

# Appendix 2A

## BLM's Best Management Practices

This appendix describes a number of Best Management Practices (BMPs) intended to reduce the potential for short- and long-term impacts to identified resources. These BMPs would be implemented by NV Energy, its agents, and contractors during construction and operation of the ON Line Project and would be incorporated into all construction specifications and contract documents, as appropriate. All construction personnel would be required to follow them. These BMPs are considered by BLM to be added to the Proposed Action and Action Alternative evaluated in the ON Line Project SEIS for the purposes of environmental impact analysis.

### **Air Quality**

1. Project activities would be in compliance with all applicable federal, state, and local laws and regulations concerning prevention and control of air pollution during construction and operation.
2. NV Energy and/or the construction contractor would obtain necessary air quality (i.e., fugitive dust control) permits before starting construction or operating equipment that would result in regulated atmospheric or fugitive dust emissions.
3. Project personnel would be required to implement measures to minimize fugitive dust emissions from construction activities. To accomplish this, the following measures would be implemented:
  - For the duration of construction activities, actively disturbed areas would be stabilized through the use of water or chemical dust suppressants as required to meet dust control plans and permits issued by state and local regulators. Disturbed areas, including soil storage piles, would be maintained and stabilized as appropriate to minimize fugitive dust emissions. Active stabilization may not be required if local conditions (i.e., soil moisture, natural crusting, low winds) are adequately maintaining ambient air impacts within parameters of the dust control permit and plan.
  - Bulk soil material stored onsite that is a possible fugitive dust source would be actively wetted, compacted, contoured, protected by wind breaks, controlled with chemical suppressants or a combination of these practices as needed, to minimize ambient impacts.
  - Fugitive dust emissions would be minimized by enforcing construction vehicle speed limits on dirt/gravel roads and a combination of active and passive dust suppression measures, including:
    - Unpaved roads and yards onsite (substations) and within the authorized ROWs would be watered as necessary when being used. If dust suppressants other than water were to be proposed by the construction contractor, it would require prior approval by the BLM and possible NEPA analysis.

- Combustion emissions from mobile sources would be minimized by proper maintenance and tune-up of equipment.

### **Landscape Preservation and Impact Avoidance**

1. To the maximum extent practical, all trees, native shrubs, and other vegetation would be avoided or protected during construction activities except where safety clearances are required for structures and equipment, approved construction and permanent roads, construction yards and staging areas, and excavation operations.
2. All areas around transmission line structures would be backfilled, recontoured, and returned as close as possible to the original condition and grade.
3. Wherever possible stream channels, steep slopes, or sensitive environmental areas would not be used for equipment or materials storage or stockpiling; construction staging or maintenance, field offices, hazardous material or fuel storage, solid waste, handling, or temporary access roads.
4. Excavated or graded materials would not be stockpiled or deposited on or within 100 feet of any steep slopes, where defined, or seasonally active ephemeral drainages.
5. The width of construction and new temporary access roads would be kept to the absolute minimum needed for operation, avoiding sensitive areas and trees where possible, and limiting disturbance to vegetation.
6. When and where applicable, landscaping standards, including clearing of native vegetation, would be followed as prescribed by local land use and management agencies when work is within their jurisdictions. The BLM Authorized Officer would specify required special handling and recovery techniques for yucca and some cactus in the southern part of the project on a site-specific basis.
7. ON Line Project facilities within the authorized rights-of-way would be managed for safe and reliable operation while maintaining vegetation and wildlife habitat to the maximum extent feasible.

### **Erosion and Sediment Control**

1. Planting of native grasses, forbs, trees, or shrubs beneficial to wildlife, or placing of riprap and other materials as appropriate, would be used to prevent and minimize the potential for erosion and siltation during construction of project facilities and during the period needed to reestablish permanent vegetative cover on disturbed sites. Sediment fences would be used where appropriate to limit wind and water erosion, and application of water or chemical suppressants, as approved by BLM, would be used in disturbed areas during construction to limit wind erosion.
2. Final erosion control and site restoration measures would be initiated as soon as practical after a particular area is no longer needed for construction, stockpiling, or access. Clearing schedules would be arranged to minimize exposure of soils.
3. Cuts and fills for access roads and work areas would be sloped to prevent erosion and to facilitate revegetation.

4. Where appropriate (i.e., adjacent to sensitive areas or resources), signs would be placed along access roads to discourage off-road vehicle use and project personnel from driving into unauthorized adjacent areas.
5. Borrow areas would be contoured and shaped during rehabilitation to carry the natural contour of adjacent undisturbed terrain into the borrow area.
6. Soil or rock stockpiles, excavated materials, or excess soil materials would not be placed near sensitive habitats, including perennial, intermittent, and ephemeral drainage channels, where they may erode into these habitats or be washed away by high water or storm runoff. Long-term soil stockpiles would be revegetated to prevent wind and water erosion.
7. Treading on areas not immediately involved in project construction activities would be avoided to reduce potential wind erosion and fugitive dust generated during construction.
8. When excessive soil moisture conditions are present in a construction area, construction activities would be relocated or diverted to drier areas to avoid excessive surface rutting in those areas. If wet areas cannot be avoided weight dispersing systems (i.e., wide-track or balloon tires) or materials to minimize damage (i.e., geotextile cushions, pre-fabricated pads, etc.) to the substrate would be utilized.

### **Transmission Line ROW**

1. Where existing soil and terrain conditions allow, the upper 12 to 18 inches of soil would be removed from structure foundation excavation areas and stockpiled for later use in site restoration.
2. Surface elevations would be returned to approximate pre-project conditions as practicable.
3. Where roads that service transmission facilities cross fences, a wire gate would be installed to standard BLM specifications. The gates would be built prior to the construction activities and would be kept closed except during active construction at the fence site.
4. If construction activities cause damage to existing range improvements (such as pipelines, fences, troughs, etc.), they would be fixed using material that meets or exceeds the quality of the existing improvement. If damage occurs, the BLM and livestock operator would be notified immediately. If damage occurs during active livestock grazing, repairs would be made within 24 hours.
5. To promote public safety in proximity to transmission line facilities within areas of frequent visitation by the public, fence panels would be installed at the base of guy wires on transmission line structures, and the first 10 feet of guy wires would be marked with safety reflectors, high-visibility tape or plastic, or a similar material to make them highly visible to the public.

## Biological Resources

1. The ON Line Project would adhere to an integrated pest management plan prepared for the project and submitted as part of the overall Construction, Operations, and Maintenance Plan (COM Plan).
2. Current guidelines and methodologies (Avian Power Line Interaction Committee 1994, 1996, 2005) would be used in the design of the proposed transmission facilities to minimize raptor and other bird electrocution and collision potential.
3. Facility design would avoid line-of-sight views between the transmission line structures and greater sage-grouse leks, whenever feasible.

## Cultural Resources

Specific cultural resource inventory and protection measures to be employed for the ON Line Project are outlined in the project-specific Cultural Resources Programmatic Agreement. The Programmatic Agreement is on file at the BLM's Ely and Southern Nevada District Offices, the Nevada State Historic Preservation Office, and the City of Ely.

The general guidance for Treatment of Historic Properties from Section C of the Programmatic Agreement is as follows:

1. In avoiding or mitigating effects for other types of properties, the BLM Ely District Office, in consultation with SHPO and in coordination with identified interested persons, shall determine the nature of effects to historic properties identified in the APE if the ON Line Project is approved by the BLM. All treatment shall be done in a manner consistent with the Nevada BLM/SHPO Protocol.
2. The BLM Ely District Office, to the extent practicable, and in consultation with the SHPO, shall ensure that NV Energy avoids effects to historic properties through project design, or redesign, relocation of facilities, or by other means.
3. When avoidance is not feasible, the BLM Ely District Office, in consultation with SHPO and in coordination with NV Energy and interested persons, shall develop, or ensure that NV Energy develops, an appropriate treatment plan designed to lessen or mitigate project-related effects to historic properties. For properties eligible under criteria (a) through (c) (36 CFR 60.4), mitigation, other than data recovery may be considered in the treatment plan (e.g., HABS/HAER recordation, oral history, historic markers, exhibits, interpretive brochures or publications, etc.). Where appropriate, treatment plans shall include provisions (content and number of copies) for a publication for the general public.
4. When data recovery is required as a condition of approval, the BLM Ely District Office, in consultation with SHPO, shall develop, or ensure that NV Energy develops treatment plans that are consistent with the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation (48 FR 447 16-37) and *Treatment of Historic Properties: A Handbook* (Advisory Council 1980).

5. The BLM Ely District Office shall ensure that all records and materials resulting from identification and treatment efforts are curated in accordance with 36 CFR 79 in BLM-approved facilities. All materials slated for curation will be maintained in accordance with 36 CFR 79 until the relevant final treatment report is complete and collections are curated or returned to their owners. The BLM and NV Energy shall encourage private owners to donate collections obtained from their lands to an appropriate curation facility.
6. The BLM Ely District Office shall consult with appropriate tribes per BLM Manual 8120-1 and SHPO to develop treatment options for Traditional Cultural Properties or properties considered to be of traditional religious and cultural importance in areas that would be directly or indirectly affected by the ON Line Project.
7. The BLM Ely District Office shall ensure that all final reports resulting from treatment will be provided to the SHPO, and made available to Indian Tribes, and other interested persons, as appropriate. All such reports shall be consistent with contemporary professional standards and the Department of Interior's Formal Standards for Final Reports of Data Recovery Programs (42 FR 5 3 77-79).

### **Paleontological Resources**

1. If paleontological resources are discovered during construction, the BLM would be notified immediately and measures taken to protect the resource. An appropriately sized buffer zone would be demarcated around any discovery and construction would not resume within this buffer zone until authorization is given by an authorized officer. The significance of the resource would be evaluated and whether or not avoidance was possible. Stabilization and measures to mitigate construction damage might also be required even if avoidance was possible. Should avoidance prove infeasible, further procedures to protect the resource would be determined by the BLM.
2. See the project-specific Paleontological Resource Impact Mitigation Program (PRIMP) for specific paleontological resource protection measures to be employed for the ON Line Project.

### **Noxious and Non-native, Invasive Weed Management**

1. A noxious and non-native, invasive weed survey would be completed prior to any earth disturbing activity including cross-country travel. Noxious or non-native, invasive weeds that may be located on the site would be managed according to methods tiered to the BLM's Ely and Southern Nevada District Offices' Weed Management Plans. Should chemical methods be approved, the lessee must submit a Pesticide Use Proposal to the Authorized Officer 60 days prior to the planned application date. A Pesticide Application Report must be submitted to the Authorized Officer by the end of each fiscal year following chemical application.
2. To eliminate the introduction of noxious and non-native, invasive weed seeds, roots, or rhizomes; all straw, hay, straw/hay, or other organic products used for reclamation or stabilization activities would be certified free of plant species listed on the Nevada noxious weed list or specifically identified by the BLM Ely District Office.
3. To eliminate the introduction of noxious and non-native, invasive weed seeds, roots, or rhizomes; all source sites such as borrow pits, fill sources, or gravel pits used to supply

inorganic materials used for construction, maintenance, or reclamation would be inspected and found to be free of plant species listed on the Nevada noxious weed list or specifically identified by the BLM Ely District Office. Inspections would be conducted by a BLM-approved weed scientist or qualified biologist.

4. To eliminate the transport of vehicle-borne noxious and non-native, invasive weed seeds, roots, or rhizomes, all vehicles and heavy equipment used for the completion, maintenance, inspection, or monitoring of ground disturbing activities would be cleaned of soil and debris capable of transporting weed propagules prior to entering or leaving the work site or project area in a manner acceptable to the BLM Ely District Office Weed Coordinator or designated contact person.
5. Prior to entry of vehicles and equipment to a project area, areas of concern would be identified, flagged, and recorded in the field by a weed scientist or qualified biologist in a manner acceptable to the BLM Ely District Office Weed Coordinator or designated contact person.
6. Prior to construction commencement, NV Energy would ensure that all contractors, operators, or permit holders would receive information and training regarding noxious and non-native, invasive weed management and identification to all personnel who would be affiliated with the implementation and maintenance phases of the project. The importance of preventing the spread of weeds to uninfested areas and the importance of controlling existing populations of weeds would be explained.
7. To eliminate the transport of soil-borne noxious and non-native, invasive weed seeds, roots, or rhizomes, infested soils or materials would not be moved and redistributed on weed-free or relatively weed-free areas. In areas where infestations are identified or noted and infested soils, rock, or overburden must be moved, these materials would be salvaged and stockpiled adjacent to the area from which they were stripped. Appropriate measures would be taken to minimize wind and water erosion of these stockpiles. During reclamation, the materials would be returned to the area from which they were stripped.
8. Prior to project approval, a site-specific noxious and non-native, invasive weed survey would occur and a weed risk assessment would be completed. Monitoring would be conducted for a period no shorter than the life of the permit or until bond release and monitoring reports would be provided to the BLM. If the spread of noxious and non-native, invasive weeds is noted on project areas, appropriated weed control procedures would be determined in consultation with BLM personnel and would be in compliance with the appropriate BLM Handbook sections and applicable laws and regulations. All weed control efforts on BLM-administered lands would be in compliance with BLM Handbook H-9011, H-9011-1 Chemical Pest Control, H-9014 Use of Biological Control Agents of Pests on Public Lands, and H-9015 Integrated Pest Management. A pesticide Application Report must be submitted to the Authorized Officer by the end of the fiscal year following any chemical application.
9. Removal and disturbance of vegetation would be kept to a minimum through construction site management (e.g. using previously disturbed areas and existing easements, limiting equipment/materials storage and staging area sites, etc.).

10. Mixing of herbicides and rinsing of herbicide containers and spray equipment would be conducted only in areas that are safe distance from environmentally sensitive areas and points of entry to bodies of water (storm drains, irrigation ditches, streams, lakes, or wells).
11. Methods used to accomplish weed and insect control objectives would consider seasonal distribution of large wildlife species.
12. When managing weeds in areas of special status species, impacts of the treatment on such species would be carefully considered. Wherever possible, hand spraying of herbicides would be the preferred method in compliance with an approved Integrated Weed Management Plan and associated environmental impact analyses.

## Reclamation

1. Reclamation would normally be accomplished with native species, if available. These would be representative of the indigenous species present in the adjacent habitat. Rationale for potential planting with selected non-natives would be documented. Possible exceptions could include use of non-natives for a temporary cover crop to out-compete weeds.
2. Seeding would occur during October 15 through March 15 to ensure a greater chance of success.
3. Reclamation release criteria are as follows:
  - Achieve 100 percent in the Great Basin and 70 percent in the Mojave Desert of the baseline perennial plant cover of selected comparison areas, normally like adjacent habitat. If the adjacent habitat is severely disturbed, a range site description may be used as a cover standard. Cover is normally crown cover as estimated by the point intercept method. Selected cover can be determined using a method as described in *Sampling Vegetation Attributes, Interagency Technical Reference* (1996, BLM/RS/ST-96/002+1730). The reclamation plan for the project area would identify the site-specific release criteria and associated statistical methods in the reclamation plan or permit.
  - No noxious and non-native, invasive weeds would be allowed on the sites for reclamation release. Control of noxious and non-native, invasive weeds would follow an integrated pest management plan approved by the authorizing officer. A list of Nevada noxious weeds would be provided by the authorized officer.
4. Where local conditions allow, up to the first 12 to 18 inches of growth medium would be salvaged, where soil and terrain conditions allow, and stockpiled prior to disturbance for all areas to be reclaimed after construction. All disturbance areas to be reclaimed would be recontoured to blend as nearly as possible with the natural topography prior to revegetation. All compacted portions of the disturbance would be ripped to a depth of 12 inches unless solid rock is encountered. Adequate, fine-grain seedbed would be established to provide good seed to soil contact. Large blocks and clumps of soil with deep pockets would be avoided. This normally requires some type of tillage procedure after ripping.

5. All portions of access roads not needed for other uses as determined by the authorized officer would be reclaimed.
6. Mulching of the seedbed following seeding may be required under certain conditions, such as severe erosion.
7. Respread weed-free vegetation removed from the right-of-way to provide protection, nutrient recycling, and seed source.
8. The success of the vegetative growth on a reclaimed site may be evaluated for release no sooner than during the third growing season after earthwork and planting have been completed. Where it has been determined that revegetation success criteria have not been met, the agencies and the operator would meet to decide on the best course of actions necessary to meet the reclamation goal.
9. Where applicable, the following agencies would be consulted to determine the recommended plant species composition, seeding rates, and planting dates:
  - U.S. Fish and Wildlife Service
  - U.S. Natural Resources Conservation Service
  - U.S. Bureau of Land Management
  - Nevada Department of Wildlife
10. Grasses, forbs, shrubs, and trees appropriate for site conditions and surrounding vegetation would be included on the BLM-approved plant and seed mix list. Species chosen for a site would be matched for site drainage, climate, shading, resistance to erosion, soil type, slope, aspect, and vegetation management goals. Upland revegetation shall match the plant list to the site's soil type, topographic position, elevation, and surrounding natural communities.
11. Construction areas, including storage yards, would be free of waste material and trash accumulations, unless stored in appropriate containers.
12. All unused materials and solid waste would be removed from construction and storage sites during the final phase of work. Unused material may be sold or relocated to other work sites other than the ON Line Project. Solid waste would be placed in existing permitted solid waste management facilities.
13. Upon completion of construction, any land disturbed would be graded to provide proper drainage and blend with the natural contour of the land. Following grading and where appropriate, it would be revegetated using plants native to the area, suitable for the site conditions, and beneficial to wildlife.
14. Following completion of construction, all temporary construction yards, offices, and related buildings, including temporary concrete footings and slabs, would be removed from the site.
15. All construction roads not needed for ongoing operations and maintenance activities would be restored to the original contour, and made to discourage vehicular traffic when no longer needed for construction. Culverts would be removed as appropriate, road

escarpments would be contoured and vegetated, and all road surfaces would be scarified to establish conditions appropriate for reseeding, drainage, and erosion prevention.

## **Visual Resources**

1. All outside surfaces of structures at the Robinson Summit Substation would be constructed of materials that would minimize glare, and would be finished with flat tones intended to blend with the surrounding rural environment. The standard environmental colors chart, CC-001 June 2008 (Standard Environmental Colors), would be used, especially for remote facilities.
2. All fencing would be constructed of non-reflective materials. No white top fence posts would be used.
3. Signs at the Robinson Summit Substation would be constructed of materials that are non-glare, and would be painted using unobtrusive colors. This requirement shall not apply to safety signs (e.g., brightly colored signs indicating the presence of a hazard).
4. Permanent outdoor lighting at Robinson Summit Substation would be limited to areas required for operations, maintenance, safety and security, and would be anti-glare, shielded, and directed downward to the extent possible. Highly directional, high-pressure sodium vapor fixtures (or other fixtures that meet the criteria specified) would be used where practical. Switches or photocells would be used as appropriate on outdoor lighting to allow use of lighting only when needed. Lighting techniques would include using directional lights that do not allow lights to shine into the sky, screening lights, using timers and motion detectors so that lights are only on when necessary, and systems that minimize lighting to only meet functional requirements.
5. The transmission structures would be finished with flat, neutral colors that would blend with the surrounding environment and that would relate to the colors of the other structures in the existing utility corridors.
6. Unless required for worker safety, non-specular conductors and non-reflective and non-refractive insulators would be used to reduce conductor and insulator visibility.
7. In areas of frequent visitation by the public, the base of guy-wires on transmission structures would have fence panels, and the first 10 feet of guy wires would be marked with safety reflectors, high-visibility tape or plastic, or a similar material to make them highly visible to the public.
8. During the implementation of vegetation treatments, irregular margins would be created around treatment areas to better maintain the existing scenic character of the landscape.

## **Water Pollution Prevention and Monitoring**

1. Water needs for soil stabilization during facility construction would be transported by truck or other methods from local water sources.
2. All federal and state laws related to control and abatement of water pollution would be complied with. All waste material and sewage from construction activities or project-

related features would be disposed of according to federal and state pollution control regulations.

3. All disturbed drainage channels would be reclaimed as soon as practical, to a standard for aesthetic value comparable to what existed prior to disturbance. Where appropriate, native species capable of bank stabilization would be used to revegetate all disturbed stream banks.
4. Diversion structures would be used to re-direct flows from any drainages potentially impacted by facility features and would be designed to minimize potential destabilization and erosion of adjacent and downgradient drainages.
5. Stormwater management plans would be implemented for project construction and facility operation to minimize and control erosion from stormwater runoff. During project construction, stormwater would be managed in compliance with applicable state and federal regulations, including compliance with requirements of the National Pollutant Discharge Elimination System (NPDES) stormwater general permits, which would be obtained for the project. Stormwater management elements would include:
  - Application of best management practices for erosion, sedimentation, and stabilization control during construction activities, and management of oils and other substances during operation to minimize contact with stormwater;
  - Structural controls during operation that could include stabilized stormwater conveyance systems (swales); and
  - Monitoring and maintenance to ensure long-term effectiveness of the management system.
6. Construction specifications would require construction methods that prevent pollutants from accidentally entering or spilling into flowing or dry watercourses, and ground water sources. Potential pollutants and wastes include refuse, garbage, cement, concrete, sewage effluent, industrial waste, oil and other petroleum products, aggregate processing tailings, mineral salts, drilling mud, and thermal pollution.
7. Any construction wastewater from aggregate processing, concrete batching, or other construction operations would be directed to on-site temporary retention basins designed for zero discharge. The water may be reclaimed for construction purposes or evaporated. The residual as a result of evaporation would be removed.

### **Noise Prevention**

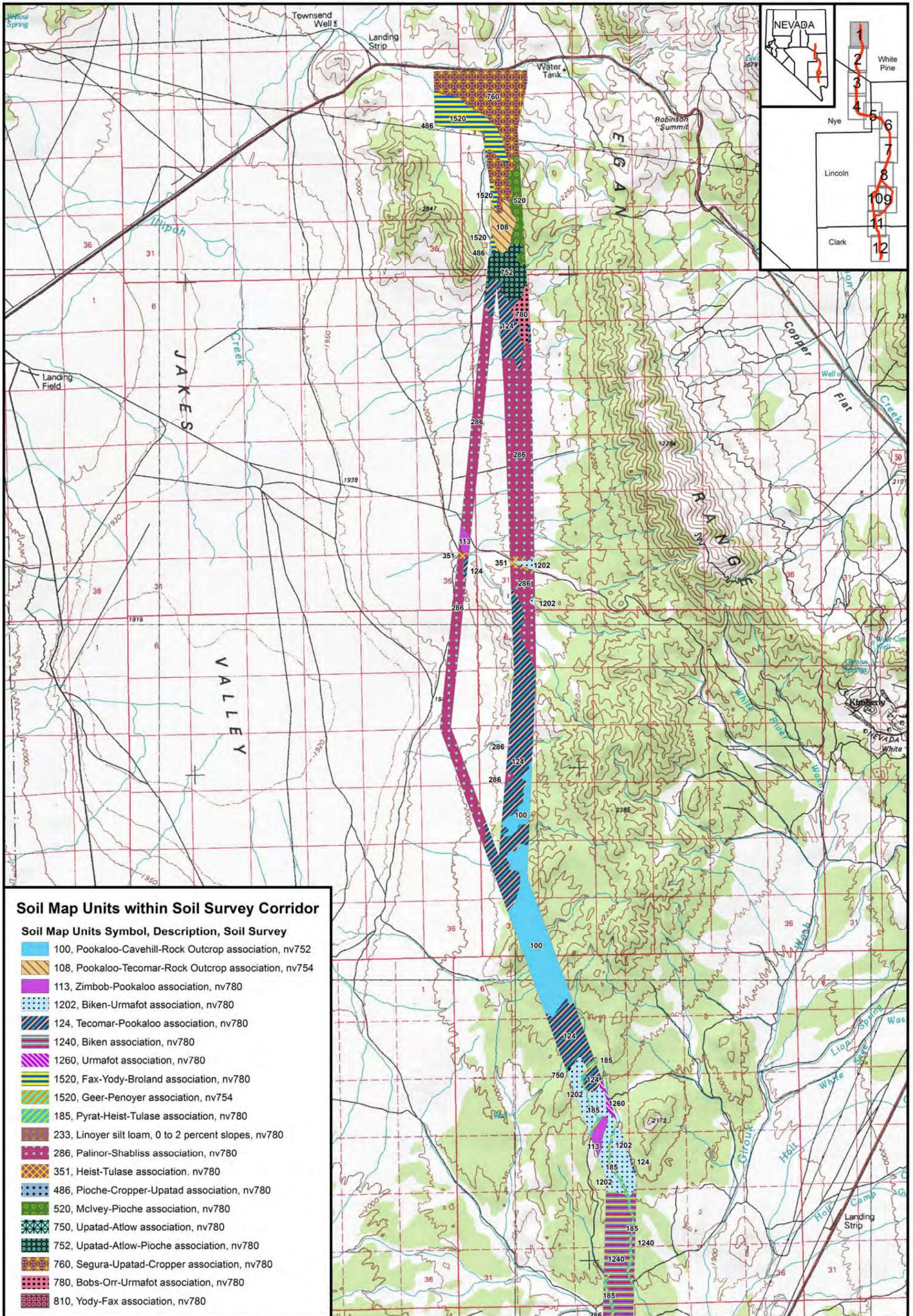
1. The Robinson Summit Substation facility would be designed to operate in compliance with all applicable federal, state, and local laws and regulations related to noise.
2. Personnel would be required to comply with all applicable federal, state, and local laws and regulations concerning prevention and control of noise during project construction and operation.

### **Hazardous Material Storage, Handling, and Disposal and Safety Measures**

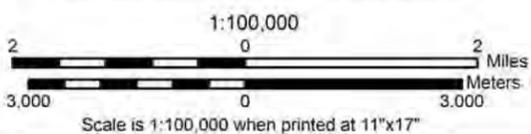
1. Personnel, contractors, and transporters involved with hazardous materials management would be required to comply with federal and state regulations established for the transportation, storage, handling and disposal of hazardous substances, materials and

wastes. "Hazardous material" means any substance, pollutant, or contaminant that is listed as hazardous under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 USC 9601 et seq., and its regulations (CERCLA). The definition of hazardous substances under CERCLA includes any "hazardous waste" as defined in the Resource Conservation and Recovery Act of 1976 (RCRA), as amended 42 USC 6901 et seq., and its regulations.

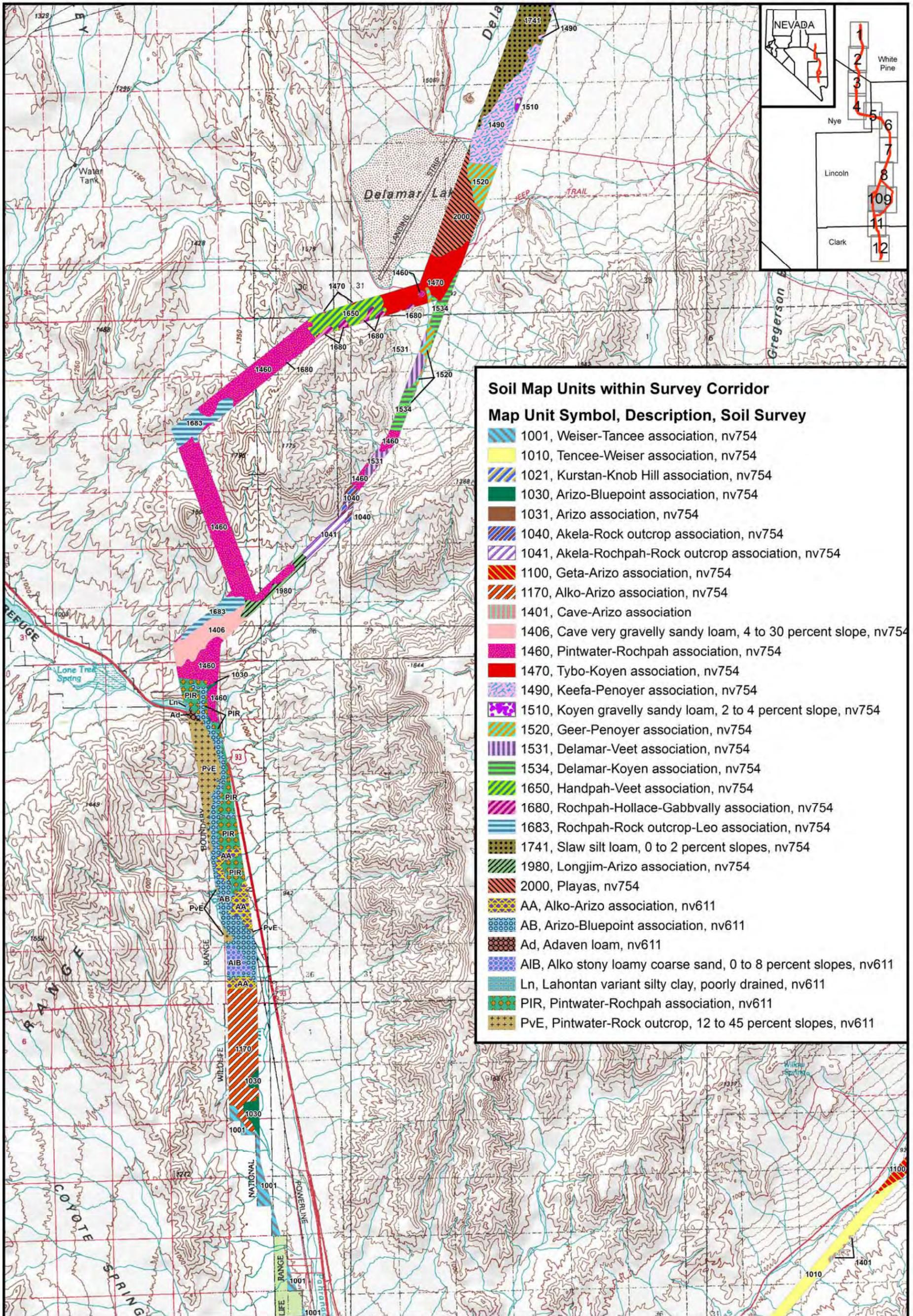
2. The potential for adverse impacts from oil and fuel spills would be reduced through careful handling and designation of specific equipment repair and fuel storage areas. In the event that hazardous or regulated materials such as diesel fuel or gasoline are spilled, measures would be taken to control the spill and the National Response Center and/or Nevada Department of Environmental Protection would be notified immediately.
3. The permittee is responsible for clean-up and assumes liability for any and all releases of hazardous substances disposed on public land in accordance with State, Federal and Local laws and regulations. The permittee would immediately notify the BLM Authorized Officer of any and all releases of hazardous substances on public land.
4. Outdoor oil storage and use areas would be bermed with a capacity sufficient to contain the oil inventory contained in the single largest tank or equipment unit plus sufficient freeboard to prevent overflow. Outlets from these containment areas would be equipped with a normally closed valve. Regular inspections would determine if there had been a leak requiring special attention.
5. Waste materials known or found to be hazardous would be disposed of in approved off-site, permitted treatment or disposal facilities in accordance with federal, state, and local regulations, standards, codes, and laws.
6. Generation of wastes during construction would be minimized through detailed estimating of materials needed and through efficient construction practices. Wastes generated during construction would be recycled to the extent feasible. Concrete waste would be removed to a local licensed landfill. Non-recyclable wastes would be collected and transported to a local licensed landfill.
7. Fuels, lubricant chemicals, and welding gases used during construction would be in controlled storage until used. Any empty containers or waste material would be segregated in storage and properly recycled or disposed of by licensed handlers.
8. Concrete trucks would be washed only at designated sites along the authorized ROW where wastes would be contained.
9. Portable toilets or a packaged treatment system would be provided for onsite sewage handling during construction at Robinson Summit Substation. Portable toilets would be provided at construction locations along the ROW. Sewage from the portable toilets would be removed regularly and disposed of in accordance with applicable federal and state pollution control regulations. There shall be no dumping of black water, sewage or litter.



