

## CHAPTER 1 – INTRODUCTION, PURPOSE, AND NEED

*This Final Supplemental Environmental Impact Statement (EIS)/Proposed Resource Management Plan Amendment (PRMPA) incorporates revisions since the Draft Supplemental EIS/PRMPA was published in October 2012. Substantive revisions include 1) identification of a Bureau of Land Management (BLM) Preferred Alternative to address public and agency concerns related to desert tortoise connectivity within the Ivanpah Valley and provision of a reduced-scale alternative; 2) additional mitigation measures developed in response to input from resource agencies and stakeholder discussion; and 3) designation of a 31,859-acre Area of Critical Environmental Concern (ACEC), and 4) revisions to ACEC management prescriptions to allow rights-of-way for construction and operation of the Southern Nevada Supplemental Airport (Airport) and associated facilities in the ACEC, subject to an approved Airport Final Environmental Impact Statement and Record of Decision and subject to compliance with the Endangered Species Act, 16 U.S.C. § § 1531-1544. Minor revisions were also made to correct Project acreage and are identified throughout the document.*

*Revisions made between the Draft and Final Supplemental EIS/PRMPA are summarized at the beginning of each chapter, with substantive changes shown as shaded, italicized, and underlined text throughout the document.*

### 1.1 INTRODUCTION

Silver State Solar Power South, LLC, a wholly owned subsidiary of First Solar, Inc., hereafter referred to as Silver State or Applicant, is proposing to develop a 250 to 350 megawatt alternating current (MW<sub>AC</sub>) (nominal plant capacity)<sup>1</sup> solar photovoltaic (PV) generating facility referred to as the Silver State Solar South Project (Project). The proposed solar facility was previously analyzed as Phases II and III in the Silver State Solar Energy Project Final EIS (BLM 2010). The 2010 Final EIS analyzed the development of a 400MW<sub>AC</sub> project to be constructed in phases. Phase I, which became the Silver State Solar North Project and is currently operational, consisted of the construction, operation, maintenance, and ultimate decommissioning of a 50MW<sub>AC</sub> solar plant and associated facilities. Phases II and III, which are the subject of this Supplemental EIS/PRMPA, consisted of the construction, operation, maintenance, and decommissioning of the remaining 350-MW<sub>AC</sub> project to complete the 400MW<sub>AC</sub> solar project.

The Record of Decision (ROD) for the 2010 Final EIS, signed on October 12, 2010, authorized only the first phase (Phase I) of project development. With regard to the remaining 350MW<sub>AC</sub> of proposed development, the ROD stated that subsequent phases (i.e., Phases II and III) may require supplemental analysis under the National Environmental Policy Act (NEPA) and additional public involvement.

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<sup>1</sup> Nominal plant capacity refers to generation and delivery of power under ideal conditions. The capacity of any solar energy facility is dependent on many factors and changes over a course of a day, a season, or year regardless of the technology, geographic location, or design. The nominal capacity of 350 MW<sub>AC</sub> is understood to mean the peak power-generating capacity of the facility expressed in watts minus all auxiliary, internal (parasitic) loads. In this document, MW<sub>AC</sub> is used synonymously with MW.

This Supplemental EIS/PRMPA/PRMPA, prepared by the Southern Nevada District, Las Vegas Field Office (LVFO), of the BLM, addresses new information associated with the project analyzed in the 2010 Final EIS for the Silver State Solar Energy Project (BLM 2010). These changes include 1) modified layouts of the solar arrays and appurtenant facilities identified as Phases II and III in the 2010 Final EIS; 2) amendments to the LVFO Resource Management Plan (RMP) that are required to approve the Project as proposed, as it would be out of compliance with the existing RMP; and 3) consideration of comments received during scoping for the Supplemental EIS/PRMPA and the public comment period for the Draft Supplemental EIS/PRMPA.

