and, where feasible, seeking agreement with them regarding matters arising in the section 106 compliance process.

9. **Cultural resource.** A definite location of human activity, occupation, or use identifiable through field inventory (survey), historical documentation, or oral evidence. The term includes archaeological, historic, or architectural sites, structures, or places with

important public and scientific uses, and may include definite locations (sites or places) of traditional cultural or religious importance to specified social and/or cultural groups (Cf. "traditional cultural property"; see "definite location"). Cultural resources are concrete, material places and things that are located, classified, ranked, and managed through the system of identifying, protecting, and utilizing for public benefit described in the BLM Manual. They may be but are not necessarily eligible for the NRHP. (*See* "historic property.")

10. **Cumulative effects.** Effects on a historic property which result from the incremental impact of an undertaking, such as the GWD Project, 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 effects can result from individually minor but collectively significant actions taking place over a period of time.

11. **Definite location.** Having discernible, mappable, more or less exact limits or boundaries, on a scale that can be established by a survey crew using conventional sensing and recording equipment, by an informant's direct on-the-ground indication, or by precise placement in a documentary source (*see* "cultural resource").

12. **Effect.** An alteration of the characteristics of a historic property qualifying it for inclusion in or eligibility for the NRHP.

13. **Direct effects.** Effects that are caused by an undertaking such as the GWD project and which occur at the same time and place.

14. **Historic property.** Any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the NRHP maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of religious and cultural importance to an Indian tribe that meet the NRHP criteria for eligibility.

15. **HPTP.** Historic Properties Treatment Plan.

16. **Identified Indian Tribe.** A federally recognized Indian tribe that that has religious or cultural ties to, or whose direct ancestors had historic or pre-historic religious or cultural ties to, GWD Project areas, and based on such ties, may attach religious and cultural significance to historic properties, including PRCSs that may be affected by the GWD Project.

17. **Indian tribe.** An Indian tribe, band, nation or other organized group or community, which is recognized as eligible for the special programs and services provided by the United States to Indians because of their status as Indians.

18. **Indirect effects.** Effects that are caused by an undertaking, such as the GWD Project, and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate.

19. **Invited Consulting Party/Parties**. Organizations and agencies having responded and expressed their desire to participate in this Agreement, including Archeo-Nevada Society, Bureau of Indian Affairs, Great Basin National Heritage Area, National Park Service, Nevada Division of State Lands, Nevada Rock Art Foundation, Preserve Nevada, U.S. Fish and Wildlife Service, and White Pine County.

20. **Invited Signatory.** SNWA.

21. **Isolate artifact.** A single artifact or pieces from a single artifact, i.e., ten pieces of glass from a single bottle. An isolate artifact is considered single and unassociated when separated by 30 meters or more from any other artifact. For example, two flakes of the same or different raw material separated by 29 meters would be documented as a site. Ten pieces of glass from a single bottle spread across 31 meters would be an isolate. Isolates will not be recorded on a site form, but will be listed in a table designated by number, description, and location.

22. **Isolated or unassociated feature.** A single feature unassociated with other features or artifact scatters that are undateable; e.g., a prospect pit, a claim marker, an adit, or a shaft. An isolated or unassociated feature is considered single and unassociated when separated by 30 meters or more from any other feature or artifact. If these features are elements to a historic district, they are not isolated or unassociated. In addition, if an isolated feature is unique because of its construction (elaborate stonework claim marker) or distinctive qualities, the feature has to be evaluated for eligibility. Isolated features that have potential data (fire hearth) need to be evaluated for eligibility. Isolated or unassociated features need not be recorded on a site form, but will be listed in a table designated by number, description, and location.

23. **Keeper.** The Keeper of the National Register of Historic Places. The Keeper is the individual who has been delegated the authority by the Secretary of the Interior to list properties and determine their eligibility for the NRHP.

24. **NAGPRA.** The Native American Graves Protection and Repatriation Act (25 U.S.C. §§ 3001–3013).

25. **NRHP.** The National Register of Historic Places maintained by the Secretary of the Interior.

26. **NRHP criteria.** Criteria developed by the Secretary of the Interior for use in evaluating the eligibility of properties for the National Register (36 C.F.R. § 60.4).

27. **NHPA.** The National Historic Preservation Act of 1966 (16 U.S.C. § 470 *et seq.*).

28. **NTP.** Notice to Proceed.

29. **Other Consulting Parties.** Individuals and organizations with a demonstrated or known interest and expertise in historic properties and preservation issues in the Project area.

30. **PRCS.** A property of religious and cultural significance.

31. **Property of Religious and Cultural Significance.** A property identified by a tribe as having religious and cultural significance to that tribe.

32. **Secretary.** The Secretary of the United States Department of the Interior.

33. **SHPO.** *See* State Historic Preservation Officer.

34. **Signatories.** BLM, ACHP, and SHPO.

35. **Signing Party/Parties.** Singularly or collectively, the Signatories, Invited Signatory, Invited Consulting Parties, and Identified Indian Tribes that sign this Agreement.

36. **Site.** A location where one can reasonably infer from physical remains or other physical evidence that a purposeful human activity took place. The minimum criterion for defining archaeological sites, requiring use of the IMACS site record, is that sites should contain remains of past human activity that are at least 50 years old.

37. **State Historic Preservation Officer ("SHPO").** The official appointed or designated pursuant to section 101(b)(1) of the NHPA to administer the State historic preservation program or a representative designated to act for the State historic preservation officer.

38. **THPO.** Tribal Historic Preservation Officer.

39. **Traditional cultural property ("TCP").** A historic property that is eligible for inclusion in the NRHP because of its association with cultural practices or beliefs of a living community that (a) are rooted in that community's history, and (b) are important in maintaining the continuing cultural identity of the community. A traditional cultural property may qualify for the NRHP if it meets the criteria and criteria exceptions at 36 C.F.R. § 60.4. *See* National Register Bulletin 38.

40. **Tribal Historic Preservation Officer ("THPO").** The tribal official appointed by the tribe's chief governing authority, or designated by a tribal ordinance or preservation program, who has assumed the responsibilities of the SHPO for purposes of section 106 compliance on tribal lands in accordance with section 101(d)(2) of the NHPA.

37. **Undertaking.** (1) A project, activity, or program funded in whole or in part under the direct or indirect jurisdiction of a federal agency, including those carried out by or on behalf of a federal agency; those carried out with federal financial assistance; and those requiring a federal permit, license or approval; (2) The undertaking for the GWD Project is generally defined as the construction, installation, operation and maintenance of those Tier 1 and Future Tier facilities described in Appendix B. The particular facilities will be defined in conjunction with site-specific agency actions.

Appendix B

Proposed GWD Project Facilities and Anticipated Future Facilities

The following lists summarize the currently proposed and anticipated future facilities that are part of the GWD Project and covered under this Agreement.

Tier 1: Proposed GWD Project Facilities

SNWA has requested ROWs from the BLM to construct the following proposed facilities:

- Pipelines – approximately 306 miles of buried water pipelines, between 30 and 96 inches in diameter
- Pumping Stations – 5 pumping station facilities
- Regulating Tanks – 6 regulating tanks, each approximately 3 to 10 million gallons in capacity
- Pressure Reducing Stations - 3 facilities
- Buried Storage Reservoir – a 40 million gallon buried storage reservoir
- Water Treatment Facility– a 165 million gallon per day facility
- Power Facilities – approximately 323 miles of 230 kilovolt (kV), 69 kV, and 25 kV overhead power lines, 2 primary electrical substations (230 to 69 kV), 5 secondary substations (69 to 25 kV)
- Temporary and permanent access roads
- Alternatives to Tier 1 of the Proposed Project that are being considered by BLM are described in the attached map.

Future Tiers: Anticipated Future GWD Project Facilities

Future facilities will be required to develop permitted groundwater rights and convey them to the primary conveyance facilities. The final locations of the groundwater production wells and associated facilities to convey water into the primary system have not yet been determined. The wells will be located based on several factors, which include but are not limited to geology, hydrology, well interference studies, environmental issues, existing senior water rights, and proximity to main and lateral pipelines. Production well locations are also subject to approval by the Nevada Division of Water Resources, Office of the State Engineer (Nevada State Engineer). Since the specific location of these facilities cannot currently be identified, SNWA has not yet requested ROW for them from the BLM. However, assumptions regarding the number of wells, length of collector pipelines, and other needed facilities have been made by SNWA so that BLM can conduct a programmatic-level environmental impact analysis of construction and operation of future facilities in addition to the site-specific analysis of proposed ROWs for primary facilities.