Source -Soils: USDA NRCS Soil Surveys, nv608, nv611, nv754, nv780, nv783, and nv784  
 Base Map: USGS 1:100,000-scale topographic maps



**FIGURE 1**  
**SOILS MAP**  
**ON LINE PROJECT**

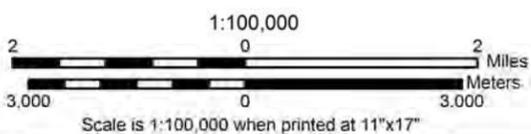


**Soil Map Units within Survey Corridor**

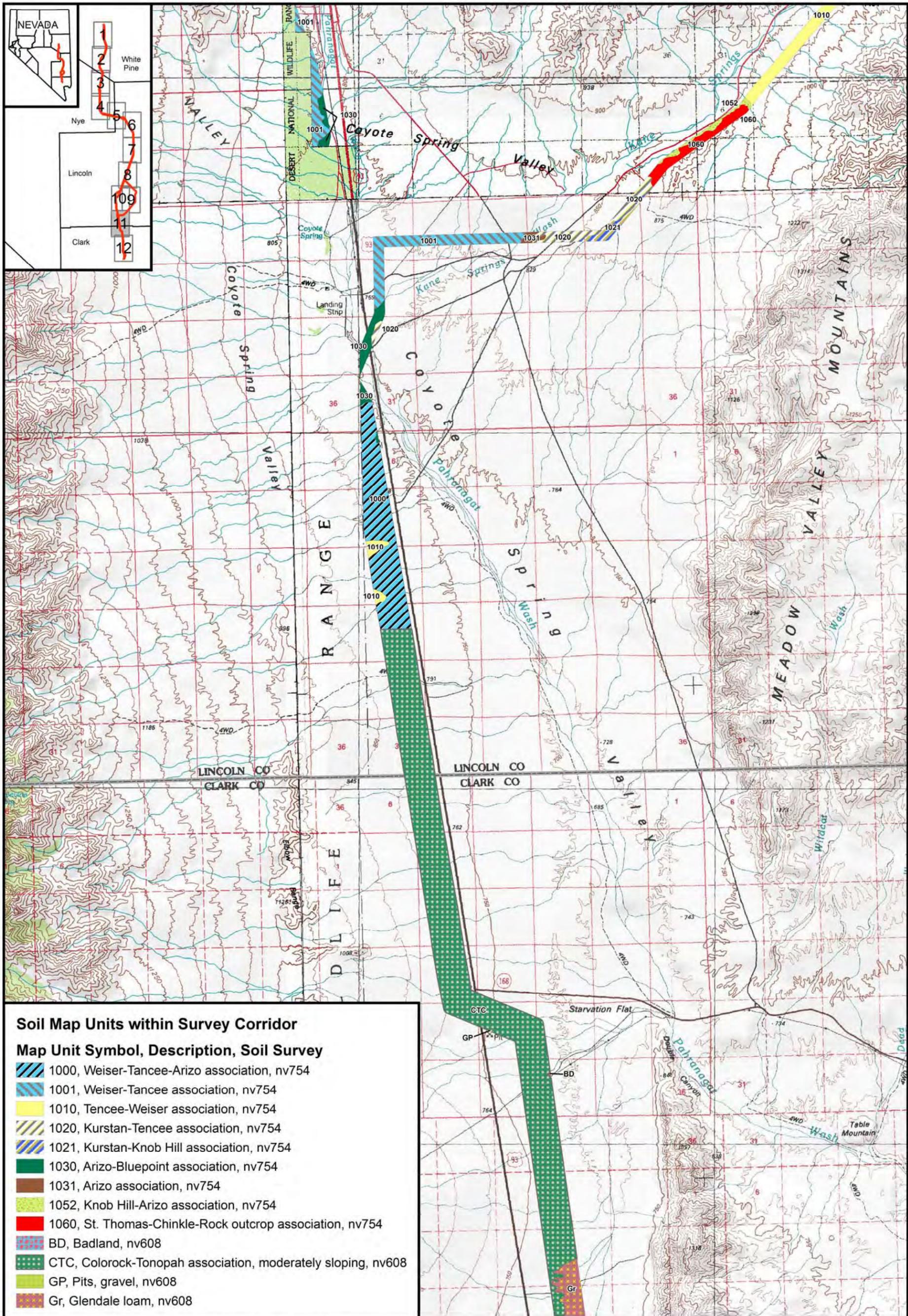
**Map Unit Symbol, Description, Soil Survey**

1001	Weiser-Tancee association, nv754
1010	Tencee-Weiser association, nv754
1021	Kurstan-Knob Hill association, nv754
1030	Arizo-Bluepoint association, nv754
1031	Arizo association, nv754
1040	Akela-Rock outcrop association, nv754
1041	Akela-Rochpah-Rock outcrop association, nv754
1100	Geta-Arizo association, nv754
1170	Alko-Arizo association, nv754
1401	Cave-Arizo association
1406	Cave very gravelly sandy loam, 4 to 30 percent slope, nv754
1460	Pintwater-Rochpah association, nv754
1470	Tybo-Koyen association, nv754
1490	Keefa-Penoyer association, nv754
1510	Koyen gravelly sandy loam, 2 to 4 percent slope, nv754
1520	Geer-Penoyer association, nv754
1531	Delamar-Veet association, nv754
1534	Delamar-Koyen association, nv754
1650	Handpah-Veet association, nv754
1680	Rochpah-Hollace-Gabbvally association, nv754
1683	Rochpah-Rock outcrop-Leo association, nv754
1741	Slaw silt loam, 0 to 2 percent slopes, nv754
1980	Longjim-Arizo association, nv754
2000	Playas, nv754
AA	Alko-Arizo association, nv611
AB	Arizo-Bluepoint association, nv611
Ad	Adaven loam, nv611
AIB	Alko stony loamy coarse sand, 0 to 8 percent slopes, nv611
Ln	Lahontan variant silty clay, poorly drained, nv611
PIR	Pintwater-Rochpah association, nv611
PvE	Pintwater-Rock outcrop, 12 to 45 percent slopes, nv611

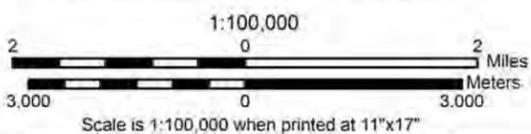
Source -Soils: USDA NRCS Soil Surveys, nv608, nv611, nv754, nv780, nv783, and nv784  
 Base Map: USGS 1:100,000-scale topographic maps



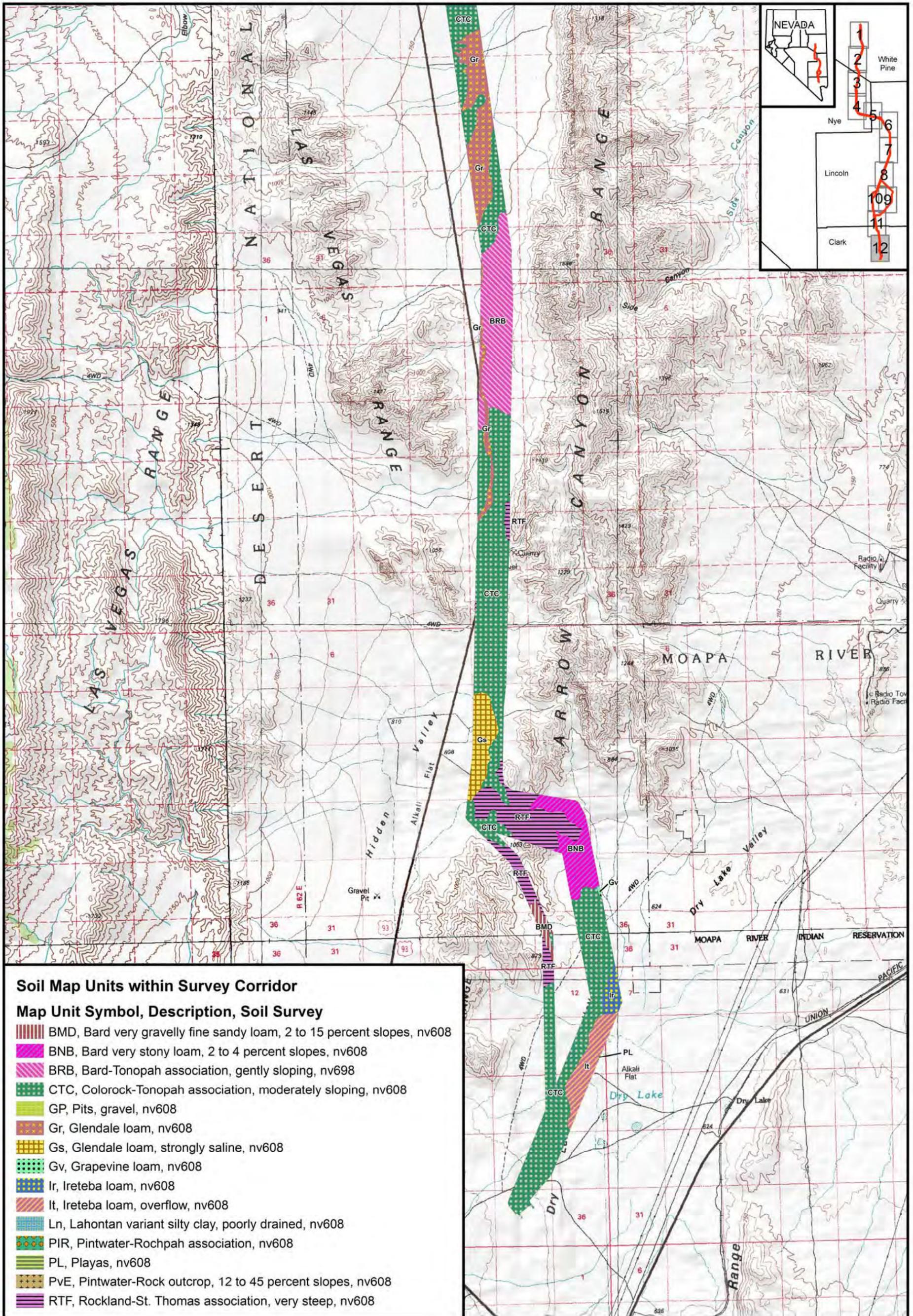
**FIGURE 10**  
**SOILS MAP**  
**ON LINE PROJECT**



Source -Soils: USDA NRCS Soil Surveys, nv608, nv611, nv754, nv780, nv783, and nv784  
 Base Map: USGS 1:100,000-scale topographic maps



**FIGURE 11**  
**SOILS MAP**  
**ON LINE PROJECT**

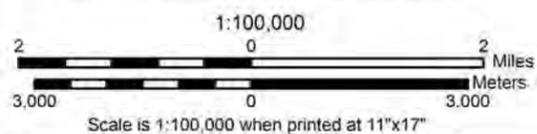


**Soil Map Units within Survey Corridor**

**Map Unit Symbol, Description, Soil Survey**

- BMD, Bard very gravelly fine sandy loam, 2 to 15 percent slopes, nv608
- BNB, Bard very stony loam, 2 to 4 percent slopes, nv608
- BRB, Bard-Tonopah association, gently sloping, nv698
- CTC, Colorock-Tonopah association, moderately sloping, nv608
- GP, Pits, gravel, nv608
- Gr, Glendale loam, nv608
- Gs, Glendale loam, strongly saline, nv608
- Gv, Grapevine loam, nv608
- Ir, Ireteba loam, nv608
- It, Ireteba loam, overflow, nv608
- Ln, Lahontan variant silty clay, poorly drained, nv608
- PIR, Pintwater-Rochpah association, nv608
- PL, Playas, nv608
- PvE, Pintwater-Rock outcrop, 12 to 45 percent slopes, nv608
- RTF, Rockland-St. Thomas association, very steep, nv608

Source -Soils: USDA NRCS Soil Surveys, nv608, nv611, nv754, nv780, nv783, and nv784  
 Base Map: USGS 1:100,000-scale topographic maps

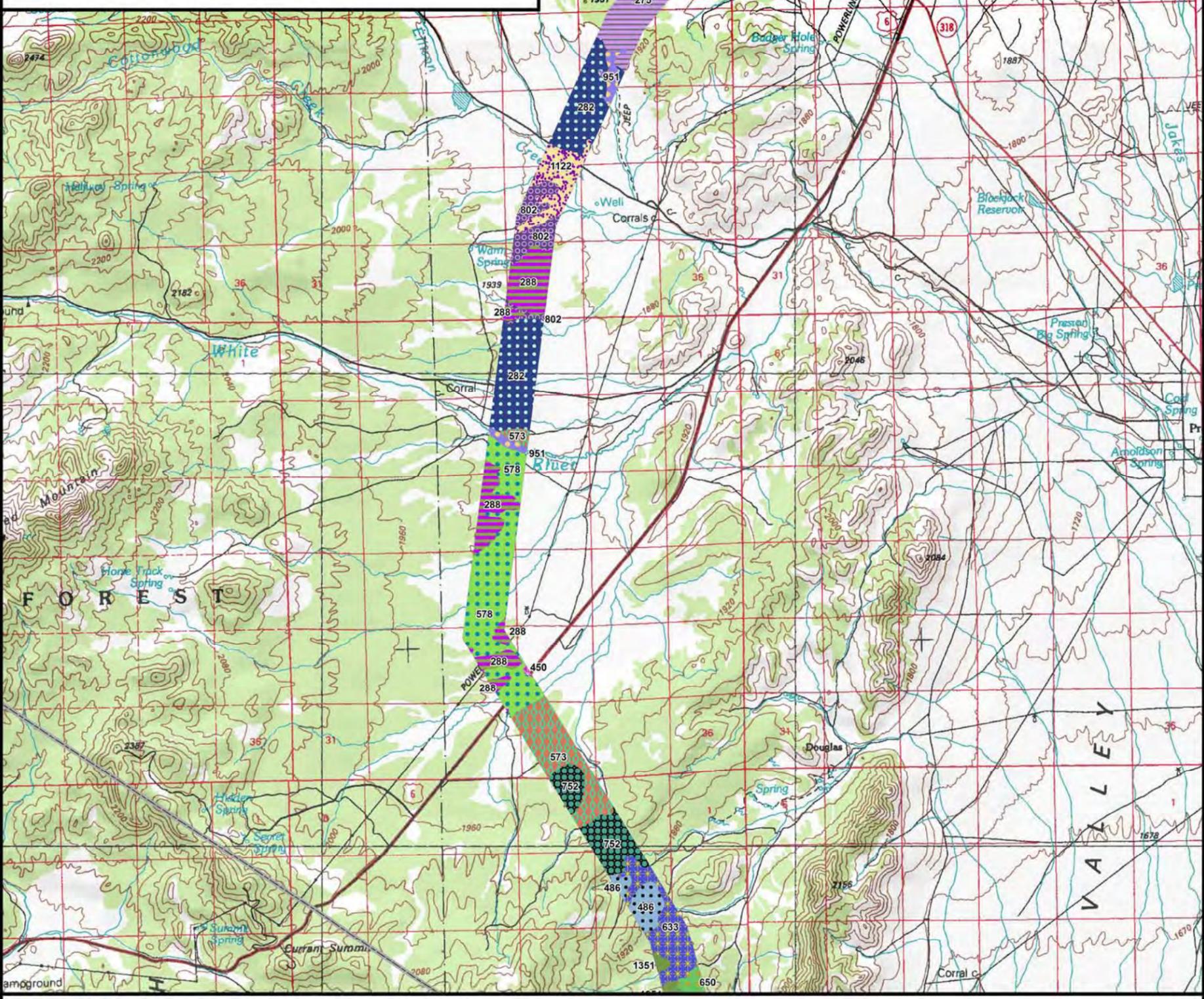
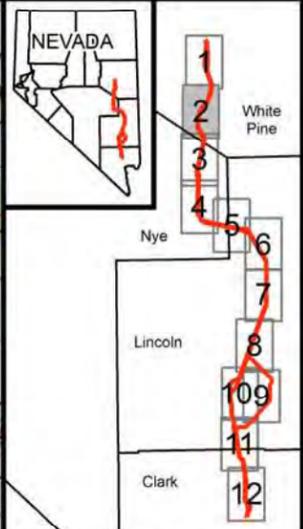
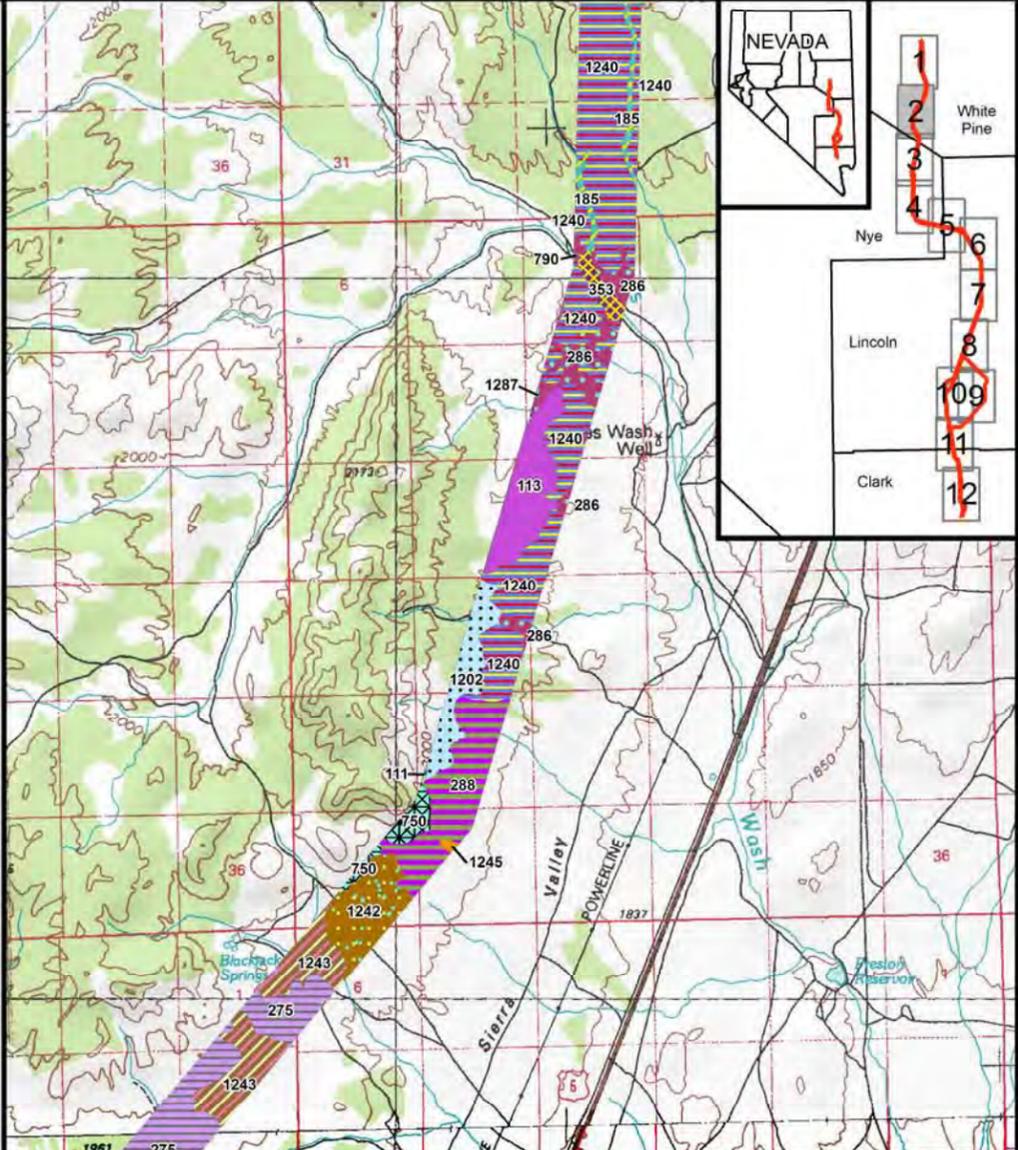


**FIGURE 12  
 SOILS MAP  
 ON LINE PROJECT**

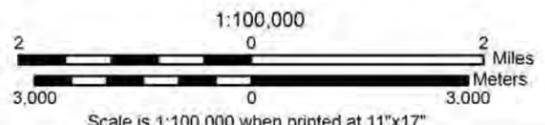
**Soil Map Units within Survey Corridor**

**Map Unit Symbol, Description, Soil Survey**

-  111, Zimbob-Hyzen-Rock outcrop association, nv780
-  1122, Kunzler-Pern association, nv780
-  113, Zimbob-Pookaloo association, nv780
-  1202, Biken-Urmafot association, nv780
-  1240, Biken association, nv780
-  1242, Biken-Palinor-Barfan association, nv780
-  1243, Biken-Breko association, nv780
-  1245, Biken-Tulase association, nv780
-  1287, Palinor-Izar-Biken association, nv780
-  1351, Hyzen-Kyler-Rock Outcrop association, nv780
-  185, Pyrat-Heist-Tulase association, nv780
-  275, Atlow-Upatad association, nv780
-  282, Palinor very gravelly loam, 2 to 15 percent slopes, nv780
-  286, Palinor-Shabliss association, nv780
-  288, Palinor-Yody-Broland association, nv780
-  353, Heist silt loam, 0 to 4 percent slopes, nv780
-  450, Shabliss-Yody association, nv780
-  486, Pioche-Cropper-Upatad association, nv780
-  573, Yody-Palinor-Shabliss association, nv780
-  578, Yody gravelly sandy loam, 2 to 4 percent slopes, nv780
-  633, Roden-Izar associatio, nv780
-  650, Eaglepass-Kyler-Rock outcrop associatio, nv780
-  750, Upatad-Atlow association, nv780
-  752, Upatad-Atlow-Pioche association, nv780
-  790, Bylo-Tulase association, nv780
-  802, Broland-Yody association, nv780
-  951, Nyak-Uwell-Pern association, nv780



Source -Soils: USDA NRCS Soil Surveys, nv608, nv611, nv754, nv780, nv783, and nv784  
 Base Map: USGS 1:100,000-scale topographic maps

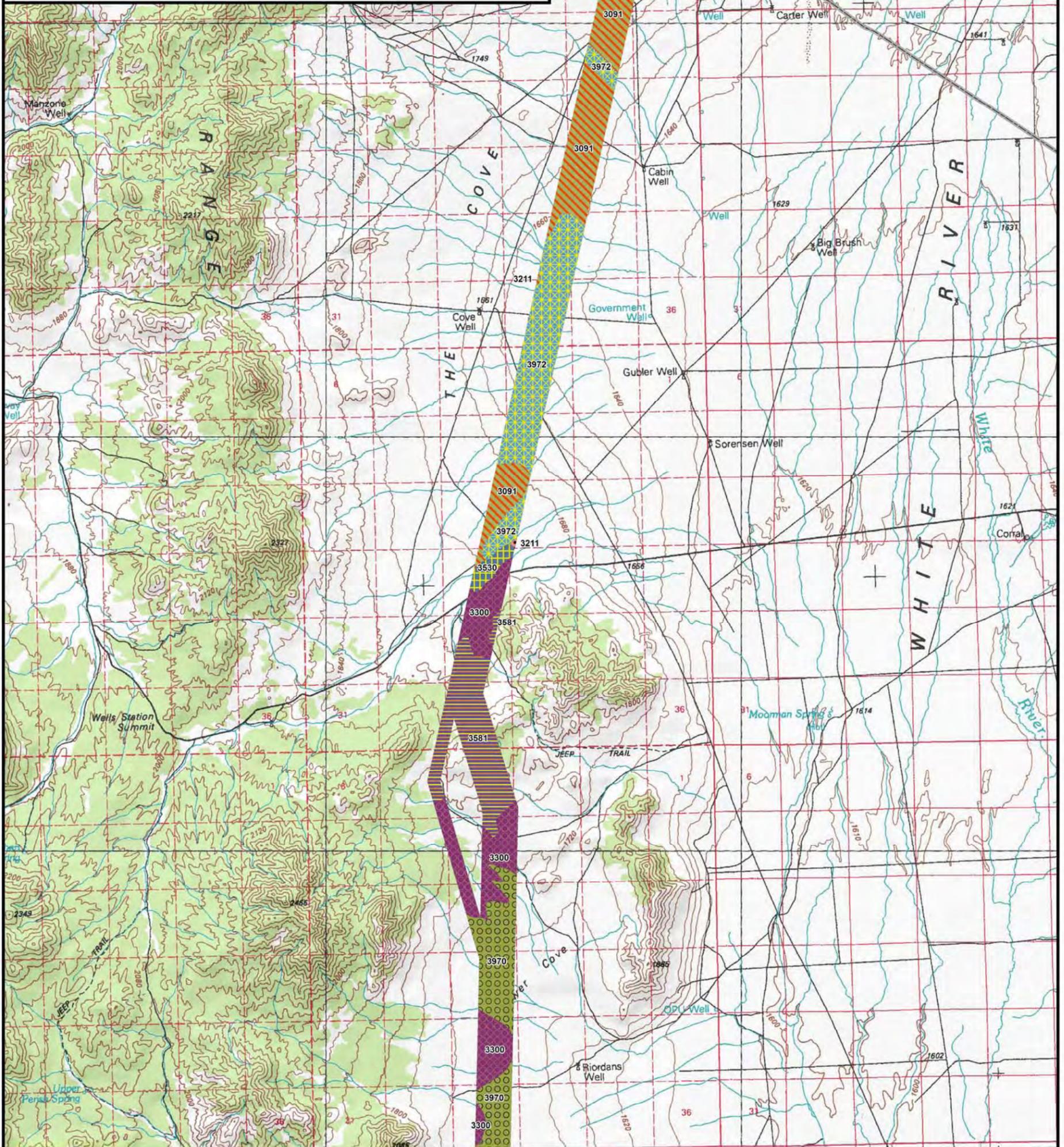
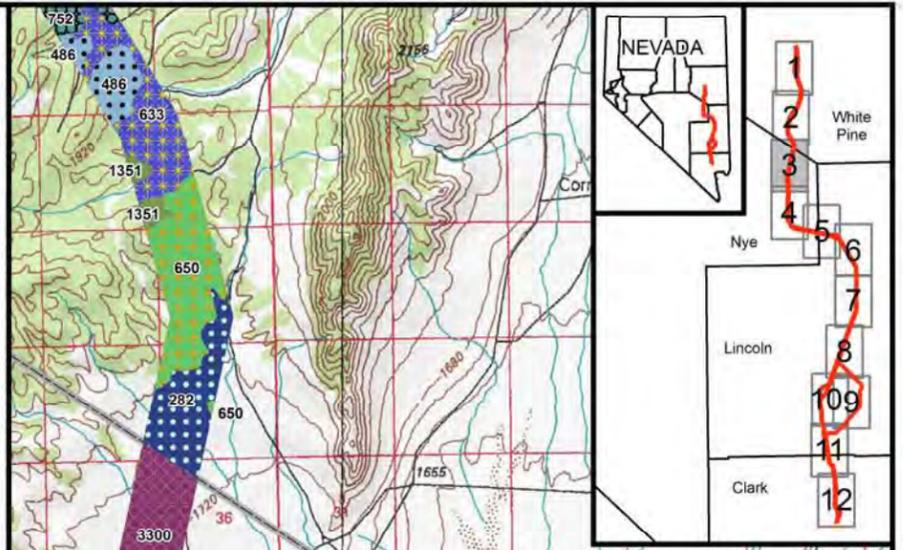


**FIGURE 2  
 SOILS MAP  
 ON LINE PROJECT**

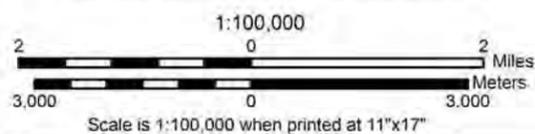
**Soil Map Units within Survey Corridor**

**Map Unit Symbol, Description, Soil Survey**

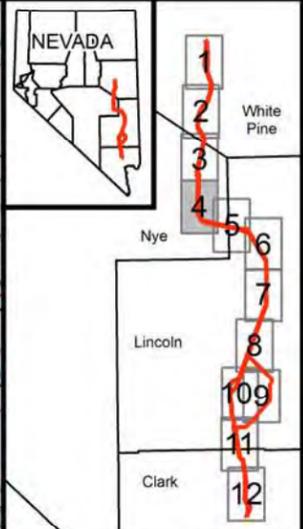
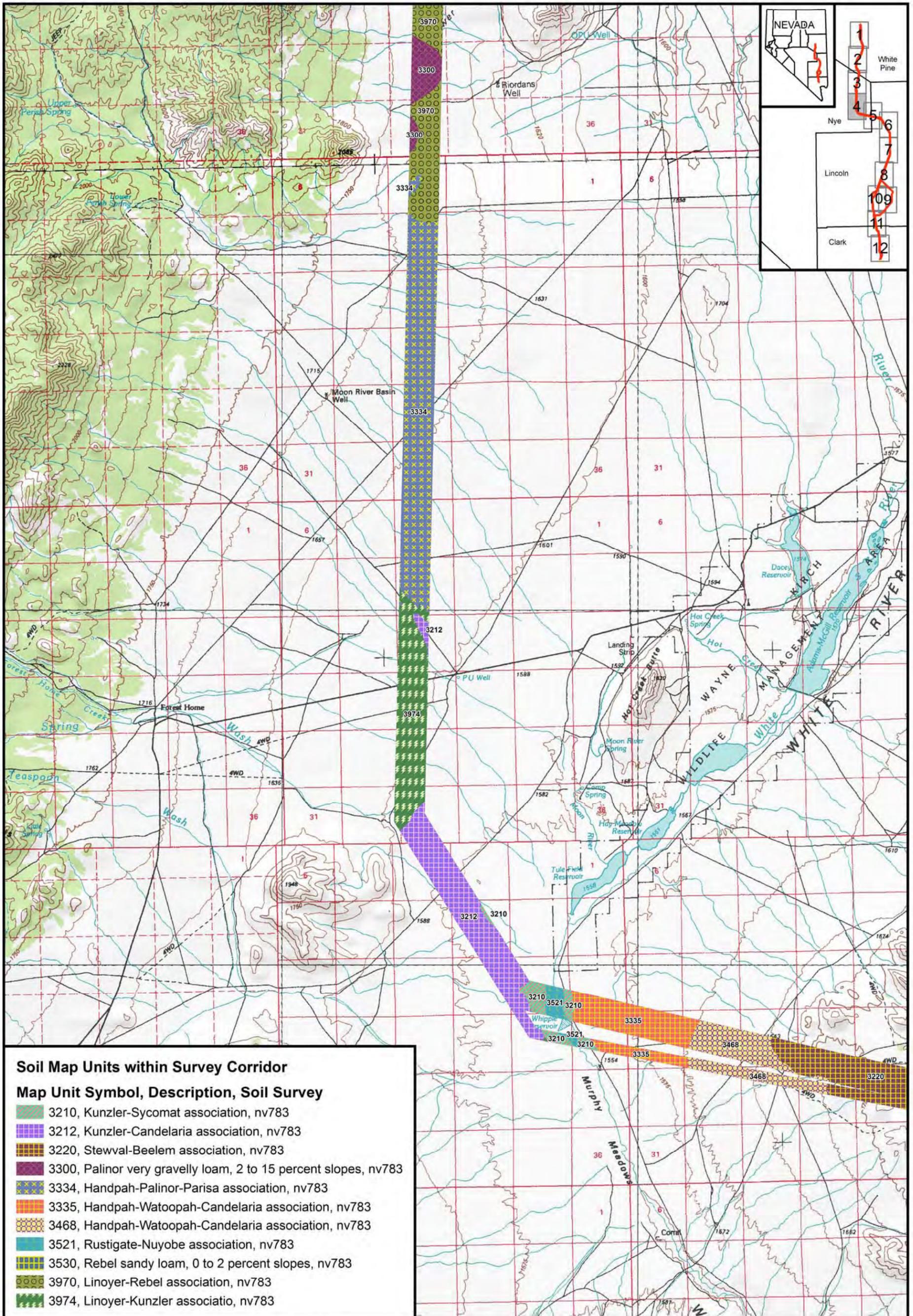
-  1351, Hyzen-Kyler-Rock Outcrop association, nv780
-  282, Palinor very gravelly loam, 2 to 15 percent slopes, nv780
-  3091, Univega-Clowfin-Molion association, nv783
-  3211, Kunzler, dry-Sycomat association, nv783
-  3300, Palinor very gravelly loam, 2 to 15 percent slopes, nv783
-  3530, Rebel sandy loam, 0 to 2 percent slopes, nv783
-  3581, Kyler, moist-Rock outcrop complex, 15 to 50 percent slopes, nv783
-  3970, Linoyer-Rebel association, nv783
-  3972, Linoyer very fine sandy loam, 0 to 4 percent slopes, nv783
-  486, Pioche-Cropper-Upatad association, nv780
-  633, Roden-Izar association, nv780
-  650, Eaglepass-Kyler-Rock outcrop association, nv780
-  752, Upatad-Atlow-Pioche association, nv780
-  951, Nyak-Uwell-Pern association, nv780



