

RECLAMATION

Managing Water in the West

River Mountains Solar Project

Finding of No Significant Impact and Final Environmental Assessment
LC-15-14

Lower Colorado Region, Boulder City, Nevada



U.S. Department of the Interior
Bureau of Reclamation
Lower Colorado Region
Boulder City, Nevada

JUNE 2015



Mission Statements

The U.S. Department of the Interior protects America's natural resources and heritage, honors our cultures and tribal communities, and supplies the energy to power our future.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

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Acronyms and Abbreviations

Applicant	River Mountains Solar, LLC
BMP	Best Management Practice
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulation
CH ₄	Methane
CO	Carbon monoxide
CO ₂	Carbon dioxide
CO _{2eq}	Carbon dioxide-equivalent
DAQEM	Department of Air Quality and Environmental Management
dB	Decibel
dBA	Decibels on the A-weighted scale
EA	Environmental Assessment
EIS	Environmental Impact Statement
EO	Executive Order
GHG	Greenhouse gas
GWP	Global Warming Potential
HMMP	Hazardous Materials Management Program
IFC	International Fire Code
ITA	Indian Trust Asset
MW	Megawatt
N ₂ O	Nitrous oxide
NAAQS	National Ambient Air Quality Standard
NEPA	National Environmental Policy Act
NDOW	Nevada Department of Wildlife
OSHA	Occupational Safety and Health Administration
PM _{2.5}	Particulate matter less than 2.5 microns
PM ₁₀	Particulate matter less than 10 microns
PPA	Power Purchase Agreement
PV	Photovoltaic
Reclamation	Bureau of Reclamation
RMWTF	River Mountains Water Treatment Facility
ROU	Right-of-Use
SCAQMD	Southern California Air Quality Management District
SHPO	State Historic Preservation Officer
SNWA	Southern Nevada Water Authority
SO ₂	Sulfur dioxide
SWPPP	Stormwater Pollution Prevention Plan
TTF	Treatment and Transmission Facility
USEPA	U.S. Environmental Protection Agency
VOC	Volatile organic compounds

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**FINDING OF NO SIGNIFICANT IMPACT
(FONSI)**

**LC-15-14
for
Final Environmental Assessment (EA) for River Mountains Solar Project
Henderson, Nevada**

Based on a thorough analysis of the potential environmental impacts presented in the EA, the Bureau of Reclamation (Reclamation) finds that implementation of the River Mountains Solar Project (Proposed Action) will not significantly affect the quality of the human environment within or adjacent to the project area; therefore an Environmental Impact Statement (EIS) will not be prepared.

Accordingly, this FONSI is submitted to document environmental review and evaluation of the Proposed Action in compliance with the National Environmental Policy Act (NEPA) of 1969, as amended.

Prepared: Faye Streier Date: June 8, 2015
Natural Resource Specialist

Recommended: [Signature] Date: June 8, 2015
Manager, Environmental Compliance Group

Approved: [Signature] Date: 6/8/15
Chief, Resources Management Office

BACKGROUND

Reclamation is proposing to issue Right of Use (ROU) contract number 05-07-30-L0831 to River Mountains Solar, LLC (Applicant) for the installation of a solar photovoltaic (PV) electric generation facility on Reclamation-administered lands at the existing River Mountains Water Treatment Facility (RMWTF). The land is located in the SE- ¼ of Section 15, Township 22 South, Range 63 East, and a portion of the W- ½ of the SW- ¼ of Section 14, Township 22 South, Range 63 East, M.D.M., Nevada (1350 Richard Bunker Avenue in Henderson, Nevada). The Final EA for the Proposed Action is attached to and incorporated by reference into this FONSI.

Reclamation was the lead Federal agency for completion of the Final EIS for the Southern Nevada Water Authority (SNWA) Treatment and Transmission Facility (TTF) in September 1996. The RMWTF is part of the TTF and is approximately 400 acres. Reclamation issued a Record of Decision and ROU grant in perpetuity to SNWA for the RMWTF in January 1997 (Contract and Grant of Easement No. 7-07-30-L0454). The EIS analyzed the entire RMWTF site and assumed that the entire 400 acres would eventually be developed for the RMWTF and associated facilities.

The solar facility would be located on undeveloped land intended for future RMWTF expansion. However, a solar facility was not envisioned for the site at the time the TTF EIS was prepared, therefore, a solar facility was not described in the TTF EIS.

The Final EA was prepared to evaluate the potential impacts of the Proposed Action and its alternative on the physical and human environment and determine if there would be any significant impacts that are not described in the TTF EIS. The purpose of the Proposed Action is to create a renewable energy source that would exclusively provide power to the RMWTF. The Proposed Action would fulfill a portion of SNWA's electricity need to treat and deliver water to southern Nevada, while simultaneously offsetting SNWA's non-renewable energy usage and provide for a more environmentally-responsible way to treat and deliver the water. Once operating, this solar installation would bring SNWA closer to its goal of obtaining 25 percent of its power requirements from renewable resources by 2025. Reclamation's purpose for the action is to consider approval of the Applicant's request to construct, operate, and maintain a solar PV electricity generation facility within an existing ROU.

ALTERNATIVES CONSIDERED

A No Action Alternative and the Proposed Action were considered. Under the No Action Alternative, the proposed solar facility would not be constructed within the RMWTF ROU area. Energy needs for the RMWTF would continue to be met with its current energy sources. The area proposed for the solar facility would be used for expansion of the RMWTF if this need is identified in the future. SNWA would continue to administer the entire RMWTF site as identified in the ROU.

The Proposed Action

Under the Proposed Action, construction and operation of a solar PV electricity generation facility would occur within a portion of the existing RMWTF ROU area. The solar facility would consist of approximately 54,500 solar panels and associated appurtenances and generate approximately 38,000 megawatt hours of power per year. Approximately 95 acres of permanent disturbance and approximately 5 acres of temporary disturbance would be required for the Proposed Action. The Proposed Action would be located entirely within the existing RMWTF, which is fenced with chain-link, barbed-wire, and tortoise fence. The TTF EIS and Biological Opinion analyzed the entire RMWTF area as to be disturbed, and desert tortoise habitat compensation fees for the entire TTF area were paid in full on December 20, 1996. A temporary ROU term of 1 year and a permanent ROU term of 20 years, with the option to extend the permanent term for two additional, 5-year periods, are requested. Upon termination of the ROU grant, SNWA will have the opportunity to purchase the solar facility for continued operation. Should SNWA decide to purchase the facility, SNWA will request that the ROU grant be reassigned from the Applicant to SNWA and granted in perpetuity. If SNWA does not purchase the facility and there is no desire for its continued operation, project structures will be removed by the Applicant and the site will be restored in accordance with Reclamation requirements. The Proposed Action includes the following primary components: design, construction, operation and maintenance, and mitigation measures.

The Proposed Action would be constructed through a “Design and Build” contract. Detailed criteria for the construction would be provided to the selected contractor who would design and construct the Proposed Action in accordance with the Applicant’s design criteria subject to jurisdictional requirements and Reclamation’s approval. The design, construction, operation and maintenance are discussed in detail in the Final EA under Section 2.0 Description of Alternatives. The mitigation measures are listed as “Environmental Commitments” below.