SNWA anticipates that future facilities will include:

- Groundwater Production wells – estimated between 144 and 174 wells
- Collector Pipelines – estimated between 177 and 434 miles, 10 to 30 inches in diameter
- Pumping Stations - 2 facilities
- Power Facilities – estimated between 177 and 434 miles of 25kV overhead power lines, 2 secondary substations, and 3 hydroturbine energy recovery facilities.

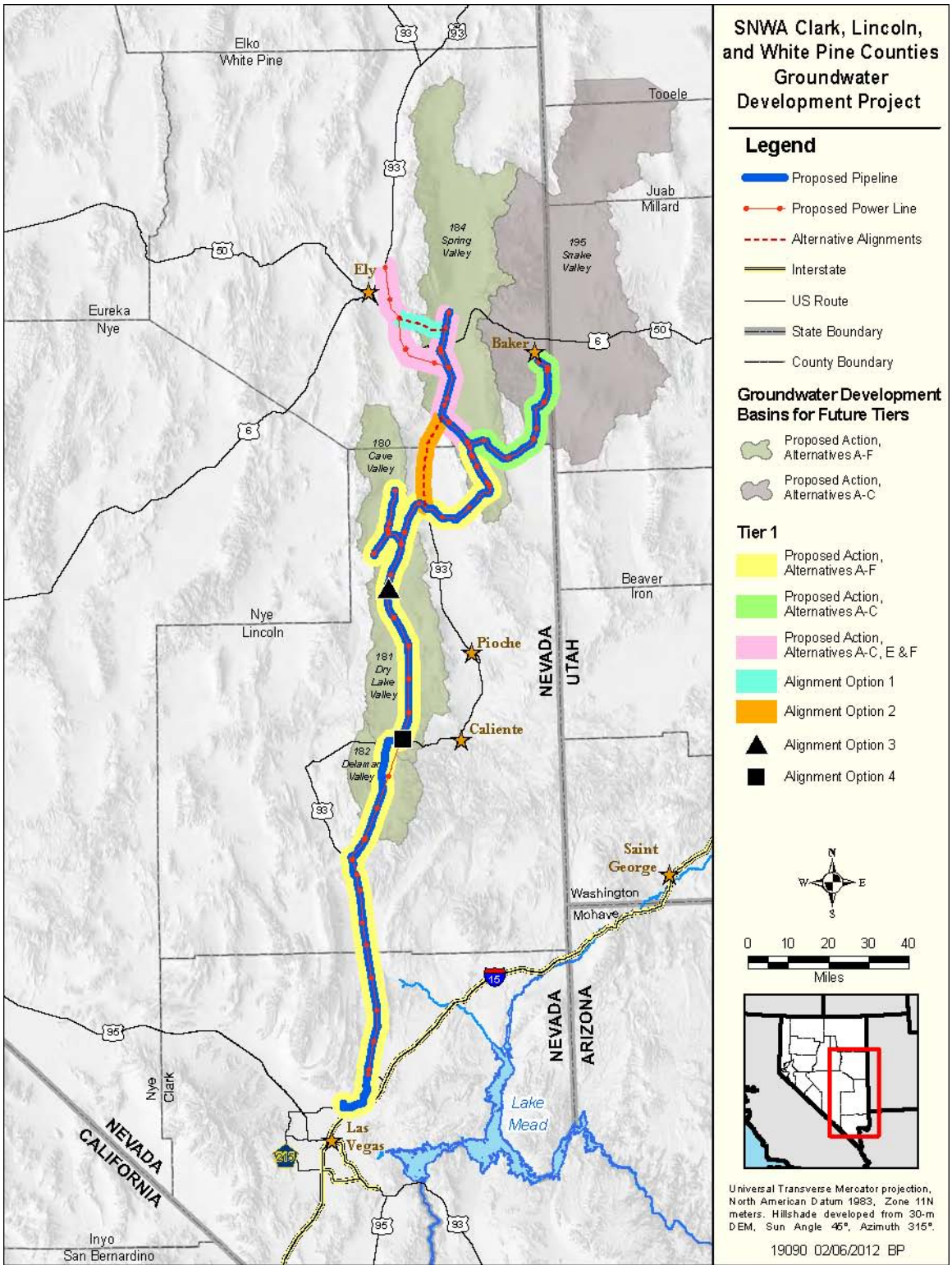

SNWA Clark, Lincoln, and White Pine Counties Groundwater Development Project
Legend
Proposed Pipeline
Proposed Power Line
Alternative Alignments
Interstate
US Route
State Boundary
County Boundary
Groundwater Development Basins for Future Tiers
Proposed Action, Alternatives A-F
Proposed Action, Alternatives A-C
Tier 1
Proposed Action, Alternatives A-F
Proposed Action, Alternatives A-C
Proposed Action, Alternatives A-C, E &F
Alignment Option 1
Alignment Option 2
Alignment Option 3
Alignment Option 4
Elko
White Pine
Tooele
Juab
Millard
184 Spring Valley
195 Snake Valley
Ely
Eureka
Nye
Baker
180 Cave Valley
Beaver
Iron
Nye
Lincoln
Pioche
181 Dry Lake Valley
NEVADA
UTAH
Caliente
182 Delamar Valley
Saint George
Washington
Mohave
NEVADA
ARIZONA
Lake Mead
Nye
Clark
Las Vegas
NEVADA
CALIFORNIA
Inyo
San Bernardino
0 10 20 30 40
Miles
Universal Transverse Mercator projection, North American Datum 1983, Zone 11N meters. Hillshade developed from 30-m DEM, Sun Angle 45°, Azimuth 315°.
19090 02/06/2012 BP

Exhibit E

COM Plan Framework

1. Introduction

The project requirements [Attachment C of the Record of Decision (ROD)] were developed through the National Environmental Policy Act (NEPA) process and are attached to the ROW as terms and conditions. As stated in the ROD, after the ROW is issued, a COM Plan will be developed based on the approved Plan of Development (POD). The process and components to be used in developing an integrated and comprehensive COM Plan are described here. This plan will encompass all proposed surface disturbance activities and facilities for the Tier 1 NEPA action analyzed in the Final Environmental Impact Statement (EIS) and will set the stage for monitoring, management, and mitigation for future development addressed by subsequent NEPA tiers. The objectives of the COM Plan are to protect federal resources and federal water rights that may be impacted by construction, operation, and maintenance of the GWD Project-related facilities.

The Council on Environmental Quality (CEQ) issued a Memorandum on January 14, 2011, titled "Appropriate Use of Mitigation and Monitoring and Clarifying the Appropriate Use of Mitigated Findings of No Significant Impact." This CEQ guidance is intended to assist agencies with the development and review of their NEPA procedures. The guidance addresses mitigation that an agency has committed to implement as part of project design and mitigation commitments informed by the NEPA review process by specifically recommending:

- How to ensure that mitigation commitments are implemented;
- How to monitor the effectiveness of mitigation commitments;
- How to remedy failed mitigation; and
- How to involve the public in mitigation planning.

The Bureau of Land Management (BLM) COM Plan framework described in this section is consistent with the CEQ Memorandum and the Department of the Interior (DOI) and BLM policy and procedures related to identifying and implementing project mitigation and monitoring.

1.1 Resource Protection Measure Sources

The protection measure framework and sources of resource protection are discussed below and shown in **Figure 1**.

NEPA Monitoring and Mitigation Measures – Based on the resource-specific impact analyses provided in Chapter 3 of the Final EIS, resource-specific monitoring and mitigation measures for the Tier 1 ROW are listed in Attachment C of the ROD ("Project Terms and Conditions"). These measures also may be applied to future groundwater development facilities (e.g., impacts related to placement of future wells, collection pipelines, power lines, and access roads). **Table 1** at the end of this document provides monitoring and mitigation to address impacts from future groundwater development and pumping analyzed at a programmatic level (subsequent NEPA tiers) in Chapter 3 of the Final EIS. In particular, these monitoring and mitigation measures are based on currently available information that will be applied to the future activities. These measures are necessarily general in nature, since they are based on the programmatic NEPA analysis for the groundwater development and related facilities. However, until they are replaced by more specific measures resulting from future NEPA analyses, these measures will apply to the future activities.

