

CHAPTER I

INTRODUCTION

I.1 INTRODUCTION

This environmental impact statement (EIS) documents and summarizes the environmental analysis of three separate projects proposed by NV Energy (also known as Sierra Pacific Power Company [SPPC]), Ormat Technologies, Inc. (Ormat), and Gradient Resources (formerly known as Vulcan Power Company [Vulcan]) in the Salt Wells area of Nevada. Together, the three projects are referred to as the Salt Wells Energy Projects (Proposed Actions).

In 2009, the United States (US) Department of the Interior (DOI), Bureau of Land Management (BLM) Stillwater Field Office (SFO) received an application for an electric transmission right-of-way (ROW) from SPPC and two separate geothermal utilization plans or plans of utilization (POUs) and applications for facility construction permits from Ormat and Vulcan. Since submission of the application by Vulcan, the company has changed their name to Gradient Resources. For consistency, the two companies will be referred to as SPPC and Vulcan in this document to coincide with the official applications to the BLM, although once permitted they will be doing business as NV Energy and Gradient Resources.

The POUs documented steps to generate electricity from geothermal resources in Salt Wells, Nevada. The term *geothermal* comes from the Greek *geo* meaning “earth” and *thermal* meaning “heat.” As such, geothermal energy is energy derived from the natural heat of the earth. **Appendix A**, Typical Geothermal Resource Development and Transmission Tools, provides background information on geothermal resources and the tools needed to develop and transmit electricity derived from these resources.

The Projects Area encompassed by the three proposals covers approximately 24,152 acres in the Salt Wells area of Nevada, which includes an area just southwest of Fallon to approximately 24 miles southeast of Fallon. **Figure I-1**, Salt Wells Energy Projects Area, shows where the proposed projects are located within the Salt Wells area.

Combined, the three proposals could result in up to five 30- to 60-megawatt (MW) geothermal power plants with up to 71 associated wells (39 for the proposed actions and the remainder previously authorized), pipelines and

associated facilities, and a 22-mile, up to 125-foot-wide ROW for a new transmission line, with substations and switching stations.

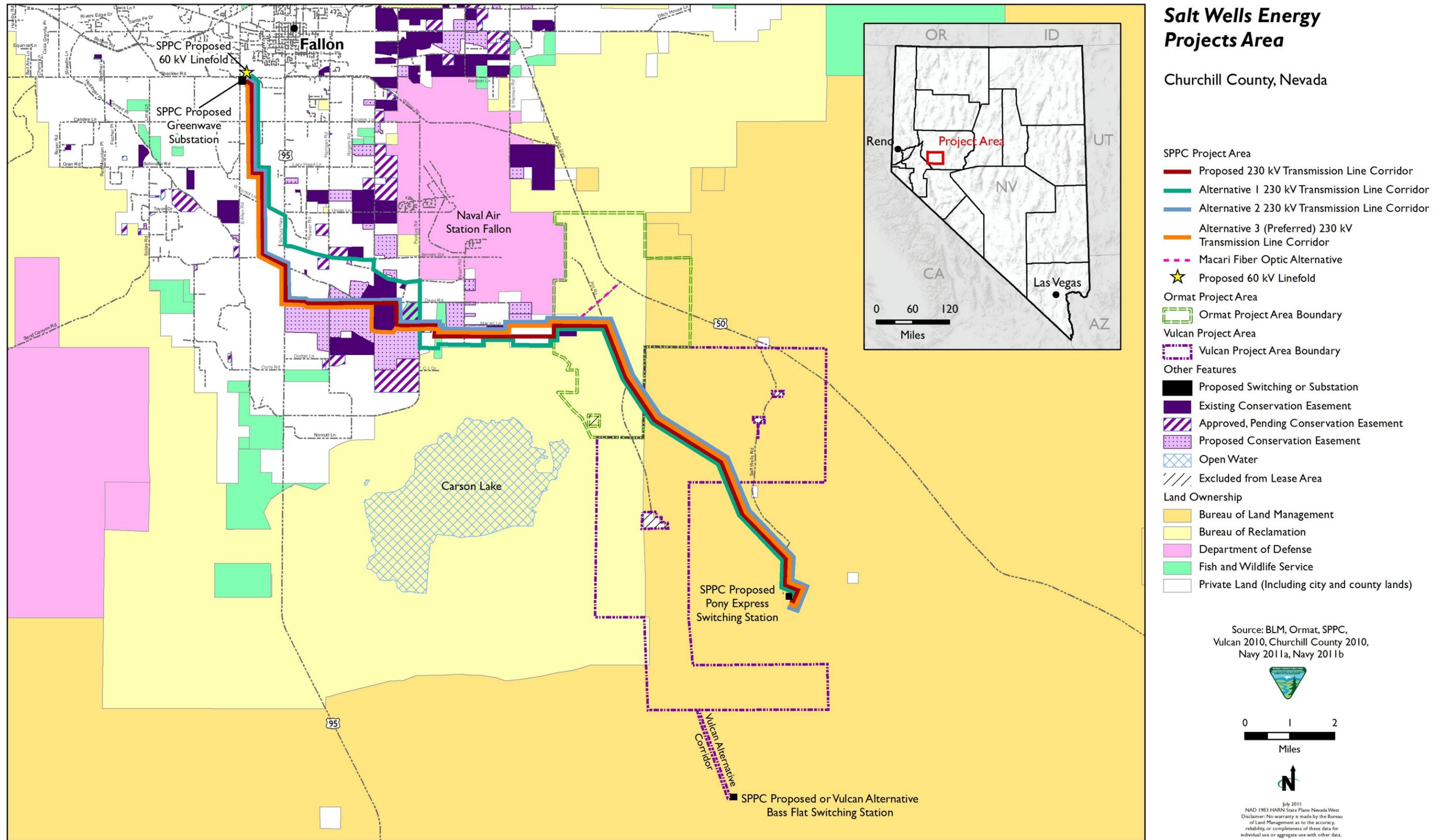
The proposed facilities would be sited on a combination of private property, federal land managed by the BLM, and Newlands Project lands managed by the US Bureau of Reclamation (Reclamation); such operations must comply with BLM regulations for Geothermal Leasing, Title 43 Code of Federal Regulations (CFR), Part 3200, the Geothermal Steam Act, as amended, regulations for activities on public land, 43 CFR Part 2800, Rights-of-Way Program, and the Federal Land Policy and Management Act of 1976 (FLPMA). Applicable Reclamation regulations are at 43 CFR Part 400.

