FISH SPRINGS WATER SUPPLY PROJECT
VIDLER WATER COMPANY, INC.

PLAN OF DEVELOPMENT
(POD)

Prepared by:
Vidler Water Company, Inc.
704 West Nye Lane, Suite 201
Carson City, NV  89703

With Technical Assistance from:

WESTECH
Environmental Services, Inc.
P.O. Box 6045
Helena, MT  59604

ECO:LOGIC
Consulting Engineers
10381 Double R Blvd.
Reno, NV  89521

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# TABLE OF CONTENTS

## PROJECT SUMMARY

1.0 OVERVIEW OF PLAN OF DEVELOPMENT .................................................. 3

2.0 PURPOSE AND NEED .............................................................................. 5

3.0 PROJECT LOCATION .............................................................................. 6
   3.1 MAPS AND CONSTRUCTION DRAWINGS ............................................. 6
   3.2 AFFECTED ACREAGE ........................................................................ 7

4.0 DESIGN AND CONSTRUCTION OF PROJECT PIPELINES ...................... 8
   4.1 WELL FIELD COLLECTION SYSTEM ............................................... 8
   4.2 TRANSMISSION PIPELINE ............................................................... 8
   4.3 PIPELINE SEQUENCING AND CONSTRUCTION ................................. 9
       4.3.1 Topsoil Salvage and Storage ..................................................... 10
       4.3.2 Clearing and Grading ............................................................... 11
       4.3.3 Trenching and Blasting ............................................................ 12
       4.3.4 Pipe Stringing ...................................................................... 13
       4.3.5 Pipe Installation .................................................................... 14
       4.3.6 Backfill .................................................................................. 14
       4.3.7 Hydrostatic Testing ................................................................ 15
       4.3.8 Regrading and Cleanup ............................................................ 15
       4.3.9 Topsoil Redistribution ............................................................... 17
       4.3.10 Livestock and Wildlife Barriers ................................................. 18
       4.3.11 Fencing and Gates .................................................................. 18
       4.3.12 Residential Areas ................................................................... 18
       4.3.13 Stream Crossings ................................................................... 19
       4.3.14 Unimproved Roadways ............................................................. 20
       4.3.15 Improved Roadways ................................................................. 20
       4.3.16 Environmental Compliance and Inspections ............................ 21

4.4 CONNECTION TO EXISTING RIGHT-OF-WAYS .................................. 21
TABLE OF CONTENTS

5.0 DESIGN AND CONSTRUCTION OF PRODUCTION WELLS, STORAGE FACILITIES, AND OTHER PROJECT FACILITIES ........................................... 22
  5.1 PRODUCTION WELLS .......................................................... 22
  5.2 MONITORING WELLS ......................................................... 23
  5.3 FISH SPRINGS PUMP STATION AND STORAGE TANKS ......................... 24
  5.4 FORT SAGE SUBSTATION AND POWER DISTRIBUTION LINE ................... 26
  5.5 SURGE SUPPRESSION FACILITY ........................................... 27
  5.6 TERMINAL STORAGE TANK ................................................ 28
  5.7 EXTRA WORK SPACE ......................................................... 29
  5.8 ACCESS ROUTES .............................................................. 29
  5.9 CONSTRUCTION SCHEDULE ............................................... 29

6.0 RECLAMATION ............................................................................ 30
  6.1 FINAL CLEANUP ..................................................................... 30
  6.2 FERTILIZER ........................................................................... 30
  6.3 EROSION CONTROL ............................................................. 31
  6.4 REVEGETATION SCHEDULE ................................................ 31
  6.5 EROSION CONTROL AND REVEGETATION MONITORING .................... 32
  6.6 REMEDIATION ..................................................................... 32

7.0 OPERATION AND MAINTENANCE ..................................................... 33
  7.1 GRAZING CONTROL .............................................................. 33

8.0 TERMINATION AND RESTORATION ............................................... 34

9.0 AGENCY INVOLVEMENT .............................................................. 35
  9.1 CONTACTS .......................................................................... 35
  9.2 PERMITTING ACTIONS .......................................................... 35

LIST OF TABLES

Table 1. Mitigation Compliance Checklist ........................................... 36
Table 2. Affected Acreage of Public and Private Land ............................. 44
Table 3. Preliminary Construction Schedule ....................................... 45
Table 4. Preliminary Permits, Approvals, and Consultation ..................... 46
TABLE OF CONTENTS

LIST OF PHOTOGRAPHS

Photo 1. Proposed Fish Springs Ranch Pump Station & Tank Location
With Facility Rendering ................................................................. 47
Photo 2. Bordertown Substation .......................................................... 47
Photo 3. Proposed Single Wood Pole Structure with Cross Arms .............. 48
Photo 3. Proposed Terminal Storage Tank Location with Tank Rendering ...... 48

LIST OF FIGURES

Figure 1 Preliminary Typical Trench Details
Figure 2 Preliminary Typical Appurtenant Facilities
Figure 3 Preliminary Production Wells Typical Floor Plan
Figure 4 Preliminary Production Wells Typical Building Elevations
Figure 5 Preliminary Production Wells Typical Site Plan
Figure 6 Preliminary Location Map for Substation and Pump Station
Figure 7 Preliminary Elevations Pump Station Facility
Figure 8 Preliminary Floor Plan Pump Station Facility
Figure 9 Preliminary Sections Pump Station Facility
Figure 10A Preliminary Elevations Pump Station Facility
Figure 10B Preliminary Elevations Pump Station Facility
Figure 11 Preliminary Elevations Tank Station Facility
Figure 12 Preliminary Elevation for Pump Station Tank
Figure 13 Preliminary Site Plan Electrical Substation
Figure 14 Preliminary Elevation A Electrical Substation
Figure 15 Preliminary Elevation B Electrical Substation
Figure 16 Preliminary Elevation C Electrical Substation
Figure 17 Preliminary Fence Details
Figure 18 Preliminary Location Map Surge Facility
Figure 19 Preliminary Site Plan Surge Facility
Figure 20 Preliminary Elevation Surge Facility
Figure 21 Preliminary Site Plan for Terminal Tank Site
Figure 22 Preliminary Elevation Terminal Storage Tank
TABLE OF CONTENTS

LIST OF DRAWINGS

Drawing 1. Project Location and Components (1 sheet)
Drawing 2. Project Map (3 sheets)

LIST OF APPENDICES

Appendix A. Environmental Compliance Management Plan
Appendix B. Stormwater Pollution Prevention Plan (SWPPP)
Appendix C. Revegetation Plan
Appendix D. Fire Control Plan
Appendix E. Dust Control Plan
Appendix F. Spill, Prevention, Containment, Countermeasure, and Cleanup Plan (SPCCC)
Appendix G. Noxious Weed Management Plan
Appendix H. Access Road Plan

Fish Springs Water Supply Project
Vidler Water Company, Inc.

Plan of Development (POD)
April 2006
PROJECT SUMMARY

The Project developer is proposing construction of the Fish Springs Water Supply Project (Project) to meet future water demands for the Stead, Silver Lake, and Lemmon Valley areas (North Valleys) within the Truckee Meadows Services Area. The proposed Project consists of the following main components:

- ground water production wells (well field);
- monitoring wells;
- well field and water collection pipelines;
- pump station and water storage tanks;
- electrical substation;
- electrical distribution lines;
- transmission pipeline;
- surge suppression facility;
- terminal storage tank.

These components are designed to supply a total of 8,000 acre-feet/year (af/yr) of water. Retail water service will continue to be provided by Washoe County and/or the Truckee Meadows Water Authority. An overview of the Project location and components is shown in Drawing 1.

Water will be supplied from six new and/or existing groundwater wells that are currently being used for alfalfa hay irrigation at Fish Springs Ranch, located in the southern half of Honey Lake Valley, Nevada. The Fish Springs water collection facilities will include buried 12-inch to 30-inch diameter well field pipelines from the individual wells that connect to the water collection pipeline, which terminates at a pump station in the southwest corner of Fish Springs Ranch. The largest diameter collection pipe will be located closest to the storage tanks to accommodate the combined volume of the well field pipes. Two 500,000-gallon capacity water storage tanks will be constructed adjacent to the pump station on Fish Springs Ranch property in Honey Lake Valley.

The pump station, with a minimum reliable capacity to supply 8,000 af/yr, will be constructed to pump water from the storage tanks over the east flank of the Fort Sage Mountains and south to Lemmon Valley via approximately 28.7 miles of buried 30-inch diameter transmission pipeline.
Sierra Pacific Power Company (SPPCo) will construct an electrical substation on private land adjacent to the Alturas 345 kV transmission line near the pump station. A 24.9 kV powerline will be installed from the electrical substation to the groundwater production wells. The line will be constructed using single pole structures and extend approximately 10 miles (4 miles across public land/6 miles across private land) to the groundwater production wells.

A surge suppression facility including a tank will be located on a public land parcel administered by the BLM along the east flank of the Fort Sage Mountains. A lateral pipeline will be constructed from the transmission pipeline to the surge facility.

The terminal storage tank will be constructed at a pad elevation of 5,515 feet amsl on public land administered by BLM. The site is located on a hillside between Antelope Valley and Lemmon Valley, immediately east and near the high point of Matterhorn Boulevard.

The tank site is sized to accommodate potential additional and/or larger storage tanks by Washoe County. This location was identified during the EIS public scoping process as an option for minimizing pipeline corridor impacts to private property and mitigating visual concerns from the Silver Knolls area. This site is the preferred tank location due to the proximity of the existing water distribution system, access, and sufficient elevation for distribution throughout the service area. Preliminary designs of Project components are shown in Figures 1 through 22. The facilities are not viewable from Highway 395.

Approximately 16 miles of the transmission pipeline will parallel the existing Tuscarora Gas Transmission Company (Tuscarora) natural gas pipeline right-of-way between the north slope of the Fort Sage Mountains, and the southern end of Bedell Flat.

For additional information on the history and development of the Project refer to Chapter 1 of the Final Environmental Impact Statement North Valleys Rights-of-Way Projects (FEIS) (October 2005).
1.0 OVERVIEW OF PLAN OF DEVELOPMENT

The Project developer has prepared this Plan of Development (POD) in compliance with the Bureau of Land Management (BLM) Manual Handbook H-2801-1 Right-of-Way Plans of Development and Grants. This POD is formatted to describe the design and construction of Project pipelines and other components as well as the reclamation, and operation and maintenance of all Project components. This document addresses environmental concerns such as soil, water, and vegetation resources by incorporating mitigation, Best Management Practices (BMPs), and permitting requirements from the public scoping process and agency review including:

- Draft and Final Environmental Impact Statement North Valleys Rights-of-Way Projects (DEIS, March 2005; FEIS, October 2005);
- BLM review and comment on the Draft Fish Springs Water Supply Project Plan of Development (October 2005);
- Washoe County Special Use Permit (SUP) Case No. SW05-009 (January 17, 2006).

A checklist of mitigation and compliance conditions contained in these documents is included as Table 1 in the attached Tables Section.

This POD is intended for use by construction and reclamation contractors and subcontractors (Contractors); Construction and Environmental Inspectors; and operations and maintenance personnel. The POD builds upon the FEIS and should be used in tandem with Construction Drawings and Details that may be revised immediately prior to construction to accommodate final permit requirements or minor Project revisions.

A copy of this POD will be available at the Project Contractors’ yard(s) from The Project developer. In addition, Construction and Environmental Inspectors will carry a copy of the POD with them in the field.

The locations of major Project items in the document are listed below:
<table>
<thead>
<tr>
<th>POD Location</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>POD Text</td>
<td>Location, design, construction, and reclamation of Project pipeline and additional components</td>
</tr>
<tr>
<td>Appendix A: Environmental Compliance Management Plan</td>
<td>Environmental monitoring, inspections, and compliance</td>
</tr>
</tbody>
</table>
| Appendix B: Stormwater Pollution Prevention Plan (SWPPP) | Topsoil salvage and distribution  
Erosion Control (temporary, permanent, and structural)  
Stream crossing methods |
| Appendix C: Revegetation Plan      | Seedbed preparation  
Revegetation  
Revegetation monitoring  
Remedial revegetation |
| Appendix D: Fire Control Plan      | Fire prevention and control |
| Appendix E: Dust Control Plan      | Dust suppression and control |
| Appendix F: Spill Prevention, Containment, Countermeasure and Cleanup Plan (SPCCC) | Hazardous materials handling |
| Appendix G: Noxious Weed Management Plan | Noxious weed management |
| Appendix H: Access Road Plan       | Project access |
2.0 PURPOSE AND NEED

The purpose of the Project is to provide additional water to the North Valleys area within the Truckee Meadows Services Area to help meet projected water demands in the region. The existing groundwater resources and Truckee River-based supplies have essentially reached capacity. Additionally, only a small number of new will-serve commitments can be issued, primarily for infill within the Silver Lake area. The Washoe County Regional Water Planning Commission (RWPC) has completed several studies to estimate potential water needs (based on currently approved planned land uses) and identified water supply infrastructure requirements for the North Valleys region. The latter of these studies also addressed water distribution system improvements required to provide water service throughout the area. A detailed description of the Project Purpose and Need is presented in Chapter 1 of the FEIS (October 2005).
3.0 PROJECT LOCATION

The Project is located in northwest Nevada, north of Reno (Drawing 1) and originates at a well field located on Fish Springs Ranch. Fish Springs Ranch is situated in the southern portion of Honey Lake Valley. The well field will be connected to the Fish Springs pump station on the eastern flank of the Fort Sage Mountains. From the pump station, the transmission pipeline will proceed to Fort Sage Pass in the Fort Sage Mountains and through the surge suppression facility at the pass high-point. The transmission pipeline will then proceed south from the pass over the North Fork of Dry Valley Creek and Dry Valley Creek to Bedell Flat. From Bedell Flat the transmission pipeline will continue to the terminus point above Matterhorn Boulevard between Lemmon Valley and Antelope Valley.

3.1 MAPS AND CONSTRUCTION DRAWINGS

A Project Map (3 Sheets) is included as Drawing 2. Features shown on the Project Map include:

- well locations;
- well field pipeline centerlines;
- Fish Springs pump station and storage tanks;
- Fort Sage Substation;
- electrical distribution line;
- Transmission pipeline centerline;
- surge suppression facility;
- terminal tank location;
- access roads;
- extra work space;
- section lines and numbers;
- property ownership;
- Project mileposts at one-mile intervals.

To be provided under separate cover are Construction Drawings depicting site-specific construction and reclamation details by station including: topography, erosion control specifications; standard right-of-way width and extra work space; stream and drainage crossing locations; revegetation specifications; and other relevant information.

Fish Springs Water Supply Project
Vidler Water Company, Inc.
3.2 AFFECTED ACREAGE

The Project affects public land administered by the BLM and private land. The area of public and private land affected by each type of Project disturbance is presented in Table 2 (see Tables Section).

Temporary and permanent disturbances on public and private land are presented below. Temporary disturbances are those that will be reclaimed to the pre-existing land use. Permanent disturbances are those that will be permanently affected by a facility's footprint (e.g. Fish Springs pump station) for the life of the Project.

**Acreage of Public and Private Land Affected by Temporary and Permanent Disturbances**

<table>
<thead>
<tr>
<th>Disturbance</th>
<th>Public Land (acres)</th>
<th>Private Land (acres)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temporary Disturbance</td>
<td>234.7</td>
<td>153.6</td>
</tr>
<tr>
<td>Permanent Disturbance</td>
<td>0.8</td>
<td>20.3</td>
</tr>
</tbody>
</table>

Project affected acreage differs slightly from that presented in the FEIS due to minor refinements in Project Design. Total affected acreage has increased by 14.7 acres from that presented in the FEIS to a total of 409.4 acres. However, Project redesign has decreased the permanent disturbance acreage on public land from approximately 5.0 acres to 0.8 acres, and on private land from approximately 33.5 acres to 18.1 acres.
4.0 DESIGN AND CONSTRUCTION OF PROJECT PIPELINES

Pipeline components include those associated with: 1) the well field pipeline collection system; and 2) the transmission pipeline. Appurtenant facilities include isolation valves, control valves, access manways, and other features.

4.1 WELL FIELD COLLECTION SYSTEM

The well field pipeline collection system will consist of a main gathering line with ancillary pipelines connecting to each well site. Several sections of pipeline will be located on public property as shown on the Project Map (Drawing 2). The pipeline will be constructed within a 50-foot permanent, and 25-foot temporary construction assessment.

The pipeline will have a minimum cover depth of three feet below existing grades and will vary in size from 12-inches to 30-inches diameter with the largest diameters located closest to the pump station storage tanks. Final design will determine actual pipeline diameters. A fiber optic telemetry cable will be located in a common trench between the Fish Springs pump station and the well sites. Appurtenant facilities will include isolation valves, control valves, access manways, air release/vacuum valves and vaults, blow-off valves, fiber optic splice vaults, and pipe alignment markers. Fire hydrants will also be provided at each well site and the ranch headquarters. Final design and construction will govern the actual number, type and location of the various appurtenances. Typical pipeline and pipeline appurtenant facility details are shown in Figures 1 and 2.

4.2 TRANSMISSION PIPELINE

Approximately 28.7 miles of buried 30-inch diameter transmission pipeline will be constructed between the Fish Springs pump station and the terminal storage tank above Matterhorn Boulevard. A permanent 50-foot-wide easement will be provided for future construction, operations and maintenance. The Project developer has obtained easements for the transmission pipeline across private property.

An additional 25-foot wide temporary construction easement will be located adjacent to the permanent easement. Wider temporary construction easements and areas designated for staging will be required for material and equipment storage as shown on Drawing 2. Extra
work space dimensions include the permanent and temporary pipeline construction easements and are shown on Drawing 2.

Due to topography, much of the transmission pipeline will operate at pressures over 150 pounds per square inch (psi). Discharge pressure at the main pump station will exceed 700 psi. The pipe type being considered as most appropriate for the transmission pipeline is AWWA C200 Cement Mortar Lined and Dielectric Coated Pipe with a concrete "rock shield" outer coating. This type of pipe consists of rolled steel cylinder designed to resist operating pressures in hoop stress.

The transmission pipeline will have a minimum cover depth of three feet below existing grades. A fiber optic telemetry cable will be located in a common trench between the Fish Springs pump station and the terminal storage tank. Appurtenant facilities will include isolation valves, control valves, access manways, air release/vacuum valves and vaults, blow-off valves, fiber optic splice vaults, cathodic protection facilities, pipe alignment markers, and surge suppression facilities. Typical pipeline and pipeline appurtenant facility details are shown in Figures 1 and 2. The surge suppression facilities may include a surge tank at both the pump station and at the top of Fort Sage Pass.

Most appurtenant facilities, other than the surge components, will be located predominantly below existing grades in traffic rated, lockable, concrete vaults that will vary in dimension. Typically these vaults will be located outside of traffic areas and may require small location markers extending above the surface several feet. Vault dimensions will range from 2 x 3 feet to 8 x 12 feet with depths approaching 8 feet. The location of these facilities will be based on existing topography and will be determined during final design. With the exception of the surge suppression facilities, these appurtenances will occur on average every mile along the alignment. Where feasible, maintenance access will be coordinated with existing roads. Details of any required cathodic protection system will be provided during final design.

4.3 PIPELINE SEQUENCING AND CONSTRUCTION

It is anticipated that the construction operations will generally be performed as described below, however the actual method of construction chosen is at the contractor's discretion.

Pipeline construction methodologies may be segregated into the following classifications:

- cross-country construction methods in farmland and rangeland;
unimproved roadway construction methods in areas where the pipeline will be installed in unimproved roadways (no structural AC) either near the edge of the roadway or just outside of the roadway, beyond the roadway drainage area;

- improved roadway construction methods in areas where the pipeline will be installed in improved roadways (structural AC) either near the edge of the roadway or just outside of the roadway.

The majority of the Project will be constructed in areas where cross-country methods are most appropriate. Sections 4.3.1 through 4.3.13 describe cross-country construction methods. Unimproved roadway and improved roadway construction methods are described in the Sections 4.3.14 and 4.3.15, respectively. In general, approximately 600 feet or more of pipeline can be laid per day using cross-country construction methods, while approximately 300 feet and 140 feet of pipeline can be laid per day in unimproved roadways and improved roadways respectively. Actual rate of pipeline installation will vary depending on installation method and local site conditions.

4.3.1 Topsoil Salvage and Storage

Topsoil will be salvaged wherever the right-of-way is graded unless otherwise specified. Topsoil handling will be conducted to salvage, store, and redistribute the highest quality soils suitable for revegetation and for maintenance of surface color. Topsoil is defined as surface soil that contains higher amounts of organic matter as well as the soil seedbank relative to underlying soils and subsoils. Topsoil generally exhibits more favorable textures, fewer coarse fragments, and less salts or other potentially limiting characteristics than soils located in lower horizons or in the subsoil. The Project developer recognizes that the term "topsoil" may be inappropriate in some areas, however, for ease of understanding this document uses the word "topsoil" throughout.

Topsoil stripping width, depth, and storage will vary along the pipeline route depending on criteria such as: potential safety hazards, construction techniques, land use, soil characteristics, grading requirements, slope, amount of traffic expected over a particular construction segment, vegetation, landowner preference, visual sensitivity, and methods for crossing wetlands, streams, roads, etc. Stripping depth and width are specified in the SWPPP (Appendix B) and on Construction Drawings.

Generally, a minimum of 3 inches to a maximum of 12 inches of topsoil will be salvaged. Topsoil will be stored separately from spoil and will not be used for padding or backfill. Additional salvage measures to protect the topsoil resource are described in Appendix B.
Topsoil will be evenly spread over areas where it was salvaged following regrading and cleanup (Section 4.3.8).

4.3.2 Clearing and Grading

Obstacles such as rock, shrubs, and trees will be removed within the permanent easement, temporary construction workspace, and access routes where necessary for construction operations. The pipeline centerline and margins will be staked and flagged to identify Project boundaries. The boundaries of extra work space, the extent of construction activity in the Tuscarora gas line easement at crossing locations, and other facility sites will also be staked and flagged prior to construction. Sufficient area will be provided for the transportation of materials, assembly and installation activities (including the temporary storage of materials), construction equipment, and salvaged topsoil. Clearing and grading details are described in the SWPPP (Appendix B). Clearing and grading will be conducted in accordance with the following guidelines.

- Only the area between flagged right-of-way boundaries may be cleared or graded where necessary for construction operations.
- Grading will occur only in those areas necessary for safe passage and the level construction of facilities.
- The spoil side of the right-of-way will be mowed or hydro-axed but not graded unless necessary for safe passage or level construction with the intent of leaving root structure in place.
- Minimal grading will be required in relatively flat terrain or when the right-of-way parallels the slope fall line.
- Clearing and grading will not be conducted during excessively wet weather (e.g. where mud fouls blades and/or mud fouls and balls on tires and tracks).
- Reasonable precautions will be taken to protect the aesthetic values of the land adjacent to the right-of-way.
- Suitable vehicle water crossing structures such as temporary bridges will be installed if required.
- Trees will be felled away from watercourses and offsite vegetation to prevent damage to adjacent trees and stream zone vegetation.
- Debris resulting from clearing operations will not be disposed of in a manner that could interfere with stream flow, contribute to flood damage, or result in streambed scour.
- Low shrubs, small woody debris and herbaceous plants will be salvaged with topsoil.
• Useable timber, posts, and poles will be removed from the right-of-way.
• Wood or slash will be piled or chipped during clearing.
• Piled or chipped material will be re-spread on the right-of-way during reclamation.
• Soil stabilization measures will be initiated concurrently with clearing and grading where practicable, but in no case more than 14 days after clearing and grading activities have temporarily or permanently ceased.

Excess rock displaced by pipeline trenching will be disposed of in one of the following manners described below.

Rock may be used to backfill the trench to the top of the existing bedrock profile per design requirements and the Environmental Inspector, or, if the landowner approves, may be buried within the subsoil portion of the right-of-way.
Rock may be randomly redistributed to blend with the adjacent landscape and/or impede access per BLM or landowner approval.
Excess rock that has not been buried or cannot be blended with the natural terrain may be hauled to an approved disposal site.
Rock may be piled to create or enhance wildlife habitat at specific locations per written authorization from the BLM or private landowners.

Rock disposal methods will not interfere with natural drainage or movement of wildlife or livestock. In rangeland, rock will be redistributed on the right-of-way so as not to exceed 20 percent (or that of the surrounding area, if greater) of the ground cover. Where desirable and consistent with adjacent areas, excess rock may be used as a rock mulch to reduce erosion on steeper slopes as determined by the Environmental Inspector. The Project developer will coordinate with the BLM and/or landowners regarding rock disposal methods.

4.3.3 Trenching and Blasting

Trenching consists of excavating the trench for the pipe, and may be performed by one or more methods. The trench may be excavated by a trenching machine and/or track mounted excavator. Conventional excavators will be used wherever a deeper and wider than normal trench is required such as at tie-in locations, access manways, fiber optic splice vaults, hydrostatic test manifold sites, pipeline valve locations and other pipeline appurtenances. Unless land uses and permits dictate a greater width, the bottom of the trench will generally be 42- to 54-inches wide and sufficiently deep to provide a minimum cover of three feet over the top of the installed pipe. Trench walls will be maintained as vertical as possible except as
required by safety standards. Per recommendations provided by the Geotechnical Engineer and Occupational Safety and Health Administration guidelines, some sloping of trench walls and/or sheeting and shoring may be required. Therefore, actual width of the top of the trench may be significantly wider than the bottom of the trench depending upon site conditions. Trenching operations in the immediate vicinity of all buried utility lines will proceed only after the lines have been located and exposed. Access across the trench will be spaced at convenient intervals to allow landowner, livestock, and wildlife to cross the construction area.

In areas of weathered rock, track mounted excavators may be preceded by a bulldozer equipped with a single shank ripper. In areas of solid rock, trenching will be performed by drilling and blasting, followed by excavation. Explosives will be used in accordance with all applicable state and federal permits and authorizations, as well as the stipulations of local ordinances. Controlled blasting will be required in the vicinity of powerlines, telephone lines, existing pipeline facilities, structures, or buildings to preclude damage by fly-rock, air blast, vibrations or excessive particle accelerations as defined in the contract documents. Fly-rock will be controlled by matting, including but not limited to fabricated mats, overburden in-situ, sand-pad matting, and blast design. In particular, blasting will be coordinated with Tuscarora Gas Transmission Company when in the immediate vicinity of the existing gas main.

Standard erosion control practices will be employed to minimize erosion during trenching operations and other construction activities. In the few areas where a high groundwater table may be encountered, after rains, or other situations when dewatering of the trench is necessary, water will be discharged in a manner that will prevent off-site erosion and minimize sedimentation as described in the SWPPP (Appendix B). Generally, discharge to the ground will be onto areas of adequate vegetation adjacent to the right-of-way to effectively function as a filter. In environmentally sensitive areas (e.g., adjacent to streams or cultural sites) or where there is inadequate vegetation, silt fences or other appropriate measures will be used to limit siltation and erosion. Any necessary permits will be obtained prior to discharge. Trench water may be transferred to water trucks and used to control dust along the right-of-way. Measures will also be taken to minimize free flow of water into the trench and from the trench into any body of water.

4.3.4 Pipe Stringing

Pipe stringing involves trucking the pipe from designated storage areas into position along the right-of-way in preparation for installation. The locations of potential pipe storage areas are generally shown on the Project Map (Drawing 2) as extra work space (EWS). Final locations will be depicted on the Construction Drawings.
The pipe will be strung along the right-of-way and spaced so that it is easily accessible to construction personnel. Sufficient pipe necessary for stream or road crossings will be stockpiled at extra work space areas in the vicinity of each crossing. Stringing activities will be coordinated with the trenching and pipe laying crews to minimize the length of time that a specific tract of land is occupied by the various construction crews.

4.3.5 Pipe Installation

The trench will be prepared in accordance with Project contract drawings and specifications to provide proper installation of the engineered pipe. Generally, the engineered pipe will have minimal ability to deviate from the engineered design, therefore the trench dimensions and alignment will be governed by the pipe design. It is anticipated that a majority of the pipe joint will be welded. During the welding operation, each weld will be observed by a qualified inspector, and radiographic inspection of the welds may be performed. After weld inspection, the welded joints will be coated and any defects in the coating will be repaired.

Side-boom tractors and/or track mounted excavators will be used to lower the pipe into the trench. Observations will be performed to document that the:

- trench is in accordance with Project contract drawings and specifications;
- trench is of adequate depth to achieve the minimum cover required over the pipe;
- bottom of the trench is free of large rocks, tree limbs, tree roots, and other debris;
- pipe is properly bedded in the trench in accordance with Project contract drawings and specifications;
- bends conform to the alignment of the trench; and,
- external coating on the pipe is not damaged.

If the bottom of the trench is located in rock, pipe supports, sand or soil padding (not topsoil), or other means will be used to protect the pipeline before it is lowered into the trench.

4.3.6 Backfill

A large portion of the excavated native subsoils encountered during construction will be suitable backfill material and will be screened and used as pipe bedding material during installation. Topsoil will not be used for backfill. Soils used for bedding and backfill should be nearly free of organic or other deleterious debris, essentially non-plastic, and less than 3
inches in maximum dimension. Specific requirements for backfill and test procedures to verify the material suitability will be provided in the Project contract drawings and specifications. Native material will reduce the amount of imported material hauled into the area and minimize: 1) disposal of excavation spoils; and 2) the amount of truck traffic on access roads and along the right-of-way. Screened byproducts will be used in intermediate backfill or hauled off-site to an approved location (either Vidler’s property in the vicinity of Fish Springs Ranch, private property near the terminal storage tank owned by International Community Christ, and/or the regional landfill).

Pipe bedding and backfill must be installed in accordance with the Project contract drawings and specifications in order to provide adequate sidewall support for the pipe, to provide adequate protection against future erosion, and to provide adequate protection at utility or vehicular crossings. Soils used for bedding and backfill generally must be uniformly moisture conditioned above the optimum moisture content, placed in relatively thin loose horizontal lifts and compacted to at least 90% relative compaction on the majority of the alignment. Relative compaction will be determined in accordance with ASTM D1557 Modified Proctor unless noted otherwise. Areas under asphalt concrete paving will require 95% relative compaction. Mechanical compaction will be required, ponding and jetting will not be allowed.

Rock may be buried at points on the Project with the following stipulations:

- Rock will not be buried in the trench.
- Rock may not be buried in Project areas that were not graded for other purposes (e.g. working side of right-of-way), disturbed areas must be returned to approximate original contour.
- Ensure that excess rock is not backfilled into the upper 12 inches of the soil horizon unless specified by an Environmental Inspector to match immediately surrounding terrain.

4.3.7 Hydrostatic Testing

Hydrostatic testing is discussed in the SWPPP (Appendix B) Section 7.1.6.

4.3.8 Regrading and Cleanup

Following backfill, areas within the right-of-way disturbed by construction operations will be regraded where necessary to the approximate original contour with allowance for settling, particularly over the trench. Environmental Inspectors will check for surficial compaction at
areas occupied by equipment during construction (e.g. the working side of the right-of-way or staging areas) with a 16-inch “sharp shooter” spade. Soils will generally be considered compacted and will require ripping or subsoiling if the spade cannot be driven to approximately one-half its length with pressure applied by both feet in four consecutive attempts within the same hole. Compacted soils will be either ripped or cultivated. The operating depth of the subsoiler or cultivator will be adequate to relieve compaction as determined by an Environmental Inspector. The Tuscarora right-of-way will not be ripped, chisel-plowed or spring-tooth harrowed to avoid contacting the pipe. Decomposition on the Tuscarora right-of-way will be accomplished with a disc or other equipment approved by the Project developer and Tuscarora.

Following regrading and cleanup, erosion control features requiring excavation, such as waterbars, will be installed prior to topsoil redistribution, revegetation, or other erosion control practices to prevent additional soil disturbance during reclamation and revegetation.

Cleanup will proceed simultaneously with final grading where feasible. Final cleanup will occur no later than 14 days after the trench is backfilled, weather and schedule permitting. Additional pipeline-related areas that will be cleaned up no later than 14 days after localized construction activities cease include:

- appurtenant facilities;
- access roads;
- borrow areas;
- rock disposal sites;
- stockpile sites;
- extra work space;
- Contractors’ yards;
- stream and wetland crossings.

Any remaining logs, stumps, or rocks that have not been intentionally left on the right-of-way will be disposed of in an appropriate manner. Trash, debris and other solid wastes will be disposed of in an appropriate manner at existing authorized sanitary landfills unless otherwise authorized by appropriate government agencies. Trash, debris, and other solid wastes include but are not limited to:

- sand bags;
- blasting mats;
- blasting materials;
- excess geotextile material;
• excess erosion and sediment control materials (e.g. silt fence, hydro-mulch sacks, netting, erosion control staples, etc.);
• stakes and ribbon;
• exclusion fencing;
• temporary or unusable fencing replaced by permanent fencing;
• daily trash accumulations.

No solid waste will be buried on the right-of-way. After final cleanup, the BLM will be contacted to verify that preconstruction commitments for the right-of-way and other component sites are satisfied.