Chapter 3.20 of the Final EIS also identified mitigation measures recommended for consideration by other agencies, but are not within the jurisdiction of the BLM. These measures have been addressed with the SNWA through the letter dated October 31, 2012, and Attachment C of the ROD.

BLM Resource Management Plans – All actions approved or authorized by the BLM must conform to the existing land use plans (43 Code of Federal Regulations [CFR] 1610.5-3, 43 CFR 2920.2-5). The BLM Ely District Resource Management Plan (RMP) (BLM 2008) and the BLM Las Vegas District RMP (BLM 1998) provide management direction for all BLM-managed lands that would be occupied by the GWD Project facilities.

BLM Best Management Practices – The 2008 BLM Ely District RMP identified Best Management Practices (BMPs) and United States Fish and Wildlife Service (USFWS) Biological Opinion (BO) terms and conditions that apply to all land use decisions including this GWD Project. The Ely BMP measures also apply to land use authorizations related to this GWD Project in the BLM Southern Nevada District. Attachment C of the ROD contains the specific terms and conditions that apply to the GWD Project.

Biological Opinion – The USFWS delivered to the BLM a BO for the ROW on November 19, 2012, that includes terms and conditions to maintain and protect the threatened desert tortoise as required under section 7 of the Endangered Species Act (ESA). It also included a programmatic BO with conservation recommendations related to future development associated with this project. The BO is Attachment E to the ROD. The ROD Attachment E also includes a letter from BLM, dated December 7, 2012, which explains to the USFWS how the conservation recommendations within the BO were incorporated into the ROD and COM Plan Framework. If section 7 consultation is reinitiated during the life of the project, new terms and conditions, and/or conservation recommendations would be incorporated into the COM Plan. New terms and conditions and/or conservation recommendations would also be incorporated into the COM Plan, based on section 7 consultations for future site-specific components of the GWD Project. Both the desert tortoise terms and conditions and the incorporated conservation recommendations will be made a condition of the right-of-way (ROW).

Applicant-committed Protection Measures – SNWA has committed to Applicant-committed Protection Measures (ACMs) that will be implemented as part of the construction and operation of the GWD Project. The ACMs include design features, monitoring, standard operating procedures, and other resource protection practices. They also include measures SNWA previously agreed to in stipulations or other agreements with federal, state, or local agencies and entities, as well as those required by the Nevada State Engineer (NSE) water right permit conditions. As part of the ACMs, SNWA has committed to implementing an adaptive management approach. The SNWA ACMs are attached to the ROD as Attachment B and will be made a condition of the ROW.

Section 106 Programmatic Agreement – A Programmatic Agreement (PA) was completed under the provisions of section 106 of the National Historic Preservation Act (NHPA) and was executed by the BLM, the Advisory Council on Historic Preservation (ACHP), the State Historic Preservation Office (SHPO), and the SNWA. The PA (Attachment G of the ROD) describes procedures for mitigating impacts to cultural resources. The ROW will be subject to the terms and conditions of the PA.

Clean Water Act Section 404 Mitigation – The United States Army Corps of Engineers (USACE) has jurisdiction related to this project under the authority of section 404 of the Clean Water Act for the discharge of dredged or fill material into waters of the U.S. Project features that result in the discharge of dredged or fill material into waters of the U.S. would require prior USACE authorization. Currently, Nationwide Permit #12 applies to this project. However, the USACE may exert discretionary authority and require an alternative permitting mechanism in cases where activities will result in more than minimal individual and cumulative impacts. During review of the Draft EIS, the USACE stated that they had not yet made a final determination on whether an individual permit may be required. Upon the final determination, the USACE may require additional mitigation measures to ensure section 404 compliance. Those measures will be included in the COM Plan.

Stipulated Agreements (Stipulations) – SNWA has entered into several stipulations with DOI Bureaus (i.e., Bureau of Indian Affairs [BIA], BLM, USFWS, and National Park Service [NPS]). The stipulations apply to the SNWA water rights in Spring, Cave, Dry Lake, and Delamar valleys. The stipulations are intended to manage the development of groundwater by the SNWA in various hydrologic basins without causing injury to federal water rights or unreasonable adverse effects to federal resources and special status species. These stipulations are provided in Appendix C of the Final EIS.

The stipulations are currently being acted upon and the following requirements are being conducted: installation of monitoring well systems in both carbonate and basin fill aquifers; constant-rate aquifer tests; groundwater chemistry

sampling; spring and stream discharge measurements; and annual monitoring reports. Both the Delamar, Dry Lake, and Cave valleys and the Spring Valley stipulations require a biological resource monitoring program. The stipulations recommend that teams be established to guide the implementation of monitoring activities; these teams have established and have approved baseline monitoring plans. Two years of baseline monitoring have been completed in Spring Valley.

The stipulation process contributes to development of the COM Plan by providing information from established monitoring, management, and mitigation processes. The BLM is a participant in the stipulations, but does not have sole authority over the processes; however, the BLM can influence the monitoring, management, and mitigation measures implemented pursuant to the stipulations. Also, as a signatory to the stipulations, the BLM has access to all of the information and decisions developed under the stipulations.

1.2 COM Plan Development

This section describes a comprehensive monitoring, management, and mitigation program that addresses all hydrographic areas and all facilities associated with the SNWA groundwater development project with the intent of protecting federal resources and federal water rights that may be impacted by construction, operation, and maintenance of the project.

The BLM, working in conjunction with other federal, state, local, and tribal agencies/governments (hereinafter collectively referred to as agencies) and operating as defined by a future Memorandum of Understanding (MOU) between the BLM and the agencies, will develop the COM Plan. The BLM also will coordinate with the USFWS relative to listed and selected BLM sensitive species. The COM Plan will include a monitoring schedule and plan for BLM cost recovery, and establish reporting requirements for SNWA, including provisions for annual meetings to review construction and operation of the ROW. The BLM expects to establish key working groups to develop sections of the COM Plan related to water resources, biologic resources and air resources. The COM Plan will reflect an adaptive approach to implement monitoring, management, and mitigation activities and will include the use of statistically rigorous methods when developing monitoring sampling designs and protocols, as appropriate.

The process described in this subsection would be followed for submittal by SNWA of future ROW requests related to groundwater development. Future groundwater development may require a new COM Plan or amendment of the existing COM Plan. The COM Plan may be supplemented and amended upon approval of future groundwater development ROWs and related PODs (subject to subsequent NEPA). The COM Plan will be developed to meet the goals and objectives described below.