Source -Soils: USDA NRCS Soil Surveys, nv608, nv611, nv754, nv780, nv783, and nv784  
 Base Map: USGS 1:100,000-scale topographic maps



**FIGURE 3  
 SOILS MAP  
 ON LINE PROJECT**

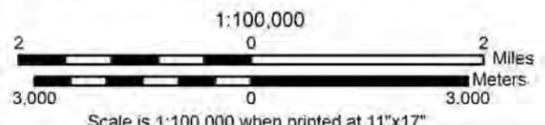


**Soil Map Units within Survey Corridor**

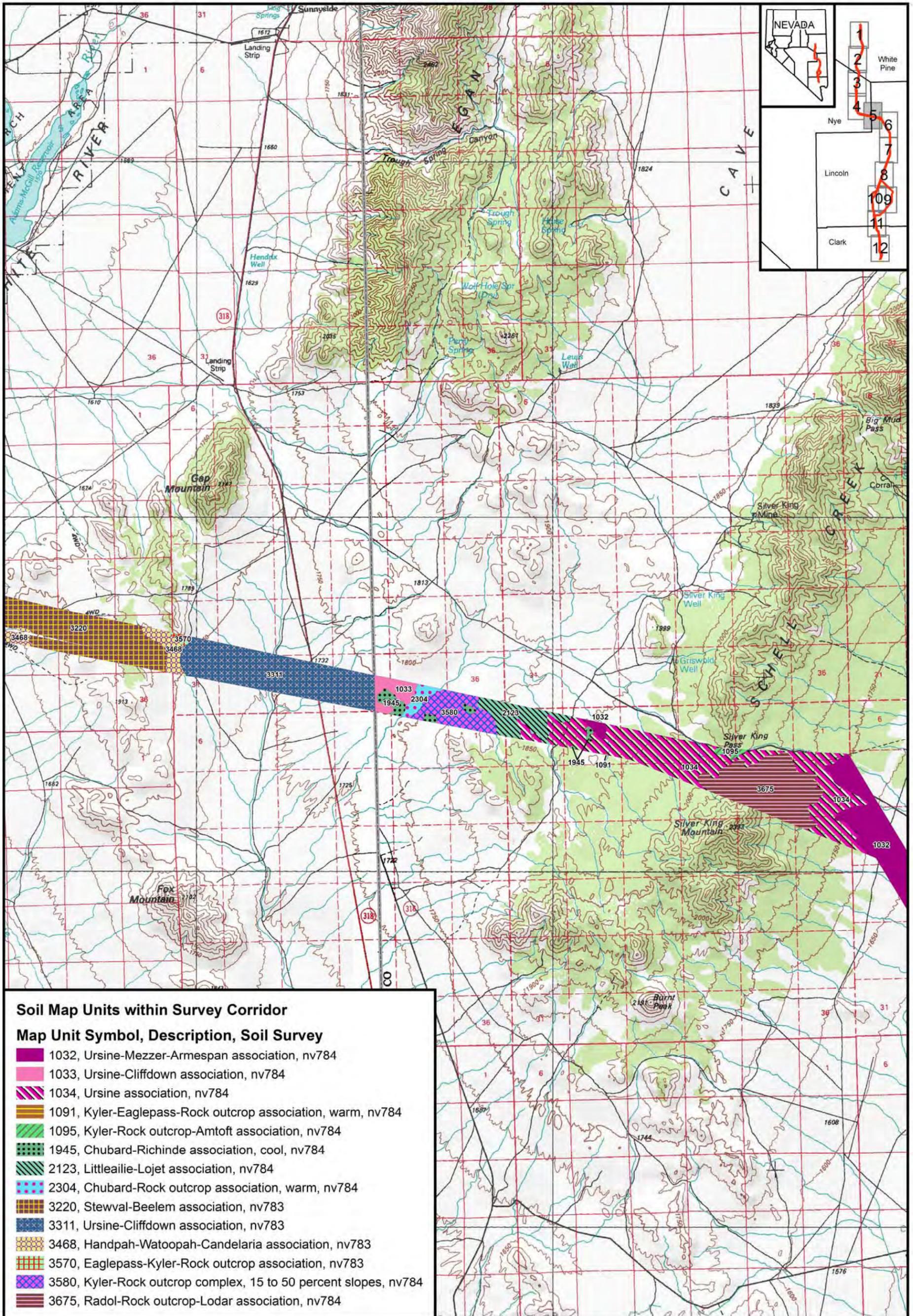
**Map Unit Symbol, Description, Soil Survey**

	3210, Kunzler-Sycomat association, nv783
	3212, Kunzler-Candelaria association, nv783
	3220, Stewval-Beelem association, nv783
	3300, Palinor very gravelly loam, 2 to 15 percent slopes, nv783
	3334, Handpah-Palinor-Parisa association, nv783
	3335, Handpah-Watoopah-Candelaria association, nv783
	3468, Handpah-Watoopah-Candelaria association, nv783
	3521, Rustigate-Nuyobe association, nv783
	3530, Rebel sandy loam, 0 to 2 percent slopes, nv783
	3970, Linoyer-Rebel association, nv783
	3974, Linoyer-Kunzler associatio, nv783

Source -Soils: USDA NRCS Soil Surveys, nv608, nv611, nv754, nv780, nv783, and nv784  
 Base Map: USGS 1:100,000-scale topographic maps



**FIGURE 4**  
**SOILS MAP**  
**ON LINE PROJECT**

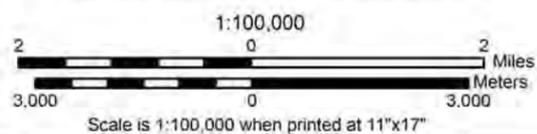


**Soil Map Units within Survey Corridor**

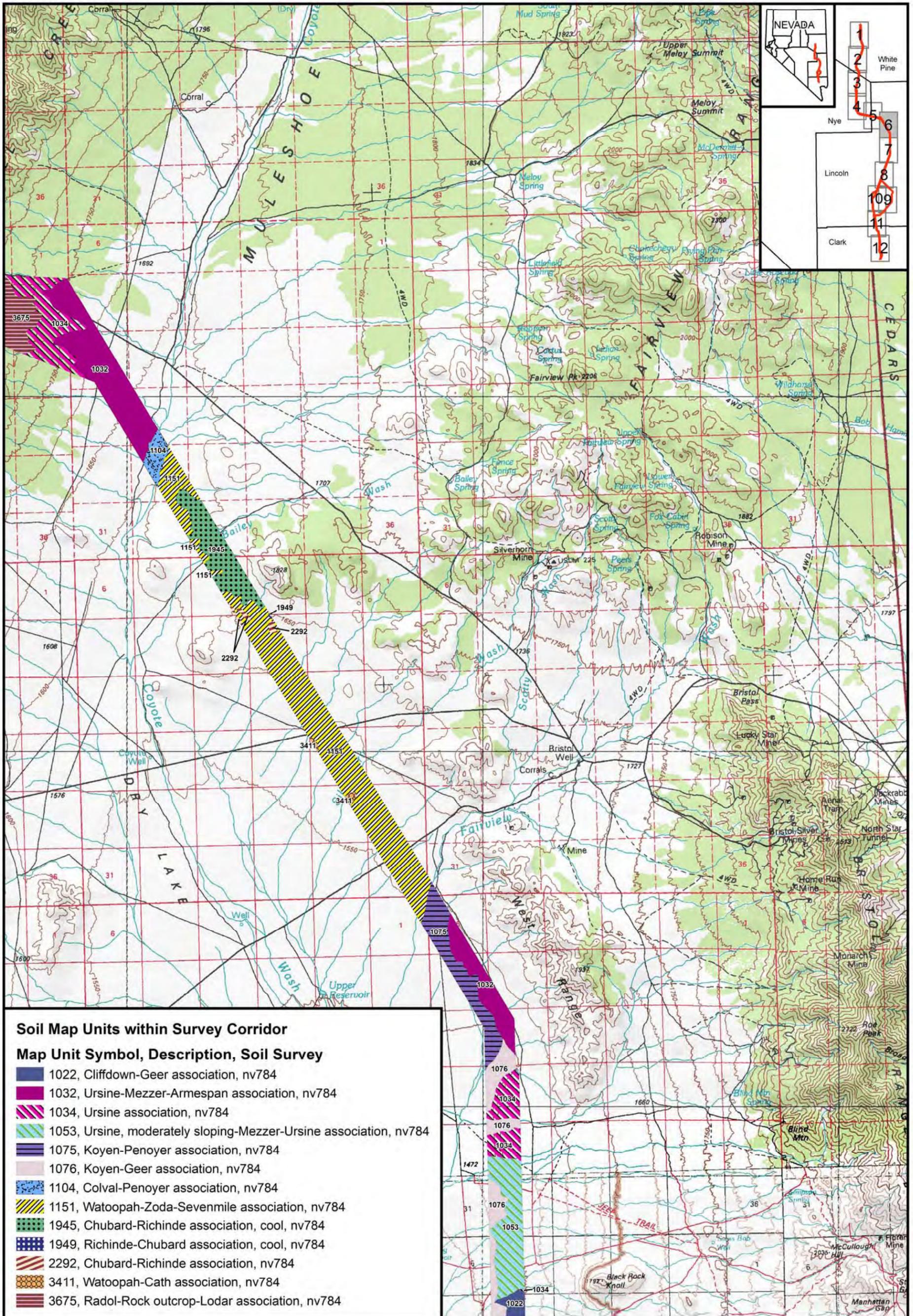
**Map Unit Symbol, Description, Soil Survey**

- 1032, Ursine-Mezzer-Armespan association, nv784
- 1033, Ursine-Cliffdown association, nv784
- 1034, Ursine association, nv784
- 1091, Kyler-Eaglepass-Rock outcrop association, warm, nv784
- 1095, Kyler-Rock outcrop-Amtoft association, nv784
- 1945, Chubard-Richinde association, cool, nv784
- 2123, Littleailie-Lojet association, nv784
- 2304, Chubard-Rock outcrop association, warm, nv784
- 3220, Stewval-Beelem association, nv783
- 3311, Ursine-Cliffdown association, nv783
- 3468, Handpah-Watopah-Candelaria association, nv783
- 3570, Eaglepass-Kyler-Rock outcrop association, nv783
- 3580, Kyler-Rock outcrop complex, 15 to 50 percent slopes, nv784
- 3675, Radol-Rock outcrop-Lodar association, nv784

Source -Soils: USDA NRCS Soil Surveys, nv608, nv611, nv754, nv780, nv783, and nv784  
 Base Map: USGS 1:100,000-scale topographic maps



**FIGURE 5**  
**SOILS MAP**  
**ON LINE PROJECT**

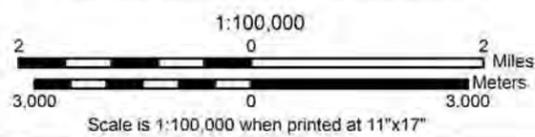


**Soil Map Units within Survey Corridor**

**Map Unit Symbol, Description, Soil Survey**

-  1022, Cliffdown-Geer association, nv784
-  1032, Ursine-Mezzer-Armespan association, nv784
-  1034, Ursine association, nv784
-  1053, Ursine, moderately sloping-Mezzer-Ursine association, nv784
-  1075, Koyen-Penoyer association, nv784
-  1076, Koyen-Geer association, nv784
-  1104, Colval-Penoyer association, nv784
-  1151, Watoopah-Zoda-Sevenmile association, nv784
-  1945, Chubard-Richinde association, cool, nv784
-  1949, Richinde-Chubard association, cool, nv784
-  2292, Chubard-Richinde association, nv784
-  3411, Watoopah-Cath association, nv784
-  3675, Radol-Rock outcrop-Lodar association, nv784

Source -Soils: USDA NRCS Soil Surveys, nv608, nv611, nv754, nv780, nv783, and nv784  
 Base Map: USGS 1:100,000-scale topographic maps

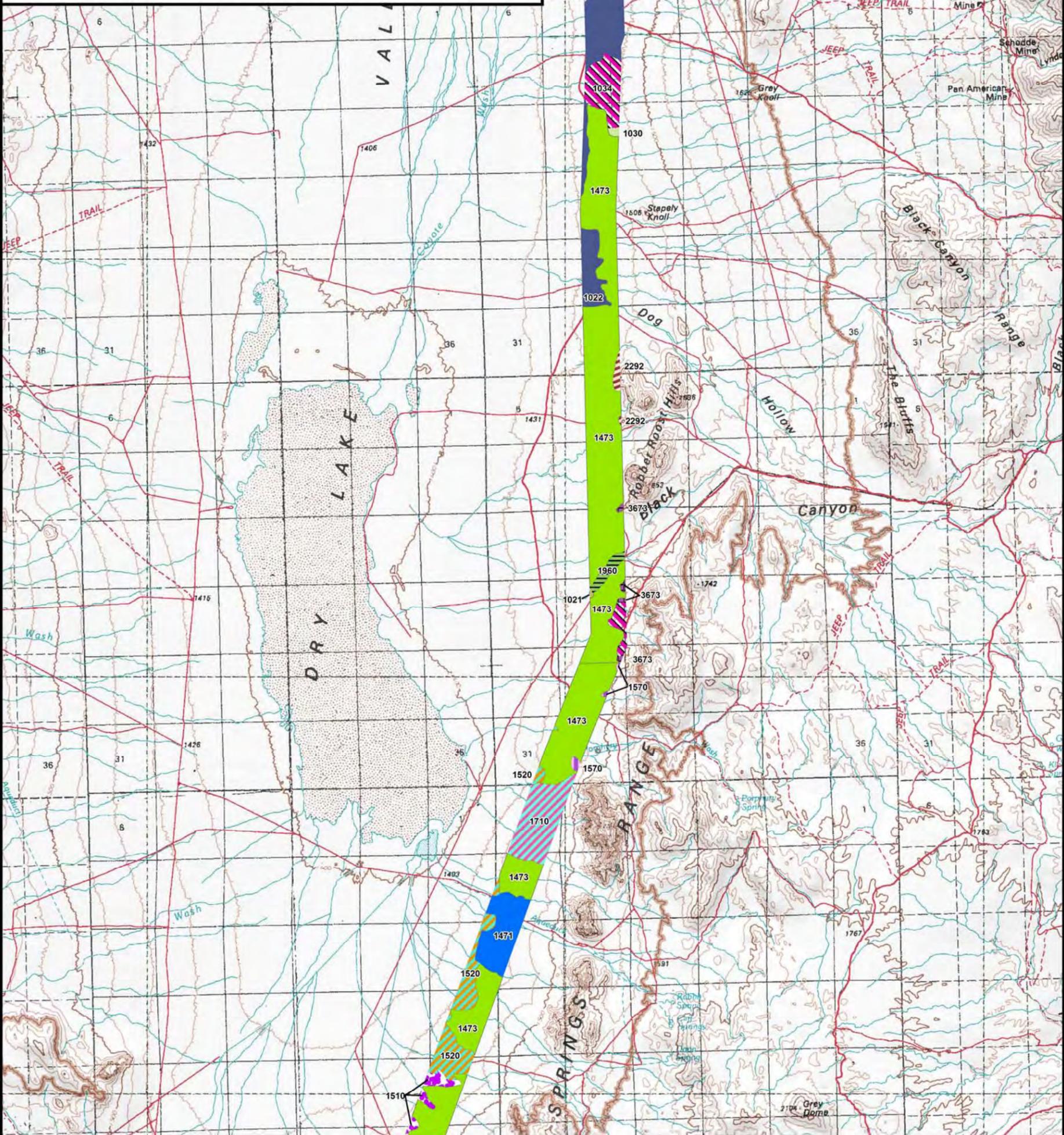
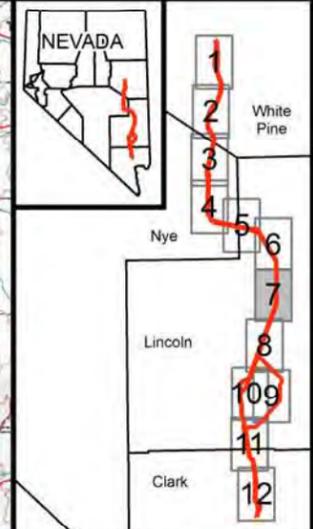


**FIGURE 6**  
**SOILS MAP**  
**ON LINE PROJECT**

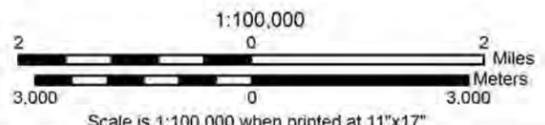
**Soil Map Units within Survey Corridor**

**Map Unit Symbol, Description, Soil Survey**

-  1021, Geer-Penoyer association, nv784
-  1022, Cliffdown-Geer association, nv784
-  1030, Ursine-Escalante association, nv784
-  1034, Ursine association, nv784
-  1053, Ursine, moderately sloping-Mezzer-Ursine association, nv784
-  1076, Koyen-Geer association, nv784
-  1471, Tybo-Koyen association, nv784
-  1473, Tybo-Leo association, nv784
-  1510, Koyen gravelly sandy loam, 2 to 4 percent slope, nv784
-  1520, Geer-Penoyer association, nv784
-  1570, Kyler-Eaglepass-Rock outcrop association, nv784
-  1710, Cliffdown gravelly sandy loam, 4 to 8 percent slopes, nv784
-  1960, Crystal Springs gravelly sandy loam, 2 to 8 percent slopes, nv784
-  2292, Chubard-Richinde association, nv784
-  3673, Kyler, very stony-Rock outcrop-Kyler association, nv784



Source -Soils: USDA NRCS Soil Surveys, nv608, nv611, nv754, nv780, nv783, and nv784  
 Base Map: USGS 1:100,000-scale topographic maps

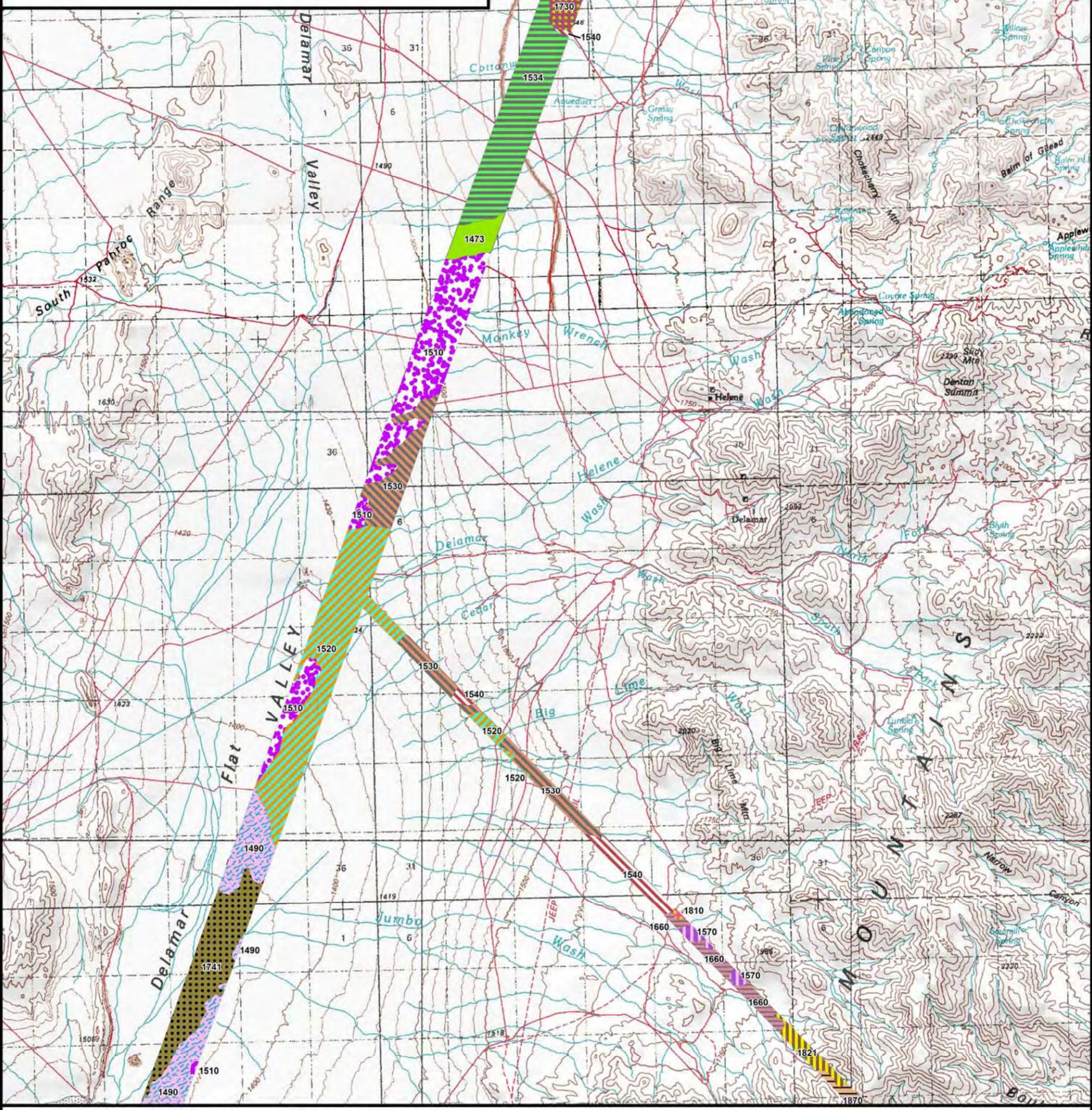
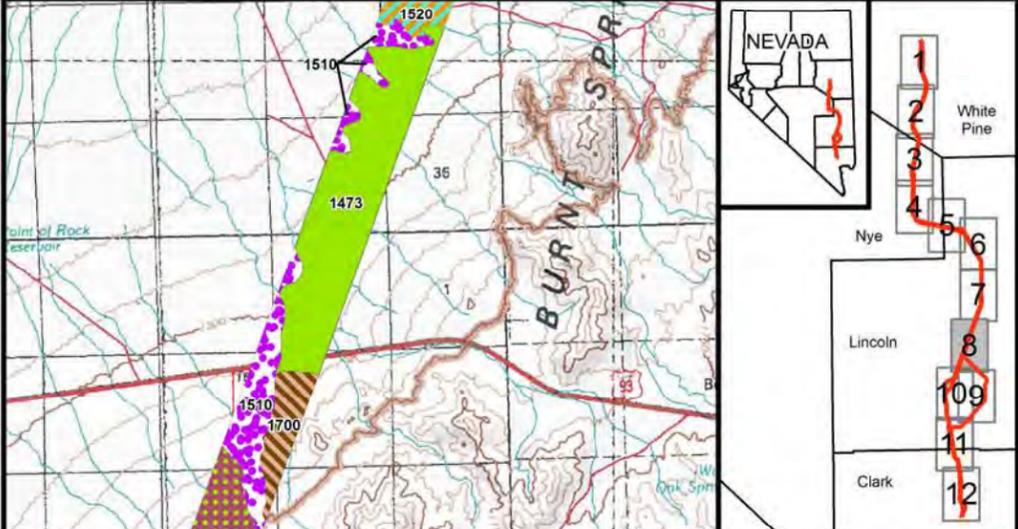


**FIGURE 7**  
**SOILS MAP**  
**ON LINE PROJECT**

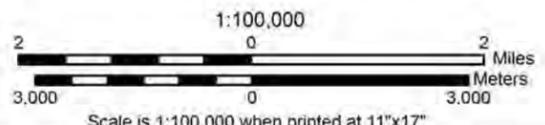
**Soil Map Units within Survey Corridor**

**Map Unit Symbol, Description, Soil Survey**

-  1473, Tybo-Leo association, nv754
-  1490, Keefa-Penoyer association, nv754
-  1510, Koyen gravelly sandy loam, 2 to 4 percent slope, nv754
-  1520, Fax-Yody-Broland association, nv754
-  1520, Geer-Penoyer association, nv754
-  1530, Delamar-Leo association, nv754
-  1534, Delamar-Koyen association, nv754
-  1540, Oleman-Leo association, nv754
-  1550, Pahroc-Leo association, nv754
-  1570, Kyler-Eaglepass-Rock outcrop association, nv754
-  1590, Winklo-Wyva association, nv754
-  1660, Dewrust-Veet association, nv754
-  1700, Sierocliiff-Veet association, nv754
-  1730, Cath-Veet association, nv754
-  1741, Slaw silt loam, 0 to 2 percent slopes, nv754
-  1810, Boxspring-Rock outcrop association, nv754
-  1821, Turba-Acti association, nv754
-  1870, Faleria-Laross association, nv754



Source -Soils: USDA NRCS Soil Surveys, nv608, nv611, nv754, nv780, nv783, and nv784  
 Base Map: USGS 1:100,000-scale topographic maps

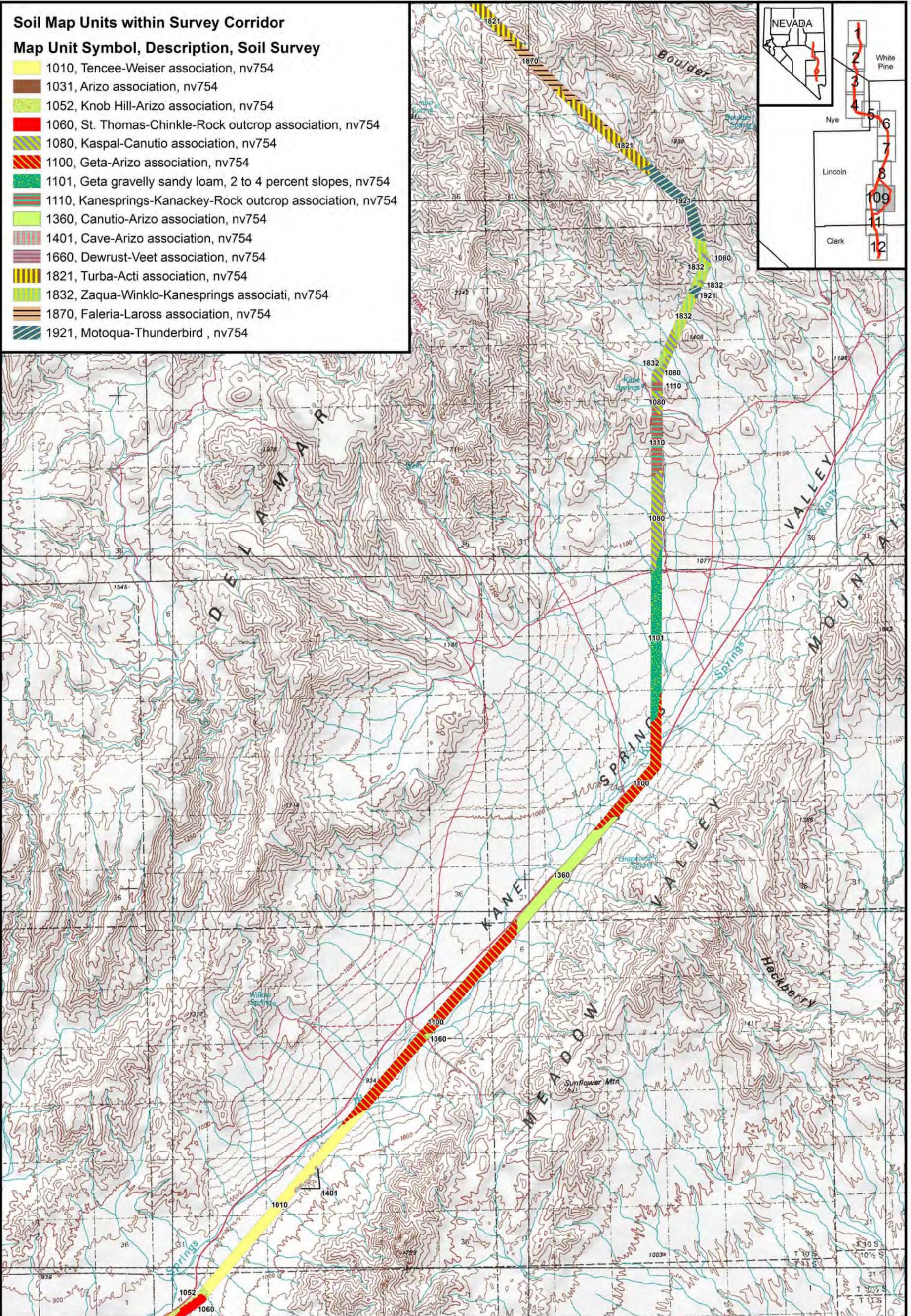


**FIGURE 8**  
**SOILS MAP**  
**ON LINE PROJECT**

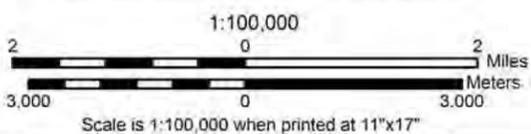
**Soil Map Units within Survey Corridor**