Soil stabilization measures will be initiated as soon as practicable after construction ceases, but in no case more than 14 days after construction activity in any portion of the Project has temporarily or permanently ceased except as described in the SWPPP (Appendix B).

Topsoil will be evenly distributed across areas where it was salvaged and seeded with native, drought-tolerant species except in agricultural areas where other seed mixes may be requested by the landowner. Seeding will also be conducted in select areas where topsoil was not salvaged (e.g. the spoil side of the right-of-way).

Erosion control specifics are described and detailed in the SWPPP (Appendix B). Specific revegetation techniques and seed mixes are described and detailed in the Revegetation Plan (Appendix C).

If a reclaimed area must be disturbed after final cleanup and/or seeding has been accomplished, the affected area, including any temporary access routes via the right-of-way will be restored using the same requirements as for the original disturbance. This includes topsoil removal and replacement, decompaction, reseeding, and remulching.

4.3.9 Topsoil Redistribution

After the trench has been backfilled and the right-of-way regraded, the Contractor will redistribute topsoil to the approximate location from which it was originally removed. Restored topsoil will be left in a roughened condition to discourage erosion and enhance the quality of the seed bed. Topsoil will not be handled during excessively wet or frozen conditions as determined by the Environmental or Construction Inspector, and managing agency.
Topsoil will be redistributed as close to original salvage depths as possible. Specific topsoil salvage depths will be shown on Construction Drawings. Salvage methods are discussed in the SWPPP (Appendix B). Segregation of subsoil and topsoil will be maintained throughout final cleanup procedures. The Contractor will be responsible for replacement of lost or degraded (mixed) topsoil with topsoil imported from a weed-free source approved by The Project developer.

4.3.10 Livestock and Wildlife Barriers

Temporary livestock barrier fence will be installed at any point where the soil is ramped from the trench bottom to the surface to allow animal escape access. Fencing will be installed to make access into the trench difficult, but in such a manner that animals trapped within the trench could use the soil ramp to escape.

Before and during construction, grazing allotment permittees on BLM-managed public lands and ranchers on private lands will be notified of Project schedules to allow ample opportunity to relocate livestock away from construction/reclamation activities. Livestock and wildlife crossing points will be provided where necessary by hard or soft trench plugs, and gaps in spoil piles.

4.3.11 Fencing and Gates

All fences crossed by the Project will be temporarily replaced with barbed-wire gates. Gates will be closed at the end of each working day and will remain closed when not needed for Project access. Gates, fences and cattle guards will be repaired or replaced to pre-construction levels or better after construction, per agreement with each landowner or the BLM.

4.3.12 Residential Areas

Construction in residential areas will require additional precautions to minimize nuisance and prevent hazards. Dust control practices are described in the Dust Control Plan (Appendix E). Noise control and blasting measures specified in the Washoe County SUP are listed below and will be included with Details attached to the Construction Drawings.
Noisy operations will be combined to occur during the same time period within a day. Construction activities within 500 feet of residences will be limited to the hours of 7:00 AM to 6:00 PM Monday through Saturday.

Blasting within 1,000 feet of any residence shall require written notification to those residences by the Project developer with a copy of the notice submitted to the Department of Community Development at least three days prior to blasting.

Residential access around construction activities that may impact roads is described in the Access Road Plan (Appendix H).

4.3.13 Stream Crossings

One flowing stream, several wetlands including several seep/springs, and numerous ephemeral drainages will be crossed by the Project. Stream and wetland crossings will be conducted in accordance with Corps of Engineers requirements for jurisdictional Waters of the U.S.

Specific crossing and erosion control measures are described and detailed in the SWPPP (Appendix B). These measures are designed to minimize adverse effects to streams, wetlands, and drainages, and include several measures.

- Expedite construction in streams and wetlands to minimize the duration of turbidity-causing activities.
- Select an alignment that minimizes crossings and impacts to streams.
- Schedule construction, as much as possible, to occur in streams and wetlands during periods of low water or no water.
- Implement temporary erosion and sediment control practices.
- Restore channels and wetlands to their original configurations as soon as possible.
- Stabilize stream banks and adjacent upland areas with permanent erosion control and vegetation as soon as possible.
- Inspect the right-of-way periodically during and after construction to identify erosion-related problems and perform maintenance work in a timely manner.
4.3.14 Unimproved Roadways

The pipeline will be installed in unimproved roadways (no structural AC) either near the edge of the roadway or just outside of the roadway. Pipe stringing will occur on the opposite side of the roadway from the installation side, and will be placed outside of the roadway.

Pipeline excavation will be accomplished using either an excavator or trenching machine. If space is not available adjacent to the alignment for stockpiling of excavation spoils, haul trucks may be employed to transport excavated materials to an approved spoils storage/processing locations where it will be processed as necessary and utilized as backfill material. Haul trucks will stage adjacent to the excavator which may require traffic control and periodic lane closures directed by flaggers and hazard markers. It is anticipated that traffic volume through the construction site on unimproved roadways will be low and that reduced traffic control measures will be adequate.

At the end of each working day backfill will be placed to finished grade and to the excavation limits for that day. Construction equipment will be moved from the roadway to an approved location and all obstacles will be removed from the roadway. In no case will open trenches be left across or within roadways. Trench plates may be used to temporarily cover excavation headings. Traffic control devices will be left in place around trench plates.

4.3.15 Improved Roadways

In general, the pipeline will parallel improved roadways (structural AC) immediately outside of the structural AC roadway. Traffic control measures in these areas will include flaggers, hazard markers, and, if necessary, pilot cars.

In areas where it is necessary to install portions of the pipeline within the roadway pavement section, the pipeline will be installed in the approximate center of a traffic lane. Surface repair will be in accordance with project contract drawings and specifications, and if applicable, a Washoe County Encroachment Permit. Flaggers and hazard markers will be used to alert drivers to the construction. Pilot cars may be used to direct traffic around construction if necessary.

At the end of each working day, backfill will be placed to finished grade and to the excavation limits for that day. Backfill at grade will in accordance with project contract drawings and specifications. Temporary or permanent surface repair will be completed prior to allowing the roadway back into use. Construction equipment will be moved from the roadway to an approved location and all obstacles will be removed from the roadway. In no case will open
trenches be left across or within roadways. Upon completion of pipe installation for a predetermined length of the alignment, asphalt-paving crews will restore the roadway section to its original state.

Access shall remain open during construction on public roads to allow for local and emergency vehicle traffic. The project developer will work with landowners to allow access through driveways.

4.3.16 Environmental Compliance and Inspection

Construction environmental mitigation measures will be implemented directly by the Contractors. The contract specifications will be based on commitments contained in this POD and Project permits and approvals. The Project developer will employ on-site Construction and Environmental Inspectors to require Contractors to comply with specifications in the contract documents. Contractors will be notified that failure to comply with construction specifications (including environmental mitigation measures to be implemented by the Contractors) will not be permitted. The Project developer’s Construction and Environmental Inspectors will conduct continuous field observations to document compliance with contract specifications. Environmental compliance and inspection details are described in the Environmental Compliance Management Plan (Appendix A).

4.4 CONNECTION TO EXISTING RIGHT-OF-WAYS

The Project lies within portions of a pre-existing pipeline and power line corridor. The Project will parallel the Tuscarora right-of-way for approximately 16 miles as shown on Drawing 2. Portions of the outer ten feet of the Tuscarora right-of-way will be disturbed as temporary workspace for the Project. Extra work space will not be located on the Tuscarora right-of-way nor will the Tuscarora right-of-way be used as an access road or be otherwise impacted. Both companies will inspect any crossings between the two pipelines prior to and during construction to insure accurate location of the Tuscarora pipeline, adequate separation between the lines, and proper safety precautions. Pipeline crossing ramps will be constructed over the Tuscarora pipe at all points where construction traffic will cross the pipeline.

In addition to the Tuscarora right-of-way, the Project roughly parallels the SPPCo Alturas 345kV transmission line between the Fish Springs pump station to just south of the Fort Sage pass, for an approximate distance of 4.5 miles.
5.0 DESIGN AND CONSTRUCTION OF PRODUCTION WELLS, STORAGE FACILITIES, AND OTHER PROJECT FACILITIES

5.1 PRODUCTION WELLS

The well field at Fish Springs Ranch is permitted to produce and export approximately 8,000 acre-feet of groundwater per year, based on permits approved by the Nevada State Engineer. USGS investigations estimate that there are 130,000 acre-feet of annual recharge to the Honey Lake groundwater basin. Annual recharge to the southeastern Honey Lake basin (Fish Springs vicinity) is estimated to be 24,000 acre-feet (USGS Water Resources Investigation Report 90-450 by Handman et al., 1990). The proposed Fish Springs Water Supply Project is designed to extract and deliver 8,000 af/yr to the North Valleys area.

Currently, there are five irrigation wells in operation at Fish Springs. Each of the wells is equipped with a line-shaft vertical-turbine pump powered by diesel engines. These irrigation wells have sustainable production rates of approximately 800 gallons per minute (gpm) to 1,700 gpm, although some wells have been test-pumped for extended periods at more than 3,000 gpm. Only one of the current irrigation wells meets current Nevada Division of Health regulations for water-supply wells. The existing wells will be replaced with new wells in order to meet current construction standards and improve operating efficiency. For planning purposes, six new wells are proposed. The wells will be gravel-packed, constructed with sanitary seals to a depth of 100 feet below the surface, and shall be equipped with water lubricated vertical turbine pumps.

All the production wells will be located on private property owned by The Project developer with approximate locations presented on the Project Map (Drawing 2, Sheet 1).

Each wellhead will be enclosed in a masonry block structure meeting current International Building Code (IBC) construction standards and Washoe County minimum design requirements. The structure will be constructed on a foundation elevated slightly above the surrounding grade to help minimize the potential for facility flooding. Each structure will contain all above-ground piping, shutoff valve, check valve, flow meter, air release valve, electrical equipment and telemetry. Each structure will have an approximate 19 x 26-foot footprint. Enclosure of the equipment will protect facilities from vandalism and weather, minimize maintenance, and prolong the life of the facility. Each well will be controlled via telemetry by water levels in the pump station storage tanks. Figures 3, 4 and 5 depict a typical site plan and building elevations for the proposed production wells.
Power will be provided via overhead electric distribution lines from the Fort Sage Substation. The Project will also include two, diesel-powered standby generators at two well sites, sized to operate two production wells in the event of a power outage on the overhead electric distribution system. The location and sizing of the generator will depend on the final design of the production wells.

Drilling fluid shall primarily be comprised of water, with additives as necessary to maintain the optimal characteristics of the fluids. These additives may include bentonite or polymers to control viscosity, swelling of clay, etc. All drilling fluids will be contained in aboveground tanks. The drilling fluid system will be equipped with shaker screens and desanders to remove all formation materials from the fluid. Drill cuttings will be dispersed at the land surface on The Project developer's property. The drilling fluids will be disposed of on the property by evaporation and desiccation in shallow depressions.

Each drill site will require approximately one acre of land to stage materials and equipment as well as to construct the well. Well screens will be constructed of corrosion-resistant materials such as Type 304 or 316L stainless steel because of their large surface area compared to corrosion susceptible blank well casing. Access and utility easement for each well will be dedicated to Washoe County and provide for an all-weather compacted gravel access road.

Upon completion of well construction, each well will be subjected to a battery of well performance and aquifer-stress tests. The entire testing sequence is expected to require approximately three to ten days per well. Groundwater pumped from wells during testing will be disposed of in accordance with applicable regulations and Project specific Special Use Permit conditions.

5.2 MONITORING WELLS

The Project developer will comply with the State Engineer's approved Water Resources Monitoring and Management Plan. A proposed Water Resources Monitoring and Management Plan is contained in Appendix D of the FEIS (BLM 2005). The proposed Water Resources Monitoring and Management Plan describes monitoring and management activities of water resources and related potential impacts resulting from development of 8,000 AFA of groundwater resources in eastern Honey Lake Valley.
The current monitoring well network includes thirteen of the former Washoe County monitoring wells. A fourteenth well was incorporated into the network in late 2004. This well is a residential well located near the eastern half of the well field.

The monitoring network will be expanded to include a monitoring well west of the well field near the California-Nevada State Line. Two prospective wells include either the USGS Monitoring Well 3 or a California Fish and Game monitoring well located at the wildlife management area. Both wells are located approximately one mile west of the state line. Permission to utilize the selected well will be sought from the owners. The selected well will be equipped with a recording pressure transducer. Future monitoring will be accomplished through a combination of efforts by the Nevada Division of Water Resources and the well field operator.

Water level data are collected by In-Situ MiniTROLL™ “Standard A” integrated pressure transducers/digital data recorders. The recorders have been programmed to collect hourly measurements. The network also includes one BaroTROLL data logger for recording barometric pressure so that water levels can be adjusted for changes in barometric pressure. Data are retrieved quarterly. Hydrographs have been generated from the data and appended to hydrographs previously prepared by Washoe County staff. These hydrographs will continue to be updated.

The monitoring wells are located on land owned by The Project developer as well as public land administered by the BLM. These locations have been selected to track changes in groundwater levels and to help manage well field operations. Nine sites are accessible via roads maintained by Washoe County and improved roads maintained by The Project developer. Four sites are accessed via unimproved dirt tracks.

5.3 FISH SPRINGS PUMP STATION AND STORAGE TANKS

Photo 1 shows the area in which the pump station and storage tank will be located, the Alturas 345 kV Powerline crossing the southwest corner of this private property, and a rendering of the proposed facilities. Project photos are shown in the Photo Section.

The pump station will be designed to pump water from two adjacent storage tanks at an approximate elevation of 4,243 feet amsl over the east shoulder of the Fort Sage Mountains at a maximum elevation of 5,515 feet amsl, to the terminal tank located at the southern terminus of the transmission pipeline. The pump station will be designed to reliably supply 8,000 af/yr with a discharge pressure in excess of 700 psi. The pump station will include up to five
vertical turbine pumps installed in suction barrels to provide a minimum reliable capacity of 6,000 gpm, subject to final design requirements. Figures 6, 7, 8 and 9 present the preliminary site plan for the Fish Springs pump station facility. The pump station will be located on The Project developer’s property.

The pump station will be a masonry block building with minimum dimensions of 95 x 42 feet. Figures 10A and 10B show the preliminary pump station floor plan and elevations. The pump station will house the required electrical/control equipment, chemical storage facilities (liquid sodium hypochlorite), the pressure surge tank and compressor, and associated facilities. A small restroom will also be provided for operations and maintenance personnel. Wastewater disposal will be accomplished using an on-site septic tank and leach field system.

Chlorination will be used to provide disinfection of the groundwater and to provide a chlorine residual in the transmission pipeline. The planned method of chlorination will use a Sodium Hypochlorite solution commonly available in bulk at 12.5% concentration. Two 2,500-gallon storage tank with appropriate appurtenances and secondary containment facilities will be provided in the pump station building.

Minor grading will be required to construct the pump station. Cut and fill slopes will have a maximum slope of 3:1 horizontal to vertical. Improved access to the site will be along the dedicated 50-foot wide access and utility easement for Rainbow Way and across The Project developer’s property as shown in Figure 6. Access roads and surfaces around the pump station facility will be constructed with an all-weather surface such as compacted aggregate base with a surface of crushed rock. Access into the pump station site will be restricted by a chain link fence with three-strand barbed-wire around the facilities. The fencing will be vinyl coated with an approved neutral color to minimize visual impacts. In addition, facilities will include an alarm system that will notify appropriate personnel in case of unauthorized entry.

The water level in the terminal storage tank will control the operation of the pump station and wells via telemetry. When called for, the wells will pump to the pump station storage tanks, which in turn will provide a positive suction supply to the main pump station. A direct-burial fiber optic telemetry cable will be located in a common trench between the main pump station and the terminal storage tank. Fiber optic telemetry cables will be used to communicate between the main pump station and the individual wells.

Two 500,000-gallon capacity storage tanks will be constructed adjacent to the pump station on The Project developer’s property. Figures 11 and 12 present the preliminary site plan and elevations of the pump station storage tanks. Preliminary dimensions of each welded steel tank are 36 feet tall with an approximate diameter of 61 feet. Welded steel tanks shall be
designed and constructed in accordance with AWWA D100. The proposed site is slightly sloped, with minimal vegetation due to recent fires. The site will require minor grading to provide a level area to construct the tanks. Cut and fill slopes will be limited to a maximum slope of 3:1 horizontal to vertical. Tanks will be constructed on compacted gravel foundations and will be painted an approved neutral color to minimize visual impacts.

5.4 FORT SAGE SUBSTATION AND POWER DISTRIBUTION LINE

Sierra Pacific Power Company will serve the electrical needs of the Fish Springs Water Supply Project by constructing a 345/25 kV substation (Fort Sage Substation) tapping the Alturas 345kV transmission line in the Fish Springs Valley. Sierra Pacific Power Company has filed for PUCN approval of the substation under a separate UEPA. The existing Alturas transmission line is a reliable electric line that originates in Alturas, California and terminates at the North Valley Road Substation near Reno in Washoe County, Nevada. An appropriate protection scheme will be developed to ensure that this proposed line tap does not impact the reliability or integrity of the Alturas 345kV source. In addition, the substation will be designed with sufficient redundancy to allow for maintenance without requiring a 345kV line outage. Additional 345kV breakers will be installed to allow for substation maintenance, while allowing the Fish Springs service to remain energized. System operation and maintenance will be conducted in such a manner so as to minimize any outages to the Fish Springs service.

The substation will be located primarily in-line with the existing Alturas 345kV transmission line, near the Fish Springs pump station. The construction pad will be approximately 880 x 500 feet. Standard 6-foot chain link fencing with barbed-wire will be installed around the substation. Figure 6 presents the proposed substation location in relation to the pump station. Figures 13 through 16 present the tentative pad grading, layout, cross-sections, and elevations for the substation. Figure 17 shows exclusion fence details. The tentative substation layout presented in this Plan of Development (Figure 13) is based on a modified version of the Bordertown Substation and does not represent the final design. Final facility design will be similar and fit on the proposed pad dimensions. Photo 2 presents a picture of the Bordertown Substation as a visual reference that provides a general view of the size and elevation of what the proposed Fort Sage Substation will look like.

The substation will be comprised of two 345kV line terminals and two terminals for the two 345/25kV transformers, associated bus work, switches, and circuit breakers. A line reactor will be re-located from the existing Bordertown Substation. Both transformers shall be maintained in an energized state; one to be used as the main step-down transformer, and one to be used as a back-up transformer in the event of failure of the first transformer.
On the low side of the 345/25kV transformers, the 25kV bus with switches and a breaker will be installed to connect to a single 25kV distribution line.

From the substation, a 25kV distribution line will be installed to provide electric service to each of the wells, including the main booster pump. This line will primarily be overhead construction, consisting of wood single pole structures with cross arms. Photo 3 presents a picture of a typical wood single pole structure. Typical SPPCo power pole drawings and details will be included with the Construction Drawings.

The distribution line will extend approximately 10 miles and will generally parallel the proposed water collection pipeline and will be constructed approximately 20 to 30 feet offset from the water collection pipeline depending on terrain changes. At each well-head point, a dip structure and pad-mounted transformer will be installed to provide the required 200 amp service. The existing diesel engines at each well will be removed upon completion of the Project.

A small portion of the distribution line will be conveyed underground due to an existing utility easement limiting utility construction to underground construction. This limitation is isolated to a single private parcel of land. Construction on this parcel will consist of standard utility trenching and installation of the required conduit, cable, and backfill.

5.5 SURGE SUPPRESSION FACILITY

The surge suppression facility will consist of a tank with an estimated volume of 200,000 gallons, subject to final design requirements. The site will be located on public property at the top of Fort Sage Pass on the east side of the Fort Sage Mountains, as shown on the Project Map (Drawing 2). Limited access to the site will be maintained for periodic maintenance. The site will occupy approximately one acre. A lateral pipeline from the transmission pipeline will be installed to the surge facility.

The preliminary site plan and elevation for the surge suppression facility are presented in Figures 18, 19, and 20. The precise location and capacity are dependent on a hydraulic analysis of the final design of the pump station and pipeline system. Details of the surge facility will be provided during final design. The tank will be similar in appearance to other Project tanks and will be painted an approved neutral color to minimize visual impacts.
Access will be restricted by a perimeter chain link fence with three-strand barbed-wire on top (Figure 17). Fencing will be vinyl-coated with an approved neutral color to minimize visual impacts. All tank hatches will be fabricated with lock boxes to prevent padlock cutting. Tank ladders will be constructed in such a way as to prevent unauthorized personnel from climbing the tank.

5.6 TERMINAL STORAGE TANK

A storage tank located at the southern end of the water transmission pipeline is required for receiving the imported water, and to serve as a facility from which water distribution operations will begin. The storage tank will be constructed at a pad elevation of approximately 5,515 feet amsl and will have a minimum capacity of 1,000,000 gallons, subject to final design requirements.

Distribution system piping to connect the tank to the existing water distribution system located to the south will be required, but is not included in this Project. It is anticipated that the tank will be welded steel, 24 to 36 feet tall, located in a cut area on the hillside immediately east of the high point in Matterhorn Boulevard between Lemmon Valley and Antelope Valley. Figures 21 and 22 present the preliminary site plan and elevations of the terminal storage tank. The tank will be designed and constructed in accordance with AWWA D100.

The tank site is located on public property administered by the BLM and is sized to allow for the construction of future distribution storage facilities. The Special Use Permit approved by Washoe County provides for up to 5 million gallons of storage capacity at the tank site. The site will require approximately four acres of land for the proposed facilities and grading. Configuration of the easement is rectangular with the long access paralleling the slope contour. Photo 4 shows the approximate area in which these facilities will be located. The water tank will be constructed on a compacted gravel foundation and painted an approved neutral color to minimize visual impacts.

Access will be restricted by a perimeter chain link fence with three-strand barbed-wire on top (Figure 17). Fencing will be vinyl-coated with an approved neutral color to minimize visual impacts. All tank hatches will be fabricated with lock boxes to prevent padlock cutting. Tank ladders will be constructed in such a way as to prevent unauthorized personnel from climbing the tank.
5.7 EXTRA WORK SPACE

Twenty-six extra work spaces have been identified for the Project as shown on Drawing 2. Extra work spaces are located above steeply-incised drainages, above and below slopes where construction is expected to be difficult, at pipe laydown areas, and at sites that will be used for equipment parking and storage. Most extra work spaces are 150 by 150-feet. The largest extra work space will be a pipe laydown yard (3 acres) on The Project developer’s property near the pump station. The area that will be affected by extra work space is shown on Table 2.

5.8 ACCESS ROUTES

Fifteen access roads have been identified for the Project as shown on Drawing 2. Access road modifications will include several treatments as listed below.

- Light blading as necessary to fill ruts and washboards. Minimal rock and/or culverts may be temporarily added at drainages to facilitate crossing and decrease sedimentation, and removed after construction/reclamation activities.
- Temporarily widened to 15 feet and restored to original width after construction.
- Temporarily widened to 20 feet and restored to original width after construction.
- Permanently widened to 20 feet (The Project developer’s property only).
- Improved all-weather road to Project component.
- Maintained as requested by landowner.
- No proposed improvements, repair damage as necessary.

5.9 CONSTRUCTION SCHEDULE

A preliminary construction schedule is included as Table 3.
6.0 RECLAMATION

General cleanup, reclamation, and revegetation information is discussed below in Sections 6.1 through 6.6. Specific information on reclamation of the right-of-way and associated facilities appears in the following documents:

- Construction Drawings;
- Stormwater Pollution Prevention Plan (Appendix B);
- Revegetation Plan (Appendix C);
- Dust Control Plan (Appendix E);
- Spill Prevention, Containment, Countermeasure, and Cleanup Plan (Appendix F);
- Noxious Weed Management Plan (Appendix G).

Environmental training will be conducted for all Project personnel as detailed in the Environmental Compliance Management Plan (Appendix A). Training will include a discussion of topsoil protection measures, erosion and sediment control measures, and methods of controlling the spread of noxious weeds (e.g., pre-construction treatment and topsoil separation).

6.1 FINAL CLEANUP

Contractors will make every effort to complete final cleanup and install permanent erosion control structures within 14 days of backfilling the trench. The right-of-way and other Project-related areas where soil has been disturbed, will be graded to approximate original contour. No solid waste, trash or vegetative matter will be buried on any Project site. Stumps will be hauled to an approved disposal site or, if the landowner or BLM representative approves, placed on the surface to help stabilize soil and provide wildlife habitat. Additional regrading, cleanup, and topsoil distribution methods are described in Section 4.3.8.

6.2 FERTILIZER

It is not anticipated that fertilizer will be required since salvaged topsoil will not be stockpiled long enough to adversely impact soil quality and because fertilizer may enhance weed growth.
6.3 EROSION CONTROL

Contractors will implement drainage and erosion control measures during reclamation to minimize the production, transport and deposition of sediment and to enhance revegetation success. The SWPPP (Appendix B) specifies requirements for temporary and permanent erosion control. The Environmental Inspectors will ensure implementation of required erosion control measures, and may adapt requirements set forth in the SWPPP as necessary to suit site-specific conditions.

Contractors will be responsible for mulching, installing erosion control matting and silt fence, and other specified erosion and sediment barriers.

6.4 REVEGETATION SCHEDULE

Specific revegetation details including seed mix and seeding methods are described in the Revegetation Plan (Appendix C).

Revegetation activities will be determined by construction schedules and seasonal climatic conditions. Seeding and planting will be coordinated with other revegetation activities to occur as soon as possible after seedbed preparation. If seasonal or adverse weather conditions preclude timely revegetation of a site after construction, The Project developer will meet with agency representatives to discuss viable revegetation alternatives. Depending upon soil moisture conditions, the preferred local seeding windows generally occur from late September to early December and from March to May.

Environmental Inspectors and Construction Inspectors will be on-site throughout the revegetation process to verify that seeding activities adhere to this plan.

Upon completion of reclamation activities, The Project developer's Construction Inspectors, Environmental Inspectors, and available BLM representatives will perform a final inspection of the right-of-way and additional facilities to verify completion of preconstruction commitments. A copy of the post-revegetation inspection form, detailing any deficiencies or need for remedial action, will be transmitted to Contractors.
6.5 EROSION CONTROL AND REVEGETATION MONITORING

Specific erosion control and revegetation monitoring procedures and methods are specified in Appendices B and C.

6.6 REMEDIATION

Protocols and schedules for specifying remedial erosion control and revegetation are specified in Appendices B and C.
7.0 OPERATION AND MAINTENANCE

Upon completion of the Project, the facilities will convey water from the various wells around Fish Springs Ranch to the terminal storage tank. The facilities will be designed to minimize the amount of time required for personnel to be physically on-site. The majority of the facility operation will be performed remotely. The facilities will include stand-alone programmable logic control units that will operate the system with data transfer back to a remote operations center, located at Washoe County Department of Water Resources.

Routine maintenance of the various facilities will require site visits by operations personnel. In particular, weekly site visits will be required to the pump station and wells to perform maintenance. Monthly or more frequent visits may be required to the various tank sites. Appurtenances along the various pipes will require site visits on a less frequent basis to perform maintenance and to verify that the facilities are functioning properly. Generally, this will require traveling to the various appurtenances along the alignment using a 4-wheel drive utility truck with two operators accessing vaults with hand equipment. Disturbances during maintenance along the alignment will generally be associated with foot traffic and the associated vehicle access.

7.1 GRAZING CONTROL

Criteria for evaluating the need for grazing control on revegetated areas include: 1) the number and species of livestock; 2) length and season of grazing period; 3) type of vegetation; and 4) wildlife utilization. It is not anticipated that grazing will need to be excluded from upland revegetation areas that are in relatively good range condition, or where slopes are less than 30 percent and livestock utilization is light to moderate.

Revegetation of riparian areas, steep slopes (greater than 30 percent), and other sensitive areas can be significantly impacted by premature livestock use. The installation of livestock fences or pasture rotation, if feasible, will be considered on a site-specific basis. All decisions regarding necessary changes in existing rangeland use patterns will be coordinated by The Project developer with the private landowner, tenant, and BLM and/or grazing allotment permittee.
8.0 TERMINATION AND RESTORATION

In the event the Project is terminated, all aboveground facilities will be removed. Vaults will be removed or filled, and small appurtenant facilities will be buried. Areas disturbed as part of termination activities will be reclaimed similar to adjacent conditions.
9.0 AGENCY INVOLVEMENT

9.1 CONTACTS

Agency contacts for the Project are included below.