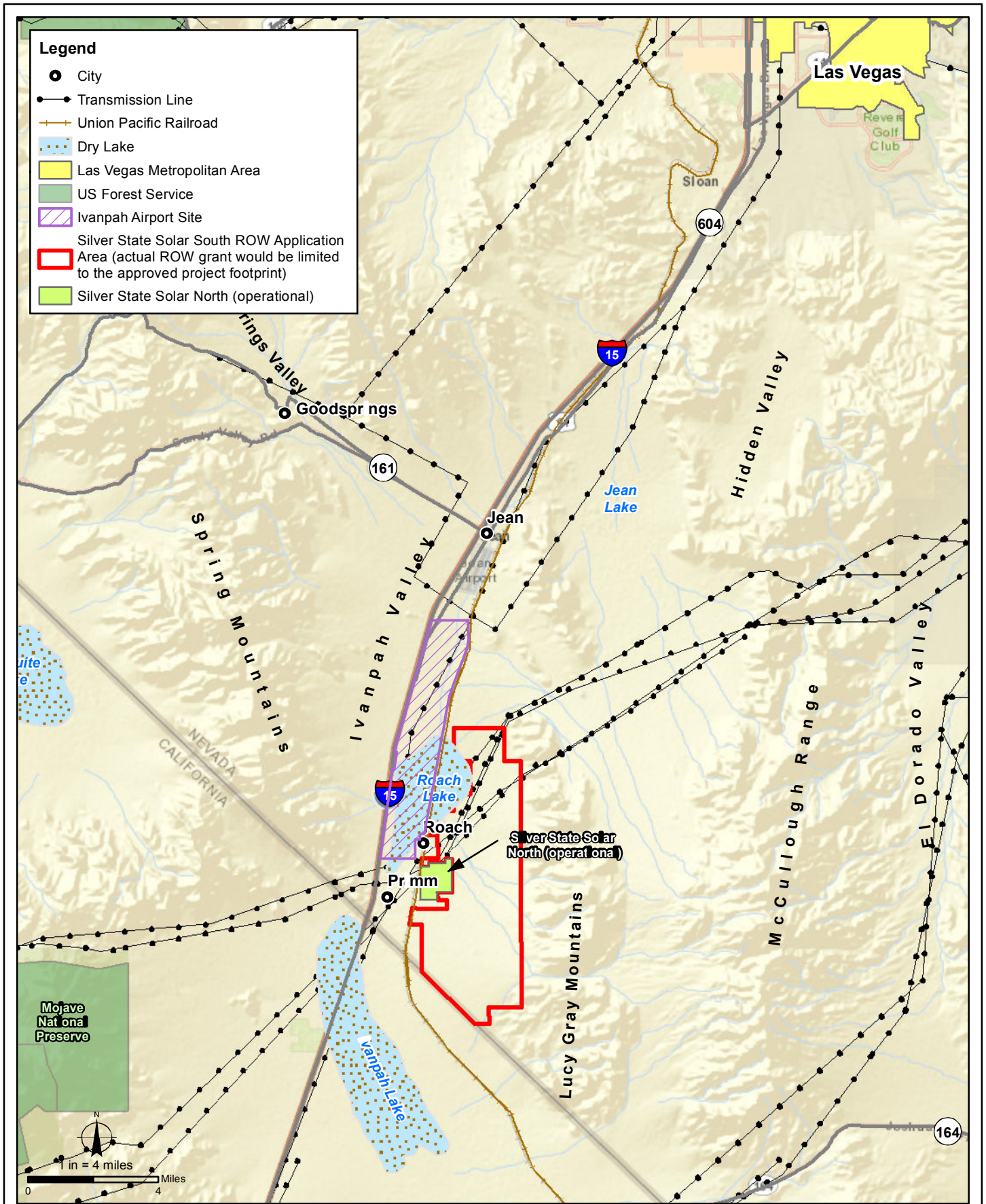
The 1998 LVFO RMP is currently being revised. The BLM began the process of formally updating the RMP in 2010, and expects to complete the update in 2015. Because the proposed Project is time-sensitive and would be out of conformance with some management goals of the 1998 RMP, the BLM must amend the existing LVFO RMP to accommodate the proposed Project. Specifically, the Supplemental EIS/PRMPA analyzes a reduction in the size of the Jean Lake/Roach Lake Special Recreation Management Area (SRMA), and revisions to the Visual Resource Management (VRM) for the area from a VRM Class III to a VRM Class IV.