Environmental Commitments

The applicant is required to comply with all requirements of the FONSI and Final EA for the River Mountains Solar Project (LC-15-14), including applicable environmental commitments and mitigation measures from the TTF EIS. The applicable mitigation measures from the TTF EIS are listed by resource in Appendix A to the Final EA. In addition to these measures, the Applicant will implement the following measures as part of the Proposed Action to reduce or eliminate impacts to resources:

Air Quality/Greenhouse Gases/Climate Change

- Proper and routine maintenance of all vehicles and other construction equipment will be implemented to ensure that emissions are within the design standards of all construction equipment.
- Dust suppression methods such as watering of disturbed areas, will be implemented to minimize fugitive dust and will be in accordance with Federal and State air quality regulations.
- Prior to construction activities, an air quality permit will be obtained by the contractor from the Clark County Department of Air Quality and Environmental Management.

- The minimum necessary grading and vegetation clearing will be performed to install PV modules, plant facilities, and other hardware.
- Additional environmental commitments regarding Air Quality/Greenhouse Gases/Climate Change are listed in the Final EA, Appendix A Environmental Mitigation Measures.

Biological Resources

- A speed limit of 25 miles per hour will be adhered to on unmarked Clark County roads.
- All workers will check under vehicles and heavy equipment prior to moving them for desert tortoise or sensitive wildlife. If desert tortoise or sensitive wildlife are found, Appendix A will be consulted for the proper procedures.
- The proposed temporary access fence will consist of a swinging gate with tortoise fence installed, be maintained throughout construction, and be restored to prior conditions following construction activities.
- Solar panel washing will use either pure water or a water-based Reclamation-approved washing fluid.
- Where applicable, topsoil and cacti will be salvaged, and following construction activities, surface disturbances will be restored and include earthworks, topsoil replacement, and cacti transplanting.
- Fire protection measures will include portable CO2 fire extinguishers mounted outside the electrical enclosures that contain the inverters and medium voltage transformers, implementation of a FM200 fire suppression system, or equivalent, and vegetation maintained as low-growing by mechanical methods to minimize fire risk.
- Invasive species management will include proper cleaning of vehicles and heavy equipment prior to entering and before leaving the site.
- In order to reduce the spread of weeds into the Proposed Action area, any necessary fill material used during construction will be certified noxious weed-free.
- Additional environmental commitments regarding Biological Resources are listed in the Final EA, Appendix A Environmental Mitigation Measures.

Energy Resources

- Energy requirements for the construction and operation of the solar facility will not exceed the capacity of the existing energy infrastructure, requiring the development and/or construction of otherwise unplanned energy resources and infrastructure.

Noise

- During construction, the construction contractor will be required to comply with the City of Henderson noise ordinance.
- A noise complaint telephone number will be made available in the local area so that noise disturbances can be reported and investigated.
- Temporary noise barriers may be used to protect against excessive noise levels if construction activities occur in an area closer than 100 feet from noise sensitive land uses (i.e., Burkholder and River Mountains Loop trails).
- Additional environmental commitments regarding Noise are listed in the Final EA, Appendix A Environmental Mitigation Measures.

Soils/Hydrology

- A Nevada Division of Environmental Protection Stormwater General Permit will be acquired and all permit conditions adhered to, a Stormwater Pollution Prevention Plan will be prepared, and Best Management Practices for runoff and erosion control will be implemented.
- A comprehensive spill prevention, control, and countermeasure plan will be implemented as applicable in accordance with State and Federal regulations.
- A hazardous materials business plan will be provided to the appropriate local jurisdictions and will include a complete list of all materials used on-site, and a Hazardous Materials Management Plan will be developed for the Proposed Action operations prior to turnover of the site from construction to operations.
- Grading and construction procedures will be designed to minimize topographic changes.
- Vegetation and topsoil removal will be limited and any topsoil removed will be returned to the site in order to maintain the native seedbed, promote vegetation growth, and therefore reduce exposed soils.
- Low-growing vegetation will be allowed to establish, and any cacti that cannot be avoided during construction will be salvaged and transplanted back to the Proposed Action area, where feasible.
- Additional environmental commitments regarding Soils/Hydrology are listed in the Final EA, Appendix A Environmental Mitigation Measures.

Traffic Circulation

- Access to the site will be controlled and gates will be installed.
- A Construction Traffic Management Plan will be developed and implemented.
- Material deliveries will be scheduled during off-peak periods (10:00 a.m. and 3:00 p.m.), as feasible.
- Additional environmental commitments regarding Traffic Circulation are listed in the Final EA, Appendix A Environmental Mitigation Measures.

Visual Resources

- Lighting will be limited to specific areas within the Proposed Action site, designed to provide the minimum illumination needed to achieve safety and security objectives, and shielded and directed down towards the site and not into surrounding areas.
- Facility and landscape design features will be incorporated which minimize visual effects.
- Additional environmental commitments regarding Visual Resources are listed in the Final EA, Appendix A Environmental Mitigation Measures.

Common to all Resources

- Trash and waste removal from the Proposed Action area will occur on a daily basis and disposed of at an appropriate facility.
- All construction and operation contractors will be trained and required to operate under a health and safety program that meets industry and OSHA standards.
- All construction-related activities will be conducted within the marked boundaries of the Proposed Action area.

ENVIRONMENTAL IMPACTS AND FINDINGS

Implementation of the Proposed Action will not result in significant impacts to any of the resources evaluated in the EA. The reasons for this determination are summarized by resource below.

Air Quality/Greenhouse Gases (GHGs)/Climate Change – Short term, minor impacts to air quality are expected from the use of construction equipment (i.e., combustible emissions) and the disturbance of soils (i.e., fugitive dust) during site grading and placement of the solar panels and conduits. However, criteria air pollutant emission levels for the facility construction are well below the major source thresholds considered for new source review permitting, and are a small fraction of current GHG emissions in Nevada. Further, long-term operational phase air emissions can be characterized as minimal, and small in comparison to other existing emission sources in the vicinity. Implementing dust control best management practices (BMPs) will ensure air emissions from construction and operation activities would be temporary, and potential effects on air quality in Clark County would be minimal and result in no long-term impacts on existing ambient air quality. To the contrary, the use of solar panels to generate electricity for the RMWTF reduces dependence on fossil fuels that emit GHGs, reduces energy-related emissions from the RMWTF, and has long-term benefits to air quality in Clark County. Cumulative impacts are not anticipated because impacts from the Proposed Action would be minimal and any concurrent construction projects would implement emission and dust control requirements.

Biological Resources – No designated critical habitat occurs within the Proposed Action area for any Threatened or Endangered species. The area has been fenced with tortoise-proof fencing since 2004 and cleared of tortoise multiple times. The Proposed Action contains mitigation measures to prevent impacts to migratory birds and other sensitive species. Construction activities will be temporary in nature and limited to an existing granted ROU, within the tortoise-proof fenced area. Increased human activity on the project site will be temporary; lighting used during construction, operation, and maintenance would be limited, used for safety and security reasons, and directed down and not into surrounding areas; operation and maintenance activities will be relatively low in noise level, reducing the level of disturbance to wildlife species in adjacent areas; and due to the small amount of water necessary for the Proposed Action, long-term ponding of water, which may attract sensitive species to the area, is not anticipated. Cumulative impacts to wildlife habitat may have impacted habitat in the vicinity of the Proposed Action. The Proposed Action is not expected to contribute to these impacts because it is within a previously permitted area and impacts would be minimized by mitigation measures.