**Map Unit Symbol, Description, Soil Survey**

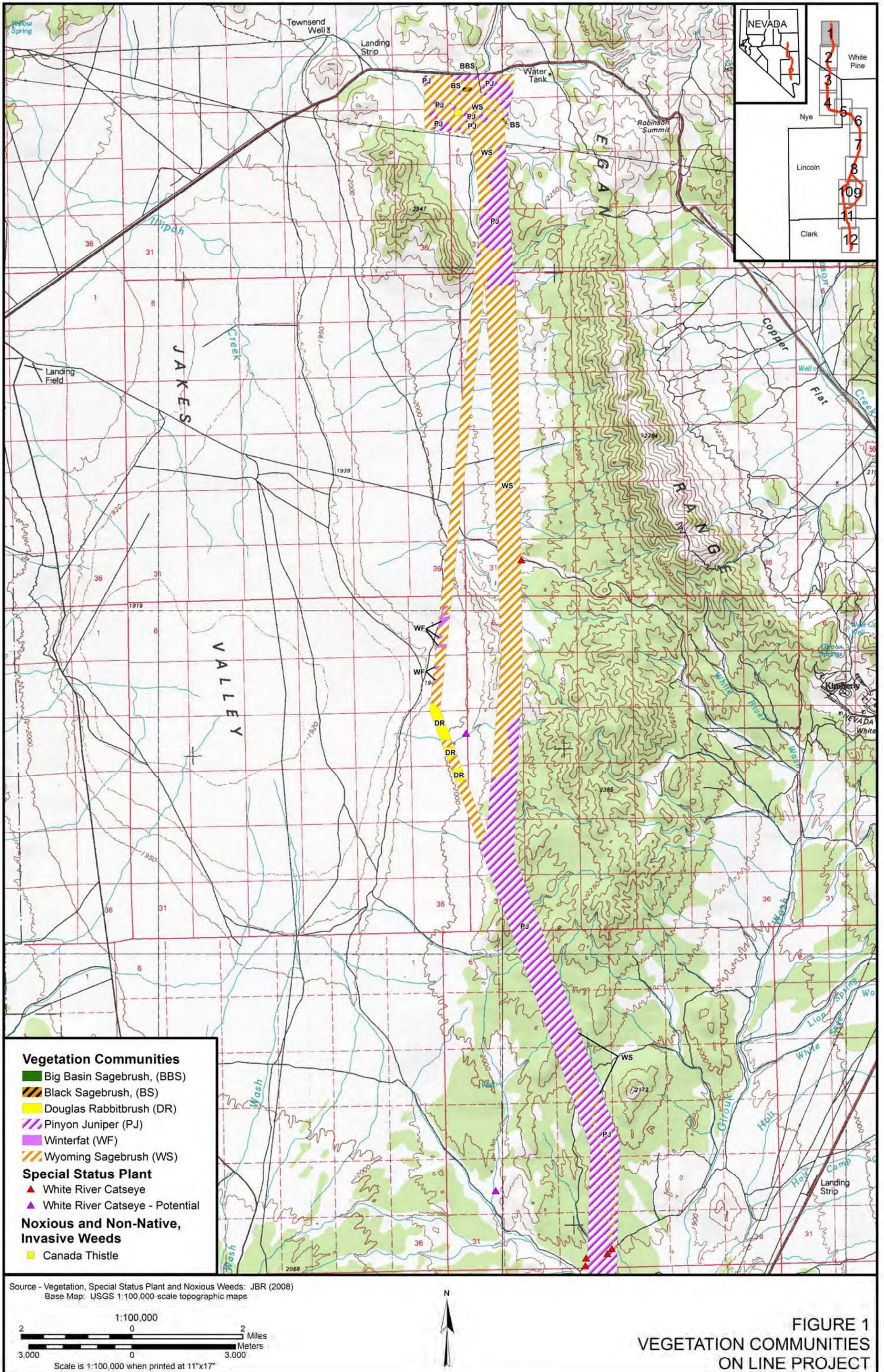
-  1010, Tencee-Weiser association, nv754
-  1031, Arizo association, nv754
-  1052, Knob Hill-Arizo association, nv754
-  1060, St. Thomas-Chinkle-Rock outcrop association, nv754
-  1080, Kaspal-Canutio association, nv754
-  1100, Geta-Arizo association, nv754
-  1101, Geta gravelly sandy loam, 2 to 4 percent slopes, nv754
-  1110, Kanespings-Kanackey-Rock outcrop association, nv754
-  1360, Canutio-Arizo association, nv754
-  1401, Cave-Arizo association, nv754
-  1660, Dewrust-Veet association, nv754
-  1821, Turba-Acti association, nv754
-  1832, Zauqa-Winklo-Kanesprings associati, nv754
-  1870, Faleria-Laross association, nv754
-  1921, Motoqua-Thunderbird , nv754



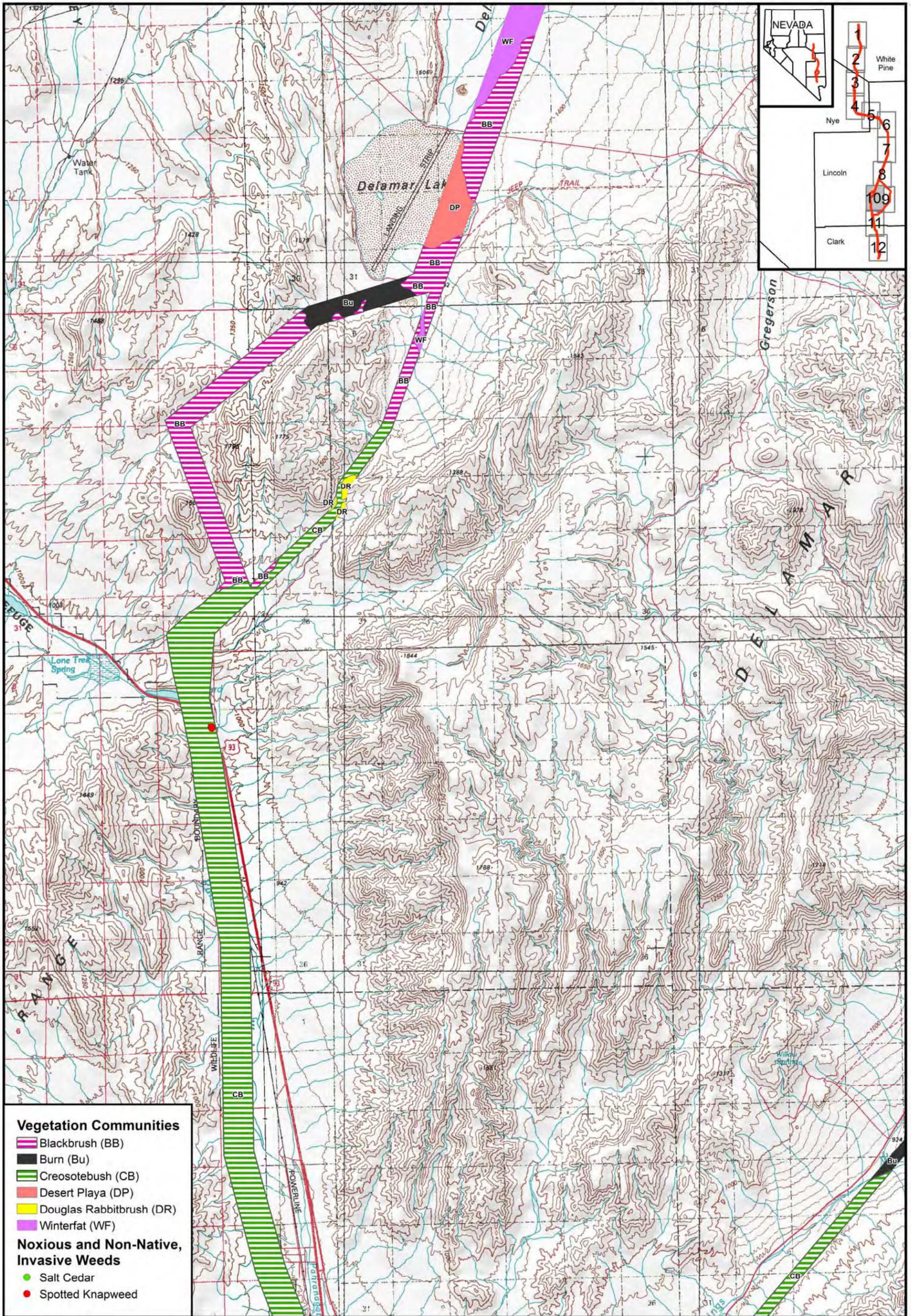
Source -Soils: USDA NRCS Soil Surveys, nv608, nv611, nv754, nv780, nv783, and nv784  
 Base Map: USGS 1:100,000-scale topographic maps



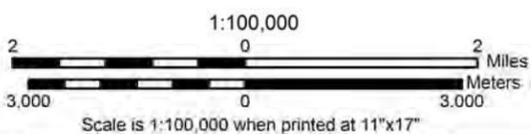
**FIGURE 9**  
**SOILS MAP**  
**ON LINE PROJECT**



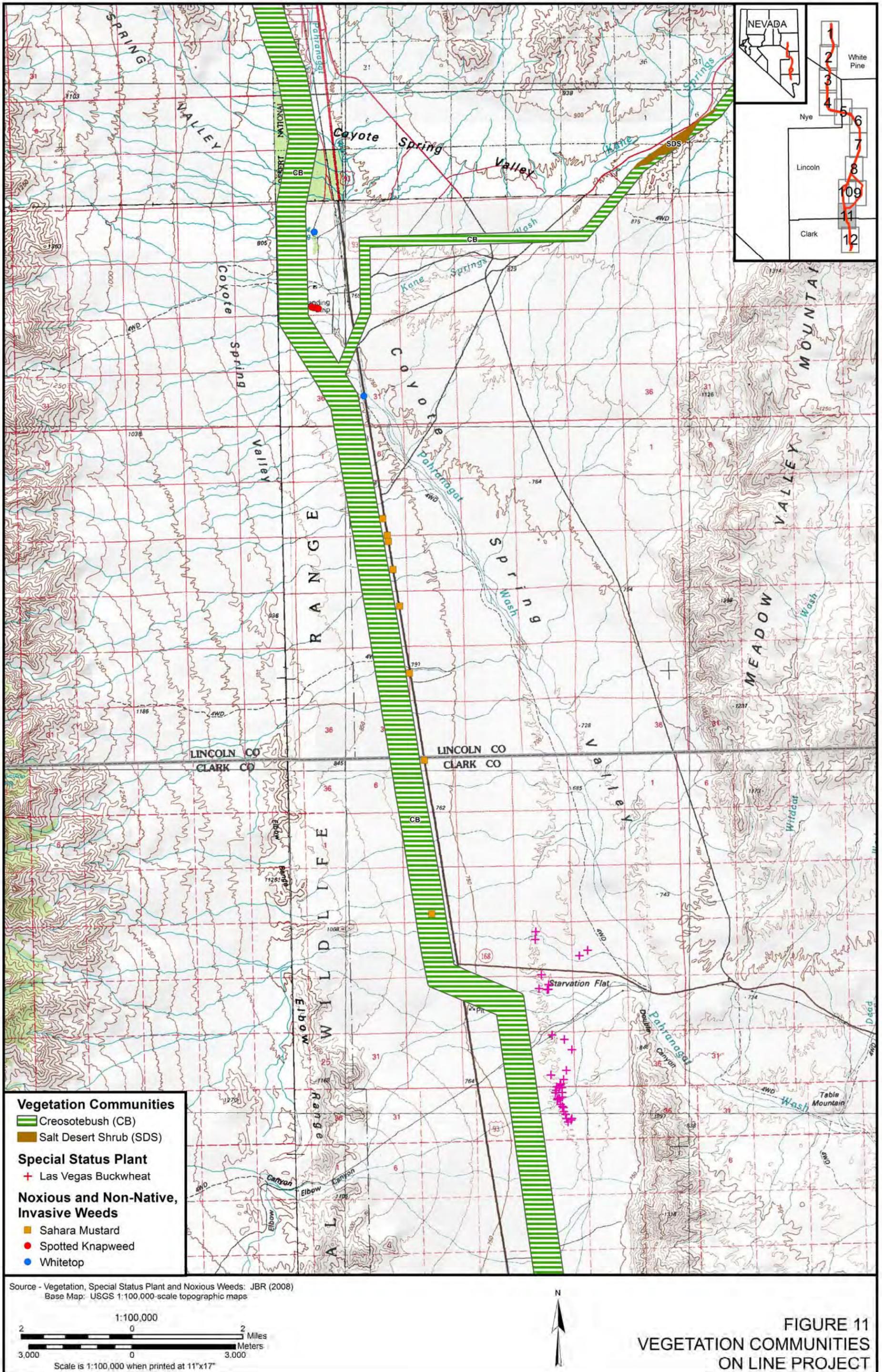
**FIGURE 1**  
**VEGETATION COMMUNITIES**  
**ON LINE PROJECT**

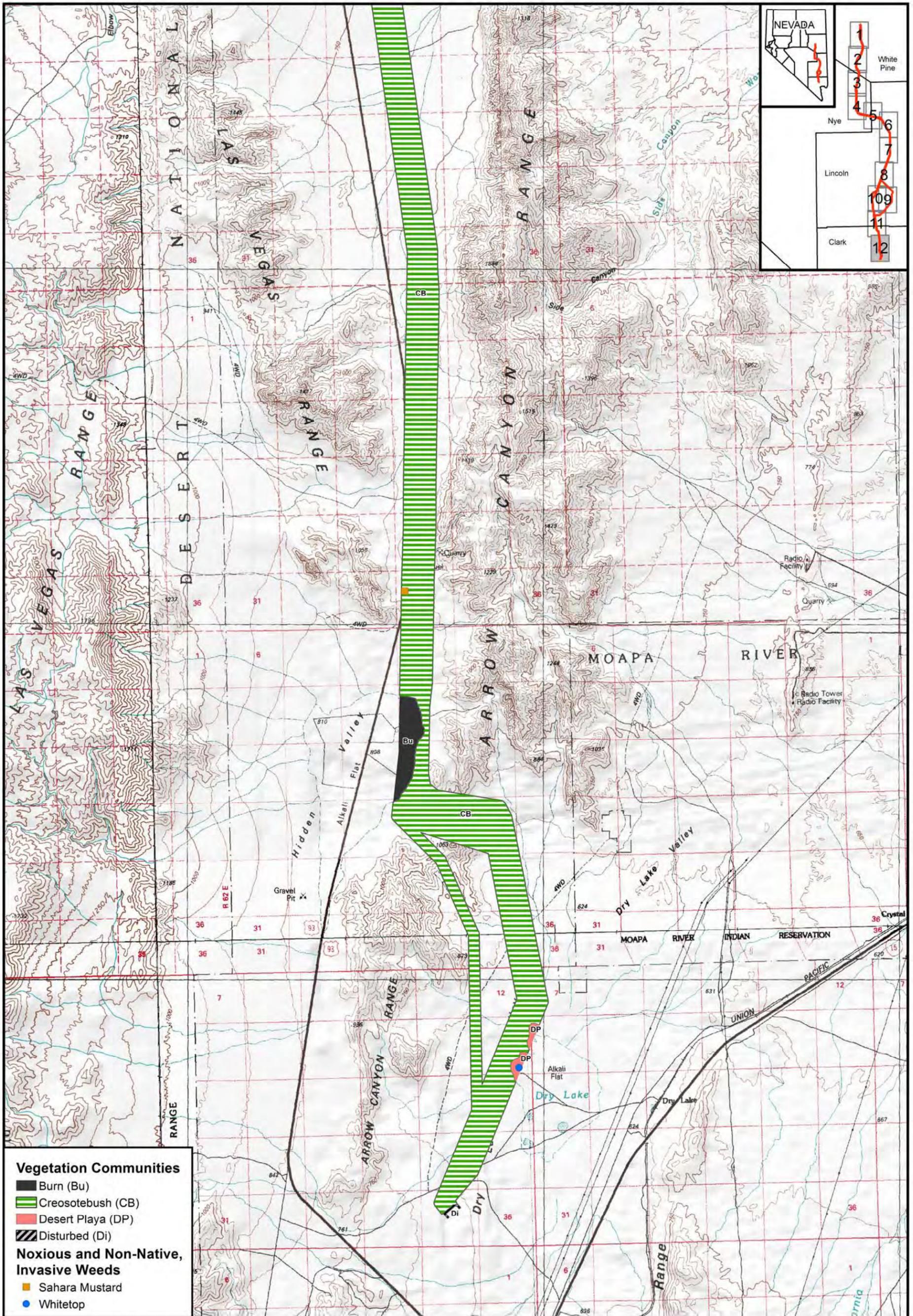


Source - Vegetation, Special Status Plant and Noxious Weeds: JBR (2008)  
 Base Map: USGS 1:100,000-scale topographic maps



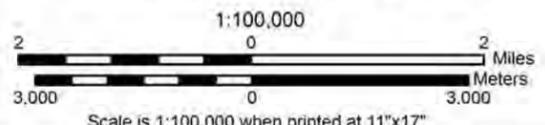
**FIGURE 10**  
**VEGETATION COMMUNITIES**  
**ON LINE PROJECT**



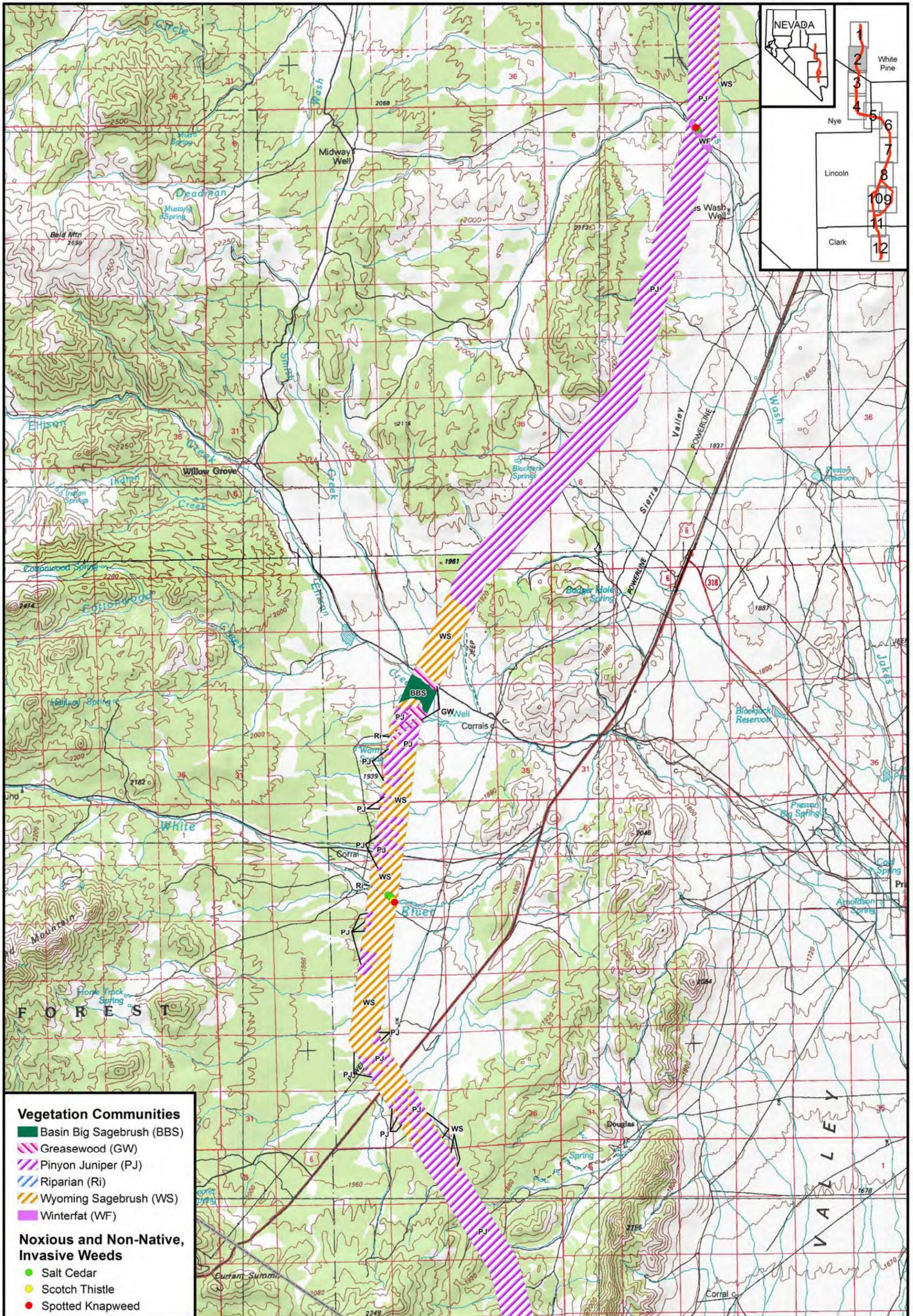


- Vegetation Communities**
- Burn (Bu)
  - Creosotebush (CB)
  - Desert Playa (DP)
  - Disturbed (Di)
- Noxious and Non-Native, Invasive Weeds**
- Sahara Mustard
  - Whitetop

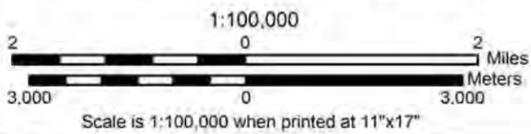
Source - Vegetation, Special Status Plant and Noxious Weeds: JBR (2008)  
 Base Map: USGS 1:100,000-scale topographic maps



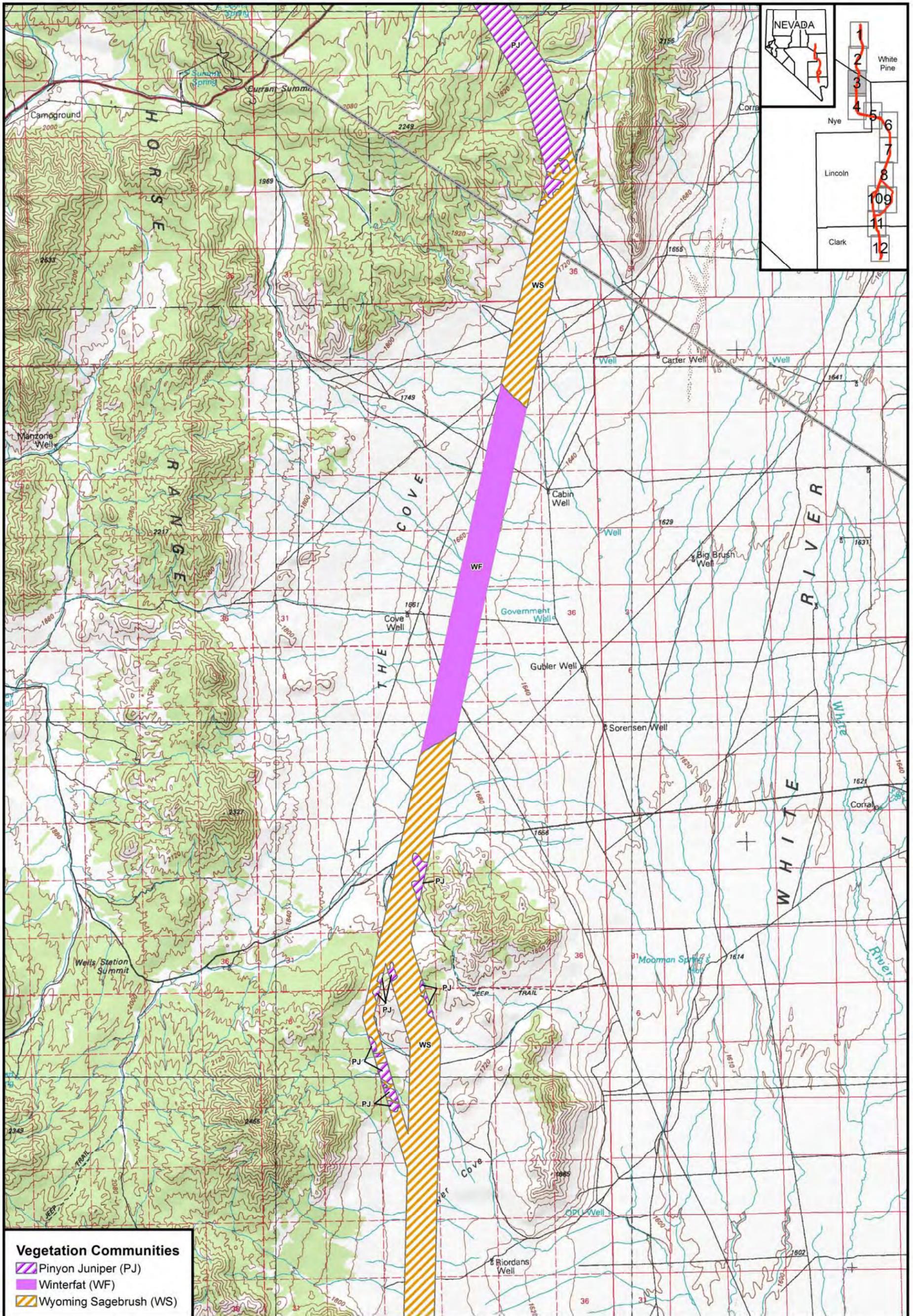
**FIGURE 12**  
**VEGETATION COMMUNITIES**  
**ON LINE PROJECT**



Source - Vegetation, Special Status Plant and Noxious Weeds: JBR (2008)  
 Base Map: USGS 1:100,000-scale topographic maps



**FIGURE 2**  
**VEGETATION COMMUNITIES**  
**ON LINE PROJECT**



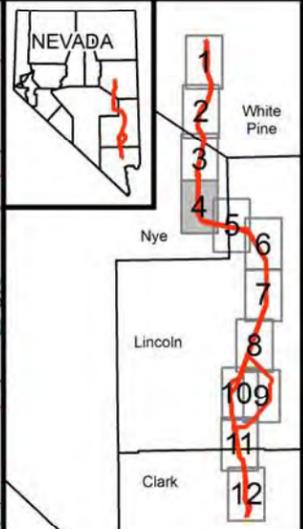
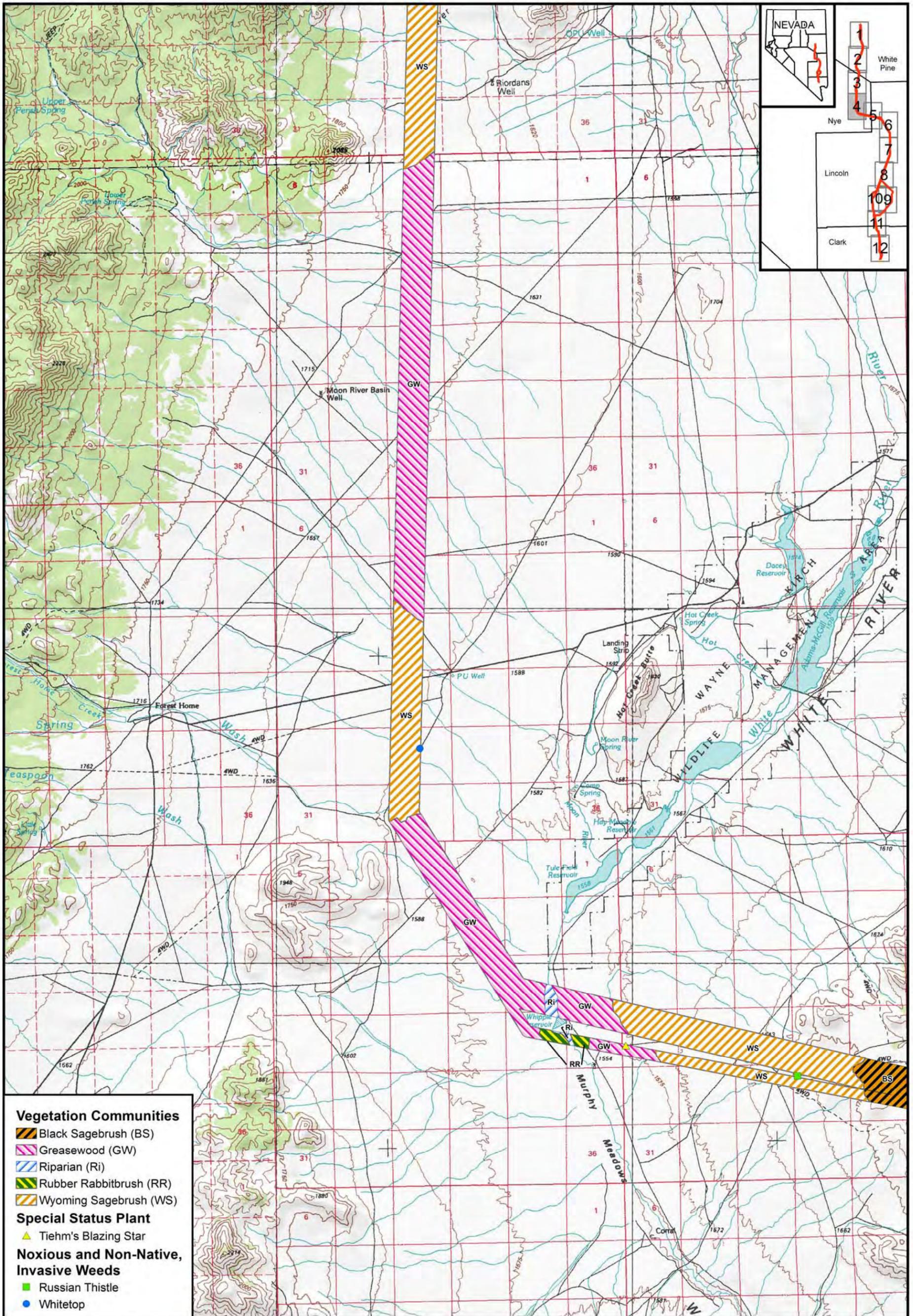
**Vegetation Communities**  
 Pinyon Juniper (PJ)  
 Winterfat (WF)  
 Wyoming Sagebrush (WS)

Source - Vegetation, Special Status Plant and Noxious Weeds: JBR (2008)  
 Base Map: USGS 1:100,000-scale topographic maps

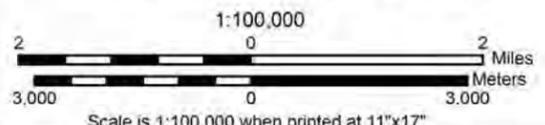
1:100,000  
 2 Miles  
 3,000 Meters  
 Scale is 1:100,000 when printed at 11"x17"