Reclamation is responsible for lands within the Newlands Project. Reclamation holds land for the Newlands Project under three authorities: withdrawn land, acquired land and 1890 easements on private land. Crossings of withdrawn lands and acquired lands will be authorized with a license issued by Reclamation. Licenses for land use require use fees. Portions of the Newlands Project that are not located on federal lands are authorized by the 1890 Canal Act easements. Utility crossings of Newlands Project facilities on private lands require engineering compliance before use authorization can be issued. The 1890 easement crossings are issued with a concurrence letter with no use fee required by Reclamation. **Figure I-2**, Transmission Line Alternatives and the Newlands Project, shows the Newlands Project Features and potential crossings associated with the SPPC Proposed Action and Alternatives.

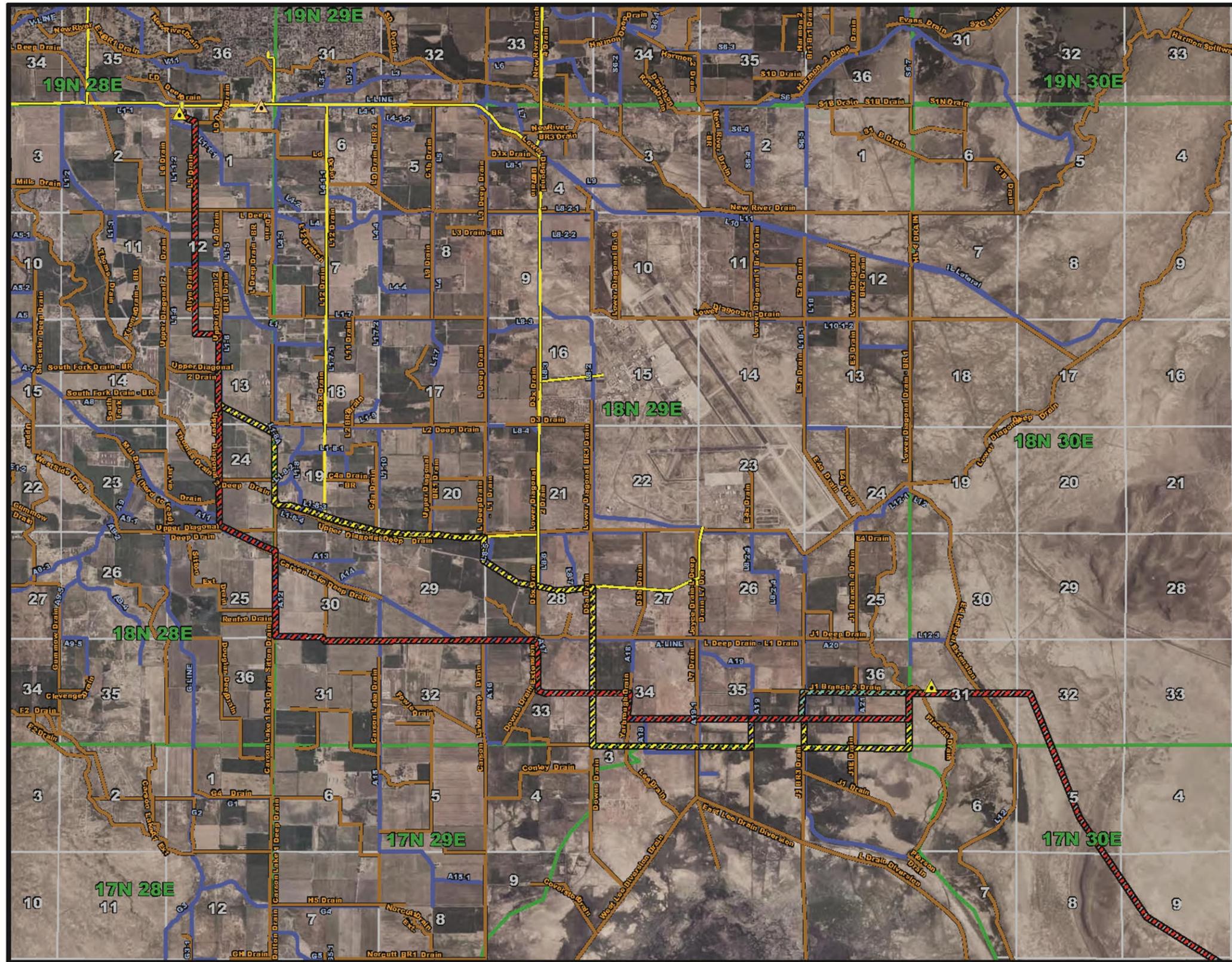
Due to potential for the Proposed Actions to result in significant environmental impacts, BLM determined that an EIS would be necessary, as required by the National Environmental Policy Act of 1969 (NEPA). This document follows regulations promulgated by the Council on Environmental Quality (CEQ) for implementing procedural provisions of NEPA (40 CFR 1500-1508) and BLM's NEPA Handbook (H-1790-1).