Cultural Resources/Indian Sacred Sites/Traditional Cultural Properties – A Class I and Class III Cultural Resource Survey were completed that included the RMWTF. Although two historic era cultural resource sites were located within the boundaries of the RMWTF during the Class III inventory, the Nevada State Historic Preservation Officer (SHPO) concurred with Reclamation's determination that the sites were not eligible for listing on the National Register of Historic Places. No cultural resources were discovered during the construction of the RMWTF. There are no Indian Sacred Sites or Traditional Cultural Properties within or adjacent to the Proposed Action area. Therefore, direct, indirect or cumulative impacts to cultural resources, Indians Sacred Sites or Traditional Cultural Properties are not anticipated.

Earth Resources – According to the analysis conducted for the TTF, the Proposed Action area is located in an area of low potential for paleontological resources and the Proposed Action includes measures for unanticipated discovery of paleontological resources. Direct, indirect or cumulative impacts to earth resources are not anticipated.

Energy Resources – Undesirable effects to energy resources would not occur from the Proposed Action, since energy requirements for the construction and operation of the solar facility would not exceed the capacity of the existing energy infrastructure, requiring the development and/or construction of otherwise unplanned energy resources and infrastructure. To the contrary, the Proposed Action would provide an additional energy resource entirely for the RMWTF that is renewable, off-setting the current non-renewable energy source for the RMWTF by 5 percent. This would have a positive cumulative impact as the Proposed Action will generate power that offsets other energy use in the region. There would be no negative cumulative impacts.

Environmental Justice – No high and adverse human health or environmental effects were identified from the Proposed Action. Data on minority populations and poverty in the Proposed Action area was reviewed and confirmed that the Proposed Action would not result in disproportionately high and adverse human health or environmental effects on minority and low-income populations. There would be no cumulative impacts to Environmental Justice.

Floodplains and Wetlands – There are no floodplains or wetlands located in the vicinity of the Proposed Action, and there would be no direct, indirect or cumulative impacts to these resources.

Human Health – There would be no direct, indirect or cumulative impacts to human health. All employees and contractors would be required to adhere to the appropriate health and safety plans and emergency response plans and all construction and operation contractors would be trained and required to operate under a health and safety program that meets industry and OSHA standards. The Proposed Action area would be located within an existing secured perimeter fence with a manned guard gate with an additional inner 7-foot-tall chain-link barbed-wire fence.

Indian Trust Assets (ITA) – There would be no direct, indirect or cumulative impacts to ITAs as none are located in or adjacent to the Proposed Action area.

Land Use and Socio-Economics – The Proposed Action would not conflict with the general land use intended for the RMWTF and described in the TTF FEIS or with any existing land use policies, designations or restrictions governing the site. Positive socioeconomic impacts are expected if non-renewable energy sources are replaced by renewable energy sources for the RMWTF. The Proposed Action scope is limited to the provision of energy generated by the solar PV electricity generation facility to the RMWTF, and therefore, no direct, indirect or cumulative impacts to the tourism economy or to existing land use policies, designations or restrictions governing the site are expected.

Noise – Construction of the Proposed Action will result in temporary increases in ambient noise levels for approximately 5 months. As a result, short-term increases in traffic noise would be considered a minor impact. Operational noise from the solar facility will be negligible and will not increase ambient levels. Performing outdoor maintenance activities will temporarily increase ambient noise levels, but these activities will be short-term and will not adversely affect sensitive

receptors. Any work conducted during the night would be rare and include only maintenance activities such as those during an emergency or forced outage. All Proposed Action activities will comply with the City of Henderson noise ordinance. A noise complaint telephone number will be made available in the local area so that noise disturbances can be reported and investigated. No cumulative impacts from noise are anticipated as no reasonably foreseeable projects would occur nearby within the Proposed Action construction timeframe.

Recreation – The Proposed Action would be located exclusively within the existing RMWTF which is fenced with a guarded entrance. The area is not used for any recreational purposes and there are no plans to allow for public access or recreation within the area. No cumulative impacts to Recreation were identified.

Soils/Hydrology – A Technical Drainage Study was completed for the Proposed Action and reviewed and approved by the City of Henderson. Existing protective measures, design criteria and environmental commitments identified as part of the Proposed Action will prevent impacts to soils and hydrology. Off-site and on-site flows will not be altered, but will be allowed to return to their historic flow paths. Implementation of site-specific BMP's will effectively control storm runoff, and minimal effects to off-site properties and facilities would occur. A Storm Water Pollution Prevention Plan would be prepared and include specific measures to control erosion of soils during and following construction. Potential adverse effects with regard to site drainage and erosion are not anticipated, and therefore no cumulative impacts to soils or hydrology are expected.

Traffic Circulation – Although there will be a temporary increase in traffic during the approximate 5-month construction period, traffic will disperse over time during the different construction phases and is not expected to disrupt traffic in the vicinity of the Proposed Action area. A Construction Traffic Management Plan will be developed and implemented. No cumulative impacts from traffic are anticipated as no reasonably foreseeable projects would occur nearby within the Proposed Action construction timeframe.

Visual Resources – A Visual Resources Management Analysis was conducted which demonstrated that effects to visual resources would be minor. The solar facility would not create a major change in the existing view of the RMWTF and surrounding landscape: viewed at a distance, the major solar facility features are approximately the same height as the existing RMWTF fencing; the solar panels represent a minor element of the landscape compared to the surrounding natural features (i.e., River Mountains) and urban development; other manmade features (i.e., roads, power lines, and fencing) within the vicinity are more substantial and visible in the environment; there is minor change to long-distance views of the Las Vegas Valley and the McCullough Range by the Proposed Action; and from a distance, the solar panels are visible only as a dark blue patch on the horizon and located at the base of the River Mountains, therefore not impeding the long-distance views of the foothills or upper reaches of the mountains. Environmental commitments will be implemented to reduce any effects to visual resources. Cumulative impacts are not anticipated because the visual impact from the Proposed Action was found to be minor.

Water Resources – A relatively small amount of water would be necessary for the Proposed Action, all water required would be provided by SNWA and trucked via tanker trucks, and no new water sources will be needed. There are no major or minor surface water flows within or

directly adjacent to the Proposed Action area. All waste and rubbish will be regularly disposed and all fuel or hazardous waste leaks, spills, or releases will be immediately cleaned up. Any hazardous materials would be stored in appropriate storage locations and containers. Direct, indirect or cumulative effects to surface or groundwater quantity or quality will not occur.

River Mountains Solar Project

Final Environmental Assessment

LC-15-14

Prepared by:
United States Department of the Interior
Bureau of Reclamation
Lower Colorado Region
Boulder City, Nevada

1.0 Introduction

River Mountains Solar, LLC (Applicant) has filed an application with the Bureau of Reclamation's Lower Colorado Regional Office (Reclamation) to install a solar photovoltaic (PV) electric generation facility on Reclamation-administered lands in Clark County, Nevada. The land is located in the SE- ¼ of Section 15, Township 22 South, Range 63 East, and a portion of the W- ½ of the SW- ¼ of Section 14, Township 22 South, Range 63 East, M.D.M., Nevada (1350 Richard Bunker Avenue in Henderson, Nevada) (Figures 1 and 2). The Facility would be located entirely within the fenced boundaries of the existing River Mountains Water Treatment Facility (RMWTF).

Reclamation was the lead Federal agency for completion of the final Environmental Impact Statement (EIS) for the Southern Nevada Water Authority (SNWA) Treatment and Transmission Facility (TTF) in September 1996. The RMWTF is part of the TTF and is approximately 400 acres. Reclamation issued a Record of Decision and Right-of-Use (ROU) grant in perpetuity to SNWA for the RMWTF in January 1997 (Contract and Grant of Easement No. 7-07-30-L0454). The EIS analyzed the entire RMWTF site and assumed that the entire 400 acres would eventually be developed for the RMWTF and associated facilities.