<table>
<thead>
<tr>
<th>Agency</th>
<th>Contact Person</th>
<th>Phone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bureau of Land Management</td>
<td>Ken Nelson-Right-of-Way Project Manager</td>
<td>775-885-6114</td>
</tr>
<tr>
<td></td>
<td>Steve Edgar-Fire Prevention Manager</td>
<td>775-885-6197</td>
</tr>
<tr>
<td>Corps of Engineers</td>
<td>Richard Gebhart</td>
<td>775-784-5304</td>
</tr>
<tr>
<td>Nevada Division of Environmental Protection</td>
<td>Larry Roundtree – Construction</td>
<td>775-687-9440</td>
</tr>
<tr>
<td></td>
<td>Cliff Lawson – Stormwater</td>
<td>775-687-9429</td>
</tr>
<tr>
<td></td>
<td>Icyf Mulligan – Stream crossing</td>
<td>775-687-9432</td>
</tr>
<tr>
<td></td>
<td>Glen Gentry – Water quality</td>
<td>775-687-9448</td>
</tr>
<tr>
<td>Nevada Department of Agriculture - Washoe County Weed Control</td>
<td>Sue Donaldson</td>
<td>775-784-4848</td>
</tr>
<tr>
<td>Washoe County Planning Office</td>
<td>Dan Birkel</td>
<td>775-326-6314</td>
</tr>
<tr>
<td>Washoe County District Health Department – Air Quality Division</td>
<td>Noel Bonderson</td>
<td>775-784-7205</td>
</tr>
</tbody>
</table>

9.2 PERMITTING ACTIONS

The Project developer will obtain and comply with all necessary federal, state, and local permits and approvals as presented in Table 4.
TABLES
<table>
<thead>
<tr>
<th>Originating Document</th>
<th>Mitigation Compliance Condition</th>
<th>Permitting Location</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Geology, Minerals, and Paleontology</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FEIS</td>
<td>If rare plant, vertebrate, or invertebrate fossils are discovered during construction, BLM would be contacted to determine steps necessary to preserve the fossils.</td>
<td>Environmental Compliance Management Plan, Table A.1</td>
</tr>
<tr>
<td><strong>Air Resources</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FEIS</td>
<td>Water would be added to active construction sites during weekends, nights, and holidays especially during windy conditions.</td>
<td>Dust Control Plan, Sections 2.0 and 3.0</td>
</tr>
<tr>
<td></td>
<td>Vehicles hauling soil or other loose materials that could be a source of dust emissions would be covered with a tarp or other means.</td>
<td>Dust Control Plan, Section 3.0</td>
</tr>
<tr>
<td></td>
<td>Soil stabilizers would be applied to soil stockpiles to prevent wind erosion.</td>
<td>Dust Control Plan, Section 3.0</td>
</tr>
<tr>
<td></td>
<td>Track-out elimination devices would be used on vehicles before entering paved roads.</td>
<td>Stormwater Pollution Prevention Plan, Section 7.1.1 and Access Road Plan, Section 3.1</td>
</tr>
<tr>
<td></td>
<td>Public road surfaces would be washed or vacuumed to remove track-out.</td>
<td>Stormwater Pollution Prevention Plan, Section 7.1.1</td>
</tr>
<tr>
<td></td>
<td>Traffic speeds would be limited on access roads and construction areas.</td>
<td>Dust Control Plan, Section 3.0</td>
</tr>
<tr>
<td></td>
<td>Disturbed areas would be reclaimed as soon as practicable after completion of construction.</td>
<td>Revegetation Plan, Section 8.0</td>
</tr>
<tr>
<td><strong>Water Resources</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FEIS</td>
<td>Staging areas would not be located in drainages.</td>
<td>Stormwater Pollution Prevention Plan, Section 7.1.10</td>
</tr>
<tr>
<td></td>
<td>Expedite construction in streams and wetlands to minimize the duration of turbidity-causing activities.</td>
<td>Stormwater Pollution Prevention Plan, Section 7.1.10</td>
</tr>
<tr>
<td></td>
<td>Select an alignment that minimizes stream crossings.</td>
<td>Stormwater Pollution Prevention Plan, Section 7.1.10</td>
</tr>
<tr>
<td></td>
<td>Schedule construction of stream crossings during periods of low or no flow.</td>
<td>Stormwater Pollution Prevention Plan, Section 7.1.10</td>
</tr>
<tr>
<td></td>
<td>Implement temporary erosion and sediment control practices.</td>
<td>Stormwater Pollution Prevention Plan, Section 7.1.10</td>
</tr>
<tr>
<td></td>
<td>Restore stream banks and wetlands to original configuration as soon as possible.</td>
<td>Stormwater Pollution Prevention Plan, Section 7.1.10</td>
</tr>
<tr>
<td></td>
<td>Stabilize stream banks and adjacent areas with permanent erosion control and vegetation as soon as possible.</td>
<td>Stormwater Pollution Prevention Plan, Section 7.1.10</td>
</tr>
<tr>
<td></td>
<td>Periodically inspect the right-of-way during and after construction to identify and perform maintenance activities.</td>
<td>Stormwater Pollution Prevention Plan, Section 10.0</td>
</tr>
</tbody>
</table>
### Table 1. Mitigation Compliance Checklist

<table>
<thead>
<tr>
<th>Originating Document</th>
<th>Mitigation Compliance Condition</th>
<th>Permitting Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>FEIS</td>
<td>Crossings would be constructed where possible as close to perpendicular to the axis of the channel as engineering and routing conditions permit.</td>
<td>Stormwater Pollution Prevention Plan, Section 7.1.10</td>
</tr>
<tr>
<td></td>
<td>Soil would be stockpiled approximately 10 feet from the top of channel banks, but within the right-of-way.</td>
<td>Stormwater Pollution Prevention Plan, Section 7.1.10</td>
</tr>
<tr>
<td></td>
<td>Equipment operation in the stream channel would be limited to that needed to construct the crossing, and is not expected to require more than two days per crossing.</td>
<td>Stormwater Pollution Prevention Plan, Section 7.1.10</td>
</tr>
<tr>
<td></td>
<td>Where flowing water is encountered during construction, sediment barriers (such as silt fences) would be installed after initial disturbance of the stream channel or adjacent upland. Silt fences would be staggered downstream of the crossing on both banks to capture sediment discharged into the stream during trenching and backfill. Sediment barriers would be properly maintained throughout construction and reinstalled as necessary (such as after backfilling the trench) until restoration of the right-of-way has been completed.</td>
<td>Stormwater Pollution Prevention Plan, Section 7.1.10</td>
</tr>
<tr>
<td></td>
<td>After the pipe is installed, stockpiled growth media would be used to restore banks of the channel to a stable configuration as close to preconstruction contours as possible.</td>
<td>Stormwater Pollution Prevention Plan, Section 7.1.10</td>
</tr>
<tr>
<td></td>
<td>Chemicals, fuels, and lubricants would not be stored within 300 feet of a stream crossing.</td>
<td>Spill Prevention, Containment, Countermeasure and Cleanup Plan, Section 4.1</td>
</tr>
<tr>
<td></td>
<td>Gasoline, oil, and lubricants would be transported in approved containers in accordance with National Fire Protection Association Code.</td>
<td>Spill Prevention, Containment, Countermeasure and Cleanup Plan, Section 4.1</td>
</tr>
<tr>
<td></td>
<td>Sorbent material would be maintained on-site to absorb spills of petroleum products that may occur during construction activities.</td>
<td>Spill Prevention, Containment, Countermeasure and Cleanup Plan, Section 4.1</td>
</tr>
<tr>
<td>Washoe County Special Use Permit</td>
<td>For construction areas larger than one acre, the developer shall obtain from the Nevada Division of Environmental Protection a Stormwater Discharge Permit or Waiver for construction and submit a copy to the Engineering Division prior to issuance of a grading permit.</td>
<td>Stormwater Pollution Prevention Plan</td>
</tr>
<tr>
<td></td>
<td>Soil Resources</td>
<td>Plan of Development, Section 5.3</td>
</tr>
<tr>
<td>FEIS</td>
<td>A graded level area approximately 100 x 80 feet would be required for the pump station. Cut and fill slopes would have a maximum slope of 3:1 horizontal to vertical.</td>
<td>Stormwater Pollution Prevention Plan, Section 7.1.3</td>
</tr>
<tr>
<td></td>
<td>Prior to construction, available topsoil would be stripped and stockpiled for reclamation purposes.</td>
<td>Stormwater Pollution Prevention Plan, Section 7.1.3</td>
</tr>
<tr>
<td>Originating Document</td>
<td>Mitigation Compliance Condition</td>
<td>Permitting Location</td>
</tr>
<tr>
<td>---------------------</td>
<td>------------------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>FEIS</td>
<td>Bladed material would be stockpiled along the edge of the right-of-way and placed over the disturbed area upon completion of construction.</td>
<td>Stormwater Pollution Prevention Plan, Section 7.1.3</td>
</tr>
<tr>
<td></td>
<td>The reclamation process includes topsoil salvage, recontouring disturbed areas, distribution of stockpiled topsoil, installation of erosion control features and products, seeding, monitoring, and maintenance.</td>
<td>Stormwater Pollution Prevention Plan, Section 7.0 and Revegetation Plan, Sections 4.0 and 7.0</td>
</tr>
<tr>
<td></td>
<td>A minimum of 3 inches and maximum of 12 inches of topsoil would be salvaged where appropriate.</td>
<td>Stormwater Pollution Prevention Plan, Section 7.1.3</td>
</tr>
<tr>
<td></td>
<td>Topsoil would not be salvaged where noxious weeds are present.</td>
<td>Noxious Weed Management Plan, Section 3.1</td>
</tr>
<tr>
<td></td>
<td>After the trench has been backfilled, right-of-way regraded, and subsoil ripped to reduce compaction, topsoil would be re-distributed over the area and seeded.</td>
<td>Plan of Development, Section 4.3.9</td>
</tr>
<tr>
<td></td>
<td>Temporary erosion control structures would remain in-place until permanent revegetation and erosion control devices are effective.</td>
<td>Stormwater Pollution Prevention Plan, Section 7.2</td>
</tr>
<tr>
<td></td>
<td>During construction, water bars, silt fencing, straw bale sediment barriers, erosion control matting, interim mulching, and water flow energy dissipaters would be installed.</td>
<td>Stormwater Pollution Prevention Plan, Section 7.3</td>
</tr>
<tr>
<td></td>
<td>Erosion and sediment control measures require monitoring and maintenance following implementation. Trained crews will patrol the project during and between rains to keep erosion control devices operating properly. Maintenance of these facilities will occur as required for a defined period of time, to be determined.</td>
<td>Stormwater Pollution Prevention Plan, Section 10.0</td>
</tr>
<tr>
<td></td>
<td>Erosion control measures would be in accordance with Best Management Practice (BMPs) as defined by the Nevada State Conservation Commission (1994).</td>
<td>Stormwater Pollution Prevention Plan, Section 1.0</td>
</tr>
<tr>
<td></td>
<td>Prior to reclamation, the Washoe County Soil Survey prepared by the Natural Resources Conservation Service (NRCS) should be referenced to determine the appropriate depth of growth media to salvage prior to trenching activities.</td>
<td>Plan of Development, Section 4.3.1 and Construction Drawings</td>
</tr>
<tr>
<td></td>
<td>In areas of saline clay subsoil, care should be taken to salvage only the upper organic horizon to avoid using the saline soil as a potential growth media.</td>
<td>Stormwater Pollution Prevention Plan, Section 7.1.3</td>
</tr>
</tbody>
</table>
### Table 1. Mitigation Compliance Checklist

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<thead>
<tr>
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<th>Permitting Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Washoe County Special Use Permit</td>
<td>Surplus excavated materials that cannot be used on the project site for backfill or reclamation shall be disposed of either on Fish Springs Ranch property or in an approved landfill. Before material may be deposited at Fish Springs Ranch, plans shall be submitted to the Department of Community Development and the County Engineer for approval outlining the disposition of the materials, and shall detail the methods and/or products that will be taken or used to prevent wind and water erosion. Stockpiling excess material at Fish Springs Ranch for an indefinite period shall not be approved. Applicant shall spread the material over the land at the approved disposal site and shall revegetate the imported material on a continuous basis with a seed mix approved by the Washoe-Storey Conservation District or the BLM. The Department of Community Development shall determine compliance with this condition.</td>
<td>Plan of Development, Section 4.3.6</td>
</tr>
<tr>
<td></td>
<td>The use of straw bales for sedimentation and erosion control is prohibited. Alternative methods complying with the requirements of the Truckee Meadows Best Management Practices Handbook, the County Engineer, and Washoe County Health Department shall be used. The use of topsoil obtained where noxious weeds are present shall be prohibited in reclamation. Growth of noxious weeds on the reclaimed area shall be removed from the pipeline corridor prior to release of the performance bond required in Condition 9. The Department of Community Development and the District Health Department shall determine compliance with this condition.</td>
<td>Stormwater Pollution Prevention Plan, Section 7.2 and 7.3 and Noxious Weed Management Plan</td>
</tr>
</tbody>
</table>

#### Vegetation Resources

<table>
<thead>
<tr>
<th>Document</th>
<th>Mitigation Compliance Condition</th>
<th>Permitting Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>FEIS</td>
<td>Use variable seed mixes adapted to slope and aspect, soil depth, and landscape features to reclaim areas disturbed by construction.</td>
<td>Revegetation Plan, Section 3.0</td>
</tr>
<tr>
<td></td>
<td>Seed and plant shrubs (including sagebrush) in patches rather than uniformly over the area.</td>
<td>Revegetation Plan, Section 4.0</td>
</tr>
<tr>
<td></td>
<td>Prevent livestock grazing of reclamation until stable and resilient vegetation cover has been established.</td>
<td>Plan of Development, Section 7.1</td>
</tr>
<tr>
<td></td>
<td>Monitor disturbed and reclaimed areas for noxious weeds and other undesirable species; if noxious weeds are found, they would be controlled.</td>
<td>Noxious Weed Management Plan, Sections 2.0 and 5.0</td>
</tr>
<tr>
<td></td>
<td>Monitor reclamation yearly to assess success of seeding and planting and implement remedial measures if needed.</td>
<td>Revegetation Plan, Sections 7.0 and 9.0</td>
</tr>
<tr>
<td></td>
<td>Water roads during construction to minimize impacts from dust.</td>
<td>Dust Control Plan, Section 3.0</td>
</tr>
<tr>
<td></td>
<td>Conduct searches for cacti and transplanting them to suitable habitat undisturbed by proposed activities.</td>
<td>Revegetation Plan, Section 5.0</td>
</tr>
</tbody>
</table>

*Fish Springs Water Supply Project*  
Vidler Water Company, Inc.  
*Plan of Development (POD)*  
April 2006
<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Washoe County Special Use Permit</td>
<td>On non-BLM land, native, drought-tolerant landscaping shall be preferred for all areas disturbed by construction activities, and shall match the vegetation of the surrounding area. Cacti protected under Nevada law shall be salvaged and replanted in undisturbed habitats. The BLM or the Washoe-Storey Conservation District shall approve plants and seed mix, which shall be adhered to by the applicant. The Department of Community Development shall determine compliance with this condition.</td>
<td>Revegetation Plan, Sections 1.2, 3.0 and 5.0</td>
</tr>
<tr>
<td></td>
<td>The applicant shall submit an estimate prepared and wet stamped by a landscape architect licensed in the State of Nevada for the revegetation/reseeding of all disturbed area not located on BLM-managed land. A bond or other financial assurance in the amount of 120 percent of this estimate shall be submitted to and held by the Department of Community Development for a period of three years following completion of revegetative efforts to assure reclamation. During these three years, and before the release of the performance bond or other financial assurance, the Department of Community Development may require reseeding/revegetation of those areas where revegetation efforts have failed. The Department of Community Development shall determine compliance with this condition.</td>
<td>Pending</td>
</tr>
<tr>
<td>FEIS</td>
<td>Reduce livestock grazing and trampling on revegetated pipeline corridors.</td>
<td>Plan of Development, Section 7.1</td>
</tr>
<tr>
<td></td>
<td>Seed and plant sagebrush and other fire-sensitive species that have been removed or reduced by wildfire and Project implementation.</td>
<td>Revegetation Plan, Section 3.0</td>
</tr>
<tr>
<td></td>
<td>Replace topsoil over pipeline trenches to enhance establishment of sagebrush and other native species.</td>
<td>Plan of Development, Section 4.3.9</td>
</tr>
<tr>
<td></td>
<td>Implement best management practices to prevent delivery of sediment to drainages and wetlands along proposed pipeline routes.</td>
<td>Stormwater Pollution Prevention Plan, Section 7.1.10</td>
</tr>
<tr>
<td><strong>Access and Land Use</strong></td>
<td><strong>Conventional construction techniques would be implemented for unimproved roadway, improved roadway, and cross-country segments of the pipeline. Access to proposed pipeline alignment would be via the pump station in the north, U.S. Highway 395 and Red Rock Road from the west, Winnemucca Ranch Road from the east, and Lemmon Valley Drive from the south.</strong></td>
<td>Access Road Plan, Section 3.0</td>
</tr>
</tbody>
</table>

*Fish Springs Water Supply Project*

*Vidler Water Company, Inc.*  

*Plan of Development (POD)*  
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<tr>
<th>Originating Document</th>
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</thead>
<tbody>
<tr>
<td>FEIS</td>
<td>Segments of pipeline proposed within unimproved roadways would be installed near the edge of the roadway or beyond the roadway drainage area. Pipe stringing and placement of pipe segments along the alignment would occur on the opposite side of the roadway from the installation side, and would be placed outside the roadway section for access and safety considerations.</td>
<td>Plan of Development, Section 4.3.14</td>
</tr>
<tr>
<td></td>
<td>Haul trucks would stage adjacent to the excavator in the roadway section, necessitating traffic control and periodic lane closures as necessary. Haul trucks would transport excavated material to selected locations for processing and use as backfill. At the end of each working day, installation of pipeline and backfill to finished grade to the excavation limits for that day would be completed when adjacent to a paved public roadway, and construction equipment would be removed from the roadway.</td>
<td>Plan of Development, Section 4.3.14</td>
</tr>
<tr>
<td></td>
<td>If it becomes necessary to install portions of the pipeline within roadway pavement sections, the pipeline would be installed in the center of the traffic lane. Roadway asphalt would be saw-cut to the centerline to avoid a joint in the wheel line. The structural roadway section would be replaced to match existing surface. At the end of each working day, installation of pipeline and backfill to finished grade to the excavation limits for that day would be completed, and construction equipment moved from the roadway to an approved location. Backfill at grade would be Class 2 aggregate base, which would allow roadway usage until such time as pavement is re-installed.</td>
<td>Plan of Development, Section 4.3.15</td>
</tr>
<tr>
<td>Washoe County Special Use Permit</td>
<td>All proposed new roads shall have an all-weather surface as approved by the County Engineer. The Department of Community Development shall determine compliance with this condition.</td>
<td>Access Road Plan, Section 3.0</td>
</tr>
<tr>
<td></td>
<td>Provide documentation of access and easements for the sites to the satisfaction of the County Engineer.</td>
<td>Access Road Plan, Section 2.0</td>
</tr>
<tr>
<td></td>
<td>An approved occupancy permit shall be obtained from the Nevada Department of Transportation (NDOT), for access to, from, or under roads and highways maintained by NDOT and a copy of said permit sent to the Engineering Division.</td>
<td>Pending</td>
</tr>
<tr>
<td></td>
<td>All disturbed areas in access easements shall be restored to at least preconstruction condition.</td>
<td>Access Road Plan, Table H-1</td>
</tr>
<tr>
<td></td>
<td>During construction, access easements shall remain open to allow for local and emergency traffic access.</td>
<td>Access Road Plan, Section 3.1</td>
</tr>
<tr>
<td></td>
<td>The applicant shall obtain a street excavation permit from the Washoe County Engineering Division for all work in the County right-of-way.</td>
<td>Pending</td>
</tr>
</tbody>
</table>
## Table 1. Mitigation Compliance Checklist

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<thead>
<tr>
<th>Originating Document</th>
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<th>Permitting Location</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recreation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FEIS</td>
<td>BLM would provide 30 days prior notice to Fish Springs Ranch and Intermountain Water Supply for all permitted recreational events that would occur in the vicinity of the Projects Area. This may require a temporary modification of the respective work schedules to accommodate events.</td>
<td>Noted</td>
</tr>
<tr>
<td><strong>Noise</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FEIS</td>
<td>Limit high-noise and blasting activities to daytime hours.</td>
<td>Plan of Development, Section 4.3.12</td>
</tr>
<tr>
<td></td>
<td>Combine noisy operations to occur for short durations during the same time period.</td>
<td>Plan of Development, Section 4.3.12</td>
</tr>
<tr>
<td></td>
<td>Minimize or eliminate night time construction and operation activities.</td>
<td>Plan of Development, Section 4.3.12</td>
</tr>
<tr>
<td>Washoe County Special Use Permit</td>
<td>Construction activities within 500 feet of residences shall be limited to the hours of 7:00 AM to 6:00 PM Monday through Saturday.</td>
<td>Plan of Development, Section 4.3.12</td>
</tr>
<tr>
<td></td>
<td>Blasting within 1,000 feet of any residence shall require written notification to these residences by the applicant, with a copy of the notice submitted to the Department of Community Development, at least 3 days prior to the scheduled blasting. The Department of Community Development shall determine compliance with this condition.</td>
<td>Plan of Development, Section 4.3.12</td>
</tr>
<tr>
<td><strong>Visual Resources</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FEIS</td>
<td>Plan revegetation so colors and textures blend with undisturbed land.</td>
<td>Revegetation Plan, Section 1.2</td>
</tr>
<tr>
<td></td>
<td>Minimize visual contrast of structures with natural forms by using colors that blend with the land; use finishes that have low levels of reflectivity.</td>
<td>Plan of Development, Section 4.0</td>
</tr>
<tr>
<td></td>
<td>Paint structures a slightly darker color than the surrounding landscape to compensate for the effects of shade and shadow.</td>
<td>Plan of Development, Section 4.0</td>
</tr>
<tr>
<td></td>
<td>Preserve undeveloped character of the landscape.</td>
<td>Revegetation Plan, Section 1.2</td>
</tr>
<tr>
<td>Washoe County Special Use Permit</td>
<td>In addition to the requirements contained in Section 412 of the Development Code, the following landscaping and parking requirements shall apply for the terminal tanks located on Matterhorn Boulevard.</td>
<td>Plan of Development, Section 5.6</td>
</tr>
<tr>
<td></td>
<td>The tank(s) shall be set into the side of the hill as much as possible.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Landscaping and irrigation plans prepared and wet-stamped by a landscape architect licensed in the State of Nevada shall be submitted to the Department of Community Development for approval before the issuance of a building permit for the tank.</td>
<td>Pending</td>
</tr>
</tbody>
</table>

_Fish Springs Water Supply Project_  
_Vidler Water Company, Inc._  
_42_  
_Plan of Development (POD)_  
_April 2006_
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<tbody>
<tr>
<td>Washoe County Special Use Permit</td>
<td>Native, drought-tolerant landscaping shall be preferred, and shall match the vegetation currently at the site. The Bureau of Land Management or the Washoe-Storey Conservation District shall approve plants and seed mix, which shall be adhered to by the applicant.</td>
<td>Revegetation Plan, Sections 1.2, and 3.0</td>
</tr>
<tr>
<td></td>
<td>Temporary irrigation shall be provided to all revegetated areas for a minimum of three years to establish the vegetation. At the end of three years, staff of the Department of Community Development shall determine the success of the revegetation effort, and may require replanting or reseeding of failed vegetation.</td>
<td>Pending</td>
</tr>
<tr>
<td></td>
<td>At least two all-weather parking spaces shall be provided. The Department of Community Development shall determine compliance with this condition.</td>
<td>Plan of Development, Section 5.6</td>
</tr>
</tbody>
</table>


Washoe County Special Use Permit – Special Use Permit SW05-009, Washoe County, Nevada
<table>
<thead>
<tr>
<th>Description</th>
<th>Public Land (acres)</th>
<th>Private Land (acres)</th>
<th>Total acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Well Development</td>
<td>-</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Well Field Collection Pipelines</td>
<td>33.5</td>
<td>62.3</td>
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<td>Washoe County District Health Department, Air Quality Management Division</td>
<td>Authority to Construct and Permit to Operate</td>
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</table>
PHOTOS
Photo 1 – Proposed Fish Springs Ranch Pump Station & Tank Location with Facility Rendering

Photo 2 – Bordertown Substation
Photo 3 – Proposed Single Wood Pole Structures with Cross Arms

Photo 4 – Proposed Terminal Storage Tank Location with Tank Rendering
FIGURES
Preliminary facilities shown in this figure are subject to final design according to project plans and specifications to be approved by Washoe County Department of Water Resources.

FIGURE 1
PRELIMINARY TYPICAL TRENCH DETAILS
FISH SPRINGS WATER SUPPLY PROJECT

Date: 4/2006      Scale: NTS
Designed By: DSK      Project: VDLR03-001
Drawn By: DSK      File: Details-Figures24,25,26.dwg
FIGURE 4
PRELIMINARY PRODUCTION WELLS
TYPICAL BUILDING ELEVATIONS
FISH SPRINGS WATER SUPPLY PROJECT

Date: 4/2006  Scale: NONE
Designed By: DSK  Project: V2DL05-001
Drawn By: DSK  File: Figures4,5,6 Wells.dwg

Preliminary facilities shown in this figure are subject to final
design according to project plans and specifications to be
approved by Washoe County Department of Water Resources.

ECO: LOGIC Consulting Engineers
FIGURE 6
PRELIMINARY LOCATION MAP FOR
SUBSTATION & PUMP STATION
FACILITIES

ECO:LOGIC
Consulting Engineers

FISH SPRINGS WATER SUPPLY PROJECT
Date: 4/2006
Designed By: DSK
Project: VDLR05-001
Drawn By: DSK
File: Figure7-REV.dwg

Preliminary facilities shown in this figure are subject to final
design according to project plans and specifications to be
approved by Washoe County Department of Water Resources.
FIGURE 8
PRELIMINARY FLOOR PLAN
PUMP STATION FACILITY
FISH SPRINGS WATER SUPPLY PROJECT

- 1250 HP VERTICAL TURBINE BOOSTER PUMP (TYP.)
- 12" FLANGEED X GROOVED END STEEL MAIN (TYP.)
- 12" GRAYLOK HIGH PRESSURE COUPLING 2004 NPS (TYP.)
- 12" APCO SILENT CHECK VALVE SERIES 600 (TYP.)
- 12" BRAY BUTTERFLY VALVE SERIES 42 (TYP.)
- 18" WLD X 45° ELBOW (TYP.)
- 24" WLD X 45° ELBOW (TYP.)
- 24" BUTTERFLY VALVE (TYP.)
- 24" LINED STEEL PIPE DISCHARGE (TYP.)
- 34" FUSION EPOXY COATED AND LINED STEEL PIPE DISCHARGE (TYP.)
- 24" COUPLING ADAPTER (TYP.)
- 20" WLD X 24" FLO STL REDUCER (TYP.)
- 1" MANUAL AIR RELEASE VALVE (TYP.)
- 3" APCO AIR/VACUUM VALVE MODEL NO. 140G4T (TYP.)
- 24" BUTTERFLY VALVE SERIES 42 (TYP.)

ECO-LOGIC Consulting Engineers

Date: 4/2006
Scale: 1/8" = 1'
FIGURE 10 A
PRELIMINARY ELEVATIONS
PUMP STATION FACILITY
FISH SPRINGS WATER SUPPLY PROJECT

ECO: LOGIC Consulting Engineers

Date: 4/2006  Scale: None
Designed By: DSK  Project: VIDLO5-001
Drawn By: DSK
File: PS-Figures9,10A,10B,11.dwg

Preliminary facilities shown in this figure are subject to final
design according to project plans and specifications to be
approved by Washoe County Department of Water Resources.
FIGURE 12  
PRELIMINARY ELEVATION FOR  
PUMP STATION TANKS  
FISHSprINGS WATER SUPPLY PROJECT  

4/2006  Scale: 1" = 20'  
Designed By: DSK  Project: VIDL05-001  
Drawn By: DSK  
File: Figure8,14,15-2-10-06.dwg  

ECO: LOGIC  Consulting Engineers  

Preliminary facilities shown in this figure are subject to final design according to project plans and specifications to be approved by Washoe County Department of Water Resources.
PRELIMINARY ELEVATION C
ELECTRICAL SUBSTATION
FISH SPRINGS WATER SUPPLY PROJECT

Date: 4/2006   Scale: 1/32"=1'
Designed By: SPPCo  Project: VIDL03-001
Drawn By: DSK
File: SPPCo-Figures16,17,18.dwg
FIGURE 17
PRELIMINARY FENCE DETAILS
FISH SPRINGS WATER SUPPLY PROJECT

ECO: LOGIC
Consulting Engineers

Date: 4/2006    Scale: NTS
Designed By: DSK    Project: VDLR03-001
Drawn By: DSK
File: Details-Figures24,25,26.dwg

Preliminary facilities shown in this figure are subject to final
design according to project plans and specifications to be
approved by Washoe County Department of Water Resources.
FIGURE 19
PRELIMINARY SITE PLAN
SURGE FACILITY
FISH SPRINGS WATER SUPPLY PROJECT

Date: 4/2006    Scale: 1" = 20'
Designed By: DSK    Project: VIDL03-001
Drawn By: DSK
File: Surge-Figures21,22,23.dwg

Preliminary facilities shown in this figure are subject to final design according to project plans and specifications to be approved by Washoe County Department of Water Resources.

ECO: LOGIC
Consulting Engineers
TANK ELEVATION A-A

FIGURE 20
PRELIMINARY ELEVATION
SURGE FACILITY
FISH SPRING WATER SUPPLY PROJECT

Date: 4/2006       Scale: 1"=20'
Designed By: DSK  Project: VIDL03-001
Drawn By: DSK      File: Surge-Figures21,22,23.dwg
ECO: LOGIC        Consulting Engineers

Preliminary facilities shown in this figure are subject to final design according to project plans and specifications to be approved by Washoe County Department of Water Resources.
NOTE:
ROAD TO MATCH EXISTING WITH AN APPROXIMATE 3% SLOPE TO BRING
UP TO TANK PAD ELEVATION. GRADE 2% HORIZONTALLY IN A SOUTHERLY
DIRECTION TO ALLOW FOR RUNOFF DURING STORM EVENTS.

Preliminary facilities shown in this figure are subject to final
design according to project plans and specifications to be
approved by Washoe County Department of Water Resources.

ECO: LOGIC
Consulting Engineers

FIGURE 21
PRELIMINARY SITE PLAN FOR
FISH SPRINGS WATER SUPPLY PROJECT
TERMINAL TANK SITE

Date: 4/2006
Designed By: DSK
Drawn By: DSK
Scale: 1" = 140'
Project: VIDLOS-001
File: Figures16,17.dwg
TANK ELEVATION A-A

FIGURE 22
PRELIMINARY ELEVATION
TERMINAL STORAGE TANK
FISH SPRING WATER SUPPLY PROJECT

Date: 4/2006   Scale: 1" = 30'
Designed By: DSK   Project: VIDL05-001
Drawn By: DSK
File: Terminal-Figures16,17.dwg

Preliminary facilities shown in this figure are subject to final design according to project plans and specifications to be approved by Washoe County Department of Water Resources.
FISH SPRINGS WATER SUPPLY PROJECT

APPENDIX A

ENVIRONMENTAL COMPLIANCE MANAGEMENT PLAN

Fish Springs Water Supply Project
Vidler Water Company, Inc.

Environmental Compliance Management Plan
April 2006
# TABLE OF CONTENTS

1.0 INTRODUCTION ........................................................................................................... A-1

2.0 RESPONSIBILITIES AND COORDINATION .............................................................. A-1

3.0 ENVIRONMENTAL INSPECTORS ............................................................................ A-2
   3.1 QUALIFICATIONS ................................................................................................... A-3
   3.2 AUTHORITY ........................................................................................................ A-3

4.0 COMMUNICATION AND REPORTING .................................................................... A-4
   4.1 ENVIRONMENTAL VARIANCE PROCESS ............................................................. A-5

5.0 REFERENCES .......................................................................................................... A-6

# LIST OF TABLES

<table>
<thead>
<tr>
<th>Table A-1</th>
<th>General Responsibilities of Environmental Inspectors ........................................ A-7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table A-2</td>
<td>Procedures for Minor Compliance Problems ........................................................ A-8</td>
</tr>
<tr>
<td>Table A-3</td>
<td>Procedures for Potential Compliance Violations .................................................. A-9</td>
</tr>
<tr>
<td>Table A-4</td>
<td>Procedures for Repeated Compliance Violations or Emergencies ........................... A-10</td>
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</tbody>
</table>

# LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure A-1</th>
<th>Project Construction Organization Chart ............................................................... A-11</th>
</tr>
</thead>
<tbody>
<tr>
<td>Figure A-2</td>
<td>Environmental Inspection Report ........................................................................... A-12</td>
</tr>
<tr>
<td>Figure A-3</td>
<td>Environmental Variance Request Form .................................................................. A-13</td>
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</table>
1.0 INTRODUCTION

This Environmental Compliance Management Plan (Plan) describes procedures Vidler Water Company Inc. (Project developer) and its construction and reclamation contractors (Contractors) will use during Fish Springs Water Supply Project (Project) construction and reclamation to ensure compliance with environmental requirements and conditions stipulated in the:

- Plan of Development;
- Final Environmental Impact Statement, North Valleys Rights of Way Projects;
- Special Use Permit;
- Corps of Engineers requirements;
- construction drawings;
- relevant permits, easements, and agreements;

Environmental Inspectors, Construction Inspectors, and regulatory representatives will use this plan to coordinate procedures that minimize impacts to environmental resources during Project construction and reclamation.

2.0 RESPONSIBILITIES AND COORDINATION

The Project developer, Contractors, and Environmental Inspectors will collaborate to educate Contractors regarding environmental requirements and commitments established in the Project documents and plans listed above. Prior to construction, the Project developer representatives, construction managers, Construction Inspectors, Environmental Inspectors, and agency representatives will meet to discuss Project construction and associated environmental concerns.

Since this is a collaborative effort between numerous public and private organizations, an organizational chart is included to illustrate paths of communication and general hierarchical structure (Figure A-1). The primary environmental compliance responsibilities for the parties represented on the organizational charts are discussed in the following paragraphs.

The Project developer will secure necessary licenses, permits, and approvals prior to construction and is responsible for providing qualified Environmental and Construction Inspectors to ensure that the environmental and construction responsibilities of the Project are successfully completed. The Project developer will consult with the Environmental Inspectors, Construction Inspectors, Construction/Engineering Manager, Contractors, and regulatory agencies regarding changes to the Project that may affect environmental resources or mitigation.
measures. The Project developer will designate a representative to provide management support, as necessary, to resolve potential non-compliance issues and to communicate with the Environmental Inspectors regarding environmental inspections and compliance issues.

The Contractors are responsible for implementing the environmental management measures presented in the Applicable Documents. The Contractors will also develop procedures to integrate environmental compliance standards into all levels of Project construction and reclamation. The Contractors will ensure that copies of the Applicable Documents are available on the Project to reference specific environmental requirements and responsibilities. The Contractors will coordinate with Environmental and Construction inspectors to ensure compliance and discuss changes in construction or reclamation activities. The Contractors will designate a representative to assist in the timely resolution of potential non-compliance issues.

The Construction Inspectors will coordinate construction activities, document compliance with construction documents, and support the monitoring and implementation of this Environmental Compliance Management Plan.

Responsibilities of the Lead Environmental Inspector include but are not limited to:

- verifying that the Project Contractors have obtained the applicable documents and that the conditions stipulated in these documents are satisfied;
- coordinating the day-to-day responsibilities of field Environmental Inspectors in regards to scheduled construction or reclamation activities;
- reviewing field Environmental Reports and stop-work decisions to provide management support to field personnel;
- coordinating and tracking variance requests from environmental specifications;
- identifying potential Project-related impacts and developing procedures to apply mitigation measures; and
- maintaining communication with regulatory agencies to address Project-related environmental impacts.

3.0 ENVIRONMENTAL INSPECTORS

During construction and reclamation environmental mitigation measures will be implemented directly by the Contractors. Mitigation and impact prevention measures developed during the engineering and environmental planning phases are included as part of the construction contracts. The Project developer’s Environmental Inspectors will ensure that Contractors
comply with these measures. Contractors will be notified that failure to comply with environmental specifications or failure to respond to the direction of Environmental Inspectors will not be permitted. Environmental Inspectors will conduct continuous field inspections and document compliance with environmental specifications on Environmental Reports (Figure A-2). Environmental Inspectors will also prepare and facilitate variance requests from environmental specifications noted in permits, plans, drawings, or other documents. A variance request form is included as Figure A-3.

Table A-1 presents a list of specific advisory, oversight, documentation, and liaison responsibilities for field Environmental Inspectors.

3.1 QUALIFICATIONS

Environmental Inspectors will be required to possess the necessary education and experience to enable successful understanding and implementation of the Project’s environmental requirements. While Environmental Inspectors may request assistance from resource specialists where additional expertise is required, they are ultimately responsible for ensuring compliance with environmental requirements.

At a minimum, Environmental Inspectors will meet one or more of the following qualifications:

- an undergraduate degree in a natural resource discipline or environmental engineering;
- two years of on-the-ground experience in reclamation, erosion control, and environmental compliance or monitoring of pipeline work; or
- demonstrated familiarity with revegetation and erosion control procedures specific to restoration of arid and semi-arid plant communities such as those found along the right-of-way.