The BLM determined that because of similar timing, geographic area, and type of action, the three proposals will be analyzed in one EIS. The BLM will issue a separate Record of Decision (ROD) at the end of the process for each proposed project. A separate ROD for the SPPC project will be written and signed by Reclamation for its own use authorization in the form of a ROW pursuant to its own regulations at 43 CFR 429.

Although this EIS has been jointly prepared and has resulted in combined decisions, each agency's decision has been made pursuant to its individual responsibilities and authorities, and each agency shall be responsible for its implementation.



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TRANSMISSION LINE ALTERNATIVES
 - Newlands Project -
 Reclamation Features Overlay
 Churchill County, Nevada

LEGEND

-  230 kV Transmission Line Proposed Action
 -  230 kV Transmission Line Alternative 1
 -  230 kV Transmission Line Alternative 2
 -  Proposed 60 kV Line Fold
 -  Proposed Switching Station/Substation
 -  Existing Fallon Substation
 -  Existing Transmission Line
- NEWLANDS PROJECT FEATURES**
-  Delivery Feature
 -  Drainage Feature



RECLAMATION
Managing Water in the West

U.S. DEPARTMENT OF THE INTERIOR
 BUREAU OF RECLAMATION

Lahontan Basin Area Office
 705 N. Plaza Street
 Carson City, NV 89701

THIS FIGURE WAS PROVIDED BY THE BUREAU OF RECLAMATION AND IS BASED ON DRAFT DATA

Figure I-2

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I.2 PROJECT OBJECTIVES AND HISTORY

The applicant's objectives are to develop the infrastructure necessary to produce and transmit geothermal energy to consumers and provide reliable electric capacity to the Fallon area. Additionally, the projects would help meet the requirements of the Nevada Renewable Portfolio Standard, a state law that requires 25 percent of electricity be produced from renewable sources by 2025.

The SPPC Project Area covers approximately 1,194 acres and includes construction of a new substation, 22 miles of single-circuit 230-kilovolt (kV) transmission line, two 230-kV switching stations, a fiber optic cable along the length of the transmission line, and two 60-kV electric line folds connecting the proposed new substation to the existing Fallon Substation. The ROW for the transmission line would be 125 feet for H-frame structures and 60 feet for single-pole structures.

The Ormat Project includes the construction and operation of a 40-MW (gross) binary combined air- and wet-cooled geothermal power plant, up to 13 new well pads (which could accommodate multiple wells) in addition to the 9 well pads previously approved on Reclamation land, pipelines, a substation, switching station, connection to the proposed SPPC 230-kV transmission line, and access roads on approximately 6,948 acres of land. Approximately 197 acres within this area would remain permanently disturbed. BLM has completed an environmental assessment (EA) for Ormat's Carson Lake Geothermal Exploration Project (EA-NV-030-07-006) (BLM 2008) and a Sundry Notice and has previously approved 9 separate wells estimated to be necessary for Ormat's project. The conditions of approval and stipulations specified for the EA are included in **Appendix B**, Lease Stipulations and Conditions of Approval. An additional three wells on Navy property were analyzed in the EA for Ormat's Carson Lake Geothermal Project, but the Navy has not signed a FONSI for the EA and does not anticipate approving use of these well pads as part of any action being analyzed in the EIS.