The solar facility would be located on undeveloped land intended for future RMWTF expansion. However, a solar facility was not envisioned for the site at the time the TTF EIS was prepared, therefore, a solar facility was not described in the TTF EIS. Reclamation has determined that an Environmental Assessment (EA) for the River Mountains Solar Project (Proposed Action) is required in compliance with the National Environmental Policy Act (NEPA), Public Law 91-90, as amended, and the Council on Environmental Quality (CEQ) and Department of the Interior regulations for implementing NEPA. The purpose of this EA is to evaluate the potential impacts of the Proposed Action and its alternative on the physical and human environment and determine if there would be any significant impacts that are not described in the TTF EIS. If previously undescribed significant impacts are identified, a supplement to the TTF EIS would be warranted.

1.1 Background to the Purpose and Need

SNWA currently fulfills 13 percent of its power requirements through renewable resources and plans to have a total of 25 percent of its power requirements derived through renewable resources by 2025. SNWA identified the undeveloped portion of the RMWTF ROU as a potential location for solar energy development that could power the RMWTF and support SNWA's renewable resources goal. In July 2014, SNWA exercised this option by signing a Power Purchase Agreement (PPA) dated July 7, 2014, with the Applicant, a wholly-owned subsidiary of SunEdison, LLC. For the first 20 years following the commencement of commercial operation of the Proposed Action, SNWA would purchase all the power generated from the solar facility for use at the RMWTF pursuant to the PPA, with the option to extend the term of the PPA for two additional, 5-year periods. At various times during, and at the end of the term of the PPA, SNWA will have the opportunity to purchase the solar facility from the

Applicant for continued operation. The decision to do so will be dependent on multiple factors, including; will ownership by SNWA provide an overall lower cost of power for the remaining life of the equipment; will the maintenance of the system result in additional manpower requirements and an expertise that is currently not on staff; and will there be added operational flexibility as a result of ownership. With the PPA structured in its current form, there is no added cost to SNWA's energy portfolio. This will be a consideration going forward for any decision concerning future ownership.

1.2 Purpose and Need

The purpose of the Proposed Action is to create a renewable energy source that would exclusively provide power to the RMWTF. The Proposed Action would fulfill a portion of SNWA's electricity need to treat and deliver water to southern Nevada, while simultaneously offsetting SNWA's non-renewable energy usage by 5 percent and provide for a more environmentally-responsible way to treat and deliver the water. Once operating, this solar installation would bring SNWA closer to its goal of obtaining 25 percent of its power requirements from renewable resources by 2025.

Several factors support the need to construct the Proposed Action within the RMWTF site:

- **Parcel Size and Topography.** Dependent upon the type of solar technology used, approximately 5 to 10 acres of solar PV array is required to generate 1 megawatt (MW) of energy. Accordingly, generating approximately 18 MWs of direct-current (approximately 14 MW of alternating-current) using the Applicant's technology would require a minimum of approximately 100 acres. The topography must be such that shading and/or shadowing on the arrays will not be an issue. It is preferred that the minimum acreage amount for each action be contiguous land due to the cost to connect non-contiguous sites. The selected site contains approximately 127 contiguous available acres adjacent to existing infrastructure. The site allows for adequate spacing of the solar arrays to achieve maximum energy production.
- **Land Use Compatibility.** The location should be compatible with surrounding land use and should not conflict with actions on adjacent properties. The Proposed Action is compatible with adjacent uses in terms of scale, site design, and operating characteristics (Conditional Use CUP-14-500508-A1(B)). The proposed use will not cause substantial diminution in value of other property in the neighborhood in which it is to be located (Conditional Use CUP-14-500508-A1(D)).
- **Grid Access and Electrical Tie-in Potential.** The location should be located near an existing electrical transmission facility or tie-in. The infrastructure must be capable of transporting, or being upgraded to transport, electricity generated by the alternative. The purpose of the Proposed Action is to create a renewable energy source that would be exclusively provided to the SNWA RMWTF. The point of interconnect will be to an existing SNWA substation within the Proposed Action footprint.
- **Environmental Factors.** The location should have minimal environmental constraints. This will decrease up-front mitigation costs, avoid and minimize mitigation/permitting requirements, lessen improvement time, and minimize

cumulative impacts. Impacts to the entire RMWTF site have been analyzed in the TTF, and mitigation measures have been identified for environmental impacts. The Proposed Action has been designed to comply with the applicable RMWTF's environmental commitments and mitigation measures.

- **Safety.** The location should present minimal exposure of workers and/or site personnel to safety hazards. The RMWTF site is currently secured with perimeter fencing and a manned guard gate. To further ensure the safety of the public and the facility, the Proposed Action would be secured with a 7-foot-tall chain-link barbed-wire fence. Access to the site would be controlled and gates would be installed to provide the required access to the site. The site may also have closed circuit television that would be monitored from a remote location.
- **Cost.** The location should consider the cost-effectiveness of the project. A location that reduces the cost-effectiveness may make a project too expensive to build and therefore not feasible. The Proposed Action would not require any additional land acquisition costs or additional feeder line runs to accommodate power transfer from the Proposed Action to the RMWTF.

Reclamation's purpose for the action is to consider approval of the Applicant's request to construct, operate, and maintain a solar PV electricity generation facility within an existing ROU. Reclamation's need for the action is to respond to the Applicant's request for use of Reclamation-managed lands. It is Reclamation's responsibility under the Act of Congress of June 17, 1902 (32 Stat.388), the Act of Congress approved August 4, 1939 (53 Stat. 1187), Section 10, and 43 Code of Federal Regulations (CFR) Part 429 to respond to a request for a land use authorization on Reclamation-administered Federal lands.

1.3 Tiering and Incorporation by Reference

Since the Proposed Action would be located entirely within the granted RMWTF ROU and only occupy a fraction of its area, this EA directly tiers from the following TTF documents, and are hereby incorporated by reference. These documents are available for review at the office of SNWA, Las Vegas, Nevada, and Reclamation, Boulder City, Nevada:

- Final Environmental Impact Statement for the Southern Nevada Water Authority (SNWA) Treatment and Transmission Facility (TTF), Las Vegas, Nevada, September 1996.
- Record of Decision on the Southern Nevada Water Authority Treatment and Transmission Facility Final Environmental Impact Statement, November 1996.
- Biological Opinion on the Proposed Construction of the Southern Nevada Water Authority Treatment and Transmission Facilities, September 1996.
- Second Re-initiation of Consultation on the Southern Nevada Water Authority Treatment and Transmission Facilities, Henderson, Clark County, Nevada, June 2008.
- Programmatic Agreement Among the Bureau of Reclamation, Advisory Council on Historic Preservation, Nevada State Historic Preservation Officer, National Park Service, Bureau of Land Management, Southern Nevada Water Authority, and Colorado River Indian Tribes Regarding the Southern Nevada Water Authority Treatment and Transmission Facility, 1996.

- Contract and Grant of Easement to the Southern Nevada Water Authority for System Expansion Project Facilities on Federal Lands West of the River Mountains, January 1997.

1.4 Related Laws, Policies, and Planning Documents

This EA complies with all applicable environmental, natural resource, and cultural resource statutes, regulations, and guidelines. These additional statutes, regulations, and guidelines may require permits, approvals, consultations with outside agencies, or implementation of mitigation measures.

The following Federal, State, and local statutes and regulations are relevant to the Proposed Action.