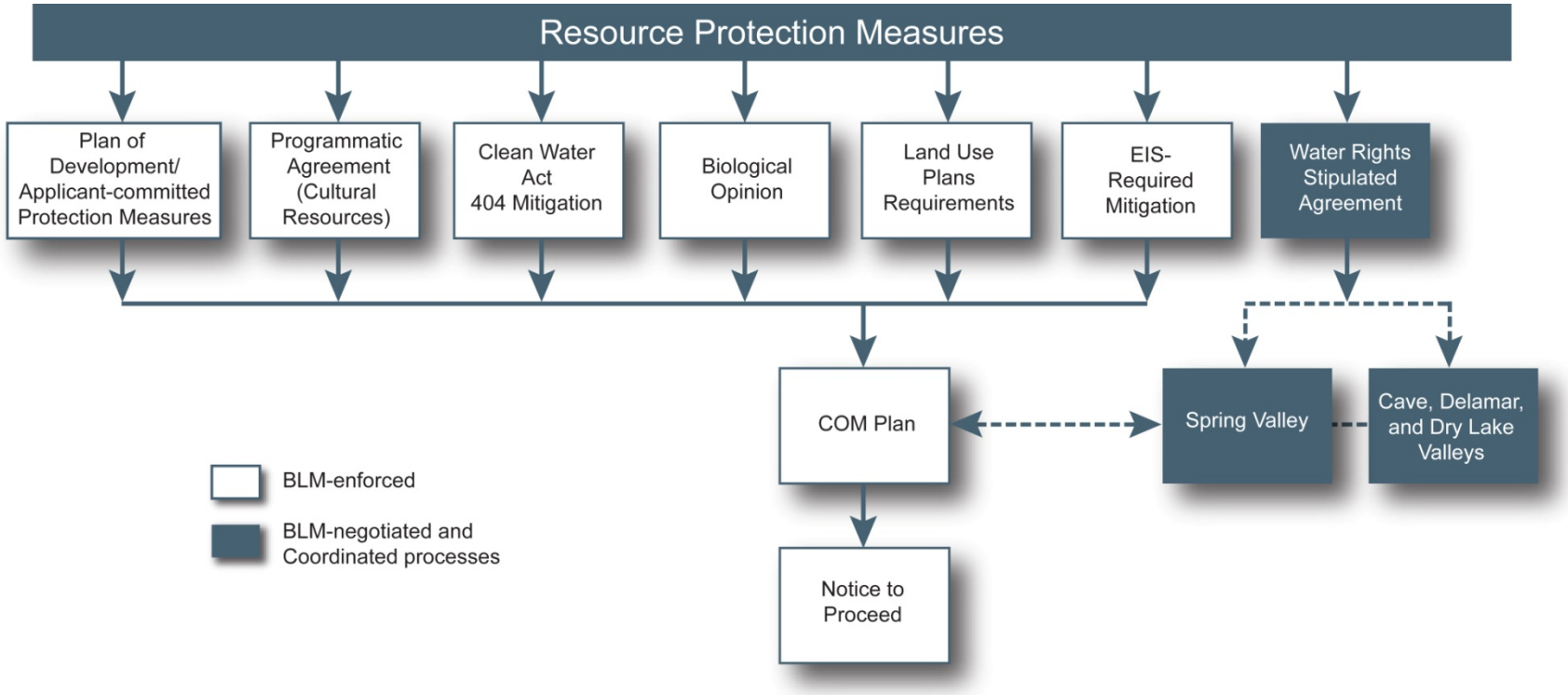


Figure 1 Protective Measure Framework

COM Plan Goals and Objectives

Goals

- Ensure that the GWD Project complies with the Federal Land Policy and Management Act (FLPMA), Sec. 504. [43 United States Code (USC) 1764] (a)(4), which states that the ROW would do no unnecessary damage to the environment;
- Ensure compliance with the BLM's other resource protection requirements, as described in Section 3.20.1 (e.g., RMPs, watershed plans, resource policy and regulations);
- Identify all mitigation, monitoring, and management requirements for the GWD Project main conveyance pipeline Tier I ROW grant in one document;
- Outline a process, including schedules, sources of funding, and performance standards, for developing additional mitigation, monitoring, and management requirements for future ROW grants; and
- Provide agencies with insight concerning the integration of the resource issues and importance of regional monitoring and mitigation for subsequent tiered NEPA processes, as the GWD Project is developed.

Objectives

- Protect federal resources that may be impacted by construction, operation, and maintenance of the project;
- Protect federal water rights managed by federal agencies;
- Avoid, minimize, or mitigate the effects of actions that could contribute to the need to list species as threatened or endangered under the ESA, and incorporate conservation recommendations (as appropriate) provided by the USFWS in their BO;
- Avoid adverse environmental impacts that could cause jeopardy to listed species or destruction or adverse modification of designated critical habitats;
- Avoid, minimize, or mitigate adverse environmental impacts to groundwater-dependent ecosystems and biological communities, impacts to habitat for fish and wildlife, degradation of visibility and air quality due to potential increases in airborne particulates and loss of surface vegetation; and impacts to cultural and visual resources
- Provide a process for mitigating impacts;
- Prior to completion of subsequent NEPA, identify triggers for early warning of potential adverse impacts, including an analysis of whether early-warning indicators for groundwater withdrawal thresholds have been reached or whether data trends indicate early warning thresholds would likely be reached in the near future under current conditions and whether SNWA groundwater withdrawals are the likely cause of or contributor to this, based on the best scientific information available;
- Allow flexibility to implement management and mitigation measures;
- Monitor the effectiveness of mitigation measures in achieving expected outcomes and reducing impacts to resources; and
- Implement adaptive management as needed to achieve the goals stated above.

The Tier 1 COM Plan will be written based on the goals and objectives written above, as applicable. As future COM plans are developed, the goals and objectives listed above would be utilized along with additional monitoring from the subsequent NEPA review to develop site-specific management, monitoring, and mitigation required for the GWD Project.

COM Plan Conceptual Outline

The main water conveyance pipeline (tier I) will be developed using the following conceptual outline. It is anticipated that groundwater development-specific COM Plans (subsequent NEPA tiers) also would be developed using this conceptual outline. Modifications of the outline may occur during COM Plan preparation. In addition, some sections may be deferred and completed at an appropriate time in the future.

The following is the conceptual outline:

- **Introduction**

– Relationship with Other Environmental Documents/ Protective Measure Processes**,** Authorization, Permits, Reviews, and Approvals, etc.

- **Project Management**

– Roles and Responsibilities**,** Communication Procedures, and Protocols

- **Project Construction**

– Pre-construction Activities
  - Biological and cultural resource surveys
  - Identification of existing monitoring sites needed in establishing baseline conditions
  - Identification of additional monitoring needed to build full sets of baseline data
  - Development of triggers or environmental indicators and adaptive management thresholds

– Construction Activities
  - Mitigation Activities
  - Restoration

– Variance Process

- **Project Operation and Maintenance**

– Inspections and Maintenance
– Ongoing Studies – Baseline and Data Gaps
  - Processes for sharing monitoring data with interested parties
  - Description of interrelated monitoring, management, and mitigation activities that would begin at later stages of project development

1.1.1 Development and Implementation Process

Background

The SNWA submitted a Conceptual POD (November 2012; Attachment B of the ROD) complete with its ACMs. The BLM has conducted a NEPA review on the proposed project, including consideration of the ACMs, and has prepared the ROD based on that review. The ROD contains the appropriate monitoring and mitigation from the Final EIS; resource-specific monitoring and mitigation that apply to Tier 1 are provided in the Project Terms and Conditions (Attachment C of the ROD), while monitoring and mitigation to address future impacts from groundwater development and pumping are provided in **Table 1**. The BLM authorized officer will issue a ROW grant based on the ROD. The integration of the COM Plan into the project is shown in **Figure 2**.

The ROW grant for the main conveyance pipeline and associated facilities (Tier 1) will require that SNWA submit a final POD(s) to the BLM for approval. The BLM will only approve a POD(s) that incorporates mitigation identified in Attachment C of the ROD. The POD also must include a construction and operation schedule and all design and reports required through the NEPA process. These include, but are not limited to the reclamation plan, transportation plans, construction plans, resource-specific monitoring plans, weed management plan, health and safety plans, and biological survey protocols. Prior to approval of the POD(s), the BLM will coordinate with the USFWS regarding portions of the POD(s) relating to their regulatory role under the ESA, the Migratory Bird Treaty Act, and the Bald and Golden Eagle Protection Act. BLM will issue the Notice to Proceed (NTP) once all terms and conditions of the ROW grant are fulfilled.