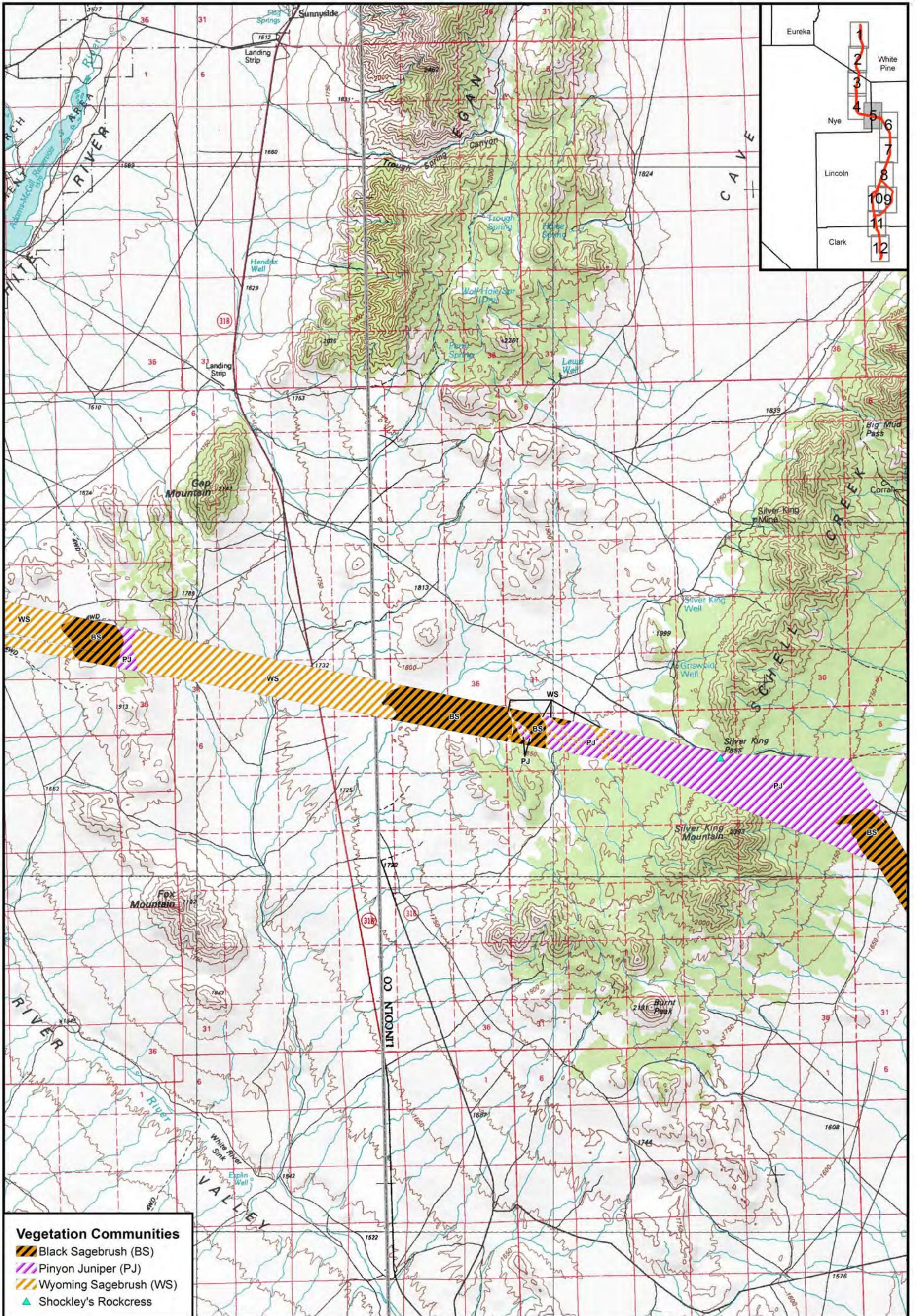
**FIGURE 3**  
**VEGETATION COMMUNITIES**  
**ON LINE PROJECT**



Source - Vegetation, Special Status Plant and Noxious Weeds: JBR (2008)  
 Base Map: USGS 1:100,000-scale topographic maps



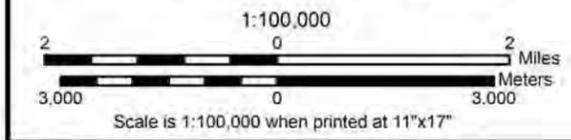
**FIGURE 4**  
**VEGETATION COMMUNITIES**  
**ON LINE PROJECT**



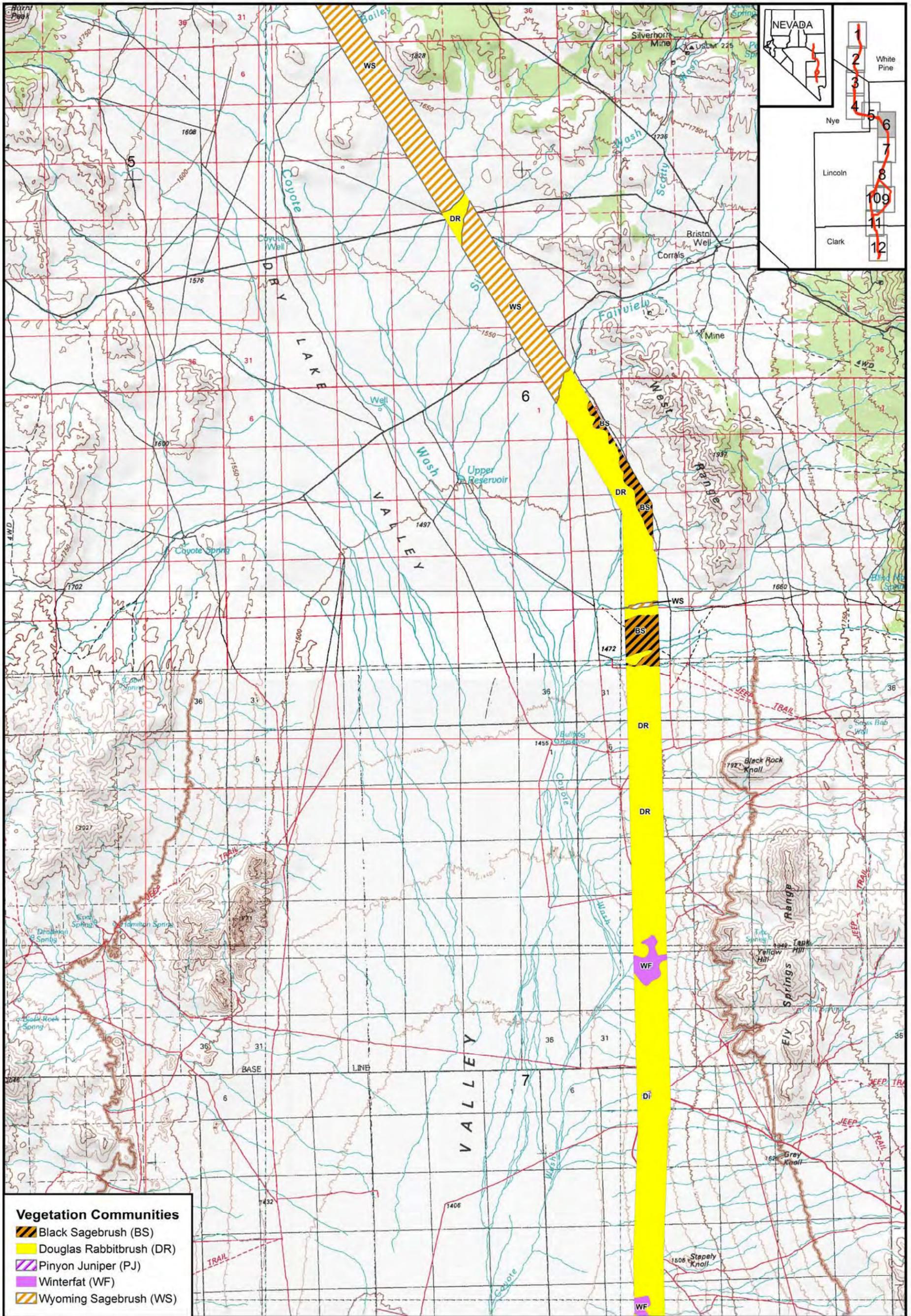
**Vegetation Communities**

-  Black Sagebrush (BS)
-  Pinyon Juniper (PJ)
-  Wyoming Sagebrush (WS)
-  Shockley's Rockcress

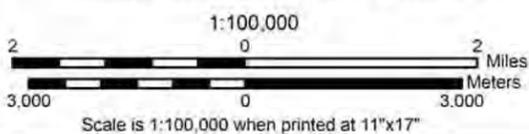
Source - Vegetation, Special Status Plant and Noxious Weeds: JBR (2008)  
 Base Map: USGS 1:100,000-scale topographic maps



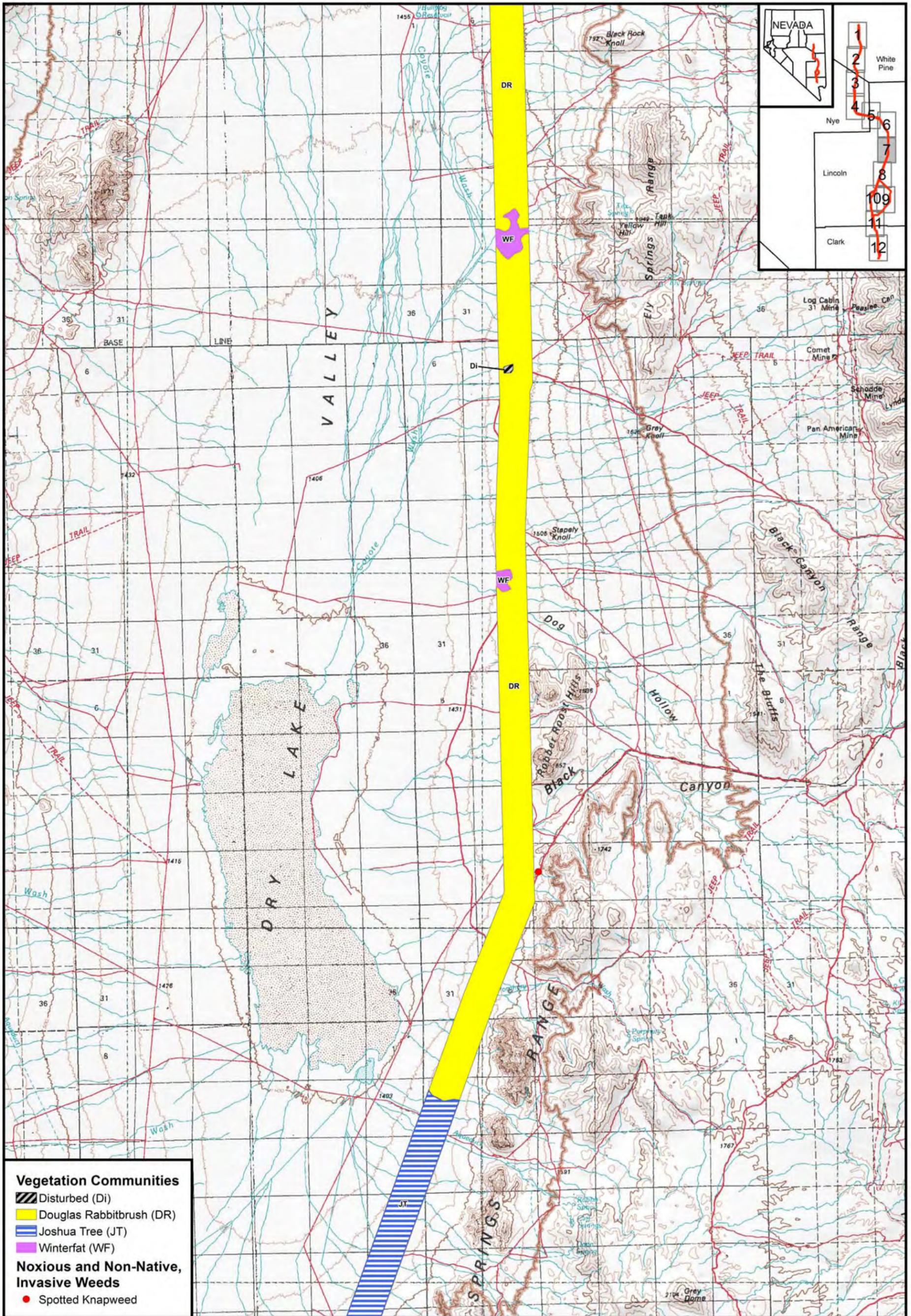
**FIGURE 5**  
**VEGETATION COMMUNITIES**  
**ON LINE PROJECT**



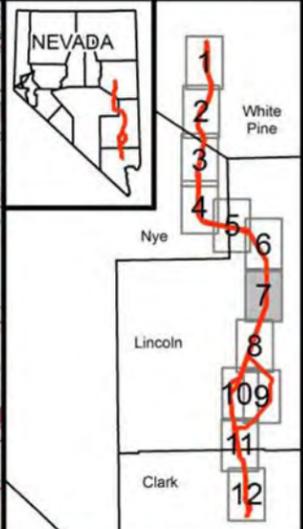
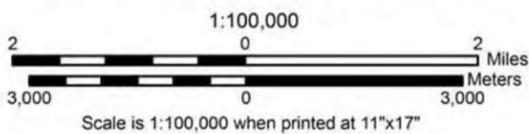
Source - Vegetation, Special Status Plant and Noxious Weeds: JBR (2008)  
 Base Map: USGS 1:100,000-scale topographic maps



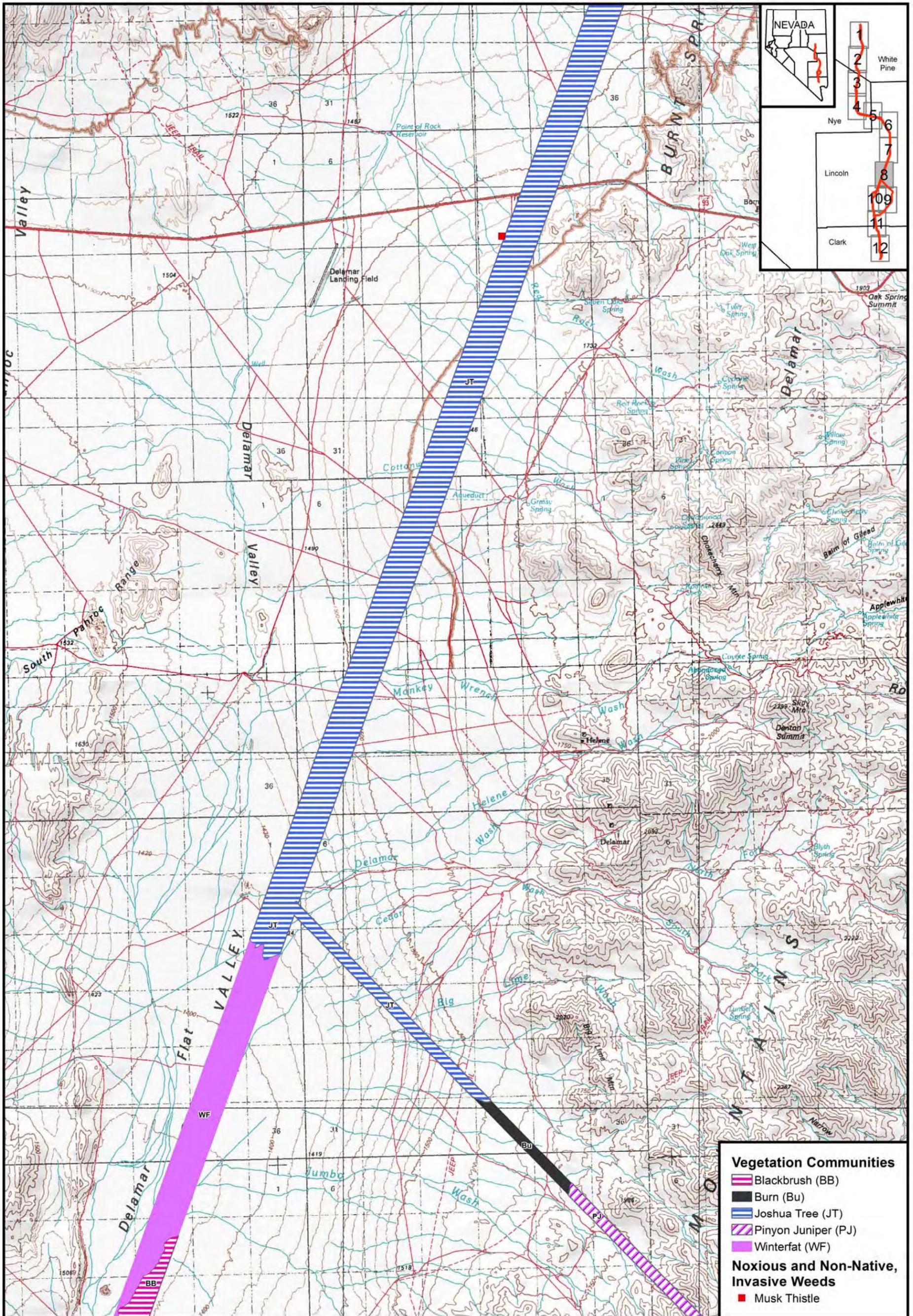
**FIGURE 6**  
**VEGETATION COMMUNITIES**  
**ON LINE PROJECT**



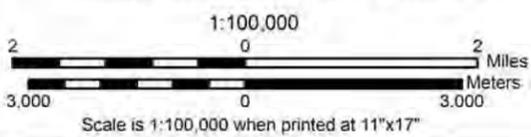
Source - Vegetation, Special Status Plant and Noxious Weeds: JBR (2008)  
 Base Map: USGS 1:100,000-scale topographic maps



**FIGURE 7**  
**VEGETATION COMMUNITIES**  
**ON LINE PROJECT**

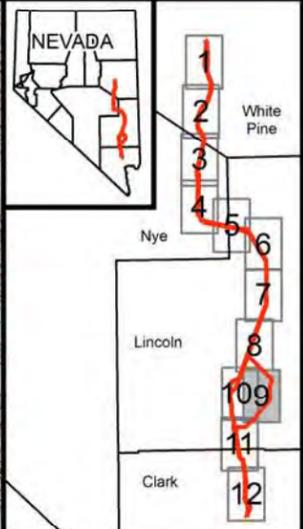
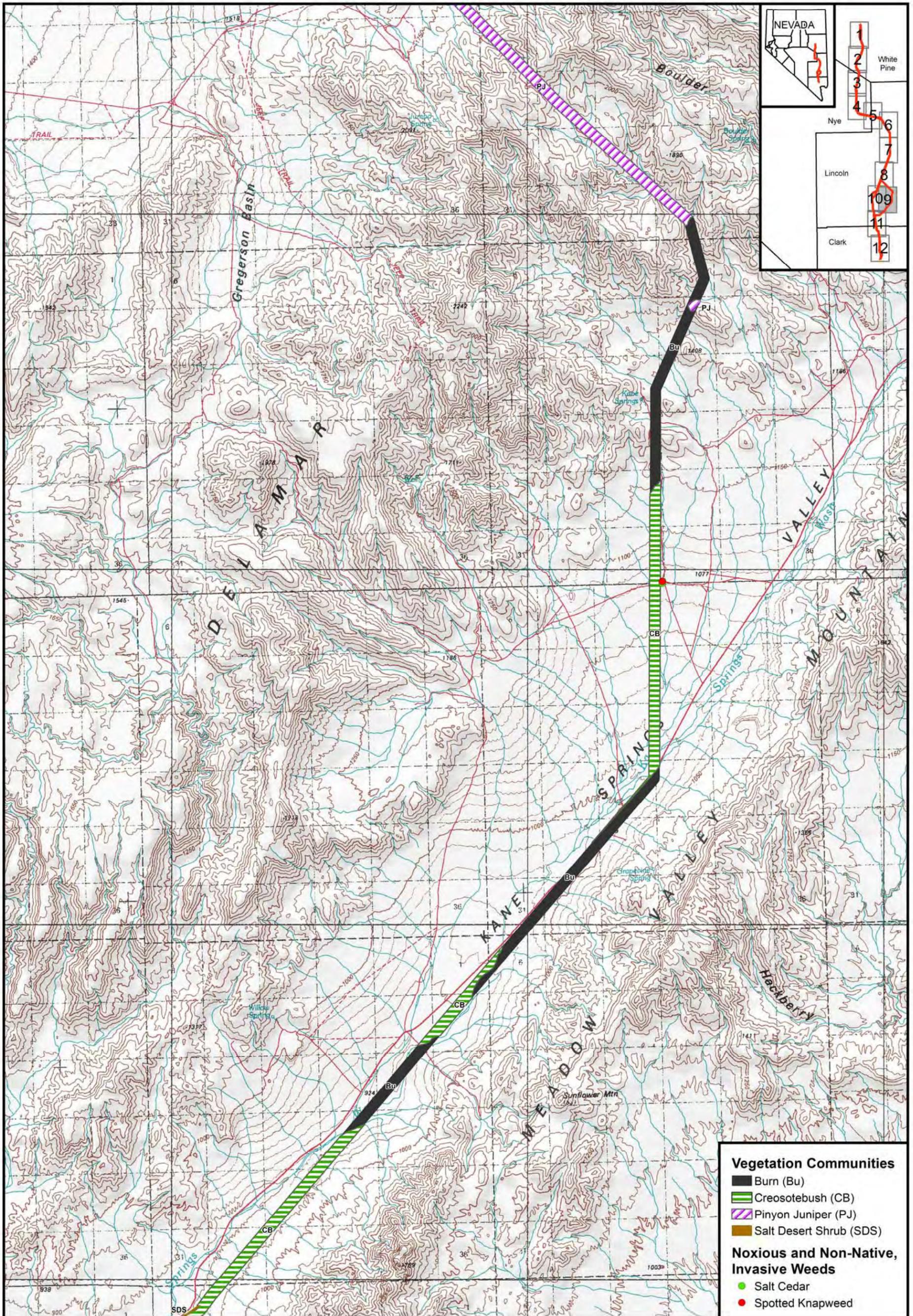


Source - Vegetation, Special Status Plant and Noxious Weeds: JBR (2008)  
 Base Map: USGS 1:100,000-scale topographic maps

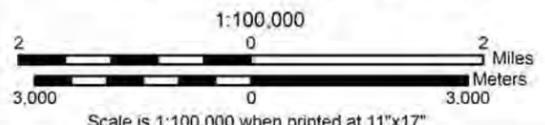


- Vegetation Communities**
- Blackbrush (BB)
  - Burn (Bu)
  - Joshua Tree (JT)
  - Pinyon Juniper (PJ)
  - Winterfat (WF)
- Noxious and Non-Native, Invasive Weeds**
- Musk Thistle

**FIGURE 8**  
**VEGETATION COMMUNITIES**  
**ON LINE PROJECT**



Source - Vegetation, Special Status Plant and Noxious Weeds: JBR (2008)  
 Base Map: USGS 1:100,000-scale topographic maps



**FIGURE 9**  
**VEGETATION COMMUNITIES**  
**ON LINE PROJECT**

**Table 1. Federal Noxious Weeds List**

COMMON NAME	SCIENTIFIC NAME	COMMON NAME	SCIENTIFIC NAME
<b>Aquatic/Wetland</b>			
Mosquito fern	<i>Azolla pinnata</i>	Heartshape false pickerelweed	<i>Monochoria vaginalis</i>
Mediterranean strain	<i>Caulerpa taxifolia</i>	Ducklettuce	<i>Ottelia alismoides</i>
Anchored waterhyacinth	<i>Eichornia azurea</i>	Arrowhead	<i>Sagittaria sagittifolia</i>
Hydrilla	<i>Hydrilla verticillata</i>	Giant salvinia	<i>Salvinia auriculata</i>
Miramar weed	<i>Hygrophila polysperma</i>	Giant salvinia	<i>Salvinia biloba</i>
Water-spinach	<i>Ipomoea aquatica</i>	Giant salvinia	<i>Salvinia herzogii</i>
Moss	<i>Lagarosiphon major</i>	Giant salvinia	<i>Salvinia molesta</i>
Ambulia	<i>Limnophila sessiliflora</i>	Wetland nightshade	<i>Solanum tampicense</i>
Broadleaf paper bark tree	<i>Melaleuca quinquenervia</i>	Exotic bur-reed	<i>Sparganium erectum</i>
Arrowleaf false pickerelweed	<i>Monochoria hastata</i>		
<b>Parasitic</b>			
Aeginetia	<i>Aeginetia spp.</i>	Broomrape	<i>Orobanche spp. (selected)</i>
Alectra	<i>Alectra spp.</i>	Witchweeds	<i>Striga spp.</i>
Dodder	<i>Cuscuta spp. (selected)</i>		
<b>Terrestrial</b>			
Crofton weed	<i>Ageratina adenophora</i>	Prosopis	<i>Prosopis articulata</i>
Sessile joyweed	<i>Alternanthera sessilis</i>	Prosopis	<i>Prosopis caldenia</i>
Onionweed	<i>Asphodelus fistulosus</i>	Cusqui	<i>Prosopis calingastana</i>
Animated oat, wild oat	<i>Avena sterilis</i>	Prosopis	<i>Prosopis campestris</i>
Wild safflower	<i>Carthamus oxyacantha</i>	Prosopis	<i>Prosopis castellanosii</i>
Pilipiliula	<i>Chrysopogon aciculatus</i>	Prosopis	<i>Prosopis denudans</i>
Benghal dayflower	<i>Commelina benghalensis</i>	Prosopis	<i>Prosopis elata</i>
Common crupina	<i>Crupina vulgaris</i>	Syrian mesquite	<i>Prosopis farcta</i>
African couchgrass	<i>Digitaria scalarum</i>	Prosopis	<i>Prosopis ferox</i>
Velvet fingergrass	<i>Digitaria velutina</i>	Prosopis	<i>Prosopis fiebrigii</i>
Lightning weed	<i>Drymaria arenarioides</i>	Prosopis	<i>Prosopis hassleri</i>
Three-cornered jack	<i>Emex australis</i>	Prosopis	<i>Prosopis humilis</i>
Devil's thorn	<i>Galega officinalis</i>	Prosopis	<i>Prosopis kuntzei</i>
Giant hogweed	<i>Heracleum mantegazzianum</i>	Kiawe	<i>Prosopis pallida</i>
Homeria	<i>Homeria spp.</i>	Prosopis	<i>Prosopis palmeri</i>
Brazilian satintail	<i>Imperata brasiliensis</i>	Tornillo	<i>Prosopis reptans</i>
Cogongrass	<i>Imperata cylindrical</i>	Prosopis	<i>Prosopis rojasiana</i>
Murainograss	<i>Ischaemum rugosum</i>	Prosopis	<i>Prosopis ruizlealii</i>
Asian sprangletop	<i>Leptochloa chinensis</i>	Prosopis	<i>Prosopis ruscifolia</i>
African boxthorn	<i>Lycium ferocissimum</i>	Prosopis	<i>Prosopis sericantha</i>
Melastoma	<i>Melastoma malabathricum</i>	Argentine screwbean	<i>Prosopis strombulifera</i>
Mile-a-minute	<i>Mikania cordata</i>	Prosopis	<i>Prosopis torquata</i>
Giant sensitive plant	<i>Mimosa invisa</i>	Itchgrass	<i>Rottboellia cochinchinensis</i>
Catclaw mimosa	<i>Mimosa pigra</i>	Wild blackberry	<i>Rubus fruticosus</i>
Serrated tussock	<i>Nassella trichotoma</i>	Wild raspberry	<i>Rubus moluccanus</i>
Jointed prickly pear	<i>Opuntia aurantiaca</i>	Wild sugarcane	<i>Saccharum spontaneum</i>
Red rice	<i>Oryza longistaminata</i>	Wormleaf salsola	<i>Salsola spontaneum</i>
Red rice	<i>Oryza punctata</i>	South African ragwort	<i>Senecio inaequidens</i>

COMMON NAME	SCIENTIFIC NAME	COMMON NAME	SCIENTIFIC NAME
Red rice	<i>Oryza rufipogon</i>	Madagascar ragwort	<i>Senecio madagascariensis</i>
Kodo-millet	<i>Paspalum scrobiculatum</i>	Cattail grass	<i>Setaria pallide-fusca</i>
Kikuyugrass	<i>Pennisetum clandestinum</i>	Turkeyberry	<i>Solanum torvum</i>
African feathergrass	<i>Pennisetum macrourum</i>	Tropical soda apple	<i>Solanum viarum</i>
Missiongrass	<i>Pennisetum polystachion</i>	Winged false buttonweed	<i>Spermacoce alata</i>
Prosopis	<i>Prosopis alata</i>	Coat buttons	<i>Tridax procumbens</i>
Prosopis	<i>Prosopis argentina</i>	Liverseed grass	<i>Urochloa panicoides</i>

Source: [http://www.aphis.usda.gov/plant\\_health/plant\\_pest\\_info/weeds/index.shtml](http://www.aphis.usda.gov/plant_health/plant_pest_info/weeds/index.shtml)

**Table 2. Nevada Department of Agriculture Noxious Weeds List**

COMMON NAME	SCIENTIFIC NAME	COMMON NAME	SCIENTIFIC NAME
<b>Category A Weeds<sup>1</sup></b>			
African rue	<i>Peganum harmala</i>	Leafy spurge	<i>Euphorbia esula</i>
Austrian fieldcress	<i>Rorippa austriaca</i>	Malta star thistle	<i>Centaurea melitensis</i>
Austrian peaweed	<i>Sphaerophysa salsula/ Swainsona salsula</i>	Mayweed chamomile	<i>Anthemis cotula</i>
Camelthorn	<i>Alhagi camelorum</i>	Mediterranean sage	<i>Salvia aethiopis</i>
Common crupina	<i>Crupina vulgaris</i>	Purple loosestrife	<i>Lythrum salicaria, L. virgatum</i>
Dalmation toadflax	<i>Linaria dalmatica</i>	Purple star thistle	<i>Centaurea calcitrapa</i>
Dyer's woad	<i>Isatis tinctoria</i>	Rush skeletonweed	<i>Chondrilla juncea</i>
Eurasian water-milfoil	<i>Myriophyllum spicatum</i>	Sow thistle	<i>Sonchus arvensis</i>
Giant reed	<i>Arundo donax</i>	Spotted knapweed	<i>Centaurea masculosa</i>
Giant salvinia	<i>Salvinia molesta</i>	Squarrose star thistle	<i>Centaurea virgata Lam. Var. squarrose</i>
Goats rue	<i>Galega officinalis</i>	Sulfur cinquefoil	<i>Potentilla recta</i>
Houndstongue	<i>Cynoglossum officinale</i>	Syrian bean caper	<i>Zygophyllum fabago</i>
Hydrilla	<i>Hydrilla verticillata</i>	Yellow star thistle	<i>Centaurea solstitialis</i>
Iberian star thistle	<i>Centaurea iberica</i>	Yellow toadflax	<i>Linaria vulgaris</i>
Klamath weed	<i>Hypericum perforatum</i>		
<b>Category B Weeds<sup>2</sup></b>			
Carolina horse-nettle	<i>Solanum carolinense</i>	Russian knapweed	<i>Acroptilon repens</i>
Diffuse knapweed	<i>Centaurea diffusa</i>	Scotch thistle	<i>Onopordum acanthium</i>
Medusahead	<i>Taeniatherum caput-medusae</i>	White horse-nettle	<i>Solanum elaeagnifolium</i>
Musk thistle	<i>Carduus nutans</i>		
<b>Category C Weeds<sup>3</sup></b>			
Black henbane	<i>Hyoscyamus niger</i>	Perennial pepperweed	<i>Lepidium latifolium</i>
Canada thistle	<i>Cirsium arvense</i>	Poison hemlock	<i>Conium maculatum</i>
Green fountain grass	<i>Pennisetum setaceum</i>	Puncture vine	<i>Tribulus terrestris</i>
Hoary cress	<i>Cardaria draba</i>	Salt cedar (tamarisk)	<i>Tamarix ramosissima</i>
Johnson grass	<i>Sorghum halepense</i>	Water hemlock	<i>Cicuta maculata</i>

<sup>1</sup> Weeds not found or limited in distribution throughout the State; actively excluded from the State and actively eradicated wherever found; actively eradicated from nursery stock dealer premises; control required by the State in all infestations.