Several proposed well sites are located on federal geothermal leases in the Carson Lake and Pasture area, currently open to leasing under the BLM Carson City District Office (CCDO) Consolidated Resource Management Plan (CRMP) (2001) (as amended by the 2008 resource management plan (RMP) amendments to Geothermal Leasing in the Western US Programmatic EIS [PEIS]) and whose surface is managed by Reclamation, although these lands have been authorized by federal legislation to be transferred to the Nevada Department of Wildlife (NDOW). All lands within the Salt Wells Energy Projects Area are already under lease.

Vulcan is proposing up to four power plants and associated substations at five possible locations. In addition, a 230-kV interconnection transmission line would be constructed to connect the power plant(s) to Vulcan's proposed Bunejug Switching Station. Vulcan would also construct up to 26 new well pads and

associated wells, roads, and pipelines. Vulcan's Project Area encompasses approximately 15,622 acres of land of which approximately 750 acres would be permanently disturbed.

BLM has previously completed two EAs for exploration drilling in Salt Wells (EA–NV–030–07–05 of February 2007 and DOI– BLM–NV–C010–2009–0006–EA of April 2009) for twenty exploration wells and associated access roads (see **Appendix B**, Lease Stipulations and Conditions of Approval).

This EIS describes the components of, reasonable alternatives to, and environmental consequences of constructing, maintaining, and operating the proposed ROWs, proposed geothermal power plants, and their associated facilities. **Chapter 1**, Introduction, describes the purpose of and need for action, authorizing actions, and public participation in the EIS process. **Chapter 2**, Description of the Proposed Actions and Alternatives, describes the Proposed Actions, Alternatives to the Proposed Actions, and alternatives considered but eliminated from further analysis. **Chapter 3**, Affected Environment, describes the existing social and environmental conditions in the project area. **Chapter 4**, Environmental Consequences, details potential direct and indirect impacts associated with the Proposed Actions and Alternatives, and possible mitigation measures that could be selected to minimize impacts. Potential cumulative impacts of the Proposed Actions and Alternatives as related to other projects in the region are discussed in **Chapter 5**, Cumulative Impacts. References cited in the EIS are provided in **Chapter 6**, References. **Chapter 7**, Consultation, Coordination, and Preparation, identifies the consultation and coordination with state and federal agencies that occurred during preparation of this EIS, along with a list of preparers, and authorized users that were notified. A glossary of terms and acronyms is in **Chapter 8**, Glossary.

I.3 PURPOSE OF AND NEED FOR ACTION

BLM manages the federal lands in accordance with land use plans under the FLPMA on principles of multiple use and sustained yield. A geothermal lease is for the heat resource of the earth where there is federal mineral estate. Unless specifically owned in fee, the federal government does not own the hot water commonly associated with the heat; this falls under state water laws. Geothermal developers must obtain the appropriate water rights and state permits, in addition to the federal lease for the resource.

The BLM has the delegated authority to issue geothermal leases on federal lands. The BLM currently administers about 480 geothermal leases that covered over 700,000 acres at the end of fiscal year 2007. Of those leases, 57 are producing geothermal energy, 54 producing resource for electrical generation, and 3 for direct use (BLM and USFS 2008). It is the policy of the federal government, consistent with Section 2 of the Mining and Mineral Policy Act of 1970 and Sections 102(a)(7), (8), and (12) of the FLPMA (43 US Code [USC]

1701 *et seq.*), to encourage the development of mineral resources, including geothermal resources, on federal lands. The Geothermal Steam Act of 1970 (30 USC Section 1001, *et seq.*), which was amended and supplemented by the Energy Policy Act (EPAAct) of 2005, provides statutory guidance for geothermal leasing by the BLM. New federal geothermal development regulations (43 CFR Parts 3000, 3200, and 3280 – Geothermal Resource Leasing and Geothermal Resources Unit Agreements) were made effective June 1, 2007 (72 Fed Reg. 24358, May 2, 2007), as a result of a directive provided in the EPAAct of 2005. These statutes and regulations delineate lands that are available and unavailable for leasing.

The BLM is responsible for the development of energy resources on public lands in an environmentally sound manner (43 USC 1701). The BLM's purpose for this project is to direct and control the use of public lands for the orderly development of commercial-scale geothermal power generation facilities, associated infrastructure, and a transmission line in a manner that will allow other existing uses to continue, protect the natural resources, minimize resource conflicts and prevent unnecessary or undue degradation to the public lands (see 40 CFR 2801.2).

In accordance with the Geothermal Steam Act, as amended and 43 CFR Part 3200, BLM needs to consider whether to approve any or all of the three related applications for utilization of geothermal resources, which include construction, operation, and maintenance of the Proposed Actions. Title V of the FLPMA, implemented by 43 CFR Part 2800 and Part 3200, authorizes the Secretary of the Interior (through the BLM) to grant ROWs over, upon, under, or through public lands for the purposes of generating and transmitting electric energy. Because this is an externally generated proposal, BLM must respond to and consider whether to approve, approve with conditions, or deny the applications filed by the applicants. In addition, Reclamation will use this analysis and ROD to decide whether to approve a use authorization in the form of a ROW for the transmission line under its own regulations at 43 CFR Part 400.