The final POD(s), while initially focused on the main conveyance pipeline, will include potential baseline/data gap monitoring for subsequent NEPA tiers as appropriate. The BLM will coordinate with the partner agencies to refine baseline and data gap information needs to better inform subsequent NEPA analysis as follows:

- Conducting surveys for northern leopard frog in pertinent springs in the GWD Project Region of Study for the purpose of identifying new locations of populations.
- Investigating important aspects of northern leopard frog ecology and demographics.
- Conducting surveys for special status springsnails in pertinent springs in the GWD Project Region of Study for the purpose of identifying new locations of populations.
- Defining ecological water requirements for the groundwater-dependent ecosystems that special status species depend upon.
- Conducting supplemental baseline water resource monitoring including collecting water quantity (i.e. flow) and quality data to characterize baseline water resource conditions at locations where special status species are known to exist.
- Conducting additional surface water and groundwater monitoring hydrogeologic characterization studies, and aquifer testing to improve the predictive abilities of the numerical groundwater flow models.
- Completing wetland inventory using Cowardin (or currently accepted method) classification of wetlands to ensure necessary information is available for the development areas and areas expected to be impacted by groundwater pumping. Based upon this assessment, SNWA could set up a mitigation bank to offset any expected loss of wetland acres.
- Investigating important aspects of White River spinedace ecology, life history, demographics, and limiting factors for the purpose of understanding how this species might respond to changes in habitat caused by decreased spring flow, developing a flow-ecological response relationship for this species at Flag Springs, and setting decision-making triggers.
- Assisting in the development of an ecological model or other appropriate tools to help understand and predict potential effects of reduced flow and water levels to White River spinedace and its habitat. If appropriate and related directly to the project, investigate long-term viability of the species based on predicted habitat changes due to decreased flow or water levels in Flag Springs.
- Investigating important aspects of Pahrump poolfish life history for the purpose of informing subsequent NEPA analyses (including developing triggers and mitigation and monitoring requirements).
- Conducting surveys for Ute ladies'-tresses in areas of potential habitat at risk from groundwater pumping, in accordance with appropriate protocol. If this species is found during the surveys, known locations will be reported to the USFWS and the appropriate State natural heritage program.

Other activities, data, or information as may be identified through the subsequent NEPA process.

COM Plan Implementation

The steps for integrating the COM Plan into the project are outlined in **Figure 2**. A discussion of the roles and responsibilities of the BLM and other involved parties, as well as the overall concept of adaptive management to allow management changes in response to the results of environmental monitoring programs follows.

- **BLM COM Plan Authority**

  Upon approval of the first and subsequent ROW grants, the BLM will implement the COM plans including regularly scheduled interaction with the MOU partners and other involved parties. The BLM will serve as the lead federal agency, and will designate a BLM Project Manager (authorized officer) who will provide oversight for the project. The BLM Project Manager will, on behalf of the BLM, be responsible for administering and enforcing ROW grant and permit provisions for the BLM, including the mitigation measures and project terms and conditions contained in the ROD and its attachments. The BLM Project Manager also will be responsible for written stop-and-resume work orders, and resolving any conflicts that arise relating to the project on land administered by the BLM. Compliance will be monitored by the BLM

Project Manager and other BLM resource specialists, as needed, in conjunction with the Compliance Inspector Contractor (CIC). The CIC likely will be a third-party contractor selected by the BLM.

- **Project Implementation**

  Actual project implementation may require a series of PODs reflecting different phases of the project (e.g., water treatment plant at Apex or main pipeline to Delamar Valley) or various functional elements (e.g., worker transportation to and from work sites or class III survey for cultural resources). Accordingly, the COM Plan will be a dynamic document, designed to be revised over the duration of construction and operation of the GWD Project, as data are collected and facilities are proposed. The NTPs will reflect authorization for only those portions of the project for which an approved POD and COM Plan have been finalized. Shortly after the ROW is issued, the BLM will meet with SNWA to determine an appropriate strategy to assure that project components are scheduled and coordinated appropriately.

- **Adaptive Management**

  The adaptive management process is expected to be used to minimize future environmental impacts. This includes periodic review and revision of programmatic policies and BMPs; comprehensive site monitoring programs; including metrics for measuring impacts; and protocols for incorporating monitoring observations and new mitigation measures into standard operating procedures and project specific stipulations. As part of the adaptive management process, evaluation factors will be developed to determine and measure the effectiveness of the overall adaptive management strategy. These evaluation factors could include such items as mitigation and monitoring measures and their ability to respond to the potential impacts.

  It is also important to note that adaptive management is an available tool, but it does not replace the BLM authority and duties under FLPMA to protect and manage federal resources.

- **Variance Process**

  Surface disturbance locations and acreages identified in the Final EIS represent reasonable estimates for the construction, operation, and maintenance of the project. However, route and other project refinements often continue past the project review phase and into the construction phase. As a result, work location and disturbed acres documented in the Final EIS may change after project approval. These changes frequently involve minor route realignments or moving approved temporary workspaces, adding new temporary workspaces, adjusting workspaces based on site-specific conditions and adding access routes to work areas. When work areas different from those evaluated in the Final EIS are needed, additional inventory and evaluation would be required to ensure that impacts on biological, cultural, and other resources are avoided or minimized to the extent practicable. New workspace location and survey results would be documented and forwarded to the BLM in the form of a "variance request." The request would be reviewed by the BLM, consultations would be conducted, and other approvals would be obtained before the BLM would approve the variance. At the conclusion of the project, as-built drawings would be provided to the BLM. In addition, the SNWA, when working with specific requirements of the ROW (e.g., a 0.5-mile buffer from a raptor nest), could make a "variance request" if circumstances warranted (e.g., the nest is not within line of sight of the construction). The BLM would address these requests on a case-by-case basis.

Interagency Input

The agencies and key working groups comprised of resource specialists with expertise related to resources of concern will participate in development and implementation of the COM Plans. The agencies and key working groups will have an active role in the review process to ensure BLM resource management standards and goals are upheld and will assist in the identification of areas where the COM plans need to be strengthened or modified. In addition, the agencies will periodically review project monitoring reports and data made available by SNWA and BLM. All parties recognize that additional data collection for a variety of resources is necessary. Prior to initiating the subsequent NEPA tiers, the BLM will coordinate with the agencies to define data gaps and obtain input on strategies to remedy the data issues. BLM will determine how to resolve the data gaps and inform SNWA.

The BLM will consider the interagency input as it makes future decisions on implementation of the COM Plan (**Figure 2**). Because project-related impacts may not become evident for many years after implementation of

groundwater development, the BLM intends to maintain the required COM plans and periodic interagency review for the life of the project.

Public Disclosure

The public will be kept informed of the development and implementation of the COM Plans. Copies of the COM plans, compliance and monitoring reports, supporting documents, and data will be made available to the public via the BLM GWD Project website and BLM will respond to public inquiries regarding mitigation and monitoring.

1.3 Enforcement of Decisions

The BLM, as the Federal Land Manager, enforces the ROW grant through terms and conditions. Throughout the life of the project it will be the BLM's responsibility to conduct compliance reviews of the project to ensure the terms and conditions of the ROW grant have been met. Any noncompliance issues will be brought to SNWA's attention and they will have appropriate time to resolve the notice of noncompliance. If SNWA does not bring the ROW into compliance to BLM's satisfaction, the BLM may initiate actions under its authority to suspend SNWA's ROW until SNWA can remedy the issues of non-compliance. Depending upon the non-compliance issue, SNWA would not be allowed to operate the ROW until the issues of non-compliance are remedied and the BLM issues a NTP. If non-compliance continues, SNWA would not be granted any further ROWs, permits, or other land use authorizations from BLM until all non-compliance issues are resolved.

In the case of adverse impacts to federal water rights or federal resources, the BLM enforcement authority includes the ability to require:

- Geographic redistribution of groundwater withdrawals;
- Reduction or cessation in groundwater withdrawals;
- Augmentation of water supply for federal resources and federal water rights; and
- Use of recharge projects to offset local groundwater drawdown.

Compliance with the FLPMA

The BLM manages surface and mineral resources for federal lands it administers under the FLPMA and applicable regulations. The COM Plan is developed and implemented in compliance with the FLPMA, which is a mechanism through which project performance can be comprehensively reviewed and corrective actions implemented. When a ROW grant is issued for a project, FLPMA requires the following:

"Each right-of-way shall contain–(b) such terms and conditions as the Secretary concerned deems necessary to (i) protect Federal property and economic interests; (ii) manage efficiently the lands which are subject to the right-of-way or adjacent thereto and protect the other lawful users of the lands adjacent to or traversed by such right-of-way; (iii) protect lives and property; (iv) protect the interests of individuals living in the general area traversed by the right-of-way who rely on the fish, wildlife, and other biotic resources of the area for subsistence purposes; (v) require location of the right-of-way along a route that will cause least damage to the environment, taking into consideration feasibility and other relevant factors; and (vi) otherwise protect the public interest in the lands traversed by the right-of-way or adjacent thereto." SEC. 505. [43 USC 1765]

The BLM also is generally obligated to avoid unnecessary or undue degradation of the public lands. [43 U.S.C. § 1732].