<sup>2</sup> Weeds established in scattered populations in some counties of the State; actively excluded where possible; actively eradicated from nursery stock dealer premises; control required by the State in areas where populations are not well established or previously unknown to occur.

<sup>3</sup> Weeds currently established and generally widespread in many counties of the State; actively eradicated from nursery stock dealer premises; abatement at the discretion of the State quarantine officer.

Source: [http://agri.nv.gov/nwac/PLANT\\_NoXWeedList.htm](http://agri.nv.gov/nwac/PLANT_NoXWeedList.htm)

**Table 3. BLM Invasive Weed Species of Concern**

COMMON NAME	SCIENTIFIC NAME	COMMON NAME	SCIENTIFIC NAME
<b>Grasses</b>			
Jointed goatgrass	<i>Aegilops cylindrica</i>	Veldt grass	<i>Ehrharta calycina</i>
European beachgrass	<i>Ammophila arenaria</i>	Quackgrass	<i>Elytrigia repens</i>
Giant reed	<i>Arundo donax</i>	Lehmann lovegrass	<i>Eragrostis lehmanniana</i>
Ripgut brome	<i>Bromus diandrus</i>	Matgrass	<i>Nardus stricta</i>
Japanese brome	<i>Bromus japonicus</i>	Wild proso millet	<i>Panicum miliaceum</i>
Red brome	<i>Bromus rubens</i>	Crimson fountain grass	<i>Pennisetum setaceum</i>
Downy brome	<i>Bromus tectorum</i>	Schismus	<i>Schismus arabicus</i>
Longspine sandbur	<i>Cenchrus longispinus</i>	Mediterranean grass	<i>Schismus barbatus</i>
Andean pampas grass	<i>Cortaderia jubata</i>	Johnsongrass	<i>Sorghum halepense</i>
Pampas grass	<i>Cortaderia selloana</i>	Medusa-head	<i>Taeniatherum caput-medusae</i>
Bermudagrass	<i>Cynodon dactylon</i>		
<b>Forbs</b>			
Russian knapweed	<i>Acroptilon repens</i>	Chicory	<i>Cichorium intybus</i>
Scentless chamomile	<i>Anthemis arvensis</i>	Bull thistle	<i>Cirsium vulgare</i>
Mayweed chamomile	<i>Anthemis cotula</i>	Chinese clematis	<i>Clematis orientalis</i>
Common burdock	<i>Arctium minus</i>	Poison hemlock	<i>Conium maculatum</i>
Bassia	<i>Bassia hyssopifolia</i>	Field bindweed	<i>Convolvulus arvensis</i>
Black mustard	<i>Brassica nigra</i>	Bristly hawkweed	<i>Crepis setosa</i>
Wild turnip	<i>Brassica tournefortii</i>	Common crupina	<i>Crupina vulgaris</i>
Mexican bird-of-paradise	<i>Caesalpinia gilliesii</i>	Artichoke thistle	<i>Cynara cardunculus</i>
Lens-podded whitetop	<i>Cardaria chalepensis</i>	Houndstongue	<i>Cynoglossum officinale</i>
Hoary cress	<i>Cardaria draba</i>	Foxglove	<i>Digitalis purpurea</i>
Hairy whitetop	<i>Cardaria pubescens</i>	Common teasel	<i>Dipsacus fullonum</i>
Plumeless thistle	<i>Carduus acanthoides</i>	Blueweed	<i>Echium vulgare</i>
Musk thistle	<i>Carduus nutans</i>	Brazilian waterweed	<i>Egeria densa</i>
Italian thistle	<i>Carduus pycnocephalus</i>	Water hyacinth	<i>Eichhornia crassipes</i>
Slender-flowered thistle	<i>Carduus teniflorus</i>	Australian fireweed	<i>Erechtites glomerata</i>
Hottentot fig	<i>Carpobrotus edulis</i>	Cypress spurge	<i>Euphorbia cyparissias</i>
Sea iceplant	<i>Carpobrotus chilensis</i>	Leafy spurge	<i>Euphorbia esula</i>
Distaff thistle	<i>Carthamus lantus</i>	Myrtle spurge	<i>Euphorbia myrsinites</i>
Common caraway	<i>Carum carvi</i>	Fennel	<i>Foeniculum vulgare</i>
Purple starthistle	<i>Centaurea calcitrapa</i>	Goat's rue	<i>Galega officinalis</i>
Cornflower	<i>Centaurea cyanus</i>	Baby's breath	<i>Gypsophila paniculata</i>
Diffuse knapweed	<i>Centaurea diffusa</i>	Halogeton	<i>Halogeton glomeratus</i>
Iberian starthistle	<i>Centaurea iberica</i>	Dames's rocket	<i>Hesperis matronalis</i>
Brown knapweed	<i>Centaurea jacea</i>	Orange hawkweed	<i>Hieracium aurantiacum</i>
Bighead knapweed	<i>Centaurea macrocephala</i>	Mouseear hawkweed	<i>Hieracium pilosella</i>
Spotted knapweed	<i>Centaurea maculosa</i>	Yellow hawkweed	<i>Hieracium pretense</i>
Malta starthistle	<i>Centaurea melitenensis</i>	Hydrilla	<i>Hydrilla verticillata</i>
Mountain cornflower	<i>Centaurea montana</i>	Black henbane	<i>Hyoscyamus niger</i>
Black knapweed	<i>Centaurea nigra</i>	Common St. Johnswort	<i>Hypericum perforatum</i>
Vochin knapweed	<i>Centaurea nigrescens</i>	Common catsear	<i>Hyposphaeris radicata</i>
Meadow knapweed	<i>Centaurea pratensis</i>	Dyer's woad	<i>Isatis tinctoria</i>
Squarrose knapweed	<i>Centaurea squarrosa</i>	Blue buttons	<i>Knautia arvensis</i>
Yellow starthistle	<i>Centaurea solstitialis</i>	Everlasting peavine	<i>Lathyrus latifolius</i>
Feather-headed knapweed	<i>Centaurea trichocephala</i>	Perennial pepperweed	<i>Lepidium latifolium</i>
Rush skeletonweed	<i>Chondrilla juncea</i>		
Ox-eye daisy	<i>Chrysanthemum leucanthemum</i>	Dalmation toadflax	<i>Linaria genistifolia</i> spp. <i>dalmatica</i>

COMMON NAME	SCIENTIFIC NAME	COMMON NAME	SCIENTIFIC NAME
<b>Forbs (cont.)</b>			
Yellow toadflax	<i>Linaria vulgaris</i>	Mediterranean sage	<i>Salvia aethiopsis</i>
Garden loosestrife	<i>Lysimachia vulgaris</i>	Bouncing bet	<i>Saponaria officinalis</i>
Purple loosestrife	<i>Lythrum salicaria</i>	Tansy ragwort	<i>Senecio jacobaea</i>
Wand loosestrife	<i>Lythrum virgatum</i>	German ivy	<i>Senecio mikanoides</i>
Chilean tarweed	<i>Madia sativa</i>	Bitter nightshade	<i>Solanum dulcamara</i>
Eurasian watermilfoil	<i>Myriophyllum spicatum</i>	Perennial sowthistle	<i>Sonchus arvensis</i>
Scotch thistle	<i>Onopordum acanthium</i>	Swainsonpea	<i>Sphaerophysa salsula</i>
Scotch thistle	<i>Onopordum taricum</i>	Common tansy	<i>Tanacetum vulgare</i>
African rue	<i>Peganum harmala</i>	Syrian bean caper	<i>Zygophyllum fabago</i>
Sulfur cinquefoil	<i>Potentilla recta</i>		
<b>Shrubs and Trees</b>			
Tree-of-heaven	<i>Ailanthus altissima</i>	Himalaya blackberry	<i>Rubus discolor</i>
Camelthorn	<i>Alhagi pseudalhagi</i>	Brazilian pepper	<i>Schinus terebrinthifolius</i>
Spanish broom	<i>Cytisus junceum</i>	Athel	<i>Tamarix aphylla</i>
French broom	<i>Cytisus monspessulanas</i>	Tamarisk	<i>Tamarix chinensis</i>
Scotch broom	<i>Cytisus scoparius</i>	French tamarisk	<i>Tamarix gallica</i>
Portuguese broom	<i>Cytisus striatus</i>	Small flower tamarisk	<i>Tamarix parviflora</i>
Russian olive	<i>Elaeagnus angustifolia</i>	Tamarisk	<i>Tamarix pentada</i>
Edible fig	<i>Ficus carica</i>	Salt cedar	<i>Tamarix ramosissima</i>
Himalaya bush cover	<i>Lespedeza cuneata</i>	Gorse	<i>Ulex europaeus</i>
Bridal veil broom	<i>Retama monosperma</i>	Siberian elm	<i>Ulmus pumila</i>

Source: [http://www.blm.gov/co/st/en/BLM\\_Programs/botany/invasiweed.html](http://www.blm.gov/co/st/en/BLM_Programs/botany/invasiweed.html)

**Table 1 - WILDLIFE SPECIES OBSERVED BY JBR DURING BASELINE SURVEYS**

Date	Species	Location	Notes
<b>AVIAN</b>			
11/8/2006	Black-Throated Sparrow	ALT - Segment 10 Transmission Line	S half of Kane Springs valley
11/16/2006	California Quail	ALT - Segment 10 Transmission Line	Gregorsian Basin; NW corner
11/0/2006	California Quail	ALT - Segment 10 Transmission Line	Elgin SW; Very S end
11/17/2006	Dark-eyed Juncos	ALT - Segment 10 Transmission Line	Observed
11/8/2006	House Finch	ALT - Segment 10 Transmission Line	S half of Kane Springs valley
11/16/2006	Raven	ALT - Segment 10 Transmission Line	Delmar NW; All on power line coming into corridor
10/9/2006	Bushtits	Robinson Summit Substation	In PJ
10/9/2006	Bushtits	Robinson Summit Substation	In Junipers with a few Pinyons mixed in
10/9/2006	Bushtits	Robinson Summit Substation	Observed
10/9/2006	Bushtits	Robinson Summit Substation	In Junipers and Rabbitbrush W of outcrop
10/9/2006	Bushtits	Robinson Summit Substation	
10/9/2006	Flicker	Robinson Summit Substation	Calling to the N
10/9/2006	Flickers	Robinson Summit Substation	Observed in area
10/9/2006	Flickers	Robinson Summit Substation	Flushed from outcrop
10/9/2006	House Finches	Robinson Summit Substation	NW of site
10/9/2006	House Finches	Robinson Summit Substation	
10/9/2006	Juncos	Robinson Summit Substation	
10/9/2006	Mt. Bluebird	Robinson Summit Substation	Male; In Junipers
10/9/2006	Mt. Bluebird	Robinson Summit Substation	Male; Observed to the N
10/9/2006	Mt. Bluebirds	Robinson Summit Substation	One male; One female
10/9/2006	Mt. Bluebirds	Robinson Summit Substation	
10/9/2006	Mt. Chickadee	Robinson Summit Substation	Observed
10/9/2006	Mt. Chickadees	Robinson Summit Substation	In dense PJ line to NW
10/9/2006	Mt. Chickadees	Robinson Summit Substation	In Junipers and Rabbitbrush W of outcrop
10/9/2006	Mt. Chickadees	Robinson Summit Substation	
10/9/2006	Northern Flicker	Robinson Summit Substation	
10/9/2006	Oregon Junco	Robinson Summit Substation	Observed
10/9/2006	Phoebe	Robinson Summit Substation	Birds observed in Pinyon to E

Date	Species	Location	Notes
10/9/2006	Raven	Robinson Summit Substation	Calling
10/9/2006	Raven	Robinson Summit Substation	
10/9/2006	White-Crowned Sparrows	Robinson Summit Substation	
6/28/2007	Barn Swallows	Segment 6C Transmission Line	Ellison Cr.
6/29/2007	Horned Larks	Segment 6C Transmission Line	Observed S of Kirch WMA
6/29/2007	Long-billed Curlew	Segment 6C Transmission Line	Observed S of Kirch WMA
6/29/2007	Mockingbird	Segment 6C Transmission Line	Observed S of Kirch WMA
6/28/2007	Mt. Blubirds	Segment 6C Transmission Line	Upper White River
6/28/2007	Raven	Segment 6C Transmission Line	Ellison Cr.
6/29/2007	Raven	Segment 6C Transmission Line	Observed overhead S of Kirch WMA
6/28/2007	Sage Sparrows	Segment 6C Transmission Line	Lower S fork of Ellison Cr.
6/28/2007	Spotted Towhee	Segment 6C Transmission Line	Upper White River
6/28/2007	Spotted Towhee	Segment 6C Transmission Line	Upper White River
6/29/2007	Western Meadowlarks	Segment 6C Transmission Line	Observed S of Kirch WMA
6/29/2007	Yellow-headed Blackbirds	Segment 6C Transmission Line	Observed S of Kirch WMA
<b>TEPCS AVIAN</b>			
11/16/2006	Loggerhead Shrike	ALT - Segment 10 Transmission Line	Gregorsian Basin; NW corner
11/16/2006	Loggerhead Shrike	ALT - Segment 10 Transmission Line	Gregorsian Basin; NW corner
10/9/2006	*Sage Grouse	Robinson Summit Substation	Winter Group; 60+ pellets
10/9/2006	*Sage Grouse	Robinson Summit Substation	Two old tar patches in two-track; W edge of RSS Boundary
10/9/2006	Pinyon Jays	Robinson Summit Substation	Calling
<b>TEPCS RAPTORS</b>			
11/0/2006	Burrowing Owl	ALT - Segment 10 Transmission Line	N end of Kane Springs Valley; Flew out of den
11/16/2006	Golden Eagle	ALT - Segment 10 Transmission Line	Delmar NW; All on power line coming into corridor
10/9/2006	Red Fox	Robinson Summit Substation	Observed in Drainage
<b>BIG GAME</b>			
6/29/2007	Pronghorn	ALT - Segment 8 Transmission Line	S of Kirch WMA
9/21/2006	Pronghorn	Robinson Summit Substation	Observed

Date	Species	Location	Notes
<b>SMALL MAMMALS</b>			
11/16/2006	White-Tailed Antelope Squirrel	ALT - Segment 10 Transmission Line	Delmar NW
11/16/2006	Black-tailed Jack Rabbit	ALT - Segment 10 Transmission Line	Gregorsian Basin; NW corner
6/29/2007	Black-tailed Jack Rabbits	ALT - Segment 8 Transmission Line	In corridor; S of Kirch WMA
9/21/2006	Black-tailed Jack Rabbit	Robinson Summit Substation	Observed
10/9/2006	Black-tailed Jack Rabbit	Robinson Summit Substation	Observed S of drain 2
10/9/2006	Black-tailed Jack Rabbits	Robinson Summit Substation	Observed
10/9/2006	Cottontail Rabbit	Robinson Summit Substation	Flushed just E of area; From rocky spot on slope
10/9/2006	Cottontail Rabbit	Robinson Summit Substation	Observed at top of E hill
10/9/2006	Cottontail Rabbits	Robinson Summit Substation	Flushed from just S of outcrop
10/9/2006	Cottontail Rabbits	Robinson Summit Substation	Observed
10/9/2006	Ground Squirrel	Robinson Summit Substation	Observed
10/9/2006	Least Chipmunk	Robinson Summit Substation	On rock
10/9/2006	Least Chipmunk	Robinson Summit Substation	Observed
<b>AMPHIBIANS &amp; REPTILES</b>			
11/8/2006	Tortoise	ALT - Segment 10 Transmission Line	
11/9/2006	Tortoise	ALT - Segment 10 Transmission Line	
11/9/2006	Side Blotched Lizard	ALT - Segment 10 Transmission Line	Pahranagat Wash; Near isolated hill
11/16/2006	Side Blotched Lizard	ALT - Segment 10 Transmission Line	Gregorsian Basin; NW corner
11/8/2006	Sidewinder	ALT - Segment 10 Transmission Line	S half of Kane Springs Valley
11/9/2006	Tortoise	ALT - Segment 10 Transmission Line	Deceased Tortoise; Pahranagat Wash; Near isolated hill
10/9/2006	Unknown Lizard	Robinson Summit Substation	Observed 10' to the E of burrow
10/9/2006	Unknown Lizard	Robinson Summit Substation	2" unknown lizard
10/9/2006	Unknown Snake	Robinson Summit Substation	Blunt tail; Grey with black markings; Yellow eyes; Black stripe behind eye (photo 3262 & 3263)
6/28/2007	Leopard lizard	Segment 6C Transmission Line	Upper White River
6/28/2007	Sagebrush Lizards	Segment 6C Transmission Line	By Ellison Cr.
<b>PYGMY RABBIT SIGN</b>			
6/28/2007	Pygmy Rabbit	Segment 6C Transmission Line	Possible burrow; Near N fork of Ellison Cr.

Date	Species	Location	Notes
<b>WILDLIFE SIGN</b>			
10/9/2006	*Black Tailed Jack Rabbit	Robinson Summit Substation	Pellets
10/10/2006	*Black Tailed Jack Rabbit	Robinson Summit Substation	Droppings
10/9/2006	*Canid Burrows	Robinson Summit Substation	Observed
10/9/2006	*Cottontail	Robinson Summit Substation	Pellets
10/9/2006	*Coyote	Robinson Summit Substation	Coyote scat in sage
10/9/2006	*Coyote	Robinson Summit Substation	Coyote scat in sage
10/9/2006	*Coyote	Robinson Summit Substation	Tracks in drain & road S of main E-W drain
10/9/2006	*Elk	Robinson Summit Substation	Pellets; Near E end of S Power Line
10/9/2006	*Elk	Robinson Summit Substation	Pellets
10/9/2006	*Elk	Robinson Summit Substation	Pellets
10/10/2006	*Feral Horse	Robinson Summit Substation	Droppings
10/9/2006	*Mule Deer	Robinson Summit Substation	Pellets
10/9/2006	*Mule Deer	Robinson Summit Substation	Pellets
10/9/2006	*Packrat	Robinson Summit Substation	Nest; Shallow Crevice; Whitewash;
10/9/2006	*Packrat or Prairie Falcon	Robinson Summit Substation	Nest; Whitewash & Crevice
10/9/2006	*Prairie Falcon	Robinson Summit Substation	Unconfirmed Falcon nest (photo 3260 & 3261)
10/9/2006	*Predator Burrow	Robinson Summit Substation	Coyote Den; 12" diameter; Pic 6
10/9/2006	*Predator Burrow	Robinson Summit Substation	Predator Burrow
10/10/2006	*Predator Burrow	Robinson Summit Substation	Large and active Burrow; photographed
10/9/2006	*Rodent Burrows	Robinson Summit Substation	Observed
10/9/2006	*Unidentified Burrow	Robinson Summit Substation	Active burrow at base of N face

\* Sign Only

**Table 2 – Threatened, Endangered, Proposed, and Candidate Species Known to Occur within the Project Area**

Common Name	Scientific Name	Habitat Type	USFWS	BLM	Lincoln County	White Pine County	Nye County	Clark County	JBR - Observed
Pygmy Rabbit	<i>Brachylagus idahoensis</i>	SB; MDV	UR	X		X	X		X
Yellow-billed cuckoo	<i>Coccyzus americanus</i>	R-W; PJ	C		X		X	X	
Relict leopard frog	<i>Rana onca</i>	R-W	C					X	
Southwestern willow flycatcher	<i>Epidonax tralii extimus</i>	R-W; PJ	LE		X		X	X	
Yuma clapper rail	<i>Rallus longirostris yumanensis</i>	R-W	LE				X	X	
White River springfish	<i>Crenichthys baileyi baileyi</i>	R-W	LE		X				
Hiko White River springfish	<i>Crenichthys baileyi grandis</i>	R-W	LE		X				
Devils Hole pupfish	<i>Cyprinodon diabolis</i>	R-W	LE				X	X	
Ash Meadows Armagosa pupfish	<i>Cyprinodon nevadensis mionectes</i>	R-W	LE				X		
Warm Springs pupfish	<i>Cyprinodon nevadensis pectoralis</i>	R-W	LE				X		
Pahrump poolfish	<i>Empetrichthys latos</i>	R-W	LE			X		X	
Humpback chub	<i>Gila cypha</i>	R-W	LE					X	
Bonytail chub	<i>Gila elegans</i>	R-W	LE					X	
Pahrana gat roundtail chub	<i>Gila robusta jordani</i>	R-W	LE		X				
Virgin River chub	<i>Gila seminude</i>	R-W	LE	X	X			X	
White River spinedace	<i>Lepidomeda albivallis</i>	R-W	LE			X	X		
Moapa dace	<i>Moapa coriacea</i>	R-W	LE					X	
Woundfin	<i>Plageopterus argentissimus</i>	R-W	LE					X	
Colorado pikeminnow	<i>Ptychocheilus lucius</i>	R-W	LE					X	
Meadow Valley Wash speckled dace	<i>Rhinichthys osculus ssp.</i>	R-W	LE	X	X				
Razorback sucker	<i>Xyrauchen texanus</i>	R-W	LE					X	
Desert tortoise	<i>Gopherus agassizii</i>	MDV	LT		X		X	X	X
Railroad Valley springfish	<i>Crenichthys nevadae</i>	R-W	LT				X		
Big Spring spinedace	<i>Lepidomeda mollispinis pratensis</i>	R-W	LT		X				
Lahontan cutthroat trout	<i>Oncorhynchus clarkii henshawi</i>	R-W	LT				X	X	
Greater sage-grouse	<i>Centrocercus urophasianus</i>	R-W; SB	UR	X	X	X	X		X

Sources:

BLM Nevada Sensitive Species list, July 29, 2003  
 Nevada Heritage Program shape files, 2004  
 US Fish and Wildlife Service species list, 2004  
 Nevada Natural Heritage Program Detailed Rare Plant and Animal Species list, March 18, 2004  
 Nevada Natural Heritage Program Rare Plant Atlas, June 2001

USFWS Status:

LE - Federally listed as endangered  
 LT - Federally listed as threatened  
 C - Federal candidate species  
 PT - Proposed Threatened  
 UR – Under Review

Habitat Type

PJ - Pinyon-Juniper Woodlands  
 A - Aspen  
 C - High-elevation Conifer  
 R-W - Riparian Wetlands (includes Aquatic habitat)  
 MM - Mountain Mahogany  
 SB - Sagebrush  
 SDS - Salt Desert Shrub  
 MDV - Mojave Desert Vegetation  
 NNS - Non-Native Seedings

**Table 3 - BLM and State of Nevada Sensitive Species Known to Occur within the Project Area**

Common Name	Scientific Name	Habitat Type	USFWS	BLM	Lincoln County	White Pine County	Nye County	Clark County	JBR - Observed
<b>MAMMALS</b>									
Pallid bat	<i>Antrozous pallidus</i>	All		X	X	X			
Pygmy Rabbit	<i>Brachylagus idahoensis</i>	SB; MDV	PT	X		X	X		X
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	All		X		X	X	X	
Spotted bat	<i>Euderma maculatum</i>	All		X	X	X	X	X	
Silver-haired bat	<i>Lasionycteris noctivagans</i>	R-W; PJ; MC/A		X	X	X			
Hoary bat	<i>Lasiurus cinereus</i>	R-W; PJ MC/A		X	X	X			
Desert Valley kangaroo mouse	<i>Microdipodops</i>	SB; MDV		X	X				
Pahranaganat bat	<i>Microtus montanus fucosus</i>	R-W; MDV		X	X				
Ash Meadows montane vole	<i>Microtus montanus nevadensis</i>	All		X			X		
California myotis	<i>Myotis californicus</i>	All		X	X	X	X	X	
Small-footed myotis	<i>Myotis ciliolabrum</i>	All		X	X	X	X		
Long-eared myotis	<i>Myotis evotis</i>	All		X		X			
Little brown myotis	<i>Myotis lucifugus</i>	All		X	X		X	X	
Fringed myotis	<i>Myotis thysandodes</i>	All		X	X	X	X	X	
Long-legged myotis	<i>Myotis volans</i>	PJ; MC/A		X	X	X			
Yuma myotis	<i>Myotis yumanensis</i>	All		X	X				
Desert bighorn sheep	<i>Ovis canadensis nelsoni</i>	MM		X	X	X			X
Western pipistrelle bat	<i>Pipistrellus hesperus</i>	All		X	X	X			
Brazilian free-tailed bat	<i>Tadarida brazilliensis</i>	All		X	X	X			
Fish Spring pocket gopher	<i>Thomomys bottae abstrusus</i>	All		X			X		
San Antonio pocket gopher	<i>Thomomys bottae curtatus</i>	All		X			X		
<b>BIRDS</b>									
Northern goshawk	<i>Accipiter gentiles</i>	MC/A; R-W; SB		X		X	X		
Golden eagle	<i>Aquila chrysaetos</i>	All		X	X	X			X
Short-eared owl	<i>Asio flammeus</i>	R-W		X		X			X
Long-eared owl	<i>Asio otus</i>	R-W; MC; MDV		X	X	X			
Western burrowing owl	<i>Athene cunicularia hypugea</i>	SB; MDV		X	X	X	X	X	
Juniper titmouse	<i>Baeolophus griseus</i>	MC; SB; MDV		X	X	X			
Ferruginous hawk	<i>Buteo regalis</i>	PJ; R-W; MDV; SB		X	X	X	X	X	X
Swainson's hawk	<i>Buteo swainsoni</i>	PJ; MDV; SB		X	X	X	X		
Greater sage grouse	<i>Centrocercus urophasianus</i>	R-W; SB	PT	X	X	X	X		X
Western snowy plover	<i>Charadrius alexandrinus nivosus</i>	R-W		X		X	X		

Common Name	Scientific Name	Habitat Type	USFWS	BLM	Lincoln County	White Pine County	Nye County	Clark County	JBR - Observed
Black tern	<i>Chlidonias niger</i>	R-W		X		X	X		
Yellow-billed cuckoo	<i>Coccyzus americanus</i>	R-W; PJ	C		X		X	X	
Southwestern willow flycatcher	<i>Epidonax tralii extimus</i>	R-W; PJ	LE		X		X	X	
Prairie falcon	<i>Falco mexicanus</i>	MDV		X	X	X			X
Sandhill Crane	<i>Grus canadensis</i>	R-W		X	X	X			X
Pinyon jay	<i>Gymnorhinus</i>	R-W; MC; MDV		X	X	X			X
Bald eagle	<i>Haliaeetus luecocephalus</i>	All			X	X	X	X	
Yellow-breasted chat	<i>Icteria virens</i>	R-W		X	X	X			
Least bittern	<i>Ixobrychus exilis</i>	R-W		X	X		X	X	X
Loggerhead Shrike	<i>Lanius ludovicianus</i>	R-W		X	X	X			X
Black rosy-finch	<i>Leucosticte atrata</i>	SB		X	X	X			
Lewis' woodpecker	<i>Melanerpes lewis</i>	R-W		X		X			
Long-billed curlew	<i>Numenius americanus</i>	R-W		X	X	X			
Mountain quail	<i>Oreotyx pictus</i>	PJ; R-W		X			X		
Flammulated owl	<i>Otus flammeolus</i>	R-W		X	X	X	X	X	
Phainopepla	<i>Phainopepla nitens</i>	MDV; PJ		X	X		X	X	
White-faced ibis	<i>Plegadis chihi</i>	R-W		X			X		
Vesper sparrow	<i>Pooecetes gramineus</i>	SB; MDV; PJ		X	X	X			
Yuma clapper rail	<i>Rallus longirostris yumanensis</i>	R-W	LE				X	X	
Red-naped sapsucker	<i>Sphyrapicus nuchalis</i>	R-W		X	X	X			
Crissal thrasher	<i>Toxostoma crissale</i>	MDV; R-W; PJ		X	X				
Lucy's warbler	<i>Vermivora luciae</i>	R-W; MDV; SB		X	X				
Gray vireo	<i>Vireo vicinior</i>	PJ; WC; MDV; SB		X	X				
<b>REPTILES</b>									
Desert tortoise	<i>Gopherus agassizii</i>	MDV	LT		X		X	X	X
Banded gila monster	<i>Heloderma supectum cinctum</i>	R-W		X	X		X	X	
Sonoran mountain kingsnake	<i>Lampropeltis pyromelana</i>	R-W		X		X			
Short-horned lizard	<i>Phrynosoma douglassii</i>	WC; SB; MDV		X		X			
Chuckwalla	<i>Sauromalus obesus</i>	MDV		X	X				
<b>AMPHIBIANS</b>									
Southwestern toad, Arizona toad	<i>Bufo microscaphus microscaphus</i>	R-W		X	X			X	
Columbia spotted frog (Great Basin pop)	<i>Rana luteiventris pop</i>	R-W		X			X		
Relict leopard frog	<i>Rana onca</i>	R-W	C					X	

Common Name	Scientific Name	Habitat Type	USFWS	BLM	Lincoln County	White Pine County	Nye County	Clark County	JBR - Observed
Northern leopard frog	<i>Rana pipens</i>	R-W		X	X	X			
<b>FISH</b>									
White River desert sucker	<i>Catostomus clarki intermedius</i>	R-W		X	X	X	X		
Meadow Valley Wash desert sucker	<i>Catostomus clarki ssp.</i>	R-W		X	X				
Flannelmouth sucker	<i>Catostomus latipinnis</i>	R-W		X				X	
White River sculpin	<i>Cottus ssp.</i>	R-W		X			X		
Preston White River springfish	<i>Crenichthys baileyi albivallis</i>	R-W		X		X			
White River springfish	<i>Crenichthys baileyi baileyi</i>	R-W	LE		X				
Hiko White River springfish	<i>Crenichthys baileyi grandis</i>	R-W	LE		X				
Moorman White River springfish	<i>Crenichthys baileyi thermophilus</i>	R-W		X			X		
Moapa White River springfish	<i>Crenichthys baileyi moapae</i>	R-W		X				X	
Railroad Valley springfish	<i>Crenichthys nevadae</i>	R-W	LT				X		
Devils Hole pupfish	<i>Cyprinodon diabolis</i>	R-W	LE				X	X	
Ash Meadows Amargosa pupfish	<i>Cyprinodon nevadensis mionectes</i>	R-W	LE				X		
Warm Springs pupfish	<i>Cyprinodon nevadensis pectoralis</i>	R-W	LE				X		
Pahrump poolfish	<i>Empetrichthys latos</i>	R-W	LE			X		X	
Newark Valley tui chub	<i>Gila bicolor newarkensis</i>	R-W		X		X			
Big Smoky Valley tui chub	<i>Gila bicolor ssp.</i>	R-W		X			X		
Charnock Springs tui chub	<i>Gila bicolor ssp.</i>	R-W		X			X		
Duckwater Creek tui chub	<i>Gila bicolor ssp.</i>	R-W		X			X		
Hot Creek Valley tui chub	<i>Gila bicolor ssp.</i>	R-W		X			X		
Little Fish Lake Vallet tui chub	<i>Gila bicolor ssp.</i>	R-W		X			X		
Railroad Valley tui chub	<i>Gila bicolor ssp.</i>	R-W		X		X	X		
Humpback chub	<i>Gila cypha</i>	R-W	LE					X	
Bonytail chub	<i>Gila elegans</i>	R-W	LE					X	
Pahranagat roundtail chub	<i>Gila robusta jordani</i>	R-W	LE		X				
Virgin River chub	<i>Gila seminude</i>	R-W	LE	X	X			X	
White River spinedace	<i>Lepidomeda albivallis</i>	R-W	LE			X	X		
Virgin River spinedace	<i>Lepidomeda mollispinis mollispinis</i>	R-W		X	X			X	
Big Spring spinedace	<i>Lepidomeda mollispinis pratensis</i>	R-W	LT		X				
Moapa dace	<i>Moapa coriacea</i>	R-W	LE					X	
Lahontan cutthroat trout	<i>Oncorhynchus clarkii henshawi</i>	R-W	LT				X	X	
Bonneville cutthroat trout	<i>Oncorhynchus clarkii utah</i>	R-W		X		X			