- National Environmental Policy Act of 1969
- Endangered Species Act of 1973, as amended
- Department of the Interior Secretarial Order 3226: Evaluating Climate Change Impacts in Management Planning
- Executive Order (EO) 11514: Protection and Enhancement of Environmental Quality
- EO 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations
- EO 13423: Strengthening Federal Environmental, Energy, and Transportation Management
- Clean Air Act of 1970 and amendments of 1977 and 1990
- Clean Water Act of 1970 and National Pollution Discharge Elimination System, as amended
- Chapter 445B of Nevada Administrative Code - State of Nevada's air pollution regulations
- National Historic Preservation Act of 1966, as amended
- Archaeological Resources Protection Act of 1979
- Native American Graves Protection and Repatriation Act of 1990
- Noise Control Act of 1972
- Comprehensive Environmental Response, Compensation, and Liability Act of 1980
- Resource Conservation Recovery Act of 1976, as amended
- Clark County Air Quality Regulations
- Americans with Disabilities Act of 1990, as amended
- Toxic Substance Control Act of 1976

Figure 1. Overview Map of the River Mountains Solar Project (Proposed Action) and the Existing Southern Nevada Water Authority River Mountains Water Treatment Facility

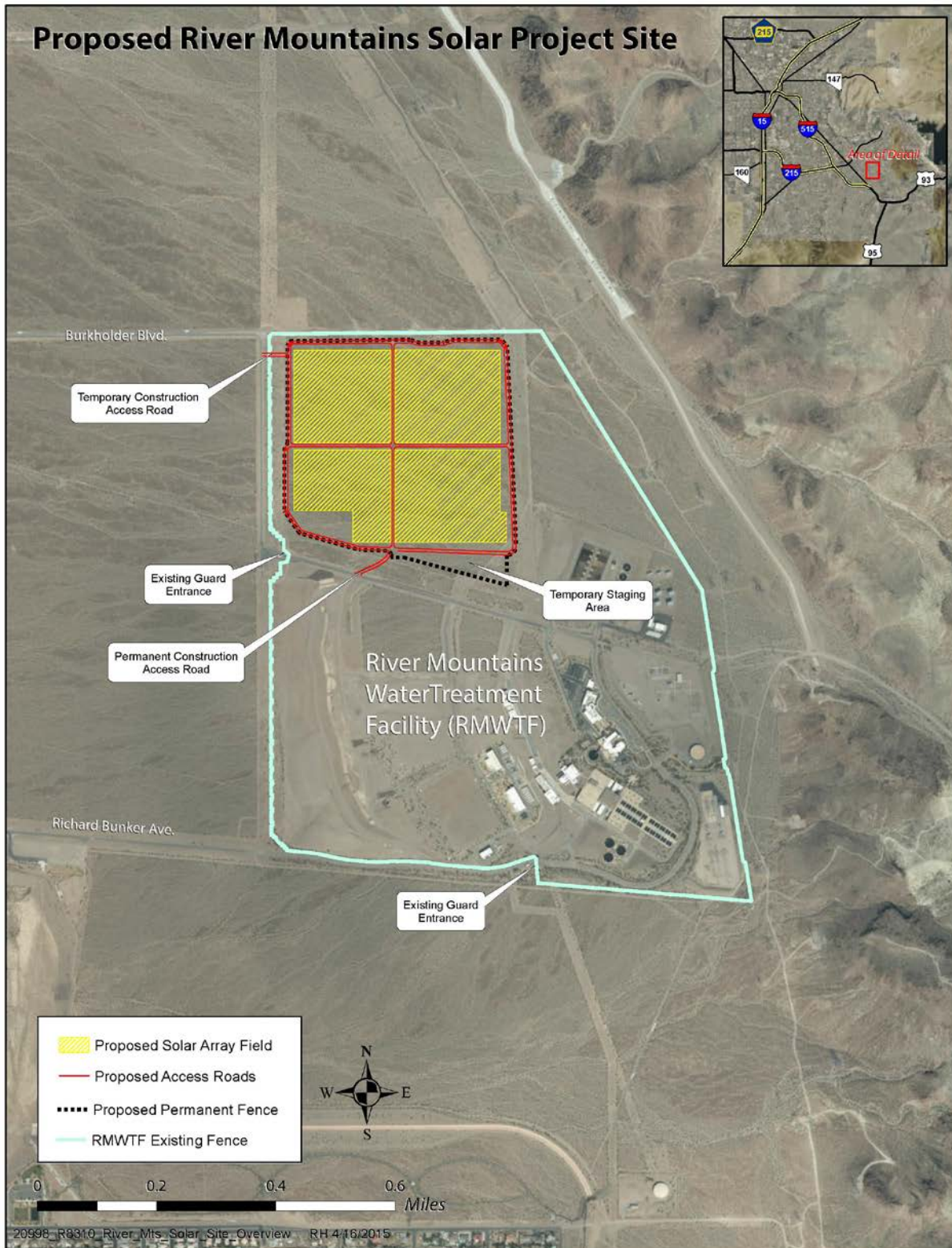


Figure 2. Up-Close Map of the River Mountains Solar Project (Proposed Action)



2.0 Description of Alternatives

2.1 No Action Alternative

Under the No Action Alternative, the proposed solar facility would not be constructed within the RMWTF ROU area. Energy needs for the RMWTF would continue to be met with its current energy sources. The area proposed for the solar facility would be used for expansion of the RMWTF if this need is identified in the future. SNWA would continue to administer the entire RMWTF site as identified in the ROU.

2.2 Proposed Action Alternative

The Proposed Action includes the construction and operation of a solar PV electricity generation facility within a portion of the existing RMWTF ROU area. The solar facility would consist of approximately 54,500 solar panels and associated appurtenances and generate approximately 38,000 megawatt hours of power per year. Approximately 95 acres of permanent disturbance and approximately 5 acres of temporary disturbance would be required for the Proposed Action. The Proposed Action would be located entirely within the existing RMWTF, which is fenced with chain-link, barbed-wire, and tortoise fence. The TTF EIS and Biological Opinion analyzed the entire RMWTF area as to be disturbed, and desert tortoise habitat compensation fees for the entire TTF area were paid in full on December 20, 1996. A temporary ROU term of 1 year and a permanent ROU term of 20 years, with the option to extend the permanent term for two additional, 5-year periods, are requested. Upon termination of the ROU grant, SNWA will have the opportunity to purchase the solar facility for continued operation. Should SNWA decide to purchase the facility, SNWA will request that the ROU grant be reassigned from the Applicant to SNWA and granted in perpetuity. If SNWA does not purchase the facility and there is no desire for its continued operation, project structures will be removed by the Applicant and the site will be restored in accordance with Reclamation requirements.

The Proposed Action includes the following primary components: design, construction, operation and maintenance, and mitigation measures. Each component is described in detail below.