Secretarial Order 3285, Amendment I (February 22, 2010) states that “encouraging the production, development, and delivery of renewable energy is one of the Department's highest priorities. Agencies and bureaus within the Department will work collaboratively with each other, and with other federal agencies, departments, states, local communities, and private landowners to encourage the timely and responsible development of renewable energy and associated transmission while protecting and enhancing the nation's water, wildlife, and other natural resources.”

The EPAAct of 2005 (Public Law 109-58) encourages the development of renewable and alternative energy resources, including geothermal energy, as part of an overall strategy to develop a diverse portfolio of domestic energy supplies. Section 211 of the Act calls for the Secretary of the Interior to have

approved non-hydropower renewable energy projects located on public lands, where appropriate, with a generation capacity of at least 10,000 MW of electricity by 2015.

Additionally, the BLM's implementation strategy titled, *BLM Implementation of the National Energy Policy*, and other federal policies, including the Geothermal Steam Act of 1970, amended and supplemented by the EPLA of 2005; the Mining and Mineral Policy Act of 1970; the FLPMA; and the National Materials and Mineral Policy, Research and Development Act of 1980, direct the federal government to foster and encourage private enterprise to develop alternative energy resources with appropriate environmental constraints. If approved, the Salt Wells Energy Projects would provide new renewable energy sources and contribute to meeting these goals.

I.4 GEOTHERMAL LEASE RIGHTS, LIMITATIONS, AND STAGES OF DEVELOPMENT

The four stages of geothermal resource development within a lease are exploration, drilling operations, utilization, and reclamation and abandonment. Each stage requires a permit from the BLM. Leasing geothermal resources by the BLM vests with the lessee a non-exclusive right to future exploration and an exclusive right to produce and use the geothermal resources within the lease area, subject to existing laws, regulations, formal orders, and the terms, conditions and stipulations in or attached to the lease form or included as conditions of approval to permits. Lease issuance alone does not authorize any ground-disturbing activities to explore for or develop geothermal resources without site specific approval for the intended operation. Such approval could include additional environmental reviews and permits. Also at each stage, the BLM can issue site-specific conditions-of-approval to protect resource values. The specific activities associated with each phase are detailed in Chapter 2.

A lease is issued for a primary term of 10 years and may be extended for two five-year periods. Each of these extensions is available provided the lessee meets the work commitment requirements or lessee made payment in lieu of minimum work requirements of each year. At any time a lease may receive a 5-year drilling extension. Once commercial production is established, the lease may receive a production extension of up to 35 years and a renewal period of up to 55 years. The lease must continue to produce to remain in effect. BLM may grant a suspension of operations and production on a lease when justified by the operator (see 43 CFR 3207).

Geothermal exploration and production on federal land conducted through leases is subject to terms and stipulations to comply with all applicable federal and state laws pertaining to various considerations for tribal interests, sanitation, water quality, wildlife, safety, cultural resources, and reclamation.

I.5 BLM DECISIONS RESULTING FROM THIS EIS

Regulations at 43 CFR 2800 and 43 CFR 3200 would be included in the ROD including approval of a utilization plan, facility construction permit, geothermal

drilling permit (GDP), site license, ROW authorizations. However the Notice to Proceed under the ROW would be granted later in the process and would be based on a revised, more site specific plan of development (POD) or POU or Sundry Notice for actions covered under this draft EIS (DEIS) analysis.

I.6 RECLAMATION DECISIONS RESULTING FROM THIS EIS

Reclamation regulations at 43 CFR 429 would be included in the ROD, including approval of use authorizations. However, licenses and concurrence letters authorizing the specific crossings would be granted later in the process and would be based on a revised, site specific POD for actions covered under this DEIS analysis.

I.7 AUTHORIZING ACTIONS

Actions proposed on BLM-administered lands must comply with FLPMA, whose statutes require the BLM to analyze the Proposed Actions to ensure the following:

- Adequate provisions are included to prevent undue or unnecessary degradation of public lands;
- Measures are included to provide for reasonable reclamation of disturbed areas; and
- Proposed Actions would comply with other applicable federal, state, and local laws and regulations.

BLM's authority to grant a ROW is limited to that portion of the route that is on public land. Because most of SPPC's proposed ROW covers non-BLM land, the Proposed Actions would be subject to permit approvals from the affected local jurisdictions, including Churchill County.

Other federal, state, and local agencies have jurisdiction (including inspection responsibilities) over certain aspects of the Proposed Actions. **Table I-1**, Potential Regulatory Responsibilities, lists additional federal, state, and local permits, policies, and actions that may be required and lists the agencies that may use the information presented in the EIS to make decisions about issuing permits or approvals.