3.2 AUTHORITY

The Environmental Inspectors will have authority to order corrections of activities that violate the environmental conditions stipulated in the Applicable Documents.

Daily site inspections will evaluate all construction activities and monitor levels of compliance with Project environmental specifications. The compliance levels will be defined as Acceptable,
Minor Problem, Potential Violation, Emergency Event, or Repeated Violation. The procedures for handling the unacceptable levels are shown in Tables A-2 through A-4.

Environmental Inspectors will notify the Lead Environmental Inspector, the Construction Inspector and designated Contractors’ representatives in the event any activities may cause a negative environmental impact. Should a situation arise in which there is a clear noncompliance of environmental specifications and the time necessary for standard communications could result in unnecessary environmental impact, the Environmental Inspector will notify the Construction Inspector to immediately stop the specific work, then notify the Lead Environmental Inspector and designated Contractor representatives.

4.0 COMMUNICATION AND REPORTING

Weekly meetings will be held between the Environmental Inspectors and designated representatives from The Project developer, Contractors, and any on-site regulatory agency personnel to discuss environmental implications of construction and compliance. An Environmental Report will be completed for each construction site or environmentally sensitive area monitored by an Environmental Inspector each day. The Environmental Report will include information on compliance status including non-compliance and corrective actions.

Weekly status reports prepared by the Lead Environmental Inspector will summarize environmental resource issues encountered during construction and reclamation activities. These status reports will be provided to federal, state, and county agencies, as requested.

Weekly status reports will include, but are not limited to:

- the current construction status of each site and any scheduled work in environmentally sensitive areas;
- a list and description of environmental variance requests;
- instances of non-compliance observed during the reporting period;
- corrective actions implemented in response to instances of noncompliance and the effectiveness of the corrective actions;
- copies of any correspondence received by The Project developer from regulatory agencies concerning instances of non-compliance, and The Project developer's response.
Construction constraints, site-specific situations, and unforeseen conditions will necessitate field modification of the construction and mitigation procedures described in the POD and attached appendices. Variances are typically requested for items such as modified work space, additional access roads, changes to construction procedures due to weather constraints, or variances to Project permit requirements.

When an item is identified that will require a modification or change to the specified procedures, an Environmental Variance Request Form (Figure A-3) will be completed to describe the variance request, and coordinate a review process between the Contractor, Construction and Environmental Inspectors, The Project developer, appropriate agency personnel, and other parties as necessary.

Typically, a variance request will follow the format described below.

1) Contractors will sign and submit an Environmental Variance Request Form (Form) and any necessary support information to The Project developer's Chief Construction Inspector or Construction Manager.

2) A copy of the Form will be sent to the Lead Environmental Inspector who will determine if any additional field surveys (e.g. cultural or biological) or other conditions are necessary to facilitate the request.

3) If the variance request is minor and will not substantially affect resources, the Lead Environmental Inspector will include any necessary conditions, if applicable, and authorize and sign the Form in the field. The Lead Environmental Inspector will then confer with the BLM or appropriate regulatory agency for a concurring signature.

4) If the request is beyond the scope of the FEIS, BLM Right-of-Way Grant, COE permit requirements, or other permit requirements, the Lead Environmental Inspector will submit a formal variance request to the appropriate regulatory agency(ies).

5) Upon notification by the regulatory agency(ies), the Lead Environmental Inspector will forward the agency(ies) response(s) and any attached conditions to The Project developer, the Chief Construction Inspector or Manager, and the Contractor(s).

6) Once a variance request has been approved by the appropriate agency(ies) and agreed to by The Project developer, the requested work will begin pursuant to any attached conditions.
5.0 REFERENCES

Table A-1. General Responsibilities of Environmental Inspectors

**Advisory**
- Advise construction and inspection personnel as necessary regarding compliance with project environmental requirements.
- Provide advice on major decisions such as wet weather shut-downs, emergency erosion/sediment control, and other courses of action to deal with major unexpected environmental conditions.
- Provide immediate response to spills in accordance with state and federal regulations and SPCCC plan. Advise management and inspection staff on the cleanup and disposal of spilled material and any affected soils and vegetation.
- Proactively plan ahead to facilitate environmental compliance in difficult areas and provide troubleshooting advice in advance of construction.
- Conduct environmental training for construction crews, including informal tailgate briefings.
- Check weather reports and inform construction management of potential heavy rain forecasts.

**Construction Oversight**
- Ensure that all wastes including garbage, oil, grease, chemicals, unsalvageable timber, rock, etc. are disposed of in an authorized manner.
- Conduct water, soil and biological monitoring/sampling as necessary.
- Review construction methodologies with the contractor and inspection staff to ensure implementation of the appropriate construction and mitigation methods for prevailing conditions.
- Coordinate the deployment of special environmental monitors to provide specialized monitoring of sensitive resource issues, including, species of concern, soils, erosion and sediment control, restoration, and cultural resources.
- Contact BLM representative in the event rare plant, vertebrate, or invertebrate fossils are discovered.
- Evaluate the construction contractor's implementation of the environmental mitigation measures required in the contract documents and all other authorizing documents.
- Verify that the limits of authorized construction work areas and access roads are marked prior to clearing.
- Oversee the location of dewatering structures and slope breakers to ensure they will not direct water into known cultural resource sites, erosion-prone sites, or sensitive plant populations.
- Verify that trench dewatering activities do not result in the deposition of sand, silt and/or sediment near the point of discharge into a wetland or waterbody.
- Ensure that grading returns sites to natural grade except as otherwise approved by the authorized change orders.
- Confirm that all erosion control measures are adequate to handle forecasted rain events, including severe storms, and work with construction personnel and regulatory agencies to ensure erosion control measures are promptly and properly installed.
- Conduct periodic post-cleanup inspections of the restored right-of-way to identify potential stabilization or revegetation failure. Develop a list of outstanding items to be corrected and revise their status accordingly.

**Documentation**
- Document construction contractor conformance with all company environmental specifications, policies, plans, drawings, commitments, and agency grants and permit requirements (collectively referred to as Project Environmental Requirements).
- Prepare Environmental Inspection Reports to address nonconformance situations and their resolution.
- Document the implementation of temporary and permanent erosion control and revegetation programs during construction.
- Maintain records on cleanup and restoration data.

**Liaison**
- Provide liaison with landowners and government agencies as necessary.
- Coordinate agency review and approval of field design change orders.
<table>
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<th>PERSON</th>
<th>ACTION</th>
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<tbody>
<tr>
<td>Field Environmental Inspector</td>
<td><strong>Communication</strong>&lt;br&gt;1. Discuss the problem with the Construction Inspector directly and attempt to resolve the problem the same day.&lt;br&gt;2. If the problem can’t be resolved the same day, agree on the corrective action and a timeframe for completing the corrective action.</td>
</tr>
<tr>
<td></td>
<td><strong>Documentation</strong>&lt;br&gt;1. Document the problem, agreed upon corrective action and time for completing the corrective action on the Environmental Report.</td>
</tr>
<tr>
<td></td>
<td><strong>Follow-up to Corrective Action</strong>&lt;br&gt;1. Document follow-up corrective action on Environmental Report.</td>
</tr>
<tr>
<td>Lead Environmental Inspector</td>
<td><strong>Reporting</strong>&lt;br&gt;1. Record Environmental Report.</td>
</tr>
<tr>
<td>PERSON</td>
<td>ACTION</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Field Environmental Inspector</td>
<td>1. Discuss the potential violation with the Construction Inspector or Contractor directly and attempt to perform corrective actions the same day.</td>
</tr>
<tr>
<td></td>
<td>2. If corrective action is not completed the same day, then coordinate with the Lead Construction Inspector to determine a timeframe for completing the corrective action.</td>
</tr>
<tr>
<td></td>
<td><strong>Documentation</strong></td>
</tr>
<tr>
<td></td>
<td>1. Document the potential violation, agreed upon corrective action and time for completing the corrective action on the Environmental Report.</td>
</tr>
<tr>
<td></td>
<td><strong>Follow-up Corrective Action</strong></td>
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<tr>
<td>Lead Environmental Inspector</td>
<td>1. With concurrence from Construction Inspector notify Contractor verbally at morning meeting.</td>
</tr>
<tr>
<td></td>
<td>2. Provide written notification of simple violation to Contractor and Construction Inspector and date to be corrected.</td>
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<td>3. Coordinate with Environmental Inspectors on follow-up.</td>
</tr>
<tr>
<td></td>
<td><strong>Reporting</strong></td>
</tr>
<tr>
<td></td>
<td>2. Record Environmental Report.</td>
</tr>
<tr>
<td>PERSON</td>
<td>ACTION</td>
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<tr>
<td>----------------------</td>
<td>------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Field Environmental Inspector</td>
<td>Communication 1. Notify Construction Inspector to halt construction in the immediate area, <em>if necessary</em>. 2. Discuss the situation with the Construction Inspector and attempt corrective action immediately. 3. Review the situation with the Lead Environmental Inspector. 4. If corrective action is not completed the same day, coordinate with the designated Contractor and agency representatives, as appropriate, to determine a timeframe for completing the corrective action.</td>
</tr>
<tr>
<td>Documentation</td>
<td>1. Take photographs and draw plan view of incident area, as appropriate, to thoroughly document situation. 2. Complete an Environmental Inspection Report, which includes thorough documentation of the situation, agreed-upon corrective action and time for completing the corrective action.</td>
</tr>
<tr>
<td>Reporting</td>
<td>1. File Environmental Report</td>
</tr>
<tr>
<td>Construction Supervisor</td>
<td>Communication 1. Provide immediate verbal notification to Contractor. 2. Provide written notification to Contractor and date to be corrected. 3. Coordinate with Contractor and Environmental Inspectors on follow-up.</td>
</tr>
<tr>
<td>Lead Environmental Inspector</td>
<td>Communication 1. Perform verbal notifications to jurisdictional agencies, as required, and continue to coordinate with agency representatives on follow-up action.</td>
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### Figure A-2. Environmental Inspection Report, Vidler Water Supply Project

#### ENVIRONMENTAL INSPECTION REPORT

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*Fish Springs Water Supply Project*

*Vidler Water Company, Inc.*

*A-12*  
*Environmental Compliance Management Plan*  
*April 2006*
Vidler Water Company, Inc.
Fish Springs Water Supply Project
Variance Request Form

Date: ____________________ Date by which approval is required: ____________________

Location/Stationing: _____________________________________________________________

Drawing/Plan No.: ______________________________________________________________

Landowner: __________________________________________________________________

Attach copy of Construction Drawing as applicable

Variance from (check one): Permit Plan Drawing Specification EWS
Other (describe): __________________________________________________________________

Describe variance in detail below (attach additional pages and map as required):
_____________________________________________________________________________
_____________________________________________________________________________
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Reason for variance request (attach additional pages as required):
_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________

_____________________________________________________________________________

____ Approval _______ Date _______ Conditions (Y/N) Attach as required

Lead Environmental Inspector
Chief Company Inspector
Contractor Construction Manager
Archaeologist (as required)
Biologist (as required)
BLM Authorization (as required)
FERC Authorization (as required)
ACOE Authorization (as required)
SHPO Authorization (as required)
Other Agency Authorization (as required)
Vidler Final Authorization (as required)
FISH SPRINGS WATER SUPPLY PROJECT

APPENDIX B

STORMWATER POLLUTION PREVENTION PLAN
# TABLE OF CONTENTS

1.0 INTRODUCTION ........................................................................................................... B-1

2.0 PROJECT RESPONSIBILITIES .................................................................................... B-2
   2.1 PROJECT OWNERSHIP ......................................................................................... B-2
   2.2 AVAILABILITY OF THE SWPPP ........................................................................... B-2
   2.3 AMENDMENTS TO THE SWPPP.......................................................................... B-2
   2.4 PROJECT CONTACT .............................................................................................. B-2

3.0 PROJECT DESCRIPTION ............................................................................................. B-3

4.0 EXISTING SOIL AND WATER QUALITY DATA ........................................................... B-3

5.0 SITE MAPS ................................................................................................................ B-4
   5.1 GENERAL LOCATION MAP ................................................................................... B-4
   5.2 DETAILED SITE MAPS ....................................................................................... B-4
   5.3 DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY ............................... B-5

6.0 RECEIVING WATERS ............................................................................................... B-5

7.0 EROSION AND SEDIMENT CONTROLS .................................................................. B-5
   7.1 SEQUENCE OF BMPs AND CONTRACTORS ......................................................... B-5
      7.1.1 Construction Access ..................................................................................... B-6
      7.1.2 Marking, Flagging and Fencing ...................................................................... B-7
      7.1.3 Topsoil Salvage ............................................................................................ B-7
      7.1.4 Clearing and Grading .................................................................................... B-8
      7.1.5 Trenching ..................................................................................................... B-9
      7.1.6 Pipe Fabrication, Installation and Hydrostatic Testing ................................ B-9
      7.1.7 Trench Dewatering ....................................................................................... B-10
      7.1.8 Backfill, Regrading, and Cleanup ................................................................ B-10
      7.1.9 Topsoil Redistribution ................................................................................ B-11
      7.1.10 Stream and Wetland Crossings .................................................................. B-12
      7.1.11 Wet Weather Considerations ..................................................................... B-13
      7.1.12 Construction in Dune Habitat ..................................................................... B-14

7.2 TEMPORARY STABILIZATION PRACTICES .............................................................. B-14

7.3 PERMANENT STABILIZATION PRACTICES ............................................................ B-15
   7.3.1 Slope Tracking ............................................................................................... B-15
   7.3.2 Mulching ......................................................................................................... B-15
   7.3.3 Matting .......................................................................................................... B-16
   7.3.4 Revegetation ................................................................................................. B-16
TABLE OF CONTENTS

7.4 STRUCTURAL PRACTICES ................................................................. B-16
  7.4.1 Waterbars ............................................................................ B-16
  7.4.2 Energy Dissipaters ................................................................. B-17
  7.4.3 Sediment Logs ................................................................. B-17
  7.4.4 Sediment Barriers ................................................................. B-18
  7.4.5 Trench Breakers ................................................................. B-19

8.0 STORMWATER MANAGEMENT ...................................................... B-19

9.0 OTHER CONTROLS ........................................................................ B-19
  9.1 MATERIAL STORAGE, SPILL PREVENTION AND RESPONSE .... B-19
  9.2 OFFSITE VEHICLE TRACKING CONTROLS ................................ B-19
  9.3 CONSTRUCTION WASTE STORAGE AND DISPOSAL .............. B-20
  9.4 HAZARDOUS AND SANITARY WASTE STORAGE AND DISPOSAL B-20
  9.5 OFFSITE DISCHARGES ............................................................ B-20
  9.6 NON-STORMWATER DISCHARGES ........................................ B-21

10.0 INSPECTION AND MAINTENANCE PROCEDURES ....................... B-21
   10.1 INSPECTION AND MAINTENANCE OF STABILIZATION AND
        STRUCTURAL PRACTICES ...................................................... B-21

11.0 CERTIFICATION OF COMPLIANCE .............................................. B-23
   11.1 OWNER/OPERATOR CERTIFICATION STATEMENT ................. B-23
   11.2 CONTRACTOR'S CERTIFICATION STATEMENT ....................... B-24

12.0 RECORD OF CONSTRUCTION ACTIVITIES .................................... B-24

TABLES

Table B-1. Truckee Meadows Regional Stormwater Quality Performance
  Standards Compliance Checklist ....................................................... B-25

Table B-2. Average Runoff Coefficients for Pre-Project and Post-Project Land Uses.... B-27

ATTACHMENT

DETAILS
1.0 INTRODUCTION

This Stormwater Pollution Prevention Plan (SWPPP) provides stormwater, erosion, and sediment pollution control practices for all activities related to construction and reclamation of the Fish Springs Water Supply Project (Project) and is appended to the overall Project Plan of Development (POD) as Appendix B. This SWPPP, together with the POD’s text and supporting appendices comprise the Project’s stabilization, reclamation, inspection, and monitoring components. Consequently, the SWPPP references sections and appendices of the POD to create a tiered comprehensive document, and limit redundancy.

Regional Best Management Practices (BMPs) are incorporated into this SWPPP. BMPs specified in the Truckee Meadows Construction Site Best Management Practices Handbook (February 2003), referred to as the BMP Handbook, and the Nevada Division of Environmental Protection (NDEP) Handbook of Best Management Practices (1994) have been incorporated throughout the document. The format for this SWPPP follows guidelines presented in the Truckee Meadows BMP Handbook for the development and implementation of a Construction Activity SWPPP within Washoe County, Nevada. Also incorporated are mitigation measures and conditions related to erosion control and stormwater management specified in the Final Environmental Impact Statement for the North Valleys Rights-of-Way Projects (FEIS) (October 2005) and in the Washoe County Special Use Permit Case No. SW05-009 (SUP) (January 17, 2006). Additional Project information is presented in the following documents appended to the Project POD:

- Environmental Compliance Management Plan (Appendix A);
- Revegetation Plan (Appendix C);
- Fire Control Plan (Appendix D);
- Dust Control Plan (Appendix E);
- Spill Prevention, Containment, Countermeasure and Cleanup Plan (Appendix F);
- Noxious Weed Management Plan (Appendix G);
- Access Road Plan (Appendix H).

This SWPPP addresses the entire Project including: groundwater production wells, pipeline rights-of-way, pump station and storage tanks, substation, surge suppression facility, terminal storage tank, and other aboveground facilities.

The risk of stormwater pollution issuing from the Project will be minimized by the use of appropriate construction BMPs and equipment, the relatively limited area involved, proper scheduling of construction activities, and project oversight. Environmental Inspectors will insure adherence to BMPs, scheduling, maintenance, and the duration of construction activities specified in this SWPPP. Environmental Inspectors will be qualified professionals with
experience in environmental project oversight, erosion control inspection and maintenance, and compliance reporting and enforcement.

Crossing procedures presented in the SWPPP will be utilized where streams, wetlands, or drainages are encountered. These methods may be modified pending input from the Army Corps of Engineers and the Nevada Division of Environmental Protection under the terms and conditions of the 404 Permit or Authorization and 401 Water Quality Certification.

2.0 PROJECT RESPONSIBILITIES

2.1 PROJECT OWNERSHIP

Vidler Water Company, Inc. (Vidler) is the Project developer responsible for ensuring implementation of this SWPPP. Following completion of construction, the Project owner/operator (Owner) will be responsible for monitoring and maintenance.

2.2 AVAILABILITY OF THE SWPPP

A copy of this SWPPP will remain on site during all phases of construction and reclamation. Following completion and installation of all reclamation features, the SWPPP will be available from the Project developer or the Owner until a Notice of Termination has been issued by NDEP pursuant to Stormwater General Permit NVR 100000.

2.3 AMENDMENTS TO THE SWPPP

This SWPPP will be amended whenever there is a change in construction or operations that could affect the potential discharge of pollutants to surface waters, ground waters, or municipal storm sewer systems. The SWPPP will also be amended if any condition of the General Permit is violated or if the Plan does not achieve the general objective of reducing or eliminating pollutants in stormwater discharges. All amendments will be dated and directly attached to this SWPPP.

2.4 PROJECT CONTACT

The Project Contact is: Dave Merrill, Vidler Water Company, Inc.
704 West Nye Lane, Suite 201
Carson City, Nevada 89703
775-885-5000
3.0 PROJECT DESCRIPTION

The Project developer is proposing construction of the Project to meet future water demands in the Stead, Silver Lake, and Lemmon Valley (North Valleys) area within the Truckee Meadows Services Area. The proposed Project consists of the following main components:

- ground water production wells;
- well field and water collection pipelines;
- pump station and water storage tanks;
- electrical substation;
- electrical distribution lines;
- transmission pipeline;
- surge suppression facility;
- terminal storage tank.

These facilities are designed to supply a total of 8,000 acre-feet/year (af/yr) of water. Retail water service will continue to be provided by Washoe County. An overview of the Project location and components is shown in Drawing 1 of the POD. The Project would disturb a total of 234.1 acres of public land administered by the BLM, and 173.9 acres of private land. The affected acreage is detailed by disturbance type and land ownership in Table 3 of the POD.

The Project description, including a construction sequence of soil disturbing activities is described in the POD. A checklist of BMPs that will be used on this Project and their location in the SWPPP and other portions of the POD is included as Table B-1 of this SWPPP. Pre-project and post-project runoff coefficient calculations are presented as Table B-2 of this SWPPP and indicate essentially no difference between runoff pre-Project and run-off once the Project is revegetated. Tables are located in the Tables Section included at the end of this document.

4.0 EXISTING SOIL AND WATER QUALITY DATA

No contaminated soils or sources of contaminant leaching are known to occur in the Project Study Area (FEIS). Surface water samples from the Dry Valley Creek hydrographic basin, the only perennial stream crossed by the Project, contained concentrations of metals, minerals, and total dissolved solids (TDS) that were below the standards set by the State of Nevada for secondary drinking water sources. The solids present in the stream are primarily sodium and calcium bicarbonates. Salinity and alkalinity are low in all waters except those adjacent to playas (FEIS).
5.0 SITE MAPS

5.1 GENERAL LOCATION MAP

The Project is located in western Washoe County, Nevada (Drawings 1 and 2, POD). Six wells, a well field water collection system, pump station, and substation are located in the southeastern end of Honey Lake Valley. The water transmission pipeline extends from the pump station over the Fort Sage Mountains, through Bedell Flat, and terminates at a storage tank above Matterhorn Boulevard between Lemmon and Antelope valleys.

5.2 DETAILED SITE MAPS

Detailed site maps of the Project are presented as Construction Drawings under separate cover. These detailed site maps identify construction-related details including the following required Truckee Meadows SWPPP items per the BMP Handbook:

- topography and drainage patterns drawn to scale with north arrow;
- soil disturbance areas;
- locations of structural and non-structural controls identified in this SWPPP;
- locations where stabilization practices will be applied;
- locations where vehicles and equipment will be stored and maintained;
- locations where materials and wastes will be stored;
- locations and aerial extent of nearby receiving waters (including wetlands);
- locations where stormwater discharges will enter receiving waters and/or the municipal stormdrain system; and
- legend identifying all symbols, bmp numbers or abbreviations used.

Additional site information presented on the Construction Drawings includes:

- stationing;
- property boundaries;
- elevation contours;
- location of the right-of-way alignment and associated areas of extra work space;
- clearing and grading methods;
- topsoil stripping procedures and depths;
- wetland and drainage crossing methods;
- hydrology (drainages, streams, wetlands);
- noxious weed locations;
• revegetation specifications; and
• erosion control methods (temporary and permanent).

5.3 DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY

There are no industrial discharges associated with the Project at this time. Should future Project facilities produce industrial discharges, the National Pollutant Discharge Elimination System (NPDES) permit would be amended or a separate permit would be obtained.

6.0 RECEIVING WATERS

One perennial stream (Dry Valley Creek), several small wetlands, and numerous ephemeral drainages will be crossed by the Project. These drainages and wetlands are shown on the Construction Drawings. A line list of all wetlands and drainages impacted by the Project is included in the 404 permit application.

7.0 EROSION AND SEDIMENT CONTROLS

7.1 SEQUENCE OF BMPs AND CONTRACTORS

Construction sequencing of the transmission, water collection, and well field pipelines, and associated facilities (e.g. pump station, storage tanks, etc.) is designed and scheduled to create the shortest construction window practicable and the least amount of stormwater runoff. The Project developer has avoided drainages and highly erodible slopes where possible, and will employ primary contractors and subcontractors (Contractors) to implement the BMPs specified in this SWPPP. A list of Project Contractors will be created following a review of construction bids and the selection of Contractors.

Construction (including final reclamation and revegetation) will generally be conducted between April 15 and December 1. Construction, cleanup, and reclamation will be sequenced to minimize the time between ground disturbance and final restoration/reclamation. Temporary erosion and sediment control devices will be installed prior to initial soil disturbance and will be maintained throughout construction and reclamation, as necessary, until replaced by permanent erosion control measures during final reclamation activities. Permanent erosion control measures and final cleanup will be completed within 14 days after the trench has been backfilled.
except as noted below pursuant to Stormwater General Permit NVR100000 Parts I.B.1.b. (2)(i), (ii), (iii) and as agreed to by the Project developer’s representative:

(i) Where snow cover or frozen ground preclude the initiation of stabilization measures by the 14th day after construction activity temporarily or permanently ceases.

(ii) Temporary stabilization measures do not have to be initiated on a portion of a site where construction activity have temporarily ceased and where earth-disturbing activities will be resumed within 21 days.

(iii) In arid areas (average annual rainfall 0 to 10 inches), semiarid areas (average annual rainfall 10 to 20 inches), and areas experiencing drought, where the initiation of stabilization measures by the 14th day after construction activity is precluded by seasonal arid conditions; stabilization measures shall be initiated as soon as practicable.

In no case will final cleanup or final reclamation be delayed beyond the end of the next seeding season.

Revegetation activities will be determined by construction schedules, seasonal climatic conditions, and site conditions. Seeding will be coordinated with other reclamation activities to occur as soon after seedbed preparation as possible, weather and soil conditions permitting. All seed will be used within 12 months of testing. Revegetation will ideally be conducted between September 15 and May 1, depending on weather conditions.

A description of Project construction activities is included in the POD (Sections 4.0 and 5.0). The following sections of this document describe specific BMPs that will be used to limit sediment pollution resulting from Project construction and are described in the approximate sequence that they will occur during construction. Project erosion-control Details are included as Attachment A of this SWPPP. Construction Drawings will reference these Details and specify the locations where they will be applied. Construction activities that require similar BMPs (e.g. topsoil salvage on a pipeline right-of-way and topsoil salvage at a storage tank) have been combined in the following text and in the attached Details to limit the number of Details and specifications required.

7.1.1 Construction Access

Vehicles and equipment will only use approved access roads identified by the Project developer in the POD Access Road Plan (Appendix H). Construction entrances will be installed wherever sediment tracking onto asphalt or concrete road surfaces or other damage such as rutting of the road shoulder is a potential concern. Access points will be stabilized with crushed rock underlain by geotextile filter fabric (Detail ENT/EXIT – ACCESS ROAD ENTRANCE/EXIT). Access will otherwise be along and within the designated construction right-of-way.
If inordinate amounts of sediment are transported onto a public road surface or other paved area by Project equipment or vehicles, it will be removed immediately from the road by shoveling and sweeping and transported to an approved disposal area, typically along the construction right-of-way. Road washing will be allowed only after the sediment is removed in the above manner. Other means of cleaning vehicles prior to entering roads or driveways may include hand removal or tire washing.

7.1.2 Marking, Flagging and Fencing

Survey crews will survey and stake the pipeline centerline, facility boundaries (e.g. Fish Springs Ranch pump station), and exterior right-of-way and extra workspace boundaries prior to construction, and will maintain these stakes through the construction period. Prior to construction, utility lines will be located and marked to prevent accidental damage during pipeline construction. Any irrigation systems will also be noted during the survey. Residences, sensitive areas and buffers, and existing underground utilities will be clearly marked to prevent damage and offsite impacts. Snow fence, orange exclusion fence, or equivalent will be used where necessary to prevent access to sensitive areas (e.g. wetlands).

7.1.3 Topsoil Salvage

Topsoil salvage methods will vary depending on site and topsoil depth. In general, topsoil will be salvaged as follows:

- Native Rangeland: Trench and working side of ROW (Detail T&W);
- Stabilized Dune: Mow vegetation, no salvage (Detail DUNE);
- Residential yards and/or developments: Full ROW or as determined with landowner (Detail FULL);
- Wetlands (nonsaturated): Trench only (Detail WET A);
- Wetlands (standing water): No salvage (Detail WET B);
- Permanent Facilities: Graded footprint (Detail FULL).

On private land, alternative stripping methods negotiated with the landowner may modify salvage methods.

Salvaged topsoil will be stored on one or both sides of the right-of-way depending on space, direction of movement and construction logistics. Topsoil will be stored separately from spoil.
Specific measures to protect the topsoil resource include the following items.

- Only the area between the staked and flagged construction boundaries will be available for topsoil salvage.
- Topsoil will be salvaged wherever grading is necessary or as otherwise specified on the Construction Drawings.
- Topsoil will not be salvaged where noxious weeds are present unless the area must be graded to allow for construction. Salvaged topsoil suspected of containing noxious weed seed or plant parts will be stored separately from adjacent "clean" topsoil and spoil, labeled, and respread on the original salvage site.
- Topsoil salvage depths for specific locations on the right-of-way and at permanent facilities are shown on the Construction Drawings or will be specified in the field by Environmental Inspectors. In general, a minimum of 3 inches and a maximum of 12 inches will be salvaged.
- Gaps will be left in topsoil piles to accommodate dirt roads, ORV trails, and livestock trails.
- Topsoil stockpiles will be pushed away from streams, wetlands, and ephemeral drainages and stored a minimum of 10 feet above the ordinary high-water mark.
- Topsoil will not be stripped during excessively wet conditions (soil moisture high enough to foul blades, rut deeply, or heavily accumulate on tires and tracks), and/or inordinately windy conditions (large plumes of soil particles visibly moving during stripping operations).
- Topsoil will not be used as padding in the trench, to fill sacks for trench breakers, or for any other use as a construction material.
- In areas of saline clay subsoil, care will be taken to salvage only the upper organic horizon.

7.1.4 Clearing and Grading

The minimum area necessary for safe construction will be cleared of vegetation. Vegetation on the spoil side of the right-of-way will be hydro-axed or mowed level with the soil but not cleared to leave root structures in place. In addition, vegetation will be mowed level with the ground but not cleared at certain extra workspaces (e.g. pipe storage yards) unless mowed stems create a driving or operating hazard.

Cleared vegetation will be stockpiled or windrowed to be respread with topsoil during restoration. Trees may be chipped and utilized during reclamation or left as woody debris on the right-of-way or other Project facilities as mulch. Stumps will be chipped or disposed of at approved sites shown on the Construction Drawings, or at a licensed landfill.
Objectives are to minimize grading, preserve native rootstock in the topsoil, and minimize soil disturbance. Clearing and grading will be conducted as shown on the Construction Drawings and as presented in the Details referenced in Section 7.1.3.

7.1.5 Trenching

Trench spoil will be stockpiled on the non-working side of the trench, or as directed by the Project developer. Similar to topsoil stockpiles, trench spoil stockpiles will be managed as described below.

- Gaps will be left in trench spoil stockpiles to accommodate dirt roads, ORV trails, and livestock trails.
- Spoil stockpiles will be pushed away from streams, wetlands, and ephemeral drainages and stored a minimum of 10 feet above the ordinary high-water mark.
- Trench spoil stockpiles will be separated from topsoil stockpiles by a minimum of one foot and will not be allowed to flow or slump together.

7.1.6 Pipe Installation and Hydrostatic Testing

Pipe construction and installation activities will include trucking the pipe from designated storage areas into position along the right-of-way in preparation for installation. Trenches will be prepared in accordance with construction contract documents and specifications prior to installation of piping. Once segments are lowered into the trench and secured to the previous segment of pipe, bedding will be placed in lifts around the pipe and compacted. This process will continue until the trench backfill reaches the adjacent native grade. Hydrostatic testing and final tie-ins will be completed as required in accordance with the project contract documents and specifications. Installation is discussed in greater detail in the POD Sections 4.3.4 to 4.3.6.

Preliminary construction sequencing calls for filling the pipeline with water as it is completed from the proposed pump station in the north to the terminal storage tank in the south to provide for construction water and to allow for hydrostatic testing as may be required. Based on this preliminary construction sequencing flush/testing water will be dechlorinated and pH-adjusted as necessary prior to disposal at the terminal storage tank. Should discharge be required at other locations on the Project, the Project developer would obtain a temporary NPDES permit. The following standard test dewatering procedures would be followed.

- Dewatering locations would be sited in upland areas of adequate vegetation.
• Dewatering locations would not be located within 100 feet of any drainage, wetland, stream, or cultural site.
• Dewatering locations would be specified in the temporary NPDES permit and provided to the BLM.
• Test water would be expelled into dewatering structures as shown in Detail HDW (HYDROSTATIC TEST DEWATERING) at a controlled rate to prevent overflowing the structures.
• The BLM would be notified of the Project developer’s intent to discharge test water 48 hours prior to discharge.

7.1.7 Trench Dewatering

Where trench dewatering is required prior to pipeline lowering-in, bedding and padding, or completing tie-ins, dewatering will be accomplished by pumping water from the trench onto stable, vegetated upland sites at a controlled rate that prevents erosion and minimizes sedimentation. Water will not be pumped directly from the trench or other excavation into a dry or flowing waterway, or into a wetland. Sediment barriers, hay-bale structures, or filter bags will be used during dewatering to prevent sedimentation (Details TRENCH A and TRENCH B).

Special precautions will also be taken as directed by the Project developer to avoid any potential impact to sensitive biological or cultural resources from dewatering operations. Strategies that will be implemented to prevent heavily sediment-laden water from reaching sensitive resources include those listed below.