In addition, the analysis in this Supplement EIS considered an ACEC nomination brought forth during scoping. The ACEC nomination included 98,300 acres of land in Nevada and 31,079 acres in California. The BLM LVFO determined that 40,180 acres of the nominated area within Nevada meets the criteria for both relevance and importance. Of the 40,180 acres, a 30,912-acre ACEC is included as part of Alternative D and a 31,859-acre ACEC is included as part of the BLM Preferred Alternative because these areas meet the relevance and importance criteria for the Agassiz's desert tortoise. They are slightly different due to the different proposed layouts. The remainder of the ACEC nomination area in Nevada will be addressed through the LVFO RMP revision process, with the California portion evaluated in the Desert Renewable Energy Conservation Plan currently in progress in California. Details about the plan amendment and ACEC processes are described in Sections 2.1.1 and 2.3.5.

## **1.2 PROJECT OVERVIEW**

The 2010 Final EIS provided an analysis of proposed development within a 7,925-acre right-of-way (ROW) application area. In early 2011, Silver State submitted a ROW application (designated as NVN-089530) for the Silver State Solar South Project encompassing an additional 5,610 acres of BLM-administered public lands. This area includes 5,069 additional acres immediately north of the previously analyzed ROW application area and a 541-acre area immediately west (Figure 1-1). This additional acreage allowed the development of site layout alternatives for the Silver State Solar South Project to avoid impacts to interstate drainages, reduce impacts to desert tortoise and other special status species, and minimize impacts to recreational areas in the Jean Lake/Roach Lake SRMA.

Of the previously analyzed 7,925-acre ROW application area, 7,373 acres is included in the ROW application for Silver State Solar South. An additional 200-acre ROW application was submitted under number NVN-090823, bringing the entire ROW application area to 13,184 acres. The final footprint for the Silver State Solar South Project would be between 2,427 acres and 3,881 acres in size, depending on the alternative chosen and the final site configuration. If



**Regional Area  
Silver State Solar South Project**

**FIGURE  
1-1**

approved, the remaining acreage within the larger ROW application area would be relinquished and the ROW grant would only be issued for lands needed for Project development.

*Since the publication of the Draft Supplemental EIS/PRMPA, the Applicant has developed a new Project layout to address public and agency concerns related to desert tortoise connectivity within the Ivanpah Valley, as well as agency and public interest in a reduced-scale alternative. The new Project layout is referred to as the BLM Preferred Alternative. The addition of this new alternative is consistent with the Council for Environmental Quality (CEQ) guidance allowing an agency to develop new alternative(s) that are variations of alternatives analyzed in a Draft EIS. This new layout is located entirely within the footprint of alternatives analyzed in the Draft Supplemental EIS/PRMPA and is smaller in total area, and thus involves no new areas of effect.*

### **1.3 BLM'S PURPOSE AND NEED**

In accordance with Section 103(c) of the Federal Land Policy and Management Act (FLPMA) of 1976, public lands are to be managed for multiple uses that take into account the long-term needs of future generations for renewable and non-renewable resources. The Secretary of the Interior is authorized to grant ROWs on public lands for systems of generation, transmission, and distribution of electrical energy (Section 501[a][4]). Taking into account the BLM's multiple-use mandate, the BLM's purpose and need for this action is to respond to Silver State's application under Title V of FLPMA (43 U.S. Code [USC] § 1761) for a ROW grant to construct, operate, maintain, and decommission a solar generation power plant and ancillary facilities in compliance with FLPMA, BLM ROW regulations, the BLM NEPA Handbook, *Department of Interior (DOI) NEPA regulations*, and other applicable Federal and State laws and policies. The BLM will also consider a concurrent amendment of the LVFO RMP to: 1) reduce the size of the Jean Lake/Roach Lake SRMA to ensure that the proposed ROW grant is in conformance with the existing LVFO RMP and to ensure a balanced use of the public lands and the resources affected by those uses; 2) revise the VRM classification of lands within the Project footprint to ensure management is in conformance with existing LVFO RMP decisions; and 3) designate an ACEC and identify management prescriptions for a portion of the proposed ACEC nomination area.

### **1.4 NEPA AND PLAN AMENDMENT PROCESSES**

The preparation of a Supplemental EIS/PRMPA compliant with NEPA follows a process consisting of nine major steps. The steps listed below also include the BLM's plan amendment process, which is described in Section 1.4.2.