Conformance Statement

The Proposed Actions and Alternatives described below are in conformance with the terms and conditions in the CRMP page ROW I: National Policy, Section I and for Lands and Realty and Minerals, as amended by the 2008 Geothermal PEIS, and are consistent with the NEPA analysis supporting these decisions. Specifically page MINI, Decision I: the desired outcome for minerals and energy management is to "encourage development of energy and mineral resources in a timely manner to meet national, regional, and local needs consistent with the objectives for other public land uses" (BLM 2001a).

Table I-1
Potential Required Permits and Regulatory Responsibilities

Regulatory Agency	Action
BLM	<ul style="list-style-type: none"> • Section 106 compliance with the National Historic Preservation Act (NHPA) • Cultural Resource Permit pursuant to the Native American Graves Protection and Repatriation Act (NAGPRA) • Cultural Resource Permit pursuant to the American Indian Religious Freedom Act • Cultural resource use permits: 1) survey/recordation permit, (2) survey and limited testing permit, and (3) excavation and/or removal permit • EIS and ROD pursuant to NEPA • Facility Construction Permit • Geothermal Drilling Permit (GDP) • Geothermal Sundry Notice • Commercial Use Permit • ROW Grant – transportation and utility systems and facilities on federal lands • Site License Agreement • Temporary Use Permits for construction-related activities • Utilization Plan
Reclamation	<ul style="list-style-type: none"> • Commercial Use Licenses and Letters of Concurrence. • ROD for non-lease actions on Reclamation action on Reclamation withdrawn acquired and 1890 reservation easement lands. Memorandum of Understanding (MOU) between BLM and Reclamation (see Appendix C, Interagency Agreement between the Bureau of Reclamation and the Bureau of Land Management) allows BLM to make geothermal surface use approvals on Reclamation-managed lands.
Federal Aviation Administration (FAA)	<ul style="list-style-type: none"> • FAA Notice of Proposed Construction Permit (FAA Form 7460-1)
Federal Energy Regulatory Commission	<ul style="list-style-type: none"> • Notice of Self Certification as a Qualifying Small Power Producing Facility
US Army Corps of Engineers (USACE)	<ul style="list-style-type: none"> • Nationwide Permit 14, 404/401 Permit pursuant to the Clean Water Act (CWA)
US Fish and Wildlife Service (USFWS)	<ul style="list-style-type: none"> • Section 7 Compliance per the Endangered Species Act (ESA)
Nevada Bureau of Water Pollution Control	<ul style="list-style-type: none"> • Stormwater general permits for construction, National Pollutant Discharge Elimination System (NPDES) • Temporary rolling stock permit

**Table I-1
Potential Required Permits and Regulatory Responsibilities**

Regulatory Agency	Action
Nevada Bureau of Water Quality Planning	<ul style="list-style-type: none"> • Section 401 Water Quality Certification pursuant to the CWA
Nevada Chemical Accident Prevention Program	<ul style="list-style-type: none"> • Permit to Construct • Permit to Operate
NDOW	<ul style="list-style-type: none"> • State-listed endangered species review
Nevada Department of Conservation and Natural Resources, Division of Water Resources (NDWR)	<ul style="list-style-type: none"> • Application for Permit to Appropriate the Public Waters of the State of Nevada • Request for a Waiver for Temporary Use of Groundwater for Oil & Gas or Geothermal Exploration
Nevada Department of Transportation (NDOT)	<ul style="list-style-type: none"> • Occupancy or Encroachment Permits
Nevada Division of Environmental Protection (NDEP)	<ul style="list-style-type: none"> • Air Quality Operating Permit
NDEP-Bureau of Air Pollution Control	<ul style="list-style-type: none"> • Permit to Construct • Surface Area Disturbance Permit
NDEP- Bureau of Water Pollution Control	<ul style="list-style-type: none"> • Commercial Septic Discharge Permit • Underground Injection Control Permit • Use of Water to Explore for Minerals • Water Appropriation Permit
Nevada Division of Industrial Relations	<ul style="list-style-type: none"> • Pressure Vessel Inspection and Permitting
Nevada Division of Minerals (NDOM)	<ul style="list-style-type: none"> • Geothermal Project Area Permit • Geothermal Drilling Permit • Geothermal Injection Well Permit
Nevada State Historic Preservation Office (SHPO)	<ul style="list-style-type: none"> • Programmatic Agreement for NHPA compliance between BLM, Reclamation, SHPO, and the project proponents. The Programmatic Agreement is included in Appendix D, Programmatic Agreement for the Salt Wells Energy Projects.
Public Utilities Commission of Nevada	<ul style="list-style-type: none"> • Utility Environmental Protection Act Permit
Churchill County	<ul style="list-style-type: none"> • Application and permit for county road encroachment • Building Permit (substation) • Grading Permit • Special Use Permit • Surface Area Disturbance Permit (dust control plan)

Relationship to BLM and Non-BLM Policies, Plans, and Programs

These actions are consistent with federal laws and regulations; other plans, programs, and policies of affiliated Tribes; and other federal agencies, state, and local government, to the extent practical within federal law, regulation, and policy. Specific approvals, permits, and regulatory requirements would be required for constructing, operating, and maintaining the proposed geothermal exploratory wells.