• Locating dewatering discharges a minimum of 100 feet from drainages, wetlands, streams or cultural sites.
• Minimizing duration of dewatering discharges by scheduling dewatering operations immediately prior to lowering-in, tie-ins, or backfilling.
• Minimizing disturbance of the trench (i.e., additional excavation) to the extent practicable while dewatering is in progress.
• Suspending the hose intake above the bottom of the trench to minimize the sediment taken in during the pumping operation.

7.1.8 Backfill, Regrading, and Cleanup

A large portion of the excavated native subsoils encountered during construction will be suitable backfill material and may be screened and used as pipe bedding material during installation. Topsoil and rock will not be used for backfill. Following backfill, the right-of-way will be re-
graded where necessary to the approximate original contour with allowance for settling, particularly over the trench (Detail BACK/REG). Environmental Inspectors will check for surficial compaction at areas occupied by equipment during construction (e.g. the working side of the right-of-way or staging areas) with a 16-inch “sharp shooter” spade. Soils will generally be considered compacted and will require ripping or subsoiling if the spade cannot be driven to approximately one-half its length with pressure applied by both feet in four consecutive attempts within the same hole. The operating depth of the subsoiler or cultivator will be adequate to relieve compaction as determined by an Environmental Inspector. The Tuscarora right-of-way will not be ripped, chisel-plowed or spring-tooth harrowed to avoid contacting the pipe. Decompaction on the Tuscarora right-of-way will be accomplished with a disc or other equipment approved by the Project developer and Tuscarora.

Following regrading and cleanup, permanent erosion control features requiring excavation, such as waterbars, will be installed prior to topsoil redistribution, revegetation, or other erosion control practices to prevent additional soil disturbance during reclamation and revegetation.

**Cleanup** is discussed in the POD (Sections 4.3.8 and 6.1) while revegetation is specifically discussed in the *Revegetation Plan (Appendix C of the POD).*

### 7.1.9 Topsoil Redistribution

After the trench has been backfilled and the right-of-way regraded, the Contractor will redistribute topsoil to the approximate location from which it was originally removed. The following criteria will be used when redistributing topsoil.

- Topsoil will be redistributed as close to original salvage depths as possible. Specific topsoil salvage and redistribution depths will be shown on Construction Drawings or determined by the Environmental Inspector.
- Redistributed topsoil will be left in a roughened condition to discourage erosion and enhance the quality of the seedbed.
- Topsoil will not be handled during excessively wet or frozen conditions as determined by the Environmental or Construction Inspector, with input from a BLM representative as necessary.
- Segregation of subsoil and topsoil will be maintained throughout final cleanup procedures.
- Topsoil gathered at sites with noxious weed infestations will be replaced in the original salvage site.
- The Contractor will be responsible for replacement of lost or degraded (mixed) topsoil with topsoil imported from a weed-free source approved by the Project developer.
7.1.10 Stream and Wetland Crossings

Dry Valley Creek, the only perennial stream crossed by the Project, will be crossed using an open-cut dam and pump method as shown in Detail OCD (OPEN CUT DRY). Should any other drainages contain water at the time of crossing, Contractors will consult with the Construction Inspector and the Environmental Inspector to determine whether an OCD, OPEN CUT FLOWING (OCF), or OPEN CUT NONFLOWING (OCN) would be most appropriate.

The following crossing specifications will apply to the Dry Valley Creek crossing.

- A 10-foot vegetation buffer strip between the cleared right-of-way and the drainage high-water mark will be maintained if the time between clearing/grading and pipe installation is expected to exceed 14 days.
- Soil and spoil stockpiles will be pushed away from Dry Valley Creek and stored a minimum of 10 feet above the ordinary high-water mark.
- The crossing will be completed in 48 hours if possible. Additional time may be necessary to allow concrete to dry or for other engineering purposes.
- Prior to crossing Dry Valley Creek, the appropriate pipe will be on site and inspected to complete the crossing in a timely manner once the trench is prepared.
- The pipeline will cross the stream channel as close to perpendicular as possible.
- The crossing will be conducted during low-flow periods.
- Any temporary bridges used during construction will be left in place to facilitate further Project access until revegetation and erosion control has been completed on the plateau between Dry Valley Creek and North Fork of Dry Valley Creek. Following revegetation and reclamation, the Contractor that placed the bridge will be responsible for its removal. Bridges will be installed according to Detail BRIDGE (PORTABLE BRIDGE).
- Once the crossing has been completed, silt fence will be installed 5 feet above the ordinary high-water mark on both banks. Silt fence will extend along the entire width of the right-of-way with openings for a portable bridge as shown on Detail OCD. Silt fence will be installed as soon as possible after completing the crossing but no later than 24 hours. Silt fence will be installed according to Detail SILT.
- After final cleanup, STREAMBANK MATTING (Detail MAT-ST) or HYDROMULCH (Detail HYDRO) will be installed from the water’s edge to the silt fence and the silt fence will be removed.
- Vehicle and equipment refueling will not be allowed within 100 feet of Dry Valley Creek.
- Hazardous materials (e.g. fuels and lubricants) will not be stored within 300 feet of Dry Valley Creek.

Numerous dry streambeds, drainages, and small wetlands will be crossed by the Project. Typical dry streambed and wetland crossing procedures are listed below.

Fish Springs Water Supply Project
Vidler Water Company, Inc.
• Soil and spoil stockpiles will be pushed away from ephemeral drainages and wetlands and stored a minimum of 10 feet above the ordinary high-water mark.
• A 10-foot vegetation buffer strip between the cleared right-of-way and the drainage high-water mark will be maintained if the time between clearing/grading and pipe installation is expected to exceed 14 days.
• Vehicle and equipment refueling will not be allowed within 100 feet of any drainage or wetland.
• Hazardous materials (e.g. fuels and lubricants) will not be stored within 300 feet of any drainage or wetland.

Dry streambed and wetland crossing details are included in Detail OCN (OPEN CUT NON-FLOWING) and Details WET A and WET B (WETLAND CROSSING PROCEDURE).

7.1.11 Wet Weather Considerations

Timber mats or other specialized equipment (e.g. balloon tire equipment) that reduce or minimize rutting and other wet-weather construction-related impacts will be used where possible to allow construction to continue. Should these measures fail at preventing rutting or other wet-weather construction impacts, the Project developer will require Contractors to implement the following measures to prevent additional impacts to soil as a result of wet weather construction.

• No construction activities will be performed during periods when the soil is too wet to adequately support construction equipment.
• Where possible, drainage across Project facilities will be directed to reduce the potential for water to accumulate and supersaturate soils. Proper grading will result in fewer areas of ponded water on the Project and less rutting.
• Topsoil stripping or replacement activities will cease in the event substantial amounts of topsoil stick to the equipment blades or tracks, or topsoil otherwise mixes with subsoil.
• In areas where the topsoil has been stripped, the right-of-way will be lightly graded to remove significant ruts, eliminate ponding of water, and maintain access.
• In situations of extreme soil saturation where Project access is not feasible for rubber-tired equipment (e.g., stringing trucks), activities (e.g. stringing) will cease in a particular location and relocate elsewhere on the Project until conditions improve.
7.1.12 Construction in Dune Habitat

Recent fires have resulted in a semi-stabilized dune habitat along the water collection pipeline between approximately milepost WC 8.59 and milepost WC 8.76 (Drawing 2 of the POD). Exact locations of Dune habitat will be shown on the Construction Drawings.

Bare sand accounts for between 85 and 99 percent of ground cover within this area. To minimize erosion in this area, Contractors will implement measures described in Detail DUNE and listed below.

- No grading will occur within the Dune habitat.
- Existing vegetation will be mowed as low as necessary to allow for construction but root structures will be left intact.
- Topsoil will not be salvaged within the Dune habitat.
- Trench spoil will be stored as close as practicable to the trench to minimize the amount of sand that may be re-graded into the trench during backfill.
- On-site changes may be made to the above requirements if, in the opinion of the Environmental Inspector and a BLM representative, less erosion would result from the following types of changes:
  o adequate subsoil exists to support a bladed travel route and sand can be effectively windrowed;
  o the sand layer would be better protected by salvage and storage separate from trench spoil;
  o silt fence or temporary matting should be installed to lessen wind erosion of stockpiled sand.
- The Dune section will be broadcast seeded at twice the standard rate to account for some seed that will likely be buried too deep in shifting soils.
- Seed will be dragged with a flexible harrow with the harrow tines pointing up to avoid burying the seed too deep.

7.2 TEMPORARY STABILIZATION PRACTICES

Temporary stabilization measures are required by Washoe County when construction activity is expected to cease for 14 days or more and will not be resumed within 21 days. Should construction be interrupted for this period of time, or should a Project developer representative determine that temporary erosion control practices are necessary, the Project developer will specify the following temporary stabilization measures depending upon site and weather conditions:
• straw mulching and crimping;
• hydromulching;
• silt fence, sandbag, or sediment log installation;
• temporary revegetation.

It is not expected that Project construction will cease long enough for temporary stabilization practices to be necessary.

7.3 PERMANENT STABILIZATION PRACTICES

Permanent stabilization practices are those that will remain after construction and reclamation activities have ceased (e.g. permanent revegetation, mulching, and matting). Permanent stabilization measures must be applied no later than 14 days from the last construction activity in an area per the BMP Handbook except as previously noted in Section 7.1.

Permanent stabilization practices are described in the following sections. The locations where these practices will be applied are shown on the Construction Drawings.

7.3.1 Slope Tracking

Slope tracking creates small, stair-step furrows across slopes, and reduces erosion by decreasing runoff velocity, trapping sediments, and increasing water infiltration into the soil. Tracking is accomplished by driving maneuverable tracked vehicles perpendicular to a slope face in repeated passes as shown in Detail TRACK (SLOPE TRACKING).

7.3.2 Mulching

Straw mulching will be considered on 20 to 40 percent slopes with less than 40 percent surface cover of respread plant debris or rock, as determined by an Environmental Inspector during reclamation. Hydro-mulch and tackifier will be considered on 40 to 60 percent slopes with less than 70 percent surface cover of plant debris or rock, as determined by an Environmental Inspector during reclamation. Conditions that will be considered prior to applying mulch include:

• slope angle;
• slope length;
• slope configuration;
• soil texture and coarse fragments; and
• adjacent features such as drainages or wetlands.
In very limited areas, mulch may be applied on slopes that are less than 20 percent, depending upon topography and configuration as determined by the Environmental Inspector. Specific straw mulching requirements such as application rate, straw fiber length, and noxious weed-free status are described in Detail STRAW (STRAW MULCH). Hydro-mulching is described in Detail HYDRO (HYDRO-MULCH AND TACKIFIER).

7.3.3 Matting

Erosion control matting on upland sites will be considered on slopes over 60 percent with less than 70 percent surface cover of respread plant debris or rock as determined by an Environmental Inspector during reclamation; or on steep approach slopes at drainage crossings. Matting will be applied after a site has been seeded. Matting specifications are described in Detail MAT-SL (SLOPE MATTING).

7.3.4 Revegetation

The revegetation seed mix, seed rates, and seeding methods are detailed in the POD Revegetation Plan (Appendix C). Native, regional, drought-tolerant species comprise the majority of the revegetation seed mix. Non-native species will only be used on agricultural lands, or where requested in residential areas. Seeding methods are described in Detail SEED.

7.4 STRUCTURAL PRACTICES

Structural practices are constructed or manufactured BMPs that limit, divert, or filter flows from exposed soils, reduce flow velocities, or temporarily store flows and limit runoff from exposed areas. Structural practices may be either temporary or permanent and include features such as waterbars/diversion berms, energy dissipaters, sediment logs, and silt fences.

7.4.1 Waterbars

Waterbars will be spaced according to the following guidelines except as noted below:
<table>
<thead>
<tr>
<th>Slope Angle (%)</th>
<th>Interval Between Waterbars (feet)</th>
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<td>20 - 30</td>
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<td>&gt;30</td>
<td>100</td>
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</tbody>
</table>

Waterbars can create visual concerns once revegetation has been established and structural erosion control devices are no longer necessary. Further, waterbars frequently contribute to ORV use of a right-of-way by serving as jumps and obstacles. In order to avoid these negative impacts, the Project developer will use bio-degradable sediment logs in place of waterbars at sites listed below.

- All slopes near the established moto-cross course in Bedell Flat between mileposts TP 12.0 and TP 21.0.
- All slopes in the residential area between mileposts TP 21.0 and the terminal storage tank.

Waterbars will be installed across the right-of-way prior to topsoil placement and spreading and will be constructed using compacted native subsoils. Waterbars will be constructed according to **Detail WATER BAR**. Waterbars will be constructed at a 3 to 5 percent gradient across the entire right-of-way to facilitate drainage to stable, vegetated, adjacent uplands. If right-of-way boundaries permit, the waterbar berm (but not the trough) will extend 5 feet beyond the edge of the disturbance to insure that water flowing from the disturbed area does not return to the right-of-way below the water bar. Where applicable, water bars will be aligned and connected with those on the Tuscarora Gas Transmission Company (TGTC) right-of-way to prevent concentrating water flow onto the TGTC right-of-way.

### 7.4.2 Energy Dissipaters

Energy dissipaters constructed of rock and biodegradable geotextiles will be installed at the outflow end of water bars if adjacent vegetation is not adequate to prevent erosion as determined by the Environmental Inspector. Energy dissipater specifications are included with **Detail WATER BAR**.

### 7.4.3 Sediment Logs

Sediment logs will be used in place of water bars to avoid visual impacts and to discourage ORV use of the right-of-way between milepost TP 12.0 and the terminal storage tank. The same slope and interval spacing specified for water bars in Section 7.4.1 will apply to sediment logs.
that are used in place of water bars unless otherwise directed by an Environmental Inspector. Sediment logs will be keyed and staked into slopes as specified in **Detail SED LOG (SEDIMENT LOGS)**. In addition, sediment logs may be used as sediment barriers similar to sandbags and silt fence as described in **Section 7.4.4**.

### 7.4.4 Sediment Barriers

Sediment barriers will be installed to prevent sediment flow and erosion from disturbed areas. Sediment barriers may include silt fences, sediment logs, or sand bags. Straw bale barriers will not be allowed per the Truckee Meadows Regional Stormwater Quality Management Program other than at limited trench dewatering or hydrostatic test dewatering facilities.

Sediment barriers will typically be installed at the base of slopes where the right-of-way crosses or is adjacent to roads, streams, drainages, wetlands, or other sensitive resources where the topography could direct sediment into adjacent areas or create erosion on the Project. Generally, the location of these structures are presented in the Construction Drawings and may be modified as necessary by the Project Developer's Representative. Temporary sediment barriers will also be installed around spoil and topsoil stockpiles, trench dewatering operations, and other locations identified in the Construction Drawings and in the field by the Environmental Inspector or other Project Developer Representatives.

Silt fence sediment barriers will be placed at the bottom of slopes, at least six feet beyond the toe of the slope, where possible, to increase ponding volume. The ends of the sediment barrier will be turned slightly upslope to capture sediment and extended 10 feet off of the right-of-way into adjacent vegetation.

Sediment barriers will be placed to facilitate construction activities. If sediment barriers are placed across the construction area, provisions will be made for traffic flow. An approximately 15-foot-wide gap will be provided along the sediment barrier. Across the gap, a drivable earthen berm will be installed and maintained immediately upslope of the sediment barrier (upturned ends of the sediment barrier will tie into the drivable earth berm).

Specifications for the installation of silt fences and sandbags are shown on **Details SILT** and **SAND (SANDBAG INSTALLATION)** respectively. The use of sediment logs is shown on **Detail SED LOG**. Sediment logs will not be used in lieu of silt fence at wetlands and drainage crossings but may be used for temporary erosion control across the right-of-way on upland slopes in addition to replacing water bars as specified in **Section 7.4.1**. Sediment barriers will be maintained and removed as specified in **Section 10.0**.
7.4.5 Trench Breakers

Trench breakers are intended to slow subsurface water flow along the trench. Trench breakers will be installed according to **Detail TB (TRENCH BREAKER)** and as described below:

- at the base of slopes greater than 5 percent, within 50 feet of a waterbody, at the interface of uplands and wetlands;
- at the same interval but on the upslope side of water bars; and
- according to engineer specifications.

Concrete slurry backfill will be used at specified drainage crossings per Construction Drawings and Project Specifications in addition to any required trench breakers.

8.0 STORMWATER MANAGEMENT

Stormwater discharges from the Project will be managed after construction has ceased through regular inspection and maintenance of erosion control structures as detailed in **Section 10.0**. Revegetation will be inspected and remedial measures will be implemented as necessary, per the Revegetation Plan (**Appendix C of the POD**).

9.0 OTHER CONTROLS

Other controls that will be implemented to prevent stormwater discharge or pollution of stormwater runoff are described in the following sections.

9.1 MATERIAL STORAGE, SPILL PREVENTION AND RESPONSE

The Project developer’s Spill Prevention, Countermeasure, Containment, and Cleanup Plan (**SPCCC**) details measures that will be taken to properly store, handle, and prevent hazardous materials from entering stormwater. The SPCCC is included as **Appendix F of the POD**.

9.2 OFFSITE VEHICLE TRACKING CONTROLS

Offsite vehicle tracking will be controlled as described in **Section 7.1.1**.
9.3 CONSTRUCTION WASTE STORAGE AND DISPOSAL

The Contractors will be responsible for ensuring that construction waste is collected in a timely fashion; stored in an appropriate manner that does not create a public nuisance or health hazard; and disposed of at approved, licensed disposal facilities (e.g. regional landfills). The following conditions will apply:

- Littering on the right-of-way will not be permitted.
- All Project-related employees will be responsible for maintaining a clean working environment by collecting miscellaneous trash on the Project (e.g. paper, plastic bags, etc.).
- Contractors will be responsible for collecting unused or discarded construction-related items such as, but not limited to the following:
  - stakes and ribbon;
  - exclusion fencing;
  - temporary or unusable fencing;
  - erosion control items (e.g. ripped silt fence, broken sediment logs, torn matting, erosion control staples and stakes, baling twine, etc.);
  - blasting materials;
  - blasting mats;
  - sand bags.
- Trash, debris, and/or waste will not be buried on the Project.
- Trash, debris, and/or waste will not be burned on the Project.
- Trash, debris, and/or waste will be stored in appropriate barrels or other containers within designated Contractors yards until it is disposed of at approved, licensed disposal facilities.

9.4 HAZARDOUS AND SANITARY WASTE STORAGE AND DISPOSAL

Hazardous material will be stored and disposed of as described in the SPCCC (Appendix F of the POD). Sanitary waste will be contained within portable toilet facilities. The Contractors will be responsible for obtaining, managing, and removing portable toilets. Portable toilets will only be located at Contractors’ Yards or other sites approved by a Project developer representative.

9.5 OFFSITE DISCHARGES

Offsite discharges will not occur as part of the Project.
9.6 NON-STORMWATER DISCHARGES

The following non-stormwater discharges may occur from the site during the construction period:

- Cleanup wash waters (non-hazardous) from vehicle washing, particularly around Project components such as the pump station or terminal tanks, and contractor yards;
- Trench dewatering; and
- Hydrostatic test waters.

All non-stormwater discharges will be discharged onto stable upland locations through energy dissipating, filtering devices designed to slow flow velocity and trap sediments and other particulates. Hydrostatic test dewatering and trench dewatering is described in Sections 7.1.6 and 7.1.7 respectively of this SWPPP. Vehicle cleaning will be conducted on gravel pads at designated sites only. Washwater will be collected using berms.

10.0 INSPECTION AND MAINTENANCE PROCEDURES

10.1 INSPECTION AND MAINTENANCE OF STABILIZATION AND STRUCTURAL PRACTICES

Erosion control inspection and maintenance will be continuous throughout construction and reclamation. Environmental Inspectors will notify the Construction inspector to suspend or re-direct Contractor work activities where requirements of this SWPPP are not followed and implement corrective action as specified in the Environmental Compliance Management Plan (Appendix A of the POD). Inspection reports will be prepared and maintained by Environmental Inspectors and submitted to the BLM, NDEP, and Washoe County upon request.

Specifically, erosion control measures and structures will be inspected and maintained on the Project per the Truckee Meadows Regional Stormwater Quality Management Program as described below.

- Qualified agents such as Environmental Inspectors, or other Project developer or Contractor representatives who have received training in erosion control inspection and maintenance will conduct inspections.
- The Truckee Meadows Construction Site Inspection Checklist as described in the BMP Handbook will be used as a basis for all site inspections. Photos will be taken during site inspections as necessary.
- Construction and reclamation inspections will occur at the following sites:
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 on the Project;
all structural control measures; and
all locations where vehicles enter or exit the Project.

Following final revegetation and installation of permanent erosion control measures, inspection and maintenance will be conducted until final stabilization is achieved. Final stabilization is achieved when a site supports native herbaceous and shrub cover equal to 70 percent of total native herbaceous cover in adjacent areas. Shrub cover in adjacent areas is excluded because shrub establishment and canopy cover are expected to develop slowly on revegetated areas. Management inspections and maintenance will be completed according to the following criteria.

- Inspections will be conducted on the following schedule:
  - within 24 hours of any precipitation event that creates runoff on or from the Project;
  - prior to forecasted precipitation events to insure that BMPs are functioning properly;
  - once every 7 days unless a precipitation event inspection has already been completed.

However, the Owner will be eligible for a waiver of the weekly inspections as specified under the Stormwater General Permit NVR100000 Part I.B.1.b(3) g. (1)(i), (ii), (iii) which states that weekly inspections may be suspended where all of the following criteria are met: 1) frozen soil conditions are present for more than one month; 2) land disturbance activities have been suspended; and 3) the beginning and ending dates of the waiver period are documented in the SWPPP. Typically, this waiver will be in effect from December until February.

- Maintenance of erosion control measures and structures will occur as described below or as directed by Environmental Inspectors.
  - Broken structural controls such as water bars, sediment logs, silt fence, matting or other controls will be replaced or restored as soon as practicable but before the next forecasted precipitation event.
  - Accumulated sediment will be removed from erosion control structures when sediment reaches 50 percent of the barrier capacity. Sediment will be spread on Project disturbances uphill of the sediment barrier or disposed of at an approved location if spreading would be detrimental to revegetation success as determined by an Environmental Inspector.
Additional erosion control measures and/or structures will be added to the Project should substantial rilling, gullying, or sheet erosion occur as determined by an Environmental Inspector.

Inspection and maintenance of erosion control measures and structures will cease when final stabilization has been achieved. Once final stabilization has been achieved and the NDEP has issued a Notice of Termination, structural erosion control measures such as silt fence, sediment barriers, and sediment logs will be removed and disposed of appropriately unless structures have already biodegraded or will in the near future. Exceptions to this condition include those described below.

Revegetation on Project disturbances is unlikely to achieve the 70 percent stabilization criteria at the same rate throughout the Project. Erosion control inspections and maintenance will be discontinued in those areas where final stabilization has been achieved with BLM, NDEP, and Washoe County concurrence.

Dense shrub cover in the adjacent Project area may preclude achievement of the 70 percent final stabilization criteria in all areas; however, desirable species cover on the Project could be expected to effectively limit erosion and sedimentation. Should Environmental Inspectors determine that Project erosion at a site is similar to that of adjacent areas, BLM, NDEP, and Washoe County will be contacted for concurrence that erosion control inspection and maintenance may be discontinued at that site.

The Owner will prepare an annual report detailing erosion control inspections and maintenance until final stabilization is achieved as described above. Reports will be submitted to the BLM, NDEP, and Washoe County.

11.0 CERTIFICATION OF COMPLIANCE

11.1 OWNER/OPERATOR CERTIFICATION STATEMENT

The Project developer will complete a Certification of Compliance when submitting a Notice of Intent pursuant to the Stormwater General Permit NVR100000.
11.2 CONTRACTOR'S CERTIFICATION STATEMENT

The Project developer's Contractors will complete a Contractor's Certification Statement in concert with the Project developer's submittal of a Notice of Intent.

12.0 RECORD OF CONSTRUCTION ACTIVITIES

The Project developer will maintain a record of major grading activities including the dates when construction activity on a portion of the Project temporarily ceases, and a list of dates when temporary, permanent, and structural stabilization practices are implemented as specified in the Truckee Meadows BMP Handbook.
# Table B-1: Truckee Meadows Regional Stormwater Quality Performance Standards Compliance Checklist

<table>
<thead>
<tr>
<th>Truckee Meadow Regional Stormwater Quality Management Performance Standard</th>
<th>BMPs Selected</th>
<th>BMP Type</th>
<th>Text Location</th>
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<tbody>
<tr>
<td><strong>1</strong> Schedule construction and minimize clearing and grading</td>
<td>✔ PL-1 Site Design</td>
<td>POD Sec. 4.0-6.0</td>
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<tr>
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<td>✔ PL-2 Scheduling</td>
<td>POD Sec. 4.3, SWPPP Sec. 7.1, Revegetation Plan Sec. 6.0</td>
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<td>PL-3 Phased Construction</td>
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<td>✔ PL-4 Topsoil Reuse</td>
<td>SWPPP Sec. 7.1.3, 7.1.9</td>
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<td>✔ EC-1 Preserve Natural Vegetation</td>
<td>SWPPP Sec. 7.1.3</td>
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<td><strong>2</strong> Stabilize disturbed areas</td>
<td>✔ EC-2 Slope Terracing and Tracking</td>
<td>SWPPP Sec. 7.3.1</td>
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<td>✔ EC-4 Soil Binders</td>
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<td>✔ EC-5 Wind Erosion and Dust Control</td>
<td>Dust Control Plan</td>
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<td>✔ EC-6 Rolled Erosion Control Products</td>
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<td>✔ EC-8 Revegetation</td>
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<td><strong>3</strong> Protect slopes</td>
<td>RC-2 Temporary Dikes and Ditches</td>
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<td>RC-4 Temporary Slope Drains</td>
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<td>SC-4 Gravel Filter Berm</td>
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<td>POD Sec. 4.0-6.0</td>
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<td>DP-3 Stormdrain Inlet Protection</td>
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<td>DP-4 Catch Basin Inlet Filters</td>
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<td>6 - Install sediment traps and retain sediment caused by erosion on site</td>
<td>RC-3 Check Dams</td>
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<td>√ SC-5 Silt Fences</td>
<td>SWPPP Sec. 7.4.4</td>
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<td>√ SC-6 Temporary Sediment Traps</td>
<td>SWPPP Sec. 7.1.6, 7.1.7</td>
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<td>SC-7 Sediment Retention Basins</td>
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<td>7 - Remove accumulated sediment</td>
<td>√ Standard Note No. 5</td>
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<td>SWPPP Sec. 10.0</td>
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<td>8 - Control site entrances and exits</td>
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<td>SWPPP Sec. 9.2</td>
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<td>√ SC-9 Construction Exit Tire Wash</td>
<td>SWPPP Sec. 9.6</td>
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<td>√ SC-10 Stabilized Construction Road</td>
<td>Access Road Plan</td>
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<td>GM-5 Street Sweeping</td>
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<td>9 - No storage on paved roadways</td>
<td>GM-2 Stockpile Management</td>
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<td>GM-3 Solid Waste Management</td>
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<td>SPCCC Sec. 4.0</td>
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<td>10 Manage materials and wastes</td>
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<td>SWPPP Sec. 9.6</td>
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<td>12 - Permanent stabilization</td>
<td>√ PL-4 Topsoil Reuse</td>
<td>SWPPP Sec. 7.1.3, 7.1.9</td>
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<td>√ EC-8 Revegetation</td>
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Table B-2. Average Runoff Coefficients for Pre-Project and Post-Project Land Uses.

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<tr>
<th>Land Use</th>
<th>Temporary (T) or Permanent (P) Disturbance</th>
<th>Runoff Coefficient&lt;sup&gt;1&lt;/sup&gt;</th>
<th>Acres of Disturbance&lt;sup&gt;2&lt;/sup&gt;</th>
<th>Proportional Runoff&lt;sup&gt;3&lt;/sup&gt;</th>
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<td>Post-Project</td>
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<tr>
<td>Facilities&lt;sup&gt;4&lt;/sup&gt;</td>
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<td>Reclaimed Sites&lt;sup&gt;5&lt;/sup&gt;</td>
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<sup>1</sup> Runoff coefficient values provided in Washoe County Development Code, Storm Drainage Standards. 1998. p. 420-12
<sup>2</sup> Disturbance acreage provided in Fish Springs Water Supply Project POD
<sup>3</sup> Proportional Runoff calculated using equation (Runoff Coefficient * Area of Disturbance = Proportional Runoff)
<sup>4</sup> Includes collection wells, well pumphouses, pump station & tanks, surge suppression tank, and terminal storage tanks.
<sup>5</sup> Permanent Access Roads on Private Land; includes Pre-project road area of 3.4 acres. Subtract 3.4 acres from Total Distribution to equal actual project disturbance.
<sup>6</sup> Includes collection & transmission pipelines Rows, extra work space, construction sites and public access roads.
<sup>7</sup> Reclaimed Access Roads on Public Land
<sup>8</sup> Average Runoff Coefficient calculated using equation: (Sum of Proportional Runoffs / Total Acres of Disturbance)
# LIST OF DETAILS

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<td>Typical Waterbody Crossing - Open Cut Flowing Method</td>
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<td>HydroMulch and Tackifier</td>
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<td>TB</td>
<td>Typical Trench Breaker</td>
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NOTES:

1. Access pads are to be installed adjacent to existing paved roads at locations identified on the Construction Drawings or upon the request of the Project Developer's Representative.
2. Should the rock pad become ineffective for reducing the buildup of mud and dirt and minimizing tracking onto the paved road, the Contractor shall wash the existing rockfill surface or add a rockfill layer to the access pad.
3. Silt fence will be installed along the sides of the access pad if necessary to prevent sedimentation onto adjacent areas.
4. The berm shall be of the same material as the access pad.
5. Contractor shall keep paved road surface in safe driving condition.
6. Upon completion of reclamation, Contractor shall remove all rock fill and the culvert (if installed) unless otherwise directed by the Project Developer.
* Widths as defined on Construction Drawings

NOTES:

1. Salvage topsoil over trench and working side at locations and depths identified on the Construction Drawings or as directed by the Project Developer's Representative. Strip shall be wide enough to accommodate a working and passing lane.
2. Stockpile topsoil as shown or in any configuration approved by the Project Developer's Representative. Keep topsoil clean of debris. Maintain a minimum 1' separation between topsoil and spoil pile edges.
3. Leave gaps in topsoil piles at drainages. Do not push topsoil into creeks or wetlands. Do not use topsoil for padding.
4. Avoid scalping vegetated ground surface when backfilling spoil pile.
5. If full ROW is graded - FULL ROW stripping (DETAIL FULL)
**TYPICAL DRAWING:** None

**NOTES:**

1. No grading will occur within the Dune habitat unless the conditions specified in item 5 are satisfied. Otherwise, the following construction and reclamation prescriptions will apply.
2. Existing vegetation will be mowed as low as necessary to allow for construction; root structures will be left in place.
3. Topsoil will not be salvaged within the Dune habitat unless it is graded as specified in item 5 below.
4. Trench spoil will be stored as close as practicable to the trench to minimize the amount of sand that may be re-graded into the trench during backfill.
5. On-site changes may be made to the above requirements if, in the opinion of the Project Developer's Representative and a BLM representative, less erosion would result from the following types of changes:
   a. adequate subsoil exists to support a bladed travel route and sand can be effectively windrowed;
   b. the sand layer would be better protected by salvage and storage separate from trench spoil;
   c. silt fence or temporary matting would stabilize stockpiled sand and result in less overall wind erosion at the site.
6. The Dune section will be broadcast seeded at twice the standard rate to account for some seed that will likely be buried too deep in shifting soils.
7. Seed will be dragged with a flexible harrow with the harrow tines pointing up to avoid burying the seed too deep.
NOTES:

1. Salvage blade width topsoil over trench at locations and depths identified on the Construction Drawings or as directed by the Project Developer's Representative.
2. Stockpile topsoil as shown or in any configuration approved by the Project Developer's Representative. Keep topsoil clean of debris. Maintain a minimum 1' separation between topsoil and spoil pile edges.
3. Leave gaps in topsoil piles at drainages. Do not push topsoil into creeks or wetlands. Do not use topsoil for padding.
4. Avoid scalping vegetated ground surface when backfilling spoil pile.
5. If full ROW is graded - FULL ROW stripping (DETAIL FULL)
* Widths as defined on Construction Drawings

NOTES:

1. Salvage topsoil full ROW at location and depths identified on the Construction Drawings or as directed by the Project Developer's Representative.
2. Topsoil shall be stockpiled on both sides of the ROW (as shown), on one side or in any configuration approved by the Project Developer's Representative. Keep topsoil pile clean of debris. Maintain a minimum 1' separation between topsoil and spoil pile edges.
3. Leave gaps in topsoil piles at drainages. Do not push topsoil into creeks or wetlands. Do not use topsoil for padding.
NOTES:

1. Flag wetland boundaries prior to clearing.
2. No refueling of mobile equipment within 100 feet of wetland. Place sign posts 100 feet back from wetland boundary and advise no refueling. Refuel stationary equipment as per SPCCC Plan.
3. Install temporary water bar upslope within 100 feet of wetland boundary as directed by the Project Developer's Representative.
4. Construct when dry, if possible. If site becomes wet at time of trenching, avoid soil compaction by utilizing wide-track or balloon tire construction equipment, or normal construction equipment operated on timber mats or prefabricated equipment mats. If fabricated timber mats are used for stabilization, the backhoe shall gradually move across the wetland, by moving the mat from immediately behind to immediately in the front of the backhoe’s path. This "leap frog" process minimizes impact to the wetland by distributing the weight of the backhoe, reducing the number of passes through the wetland, and minimizing the area covered by timber mats at any given time.
5. Avoid adjacent wetlands. Install sediment barriers (silt fence - DETAIL SILT) at edge of ROW along wetland edge as required.
6. Conduct trench line topsoil stripping if topsoil is not saturated. Salvage topsoil to a depth of 12 inches or as determined by the Project Developer’s Representative. Segregated topsoil pile may be located on spoil side, as required.
7. Trench through wetlands.
8. Lower-in pipe. Prior to backfilling trench, trench plugs shall be installed on each side of the wetland. Backfill trench.
9. Remove any timber mats or prefabricated mats from wetlands upon completion.
10. Restore grade to near pre-construction topography, replace topsoil, and install permanent erosion control.
11. Generally, seeding in wetlands will not be necessary since wetlands naturally revegetate quickly and sod will remain intact except over the trench. The Contractor shall seed any wetlands that may require seeding as determined by the Project Developer's Representative.
NOTES:

1. Flag wetland boundaries prior to clearing.
2. Narrow ROW to minimum necessary by deleting passing lane.
3. No refueling of mobile equipment within 100 feet of wetland. Place sign posts 100 feet back from wetland boundary and advise no refueling. Refuel stationary equipment as per SPCCC Plan.
4. Install temporary water bar upslope within 100 feet of wetland boundary as directed by the Project Developer's Representative.
5. Avoid soil compaction by utilizing wide-track or balloon tire construction equipment, or normal construction equipment operated on timber mats or prefabricated equipment mats. If fabricated timber mats are used for stabilization, the backhoe shall gradually move across the wetland, by moving the mat from immediately behind to immediately in the front of the backhoe's path. This "leap frog" process minimizes impact to the wetland by distributing the weight of the backhoe, reducing the number of passes through the wetland, and minimizing the area covered by timber mats at any given time.
6. Avoid adjacent wetlands. Install sediment barriers (silt fence - DETAIL SILT) at edge of ROW along wetland edge as required.
7. Topsoil stripping shall not be required in saturated soil conditions.
8. Place topsoil and spoil piles at least 10 feet from wetland edges except where wetlands are wider than the reach of excavating equipment. Where the reach is wider than that of the excavating equipment, the spoil stockpile shall be placed on the spoil side of the right-of-way.
9. Leave hard plugs at the edge of wetland, until just prior to trenching.
10. Trench through wetlands.
11. Lower-in pipe, install trench plugs at wetland edges and backfill immediately.
12. Remove any timber mats or prefabricated mats from wetlands upon completion.
13. Restore grade to near pre-construction topography, replace topsoil, and install permanent erosion control.
14. Generally, seeding in wetlands will not be necessary since wetlands naturally revegetate quickly and sod will remain intact except over the trench. The Contractor shall seed any wetlands that may require seeding as determined by the Project Developer's Representative.
NOTES:

1. Inspect open trench for trapped wildlife prior to pipe padding or trench backfilling.
2. Pad pipe as per engineering specifications and/or as directed by the Project Developer's Representative. Topsoil shall not be used for padding material.
3. Install trench breakers as directed in DETAIL TB and Construction Drawings. Actual locations may be adjusted in the field by the Project Developer's Representative.
4. In residential areas, agricultural lands and wetlands (and additional areas if directed by the Project Developer's Representative), compact the backfill to eliminate the need for a berm over the trench.
5. In rangeland, feather excess spoil over the trench such that total berm height after topsoil redistribution is not more than 3 inches.
6. Ensure that bedrock excavated from the trench is not replaced in trench but buried in a previously graded area on the project.
7. Any excess excavated materials or materials unsuitable for backfill shall be disposed of in accordance with applicable regulations.
8. Avoid scalping sod layer when backfilling spoil pile.
9. Regrade to restore approximate original contour, unless specific exemption is granted by the Company, and to allow normal surface drainage.
10. After the ROW has been regraded, any work areas having substantial subsoil compaction shall be relieved by subsoiling completed by ripping, chisel plowing or discing, as directed by the Project Developer's Representative on public lands and the landowner and the Project Developer's Representative on private lands. Ripping shall not be conducted on the adjacent natural gas pipeline ROW.
11. Total berm height after topsoil redistribution shall not be more than 3 inches. No berm shall be constructed on agricultural lands or wetlands. Leave gaps in berms at drainages and at intervals of not more than 300 feet to accommodate runoff unless otherwise directed by the Project Developer's Representative.
12. Grade ROW edges to blend smoothly with undisturbed land. ROW shall not be more than 3 inches higher or lower than undisturbed adjacent lands.
13. Under no circumstances shall topsoil be placed in trench prior to or in place of spoil material.
14. Implement temporary erosion control procedures as necessary during backfilling and regrading operations. Waterbars and riprap shall be installed as specified prior to topsoil respooling.
15. Respread topsoil as specified in the SWPPP.
2 LAYERS OF 2' x 2' x 4' SECURELY TIED BALES OF HAY OR STRAW

SOIL TO BE TAMPERED AROUND RECESSED BALES

2'' x 2'' WOODEN STAKE (TYP.)

CHICKEN WIRE FENCE SECURED TO METAL T-POSTS

NOTE: CHINK WITH HAY AS REQUIRED

FILTER FABRIC (EXXON CEY-200 OR COMPANY APPROVED EQUAL) SECURED TO 2'' x 2'' WOODEN POSTS (PLACE POSTS TO OUTSIDE OF FABRIC)

SECTION A-A

NOTE:
STAKES SECURING FILTER FABRIC AND CHICKEN WIRE FENCE ARE NOT SHOWN FOR CLARITY

NOTES:

1. Structure shall be placed on a level, adequately-vegetated site such that water will flow away from structure and any work areas. Structure shall not be located within 100 feet of any wetland, drainage, stream, or cultural site.
2. Flow rates through discharge and diverter pipes shall be such that structure will not overflow.
3. Where conditions warrant, a 30' x 30' rectangular structure may be substituted for the circular configuration shown.
4. Dimensions shown are the minimum acceptable values and may be varied depending upon specific location.
5. Contractor shall utilize certified noxious weed-free hay or straw for structure.
6. Remove structure once dewatering has been completed.
STRAW BALE OPTION

STEP 1
ARRANGE HAY BALES OVER FILTER FABRIC ON LEVEL LAND TIGHTLY PACKED AS SHOWN TO COVER AN AREA APPROXIMATELY 12' x 12'. SECURE EACH HAYBALE IN PLACE BY DRIVING REBAR OR A WOODEN STAKE THROUGH EACH OF THE HAY BALES.

STEP 3
INSTALL FILTER FABRIC ALL AROUND HAY BALES STRUCTURE AS SHOWN.

STEP 2
INSTALL ANOTHER LAYER OF HAY BALES ON THE OUTER EDGE AS SHOWN.

STEP 4
INSTALL ANOTHER LAYER OF HAY BALES ON THE OUTSIDE OF THE FILTER FABRIC AND SECURE IN PLACE BY DRIVING REBAR OR A WOODEN STAKE THROUGH EACH OF THE OUTER HAY BALES.

CHINK WITH HAY AS REQUIRED

NOTES:

1. Where possible structure shall be placed on a level, adequately vegetated site such that water will flow away from structure and any work areas. Structures shall not be located within 100 feet of any wetland, drainage, stream, or cultural site.

2. If substantial vegetated area is available, the dewatering structure will not be required provided the following precautions are taken:
   a. A perforated PVC pipe outlet is attached to pump for a more gradual release of water.
   b. An adequate length of filter fabric with rock filter outlets is located downslope of pump discharge.

3. This measure shall be removed upon completion of the project. Removal is not contingent upon establishment of permanent vegetation. Material from bales may be scattered on right-of-way.

4. Contractor shall use certified noxious weed-free hay or straw for structure.

TYPICAL TRENCH DEWATERING - A

DATE: 04/20/06
DETAIL: TRENCH A
FILE: TRENCH-A.DWG
PAGE: 1 OF 1
FILTER BAG OPTION

NOTES:

1. Filter bag shall be placed on a gently sloping or level, well graded vegetated site such that water will flow away from device and any work areas.
2. The filter bag must be staked in place and secured to the pump discharge line.
3. Filter bag shall not be used for discharge flows greater than 300 gpm.
4. Device shall be removed and disposed of after bag is filled with sediment. Sediment from bag shall be spread in an upland area on the ROW or at company approved disposal site.
NOTES:

1. This method applies to stream and river crossings where flows exceed the capacity of flume or pump crossing methods, are not feasible to bore or smaller streams and ditches without important fisheries. Clearing and grading, topsoil salvage and topsoil stripping depths shall be the same as indicated for adjacent upland areas unless specified otherwise.

2. Flag wetland boundaries prior to clearing.

3. Leave a 10 foot vegetation buffer strip between the cleared right-of-way and the ordinary high water mark if time between clearing/grading and pipe installation will exceed 14 days.

4. This method will be used for crossing waterways using conventional open-trenching methods. This method shall not be used on crossings specified for a concrete slurry backfill.

5. Schedule crossing during low flow period, if possible.

6. Right-of-way width and temporary extra workspace areas are shown on Construction Drawings.

7. Workspace for spoil storage is located on either side of the creek crossing adjacent to the proposed pipeline alignment. Additional workspace for support vehicles, supplies and materials, construction equipment and access construction area (including areas to turn equipment around) are shown on the site specific plans. Sediment barriers will be installed around workspace areas and spoil storage areas to protect waterbody from surface runoff.

8. Impacts to riparian vegetation will be minimized by keeping workspace areas compact, locating them away from stream bank edges, and by locating them in previously cleared areas to the extent possible.

9. Spoil and/or topsoil will be placed on either side of the trench based on evaluation of site conditions at construction per the Project Developer's Representative.

10. No refueling of mobile equipment within 100 feet of stream bank. Place sign posts 100 feet back from wetland boundary and advise no refueling. Refuel stationary equipment as per SPCCC Plan.

11. The crossing will be installed within 24 hours or as expeditiously as possible to minimize impacts to the waterway, and work will proceed without stoppage from the start of excavation until the pipeline is buried under the stream. The pipe trench will be backfilled using mechanical placement. Trench plugs will be installed on both banks within 50 feet of the waterway or as directed by the Construction or Project Developer's Representative.

12. Leave hard plugs at the stream bank edge, until just prior to pipe installation.


14. Erosion and sediment control measures shall be inspected daily and repaired if necessary.

15. Begin backfilling in the center of the stream and proceed toward each bank simultaneously. In this manner, much of the water in the ditch will be pushed to the ditch outside the stream channel. When backfilling is complete, the streambed will be compacted and trench plugs installed on both sides of the stream.

16. Restore watercourse channel to approximate pre-construction profile and substrate.

17. Install streambank matting as directed by the Project Developer's Representative.
NOTES:

1. This method applies to swales, incised drainages and ditches with no perceptible flow at time of crossing. Clearing and grading, topsoil salvage and topsoil stripping depths shall be the same as indicated for adjacent upland unless otherwise directed by the Project Developer’s Representative.
2. Flag wetland boundaries prior to clearing.
3. No refueling of mobile equipment within 100 feet of stream bank. Place sign posts 100 feet back from wetland boundary and advise no refueling. Refuel stationary equipment as per SPCCC Plan.
4. Construct sediment barrier (silt fence) to prevent silt-laden water and spoil from flowing back into watercourse. Constructed sediment barriers shall extend along the sides of the stockpiles.
5. Stockpile topsoil and spoil separately. Topsoil shall not be stockpiled across the stream channel and shall be placed a minimum of 10 feet above the ordinary high water mark.
6. Restore watercourse channel and stream banks to approximate pre-construction profile and substrate. If stabilizing is necessary, install permanent erosion controls.
7. Sediment barrier materials will be readily available for installation between spoil and topsoil stockpiles and the stream channel in the event rainfall or runoff events may cause sedimentation into the channel. Sediment barriers shall be installed as directed by the Project Developer’s Representative.
8. Spoil and/or topsoil will be placed on either side of the trench based on evaluation of site conditions at construction.
9. Right-of-way width and temporary extra workspace areas are shown on Construction Drawings. Crossings that include concrete slurry are shown on Construction Drawings.
NOTES:

1. The open cut crossing - flume method (dry) and open cut crossing-dam and pump method (dry) are interchangeable. The method used will be at the contractor's discretion. In any case, silt laden water shall not be discharged into the waterbody.
2. Schedule crossing during low flow period, if possible.
3. Flag wetland boundaries prior to clearing.
4. No refueling of mobile equipment within 100 feet of stream bank. Place sign posts 100 feet back from wetland boundary and advise no refueling.
5. Refuel stationary equipment as per SPCCC Plan.
6. Right-of-way width and temporary extra workspace areas are shown on Construction Drawings.
7. Staging area(s) for waterbody crossing(s), where required, shall be located at least 50 feet from water's edge (where topographic conditions permit) and shall be of a minimum size needed for convenient preparation.
8. Maintain vegetation in buffer zones extending 10 feet back from stream or stream wetland edge if the time between ROW clearing and actual crossing of the stream is expected to exceed 14 days. The Contractor shall preserve as much vegetation as possible along streambanks while allowing for safe equipment operation.
9. Attempt to complete all watercourse activities within 48 hours. Additional time may be necessary to allow concrete to dry or for other engineering purposes.
10. Install portable bridge for equipment crossing. No equipment shall ford a perennial stream.
11. Inspect flume pipe before it is installed to ensure it is free of grease, oil or other pollutants. Remove excessive dirt from the flume pipe. Steam-clean, if necessary, to remove any oil or grease present on the pipe before placement in the stream.
12. Size flume to handle anticipated flows.
13. Before the flume pipe is installed, place at least three rows of sandbags (the dam foundation) to support the upstream and downstream portions of the flume pipe. All in-stream work will be carried out on foot and no equipment will operate in the stream bed.
14. Fill sandbags with a non-leachable material such as clean, pre-washed sand. Tie sandbags securely before they are installed. Sheets of plastic will be interwoven between the layers of sandbags to ensure an effective seal.
15. After the dam foundation is in place, lift the flume pipe over the stream and carefully align before it is lowered onto the sandbags. Do not push or pull the pipe over the banks and into the water.
16. After the flume is laid on the sandbags, construction on the upstream dam will immediately begin, followed by installation of the downstream dam.
17. Where necessary to ensure a watertight barrier, install a flange on upstream end of flume and seal to substrate with sandbags and polyethylene liner, "key" dikes into banks or construct secondary dike, if necessary.
18. Maintain stream flow, if present, throughout crossing construction. Maintain correct flume alignment until flume is removed.
19. Trench from one or both banks to expedite crossing. Exercise care to avoid spill from bucket into stream.
20. Stockpile topsoil and spoil separately. Topsoil and spoil shall not be stockpiled across the stream channel and shall be placed a minimum of 10 feet from the ordinary high water mark (OHWM).
21. Silt fence shall be installed along either side of waterbody and around spoil and topsoil piles to intercept surface runoff. Erosion and sediment control measures shall be inspected daily and repaired if necessary.
22. Leave hard plugs at stream bank edge, until just prior to pipe installation. Replace with trench plugs after pipe installation.

| TYPICAL WATERBODY CROSSING - OPEN CUT DRY METHOD (FLUME OR DAM AND PUMP) |
|---------------------------|-----|-----|
| DATE: 04/20/06            | DETAIL: OCD |
| FILE: OCD.DWG             | PAGE: 1 OF 2 |
NOTES:

23. Pump trench water, if necessary, so that it does not accumulate to the point that it flows over or around the downstream dam.
24. Discharge water into trench dewatering structure located away from the stream such that silt-laden water does not enter the stream.
25. Locate pumps and backup pumps in a spill containment structure designed to fully contain any spills of fuel or oil. Backup pumps will be located on site, hooked up and maintained as fully operational during the entire crossing process.
26. Lower-in pipe, install trench plug and backfill immediately. Crossings that include concrete slurry are shown on Construction Drawings.
27. Begin backfilling in the center of the stream directly under the flume pipe(s) and proceed toward each bank simultaneously. In this manner, much of the water in the ditch will be pushed to the ditch outside the stream channel. When backfilling is complete, the streambed will be compacted and trench plugs installed on both sides of the stream.
28. Backfill trench slowly so that water does not overflow dams. Use pumps to control water level in the construction area.
29. To prevent excessive increases in turbidity during flume removal, remove sandbags in a controlled, well-planned manner. Remove sandbags from downstream dam first, followed by the upstream dam at a rate dependent on the size and flow of the stream. Lift the flume pipe out of the crossing area and remove the remaining sandbags by hand.
30. Restore watercourse channel and stream banks to approximate pre-construction profile and substrate.
31. Install diversion berms at the base of all slopes adjacent to the waterbody as part of final grading to prevent bank wash-out.
32. Install streambank matting (after seeding).
NOTES:

1. Install a portable bridge at flowing streams.
2. Depending on length of span, bridge may be railroad flatcar, timber mat, or other suitable bridge as approved by the Project Developer's Representative.
3. Utilize approach fills of clean granular material, swamp mats, skids or other suitable materials to avoid cutting the banks wherever feasible. Do not constrict flow. Ensure adequate freeboard. As required, ensure that fill material does not spill into the watercourse.
4. Structure shall be removed if there is more than one month between final grading/clean up and beginning of reclamation. Remove support, structures and approach fills. Restore and stabilize bed and banks to approximate pre-construction condition.
SEEDBED PREPARATION:
1. Seedbed preparation includes tilling regraded and/or retopsoiled areas in preparation for seeding.
2. Seedbed preparation shall be conducted on all areas that are excessively crusted or compacted as determined by the Project Developer's Representative. Soil shall be loosened to a minimum depth of 3" and no deeper than the depth of the respread topsoil. The seedbed will be prepared to allow for adequate roughness to capture precipitation and reduce runoff. A disc, harrow, spring tooth, chisel plow, or similar equipment shall be used on slopes that are less than 33 percent unless otherwise specified by the Project Developer's Representative.
3. Steep or rocky areas where seedbed preparation with conventional farm equipment is not possible will be left in a roughened condition.

SEEDING (BROADCAST AND DRILL):
1. All areas temporarily disturbed by the Project shall be seeded. Seed and application rates shall be as specified by the Project Developer's Representative.
2. Uplands amenable to drill seeding with grasses shall be drill seeded unless otherwise approved by the Project Developer's Representative. All other areas and shrub seed will be broadcast.
3. Wetlands and riparian areas shall be drill seeded or broadcast seeded as specified in the Pre-Construction Notification.
4. Agricultural lands shall be seeded using methods appropriate for the specific crop, based on consultations with the landowner.
5. The optimum seeding window for the Project area is after September 15 and prior to May 1.

A. Drill
1. Drill seeding of grasses shall be used wherever equipment can negotiate the terrain (less than 33 percent slopes and non-rocky areas).
2. Drill seeding equipment must be of the range or reclamation type for applying grass and/or fluffy seed. The drill seeder must regulate the seed application rate and planting depth and shall be equipped with press wheels. Planting depth shall be regulated by depth bands or coulter. The rows of planting seed shall be from 7 to 14 inches apart. A drill shall be no wider than the width of the area over which it is to operate. The drill box shall be partitioned by dividers no more than 24 inches apart, in order to provide for more even distribution on sloping areas.
3. Seed must be uniformly distributed in the drill hopper during drilling operation.
4. Seeding depths shall be at least 1/4 inch and a maximum of 1/2 inch, or as specified by the Project Developer's Representative.
5. Drill seeding of agricultural crops shall use seeders appropriate to the crop.

B. Broadcast
1. Broadcast seeding shall be conducted on slopes exceeding 33 percent or rocky areas, unless otherwise determined by the Project Developer's Representative.
2. Shrubbs will be broadcast on all Project disturbances either: 1) separately from grasses where drill seeding is conducted; or 2) combined with grasses where drill seeding is not possible.
3. Seed will be broadcast using manually or mechanically operated cyclone-type bucket spreaders or a drop-seeder (e.g. Brillion). Seed will be mixed frequently to prevent bridging.
4. Broadcast seeding by hand shall be with a Cyclone shoulder strap broadcast spreader or an approved equivalent. Distributing seed by hand without a mechanical broadcaster will not be allowed.
5. Hydraulic seeding equipment (hydro-seeder) may be used, providing 1 pound of fiber per 3 gallons of water is added in the hydraulic seeder to cushion seed during application.
   - After blending seed and mulch, the slurry shall be applied to the seedbed within one hour after the seed has been added to the mixture. If slurry cannot be applied within the specified one hour, it shall be fortified at no cost to the Project Developer, with the correct ratio of seed to the remaining slurry and a new one hour time frame established for applying the fortified mixture.
   - Hydroseeding shall be conducted to ensure seed/soil contact by directing the spray at the ground and as much as possible, mixing soil, seed and mulch together.
   - The Contractor shall be required to use extension hoses to reach inaccessible areas.
   - The mulch used as a cushion may be part of the total required mulch, with the remainder applied in a separate application after the seed is in place.

DRAGGING:
1. Following broadcast seeding, good seed/soil contact shall be established by dragging a roller harrow or flexible meadow harrow with tines up over the seeded area. All seed that is broadcast shall be dragged unless otherwise specified by the Project Developer's Representative.
2. If areas are inaccessible or where it is impractical to use a meadow harrow, a 1/2-inch chain shall be dragged over seeded areas as determined by the Project Developer's Representative. On small areas, hand raking may be used to cover seed.
3. On slopes steeper than 3:1 (33%), dozer tracking may be implemented in place of dragging a harrow or chain. Tracks will be left perpendicular to the slope.
TYPICAL DRAWING: None

STRAW MULCH

1. Straw mulch shall be used at locations identified on the Construction Drawings and/or as directed by the Project Developer's Representative to protect soil from erosion. Areas targeted for straw mulch include the following:

   - 20-40% slopes with less than 40% surface cover of respread plant debris or rock.

2. Straw mulch shall be applied at a rate of 3000 lbs/acre. In areas where respread topsoil exhibits an adequate cover of respread of plant debris and coarse fragments, mulch rates may be reduced or eliminated by the Project Developer's Representative.

3. Only certified noxious weed-free cereal grain straw shall be used. Written confirmation from a certified supplier shall be required.

4. Straw fiber length shall be at least 8" long and crimped in place after application.

5. Equipment specifically designed to crimp straw (such as a straw mulch crimper manufactured by Finn Corporation or an approved equivalent) shall be used to crimp straw fibers to a depth of two to three inches. Slopes inaccessible with a crimper shall be crimped by tracking with a crawler running perpendicular to the slope. Discs shall not be allowed for crimping.

6. The Contractor may use hydromulch/tackifier in lieu of straw mulch only if approved by the Project Developer.

7. Mulch may not be required where chipped vegetation provides adequate erosion control as determined by the Project Developer's Representative.
HYDROMULCH

1. Hydromulch with tackifier shall be used at locations identified on the Construction Drawings and/or as directed by the Project Developer’s Representative to protect soil against erosion. Areas targeted for hydromulch application include 40-60% slopes with less than 70% surface cover. Surface cover includes respread plant debris and coarse fragments (rock).

2. The Contractor shall be required to use extension hoses to reach inaccessible areas.

3. Hydromulch and tackifier shall be applied at a rate of 1500 lbs/acre and 120 lbs/acre respectively (or tackifier at rates as recommended by the manufacturer), in a single application. Hydromulch and tackifier shall produce a uniform mat covering the ground.

4. The hydromulch material shall meet the following additional requirements:
   - The mulch shall not contain any growth or germination inhibiting factors.
   - The fibers shall be dyed to facilitate visual metering during application.

5. The hydromulch shall be supplied in 50 pound net weight bags. Each package shall be marked by the manufacturer to show the air-dry weight content.

6. The hydromulch material shall be of such a consistency that after being combined in a slurry tank with water and approved tackifier, the fibers in the material shall be uniformly suspended to form a homogeneous slurry.

7. The hydromulch material shall be manufactured by Mat-Fiber, Fiber Marketing International, Thermo-guard or be an approved equal, and be supplied in packages marked by the manufacturer to show the air-dry weight content. Mulch which has been damaged by moisture or other means shall not be accepted.

8. If requested, the Contractor shall submit a minimum 1-pound bag of the product proposed for use on the project to the Project Developer for testing. Or, if requested, the Contractor shall submit a signed statement certifying that the material furnished has been laboratory and field tested and that it meets requirements for its intended use. The Project Developer may accept the hydromulch material for use based on a certificate of compliance.

TACKIFIER

1. Tackifier shall meet the following requirements:
   - be of a biodegradable organic formulation.
   - consist of specifically blended compatible hydrocolloids (soluble polysaccarides, guar gum or plantago). Starch based tackifiers are unacceptable.
   - have the characteristics of hydrating and uniformly dispersing in circulating water to form a homogeneous slurry and remain in such a state in the hydraulic mixing unit (usually a hydromulcher).

2. Tackifier shall be supplied in packages marked by the manufacturer to show ingredients and weight content. Tackifier which has been damaged by moisture or other means shall not be accepted.

3. When directed by the Project Developer’s Representative, soil stockpiles shall be tackified at a rate of 120 lbs/acre to control wind erosion.
ANCHOR IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. ONE STAKE OR PIN PER FOOT LENGTH.

OVERLAP 6" AND SECURELY STAKE OR PIN IN PLACE

NATURAL GROUND

SECTION A-A

INSTALL STAKES OR PINS 3' TO 5' APART THROUGHOUT THE BLANKET/MAT. SPACING SHALL BE DECREASED IN LOOSE OR SANDY SOILS. INSTALL STAKES OR PINS EVERY 6 INCHES ALONG EXPOSED EDGE OF MATTING.

OVERLAP 6" AND SECURELY STAKE OR PIN IN PLACE ONE FOOT APART - OVERLAP IN DIRECTION OF PREVAILING WIND

SECTION B-B

EMBANKMENT INSTALLATION

TYPICAL SLOPE MATTING
NOTES:

1. The erosion control mat shall meet the specifications of the Erosion Control Technology Council (ECTC) for a Type 2D Short-Term Erosion Control Blanket. Nettings shall be biodegradable natural fibers. Erosion control mats shall be furnished in continuous rolls of 30' or greater with a minimum width of 4'.
2. Biodegradable stakes or pins such as wooden or bamboo stakes, or BIO-PIN, or approved equivalent with at least 5" legs and a hooked or round top shall be used unless otherwise specified or agreed to by the Project Developer's Representative. Stakes or pins shall be driven into the ground their full length.
3. Install slope matting at locations shown on Construction Drawings or as specified by the Project Developer's Representative.
4. Monitor for washouts, stake and pin integrity or mat movement. Replace or repair as necessary.
NOTES:

1. Erosion control matting (blankets) shall be placed on the banks of all perennial and intermittent streams where vegetation has been removed and/or as directed by the Project Developer's Representative.

2. The erosion control mat shall meet the specifications of the Erosion Control Technology Council (ECTC) for a Type 3B Extended-Term Erosion Control Blanket. Nettings shall be biodegradable natural fibers. Erosion control mats shall be furnished in continuous rolls of 30' or greater with a minimum width of 4'.

3. Biodegradable stakes or pins such as wooden or bamboo stakes, or BIO-PIN, or approved equivalent with at least 5" legs and a hooked or round top shall be used unless otherwise specified or agreed to by the Project Developer’s Representative. Stakes or pins shall be driven into the ground their full length.

4. Matting shall be installed according to manufacture specifications or as stated below:
   - The top of the blanket shall extend 2' past the upper edge of the high water mark. If a water bar is present on the approach slope, the blanket shall begin on the uphill side of the water bar.
   - Install blanket(s) across the slope in the direction of water flow.
   - Anchor ("key") the upstream edge of the blanket(s) into the slope using a 6" wide by 6" deep trench. Double staple every 12" before backfilling and compacting trench.
   - Anchor ("key") the upper edge of the blanket into the slope in a 6" wide by 6" deep trench. Double staple every 12" before backfilling and compacting trench.
   - The edges of parallel blankets shall be overlapped a minimum of 6". The upper blanket shall be placed over the lower blanket (shingle style) and stapled every 12" the length of the edge.
   - When blanket ends are to adjoining blankets, the upstream blanket shall be placed over the downstream blanket (shingle style) with approximately 6" of overlap. Staple through the overlapped area every 12". Staple down the center of the blanket(s). Three staples in every square yard.

5. Monitor for washouts, stake and pin integrity or mat movement. Replace or repair as necessary.
NOTES:

1. Install logs nearly perpendicular to the flow direction and parallel to the slope contour (3 to 5% grade). Extend logs 3 feet into undisturbed vegetation at the downslope ROW edge. Ends of the logs should be placed so that sediment is not discharged directly into a waterbody or wetland.

2. Narrow trenches should be dug across the slope on contour to a depth of 3 to 5 inches on clay soils and soils with gradual slopes. On loose soils, steep slopes, and areas with high rainfall, the trenches should be dug to a depth of 5 to 7 inches, or 1/2 to 2/3 of the thickness of the log.

3. Build trenches and install logs from the base of the slope and work up. Excavated material should be spread evenly along the uphill slope and compacted using hand tamping or other methods.

4. Construct trenches at contour intervals of 10-100 feet apart depending on the steepness of the slope, soil type, and rainfall. The steeper the slope the closer together the trenches. Spacing shall be as directed by the Project Developer's Representative.

5. Eight to ten inch sediment logs shall be used for general erosion control purposes. Twenty inch sediment logs shall be used when used to replace water bars.

6. Install the logs snugly into the trenches and abut tightly end to end. Do not overlap the ends.

7. Install stakes at each end of the log, and at 4-foot centers along entire length of log.

8. If necessary, install pilot holes for the stakes using a straight bar to drive holes through the log and into the soil.

9. At a minimum, wooden stakes should be approximately 3/4 x 3/4 x 24 inches.

10. Logs may be straw (cereal grain or rice), coconut fiber or equivalent. Rice straw logs shall not be used in wetlands or within 50 feet of a wetland or waterbody unless the rice straw is certified seed free.

11. Sediment logs shall not be used in lieu of silt fence at waterbody or wetland crossings but may be used for temporary erosion control across the right-of-way on upland slopes.
NOTES:

1. Filter fabric shall be installed to filter sediment from surface runoff at locations noted on Construction Drawings or as directed by the Project Developer's Representative.

2. Installations shall be periodically checked, and if flow is obstructed, build-up of sediment shall be removed.

3. Filter fabric shall be left in place until permanent vegetative cover is established unless removal is authorized by the Project Developer's Representative.

4. Filter fabric shall be replaced whenever it has deteriorated to such an extent that it reduces the effectiveness of the filter fabric.

5. Filter fabric shall be placed to follow (run parallel to) the contours.

6. On upslope installations, both ends of the filter fabric shall be turned and extended upslope.

7. Filter fabric shall be constructed of Exxon GTF-180 fabric, Minus 100x, or a similar fabric with a tensile strength at 20% (max.) elongation of 50 lb/linear inch or greater.

8. Areas disturbed as a result of removing the filter fabric shall be restabilized by seeding.

**Typical Silting Fence**

**Date:** 04/21/06

**Detail:** Silt

**File:** SILT.DWG

**Page:** 1 of 1
NOTES:

1. Slope tracking will be accomplished by driving maneuverable tracked vehicles perpendicular to the slope in repeated passes.
2. Limit slope tracking to soils with sufficient sand to prevent compaction.
3. Do not back-blade during slope tracking.
4. Track grooves should be less than 10 inches apart and between 1 and 4 inches deep.
5. Slope tracking will be specified by the Project Developer's Representative, in consultation with the Contractor, in areas such as:
   a. Sites that are too steep (>33 percent) to straw mulch/crimp and that are inaccessible to a hydromulcher.
   b. Sites where additional seedbed prep is required but where slopes are too steep to operate wheeled vehicles.
DIVERSION TRENCH OUTLET SHALL BE PLACED WHERE RUNOFF WILL BE RELEASED ONTO EXISTING VEGETATED GROUND. INSTALL ENERGY DISSIPATORS AT OUTLET AS DETERMINED BY THE PROJECT DEVELOPER'S REPRESENTATIVE.

SECTION A-A

COMPACTED EARTH RIDGE

EXCAVATED CHANNEL

6'-12' TO 12'

10'-12'

10'-12'

24" MIN.
NOTES:

1. Install water bar on moderate and steep slopes to divert surface water off the right-of-way. Also install water bars immediately downslope of trench breakers to collect seepage forced to the surface.

2. Skew water bar across the right-of-way at downhill gradient of 3-5%.

3. Construct berm of water bar from compacted native subsoils where extensive disturbance of the sod layer has occurred. Avoid use of organic material. Where native material is highly erodible, protect upslope of berm and base of cross ditch by burying a geotextile liner 6 to 8 inches below the surface or armor upslope face of berm with earth filled sand bags.