1. Issue the Notice of Intent to prepare a Supplemental EIS/PRMPA and RMP amendment;
2. Conduct public and agency scoping;
3. Prepare the interdisciplinary Supplemental EIS/PRMPA analysis of the issues and alternatives;
4. Issue the Notice of Availability for the Draft Supplemental EIS/PRMPA;
5. Conduct the public review and 90-day comment period;
6. Issue the Final Supplemental EIS/PRMPA which includes responses to comments received on the Draft Supplemental EIS/PRMPA;
7. Await a 30-day protest period and 60-day Governor's consistency review of the PRMPA;

8. If applicable, the BLM Washington D.C. Office resolves protests;
9. Issue the ROD. The BLM decision on the Project and plan amendment will be presented in the same ROD.

## **1.4.1 The Environmental Impact Statement Decision Framework**

This Supplemental EIS/PRMPA tiers from the Silver State Solar Energy Project Final EIS (BLM 2010). The CEQ encourages federal agencies “to tier their environmental impact statements to eliminate repetitive discussion of the same issues and to focus on the actual issues ripe for decision at each level of environmental review (Section 1502.20). As such, this document only includes information that has been added or revised subsequent to the publication of the 2010 Final EIS to address and analyze specific changes and new information. A Supplemental EIS is intended to provide BLM-decision makers detailed description and analysis of changes or new information related to a project and also to give the public an additional opportunity to participate in the NEPA process (40 Code of Federal Regulations [CFR] 1502.9[c][4]).

## **1.4.2 BLM Plan Amendment Process**

Section 202 of FLPMA states: “The Secretary shall, with public involvement...develop, maintain, and when appropriate, revise land use plans which provide by tracts or areas for the use of the public lands” (43 USC 1712). The regulations for making and modifying land use plans and planning decisions are found in 43 CFR 1600. The proposed amendments to the RMP shall follow the regulations as set forth in 43 CFR 1610, Resource Management Planning.

## **1.4.3 Decisions to be Made**

The BLM will decide whether to approve, approve with modification, or deny issuance of a ROW grant to the Applicant for the Silver State Solar South Project. Modifications may include the proposed use or location of the proposed facilities (43 CFR 2805.10[a][1]). The BLM will also consider a concurrent amendment of the LVFO RMP to: 1) reduce the size of the Jean Lake/Roach Lake SRMA to ensure that the ROW action proposed in Silver State’s application decisions is in conformance with the existing LVFO RMP and to ensure a balanced use of the public lands and the resources affected by those uses; 2) revise the VRM classification of lands within the Project footprint to ensure management is in conformance with existing LVFO RMP decisions; and 3) designate an ACEC and identify management prescriptions for a portion of the proposed ACEC nomination area. The BLM preferred alternative for the RMP amendment is to (1) reduce the acreage of the SRMA by the Project footprint (if approved); (2) change the VRM class from VRM Class III to IV for the Project footprint (if approved); and (3) designate an ACEC.

If the decision is made to grant a ROW, the BLM will also make the decision on which alternative to approve and which terms and conditions are to be included in the ROW grant. The BLM may also consider a combination of Project elements from among the alternatives analyzed in the Supplemental EIS/PRMPA, or may consider approving a ROW of less than that requested in the ROW application (as was done for the Silver State Solar North project). Decisions will be



outlined in a ROD and will be based on the analyses in this Supplemental EIS/PRMPA. If the ROD were to approve the issuance of a ROW grant/lease, the ROW grant would only be issued upon completion and approval of the Plan of Development and payment of a Performance and Reclamation bond (see Section 2.6.1 in this document). The ROW grant would be authorized or denied by the BLM Authorizing Officer, and the BLM decision would only apply to public land.

The BLM's RMP amendment decision will be outlined in the ROD concurrently with its decision regarding the Project's ROW grant, based on the analyses in this Supplemental EIS/PRMPA.