2.2.1 Design

The Proposed Action would be constructed through a “Design and Build” contract. Detailed criteria for the construction would be provided to the selected contractor; who would design and construct the Proposed Action in accordance with the Applicant’s design criteria subject to jurisdictional requirements and Reclamation’s approval. Appendix A includes all of the design criteria that would be implemented for the Proposed Action, including the following:

- Incorporation of facility and landscape features which minimize visual effects;
- Application of noise control features;
- Implementation of traffic management procedures, as part of an approved traffic management plan;
- Invasive species management via cleaning of vehicles and heavy equipment prior to entering or leaving the Proposed Action site;
- Dust control; and

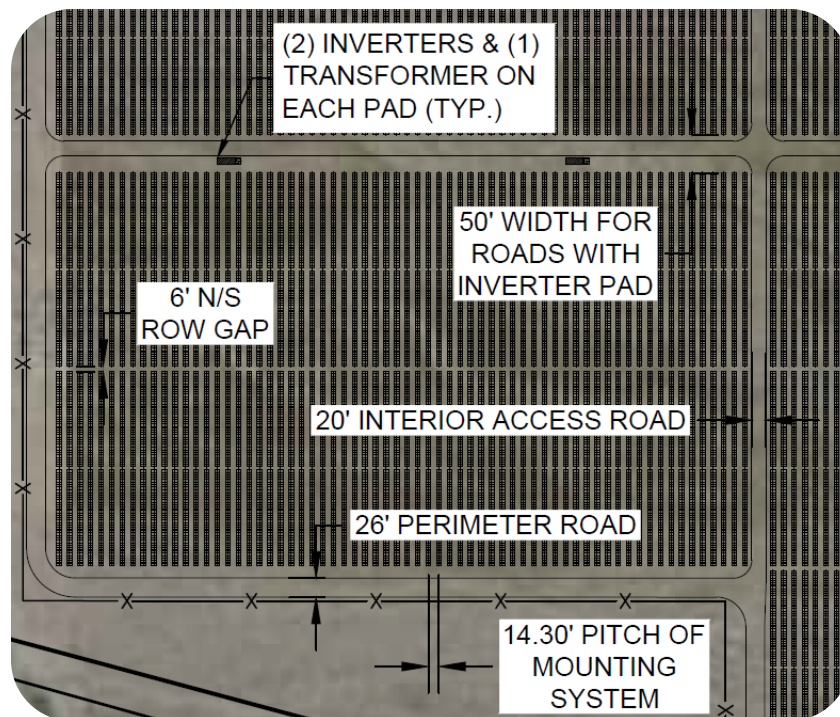
- Trash control.

2.2.2 Construction

2.2.2.1 Construction Activities

Prior to the start of construction, the Proposed Action boundaries would be marked and all construction-related activities would be conducted within these boundaries. The PV modules (i.e., solar panels), solar trackers (i.e., the devices for orienting the solar panel toward the sun), and associated appurtenances (i.e., combiner boxes, inverters, switchgear and monitoring system) for the solar facilities would be manufactured off-site and delivered to the Proposed Action site by truck. Upon their arrival, the PV modules, solar trackers, and appurtenances would be inspected, stored, and assembled in the approximate 4.84-acre temporary staging area. The north-south arranged solar tracker rows would be constructed approximately 14.3 feet apart (i.e., center-line to center-line or pitch of mounting system) in an east-west direction. The north-south ends of each solar tracker array would be separated by about six feet, except where there are inverter/transformer pads; in those locations there would be nearly a 50-foot separation to accommodate for a 20-foot-wide road and inverter/transformer pads. A representative solar array is depicted in Figure 3.

Figure 3. Representative Solar Array

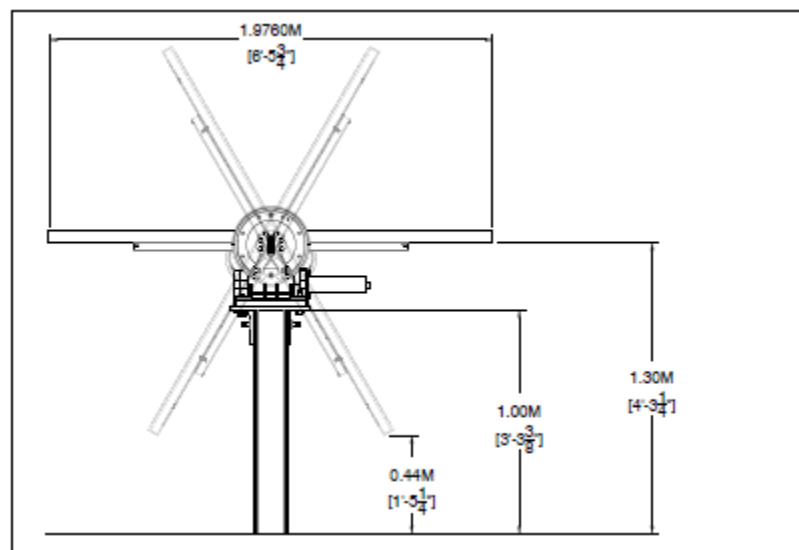


Two permanent access roads would be constructed between the grouped solar panels, each 20 feet wide. One of the 20-foot-wide roads would have an additional 30 feet of width to accommodate inverter/transformer pads, therefore totaling a width of 50 feet. One permanent 26-foot-wide access road would be constructed around the perimeter of the Proposed Action site. A 7-foot-tall chain-link barbed-wire fence would be installed around the perimeter of the Proposed Action boundary. This fence, in turn, would be located within the perimeter of the

existing SNWA RMWTF fence. Access to the Proposed Action area would be via two entry points as noted on Figure 2. Only one of the entry points would be kept permanent for the life of the Proposed Action and would be located entirely within the existing RMWTF fence. The other entry point (approximately 280 feet by 25 feet, or 0.16 acre) would be temporary and require the addition of a swinging gate with tortoise fence installed to the existing RMWTF fence. The tortoise fence will drag along the surface of the ground to prevent tortoises from entering the site and will be maintained throughout construction. Following construction activities, the RMWTF fence would be restored to prior conditions (i.e., back to the original RMWTF fence with desert tortoise fence installed). One temporary staging area, approximately 4.84 acres in size, would be required throughout the construction period and established during the site preparation phase. The staging area would be contained within the existing fenced RMWTF ROU (Figure 2).

Figure 4 depicts a representative side view image of a solar tracker, looking along the solar tracker axis. Heights may vary, depending upon final grading and terrain, but shall have an elevation of no more than approximately 8 feet. The PV system will interconnect to an existing SNWA substation located west of an existing access road. Alternating current cable will be installed in conduit, which will extend south from the Proposed Action area and enter the side of an existing vault with a manhole access point. Once inside the vault, conductors will be run through existing conduit to the substation where conductors will connect to newly installed switchgear within the substation, serving as the point of interconnection.

Figure 4. Representative Solar Tracker (side-view)



Although portions of the Proposed Action site are graded and disturbed, the majority is undisturbed. The minimum amount of grading and vegetation clearing necessary would be implemented to install PV modules and associated facilities, inverters, transformer pads, access roads and entry points, and the staging area. Where applicable, topsoil and cacti would be salvaged. The construction activities will overlap with one another, with grading and access road construction preceding the installation of solar trackers and associated equipment within each array area. Where appropriate, surface disturbances would be restored to Reclamation requirements and include earthworks, topsoil replacement, and cacti transplanting.

Temporary power for construction activities is expected to be provided by mobile diesel-driven generator sets and/or by temporary electrical service from the local power provider. Approximately 29 acre-feet of water will be required during construction for dust control, equipment wash down, site grading, and road construction and maintenance. All of the required water would be provided by SNWA at the RMWTF and trucked via tanker trucks.

Temporary personnel parking and trailers used during construction activities would be located entirely within the fenced RMWTF on two previously disturbed areas (i.e., past RMWTF construction laydown and trailer areas) that were never restored to pre-site conditions (see Figure 2). There is no suitable desert tortoise habitat in either of these two areas. The vegetated habitat just north of these two areas were surveyed for desert tortoise in February 2015 and no tortoise nor tortoise burrows were observed. Personnel vehicles will remain on existing paved/gravel roads when traveling between these two areas and the solar facility site, thereby reducing potential dust and transmission of weeds. The personnel parking and trailer areas will be restored to their original (pre-Proposed Action) condition following construction activities.