4. Note that typical water bar height and widths are approximately 12 inches. Water bars shall be inspected after heavy rains and the first spring following construction; Contractor shall replace or restore water bars, if warranted.

5. Leave a break in trench crown immediately upslope of water bar to allow passage of water across the right-of-way.

6. Rock used in Energy Dissipators shall be of sufficient size (generally 6-12 inch diameter) to prevent displacement by water flowing from water bar.

7. Project Developer's Representative to determine location, direction and spacing of water bar and necessity for energy dissipators based on local topography, drainage patterns and existing waterbars present adjacent to the right-of-way.

8. Where waterbars are disturbed on the adjacent natural gas pipeline ROW, they shall be repaired and extended across the ROW so that flows are not directed onto either ROW.

9. Note typical water bar spacing indicated below.

<table>
<thead>
<tr>
<th>SLOPE GRADIENT (%)</th>
<th>SPACING (FEET)</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 - 30</td>
<td>200</td>
</tr>
<tr>
<td>&gt;30</td>
<td>100</td>
</tr>
</tbody>
</table>

* SPACING MAY BE DECREASED BASED ON SITE-SPECIFIC CONDITIONS AS DIRECTED BY THE PROJECT DEVELOPER'S REPRESENTATIVE.
1. Topsoil shall not be used in trench breakers.
2. Spacing of breakers shall be as noted below, or located as directed by Project Developer's Representative to meet field conditions.
   A. Trench breakers shall be installed at the edge of cultivated areas but not within cultivated areas.
   B. At the base of slopes greater than 5 percent.
   C. At the same interval but upslope of waterbars. See DETAIL WB for spacing.
   D. At the interface between wetlands and uplands.
3. At locations where breakers are specified on details, plans or as directed by Project Developer's Representative, soft plugs (unexcavated sections along trench-line) may be left in place to perform function of permanent breakers prior to pipe placement.
4. Trench breakers shall be installed at the banks of all perennial stream crossings immediately after trench excavation. The breakers may be temporarily removed during pipe placement, but then replaced.
5. The trench shall be dewatered through a sediment trap, filter bag, or dewatering structure. Refer to DETAILS TRENCH A or TRENCH B.
6. Permanent trench breakers shall be installed before the trench is backfilled.
FISH SPRINGS WATER SUPPLY PROJECT

APPENDIX C

REVEGETATION PLAN
TABLE OF CONTENTS

1.0 INTRODUCTION.................................................................................................................. C-1
  1.1 PLAN OVERVIEW............................................................................................................. C-1
  1.2 OBJECTIVES.................................................................................................................... C-1
  1.3 RESPONSIBILITIES.......................................................................................................... C-2
  1.4 RELATED INFORMATION............................................................................................... C-2

2.0 SEEDBED PREPARATION.................................................................................................... C-3

3.0 SEED MIXTURES................................................................................................................. C-3
  3.1 EXISTING VEGETATION................................................................................................. C-3
  3.2 SPECIES SELECTION AND SOURCES............................................................................. C-4
  3.3 SEEDING RATES.............................................................................................................. C-5

4.0 SEEDING METHODS.......................................................................................................... C-5

5.0 CACTUS SALVAGE AND TRANSPLANTING..................................................................... C-7

6.0 REVEGETATION SCHEDULE............................................................................................ C-7

7.0 POST-CONSTRUCTION REVEGETATION MONITORING.................................................. C-8

8.0 EVALUATION OF REVEGETATION SUCCESS................................................................. C-9

9.0 POST-CONSTRUCTION REMEDIATION AND REPORTING............................................ C-10
  9.1 REMEDIATION............................................................................................................... C-10
  9.2 REPORTING................................................................................................................... C-10

TABLE

Table C-1. Fish Springs Water Supply Project Upland Revegetation Mixture......................... C-6
1.0 INTRODUCTION

This Revegetation Plan (Plan) describes procedures that the Project developer and its construction and reclamation contractors (Contractors) will use to conduct revegetation. Post-construction monitoring in upland areas on the Fish Springs Water Supply Project (Project) will be conducted by the Project owner/operator (Owner). Recommended mitigation practices, Best Management Practices (BMPs) and permitting requirements have been incorporated into this Plan from the following documents:

- Draft and Final Environmental Impact Statements North Valleys Rights-of-Way Projects (DEIS, BLM 2005; FEIS, BLM 2005);
- BLM review and comment on Draft Fish Springs Water Supply Project Plan of Development (October 2005);
- Washoe County Special Use Permit (SUP) Case No. SW05-009 (January 17, 2006);
- Other existing reclamation plans.

1.1 PLAN OVERVIEW

This Plan describes seedbed preparation, seed mixture, seeding methods, revegetation schedule, post-construction monitoring, evaluation of revegetation success and remediation of upland areas. Revegetation of wetlands and ephemeral drainages will be conducted in accordance with the Corps of Engineers.

Other Project components addressed in this Plan include the water collection and water transmission pipelines, production and monitoring wells, pump station and storage tanks, electrical substation and distribution line, surge suppression, terminal storage tank, extra work space and access roads.

1.2 OBJECTIVES

Specific objectives of revegetation are stated below.

- Provide a self-perpetuating, drought-tolerant vegetative cover that is compatible with post-construction land use.
• Utilize adapted native species for revegetation to reduce the visual effect of the right-of-way and other Project components.
• Encourage native plant reinvasion by avoiding the use of highly competitive introduced species.
• Limit the introduction and spread of noxious weeds through prompt revegetation.
• Return disturbed land to a level of productivity comparable to pre-construction levels.

1.3 RESPONSIBILITIES

The Project developer will be responsible for ensuring that the Contractors conduct revegetation activities as set forth in this Plan. The Project developer will also acquire and distribute blended seed mixtures to the Contractors. The Owner will ensure that post-construction revegetation monitoring occurs as described in this Plan and will make arrangements for remedial actions to be taken as necessary to address revegetation problems.

Contractors will be responsible for seedbed preparation and seeding of the pipeline rights-of-way and other Project components as described in this Plan.

Environmental Inspector(s) will ensure that all activities associated with seedbed preparation and seeding are performed in accordance with this Plan, and are in compliance with all applicable permits and approvals. Environmental Inspectors performing this role will have appropriate reclamation expertise. In certain site-specific circumstances, the Environmental Inspector will have the authority to make changes to this Plan in consultation with the appropriate agency representative or landowner and in accordance with procedures in the Environmental Compliance Management Plan (Appendix A of the Plan of Development).

1.4 RELATED INFORMATION

Supplemental reclamation information appears in the following Project Plan of Development (POD) documents:

• Construction Drawings (under separate cover)
• Environmental Compliance Plan (Appendix A)
• Stormwater Pollution Prevention Plan (Appendix B)
• Dust Control Plan (Appendix E)
• Spill Prevention, Control, Countermeasure, and Cleanup Plan (Appendix F)
• Noxious Weed Management Plan (Appendix G)
2.0 SEEDBED PREPARATION

On slopes that are 33 percent or less, the seedbed will be disc'd to a depth of at least three inches and harrowed, if necessary, to break up large clods. The seedbed will be prepared to allow for adequate roughness to capture precipitation and reduce runoff. On slopes exceeding 33 percent and on extremely rocky soils, the soil surface will be left in a roughened condition to create an irregular seedbed to provide microsites for seed germination and reduce soil movement. Broadcast-seeded areas will be dragged with a flexible pasture harrow to cover the seed, and cultipacked or imprinted to provide a firm seedbed.

Sites with minimal construction damage (e.g.; extra work space and the spoil side of the right-of-way where topsoil has not been stripped) may require loosening with a harrow, disc, spring tooth, chisel plow, or similar implement to relieve compaction prior to seeding.

Fertilizer will generally not be applied unless requested by a landowner or recommended by the Environmental Inspector or BLM representative. Fertility is usually not an issue since topsoil will be redistributed promptly following regrading. Fertilizer is also known to enhance weed growth.

3.0 SEED MIXTURES

3.1 EXISTING VEGETATION

The North Valleys Rights-of-Way Projects FEIS (2005) described upland vegetation resources on the Project:

"A mosaic of burned and unburned areas extend from the south slope of Fort Sage Mountains through Bedell Flat to the northern portion of Antelope Valley. Much of the north slope of Fort Sage Mountains is devoid of shrubs due to fire. Some burned areas have been reseeded with crested wheatgrass (Agropyron cristatum).

Southeastern Honey Lake Valley is dominated by sagebrush with areas of salt desert shrubs. South of Honey Lake Valley to the terminus of the proposed pipelines, vegetation is dominated by sagebrush, with scattered rabbitbrush (Chrysothamnus spp.) and shadscale (Atriplex canescens). Juniper woodlands (Juniperus osteosperma) occur in scattered locations between Dry Valley and Bedell Flat.

Big sagebrush (Artemisia tridentata) and low sagebrush (Artemisia arbuscula) predominate on upland sites. Juniper woodlands occur at the upper elevations with sagebrush communities. On dry lower slopes, sagebrush communities transition to
shadscale communities that are tolerant of increasing soil aridity and salinity. On basin floors, which experience seasonally high groundwater levels, the shadscale community is replaced by a black greasewood (*Sarcobatus vermiculatus*) community."

In addition, there are irrigated alfalfa fields in the vicinity of Fish Springs Ranch, stabilized sand dunes east of the pump station/storage tank facility, and widespread disturbances associated with past fires, livestock grazing and road/utility corridors.

### 3.2 SPECIES SELECTION AND SOURCES

The Project developer proposes to seed all upland Project disturbances using a primary native revegetation mixture (Table C-1) with certain site-specific variations based on soils and land use practices. The mixture is comprised of native grasses and shrubs that are:

- found in pre-construction vegetation communities;
- adapted to local soils;
- shown to be relatively easy to establish on similar local projects; and
- commercially available.

Forbs are not included in the mixture since they can be expected to volunteer from adjacent undisturbed communities.

The grass component of the revegetation mixture will be drilled or broadcast-seeded, based on topography and coarse fragment content. The shrub component of the mixture will always be broadcast-seeded. Seeding rates will be increased east of the pump station/storage tank site to stabilize sandy soils. The irrigated alfalfa fields on Fish Springs Ranch will be seeded according to landowner preference.

Project seed will be purchased from, and blended by, qualified producers and dealers. Certified weed-free seed will be purchased for use on the Project (native species with named varieties). The Contractors will be responsible for providing seed tags to the Environmental Inspector at the end of each day of seeding.

Wetland revegetation will be conducted in accordance with requirements from the Corps of Engineers.
3.3 SEEDING RATES

Species ratios and Pure Live Seed (PLS) application rates in Table C-1 are based on experience with similar local projects. The drill seeding rate for grasses is half that of the broadcast rate. Shrubs will be seeded over 100 percent of the right-of-way and other Project components.

Seed will be used within 12 months of testing to ensure seed viability. If additional seeding is required in the year(s) following construction, further viability tests may be conducted to determine the need for any adjustment of application rates.

4.0 SEEDING METHODS

Revegetation will be conducted on all Project disturbances, including the pipeline rights-of-way and those portions of the wells, the pump station/storage tanks, the electrical substation, the surge suppression facility and the terminal storage tank that are not graveled.

Both broadcast and drill seeding will be used as specified on the Construction Drawings. Broadcast seeding will be conducted on slopes exceeding 33 percent and areas with high coarse fragment content. Shrubs will be broadcast on all Project disturbances either: 1) separately from grasses (where drill seeding is conducted); or 2) combined with grasses on areas where drill seeding is not possible. Seed will be broadcast using manually or mechanically-operated cyclone-type bucket spreaders or a drop-seeder (e.g.; Brillion). Seed will be mixed frequently to prevent bridging. Broadcast-seeded areas will be dragged with a flexible pasture harrow to cover the seed and cultipacked or imprinted to provide a firm seedbed. The tines on the harrow will face up to prevent burying the seed too deeply and to reduce clogging the harrow with vegetation and debris. On small or inaccessible sites, hand raking will be used to cover seed.

Drill seeding may be used wherever equipment can negotiate the terrain, specifically on more level areas with fewer coarse fragments on portions of Fish Springs Ranch, Bedell Flat and Antelope Valley. Where drill seeding is conducted, grasses will be seeded separately from shrubs. Drill row spacing will range from 7 to 14 inches, as determined by species in each mixture. Seeding depth will reflect requirements of the specific seed mixture, but will generally be ¼ to ½ inch. A rangeland drill or comparable equipment will be used.

If hydroseeding is used (potentially in portions of the residential area of Antelope Valley), seed and mulch (not more than 1 pound mulch per 3 gallons water) will be sprayed in one application. Hydroseeding will be conducted to ensure seed/soil contact by directing the spray at the ground. Where hydromulching is used, a second application will spray the remainder of the cellulose
Table C-1. Fish Springs Water Supply Project Upland Revegetation Mixture

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
<th>Variety</th>
<th>Seeding Rate¹</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Pounds PLS per acre</td>
<td>PLS per sq.ft.</td>
<td></td>
</tr>
<tr>
<td><strong>GRASSES:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Agropyron spicatum</em>²</td>
<td>Bluebunch wheatgrass</td>
<td>Goldar</td>
<td>4.00</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td><em>Elymus elymoides</em></td>
<td>Bottlebrush squirreltail</td>
<td>-</td>
<td>2.00</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td><em>Leymus cinereus</em></td>
<td>Basin wildrye</td>
<td>Trailhead</td>
<td>3.00</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td><em>Leymus triticoides</em></td>
<td>Creeping wildrye</td>
<td>Shoshone</td>
<td>3.00</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td><em>Oryzopsis hymenoides</em></td>
<td>Indian ricegrass</td>
<td>Rimrock</td>
<td>5.00</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td><em>Poa sandbergii</em></td>
<td>Sandberg bluegrass</td>
<td>-</td>
<td>1.00</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td><strong>Sub-Total Grasses:</strong></td>
<td></td>
<td></td>
<td>18.00</td>
<td>76</td>
<td></td>
</tr>
<tr>
<td><strong>SHRUBS³:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Artemisia tridentata var.</em></td>
<td>Basin big sagebrush</td>
<td>-</td>
<td>0.25</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td><em>tridentata</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Atriplex confertifolia</em></td>
<td>Shadscale</td>
<td>-</td>
<td>1.00</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td><em>Chrysothamnus nauseosus</em></td>
<td>Rubber rabbitbrush</td>
<td>-</td>
<td>0.50</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td><em>Chrysothamnus viscidiflorus</em></td>
<td>Green rabbitbrush</td>
<td>-</td>
<td>0.25</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td><em>Grayia spinosa</em></td>
<td>Spiny hopsage</td>
<td>-</td>
<td>0.50</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td><em>Prunus andersonii</em>⁴</td>
<td>Desert peach</td>
<td>-</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td></td>
</tr>
<tr>
<td><em>Purshia tridentata</em></td>
<td>Antelope bitterbrush</td>
<td></td>
<td>1.00</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><strong>Sub-Total Shrubs:</strong></td>
<td></td>
<td></td>
<td>3.50</td>
<td>26</td>
<td></td>
</tr>
<tr>
<td><strong>TREES:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>Juniperus osteosperma</em>⁵</td>
<td>Utah juniper</td>
<td>&lt;1</td>
<td>&lt;1</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL⁶:</strong></td>
<td></td>
<td></td>
<td>21.50</td>
<td>102</td>
<td></td>
</tr>
</tbody>
</table>

¹Based on a broadcast seeding rate of approximately 100 Pure Live Seeds (PLS) per square foot. Where drill-seeding is used, the rate for grasses will be halved.
²Bluebunch wheatgrass will not be seeded south of Dry Valley Creek; Indian ricegrass will be substituted at a rate of 10 pounds PLS per acre.
³Shrubs will be broadcast-seeded on all Project disturbances.
⁴Desert peach will be selectively seeded in the areas where it commonly occurs, as determined by the Environmental Inspector.
⁵Utah juniper will be selectively seeded in unburned stands, as determined by the Environmental Inspector.
⁶Seeding rates will be doubled in stabilized dunes between MP WC 8.6 to 8.75
fiber mulch (to achieve a total of 1 ton per acre) and a tackifier (at an application rate of 80 pounds per acre).

Seeding activities will be contingent upon weather and soil conditions, and subject to evaluation by the Environmental Inspector. Seeding will not be permitted if there are more than two inches of snow on the ground or if the soil is frozen, unless approved by the Environmental Inspector and BLM representative.

5.0 CACTUS SALVAGE AND TRANSPANTING

Mojave prickly pear cactus (Opuntia erinacea var. erinacea) was found in the vicinity of the Project right-of-way in Bedell Flat and Antelope Valley (FEIS 2005). Cacti are protected by Nevada State Law NRS 527.060-120 and must be transplanted from areas to be disturbed.

The rights-of-way and other Project components will be surveyed prior to construction and the locations of Mojave prickly pear cactus will be flagged and GPS coordinates recorded. Where possible, cactus plants will be avoided.

All Mojave prickly pear cactus within the Project area will be salvaged and transplanted. The Environmental Inspector will monitor the replanting effort. Plants will be permanently planted off the right-of-way, near the area from which they originated. Plants will be marked with flagging and GPS coordinates will be recorded.

Care will be taken to protect the roots from damage during excavation. Transplants will be placed with the crown (the portion of the plant at the surface of the soil) at the same elevation as the final grade of the soil. Soil amendments will not be used. Soil around the plants will be tamped down to minimize air pockets and ensure root-soil contact. Plants will be thoroughly watered one time following transplanting to minimize shock.

6.0 REVEGETATION SCHEDULE

Revegetation activities will be determined by construction schedules and seasonal climatic conditions. Seeding will be conducted as soon as possible following seedbed preparation, typically during locally recognized planting seasons (after September 15 and prior to May 1), depending on weather conditions. Cacti will be transplanted immediately following excavation.

If seasonal or adverse weather conditions preclude timely revegetation of a site after construction, the Environmental Inspector and BLM representative will determine viable revegetation alternatives.
7.0 POST-CONSTRUCTION REVEGETATION MONITORING

Revegetation specialists will conduct qualitative pedestrian surveys of the rights-of-way and other Project components during the first and second growing seasons following construction. The revegetation specialists will:

- assess general plant establishment;
- identify noxious weed populations;
- describe grazing impacts;
- evaluate soil stability; and
- determine the need for further revegetation and reclamation efforts.

Portions of the right-of-way having similar vegetative characteristics will be grouped and evaluated by segment. The following parameters will be evaluated on each revegetated segment and compared to adjacent, undisturbed areas.

- **Total Vegetation Cover:** Total non-stratified (i.e., cannot exceed 100 percent) plant canopy cover will be ocularly estimated as a range in percent in each survey segment.

- **Vegetation Cover by Morphological Class:** Vegetation cover for each class will be ocularly estimated as a range in percent in each survey segment. The sum of all morphological class cover values is normally greater than the total non-stratified cover value due to the overlap of classes (e.g., perennial grasses growing under shrubs). Morphological classes will include:
  - Native Perennial Grasses
  - Introduced Perennial Grasses
  - Native Annual Grasses
  - Introduced Annual Grasses
  - Native Perennial Forbs
  - Introduced Perennial Forbs
  - Native Annual/Biennial Forbs
  - Introduced Annual/Biennial Forbs
  - Subshrubs/Shrubs

- **Species List:** All species observed in each survey segment will be recorded.

- **Noxious Weeds:** Noxious weeds, if present, will be documented on separate noxious weed inventory forms within areas disturbed by the project. The percent cover, phenology, infested area and density (stems/0.01-acre) of weed species will be ocularly estimated. The upper and lower boundaries of new noxious weed populations within the Project will be located with a GPS unit. Estimates will be made for the entire problem...
area within disturbed and adjacent areas, and may include a range of cover and density values.

- **Vegetation Utilization/Trampling:** Signs of vegetation utilization (grazing or browsing) and/or trampling by livestock or wildlife will be documented if it appears that use is impeding vegetative establishment (generally greater than 60 percent utilization over several growing seasons in arid or shrubland environments). The severity of the problem will be classified as low, moderate, or high. Percent vegetative utilization in the survey area will be ocularly estimated and the areal extent of the problem determined. The type of livestock using the area will be identified.

- **Erosion:** Erosion control monitoring will occur as described in Appendix B of the POD. Revegetation survey crews will describe erosion when encountered and explain how it may be affecting revegetation success.

Areas with poor germination and/or growth will be documented and the cause of the problem determined (see Section 9.0). In these instances, monitoring may extend beyond two years.

### 8.0 EVALUATION OF REVEGETATION SUCCESS

In areas where native vegetation dominated prior to construction, revegetation success will be determined using qualitative data to assess whether total native herbaceous and shrub cover (seeded species plus desirable volunteers) on reclaimed sites is equal to 70 percent of total native herbaceous cover in adjacent areas. Shrub cover in adjacent areas is excluded because shrub establishment and canopy cover are expected to develop slowly on revegetated areas.

In areas where disturbed conditions existed prior to construction, revegetation success will be based on a subjective determination that vegetative cover is comparable with adjacent areas and is adequate to prevent soil erosion.

The reclaimed right-of-way will be considered stable when the surface appears similar to adjacent undisturbed land and the following accelerated erosion indicators do not exist:

- perceptible soil movement (exceeding pre-construction conditions);
- headcutting in drainages;
- flow pattern development resulting in large (greater than 12 inches in depth) rills or gullies; and
- trench subsidence or slumping.

Areas that do not meet final stabilization criteria in the first two years following construction may require additional monitoring.
9.0 POST-CONSTRUCTION REMEDIATION AND REPORTING

9.1 REMEDIATION

Any portion of the right-of-way or other Project components lacking successful establishment of desirable species (seeded species plus native volunteers) compared to adjacent vegetation will be reseeded. Site-specific evaluations will be undertaken to address areas that may be impacted by grazing, off-road vehicle use, or noxious weed presence.

Additional seeding will be completed during the first appropriate seeding window. If it is determined that precipitation amounts significantly above or below the annual average are affecting vegetation establishment, additional seeding activities will be deferred until the next appropriate seeding window.

9.2 REPORTING

An annual post-construction monitoring report will be submitted to the BLM, Nevada Department of Environmental Protection, and Washoe County after the first and second growing seasons. The report will discuss revegetation establishment, soil stability, noxious weed status and control, and any identified problems. Additional documentation will be provided as necessary to address any areas that have not achieved successful revegetation and stabilization after the second growing season.
FISH SPRINGS WATER SUPPLY PROJECT

APPENDIX D

FIRE CONTROL PLAN
# TABLE OF CONTENTS

1.0 INTRODUCTION ................................................................. D-1
2.0 RESPONSIBILITIES AND COORDINATION .......................... D-1
3.0 PROCEDURES ................................................................. D-2
4.0 FIRE PREVENTION AND SUPPRESSION EQUIPMENT .......... D-3
5.0 MONITORING ................................................................. D-3
6.0 REFERENCES ................................................................. D-4
1.0 INTRODUCTION

This Plan identifies measures to be taken during the construction, operation, and maintenance of the Fish Springs Water Supply Project (Project) to prevent and suppress fires. The Project developer and its construction and reclamation contractors (Contractors) will utilize this Fire Control Plan to comply with BLM and local regulations as well as conditions in the North Valleys Right-of-Ways Final Environmental Impact Statement (USDI-BLM, October 2005).

The purpose of this Plan is to establish standards and practices to minimize the risk of fire or, in the event of a fire, to provide immediate suppression procedures. This Plan identifies fire hazards associated with operating vehicles and equipment off of roadways, burning slash, pipeline construction activities (e.g. grinding, cutting, welding), and using explosive or flammable materials.

2.0 RESPONSIBILITIES AND COORDINATION

The Owner and its Contractors will be responsible for ensuring that required fire suppression equipment is present and in good working order on the Project site. The Owner will be responsible for ensuring that an Environmental Inspector is present during construction periods to facilitate compliance with this plan. The Contractors will also ensure that their personnel are adequately trained and capable of using the fire suppression equipment. The Contractors will be responsible for notifying fire control authorities prior to construction and securing any required permits. The Contractors will obey at all times the requirements associated with local fire danger restrictions (e.g. high wind or excessive drought) issued by fire control authorities.

FIRE CONTROL AUTHORITIES – CONTACT INFORMATION:

TO REPORT A FIRE

Interagency Dispatch

Emergency

Alternate Number

911

(775) 883-5353

Reno Fire Department

Captain Chris Baring

(775) 325-8075

QUESTIONS REGARDING FIRE DANGER OR WARNINGS

Interagency Office Prevention Line

(775) 883-5995

Office–(775) 885-6197

BLM Office Steve Edgar

Cell–(775) 721-2273
One crew member on each construction site will serve as designated fire guard, in addition to other Project construction duties. The fire guard will be trained and able to detect and fight fires and will be designated by a decal on their hardhat and/or other apparent designation.

3.0 PROCEDURES

Vegetation will be cleared from working areas on all roadways, equipment parking areas, and construction sites, including the Project right-of-way, as described in the Project POD and SWPPP. Vehicles will not be driven or parked outside of these designated areas unless the site has been cleared of vegetation and other flammable materials. Spark arrestors are required on vehicles and motorized equipment, such as chainsaws and other hand tools.

All welders will have an assistant who will monitor welding sites for embers or fires, in addition to their other construction activities. At sites where cutting, welding, or grinding will occur the vegetation must be cleared for at least 25 feet in all directions (Nelson, pers. comm.). Additionally, sites surrounding devices with combustion engines (e.g. generators and pumps) will be cleared of all vegetation at for at least 25 feet in all directions beyond the size of the device.

If pipeline personnel are not able to quickly extinguish a fire, the Contractors will immediately contact local authorities by calling 911 to report the location of the fire. At that time, the Contractors will also inform the authorities of any road closures or impedances due to construction activity. In the event of a fire that has spread beyond the control of pipeline personnel, the crews will move to a safe location and allow emergency response teams to assume fire suppression duties.

In the event of a fire, personnel and equipment may be made available for purposes of fire fighting. The BLM or Inter-agency Fire Response Team may also request that equipment and personnel be made available to fight nearby wildland fires. Rates for fire fighting assistance will be determined by the BLM Fire Management Agency.

The requirements of the Fire Control Plan are in effect from April 1 through October 31, unless conditions warrant modification by fire management authorities. However, the proper fire prevention and suppression equipment will be readily available and properly maintained at all times.
4.0 FIRE PREVENTION AND SUPPRESSION EQUIPMENT

The Contractors will provide an adequate supply of fire extinguishers, shovels, axes, pulaskies, and other tools to ensure that each crew member is equipped to participate in fire suppression.

At sites where cutting, welding, or grinding occurs, there will be a minimum of:

- one water-filled backpack pump;
- one long handled shovel (at least 46 inches long); and
- 5-pound ABC rated fire extinguisher within 25 feet (Nelson, pers. comm.).

These tools will be contained in an area clearly labeled as fire fighting equipment and provides crew members with unrestricted access. In addition, water trucks and construction equipment will be available on-site for fire suppression.

All vehicles and equipment used by the Contractors will contain a 2-pound (or larger) fire extinguisher with an ABC rating and a long-handled shovel.

Access roads to the well houses, pump station, terminal storage tank and pump station tanks will have a minimum width of 12 feet and will be constructed of a compacted gravel base, in accordance with county building codes (Birkel, pers. comm.). A fire hydrant will be placed at the pump station as an available water source for fire fighters.

5.0 MONITORING

The Contractors will inspect each site following construction activity to ensure that there are no embers. Federal, state, and local fire control authorities may inspect sites within their jurisdiction and impose further fire prevention measures.
6.0 REFERENCES


FISH SPRINGS WATER SUPPLY PROJECT

APPENDIX E

DUST CONTROL PLAN
# TABLE OF CONTENTS

1.0 INTRODUCTION.................................................................................................................. E-1

2.0 RESPONSIBILITIES AND COORDINATION .................................................................. E-1

3.0 DUST CONTROL TECHNIQUES....................................................................................... E-1

4.0 REFERENCES ..................................................................................................................... E-2
1.0 INTRODUCTION

This Plan describes dust control measures the Project developer and its construction and reclamation contractors (Contractors) will implement during construction of the Fish Springs Water Supply Project (Project) in accordance with local regulations. The Plan is designed to comply with requirements of the Washoe County District Health Department, Air Quality Management Division (Air Quality Management Division) and conditions identified in the Final Environmental Impact Statement North Valley’s Rights-of-Ways (USDI-BLM, October 2005). Specific procedures are adapted from the Truckee Meadows Regional Stormwater Quality Management Program Construction Site Best Management Practices Handbook (2003).

2.0 RESPONSIBILITIES AND COORDINATION

The Project developer and its Contractors will implement the Dust Control Plan during Project construction. The Project developer will be responsible for ensuring that an Environmental Inspector is present during construction periods to facilitate compliance with this plan. The Project developer will notify the Air Quality Management Division of any change of ownership during construction and will obtain approval of a new Dust Control Permit should Project construction extend beyond 18 months from the original date of approval.

Prior to Project construction the Contractors will be responsible for obtaining an approved Dust Control Permit from Washoe County District Health Department, Air Quality Division. The Contractors will also ensure a copy of the approved Dust Control Permit is available on-site for inspection by Air Quality Management Division personnel. The Contractors will provide equipment and personnel necessary to maintain dust control measures 24 hours per day, seven days per week during construction. The Contractors will promptly implement dust control measures in problem areas identified by Air Quality Management Division staff. Upon completion of backfill and final grading, the Contractors will stabilize the site through revegetation and erosion control as described in the SWPPP.

3.0 DUST CONTROL TECHNIQUES

Dust control techniques will be applied to prevent fugitive dust from unduly impacting air quality vegetation, or residences. Conditions that will require dust control techniques include, but are not limited to:

- visible dust columns rising from Project construction sites;
- large dust emissions caused by soil disturbance (e.g. clearing and soil removal);
- large dust emissions from moving equipment or vehicles; and
powdery or flour-like soil textures.

The Contractor will utilize the following measures to minimize the generation of fugitive dust from construction sites:

- Apply water or non-toxic soil binders (e.g. copolymer, lignin sulfonate, psyllium/guar, or starch-resin-fiber matrix) to active construction sites and roads to stabilize disturbed soils. If non-potable water is used all tanks, hoses, and other associated equipment should be clearly labeled “NON-POTABLE WATER, DO NOT DRINK”.
- Maintain adequate soil moisture to manage dust emissions from vehicles hauling soil or other materials or if necessary, cover with a tarp or other containment device.
- Operate vehicles and equipment at reasonable and prudent speeds on access roads and construction sites to reduce fugitive dust.
- Cover any permanent soil stockpiles at the wells, pump station, surge suppression, and storage facilities with soil stabilizers, such as vegetation, to prevent erosion by wind. Soil stockpiles along the pipeline will not be covered due to the short duration of soil storage.
- Soil stabilization measures will be initiated no more than 14 days after Project construction activity has temporarily or permanently ceased.
- Soil stabilizers (e.g. mulch) will promptly be applied as necessary to disturbed sites following revegetation.

4.0 REFERENCES


FISH SPRINGS WATER SUPPLY PROJECT

APPENDIX F

SPILL PREVENTION, CONTAINMENT, COUNTERMEASURE, AND CLEANUP PLAN
# TABLE OF CONTENTS

1.0 INTRODUCTION .......................................................... F-1
2.0 RESPONSIBILITIES AND COORDINATION .......................... F-1
3.0 EQUIPMENT .............................................................. F-2
4.0 SPILL PREVENTION MEASURES ...................................... F-3
   4.1 PROJECT STAGING AREAS OR EXTRA WORK SPACE .......... F-3
   4.2 PROJECT RIGHT-OF-WAY ........................................... F-4
   4.3 ADDITIONAL PROJECT COMPONENTS ............................. F-5
5.0 SPILL CONTAINMENT AND COUNTERMEASURE ...................... F-6
6.0 SPILL CLEANUP .......................................................... F-7
7.0 REFERENCES ............................................................ F-7
1.0 INTRODUCTION

This Plan establishes procedures to minimize the potential for accidental release of hazardous materials during the construction of the Fish Springs Water Supply Project (Project). This plan also contains spill containment and cleanup measures to be utilized by the Project developer and its construction and reclamation contractors (Contractors) in the event of a hazardous material spill. The conditions of this plan were developed using input from the Final Environmental Impact Statement North Valleys Rights-of-Way Projects (USDI-BLM, October 2005). Specific procedures are adapted from the Truckee Meadows Regional Stormwater Quality Management Program Construction Site Best Management Practices Handbook (2003).

The purpose of this plan is to provide Project developer and its Contractors with necessary spill prevention and spill response measures for use during Project construction. The details of this Plan apply to construction activities at all Project construction sites, including the pipeline and powerline rights-of-way.

2.0 RESPONSIBILITIES AND COORDINATION

The Project developer will be responsible for ensuring that an Environmental Inspector is present during construction periods to facilitate compliance with this plan. The Project developer is also responsible for contacting appropriate agencies in the event of a hazardous material spill.