## **1.5 RELATIONSHIP TO POLICIES, PLANS, AND PROGRAMS**

This Supplemental EIS/PRMPA was prepared in compliance with CEQ regulations for implementing NEPA (40 CFR §§ 1500-1508; 43 CFR Part 46); the BLM NEPA Handbook H-1790-1; FLPMA Sections 201, 202, and 206 (43 USC §§ 1711, 1712, 1716; see also 43 CFR § 1600 et seq.); and the BLM Land Use Planning Handbook H-1601-1. The BLM also has Instructional Memorandum (IM) 2004-105, 149, 231; 2005-105; and 2011-059, 060, and 061, which set NEPA compliance policy for the BLM. An expanded list of specific policies, plans, and programs that may be applicable to the proposed Project is provided in *Section 1.4* in the 2010 Final EIS.

BLM lands in the ROW application area and vicinity are currently managed under the LVFO RMP (1998) and its amendments. The RMP focused management on handling land transfers, recovery of desert tortoise populations, the appropriate locations for mineral extraction, management of off-road recreation, and when to pursue special designations such as ACECs and utility corridors. Since 1998 the planning area has undergone significant population growth and undeveloped lands are targeted for renewable energy development. This has led to new planning and resource management needs to cope with new uses of and demands on the public lands. To account for these changes the BLM has revised the RMP by plan amendments, maintenance actions, and several new statutes. In an effort to have an RMP that fully addresses current and projected land use and resource conditions, the BLM began the process of formally updating the RMP in 2010. This update is not expected to be complete until 2015. The proposed Project is one of the seven priority projects selected by the DOI to help fulfill their mandate to develop renewable energy projects on public lands. As such, it is anticipated that a ROD will be made on this Project before the LVFO RMP revision is complete.

The options under consideration for the RMP amendment are:

- *Option PA1 – The LVFO RMP would be amended to designate portions of the Ivanpah Valley as an ACEC.*

The Ivanpah Valley ACEC has been nominated by Basin and Range Watch. The designation of this ACEC may occur independently of the Proposed Action, but if designation occurs BLM must identify management prescriptions for affected lands that are consistent with the resource protections of an ACEC. For the purposes of this analysis, the ACEC option is included as part of the BLM Preferred Alternative and Alternative D.

- *Option PA2 – The LVFO RMP would be amended to change the VRM classification on portions of BLM managed lands in the Ivanpah Valley from VRM III to VRM IV.*

Under the existing VRM classification, the proposed Project would not be in conformance with the LVFO RMP. By changing the VRM classification for the Project footprint, the BLM would be able to approve the ROW application. Detailed information about the VRM and the requirement for an RMP amendment is provided in this document in Sections 3.12 and 4.12 (Visual Resources) and in Appendix A. *This option applies to all action alternatives.*

- *Option PA3 – The LVFO RMP would be amended to reduce acreage within the Jean Lake/Roach Lake SRMA.*

Approval of Silver State’s ROW application would require an amendment of the LVFO RMP to adjust management objectives in the Jean Lake/Roach Lake SRMA. Specifically, the Project footprint for whichever development is approved would be withdrawn from the SRMA. The LVFO manages the 216,300-acre Jean Lake/Roach Lake SRMA for “intensive recreation opportunities, including competitive off-road vehicle (in accordance with the U.S. Fish and Wildlife Service Biological Opinion [1-5-98-F-053, June 19 1998]) and other recreational events, as well as dispersed recreational use and commercial activities” (BLM 1998). The BLM regulations in 43 CFR 1600 and the NEPA process detailed in the CEQ regulations in 40 CFR 1500 guide preparation of plan amendments. Detailed information about the Jean Lake/Roach Lake SRMA and BLM’s management objectives for this area is provided in this document in Sections 3.10 (Special Management Areas) and 3.11 (Recreation). *This option applies to all action alternatives.*

The BLM has also prepared a Programmatic EIS for Solar Energy Development in Six Southwestern States (FES 12-24; DOE/EIS-0403) that identifies the Ivanpah Valley, where the ROW application area is located, as an exclusion zone for large-scale renewable energy development. However, in the development of the Programmatic EIS, the BLM directed that processing continue for all pending solar energy applications that meet due diligence and siting requirements under existing land use plans and other policies and procedures that the BLM has adopted or might adopt. Pending applications such as the Silver State South Project are not subject to any new program elements adopted by the Solar Programmatic EIS ROD.