Wastewater generated during construction would primarily consist of sanitary waste, which would be managed through the utilization of portable toilets. Other sources of wastewater generated during construction may include storm water runoff and equipment wash water. The Applicant would obtain a Nevada Division of Environmental Protection Stormwater General Permit and adhere to all permit conditions, and prepare a Stormwater Pollution Prevention Plan (SWPPP), incorporating Best Management Practices (BMPs) for runoff and erosion control.

A small amount of solid waste would be generated by construction activities at the site. Solid waste generated from construction activities may include paper, wood, glass, plastics from packing material, waste lumber, insulation, scrap metal and concrete, empty non-hazardous containers, and vegetation wastes. These wastes would be segregated, where practical, for recycling. Non-recyclable wastes would be placed in covered dumpsters and removed on a regular basis by a certified waste handling contractor for disposal at a Class III landfill. Vegetation wastes generated by site clearing and grubbing would be chipped/mulched and spread on-site or hauled off-site to an appropriate green waste facility.

In summary, the following measures would be implemented as part of the Proposed Action construction activities. Appendix A includes additional construction-related measures that would be applied.

- All construction-related activities would be conducted within the marked boundaries of the Proposed Action area;
- The temporary access fence would consist of a swinging gate with tortoise fence installed, be maintained throughout construction, and be restored to prior conditions following construction activities;
- Where applicable, topsoil and cacti would be salvaged, and following construction activities, surface disturbances would be restored and include earthworks, topsoil replacement, and cacti transplanting; and
- A Nevada Division of Environmental Protection Stormwater General Permit would be acquired and all permit conditions adhered to, a SWPPP would be prepared, and BMPs for runoff and erosion control would be implemented.

2.2.2.2 Construction Schedule

Construction of the Proposed Action is anticipated to begin July 2015. If construction begins in July, the facility is expected to be operational by December 2015. The overall construction period, including commissioning and testing, is expected to be approximately six months. Construction and installation of the medium voltage switchgear, and associated auxiliary systems, civil works, substation connection, and interconnection facilities are anticipated to be the first major construction activities to begin in 2015, and are expected to occur over a period of approximately four months. Construction of the on-site substation connection and interconnection facilities will occur concurrently, lasting approximately two months. Construction of SNWA's interconnection facilities is anticipated to start October 2015 and be completed in December 2015. Major milestones in the construction schedule for the Proposed Action are summarized in Table 1.

Table 1. Construction Activities and Tentative Schedule

Activity	Date
Begin construction activities	July 2015
Construction and installation of switchgear, auxiliary systems, civil works, substation connection, and interconnection facilities	July – October 2015
Construction of Southern Nevada Water Authority interconnection facilities	October – December 2015
Complete construction activities	December 2015
Commissioning and testing	November – December 2015
Commercial operations	December 2015

2.2.2.3 Construction Workers, Hours, and Equipment

The construction workers employed for the Proposed Action would consist of laborers, electricians, supervisory personnel, support personnel, and construction management personnel. The on-site assembly and construction workforce is expected to reach a peak of 400 workers over the five month construction period. Construction activities would generally occur between 6:00 a.m. and 7:00 p.m. Monday - Friday in an 8-hour per day basis. Additional work hours and days may be necessary to make up for unanticipated schedule delays, to complete critical construction activities, including activities that could not be completed during daylight, and/or to perform certain testing and checkout activities. In rare circumstances, some activities may be conducted at night, including maintenance activities during emergency or forced outage. During these rare events, no heavy equipment would be used with only light vehicles used to transport workers and equipment. Temporary trailers and associated work facilities would be installed during site mobilization. These temporary facilities would be located at a designated location within the RMWTF that has previously been disturbed and has the appropriate utility connection points available. This area, located just south of the solar facility site, will be utilized throughout the construction period.

Grading and access road construction would require the use of equipment such as excavators, graders, dump trucks, and end loaders, in addition to support pickups, water trucks, and cranes. Trenches would be excavated using ditching equipment or backhoes to install the underground wiring and conduits that collect power from the PV module arrays and electrical enclosures and deliver it, ultimately, to the SNWA switchgear. The installation of PV module arrays and solar

trackers would generally require the use of scrapers, motor graders, backhoe/loaders, excavators, truck-mounted cranes, dozers, dump trucks, smooth drum compactors, vibratory hammers, water trucks, pile driving machines, and lightweight trucks. Typical equipment expected to be used for distribution line construction includes a backhoe, forklift, crane, various pickup and flatbed trucks, bucket trucks, and truck-mounted tensioner and puller. Construction materials such as concrete, pipe, wire and cable, fuels, reinforcing steel, and small tools and consumables would be delivered to the site by truck. Any required vegetation clearing and removal operations would be undertaken typically using mowers, skip loaders, chippers, and dump trucks.

Table 2 provides more detail regarding the Proposed Action’s construction activities and their approximate duration, and the equipment and number of workers required. Some construction activities would occur concurrently.

Table 2. Construction Activities, Duration, Equipment, and Workers Required for the Proposed Action

Construction Activity¹	Approximate Duration (months)	Equipment	Number of Workers (average)
Site Work: civil works including any necessary clearing, grubbing, grading, and trenching	1	2 tracked dozers 2 motor graders 2 sheep foot compactors 2 smooth drum compactors 4 backhoes/excavators 4 water trucks 2 wheel loaders 2 cat & pan scrapers 2 rear/belly dump trucks	40
Mechanical & Electrical Work: piles, solar trackers, PV modules, and wiring installation	3	6 bobcat loaders 2 backhoe excavator 2 cat & pan scraper 6 forklifts 8 pile-driving machines 4 vibratory hammers 8 pile-handling machine 2 large digger/derrick 2 mobile crane 2 65’-85’ bucket trucks 2 backhoe/front end loaders 2 excavator/trenchers 6 pickup trucks (1 ton) 4 water trucks	120
Commissioning: cold and hot commissioning of mechanical and electrical systems	2	10 pickup trucks (1 ton)	40

Construction Activity¹	Approximate Duration (months)	Equipment	Number of Workers (average)
Closeout/Restoration	1	2 motor graders 2 water trucks 2 smooth drum compactors 2 pickup trucks (1 ton)	40

¹Some activities to occur concurrently.

2.2.3 Operations and Maintenance

Once placed into service, the solar facility would operate during daylight hours, when there is sufficient sunlight to begin operation of the solar field. An estimated two to three employees would be required for operation, maintenance, and security of the site. Operation and security would be conducted from an off-site location, with security and maintenance crews dispatched to the site on an as-needed basis during operation. Project maintenance performed on the site would consist of equipment inspection and replacement, and would occur primarily during daylight hours. Maintenance schedules would be developed to include periodic maintenance and equipment replacement in accordance with manufacturer recommendations. Operation and maintenance vehicles would include trucks (pickups, flatbeds, and dump trucks), forklifts, and loaders for routine and unscheduled maintenance, and water trucks for solar panel washing. Large heavy-haul transport equipment may be brought to the site infrequently for equipment repair or replacement.