Common Name	Scientific Name	Habitat Type	USFWS	BLM	Lincoln County	White Pine County	Nye County	Clark County	JBR - Observed
Woundfin	<i>Plageopterus argentissimus</i>	R-W	LE					X	
Colorado pikeminnow	<i>Ptychocheilus lucius</i>	R-W	LE					X	
Relict dace	<i>Relictus solitarius</i>	R-W		X		X			
Big Smoky Valley speckled dace	<i>Rhinichthys osculus larversi*</i>	R-W		X			X		
Moapa speckled dace	<i>Rhinichthys osculus moapae</i>	R-W		X				X	
Ash Meadows speckled dace	<i>Rhinichthys osculus nevadensis</i>	R-W		X			X		
Meadow Valley Wash speckled dace	<i>Rhinichthys osculus ssp.</i>	R-W	LE	X	X				
Monitor Valley speckled dace	<i>Rhinichthys osculus ssp.</i>	R-W		X			X		
Oasis Valley speckled dace	<i>Rhinichthys osculus ssp.</i>	R-W		X			X		
White River speckled dace	<i>Rhinichthys osculus ssp.</i>	R-W		X		X	X		
Pahranagat speckled dace	<i>Rhinichthys osculus velifer</i>	R-W		X	X				
Jarbridge River bull trout	<i>Salvelinus confluentus pop</i>	R-W		X					
Razorback sucker	<i>Xyrauchen texanus</i>	R-W	LE					X	
<b>INVERTEBRATES</b>									
White River wood nymph	<i>Cercyonis pegala pluvialis</i>	R-W		X	X	X			
Baking Powder Flat blue	<i>Euphilotes bernadino minuta</i>	MDV		X		X			
Koret's chckerspot	<i>Euphydryas editha koreti</i>	MC/A		X		X			
Railroad Valley uncas skipper	<i>Hesperia uncas fulvapalla</i>	MDV		X		X			
White River uncas skipper	<i>Hesperia uncas grandiosa</i>	R-W		X		X			
Schell Creek mountainsnail	<i>Oreohelix nevadensis</i>	R-W		X		X			
Pahranagat naucorid bug	<i>Pelocoris shoshone shoshone</i>	R-W		X	X				
Steptoe Valley crescent spot	<i>Phycoides pascoensis arenacolor</i>	R-W		X		X			
Duckwater pyrg	<i>Pyrgulopsis aloba</i>	R-W		X			X		
Southern duckwater pyrg	<i>Pyrgulopsis anatine</i>	R-W		X			X		
Moapa pebblesnail	<i>Pyrgulopsis avernalis</i>	R-W		X				X	
Flag springsnail	<i>Pyrgulopsis breviloba</i>	R-W		X	X		X		
Moapa Valley springsnail	<i>Pyrgulopsis carinifera</i>	R-W		X				X	
Blue Point springsnail	<i>Pyrgulopsis coloradensis</i>	R-W		X				X	
Transverse gland pyrg	<i>Pyrgulopsis cruciglans</i>	R-W		X		X			
Crystal Spring springsnail	<i>Pyrgulopsis crystalis</i>	R-W		X			X		
Spring Mountains pyrg	<i>Pyrgulopsis deaconi</i>	R-W		X		X		X	
Ash Meadows pebblesnail	<i>Pyrgulopsis erythropoma</i>	R-W		X			X		
Fairbanks springsnail	<i>Pyrgulopsis fairbanksensis</i>	R-W		X			X		
Corn Creek springsnail	<i>Pyrgulopsis fausta</i>	R-W		X				X	

Common Name	Scientific Name	Habitat Type	USFWS	BLM	Lincoln County	White Pine County	Nye County	Clark County	JBR - Observed
Emigrant springsnail	<i>Pyrgulopsis gracilis</i>	R-W		X			X		
Hubbs pyrg	<i>Pyrgulopsis hubbsi</i>	R-W		X	X				
Enlongate-gland springsnail	<i>Pyrgulopsis isolata</i>	R-W		X			X		
Landyes pyrg	<i>Pyrgulopsis landeyi</i>	R-W		X		X			
Butterfield springsnail	<i>Pyrgulopsis lata</i>	R-W		X			X		
Lockes springsnail	<i>Pyrgulopsis lockensis</i>	R-W		X			X		
Hardy springsnail	<i>Pyrgulopsis marcida</i>	R-W		X	X		X		
Pahranagat pebblesnail	<i>Pyrgulopsis merriami</i>	R-W		X	X				
Camp Valley springsnail	<i>Pyrgulopsis montana</i>	R-W		X	X				
Sub-globose Steptoe Ranch pyrg	<i>Pyrgulopsis orbiculata</i>	R-W		X		X			
Bifid duct pyrg	<i>Pyrgulopsis peculiaris</i>	R-W		X		X			
Lake valley springsnail	<i>Pyrgulopsis sublata</i>	R-W		X	X				
Southern Steptoe pyrg	<i>Pyrgulopsis sulcata</i>	R-W		X		X			
Southeast Nevada springsnail	<i>Pyrgulopsis turbatrix</i>	R-W		X				X	
Grated tryonia	<i>Tryonia clathrata</i>	R-W		X	X			X	

Sources:

BLM Nevada Sensitive Species list, July 29, 2003

Nevada Heritage Program shape files, 2004

US Fish and Wildlife Service species list, 2004

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Nevada Natural Heritage Program Rare Plant Atlas, June 2001

USFWS Status:

LE - Federally listed as endangered

LT - Federally listed as threatened

C - Federal candidate species

PT - Proposed Threatened

Habitat Type

PJ - Pinyon-Juniper Woodlands

A - Aspen

C - High-elevation Conifer

R-W - Riparian Wetlands (includes Aquatic habitat)

MM - Mountain Mahogany

SB - Sagebrush

SDS - Salt Desert Shrub

MDV - Mojave Desert Vegetation

NNS - Non-Native Seedings

## Visual Contrast Rating Worksheet

### Section A. Project Information

<b>Project Name</b>	ON Line Project – Proposed Action and Action Alternative	<b>KOP Location</b>
<b>Key Observation Point</b>	KOP 1A, View to NW	UTM Zone 11, NAD83
<b>VRM Class</b>	IV (Ely District)	E 0653953 N 4303340

### Section B. Characteristic Landscape Description

	Land/Water	Vegetation	Structures
<b>Form</b>	Flat terrain	Simple forms bounded by highway	Flat (highway)
<b>Line</b>	Horizontal	Horizontal boundary	Straight
<b>Color</b>	Light gray highway	Gray-green	Dark gray
<b>Texture</b>	Smooth	Medium, uniform	Smooth

### Section C. Proposed Activity Description

	Land/Water	Vegetation	Structures
<b>Form</b>	Flat terrain	Simple forms bounded by highway	Large, prominent (support structures and wires)
<b>Line</b>	Horizontal	Horizontal boundary	Bold, geometric
<b>Color</b>	Light gray highway	Gray-green	Coated metal
<b>Texture</b>	Smooth	Medium, uniform	Coarse, contrasty

### Section D. Contrast Rating

	Land/Water	Vegetation	Structures
<b>Form</b>	4	4	2
<b>Line</b>	4	4	2
<b>Color</b>	4	4	2
<b>Texture</b>	4	4	2

Degree of Contrast: 1 = Strong; 2 = Moderate; 3 = Weak; 4 = None

**Does project design meet visual resource management objectives?** Yes.

Project elements are in foreground-middleground zone. Transmission line support structures near the highway would contrast with the existing landscape but the nearest would be approximately 600 feet away. Wires crossing the highway would be visible but for only a short time at highway speeds.

**Additional mitigating measures recommended.** None.

**Evaluator:** R. Duncan

**Date:** April 2007 (Revised August 2008)

## Visual Contrast Rating Worksheet

### Section A. Project Information

<b>Project Name</b>	ON Line Project – Proposed Action and Action Alternative	<b>KOP Location</b>
<b>Key Observation Point</b>	KOP 1B, View to SE	UTM Zone 11, NAD83
<b>VRM Class</b>	IV (Ely District)	E 0653953 N 4303340

### Section B. Characteristic Landscape Description

	Land/Water	Vegetation	Structures
<b>Form</b>	Flat terrain	Simple forms	None
<b>Line</b>	Horizontal	Horizontal boundary	None
<b>Color</b>	Gray-green	Gray-green	None
<b>Texture</b>	Smooth	Medium, uniform	None

### Section C. Proposed Activity Description

	Land/Water	Vegetation	Structures
<b>Form</b>	Flat terrain	Simple forms	Large, prominent (support structures and wires)
<b>Line</b>	Horizontal	Horizontal boundary	Bold, geometric
<b>Color</b>	Gray-green	Gray-green	Coated metal
<b>Texture</b>	Smooth	Medium, uniform	Coarse, contrasty

### Section D. Contrast Rating

	Land/Water	Vegetation	Structures
<b>Form</b>	4	4	2
<b>Line</b>	4	4	2
<b>Color</b>	4	4	2
<b>Texture</b>	4	4	2

Degree of Contrast: 1 = Strong; 2 = Moderate; 3 = Weak; 4 = None

**Does project design meet visual resource management objectives?** Yes.

Project elements are in foreground-midground zone. Transmission line support structures near the highway would contrast with the existing landscape but the nearest would be approximately 600 feet away. Wires crossing the highway would be visible but for only a short time at highway speeds.

**Additional mitigating measures recommended.** None.

**Evaluator:** R. Duncan

**Date:** April 2007 (Revised August 2008)

## Visual Contrast Rating Worksheet

### Section A. Project Information

<b>Project Name</b>	ON Line Project – Proposed Action and Action Alternative	<b>KOP Location</b>
<b>Key Observation Point</b>	KOP 2A, View to NNE	UTM Zone 11, NAD83
<b>VRM Class</b>	IV (Ely District)	E 0695627 N 4166057

### Section B. Characteristic Landscape Description

	Land/Water	Vegetation	Structures
<b>Form</b>	Flat terrain	Simple forms	Flat (highway, building, vertical support structures)
<b>Line</b>	Horizontal	Horizontal boundary	Simple
<b>Color</b>	Gray, tan	Gray-green	Light gray, dark brown
<b>Texture</b>	Smooth	Medium, uniform	Smooth

### Section C. Proposed Activity Description

	Land/Water	Vegetation	Structures
<b>Form</b>	Flat terrain	Simple forms	Large, prominent (support structures and wires)
<b>Line</b>	Horizontal	Horizontal boundary	Bold, geometric
<b>Color</b>	Gray, tan	Gray-green	Coated metal
<b>Texture</b>	Smooth	Medium, uniform	Coarse, contrasty

### Section D. Contrast Rating

	Land/Water	Vegetation	Structures
<b>Form</b>	4	4	2
<b>Line</b>	4	4	2
<b>Color</b>	4	4	2
<b>Texture</b>	4	4	2

Degree of Contrast: 1 = Strong; 2 = Moderate; 3 = Weak; 4 = None

**Does project design meet visual resource management objectives?** Yes.

Project elements are in foreground-midground zone. Transmission line support structures near the highway would contrast with the existing landscape but the nearest would be approximately 600 feet away. Wires crossing the highway would be visible but for only a short time at highway speeds.

**Additional mitigating measures recommended.** None.

**Evaluator:** R. Duncan

**Date:** April 2007 (Revised August 2008)

## Visual Contrast Rating Worksheet

### Section A. Project Information

<b>Project Name</b>	ON Line Project – Proposed Action and Action Alternative	<b>KOP Location</b>
<b>Key Observation Point</b>	KOP 2B, View to SSW	UTM Zone 11, NAD83
<b>VRM Class</b>	IV (Ely District)	E 0695627 N 4166057

### Section B. Characteristic Landscape Description

	Land/Water	Vegetation	Structures
<b>Form</b>	Flat terrain	Simple forms	Regular (support structures, fence)
<b>Line</b>	Horizontal	Horizontal boundary	Vertical, simple
<b>Color</b>	Gray, tan	Gray-green, tan	Dark brown
<b>Texture</b>	Smooth	Medium, uniform	Smooth

### Section C. Proposed Activity Description

	Land/Water	Vegetation	Structures
<b>Form</b>	Flat terrain	Simple forms	Large, prominent (support structures and wires)
<b>Line</b>	Horizontal	Horizontal boundary	Bold, geometric
<b>Color</b>	Gray tan	Gray-green, tan	Coated metal
<b>Texture</b>	Smooth	Medium, uniform	Coarse, contrasty

### Section D. Contrast Rating

	Land/Water	Vegetation	Structures
<b>Form</b>	4	4	2
<b>Line</b>	4	4	2
<b>Color</b>	4	4	2
<b>Texture</b>	4	4	2

Degree of Contrast: 1 = Strong; 2 = Moderate; 3 = Weak; 4 = None

**Does project design meet visual resource management objectives?** Yes.

Project elements are in foreground-midground zone. Transmission line support structures near the highway would contrast with the existing landscape but the nearest would be approximately 600 feet away. Wires crossing the highway would be visible but for only a short time at highway speeds.

**Additional mitigating measures recommended.** None.

**Evaluator:** R. Duncan

**Date:** April 2007 (Revised August 2008)

## Visual Contrast Rating Worksheet

### Section A. Project Information

<b>Project Name</b>	ON Line Project– Proposed Action and Action Alternative	<b>KOP Location</b>
<b>Key Observation Point</b>	KOP 3, View to N	UTM Zone 11, NAD83
<b>VRM Class</b>	III, IV (Ely District)	E 0675908 N 4117412

### Section B. Characteristic Landscape Description

	Land/Water	Vegetation	Structures
<b>Form</b>	Rolling hills	Simple forms	Flat (highway)
<b>Line</b>	Horizontal	Horizontal boundary	Simple
<b>Color</b>	Gray, tan	Gray-green	Light/dark gray
<b>Texture</b>	Coarse, patchy	Medium, uniform	Smooth

### Section C. Proposed Activity Description

	Land/Water	Vegetation	Structures
<b>Form</b>	Rolling hills	Simple forms	Large, prominent (support structures and wires)
<b>Line</b>	Horizontal	Horizontal boundary	Bold, geometric
<b>Color</b>	Gray, tan	Gray-green	Coated metal
<b>Texture</b>	Coarse, patchy	Medium, uniform	Coarse, contrasty

### Section D. Contrast Rating

	Land/Water	Vegetation	Structures
<b>Form</b>	4	4	2
<b>Line</b>	4	4	2
<b>Color</b>	4	4	2
<b>Texture</b>	4	4	2

Degree of Contrast: 1 = Strong; 2 = Moderate; 3 = Weak; 4 = None

**Does project design meet visual resource management objectives?** Yes.

Project elements are in foreground-midground zone. Transmission line support structures near the highway would contrast with the existing landscape but the nearest would be approximately 600 feet away. Wires crossing the highway would be visible but for only a short time at highway speeds.

**Additional mitigating measures recommended.** None.

**Evaluator:** R. Duncan

**Date:** April 2007 (Revised August 2008)

## Visual Contrast Rating Worksheet

### Section A. Project Information

<b>Project Name</b>	ON Line Project – Proposed Action and Action Alternative	<b>KOP Location</b>
<b>Key Observation Point</b>	KOP 4, View to NNE	UTM Zone 11, NAD83
<b>VRM Class</b>	III, IV (Ely District)	E 0680234 N 4092824

### Section B. Characteristic Landscape Description

	Land/Water	Vegetation	Structures
<b>Form</b>	Rolling hills	Simple forms	Flat, regular (highway, support structures)
<b>Line</b>	Horizontal	Horizontal boundary	Vertical, simple
<b>Color</b>	Gray, tan	Gray-green	Dark brown
<b>Texture</b>	Coarse, patchy	Patchy	Smooth

### Section C. Proposed Activity Description

	Land/Water	Vegetation	Structures
<b>Form</b>	Rolling hills	Simple forms	Large, prominent (support structures and wires)
<b>Line</b>	Horizontal	Horizontal boundary	Bold, geometric
<b>Color</b>	Gray, tan	Gray-green	Coated metal
<b>Texture</b>	Coarse, patchy	Patchy	Coarse, contrasty

### Section D. Contrast Rating

	Land/Water	Vegetation	Structures
<b>Form</b>	4	4	2
<b>Line</b>	4	4	2
<b>Color</b>	4	4	2
<b>Texture</b>	4	4	2

Degree of Contrast: 1 = Strong; 2 = Moderate; 3 = Weak; 4 = None

**Does project design meet visual resource management objectives?** Yes.

Project elements are in foreground-midground zone. Transmission line support structures near the highway would contrast with the existing landscape but the nearest would be approximately 600 feet away. Wires crossing the highway would be visible but for only a short time at highway speeds.

**Additional mitigating measures recommended.** None.

**Evaluator:** R. Duncan

**Date:** April 2007 (Revised August 2008)

## Visual Contrast Rating Worksheet

### Section A. Project Information

<b>Project Name</b>	ON Line Project – Proposed Action and Action Alternative	<b>KOP Location</b>
<b>Key Observation Point</b>	KOP 5, View to NNW	UTM Zone 11, NAD83
<b>VRM Class</b>	IV (Ely District)	E 0681414 N 4085449

### Section B. Characteristic Landscape Description

	Land/Water	Vegetation	Structures
<b>Form</b>	Flat terrain	Simple forms	Flat, regular (highway, support structures)
<b>Line</b>	Horizontal	Diagonal boundary	Vertical, simple
<b>Color</b>	Gray, tan	Gray-green	Dark brown, gray
<b>Texture</b>	Uniform	Patchy	Smooth

### Section C. Proposed Activity Description

	Land/Water	Vegetation	Structures
<b>Form</b>	Flat terrain	Simple forms	Large, prominent (support structures and wires)
<b>Line</b>	Horizontal	Diagonal boundary	Bold, geometric
<b>Color</b>	Gray, tan	Gray-green	Coated metal
<b>Texture</b>	Uniform	Patchy	Coarse, contrasty

### Section D. Contrast Rating

	Land/Water	Vegetation	Structures
<b>Form</b>	4	4	2
<b>Line</b>	4	4	2
<b>Color</b>	4	4	2
<b>Texture</b>	4	4	2

Degree of Contrast: 1 = Strong; 2 = Moderate; 3 = Weak; 4 = None

**Does project design meet visual resource management objectives?** Yes.

Project elements are in foreground-midground zone. The nearest new transmission line support structures would be approximately 1,800 feet away. The new transmission line support structures would be larger than the existing ones but the contrast would be less when viewed from the highway because of the greater distance.

**Additional mitigating measures recommended.** None.

**Evaluator:** R. Duncan

**Date:** April 2007 (Revised August 2008)

## Visual Contrast Rating Worksheet

### Section A. Project Information

<b>Project Name</b>	ON Line Project – Proposed Action and Action Alternative	<b>KOP Location</b>
<b>Key Observation Point</b>	KOP 6, View to NNW	UTM Zone 11, NAD83
<b>VRM Class</b>	IV (Las Vegas District)	E 0688692 N 4028533

### Section B. Characteristic Landscape Description

	Land/Water	Vegetation	Structures
<b>Form</b>	Flat terrain	Simple forms	Vertical support structures
<b>Line</b>	Horizontal	Diagonal boundary	Vertical, simple
<b>Color</b>	Gray, tan	Gray-green	Dark brown, light gray
<b>Texture</b>	Uniform	Patchy	Smooth

### Section C. Proposed Activity Description

	Land/Water	Vegetation	Structures
<b>Form</b>	Flat terrain	Simple forms	Indistinct (support structures, switching station equipment)
<b>Line</b>	Horizontal	Diagonal boundary	Bold, geometric
<b>Color</b>	Gray, tan	Gray-green	Coated metal
<b>Texture</b>	Uniform	Patchy	Coarse, contrasty

### Section D. Contrast Rating

	Land/Water	Vegetation	Structures
<b>Form</b>	4	4	3
<b>Line</b>	4	4	3
<b>Color</b>	4	4	3
<b>Texture</b>	4	4	3

Degree of Contrast: 1 = Strong; 2 = Moderate; 3 = Weak; 4 = None

**Does project design meet visual resource management objectives?** Yes.

Project elements are in foreground-midground zone. The new transmission facility equipment is approximately 3.5 miles away and would likely not be visible from the KOP. Management objectives for Class IV would be met.

**Additional mitigating measures recommended.** None.

**Evaluator:** R. Duncan

**Date:** April 2007 (Revised August 2008)

## Appendix 5A

### Past, Present, and Reasonably Foreseeable Projects

Project	Location (County, T/R Section, etc.)	Project Type	Brief Description	Acreages or other Quantity	Analyzed Within Resource Topic	Status
4-Mile Basin Minerals Exploration	Nye County – T5N, R47E, sections 16, 17, 20	Mining Exploration	Seabridge Gold Corporation minerals exploration proposal to drill up to 5 holes on existing roads. Includes up to 2,480 feet of cross country travel. Total surface disturbance 1 acre. Within an Inventoried Roadless Area (IRA).		Socioecon	Future
Alligator Ridge Gold Mine	North of U.S. 50, west of Highway 93, between Ely and Eureka, NV, White Pine County	Mine	Gold mining operation		Socioecon, Land Use	Present, Future
American Asphalt & Grading Company	Clark County, NV, Sec 21, T13S, R63E	Industrial	Aggregate, rock, sand, crushing		Geology & Minerals [All]	Present, Future
Apex Generating Facility, Mirant/LS Power	Apex Industrial Park, Clark County, NV	Power Plant	A 550 MW natural gas, combined cycle power plant	~200 acres	Air Quality**, Land Use, Recreation, Special Designations	Existing
Apex Industrial Park	Apex Industrial Park, Clark County, NV	Industrial	Georgia Pacific Las Vegas Plant, Gypsum Division - Gypsum wallboard manufacturing Apex Quarry and Plant, Chemical Lime Company and Granite Construction - Limestone mining, milling, and processing operations by Chemical Lime, Granite crushes overburden Apex Regional Landfill, Republic Services - Municipal landfill permitted currently using 250 acres Silver States Landfill - Sand, sand/gravel, crushing, screening Apex Landfill Pit/Las Vegas Paving - Sand and gravel operations	~100 acres ~1500 acres 1,100 acres permitted ~300 acres	Air Quality* Land Use, Recreation, Special Designations, Socioecon	Existing
Arrow Canyon	Clark County	Mining District	Silica, building stone		All	Present, Future
Bald Mountain Properties	110 km northwest of Ely, NV, White Pine County	Mine	Gold mining operation	Covers 625 square km with 12 areas with previous production	Air Quality – Cumulative Class II*	Present, Future

Project	Location (County, T/R Section, etc.)	Project Type	Brief Description	Acreages or other Quantity	Analyzed Within Resource Topic	Status
Bassett Lake Expansion	White Pine County	Recreation & Conservation	White Pine County and NDOW purchase of Bassett Lake, surrounding acreage, and water rights from Kennecott Copper Company. Once acquired, the proposal for development includes dam replacement, improvement of lake and wetlands, and recreational developments such as picnic areas, a boat launch, and restrooms.	6,000 acres 53 cfs water	Land Use, Recreation, Socioecon	Future
Bolo Minerals Exploration	Nye County – T8N, R50E, Sections 17, 20, 21, 29	Mining Exploration	Cordex Exploration Company minerals exploration proposal to drill up to 27 holes on existing roads; construct up to 5100 feet of new roads; 1300 feet of cross country travel. Total surface disturbance 2.2 acres. Within an IRA.		Socioecon	Future
Bristol	Lincoln County	Mining District	Silver, copper, lead, zinc, gold, manganese, montmorillonite		All	Present, Future
California Trails Interpretive Waysides	Northeast Nevada	Recreation	Interpretive plan for California National Historic trails in settling the west was completed in 2004. It conceptually identifies the potential for development of approximately 20 wayside sites associated with trail use as emigrants traveled through Nevada.		Historic and Cultural Resources, Land Use, Recreation, Special Designations, Socioecon	in review – subject to funding
Cherry Creek	White Pine County	Mining District	Silver, gold, lead, copper, zinc, tungsten, antimony, coal, fluorspar, beryllium Active mining.		Air Quality, Socioecon, Special Designations, Recreation, Land Use	Present, Future
Chevron Environmental Management Company	Ely, NV	Industrial			Air Quality – Cumulative Class II*	Present, Future

Project	Location (County, T/R Section, etc.)	Project Type	Brief Description	Acreages or other Quantity	Analyzed Within Resource Topic	Status
Chokecherry Power line	T5S R64E sections 13, 14,15, 16, 17, 24 T5S R65E Section 16, 17, 18, 19, 20, Lincoln County, NV within the utility corridor west of Caliente.	Transmission Line	Transmission line to Chokecherry Comsite	21.910 acres (7.23 miles)	All	Past
Chuck Lenzie Generating Station, Nevada Power	Apex Industrial Park, Clark County, NV	Power Plant	1,200 MW natural gas, combined cycle power plant		Air Quality**, Land Use, Recreation, Special Designations	Existing
Clark County Conservation of Public Land and Natural Resources Act of 2002	Clark County, NV	Lands Legislation	<ul style="list-style-type: none"> <li>Established the Arrow Canyon, Jimbilnan, Jumbo Springs, Lime Canyon, Muddy Mountains, and Pinto Valley Wilderness Areas</li> <li>Released Wilderness Study Area lands on the southeast boundary of the Desert NWR, contiguous with the Arrow Canyon, Muddy Mountains, and Lime Canyon WAs, and south of the Lime Canyon WA.</li> <li>Expanded the boundary of the SNPLMA to include 22,000 additional acres identified for disposal, with retention of proceeds for conservation initiatives within Clark County.</li> <li>Transfer of land parcels from the BLM to the USFWS and NPS for administrative jurisdiction.</li> </ul>		Land Use, Special Designations, Recreation, Socioecon	Present/ Future
Clark, Lincoln, and White Pine County Ground Water Development Project (SNWA Project)	Clark, Lincoln, and White Pine counties	Water Project	SNWA has applied to the BLM for ROWs to construct and operate a system of regional water supply facilities. This includes construction and operation of ground water production wells, water conveyance facilities, and power facilities.		Water Resources, Soils, Vegetation, Wildlife	Future
Comet	Lincoln County	Mining District	Lead, silver, zinc, gold, copper, tungsten		Range , Socioecon	Present, Future
Cooper & Sons, Inc.	Ely, NV	Industrial	Concrete, forms, and construction		Air Quality - Cumulative Class II*	Present, Future

Project	Location (County, T/R Section, etc.)	Project Type	Brief Description	Acreages or other Quantity	Analyzed Within Resource Topic	Status
Country Construction	North of Ely, NV	Industrial	Gravel Pit		Air Quality – Cumulative Class II*	Present, Future
Coyote Springs Development	About 50 miles north of Las Vegas, east of Hwy 93, north of SR168	Community Development	Planned community	43,000 acres, of which 12,000 acres are planned for a nature preserve, trail system, parks, open spaces and multi- species habitat.	All	Future
Coyote Springs Service Rock Products	Lincoln County, NV, Sec 13, T11S, R62E	Industrial	Sand/gravel, crushing, screening		Geology & Minerals [All]	Present, Future
Coyote Springs Valley Well and Moapa Transmission Project	Coyote Springs Valley	Water Project	Groundwater test well and pipeline along Highway 168 between Coyote Springs Development and Moapa, NV		Socioecon	Existing
Coyote Springs Water Pipeline along SR-168	Clark County T13S R63-65E T14S R64-66E	Water Pipeline	Nevada Power Co. has submitted an application for a 14-18- inch water pipeline connecting an existing well in the Coyote Springs area to an existing pipeline.	11.3 miles (~27 acres)		Future
Crystal Substation	Dry Lake Valley, north of Harry Allen substations between US-93 and I-15	Substation	500kV-230kV substation		All	Existing
Currant	White Pine and Nye Counties	Mining District	Gold, lead, copper, tungsten, magnesite, uranium, fluorspar NMC843483, NMC753739 Active mining.		All	Present, Future
Delamar	Lincoln County	Mining District	Gold, silver, copper, lead, perelite		All	Present, Future

Project	Location (County, T/R Section, etc.)	Project Type	Brief Description	Acres or other Quantity	Analyzed Within Resource Topic	Status
Delamar Mountains, Meadow Valley Range and Mormon Mountains Wilderness Management Plan	Lincoln County	Wilderness Management Plan	As a result of the Lincoln County Conservation, Recreation and Development Act of 2004, 111,328 acres in the Delamar Mountains will be managed for wilderness characteristics; 123,508 ac in the Meadow Valley Range and 157,938 acres in the Mormon Mountains will also be managed for wilderness values.	392,774 ac	Land Use, Socioecon, All	Present, Future
Desert National Wildlife Refuge Visitor Facilities Draft Environmental Assessment	Clark and Lincoln counties, NV	EA	Draft EA for proposed development of new visitor and administrative facilities.		Land Use, Recreation, Special Designations, Socioecon	Future
Disc Golf EA	Ward Recreation Area; 6 mi west of Ely in T16N, R62E Sections 26 & 27	Recreation	Fulfilling "Semi-Primitive Non-motorized" recreation opportunities as identified in the Recreation Opportunity Spectrum in White Pine County, Nevada.		Recreation, Special Designations, Socioecon, Land Use	Preliminary EA issued Oct 2007
Dry Lake Solar	Clark County	Energy	NV Energy has applied for a ROW for construction of an approximately 1,700 acre solar facility in the vicinity of the Harry Allen Substation	1,700 acres		Future
Duck Creek	White Pine County	Mining District	Lead, silver, copper, zinc, gold, limestone, fire clay NMC909041		Land Use, Socioecon	Present, Future
Ely Spring Cattle and Ely Spring Sheep allotments Renewal	Dry Lake Valley, 15 miles north by northwest of Panaca, Nevada, in Lincoln County west of the Highland Peak Range.	Grazing	The assessment of rangeland health for the Ely Spring Cattle and Ely Spring Sheep allotments. Standards are not being achieved on the Ely Spring Cattle Allotment while Standards are being achieved for the Ely Spring Sheep Allotment. Livestock are not a contributing factor to not achieving the Standards. Standards were not met due to historical grazing practices which occurred prior to the current permittee's tenure on the allotment. Changes to the grazing management system are proposed to improve the overall management of livestock on the allotments and to update the allotment management plan to meet the objectives of both allotments.	BLM Ely Spring Cattle Allotment: 57,849; Ely Spring Sheep Allotment: 24,238; all in Lincoln County, Nevada.	Range, Land Use, Vegetation, Soils [All]	FONSI issued Oct 2007
Ely Springs	Lincoln County	Mining District	Silver, zinc, lead, gold		All	Present, Future