*As part of the Programmatic EIS for Solar Development, a Programmatic Agreement (Solar PA) was developed that outlines procedures for complying with NHPA. The Solar PA does not apply to pending solar applications filed within Variance and/or Exclusion areas before the publication of the Supplement to the draft Solar PEIS (October 28, 2011). Because the application for the Silver State Solar Energy Project was received in July 2011, compliance with the NHPA follows NHPA and 36 CFR 800 instead of the procedures outlined in the Solar PA.*

*The proposed actions in this Supplemental EIS/PRMPA will be consistent with other officially approved federal, state and local plans, policies and programs to the extent that they are consistent with the goals and objectives of the RMP and with applicable federal regulations, policies and laws. In addition to the documents listed in the 2010 Final EIS for the Silver State Solar Energy Project (DOI No. FES 10-50) Section 1.4.2, the following documents as they relate to the Silver State South project have been reviewed and considered as the Supplemental EIS/PRMPA has been developed:*

- Clark County Desert Conservation Program and USFWS. 2001. Clark County Multiple Species Habitat Conservation Plan.

The Clark County Multiple Species Habitat Conservation Plan (MSHCP) established a biological goal of no net unmitigated loss or fragmentation of habitat in Multiple Use Management Areas (MUMA) for the following species that may occur in the project area: banded gecko (*Coleonyx variegatus*), desert iguana (*Dipsosaurus dorsalis*), desert tortoise (*Gopherus agassizii*), western chuckwalla (*Sauromalus obesus*), Western red-tailed skink (*Eumeces gilberti rubricaudatus*), large-spotted leopard lizard (*Gambelia wislizenii wislizenii*), great basin collard lizard (*Crotaphytus insularis bicinctores*), California kingsnake (*Lampropeltis getulus californiae*), glossy snake (*Arizona elegans*), Western long-nosed snake (*Rhinocheilus lecontei lecontei*), Western leaf-nosed snake (*Phyllorhynchus decurtatus*), Sonoran lyre snake (*Trimorphodon biscutatus lambda*), sidewinder (*Crotalus cerastes*), speckled rattlesnake (*Crotalus mitchelli*), Mojave green rattlesnake (*Crotalus scutulatus scutulatus*), sticky buckwheat (*Eriogonum viscidulum*), and white-margined beardtongue (*Penstemon albomarginatus*). These species have been considered during development of the affected environment and those potentially affected analyzed in the impact analysis.

## 1.6 PERMITS REQUIRED OR POTENTIALLY REQUIRED

As discussed in Section 1.1, significant portions of the ROW application area have been previously surveyed and were evaluated in accordance with NEPA in the Silver State Solar Energy Project Final EIS (BLM 2010). The studies required to support federal permitting and environmental review include identification of biological resources in accordance with the federal Endangered Species Act (ESA); identification of waters of the United States (U.S.) in accordance with the federal Clean Water Act; identification of cultural resources in accordance with the National Historic Preservation Act (NHPA); and assessments of visual resources, air emissions, and noise conducted as part of the NEPA process. Federal agencies with interest in Project review include the U.S. Fish and Wildlife Service (USFWS), U.S. Army Corps of Engineers (USACE), and the Nevada State Historic Preservation Office (SHPO). Existing relevant data and analyses from the 2010 Final EIS have been supplemented with updated information to disclose potential impacts to areas not previously evaluated in the 2010 Final EIS. Areas not included in the 2010 Final EIS were reviewed to determine the extent to which supplemental information is required to facilitate final Project review.

If approved, the Silver State Solar South Project would require a number of permits from State and local agencies, including the Nevada Department of Wildlife (NDOW), Nevada Department of Forestry, Nevada Department of Water Resources (NDWR), Nevada Division of Environmental Protection (NDEP), Nevada Department of Transportation (NDOT), Nevada Public Utilities Commission, Clark County Department of Air Quality, Clark County Development Services Department, Clark County Fire Department, and Clark County Division of Environmental Protection. A list of Federal, State, and local permits that may be required for construction and operation of the proposed Project is provided in *Table 2.9-1* in the 2010 Final EIS.