The PEIS, conducted by BLM and the US Department of Agriculture, Forest Service (USFS), amended 114 BLM RMPs, including the CRMP, to (1) allocate BLM lands as open to be considered for geothermal leasing or closed for geothermal leasing, and identify those National Forest System lands that are legally open or closed to leasing; (2) develop a reasonably foreseeable development scenario (RFD) that indicates a potential for 12,210 MW of electrical generating capacity from 244 power plants by 2025, plus additional direct uses of geothermal resources; and (3) adopt stipulations, best management practices (BMPs), and procedures for geothermal leasing and development.

According to the PEIS the state of Nevada is expected to commercially develop 1,473 MW and 2,880 MW of electricity from geothermal resources by the years 2015 and 2025, respectively. The CCDO is expected to contribute 536 and 971 MW, respectively, of this total potential. Federal lands in Salt Wells were estimated to develop approximately 120 to 140 MW of electricity from geothermal resources by 2025 (BLM and USFS 2008). Available resource information and the projections in the RFD provide background for development of geothermal resources in Salt Wells, Nevada.

Churchill County Master Plan

The 2005 Churchill County Master Plan, page 13-15, directs the County to support development and use of renewable energy sources such as geothermal, coordinate with Federal agencies promoting renewable resource development, and optimize economic benefit and environmental protection for Churchill County (Churchill County 2005).

The plan classifies geothermal as one of the four main industry sectors within the county and states, "Recognize that the development of Nevada's mineral resources is desirable and necessary to the nation, the state and Churchill County. Retain existing geothermal and mining areas and promote and encourage the expansion of these operations and areas."

The Churchill County Master Plan also outlines five policies related to energy development on federal lands:

- I. There should be reasonable access to lands where the mineral estate is in federal ownership.

2. The expansion and development of geothermal resources should be promoted on lands under federal land management.
3. Recognize geothermal production as an important component of a national energy policy.
4. Support a permitting process that is consistent and eliminates unwarranted delays in site development.
5. Mining Law reform should support a national minerals policy that promotes a strong domestic mining industry in Nevada.

Regarding energy transmission, the plan states, “Corridors for the future transmission of energy, communications and transportation need to be planned for in harmony with other uses on public lands. Preference should be given to existing corridors. Corridors should have multiple uses kept to as few a number and length as possible.”

I.8 PUBLIC INVOLVEMENT

NEPA requires an early and open process for determining issues that should be addressed and analyzed in the EIS to help decision-makers decide to implement the Proposed Actions or an alternative. The EIS process, as mandated by NEPA, is designed to involve and inform the public and federal, state, and local agencies as to the environmental consequences of a federal agency’s actions and to provide the lead agency with important information and analyses to promote better decision making. To formally solicit public input, the BLM has conducted the following activities:

- The BLM invited nine agencies to participate in the EIS process as cooperating agencies and requested them to make a decision and to notify the BLM by August 30, 2009. The agencies that accepted are Reclamation, Churchill County, City of Fallon, Naval Air Station (NAS) Fallon, NDOM, and NDOW. Representatives of these agencies signed a memorandum of understanding (MOU) to clarify all participants’ responsibilities and to specify conditions, schedules, and procedures to be followed in developing and preparing the EIS.
- Because of the close proximity of the Pony Express National Historic Trail to the Projects Area, specific coordination with the National Park Service was conducted throughout the EIS process. Initial coordination with the National Park Service began in February 2010. BLM sent the National Park Service Long Distance Trails Office an official letter requesting input on the project and no reply was received. In February 2011, the National Park Service provided updated trail location information. The Class III cultural resource survey report was completed in Spring 2011 and formal consultations were initiated at that time. Additional cultural resource surveys and visual assessments have been completed to

address potential impacts to the Pony Express National Historic Trail. A programmatic agreement has been developed, and the NPS will be assisting in the development of a treatment plan to address adverse effects on the trail.

- The public scoping period began on September 11, 2009, with the publication of the Notice of Intent (NOI) in the Federal Register and continued through November 10, 2009 (Scoping Period). A project Web site was launched prior to the beginning of the scoping period and was maintained and expanded throughout scoping. **Table I-2**, Issues and Concerns Raised During the Salt Wells Energy Projects EIS Scoping Process, summarizes comments raised during the scoping process.