The Contractors are responsible for complying with applicable laws and securing permits required to transport, store, use, and dispose of hazardous materials. The Contractors are also responsible for training personnel and providing the equipment necessary to comply with the guidelines of this Plan and applicable laws. The Contractors will provide documentation or permits required by Washoe County for hazardous material storage and transfer. This documentation will include an inventory identifying the location and quantity of all hazardous and explosive materials present. This inventory list will be updated when the quantities and types of chemicals stored on-site change.
3.0 EQUIPMENT

The Contractors will ensure that spill cleanup kits are available and clearly marked at each location where hazardous materials are stored and in vehicles operated by construction supervisors, Environmental Inspectors, and fuel transport personnel.

The Spill Cleanup Kit (Vehicle) will include:

- first aid kit;
- communication radio or phone;
- fire fighting equipment (2-pound ABC rated fire extinguisher and long handled shovel);
- protective clothing (1-tyvek suit, 2 sets- liquid-proof gloves, 1 pair-goggles, 1 pair-boots);
- nonsparking shovel;
- 10 plastic garbage bags (20 gallon, 6 mil);
- 5 absorbent socks (48” x 3”)
- 2 absorbent pillows (17” x 17”)
- 1 bag absorbent granules (aka cat litter), and
- barrier tape or flagging.

The Spill Cleanup Kit (Storage/Transfer Site) will be used where hazardous materials are stored or handled and will include:

- first aid kit;
- communication radio or phone;
- fire fighting equipment (2-pound ABC rated fire extinguisher and long handled shovel);
- protective clothing (2-tyvek suits, 5 sets- liquid-proof gloves, 2-goggles, 2 pairs- boots);
- nonsparking shovel;
- 20 plastic garbage bags (20 gallon, 6 mil);
- 10 absorbent socks (48” x 3”)
- 5 absorbent pillows (17” x 17”)
- 5 adsorbent mats (18 x 18” x 3/8”)
- 5 bags absorbent granules (aka cat litter), and
- one 55 gallon polyethylene drum
- barrier tape or flagging
- hazardous waste labels.
4.0 SPILL PREVENTION MEASURES

Measures that will be implemented by the Contractors to prevent and control spills are described below by Project component.

Construction site materials and wastes will be properly stored and managed to prevent contact with stormwater or waterbodies. Construction materials and wastes include, but are not limited to, petroleum products, paints, adhesives, solvents, water treatment chemicals, concrete washout, construction debris, and storage containers. Contractors will follow proper protocols while fueling, maintaining, storing, and parking vehicles to prevent and control leaks or spills. Cleaning of vehicles or equipment in the Project area will avoid discharges of wash water or pollutants into storm drain systems, natural drainages, or waterbodies.

4.1 PROJECT STAGING AREAS OR EXTRA WORK SPACE

Extra workspace areas will be established along the Project right-of-way to facilitate storage and transfer of construction materials, including fuels and lubricants. Hazardous materials at the staging areas will be stored using procedures and materials that comply with federal, state, and local laws.

To prevent and control spills in the staging areas the Contractors will follow the guidelines listed below.

- Store all fuels, lubricants, and other hazardous materials a minimum of 300 feet from wetlands and stream crossings.
- Perform all routine equipment maintenance at staging areas to enable the proper collection and disposal of waste fluids. Waste fluids will promptly be transferred from collection devices into approved waste fluid storage containers.
- Provide secondary containment structures (temporary liners and/or berms and dikes) around all fluid storage containers, designated refueling sites, and vehicle maintenance areas. These containment structures will be of sufficient capacity to contain 1.5 times the volume of stored material from the associated container or vehicle.
- Label all hazardous material storage containers to comply with local regulations, including the type of material contained and potential hazards.
• Attend fueling operations on vehicles and machinery at all times to prevent over-filling and mobile fueling will be avoided.

• Fuel vehicles and equipment on-site only when it is cost prohibitive to transport equipment to commercial fueling stations.

• Maintain Spill Cleanup Kit (Storage/Transfer Site) that is clearly labeled at all fueling and maintenance locations. Heavy equipment will also be available to assist with the containment and collection of spilled fluids or contaminated soils.

• Inspect storage tanks, hoses, and valves on a weekly basis to identify leaks and malfunctioning parts. Inspections will also ensure that adequate supplies of spill containment and cleanup materials are available at each storage or maintenance site. Inspections will be documented on field inspection sheets.

• Transport and store all flammable liquids (fuels, oil, and lubricants) in containers that meet or exceed requirements of the National Fire Protection Association Code.

• Lock drain valves on all storage tanks to prevent accidental or unauthorized fluid release. Tank filling and draining will be documented on field inspection sheets.

4.2 PROJECT RIGHT-OF-WAY

The refueling and lubrication of heavy equipment will generally take place along the Project right-of-way. Emergency repairs to equipment may also occur along the right-of-way, although scheduled maintenance will occur in the staging areas.

To prevent and control spills along the right-of-way the Contractors will follow the guidelines listed below.

• Refuel and lubricate equipment a minimum of 100 ft from all wetlands and stream channels. Signs will be installed by the Environmental Inspectors to identify areas that are off-limits to refueling and maintenance.

• Collect hazardous fluids and contaminated parts (used filters and collection pans) for transport and disposal according to state regulations.
• Refueling vehicles will meet the safety requirements of Nevada Department of Transportation and the refueling personnel will use fuel loading/unloading procedures that comply with Nevada Department of Transportation safety regulations.

• Fuel transport vehicles will carry at least 20 pounds of granular sorbent material appropriate for the fuels or liquids transported in that vehicle, in addition to a Spill Cleanup Kit (Vehicle).

4.3 ADDITIONAL PROJECT COMPONENTS

To prevent and control spills at the Fish Springs pump station, the Contractors will follow the guidelines listed below.

• Provide secondary containment structures (temporary liners and/or berms and dikes) around all fluid storage containers, designated fluid refueling sites, and vehicle maintenance areas. These containment structures will be of sufficient capacity to contain 1.5 times the volume of stored material from the associated container or vehicle.

• Ensure that chemical storage tanks are located a minimum of 300 feet from wetlands and stream crossings.

• Provide a Spill Cleanup Kit (Storage/Transfer Site) within 25 feet of the chemical storage tank that is clearly labeled.

The pump station will contain a chlorination system using sodium hypochlorite to disinfect the groundwater and to provide residual chlorine in the transmission line. The sodium hypochlorite solution will be stored in two 2,500-gallon tanks that will be replenished monthly via tanker truck.

To prevent and control spills at the pump station, the chemical supply contractor will follow the guidelines listed below.

• Ensure that all chemical transport and storage equipment complies with federal, state, and local laws.

• Train delivery personnel to properly transport and store chemicals in a lawful manner that complies with applicable safety regulations. This includes developing a contingency plan and training delivery personnel to follow the conditions of that plan.
• Inspect chemical storage tanks, valves, and hoses on a monthly basis to ensure proper functioning conditions. These inspections will ensure that all drain valves are locked to prevent unauthorized discharges from chemical storage tanks. Delivery personnel are also responsible for inspecting their transport vehicle prior to entering or departing the Project site to identify and contain leaks. Inspection will be documented on field inspection sheets.

5.0 SPILL CONTAINMENT AND COUNTERMEASURE

In the event of a hazardous material spill, the person(s) reporting the spill will notify the Emergency Response coordinator designated by the Contractor. The Emergency Response coordinator will identify hazards associated with the spilled material and take proper precautions to control safety of nearby persons. This person is also responsible for isolating the source of the spill and implementing the spill contingency plans to limit the area contaminated by the spill. Once personal safety has been established and the spill has been controlled, recovery and clean-up operations will commence.

Spills of reportable size require immediate notification of the proper authorities and emergency response personnel.

A reportable size spill involves:

• 25 gallons or more of hazardous fluids; or
• greater than 3 cubic yards of contaminated soil; or
• any spill contacting water (Donald, pers. comm.).

The Contractors will notify the Project developer of any reportable spills and include descriptions of the type, location, quantity, potential hazards (environmental or human), and source of the material(s) spilled. The Project developer will then ensure that all appropriate agencies are notified and informed of spill details.

If a spill threatens a water body or stream channel, berms and/or trenches will be built to contain or divert the spilled material. Were the spill to enter water, the Contractors will use barriers, booms, and surface diversions to collect the spilled materials.

Following is a list of pertinent agency contact information:
<table>
<thead>
<tr>
<th>Agency</th>
<th>Phone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Washoe County Emergency Response</td>
<td>911</td>
</tr>
<tr>
<td>National Response Center</td>
<td>(800) 424-8802</td>
</tr>
<tr>
<td>Bureau of Land Management Terry Neumann</td>
<td>(775) 885-6155</td>
</tr>
<tr>
<td>Nevada Division of Environmental Protection</td>
<td>(888) 331-6337</td>
</tr>
<tr>
<td>Washoe County District Health Department</td>
<td>(775) 328-2436</td>
</tr>
</tbody>
</table>

### 6.0 SPILL CLEANUP

Spilled liquids and contaminated materials will be cleaned up immediately, including the removal of contaminated soils and vegetation. Stockpiles of contaminated soils will be tarped to protect from wind erosion and will have dikes installed around the periphery to prevent interaction with stormwater. Water contacting the contaminated area will be treated and disposed of properly. The Contractors will consult spill response specialists and involved government agencies to clean up reportable-size spills. If requested by the Environmental Inspector or government agency, the Contractors will collect soil samples at deeper soil strata or downslope to ensure that contaminated materials have been collected and removed.

### 7.0 REFERENCES

Donald, P., Washoe County District Health Department. Personal communication with C. Baker, Westech Environmental Services Inc., regarding hazardous materials on construction sites. February 13, 2006. (775) 328-2476.


FISH SPRINGS WATER SUPPLY PROJECT

APPENDIX G

NOXIOUS WEED MANAGEMENT PLAN
# TABLE OF CONTENTS

1.0 INTRODUCTION ................................................................. G-1

2.0 NOXIOUS WEED SURVEY .................................................. G-1

3.0 NOXIOUS WEED MANAGEMENT ........................................ G-1
   3.1 PREVENTATIVE MEASURES ......................................... G-2
   3.2 TREATMENT METHODS .............................................. G-3
   3.3 EDUCATION ............................................................. G-3

4.0 HERBICIDE APPLICATION, HANDLING, SPILLS, AND CLEANUP .... G-4
   4.1 HERBICIDE APPLICATION AND HANDLING .................... G-4
   4.2 HERBICIDE SPILLS AND CLEANUP .............................. G-5
   4.3 WORKER SAFETY AND SPILL REPORTING ..................... G-5

5.0 POST-CONSTRUCTION MONITORING ..................................... G-6
1.0 INTRODUCTION

Scotch thistle and tall whitetop were identified in the Project area during baseline surveys conducted for the North Valleys Rights-of-Way Projects (FEIS 2005). Populations of each species varied from a few scattered stems to densities exceeding 50 stems per 0.01 acre. Chapter 555 of the Nevada Revised Statutes authorizes the Nevada Department of Agriculture to: 1) recommend plants for listing as noxious weeds; and 2) require landowners to control weeds.

The purpose of this plan is to prescribe methods to: 1) prevent the introduction of new populations of noxious weeds; and 2) control the spread of existing noxious weed populations on the Fish Springs Ranch Project (Project). Prior to the end of reclamation, the Project developer and its construction and reclamation contractors will be responsible for implementing the measures described in this plan. After reclamation, the Project owner/operator (Owner) will be responsible for implementing the measures described in this plan.

The goals of weed control are to eliminate the spread of noxious weeds during construction, and, to the extent possible, prevent the invasion of noxious weeds from surrounding property. Monitoring during the construction and post-construction phases will ensure that weed management goals are achieved.

2.0 NOXIOUS WEED SURVEY

A pre-construction site survey will be conducted to update existing noxious weed distributions. Noxious weeds will be identified within and adjacent to the Project area and the locations and extent of infestations will be recorded. Early identification of existing infestations will help to minimize the spread of noxious weeds by identifying sites where preventative measures will need to be implemented. The Project developer will coordinate these activities with the appropriate personnel.

3.0 NOXIOUS WEED MANAGEMENT

Weeds are spread by a variety of means including vehicles, construction equipment, construction and reclamation materials, livestock, and wildlife. Implementation of preventative measures to control the spread of noxious weeds is the most cost-effective management approach.
3.1 PREVENTATIVE MEASURES

The following measures will be used to prevent the spread of noxious weeds along the pipeline.

- The pipeline route will be inspected for noxious weeds prior to vegetative clearing. Any infestations will be recorded for construction and post-construction monitoring and treated mechanically with herbicide depending upon the species present and/or the size of the infestation.
- All Contractor vehicles and equipment will arrive at the work site clean and weed-free. Prior to being allowed access to the right-of-way, the Environmental Inspector will ensure that vehicles and equipment are free of soil and debris that are capable of transporting noxious weed seeds, roots, or rhizomes.
- In areas where infestations have been identified, the Contractor will stockpile cleared vegetation and salvaged topsoil adjacent to the area from which they were stripped to eliminate the transport of soil-born noxious weed seeds, roots, or rhizomes. Stockpiles suspected of containing noxious weed seed or plant parts will be separated from surrounding stockpiles and labeled. During reclamation, the Contractor will return topsoil and vegetative material from infestation sites to the areas from which they were stripped.
- The Contractor will remove seeds, roots, and rhizomes from construction equipment prior to transport from the site. This will minimize the potential transport of noxious weeds to other areas.
- The Contractor will implement revegetation activities following construction as specified in the Revegetation Plan and SWPPP. Supplemental revegetation efforts, where required, will ensure adequate vegetative cover to prevent the invasion of noxious weeds.
- Imported gravel and padding material will be source-certified to ensure that the originating site is noxious weed-free.
- Field wash stations will not be used as a preventative measure as they have not proven to be an effective means of weed control. In order for a wash station to be effective, high-pressure steam cleaners and controlled drainage are essential. These criteria cannot be met in the field. As a result, field wash stations run the risk of creating conditions favorable to seed germination: presence of seeds or rhizomes; presence of disturbed soils; and water from uncontrolled drainage.
3.2 TREATMENT METHODS

Noxious weed treatment methods will be in accordance with Nevada Department of Agriculture and Washoe County regulations and BLM or landowner agreements. Subsequent to the pre-construction noxious weed survey and prior to initiation of construction, weeds will be mowed or appropriate herbicides will be applied to identified weed infestations to reduce the proliferation of weeds. Post-construction control measures may include one or more of the following methods.

- Mechanical methods will include hand-pulling, mowing or discing weed populations. If these methods are used, subsequent seeding may be conducted to re-establish a desirable vegetative cover that will stabilize soils and slow the potential re-invasion of noxious weeds.
- Herbicides will be utilized to control noxious weed populations. Applications will be controlled to minimize the impacts on surrounding vegetation. In areas of dense infestation, a broader application will be used and a follow-up seeding program implemented. The timing of subsequent revegetation efforts will be based on the life of the selected herbicide and appropriate seeding windows.
- Treatment methods will be based on species-specific and site-specific conditions (e.g., plant phenology, proximity to water or riparian areas, agricultural activities, time of year) and will be coordinated with local regulatory agencies.
- In the event an area is not seeded until the following spring because of weather or scheduling constraints, all annuals and undesirable vegetation that have become established will be removed prior to seeding.

3.3 EDUCATION

The Contractor and Project developer will provide information to their employees regarding noxious weed identification, management, and impacts on agriculture, livestock, and wildlife. The critical importance of preventing the spread of noxious weeds in areas not infested, and controlling the proliferation of weeds already present will be explained. The importance of adhering to measures to prevent the spread of noxious weeds will be stressed (e.g., cleaning vehicles that collect soil and seeds, and quickly identifying new infestations of noxious weeds).
4.0 HERBICIDE APPLICATION, HANDLING, SPILLS, AND CLEANUP

4.1 HERBICIDE APPLICATION AND HANDLING

Prior to herbicide application, the Project developer, Owner, or the Contractor will obtain any required permits from Washoe County. A licensed contractor will perform the herbicide application in accordance with all applicable laws and regulations. This Contractor will handle and store herbicides in a manner consistent with the guidelines presented in the Project SPCCC (Appendix F of the POD).

U.S. Environmental Protection Agency (EPA) herbicide label instructions will be strictly followed. Application of herbicides will be suspended when any of the following conditions exist:

- wind velocity exceeds 6 miles per hour for application of liquids or 15 miles per hour for application of granular herbicides;
- snow or ice covers the foliage of noxious weeds; or
- precipitation is occurring or is imminent.

Vehicle-mounted sprayers (e.g., handgun, boom, injector) will be used primarily in open areas that are readily accessible by vehicle. Hand application methods (e.g., backpack spraying) that target individual plants will be used to treat small, scattered weed populations in rough terrain. Calibration checks of equipment will be conducted at the beginning of spraying and periodically to ensure that proper application rates are being achieved.

Herbicides will be transported daily to the project site with the following provisions.

- Concentrate will be transported only in approved containers and in a manner that will prevent tipping or spilling, and in a compartment that is isolated from food, clothing, and safety equipment.
- Mixing will only be conducted on-site and only at a distance greater than 300 feet from open or flowing water, wetlands, or other sensitive resources.

All herbicide equipment and containers will be inspected daily for leaks.
4.2 HERBICIDE SPILLS AND CLEANUP

All reasonable precautions will be taken to avoid spilling herbicides. In the event of an herbicide spill, cleanup requires immediate action that is based on adequate preparation. A spill kit carried in Contractor vehicles and kept in herbicide storage areas will allow a quick and effective response to spills. Items to be included in a spill kit are:

- protective clothing and gloves;
- adsorptive clay, “kitty litter,” or other commercial adsorbent;
- plastic bags and bucket;
- shovel;
- fiber brush and screw-in handle;
- dust pan;
- caution tape;
- highway flares (use on established roads only);
- detergent; and
- plastic garbage bags.

Response to an herbicide spill will vary with the size and location of the spill, but general procedures include:

- traffic control;
- dressing the cleanup team with protective clothing;
- stopping the leaks;
- containing the spilled material;
- cleaning up and removing the spilled herbicide and contaminated adsorptive material and soil; and
- transporting the spilled pesticide and contaminated material to an authorized disposal site.

4.3 WORKER SAFETY AND SPILL REPORTING

All herbicide contractors will obtain and have readily available copies of the appropriate Material Safety Data Sheets (MSDS) for the herbicides being used. Herbicide spills will be reported in accordance with all applicable laws and requirements.
5.0 POST-CONSTRUCTION MONITORING

The Owner will monitor the distribution and density of noxious weeds following Project construction. Surveys will be conducted as early in the year as feasible to identify and control noxious weeds before they produce seed. Noxious weeds, if present, will be documented on separate noxious weed inventory forms within areas disturbed by the project. The percent cover, phenology, infested area and density (stems/0.01-acre) of weed species will be ocularly estimated. The boundaries of new noxious weed populations within the Project will be located with a GPS unit. Estimates will be made for the entire problem area within disturbed and adjacent areas, and may include a range of species cover and density values.

The Owner will act to eradicate new noxious weed populations if the concentration of noxious weeds exceeds similar conditions adjacent to the site. Similarly, the Owner will act to control the expansion of preexisting noxious seed populations at accelerated rates beyond the natural expansion of the overall population. The selection of control methods will be based on available technology and weed species in question. Control methods may include mechanical, cultural or chemical.
FISH SPRINGS WATER SUPPLY PROJECT

APPENDIX H

ACCESS ROAD PLAN
TABLE OF CONTENTS

1.0 INTRODUCTION ......................................................................................................... H-1
2.0 RESPONSIBILITIES AND COORDINATION .......................................................... H-1
3.0 ACCESS ROADS ........................................................................................................ H-2
   3.1 EXISTING ROADS ............................................................................................... H-2
   3.2 NEW ROADS ....................................................................................................... H-3
4.0 ROAD RECLAMATION ............................................................................................. H-3
5.0 ROAD MAINTENANCE ............................................................................................. H-3
6.0 POST-CONSTRUCTION TRAFFIC MONITORING .................................................. H-3

TABLE

Table H-1. Access Roads, Fish Springs Water Supply Project ........................................... H-5
1.0 INTRODUCTION

This Access Road Plan (Plan) describes measures to be taken by the Project developer and its construction and reclamation contractors (Contractors) to access Project facilities and the rights-of-way. Measures taken to prevent unauthorized use of the right-of-way or other facilities after final reclamation will be the responsibility of the Project owner/operator (Owner). The conditions of this plan were developed according to the Final Environmental Impact Statement North Valleys Rights-of-Way Projects (FEIS)(October 2005), the Washoe County Special Use Permit (SUP) Case No. SW05-009 (January 17, 2006), and BLM comments on the Draft Fish Springs Water Supply Project Plan of Development (October 2005).

The purpose of this Plan is to provide Contractors, Construction Inspectors, Environmental Inspectors, and regulatory agency representatives with descriptions of access routes and transportation related construction activities. The access roads identified in this plan will be used during pre-construction, construction, operation, and maintenance activities. This plan is designed to minimize transportation-related impacts.

2.0 RESPONSIBILITIES AND COORDINATION

The Project developer will ensure that Contractors and associated Project personnel are aware of the requirements for travel to and from the Project using the access roads outlined in this Plan. The Project developer will also secure necessary permits and/or approvals for the use of, or disturbance to, public and private roads described in this Plan. Documentation of access agreements and easements for proposed routes will be secured to the satisfaction of the County Engineer per the SUP.

Contractors are responsible for properly maintaining or improving existing roads in accordance with this Plan. All road improvement and maintenance will be completed as described in Table H-1 and/or as required per applicable road permits. Contractors will follow any applicable road closures or restrictions implemented by federal, state, or local agencies.

Environmental Inspectors will monitor travel along access roads and the rights-of-way to ensure compliance with transportation-related environmental requirements. Specific environmental conditions are listed in the Project POD and associated appendices (e.g. SWPPP and Dust Control Plan). Transportation-related conditions include, but are not limited to, restricting road use during wet conditions to minimize vehicle ruts, restricting vehicles to reasonable and prudent speeds to reduce fugitive dust emissions, and inspecting intersections of paved and unpaved roads to monitor deposits of track-out materials.
3.0 ACCESS ROADS

Primary access to the Project will be via existing improved and unimproved roads, such as paved highways and secondary roads (e.g. Highways 395, Lemmon Drive and Red Rock Road). Gravel or dirt-surfaced BLM and private roads in close vicinity to the Project will be used to facilitate transportation along the Project rights-of-way and between construction sites.

Existing roads that will be used as Project access routes are listed in Table H-1 and shown on the Project Maps Drawings 1 & 2 of the POD. Many of these roads are identified and described in the FEIS.

Primary access routes that will be commonly used by Project personnel are:

- Highway 395 to Red Rock Road to Dry Valley Road (AR-C) and then to other Project points;
- Highway 395 to Fish Springs Road;
- Highway 395 to Red Rock Road to Bird Spring Road (AR-G) and then to other Project points;
- Highway 445 to Pyramid Lake Road to Fish Springs Road to Rainbow Way (AR-B) and Fort Sage Pass Road (AR-B1) and then to other Project points;
- Lemmon Valley Drive to Matterhorn Boulevard and then to other Project points;

Once vehicles and equipment have reached the Project, travel will proceed along the working side of the right-of-way. Large equipment (e.g. bulldozers and trenchers) will typically be hauled to the Project on trailers and not driven outside of the Project area.

3.1 EXISTING ROADS

At the intersections of paved and dirt roads, track-out elimination devices may be installed to limit sediment as discussed in the SWPPP (Appendix B of the POD). In general, improvements will not be made to paved road surfaces, unless Project related transportation unduly impacts the roads or roadbeds.

Improvements to gravel or dirt surfaced roads include, but are not limited to, blading the road surface and the application of gravel as necessary to improve travel conditions at specific locations. Proposed improvements, if any, for each road are presented in Table H-1.
3.2 NEW ROADS

Construction of some new roads and driveways will be necessary between existing public roads and Project facilities, including; well pumphouses, the power sub-station, pump station and tanks, the surge suppression site, and the terminal storage tanks. In accordance with local building codes, the roads leading to Project structures will be permanent to provide access for fire suppression agencies. Constructed roads will have an all-weather surface that has been approved by the County Engineer, per the SUP.

4.0 ROAD RECLAMATION

Areas that have been temporarily widened or upgraded during Project construction will be returned to their approximate original contours and dimensions. Disturbed areas will be reseeded and reclaimed with native, drought-tolerant species as described in the Revegetation Plan.

5.0 ROAD MAINTENANCE

Dirt and gravel-surfaced access roads will require periodic maintenance during Project construction and reclamation activities. Road maintenance schedules will be determined by the Project developer, Construction Inspector, and the Environmental Inspectors, and may include dust control, or removal of excessive washboards, ruts, and damage from precipitation events. Road maintenance will also be conducted to ensure proper drainage of road surfaces and adjacent features. Road fill or other material will not be bladed into borrow ditches or neighboring vegetation. In addition, Contractors will install sediment control devices (e.g. silt fence) at locations specified by Environmental Inspectors to protect sensitive resources from sediment deposition.

Locations where different types of road maintenance will occur are noted with a triangular symbol on Drawing 2 for each access road.

6.0 POST-CONSTRUCTION TRAFFIC MONITORING

Post-construction traffic on the rights-of-way by off-road-vehicles (ORVs) can create erosion and noxious weed problems and ultimately jeopardize the success of reclamation efforts. ORV use has contributed to these problems along other nearby project rights-of-way.

ORV use of the Project rights-of-way will be managed through the following measures.
• Sediment logs will be used instead of water bars between MP 12.0 and the terminal storage tanks due the Project's proximity to an established ORV recreation area. Water bars have attracted ORV use on other nearby projects.
• Snow fence, orange exclusion fence, or an equivalent will be installed across the right-of-way where necessary and extended to contact a natural barrier (e.g. rock outcrop, impassable draw, dense shrubby vegetation, or other impediment) to restrict travel.
• Rock, slash, or timber barriers will be placed across the right-of-way as necessary to discourage unauthorized vehicle access.

The Owner and the BLM will jointly determine locations for specific ORV traffic control measures.

The Owner will monitor the right-of-way on a periodic basis to identify sites of unauthorized vehicle use. In the event of unauthorized vehicle access, the Owner will use one of the measures mentioned above to discourage access or other effective means.
<table>
<thead>
<tr>
<th>ACCESS ROAD CODE</th>
<th>ROAD NAME</th>
<th>PUBLIC/PRIVATE</th>
<th>IMPROVEMENT OR MAINTENANCE</th>
<th>APPROXIMATE ROAD WIDTH (FEET)</th>
<th>NEW DISTURBANCE ACREAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>AR-A</td>
<td></td>
<td>Public</td>
<td>Temporarily widened to 15 feet and restored to original width after construction. Restored areas will be seeded with drought-tolerant native species.</td>
<td>10 - 12 15</td>
<td>0.4 0</td>
</tr>
<tr>
<td>AR-B</td>
<td>Rainbow Way</td>
<td>Private</td>
<td>Improved and new all-weather road to substation, pump station and storage tanks. Road will be located on Vidler's property.</td>
<td>10 - 15 20</td>
<td>0 2.1</td>
</tr>
<tr>
<td>AR-B1</td>
<td>Fort Sage Pass Road</td>
<td>Public</td>
<td>The portions of the Fort Sage Pass Road on public land within T25N R18E Sec. 3,4,10,14 &amp; 23 will be temporarily widened to 20 feet and restored to original width after construction. Restored areas will be seeded with drought-tolerant native species.</td>
<td>10 - 15 20</td>
<td>2.8 0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Public</td>
<td>Sec. 23 and the juncture with Dry Valley Road will be lightly bladed as necessary to fill ruts and smooth washboards. Minimal rock may be temporarily placed at drainage crossings</td>
<td>10 - 15 10 - 15 0</td>
<td>0 0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Private</td>
<td>The portions of the Fort Sage Pass Road on Vidler's property within T25N R18 E Sec. 4,10,14 &amp; 15 will be permanently widened to 20 feet.</td>
<td>10 - 15 20</td>
<td>0 2.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Private</td>
<td>The private portions of the Fort Sage Pass Road on the North Fork of Dry Valley Creek and the main fork of Dry Valley Creek will be maintained as requested by the landowner.</td>
<td>10 - 15 10 - 15 0</td>
<td>0 0</td>
</tr>
<tr>
<td>AR-C</td>
<td>Dry Valley Road</td>
<td>Public</td>
<td>Light blading as necessary to fill ruts and smooth washboards. Minimal rock may be temporarily placed at drainage crossings and removed after construction.</td>
<td>12 - 20 12 - 20 0</td>
<td>0 0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Private</td>
<td>Maintained as requested by landowners.</td>
<td>20 - 30 20 - 30 0</td>
<td>0 0</td>
</tr>
<tr>
<td>AR-D</td>
<td>Dixie Lane</td>
<td>Public</td>
<td>Light blading as necessary to fill ruts and smooth washboards. Minimal rock may be temporarily placed at drainage crossings and removed after construction.</td>
<td>10 - 15 10 - 15 0</td>
<td>0 0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Private</td>
<td>Maintained as requested by landowners.</td>
<td>15 - 20 15 - 20 0</td>
<td>0 0</td>
</tr>
<tr>
<td>AR-E</td>
<td>Belgian Way</td>
<td>Public</td>
<td>Light blading as necessary to fill ruts and smooth washboards. Minimal rock may be temporarily placed at drainage crossings and removed after construction.</td>
<td>15 - 20 15 - 20 0</td>
<td>0 0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Private</td>
<td>Maintained as requested by landowners.</td>
<td>15 - 20 15 - 20 0</td>
<td>0 0</td>
</tr>
<tr>
<td>ACCESS ROAD CODE</td>
<td>ROAD NAME</td>
<td>PUBLIC/PRIVATE</td>
<td>IMPROVEMENT OR MAINTENANCE</td>
<td>APPROXIMATE ROAD WIDTH (FEET)</td>
<td>NEW DISTURBANCE ACREAGE</td>
</tr>
<tr>
<td>-----------------</td>
<td>----------------</td>
<td>---------------</td>
<td>------------------------------------------------------------------------------------------</td>
<td>------------------------------</td>
<td>-------------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>EXISTING</td>
<td>FUTURE</td>
</tr>
<tr>
<td>AR-E1</td>
<td>-</td>
<td>Public</td>
<td>Light blading as necessary to fill ruts and smooth washboards. Minimal rock may be temporarily placed at drainage crossings and removed after construction.</td>
<td>10 - 12</td>
<td>10 - 12</td>
</tr>
<tr>
<td>AR-F</td>
<td>Bedell Flat Road</td>
<td>Public</td>
<td>Light blading as necessary to fill ruts and smooth washboards. Minimal rock may be temporarily placed at drainage crossings and removed after construction.</td>
<td>20 - 30</td>
<td>20 - 30</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Private</td>
<td>Maintained as requested by landowners.</td>
<td>12 - 20</td>
<td>12 - 20</td>
</tr>
<tr>
<td>AR-F1</td>
<td>-</td>
<td>Public</td>
<td>Light blading as necessary to fill ruts and smooth washboards. Minimal rock may be temporarily placed at drainage crossings and removed after construction.</td>
<td>10 - 12</td>
<td>10 - 12</td>
</tr>
<tr>
<td>AR-F2</td>
<td>-</td>
<td>Public</td>
<td>Light blading as necessary to fill ruts and smooth washboards. Minimal rock may be temporarily placed at drainage crossings and removed after construction.</td>
<td>10 - 12</td>
<td>10 - 12</td>
</tr>
<tr>
<td>AR-F3</td>
<td>-</td>
<td>Public</td>
<td>Light blading as necessary to fill ruts and smooth washboards. Minimal rock may be temporarily placed at drainage crossings and removed after construction.</td>
<td>15 - 20</td>
<td>15 - 20</td>
</tr>
<tr>
<td>AR-F4</td>
<td>-</td>
<td>Public</td>
<td>Light blading as necessary to fill ruts and smooth washboards. Minimal rock may be temporarily placed at drainage crossings and removed after construction.</td>
<td>12 - 20</td>
<td>12 - 20</td>
</tr>
<tr>
<td>AR-F5</td>
<td>-</td>
<td>Public</td>
<td>Light blading as necessary to fill ruts and smooth washboards. Minimal rock may be temporarily placed at drainage crossings and removed after construction.</td>
<td>8 - 12</td>
<td>8 - 12</td>
</tr>
<tr>
<td>AR-G</td>
<td>Bird Spring Road</td>
<td>Public</td>
<td>Light blading as necessary to fill ruts and smooth washboards. Minimal rock may be temporarily placed at drainage crossings and removed after construction.</td>
<td>12 - 20</td>
<td>12 - 20</td>
</tr>
<tr>
<td>AR-H</td>
<td>Antelope Valley Road</td>
<td>Public</td>
<td>Light blading as necessary to fill ruts and smooth washboards. Minimal rock may be temporarily placed at drainage crossings and removed after construction.</td>
<td>10 - 15</td>
<td>10 - 15</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Private</td>
<td>No proposed improvements, repair damage as necessary.</td>
<td>20 - 32</td>
<td>20 - 32</td>
</tr>
</tbody>
</table>