Project	Location (County, T/R Section, etc.)	Project Type	Brief Description	Acreages or other Quantity	Analyzed Within Resource Topic	Status
Ely to Cherry Creek Fiber Optic Line	Between Ely and Cherry Creek, White Pine County	Fiber Optic Line	Fiber optic line, Nevada Bell	67.0 miles	Land Use, Socioecon	Existing
Ely Westside Rangeland Project	Humboldt Toiyabe National Forest, Ely Ranger District, Quinn Canyon, White Pine Range, and Grant Range	DEIS (available 11/07)	Analysis of livestock grazing on 12 allotments in the White Pine, Quinn Canyon, and Grant Ranges		Socio, Land Use, Range	Future
Enexco, Wind Generation Project	North Egan Range	Wind Generation			Socioecon, Land Use, Range	Future
Falcon to Gonder 345kV Transmission Project	Begins at Gonder Substation just north of Ely Nevada then heads west to ¼ mile south of Thirtymile Substation	Transmission Line	New 345kV transmission line from Falcon to Gonder and expansion of two substations	179 miles	All	Existing
Fortification Range, Parsnip Peak, White Rock Range Wilderness EA for WMP	Lincoln County	EA for WMP	As a result of the Lincoln County Conservation, Recreation and Development Act of 2004, 30,656 acres in the Fortification Range are proposed for managed for wilderness characteristics; 43,693 ac in the Parsnip Peak Wilderness and 24,413 acres in the White Rock Range Wilderness would also be managed for wilderness values.	98,762 ac	Land Use, Socioecon, Recreation	Present, Future
Georgetown Ranch Allotment	one mile north of Ely in the Steptoe and Smith valleys	Grazing	It was determined that one of the Standards was not being achieved. A review and analysis of the monitoring data was conducted. As a result of this review, although livestock were determined not to be a causal factor to not meeting one of the Standards, changes to the management of livestock were proposed to improve the vegetative conditions of the allotment.	27,019 ac BLM managed lands	Land Use, Socioecon	FONSI issued Sept 2007

Project	Location (County, T/R Section, etc.)	Project Type	Brief Description	Acreages or other Quantity	Analyzed Within Resource Topic	Status
Geothermal Energy Leasing Programmatic ROD	12 Western States including Nevada	Renewable energy development	BLM issued ROD to facilitate geothermal leasing of the federal mineral estate in Nevada, in December 2008. Decision (1) allocates BLM and USFS lands as open or closed for geothermal leasing, and (2) develops a reasonably foreseeable development scenario that project 238 MW production by 2015 and 488 MW production by 2025 on the Elko, Wells and Las Vegas Districts by amending their RMPs.	10,932,025 ac open to leasing	All	Present, Future
Gold Canyon	White Pine County	Mining District	Gold, silver Active mining.		Socioecon, Land Use	Present, Future
Golden Chalice Resources – Aphro Hill Project	Nye County - T9N, R47.5E, Section 36 and T9N, R47E, Sections 25-26.	Mining Exploration	Golden Chalice Resources mineral exploration proposal to drill 9 drill sites and construct 5,005 feet of road; less than 4.3 acres of disturbance.		Socioecon	Future
Gonder to Machacek 230kV Transmission line	¼ mile south of Thirtymile substation site	Transmission Line	230kV transmission line		All	Existing
Granite	White Pine County	Mining District	Lead, silver, gold, tungsten, copper NMC790940		Land Use, Socioecon	Present, Future
Grazing	BLM lands	Grazing	Grazing and range improvements throughout project area			Existing and Future
Great Basin Transmission Line	White Pine County (located within SWIP utility corridor)	Transmission Line	500kV transmission line		All	Future project as of 8/07
Harry Allen 230kV and 500kV substations/ switchyards	Apex Industrial Park, Clark County, NV	Substation	Two substations located in the vicinity of the Harry Allen Generation Station		All	Existing
Harry Allen Generation Station, Nevada Power	Highway 93 and I-15, Clark County, NV	Power Plant	2 - 75 MW natural gas, simple cycle combustion turbines power plant; planned expansion includes the addition of 2 – 250 MW combined cycle turbines, 500 kV line to connect new generation to substation (approximately ½ mile), and related appurtenances.		Air Quality**, [All]	Existing and Future
Harry Allen to Apex and Silverhawk 500 kV Transmission line	Between Harry Allen and Apex and Silverhawk Generating stations	Transmission Line	500kV transmission line		All (only because it goes to Harry Allen substation)	Existing

Project	Location (County, T/R Section, etc.)	Project Type	Brief Description	Acres or other Quantity	Analyzed Within Resource Topic	Status
Harry Allen to NW and Harry Allen to Crystal 500kV Transmission lines	Between Harry Allen, Chuck Lenzie Power plant and the existing NW and Crystal substations	Transmission Line	Two 500kV transmission lines		All (only because it goes to Harry Allen substation)	Existing
Harry Allen 230kV Transmission lines	Between Harry Allen, Pecos, & Reid Gardner substations	Transmission Line	Harry Allen to Pecos, Harry Allen to NW, and Harry Allen to Reid Gardner 230kV transmission lines		All (only because it goes to Harry Allen substation)	Existing
Harry Allen to Red Butte transmission line	Between Harry Allen and Red Butte substations	Transmission Line	345kV transmission line		All (only because it goes to Harry Allen substation)	Existing
Harry Allen-Mead 500kV Transmission line – First Circuit	Between Mead Substation, located south of Lake Mead and The Harry Allen Substation northeast of Las Vegas	Transmission Line	500kV transmission line		All (only because it goes to Harry Allen substation)	Existing
Harry Allen-Mead 500kV Transmission line – Second Circuit	Parallel to First Circuit – Mead Substation to Harry Allen, southwest of Lake Mead	Transmission Line	500kV transmission line		All (only because it goes to Harry Allen substation)	Future
Heusser Mountain Allotment	approx 10 miles north of Ely in the Steptoe Valley and Egan Range	Grazing	It was determined that one of the Standards was not being achieved. A review and analysis of the monitoring data was conducted. As a result of this review, livestock were determined to be a causal factor to not meeting one of the Standards; changes to the management of livestock were proposed to improve the vegetative conditions in two pastures of the allotment.	33,956 acres of BLM managed lands	Land Use, Socioecon	FONSI issued Sept 2007
Hidden Valley Community Project	Moapa, NV	Community Development	Hidden Valley Glendale LLC's proposed Hidden Valley Community project	910 acres	Land Use, Recreation, Special Desig.	Future

Project	Location (County, T/R Section, etc.)	Project Type	Brief Description	Acreages or other Quantity	Analyzed Within Resource Topic	Status
Highland	Lincoln County	Mining District	Lead, silver, gold, copper, tungsten, manganese, iron		Range Resources, Land Use, Socioecon	Present, Future
Hunter	White Pine County	Mining District	Lead, copper, silver, gold, uranium Active mining.		All	Present, Future
I-15	Traverses Southeast Nevada	Highway	Four-lane interstate highway and easement		Transportation	Existing
Kane Springs Valley Water Development Project	Lincoln County	Water Project	Proposed by the Lincoln County Water Conservancy District; would establish a production and distribution system to deliver water to planned developments		All	Future
Kennecott water ROW	T18N R64E Sections 2, 10, 11, 15, 22 T19N R64E Sections 25, 35, 36 T19N R65E Section 30	Pipeline	36-inch diameter water pipeline; Assigned from Steptoe Valley Smelting and Mining Co. to Kennecott Nevada Copper Company	68,833	Land Use, Socioecon	Past
Kern River Gas Transmission Company expansion pipeline	From Salt Lake City Utah, terminating at Apex Industrial Park, Clark County, NV	Pipeline	36-inch diameter natural gas pipeline	400 miles	All [Socioecon]	Existing
Lincoln County Land Act Groundwater Development Project	Lincoln County	Water Project	Lincoln County water District proposes to construct groundwater facilities and ancillary utility infrastructure designed to pump and convey groundwater in the Clover Valley and Tule Desert Hydrographic Basins, primarily to meet future municipal needs in southeastern Lincoln County		Water Resources, Soils, Vegetation, Wildlife	Future

Project	Location (County, T/R Section, etc.)	Project Type	Brief Description	Acreages or other Quantity	Analyzed Within Resource Topic	Status
Lincoln County Lands Act of 2000	Lincoln County, NV	Lands Legislation	<ul style="list-style-type: none"> <li>• Disposal of over 13,000 acres of public land</li> <li>• Retention of a portion of the proceeds by the State for general education;</li> <li>• Retention of a portion of the proceeds by the County with an emphasis on support for schools</li> <li>• Retention of a portion of the proceeds by the BLM in special accounts to be used for inventory, evaluation and protection and management of unique archaeological resources; development of a multispecies habitat conservation plan; reimbursement of the State and County for costs associated with sales; and for acquisition of environmentally sensitive land</li> </ul>		Land Use, Special Designations, Recreation, Socioecon	Present/ Future
Lincoln County Conservation Recreation and Development Act	Lincoln County, NV	Lands Legislation	<ul style="list-style-type: none"> <li>• Disposal of approximately 100,000 acres of public land</li> <li>• Retention of a portion of the land sale proceeds by the State for the educational fund</li> <li>• Retention of a portion of the proceeds by the county for economic development</li> <li>• Retention of a portion of the proceeds by the BLM in special accounts to be used for inventory, evaluation and protection and management of unique archaeological resources; development of a multispecies habitat conservation plan; reimbursement of BLM costs associated with sales; for management of the Silver State Off-Highway Vehicle Trail; and for management of the wilderness designated by the act.</li> <li>• Designation of nearly 770,000 acres of wilderness.</li> <li>• Release of over 245,000 acres of wilderness study area</li> <li>• Establishment of utility corridors for the Southern Nevada Water Authority and the Lincoln County Water District, and relocation of an existing utility corridor along Highway 93.</li> <li>• Designation of the Silver State Off-Highway Vehicle Trail</li> <li>• Conveyance of nearly 5,000 acres of BLM land to the State and County for use as parks and open space</li> <li>• Transfer of administrative jurisdiction for over 8,000 acres associated with the relocated utility corridor from the USFWS to the BLM, and transfer of over 8,500 acres of land from the BLM to the USFWS near the Desert NWR</li> </ul>		Land Use, Special Designations, Recreation, Socioecon	Present/ Future

<b>Project</b>	<b>Location (County, T/R Section, etc.)</b>	<b>Project Type</b>	<b>Brief Description</b>	<b>Acreages or other Quantity</b>	<b>Analyzed Within Resource Topic</b>	<b>Status</b>
Lincoln County Power District 2x138kV Transmission line	Lincoln and Clark counties within SWIP Utility Corridor	Transmission Line	2x138kV transmission line, single-circuit, or 1x138kV transmission line double-circuit		All	Future
Lincoln County Power District 69kV Transmission line	Lincoln and Clark counties within SWIP Utility Corridor	Transmission Line	69kV transmission line		All	Existing
Lowry Hazardous Fuels Reduction and Ecosystem Enhancement Project	Humboldt-Toiyabe National Forest, White Pine County	Fuels reduction, habitat restoration	3,253 acres proposed for mechanical treatment and 844 for prescribed burn	~4100 ac	Air Quality, Land Use	
McGill Tailings Reclamation Area	Outside McGill, NV, White Pine County	Mining Tailings	Mine tailings that have been covered with topsoil, seeded and irrigated; now used for limited grazing.	Approx. 3,700 acres	Land Use, Socioecon	Past/ Present
MCI Fiber Optic Line	Lincoln and Clark counties within SWIP Utility Corridor	Fiber Optic line	Fiber optic line		All	Existing
Meadow Valley	Lincoln County	Mining District	Gold, silver, uranium		All	Present, Future
Mount Wheeler Power Transmission line	Gonder to north along Hwy 93	Transmission Line	69kV transmission line		Air Quality, Land Use, Socioecon, Special Designations, Recreation	Existing

Project	Location (County, T/R Section, etc.)	Project Type	Brief Description	Acreages or other Quantity	Analyzed Within Resource Topic	Status
NDOT 2007 Highway Improvement Projects	White Pine County	Highway Improvement	<ul style="list-style-type: none"> <li>• U.S. 93 from Cherry Creek Road to U.S. 93A</li> <li>• FH 23, Duck Creek from U.S. 93 North of McGill for 10.2 miles South, Project Administrator – Forest Service</li> <li>• Ely Colony – Route 102, Project Administrator – Indian Reservation Roads Program</li> <li>• U.S. 93 from 2.64 miles north of Lake Valley Summit roadside Park to U.S. 6 / 50</li> <li>• SR-318 Sunnyside Road from Nye/White pine County line to U.S. 6</li> <li>• U.S. 93 from Lincoln/White Pine County Line for 11 Miles North</li> <li>• U.S. 6 from the Nye/White Pine County line for 13.92 Miles North</li> <li>• U.S. 50 at 14.85 Miles East of Junction with Ruby Valley Road</li> <li>• U.S. 50 at 17.45 Miles East of Junction with Road to Strawberry (SR-892)</li> <li>• U.S. 50 at 23.45 Miles East of Junction with Road to Strawberry</li> <li>• U.S. 50 from 3.45 Miles East of Junction with Ruby Valley Road</li> </ul>		Transportation [All more or less]	2007
NDOT 2009 Highway Improvement Projects	White Pine, & Lincoln Counties	Highway Improvement	<ul style="list-style-type: none"> <li>• American Recovery &amp; Reinvestment Act, SR318, Sunnyside cutoff at Lincoln/Nye county line, 18.83 miles (\$16.2 million)</li> <li>• White Pine County, 40 projects from &lt;\$1,000 to &gt;\$675,000, totaling \$3.4 million</li> <li>• Lincoln County, 11 projects from &lt;\$5,000 to \$15.1 million, totaling \$17.2 million</li> </ul>		Transportation (All resources, more or less)	FY2009
Nevada BLM Oil & Gas Lease Sales	BLM lands in Nevada	Oil and Gas Exploration	Quarterly competitive oil and gas lease sale. Initial step in the search for oil and gas. Subsequent actions to leasing parcels are exploration, development, production of oil and gas, and eventual abandonment plugging of wells and reclamation of the site		All	Past, present, future
Nevada Cogen #1 Chevron and Northern Star Generating	Apex Industrial Park, Clark County, NV	Power Plant	85 MW natural gas plant that provides electrical power to Nevada Power and thermal heat to Georgia Pacific, for gypsum board production		Air Quality**, Land Use, Recreation, Special Designations	Existing

Project	Location (County, T/R Section, etc.)	Project Type	Brief Description	Acreages or other Quantity	Analyzed Within Resource Topic	Status
Nevada Northern Railway Rehabilitation	Elko and White Pine Counties	Railway	Rehabilitation/reconstruction of the existing Nevada Northern Railway	150 Miles	Land Use, Socioecon	Future
Nevada Wind Co & LS Power - Egan Range Wind Generating Project	Egan Mountain Range near Telegraph Peak	Wind Generation	A maximum of 200 wind turbine generators, with a maximum nominal design capacity of 1,800 MW. The wind turbine generators would be supported on 140 to 328 foot tall conical tubular steel towers with a foundation diameter of 15 feet. In addition, 32 miles of new power line from the proposed Egan Range Wind Generating Facility substation to the Gonder substation would be constructed. Would be facilitated by ON Line.		All but paleo and geology/minerals/topo	Future
Nevada Wind Co & LS Power – Wind Generating Project in the Antelope Range	Northeast portion of the Steptoe Valley and South Schelle Creek Range	Wind Generation	Renewable energy production facility that would be facilitated by ON Line.		Land Use, Socioecon	Future
Newark Valley to Ely Fiber Optic Line	White Pine County, in Hwy 50 ROW in Newark Valley, Long Valley, Jake's Valley, and Steptoe Valley	Fiber Optic Line	Fiber optic line	75.2 miles	All	Existing
North Steptoe Allotment and North Steptoe Trail	approx 40 mi NE of Ely, on the west aspect of the Schell Creek Range	Grazing	As a result of the assessment and monitoring data review, it has been determined that the Standards and Guidelines for Rangeland Health are not meeting standards but making significant progress toward being met on the North Steptoe Allotment and North Steptoe Trail.	allotment 13,979 (162 ac private); trail 9,129 acres	Land Use, Socioecon	EA issued Sep 2007
Pasco Canyon Exploration Project	Nye County - Section 31, T12N, R46E and Section 36, T12N, R45E.	Mining Exploration	Piedmont Mining Co. Inc. proposal to drill 6 reverse circulation holes for minerals exploration.		Socioecon	Future
Proposed Lower Meadow Valley Wash ACEC	BLM Ely F.O., Lincoln County, NV	ACEC Designation	This ACEC is included under the preferred alternative in the Final RMP for the Ely FO. The ACEC would be partly located along the UPRR south of Caliente		Socio, Range, Land Use, Special Desig.	Future

Project	Location (County, T/R Section, etc.)	Project Type	Brief Description	Acreages or other Quantity	Analyzed Within Resource Topic	Status
Reid Gardner Expansion	Moapa, Clark County, NV	Power Plant	Expansion for evaporation ponds and permanent storage yard for fly ash	240 acres for fly ash landfill 315 acres for evaporation ponds	Air Quality*	Future
Reid Gardner Station	Moapa, NV	Power Plant	650 MW coal-fired power plant		Air Quality*	Existing
Robinson	White Pine County	Mining District	Copper, gold, silver, zinc, lead, iron, manganese, tungsten, molybdenum, rhenium, platinum, palladium, nickel NMC484174		Land Use, Socioecon	Present, Future
Ruby Hill	White Pine County	Mining District	Silver		Land Use, Socioecon	Present, Future
Rural and suburban residential development	Throughout project area	Community Development	Rural and urban residential development, both individual residence and large-scale development		All	Existing and Future
Sacramento Pass Hazardous Fuels Reduction Project	South and east of Highway 50 near Sacramento Pass, White Pine County, NV, near the UT border	Prescribed Burn	Hazardous fuels reduction activities using prescribed fire not to exceed 4,500 acres, and mechanical methods for crushing, piling, thinning, pruning, cutting, chipping, mulching, and mowing not to exceed 1,000 acres. Such activities shall be limited to areas (1) in wildland-urban interface and (2) Condition Classes 2 or 3 in Fire Regime Groups I, II, or III, outside of the wildland-urban interface	burning up to 4,500 acres; mechanical methods up to 1,000 acres	Air Quality**, Land Use, Special Designations, Recreation, Socioecon	categorical exclusion issued June 2007
Salisbury Peak Minerals Exploration	Nye County – T8N, R44E, Section 16	Mining Exploration	Round Mountain Gold Corporation exploration proposal to drill up to 16 holes on existing roads, blade up to 800 ft of existing roads, and construct up to 2, 080 ft of new road. Total surface disturbance of approximately 1.7 acres		Socioecon	Future
San Francisco	White Pine County	Mining District	Silver, lead Active mining.		Land Use, Socioecon	Present, Future
Schellbourne	White Pine County	Mining District	Silver, tungsten Active mining.		Land Use, Socioecon	Present, Future

Project	Location (County, T/R Section, etc.)	Project Type	Brief Description	Acreages or other Quantity	Analyzed Within Resource Topic	Status
Second Creek Allotment	24 miles northeast of Ely in the Steptoe Valley	Grazing	It was determined that the Standards were not being achieved nor were grazing management in complete conformance with the Guidelines. A review and analysis of the monitoring data was conducted. As a result of this review, no additional terms and conditions are needed for management practices to conform to guidelines and achieve standards.	8,373 ac	Land Use, Socioecon	FONSI issued Sept 2007
Silver Canyon	White Pine County	Mining District	Copper, gold, lead, silver		All	Present, Future
Silver King	Lincoln County	Mining District	Silver, lead, gold, copper		Land Use, Socioecon	Present, Future
Silver State East Fiber Optic Line	Reno to SLC, UT along Hwy 50 ROW	Fiber Optic Line	Fiber optic line within ROW		All	Existing
Silverhawk Power Plant, NV Energy	Apex Industrial Park, Clark County, NV	Power Plant	570 MW natural gas, combined cycle power plant		Air Quality**, Land Use, Recreation, Special Designations	Existing
Smith Valley Habitat Improvement & Fuels Reduction Project	Humboldt-Toiyabe National Forest, White Pine County	Fuels reduction/habitat restoration	Approximately 800-925 acres proposed for treatment. No fire treatment planned.	800-925	Air Quality, Land Use, Range, Recreation	Proposed for 2009
SNWA 230kV transmission line	White Pine, Lincoln, and Clark Counties within SWIP Utility Corridor	Transmission Line	230kV Transmission line		All	Future
SNWA water pipeline	White Pine, Lincoln, and Clark Counties within SWIP Utility Corridor	Water Project	Water pipeline system		Water Resources, Soils, Vegetation, Wildlife, All	Future

Project	Location (County, T/R Section, etc.)	Project Type	Brief Description	Acres or other Quantity	Analyzed Within Resource Topic	Status
Southern Nevada Public Lands Management Act	Clark County, NV	Lands Legislation	Provides for disposal of identified tracts of public lands with proceeds retained by local agencies.		Land Use, Special Designations, Recreation, Socioecon	Present/ Future
Southern Nevada Water Authority, Vidler, Lincoln County Water District and interrelated water projects	Central Lincoln, eastern White Pine, and northern Clark Counties	Water Project	Interrelated water projects concerning deep and shallow aquifer developments and pipelines in and through the two counties. Proposed intention to develop and convey up to 200,000 acre-feet per year of groundwater from seven hydrographic basins.		Ground Water, Surface Water, Socio, Land Use [All]	Future
Southwest Intertie Project, Southern Portion (SWIP) NV-040-07-048; Great Basin Transmission, LLC	Clark County, Lincoln, Nye, and White Pine counties, NV	Transmission Line	Two modifications to the previously permitted SWIP project Right-of-Way Grant NVN-49781: an extension of the ROW and 500kV transmission line for 4 miles to the Harry Allen substation in Clark County; and a modification of the ROW grant in the Robinson Summit area to shift substation location to the west slightly	3.8 mile extension, 77 acre substation site, plus an additional approximately 232 miles of trans. Line (approx. 400 acres of long-term disturbance)	All [Socioecon]	Future (includes existing ROW)
NV Energy 230kV Transmission line	To Gonder substation, parallels US 50	Transmission Line	230kV transmission line		All	Existing
NV Energy ON Line Project	White Pine, Lincoln, and Clark Counties within SWIP Utility Corridor	Transmission Line	500kV transmission line		All	Future
Steptoe (Schoolhouse) Allotment	14 miles north of Ely, Nevada all in White Pine County, Nevada	Grazing	The Habitat Standard was not being achieved. A review and analysis of the monitoring data was conducted. As a result of this review, changes to the management of livestock were proposed to improve the vegetative conditions of the allotment	7,813 acres BLM managed land (780 private)	Land Use, Socioecon	FONSI issued Sept 2007
Telegraph	White Pine County	Mining District	Gold, tungsten Active mining.		Land Use, Socioecon	Present, Future

Project	Location (County, T/R Section, etc.)	Project Type	Brief Description	Acreages or other Quantity	Analyzed Within Resource Topic	Status
Tom Plain & McQueen Flat Allotments	Jakes Valley, White River North & White River Central watersheds, in White Pine County	Grazing	As a result of the I.D. Team assessment and monitoring data review, it has been determined that rangeland health and the quality of the plant communities is adequate to authorize the grazing permit renewal. It has been determined that one Standard is being achieved (upland sites) and two of three Standards for Rangeland Health are not being achieved on the Tom Plain Allotment. Significant progress is being made towards achievement of the two Standards not achieved. All three Standards are being achieved on the McQueen Flat Allotment.	Tom Plain 71,620 ac; McQueen Flat 10,400 ac	All	FONSI issued Sept 2007
Toquop Energy Project	About 12 miles northwest of Mesquite, NV, and 50 miles south-southeast of Caliente.	Power Plant	The company proposes to construct a 750 MW coal-fired power plant in the same location as the previously proposed natural gas-fired power plant. Newer technology has increased the efficiency of modern coal-fired plants and provides a more stable cost basis for power than natural gas. In addition, the coal-fired power plant would decrease the water use requirements substantially from those of the previously permitted project. A rail would be used to transport coal to site, crossing about 31 miles of BLM land; Disturbance of rangeland, socioeconomic factors, particulate emissions Impacts on recreation and access; visual and biological resources; noise; geology, soils, and minerals; archaeology and historic preservation; public safety; hazardous materials, and solid waste were considered minimal under the previous EIS.	640 acres of public land (to be sold); 100 ft by 31 mi ROW for rails; ROW for water pipeline and access road (approved in 2003)  Pipeline 356 Railroad 698	Air Quality**, Socioecon, Land Use	Future
TransCanada (Northern Lights) 500kV transmission line	Eastern Montana to Las Vegas within SWIP Utility Corridor	Transmission Line	500kV DC transmission line		All	Future
TransCanada (Northern Lights) 500kV transmission line	Wyoming to Las Vegas within SWIP Utility Corridor	Transmission Line	500kV DC transmission line		All	Future

Project	Location (County, T/R Section, etc.)	Project Type	Brief Description	Acres or other Quantity	Analyzed Within Resource Topic	Status
UNEV Pipeline	From Salt Lake City Utah, terminating at Apex Industrial Park, Clark County, NV	Pipeline	12-inch diameter oil pipeline	400 miles	Socioecon	Future
UPRR	Traverses through east Lincoln and Clark counties from Utah border west and south to Las Vegas into California	Railway	Mainline railroad track, access road, and future addition of second track		Socioecon Land Use Transportation	Existing and Future
US-50	Traverses east-west through central Nevada	Highway	Two-lane US highway		Transportation All	Existing
US-6	Traverses generally east-west through Nevada	Highway	Two-lane US highway		Transportation	Existing
US-93	Traverses Eastern portion of Nevada	Highway	US highway		Transportation All	Existing
Virgin and Muddy Rivers Surface Water Development Project	Clark County	Water Project	SNWA has proposed to build facilities to divert, treat, and transmit its existing surface water rights on the Virgin and Muddy Rivers to the Las Vegas Valley. SNWA has applied for rights-of-way from the BLM. Due to the 2006 Basin States Agreement regarding the Colorado River, SNWA has agreed to temporarily forego development of Virgin River water rights. However SNWA is continuing with the necessary environmental studies associated with acquiring a BLM right-of-way.		Ground Water, Surface Water, Socioecon, Land Use [All]	Future (2013)

Project	Location (County, T/R Section, etc.)	Project Type	Brief Description	Acres or other Quantity	Analyzed Within Resource Topic	Status
Western Elite Quarry / Bedrock Landfill	Located west of U.S. 93 and east of the proposed SWIP realignment, approximately 5 miles north of the Lincoln/Clark county line	Landfill	The Western Elite (Bedrock) Landfill is located in Sections 24 and 25; the Western Elite open gravel pit, now used for dumping, is located in Section 24.	Portions of Sections 24 and 25, Township 11 South, Range 62 East.  83 Acres – landfill only	All	Existing
West-wide Energy Corridor (Designation of Energy Corridors on BLM Lands in 11 Western States)	throughout Nevada, encompasses SWIP Utility Corridor	Transmission Line	The Energy Policy Act of 2005 directs the Secretaries of Agriculture, Commerce, Defense, Energy, and the Interior to designate under their respective authorities corridors on federal land in 11 Western States for oil, gas and hydrogen pipelines and electricity transmission and distribution facilities (energy corridors).	Proposed for Nevada are 1,630 miles of corridor on 925,051 acres, of which 46 % is existing utility & transportation ROWs.	All	FPEIS RMP/ROD released January 2009–
White Pine & Grant-Quinn Oil and Gas Leasing	Western White Pine, eastern Nye, and western Lincoln counties	Oil and Gas	Oil and Gas leasing program with mitigations and modified to omit inventoried roadless areas (IRAs) and other restrictions	255,603 ac of National Forest System Lands	Air Quality*, Socioecon, Range, Land Use, All	ROD issued August 2007
White Pine County Conservation, Recreation, and Development Act of 2006	White Pine County	Lands Legislation	<ul style="list-style-type: none"> <li>• Disposal of approximately 45,000 acres of BLM lands</li> <li>• Designation of approximately 558,000 acres of wilderness</li> <li>• Release of over 54,000 acres of wilderness study areas</li> <li>• Allow for land transfers to protect areas around Great Basin NP and expand two Nevada State Parks</li> <li>• Study of an off-highway vehicle trail</li> <li>• Transfer of lands into trust for the Ely Shoshone Tribe</li> <li>• Amendments to the SNPLMA</li> <li>• Funding of All-American Canal Projects, with which Nevada would be guaranteed the right to divert and consume a portion of water from Lake Mead</li> </ul>		Land Use, Special Designations, Recreation, Socioecon, All	Existing/ Future

Project	Location (County, T/R Section, etc.)	Project Type	Brief Description	Acreages or other Quantity	Analyzed Within Resource Topic	Status
White Pine County Public Works Pit	White Pine County, NV, Sec 31, T17N. R64E	Industrial	Sand, sand/gravel, crushing, screening		Geology & Minerals [All]	Present, Future
White Pine County School District	Ely, NV	Power Plant	Biomass boiler to provide heat at Norman Elementary School		Air Quality – Cumulative Class II*	Present, Future
White Pine Energy Station	White Pine County, NV	Power Plant	1,500 MW coal-fired power plant		Air Quality*, All	Future
White Pine Sagebrush Restoration Project	Humboldt- Toiyabe National Forest, White Pine County	Fuels reduction/ habitat restoration	USFS proposal to enhance sagebrush habitat and reduce the risk of large scale, high severity wildfire throughout 19,000 acres between Currant Summit and Ellison Creek using mechanical treatments on pinyon, juniper, & sagebrush	19,000	All	Beginning 2009
Willow Canyon Minerals Exploration	Nye County – T14N, R45E, Sections 11, 14	Mining Exploration	Steven Warr and Associates minerals exploration proposal involving up to 3 trenches on existing roads in a previously disturbed area. Surface disturbance less than 1 acre.		Socioecon	Future
Yelland Field (White Pine County Airport) Expansion	Northeast of Ely, NV on Highway 93	Airport	Conveyance of approximately 1,545 acres of public land to county. Lengthening runway by approximately 5000 feet. Construction of hangars and fencing.		Land Use, Socioecon	Future

\*Included in the quantitative air quality impact modeling analyses.

\*\*Not included in the quantitative air quality impact modeling analyses.