ROW Regulations under FLPMA

The regulations (43 CFR 2805.12) outline the terms and conditions that are to be included in the grant and are the proponent's responsibilities. The regulation states: "By accepting a grant, you agree to comply with and be bound by the following terms and conditions. During construction, operation, maintenance, and termination of the project …" Section 43 CFR 2805.12(i) provides that the proponent must "Comply with project-specific terms, conditions, and stipulations, including requirements to: (1) Restore, revegetate, and curtail erosion or conduct any other rehabilitation measure BLM determines necessary; (2) Ensure that activities in connection with the grant comply with air and water

quality standards or related facility siting standards contained in applicable Federal or state law or regulations; (3) Control or prevent damage to: (i) Scenic, aesthetic, cultural, and environmental values, including fish and wildlife habitat; (ii) Public and private property; and (iii) Public health and safety; … (p) Comply with all other stipulations that BLM may require."

Compliance Inspector Contractor

The CIC is anticipated to be a third-party contractor selected by the BLM that leads an interdisciplinary team conducting onsite compliance inspections and monitoring for the project during construction. The CIC interdisciplinary team will consist of appropriate specialists such as botanists, weed management specialists, wildlife biologists, archaeologists, and soil scientists. This service will promote environmental protection and ensure compliance with the lead federal agency's requirements based on the commitments, as established in the COM Plan. The CIC will report directly to the BLM, who will coordinate with other federal, state, local, and tribal agencies/governments, as appropriate. The duties of the CIC are to:

- Prepare a project compliance plan;
- Coordinate the NTP meeting(s);
- Prepare and maintain the project Key Contacts List;
- Schedule periodic meetings with the BLM Project Manager and resource specialists;
- Conduct daily field inspection of the project areas;
- Complete a daily compliance inspection report and submittal of a weekly summary report to the BLM and Project Proponent;
- Attend construction meetings;
- Review variance requests; and
- Complete the End of Construction Project Report.

After project construction is complete, the CIC will periodically monitor compliance with operational and mitigation requirements, and report back to BLM.

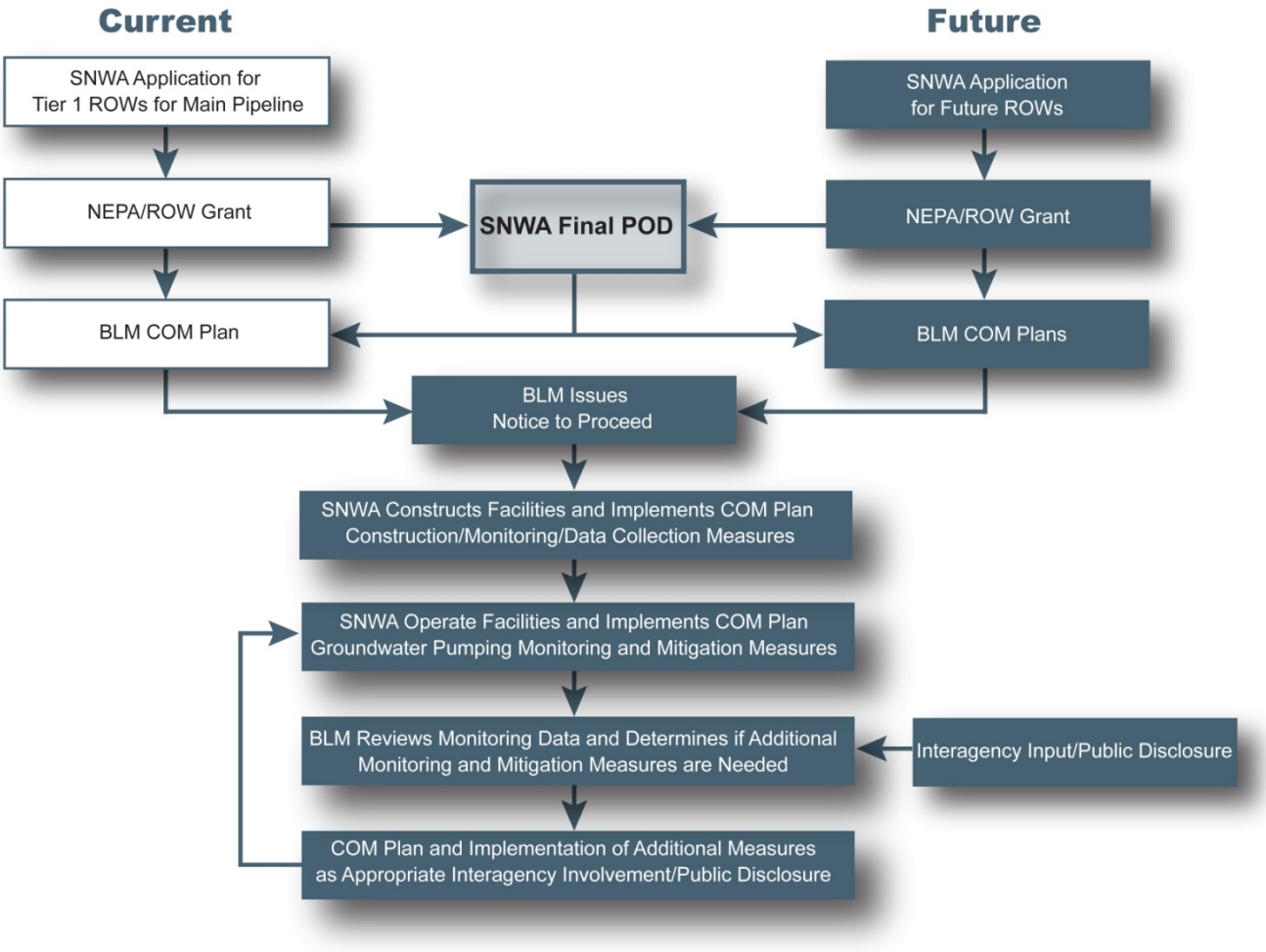


Figure 2 Integration of the COM Plan into the Project

1.4 Summary

It is anticipated that the COM Plan monitoring measures for the ROW grant in Tier I will incorporate resource protection measures from multiple regulatory processes and allow for robust interagency input. This Tier 1 COM Plan also is expected to address baseline data collection for subsequent NEPA analyses and establish a process to address potential impacts from future groundwater development consistent with mitigation and monitoring measures provided in **Table D.1-1**. However, since groundwater development presumes some level of vegetation change and reduction in groundwater levels, not all impacts may be avoided. In addition, triggers designed to provide early warning of potentially adverse impacts to federal water rights and federal resources and provide time and flexibility to implement management measures to mitigate those impacts will be developed prior to completion of subsequent NEPA, and will be included in future COM Plans. The COM Plan may include mitigation measures offered by SNWA to mitigate impacts that occur to lands, water rights, and water-dependent resources owned by private parties, local governments, and state governments. However, the BLM cannot enforce mitigation measures on lands owned by other parties, and cannot ensure that the funding and land access necessary to implement these measures would be made available. The Tier 1 COM Plan and COM Plans for subsequent tiers are designed to be adaptive over the course of the project.

1.5 Monitoring and Mitigation Measures Applied to Future NEPA:

These monitoring and mitigation measures (**Table 1**) were developed through the NEPA process and will be applied to future activities, unless they are replaced by more specific measures from future NEPA analyses.