Table I-2
Issues and Concerns Raised During the Salt Wells Energy Projects
EIS Scoping Process

Comments	Location in Document Where Addressed
Effect of this project on the price, availability, and consistency of energy supplied to the Fallon area.	Chapter 1– Purpose and Need
If power generated by this project would be made available to the local Fallon community, if needed, before being sold to outside interests	Chapter 4– Social and Economic Values
Whether drilling required for this project may increase the frequency and/or the intensity of earthquakes	Chapter 4– Minerals/Geology
Effects of lighting on Dark Sky attributes of the area	Chapter 4– Visual Resources
Building materials, colors, and site placement should be compatible with the natural environment	Chapter 4– Visual Resources; Appendix E– Environmental Protection Measures and Best Management Practices
Ensure that appropriate water rights are obtained before construction to avoid costly delays	Chapter 2– Description of the Proposed Actions and Alternatives; Chapter 4– Water Quantity and Quality
Put in place a monitoring plan that allows baseline water quality to be compared to future results during and after completion of the project	Chapter 4– Water Quantity and Quality
The operator should be prepared to mitigate any negative effects on water quality	Chapter 4– Water Quantity and Quality
Effects on the quality and quantity of surface and underground water sources, with particular concern for the area in	Chapter 4– Water Quantity and Quality

**Table I-2
Issues and Concerns Raised During the Salt Wells Energy Projects
EIS Scoping Process**

Comments	Location in Document Where Addressed
and around the project and Carson Lake	
Effects of pumping on the intermediate aquifer	Chapter 4– Water Quantity and Quality
Ormat should also perform a hydrologic study of their proposed area and address impacts on NAS Fallon and private landowners	Chapter 4– Water Quantity and Quality
Relationship between how springs and surface waters may be related to the “deep” geothermal production zone and how shallow aquifer waters are related to that same “deep” zone	Chapter 4– Water Quantity and Quality
State jurisdiction over geothermal resource drainage	Chapter 4– Land Use Authorizations, Airspace and Access; Chapter 4– Geology/ Minerals
Impacts on equity between neighboring geothermal resources	Chapter 4– Social and Economic Values; Chapter 5– Social and Economic Values
Ormat and Vulcan should create a resource development plan to determine what targets (depth and location) are anticipated for production and injection in order to make determinations regarding potential impacts	A construction and Operation Plan would be submitted following approval, however until further exploration is performed on the resource it is difficult to determine exact production and injection well numbers and depths
Effects of power lines on instrument procedures at NAS Fallon	Chapter 4– Land Use Authorizations, Airspace and Access; Chapter 4– Public Health and Safety

- A public scoping meeting, hosted by Churchill County, was held on October 21, 2009, at the County Administration Complex in Fallon, Nevada. The meeting provided an opportunity for members of the public, local government, tribes, utilities, and other interest groups to learn about the EIS, to provide input into the development of the EIS, and to voice their concerns related to potential environmental impacts so that they may be addressed in the EIS.
- The BLM presented the project to the Churchill County Commissioner’s on October 21, 2009, and answered questions from both the commissioners and the public regarding various aspects of the three proposals.
- The BLM met with the State Historic Preservation Office (SHPO) to discuss Class I Survey Methodology and Historical review on April 2, 2010.

- The BLM met with a representative of the Fallon-Paiute-Shoshone Tribe on April 13, 2010.
- The BLM attended a field visit with a US Fish and Wildlife Service (USFWS) representative to discuss raptors on August 20, 2010.
- The BLM met with tribal staff on August 25, 2010.
- The BLM met with the Cooperating Agencies during Alternative Development on the following dates:
 - November 9, 2009 (Field Trip to Project Areas)
 - November 10, 2010 (at BLM in Carson City)
 - January 13, 2010 (at Churchill County, Fallon)
 - February 24, 2010 (at Reclamation in Carson City)
 - May 7, 2010 (at BLM in Carson City)
 - June 16, 2010 (at BLM in Carson City)
 - June 23, 2010 (Field Trip to Project Areas with Reclamation)
 - August 24, 2010 (at BLM in Carson City)
 - September 10, 2010 (meeting with NDOW at BLM in Carson City)
 - October 19, 2010 (at BLM in Carson City)
- The BLM presented the findings of the Draft EIS and solicited comments at the following two meetings:
 - a. Public Open house on March 3, 2011, at the County Administration Complex in Fallon, Nevada.
 - b. Churchill County Commissioner Presentation on March 4, 2011, in Fallon, Nevada.
- April 14, 2011 (Cooperating Agency meeting at BLM in Carson City)
- May 9, 2011 (Field Trip to Project Areas with Reclamation).
- The BLM consulted with the Advisory Council on Historic Preservation on May 10, 2011, and they elected not to participate in the Programmatic Agreement.
- The BLM will distribute the Final EIS for public review in July 2011.
- The BLM continues to consult with relevant agencies and Native American interests. Consultation and Coordination is discussed in Chapter 7.

During the public review period for the Draft EIS, 30 comment letters were received containing 425 specific comments. Appendix K contains all public comments and BLM responses.