## 1.7 ORGANIZATION OF THE SUPPLEMENTAL EIS/PRMPA

As a document intended to supplement the information in the 2010 Final EIS, this Supplemental EIS/PRMPA is not intended to repeat or replace the information and analysis presented in the 2010 Final EIS. The format for this document generally follows the organization of the 2010 Final EIS; however, emphasis has been placed on those resources that may be affected by the modified Project layout and areas subject to RMP amendments. Table 1-1 below lists the specific sections included in the Supplemental EIS/PRMPA and the type of information to be found in those sections. A copy of the 2010 Final EIS is provided as an appendix to this document on a flash drive (attached to a paper copy), or as a separate electronic file if reviewing the document on the Supplemental EIS/PRMPA flash drive. Copies of the Supplemental EIS/PRMPA and a link to the 2010 Final EIS are also posted on the BLM LVFO website at:

[http://www.blm.gov/nv/st/en/fo/lvfo/blm\\_programs/energy/Silver\\_State\\_Solar\\_South.html](http://www.blm.gov/nv/st/en/fo/lvfo/blm_programs/energy/Silver_State_Solar_South.html).

**Table 1-1. Organization of the Final Supplemental EIS/PRMPA**

Chapter 1 – Introduction, Purpose and Need	This chapter provides background information for the proposed Project and the purpose of, and need for the Supplemental EIS/PRMPA. It also describes the role of the BLM in the EIS and plan amendment processes, and the required regulatory actions for the proposed Project.
Chapter 2 – Alternatives and Proposed Federal Actions	This chapter describes the Applicant’s proposed Project and alternatives to be analyzed in the Supplemental EIS/PRMPA, including <i>the BLM Preferred Alternative which was added following the comment period for the Draft Supplemental EIS/PRMPA</i> . Project components and the construction and operation process described in Section 2.5 in the 2010 Final EIS are primarily the same for Alternatives B, C, D, and <i>the BLM Preferred Alternative</i> considered in the Supplemental EIS/PRMPA. Therefore, to avoid redundancy, detailed information about Project components (what they are and how they work) and basic construction and operation process have been summarized and the reader is referred to the appropriate section of the 2010 Final EIS for more detailed information. Where major differences occur, more detailed information is provided.
Chapter 3 – Affected Environment	This chapter describes the affected environment associated with the construction, operation, maintenance and decommissioning of the Silver State Solar South Project and the BLM’s proposed plan amendment.
Chapter 4 – Environmental Consequences	This chapter describes possible environmental consequences of the Proposed Action and alternatives analyzed in the Supplemental EIS/PRMPA. Direct, indirect, and cumulative effects of the Proposed Action and alternatives are assessed and described to allow for comparative impact evaluation. Impacts are compared to the social and natural environment that would be expected to exist if the No Action Alternative was selected.
Chapter 5 – Consultation and Coordination	This chapter describes public participation undertaken to date, and additional opportunities that will occur throughout the EIS and ROD process. It also lists agencies and organizations that will receive copies of the Supplemental EIS/PRMPA for review and lists the preparers of the document.
Chapter 6 – References	This chapter includes a list of references used in the preparation of the Supplemental EIS/PRMPA.
Chapter 7 – Acronyms and Abbreviations	This chapter includes a description of all acronyms and abbreviations used.

**Table 1-1. Organization of the Final Supplemental EIS/PRMPA (Continued)**

<u><i>Appendix A</i></u>	<u><i>Visual Resources</i></u>
<u><i>Appendix B</i></u>	<u><i>ACEC Evaluation and Nomination</i></u>
<u><i>Appendix C</i></u>	<u><i>Scoping Report</i></u>
<u><i>Appendix D</i></u>	<u><i>Comments and Responses to the Draft Supplemental EIS/PRMPA</i></u>
<u><i>Appendix E</i></u>	<u><i>Primm Substation Technical Project Description</i></u>
<u><i>Appendix F</i></u>	<u><i>Jurisdictional Determinations</i></u>
<u><i>Appendix G</i></u>	<u><i>Biological Resources Technical Reports and USFWS Consultation</i></u>
<u><i>Appendix H</i></u>	<u><i>Groundwater Drawdown Analysis</i></u>
<u><i>Appendix I</i></u>	<u><i>SHPO Concurrence Letter</i></u>