Table 1 Monitoring and Mitigation Measures for Future NEPA

Air and Atmospheric Values
GW-AQ-3: Monitoring, Mitigation, and Management Plan for Air Quality. The SNWA will develop an air monitoring plan approved by the BLM, which will detail the siting and operation of at least three collocated air monitoring stations measuring particulate matter of less than or equal to10 microns, and 2.5 microns in size (PM_{10} and $PM_{2.5}$, respectively) , one of which will be upwind of the project area. Recommended monitoring locations include Snake, Spring, and Lake valleys. These valleys are selected for consideration based on predicted changes to the bare soil/sparse vegetation evapotranspiration (ET) unit, which has the greatest potential for windblown dust impacts. Baseline air measurements will be initiated at least a year prior to groundwater pumping construction activities, since these activities may increase measured particulate values. Once baseline air quality levels are established, monitoring will continue for the duration of groundwater pumping activities. Finally, the monitoring plan will comply with U. S Environmental Protection Agency (USEPA) monitoring guidance when selecting the site locations and instruments, developing the data management plan, and establishing quality assurance criteria.
Geologic Resources
GW-G-1: Cave Protection. Prior to ground disturbing or drilling activities in areas close to identified cave resources, the conditions of approval will require appropriate site specific measures for the protection of caves that may be at risk such as, but not limited to, the following: • Reasonable and appropriate setbacks and buffers around caves. • Limitations on blasting. • Requirements for the storage and handling of hazardous materials such as fuels. Other measures that may be appropriate for wells including procedures when encountering subsurface voids while drilling, closed drilling fluid (mud) systems (no earthen mud pits), use of freshwater mud, directional drilling, and special casing programs.
GW-G-2: Underground Voids. If underground voids are unexpectedly encountered during facility construction or drilling, the following measures will apply: • Work will be halted and the BLM will be notified immediately. • The BLM, in consultation with the permittee, will assess the risk of further drilling or siting of surface facilities in the area where the voids are encountered. Risk assessment may require the use of appropriate geotechnical methods to gather relevant data on the extent of karst features.
GW-G-3: Subsidence Monitoring. Subsidence monitoring is recommended in current and proposed water withdrawal areas in order to provide baseline data before build out begins. As groundwater extraction occurs in full production, monitoring will be needed to assess the magnitude and extent of subsidence in order to take actions that would mitigate subsidence where necessary.
Water Resources
GW-WR-1: Spring Inventories. A spring inventory will be conducted in all groundwater development areas to verify and map the location of all springs prior to construction. Construction and development of the groundwater development areas will avoid ground disturbance in the vicinity (i.e., 0.5 mile) of all verified spring locations.

Table 1 Monitoring and Mitigation Measures for Future NEPA

GW-WR-2: Stream Crossing Plans. A site-specific plan will be developed to detail the construction procedures, erosion control measures, and reclamation that would occur for pipeline construction across live (flowing) stream reaches. The plan also will incorporate information from BLM Technical Reference 423, for hydraulic considerations in designing pipeline stream crossings (DOI 2007). The plan will include site-specific designs using either open cut or jack and bore techniques and site-specific measures to minimize disturbance of the stream bed, and release of sediment from the construction area into the downstream stream reach. The plan will be reviewed and approved by the BLM and Nevada Department of Wildlife (NDOW) prior to initiation of any construction activities within the stream corridor.
Water Resources continued
GW-WR-5: Shoshone Ponds. Drawdown is likely to impact the source of water that supports important aquatic resources for Shoshone Ponds (as discussed in Section 3.7, Aquatic Biological Resources). The SNWA will develop a surface water and groundwater monitoring plan specific to providing an early warning system for effects to flow at Shoshone Ponds. The site specific monitoring plan will likely include monitoring discharge at the Shoshone ponds; and monitoring artesian pressures in the aquifer that controls discharge to the ponds. The general requirements for development, approval, implementation, and reporting for the Shoshone ponds monitoring plan will be the same as outlined in GW-WR-3a. Impacts to Shoshone Ponds that are attributable to the SNWA's groundwater pumping will be mitigated by improving the existing well or drilling a new well, and installing a pump such that the well, pump, and water conveyance system are designed to maintain the flow to the ponds for the foreseeable future regardless of the groundwater drawdown. Any new wells should be designed to pump groundwater from the same aquifer system to maintain the same general water quality and temperature characteristics currently used as the source of water for the ponds and sufficient to support the federally listed and special status species that inhabit the ponds, as described in Section 3.7, Aquatic Biological Resources. The SNWA will be responsible for all cost associated with the implementation, operation, and maintenance of the source of water required to offset the effects of SNWA's groundwater pumping activities.
GW-WR-7: Groundwater Development & Drawdown Effects to Federal Resources and Federal Water Rights. If the results of the monitoring or modeling information provided in accordance with GW-WR-3a indicate that undue and unnecessary impacts to federal resources or federal water rights from groundwater withdrawal are occurring or are likely to occur, and the groundwater development project is the likely cause of or contributor to the impacts, the following measures will be initiated: 1. The BLM will evaluate the available information and determine if emergency action and/or a mitigation plan is required. 2. If the BLM determines that emergency action is required to avoid, minimize, or offset the impact, the BLM will serve an immediate Temporary Suspension Order identifying the actions to be taken, including whether SNWA would be required to concurrently develop a mitigation plan as required in bullet 3 below. 3. If the BLM determines that a mitigation plan is required, the SNWA will prepare a detailed, site- specific plan that (a) identifies the magnitude and timing of the drawdown or associated impacts to federal resources or federal water rights; and (b) provides detailed site-specific measures that will be used to avoid, minimize the magnitude of, or offset the identified impacts. The mitigation plan will be submitted to BLM for approval within 30 days of BLM's determination that a site-specific mitigation plan is required (unless a longer timeframe is approved by BLM). 4. The BLM-approved, site-specific mitigation plan will be implemented by the SNWA. The BLM could require that specific measures be implemented per the schedule specified in the mitigation plan to avoid, minimize, or offset the impacts to federal resources or federal water rights. The specific mitigation measures may include but are not limited to the following: – Reduction or cessation in groundwater withdrawals; – Geographic redistribution of groundwater withdrawals; – Recharge projects to offset local groundwater drawdown; – Flow augmentation to maintain flow in specific water sources; or – Other on-site or off-site improvements. Monitoring of the surface water resources and groundwater elevations required under Mitigation Measure GW-WR3a will be used in addition to other specified monitoring in the approved mitigation plan to document the effectiveness of the implemented measures. If the initial implementation of the mitigation plan does not provide the desired results within the time frame specified by the BLM, the BLM may require implementation of additional measures.
Vegetation Resources
GW-VEG-1: Joshua Tree Avoidance. Mature Joshua trees (*Yucca brevifolia*) will be avoided to the extent possible when laying out access roads in Delamar Valley.
GW-VEG-2: Monitoring within Ute Ladies'-tresses Habitat. In concert with GW-WR-3a, and on BLM lands, biological and hydrologic monitoring will be required for Ute Ladies'-tresses (*Spiranthes diluvialis*) groundwater-dependent habitats in areas that may be affected by groundwater pumping. New occurrences of this species found during monitoring efforts will be reported to the USFWS and appropriate State natural heritage program.

Table 1 Monitoring and Mitigation Measures for Future NEPA

GW-VEG-5: Swamp Cedar Monitoring. In concert with GW-WR-3a, and on BLM lands including Areas of Critical Environmental Concern (ACECs), biological and hydrologic monitoring will be required for swamp cedar (*Juniperus scopulorum*) groundwater-dependent habitats in areas that may be affected by groundwater pumping. Monitoring of these communities will include the determination of groundwater requirements necessary to maintain viable populations, and metrics to assess the health of individual swamp cedars. The goal of monitoring will be to ensure the long-term survival and continued existence of these populations.
Terrestrial Wildlife
GW-WL-1: Avoid Siting Facilities in Key Big Game Habitats. Avoid locating wells, new roads, or other linear facilities within key big game habitats including crucial summer and winter ranges, and occupied bighorn sheep habitats. Where avoidance is not practicable, the SNWA will improve 2 acres of comparable habitat for every 1 acre disturbed.
GW-WL-2: Avoid Siting Facilities Within Buffers of Active Sage-grouse Leks. The SNWA will avoid siting facilities within 4 miles of active sage-grouse leks. Where avoidance is not possible, all power lines 33 kilovolts (kV) or smaller within 4 miles of active greater sage-grouse leks must be buried. If technology at the time of construction allows, lines greater than 33 kV will also be buried.
Terrestrial Wildlife continued
GW-WL-3: Pre-construction Surveys and Avoidance of Active Burrowing Owl Burrows. Prior to siting future facilities, SNWA will conduct pre-construction surveys for burrowing owl based on habitat, known range, and previous occurrences within areas being considered for facilities. Well and other facility siting will avoid active burrows during breeding and nesting season to the extent practicable.
GW-WL-4: Pre-construction Survey and Avoidance of Pygmy Rabbit Occupied Habitat. Prior to siting future facilities, the SNWA will conduct pre-construction surveys for pygmy rabbits based on habitat, known range, and previous occurrences within areas being considered for facilities. Well and other facility siting will avoid occupied habitat to the extent practicable.
GW-WL-5: Pre-construction Survey and Avoidance of Dark Kangaroo Mouse Occurrences. Prior to siting future facilities, the SNWA will conduct pre-construction surveys for dark kangaroo mouse based on habitat, known range, and previous occurrences within areas being considered for facilities. Well and other facility siting will avoid occurrences to the extent practicable. Where impacts cannot be avoided, measures similar to those proposed by the applicant for ROW construction will be followed.
GW-WL-6: Avoid Siting Facilities within the Baking Powder Flat ACEC. The SNWA will avoid siting groundwater development facilities within the Baking Powder Flat ACEC.
GW-WL-7: Pre-construction Surveys and Avoidance of Baking Powder Flat Blue Butterfly Occurrences and Habitat. Prior to siting future facilities, SNWA will conduct pre-construction surveys for Baking Powder Flat blue butterfly based on habitat, known range, and previous occurrences within areas being considered for facilities. Well and other facility siting will avoid occurrences and habitat.
GW-WL-8: Artificial Water Sources for Big Game. If groundwater pumping by the SNWA results in the loss of existing water sources used by big game, the SNWA, in coordination with the BLM or NPS and NDOW, will develop and maintain artificial water sources to maintain current distribution of big game. Water would come from SNWA allocations.
GW-WL-9: Greater sage-grouse monitoring in Hamlin Valley. The SNWA and BLM will coordinate with the USFWS, Utah Department of Wildlife Resources (UDWR), and NDOW to develop monitoring of the greater sage-grouse using leks in Hamlin Valley. Goals of the monitoring program will include, but not be limited to, determining if birds using Hamlin Valley leks are migratory and what, if any, groundwater dependent habitats the birds may be using.
GW-WL-10: Monitoring on BLM Lands within Greater Sage-grouse Habitat. In concert with GW-WR-3, on BLM lands, require biological and hydrologic monitoring of greater sage-grouse groundwater-dependent habitats in areas that may be affected by groundwater pumping. Hydrologic monitoring will be continuous (e.g., piezometers and soil tensiometer/piezometers) at all sites where sage-grouse habitat is being monitored.
Aquatic Biological Resources
GW-AB-1: Avoid Disturbance to Springs. Avoid direct disturbance to springs and wetlands in Spring valley with known special status aquatic species by establishing a 0.5-mile buffer around these areas.
GW-AB-2: Avoid Disturbance to Streams. Avoid locating wells, new roads or other linear facilities within 0.5 mile of or parallel to perennial streams and riparian areas with game fish and special status species.
GW-AB-3: Flow Change Mitigation. The BLM would identify specific mitigation measures during subsequent NEPA for those springs or streams with game fish or special status aquatic species where flow or water level changes are identified during modeling or monitoring. Mitigation ideas are identified as part of SNWA ACMs under adaptive management (provided in the SNWA POD, Attachment B of the ROD). Mitigation options are identified in the COM Plan Framework (above), ACMs under adaptive management, and water resource measure GW-WR-7.

Table 1 Monitoring and Mitigation Measures for Future NEPA

GW-MN-AB-1: Stream Flow and Aquatic Biology Monitoring. Monitor flows in game fish streams with moderate and high risks where potential pumping effects could occur. The selected perennial streams will include but is not limited to: 1) Geyser Creek in Lake Valley; 2) Big Wash, Big Springs Creek, and Snake Creek in Snake Valley; 3) Bassett Creek, Bastian Creek, Eightmile Creek, Indian creek, McCoy Creek, Meadow Creek, Muncy Creek, Negro Creek, Odgers Creek, Piemont Creek, Pine Creek, Ridge Creek, Shingle Creek, Siegel Creek, South Taft Creek, Spring Valley Creek, Taft Creek, Vipont Creek, Willard Creek, and Williams Canyon Creek in Spring Valley (184), and 4) Pahranagat Creek in Pahranagat Valley. Monitoring measurements will include discharge and cross-sectional profiles. Cross-section data will be used to estimate flow changes on the wetted area of streams. Fish and macroinvertebrate surveys also will be conducted following methods approved by the DOI agencies and the NDOW.
GW-MN-AB-2: Spring and Aquatic Biology Monitoring. Monitor flows in moderate and high risk springs with game fish or special status species where potential pumping effects could occur. The selected springs, ponds, and lakes will include but is not limited to: 1) Butterfield Spring and Flag Springs in White River Valley; 2) Blind Spring, Cleveland Ranch Springs, Keegan Spring, Minerva Spring Complex, North Millick Spring, O'Neal/Frog Pond, Osborne Spring, Shoshone Ponds, South Millick Spring, Stonehouse Spring Complex, Swallow Spring, Unnamed Spring #5, Unnamed spring near Cleve Creek, and Willow Spring in Spring Valley (184); 3) Big Springs in Snake Valley; and 4) Wamboldt Springs in Lake Valley. Cross-sectional profile measurements will be taken in the springs. Biology surveys (fish, macroinvertebrates, springsnails, and amphibians) will follow methods described in the Spring Valley Stipulated Agreement. If monitoring indicates pumping effects, alternative diversion points would be considered.
Aquatic Biological Resources continued
GW-MN-AB-3: Flow/habitat Determination. Flow- or water level-habitat relationships will be studied in selected streams and springs to determine minimum flow or water levels needed to support critical life stage of aquatic species in these habitats. The streams or springs will be selected from the list being monitored as part of the Stipulated Agreements or additional waterbodies recommended for Measures GWD-MN-AB-1 and GWD-MN-AB-2. Methods for determining minimum flows in stream habitats will be based on existing procedures involving flow-habitat measurements and flow preferences for fish species. It is anticipated that methods will need to be developed for spring habitats due to a general lack of studies. The selected streams and springs will include but is not limited to: 1) Butterfield and Flag springs in White River Valley; 2) Shoshone Ponds , O'Neal/Frog Pond, and Blind, Cleveland Ranch, Keegan, Minerva, North Millick, South Millick, and unnamed # 5 springs in Spring Valley; 3) Big Springs in Snake Valley; and 4) Wambolt Spring in Lake Valley.
Wild Horse and Burro Herd Management Areas
GW–WH-1: Water Source Maintenance. In cooperation with the BLM, SNWA will identify key natural water sources and monitor those sources on a regular basis (frequency determined by the BLM). If impacts to those sources are observed, SNWA will consult with the BLM to identify locations where artificial water sources could be maintained to supply herds with adequate water supplies. This mitigation measure is not limited to impacts that are a result of the SNWA groundwater development activities.
Special Designations and Lands with Wilderness Characteristics
GW-SD-1: Avoid New Disturbance in ACECs. To the degree possible, avoid new surface disturbance in ACECs outside of utility corridors when planning well locations and roads.
Visual Resources
GW-VR-1: Avoid Siting Facilities on Slopes. Where determined necessary by BLM for visual resource protection, groundwater development facilities will not be located on slopes greater than 5 percent.
GW–VR-2: Install Distribution Power Lines Underground. Where determined necessary by BLM for visual resource protection reasons, distribution power lines (voltages less than 33 kV) will be placed underground, when not located within high voltage transmission corridors. Underground power lines can be located within the 100-foot ROW with a minimum separation in accordance with the National Electric Safety Code Standard 353. Underground power lines shall be located within the disturbed area of the permanent ROW to minimize soil disturbance and visual contrasts to the extent feasible.
GW-VR-3: Site Wellfield Facilities Away from Designated Viewing Locations. Where determined necessary by BLM for visual resource protection reasons, site groundwater development production wells, staging areas, and pumping stations more than 0.5 mile from designated viewing locations with high viewer sensitivity (e.g., scenic byways, key observation points, wilderness areas and national parks) except where they are within the temporary and permanent ROW for the main or lateral pipelines or colocated with ROW facilities. Utilize terrain to screen groundwater development facilities and avoid placing buildings on high land features and along "skylines" to conceal or reduce changes (see **Appendix F3.15** of the Final EIS for site-specific mitigation).
GW-VR-4: Site Groundwater Development Structures and Facilities in BLM VRM Class III or IV Areas. No well pads or roads will be constructed in Class I and II areas.