The RMWTF is currently secured with perimeter fencing and a manned guard gate. To further ensure the safety of the public and the facility, the site would be secured with a 7-foot-tall chain-link barbed-wire fence, as described previously. Access to the site would be controlled and gates would be installed to provide the required access to the site. The site may also have closed circuit television that would be monitored from a remote location. The Proposed Action’s lighting system would provide operation and maintenance personnel with illumination for both normal and emergency conditions. Lighting would be designed to provide the minimum illumination needed to achieve safety and security objectives, and would be shielded and directed down towards the site and not into surrounding areas. Lighting would be provided at the electrical enclosures, switchgear building, warehouse, and main access road entrance. There would be no lighting in the PV field, so light spillover on the adjacent properties would be minimal. If lighting at individual PV modules or other equipment is needed for night maintenance, portable lighting would be used.

Power for plant auxiliaries would be provided by the Proposed Action’s electrical generation or backed from the SNWA system. The Proposed Action would require power for the electrical enclosures, substation equipment, solar tracker motors, switchgear buildings, warehouse, and for site lighting and security. The existing SNWA electrical switchgear building battery room would supply direct current power for substation protection equipment.

A minimal amount of water would be required for solar panel washing and for dust mitigation. Two to three times per year, approximately 0.5 to 0.7 acre-feet of water would be used to wash dust and dirt off the PV modules, and it is anticipated that approximately 1 to 2 acre-feet of additional water per year would be required for general operation of the Proposed Action and dust abatement, as necessary. All water required for the operation and maintenance of the

Proposed Action would be provided by SNWA on-site hydrants and trucked via tanker trucks. Panel washing will use either pure water or a water-based Reclamation-approved washing fluid. Temporary sanitary facilities (such as sanitary sinks and toilets) would be provided only as needed.

Areas of the solar PV electrical generation facility that could potentially release small amounts of contaminants, such as the paved areas surrounding the enclosures, would be constructed in compliance with storm water quality management measures (i.e., basins and infiltration areas) designed to meet State and local storm water management plan requirements.

The PV modules and ancillary equipment represent a negligible increase in fire potential. Fire protection measures would include portable carbon dioxide (CO₂) fire extinguishers mounted outside the electrical enclosures that contain the inverters and medium voltage transformers. A FM200 fire suppression system, or equivalent, is used in the SNWA electrical switchgear building and the attached battery room. Additionally, fire protection for the solar array and the generation-interconnection would be provided by vegetation maintenance programs. Within the solar arrays, vegetation would be maintained as low-growing by mechanical methods to minimize fire risk (as approved by the City of Henderson, Building and Fire Safety Division, in a letter dated January 28, 2015).

The Proposed Action would produce a small amount of solid waste associated with operation activities. During operations, typical refuse would be generated by the workers, warehouse, switchgear building, and small office operations, including rags, scrap metal, packing materials from deliveries, empty containers, sanitary wastewater solids, and other miscellaneous nonhazardous solid wastes. All waste would be disposed of on a regular basis.

Limited quantities of hazardous materials would be used and stored on site for operation and maintenance. These materials would include oils, lubricants, paints, solvents, degreasers and other cleaners, and transformer mineral oil. The generation step-up transformer would contain up to 5,000 gallons of dielectric fluid (mineral oil), and would be located on a concrete pad surrounded by a 6-inch earthen, fiberglass, or concrete containment berm/curb. The containment area would be lined with an impermeable membrane covered with gravel, and would drain to an underground storage tank. Each of the medium voltage transformers would contain up to 450 gallons of biodegradable dielectric fluid (mineral oil) and would be co-located with the inverter units on concrete pads equipped with containment areas and distributed through the site. The Proposed Action components would have a comprehensive spill prevention, control, and countermeasure plan as applicable in accordance with State and Federal regulations. Any hazardous materials would be stored in appropriate storage locations and containers. Flammable materials, such as paints and solvents, would be stored in nonflammable material storage cabinets with built-in containment sumps. A hazardous materials plan would be provided to the appropriate local jurisdictions and would include a complete list of all materials used on-site. A Hazardous Materials Management Program (HMMP) would be developed for the Proposed Action operations prior to turnover of the site from construction to operations. At a minimum the HMMP would include procedures for: hazardous materials handling, use, and storage; emergency response; spill control and prevention; employee training; and record-keeping and reporting. Hazardous waste generated during facility operation, if any, would be managed in accordance with applicable laws and regulations. Workers would be trained to properly identify and handle all hazardous materials. Hazardous wastes would be either recycled or disposed of at

a permitted and licensed treatment and/or disposal facility. All hazardous wastes shipped off site for recycling or disposal would be transported by a licensed and permitted hazardous waste hauler.

All employees and contractors would be required to adhere to the appropriate health and safety plans and emergency response plans. All construction and operation contractors would be trained and required to operate under a health and safety program that meets industry and Occupational Safety and Health Administration (OSHA) standards.

In summary, the following measures would be implemented as part of the Proposed Action operation and maintenance activities. Appendix A includes additional operation and maintenance measures that would be applied.

- Access to the site would be controlled and gates would be installed;
- Lighting would be limited to specific areas within the Proposed Action site, designed to provide the minimum illumination needed to achieve safety and security objectives, and shielded and directed down towards the site and not into surrounding areas;
- Panel washing will use either pure water or a water-based Reclamation-approved washing fluid;
- Fire protection measures would include portable CO₂ fire extinguishers mounted outside the electrical enclosures that contain the inverters and medium voltage transformers, implementation of a FM200 fire suppression system, or equivalent, and vegetation maintained as low-growing by mechanical methods to minimize fire risk;
- A comprehensive spill prevention, control, and countermeasure plan would be implemented as applicable in accordance with State and Federal regulations;
- A hazardous materials business plan would be provided to the appropriate local jurisdictions and would include a complete list of all materials used on-site, and an HMMP would be developed for the Proposed Action operations prior to turnover of the site from construction to operations; and
- All construction and operation contractors would be trained and required to operate under a health and safety program that meets industry and OSHA standards.

2.2.4 Mitigation Measures

In addition to the measures described above, the Proposed Action has been designed to comply with the TTF's applicable environmental commitments and mitigation measures. The environmental mitigation measures for the Proposed Action include those measures from the TTF FEIS and associated Biological Opinion and Programmatic Agreement that are relevant to the Proposed Action. Further, the measures have been modified, as needed, for the specific activities and site conditions of the Proposed Action. The Proposed Action environmental mitigation measures would be implemented prior to, during, and following construction activities, to reduce or eliminate impacts to sensitive resources (see Appendix A).

2.3 Alternatives Considered but Not Evaluated in Detail

The Proposed Action would be located on undeveloped land intended for future RMWTF expansion. The RMWTF is an existing facility, previously analyzed in an EIS, mitigated, and permitted. It meets all of the factors outlined in the Purpose and Need which were considered in determining a suitable location for the solar facility. Constructing the Proposed Action within the RMWTF site would best serve the Proposed Action Purpose and Need. No other alternatives were identified that would successfully meet all the factors identified in the Purpose and Need. Therefore, no other alternatives, other than the No Action Alternative, were considered.

3.0 Affected Environment and Environmental Consequences

The following section presents a description of the existing condition for the selected resource areas being reviewed as well as an analysis of the direct, indirect, and cumulative impacts of the Proposed Action on those resources.

3.1 Resources not Discussed Further

The following resources were considered and are either considered under other resource sections or not further addressed in this document because they would not be impacted by the Proposed Action.

- Cultural Resources/Indian Sacred Sites/Traditional Cultural Properties – The National Historic Preservation Act Section 106 (36 CFR §800) requires that Federal agencies consider and evaluate the effect that Federal projects may have on historic properties under their jurisdiction. A Traditional Cultural Property is a property or place that is eligible for the National Register of Historic Places because of its association with the cultural practices or beliefs of a living community that are: 1) rooted in that community’s history and 2) important in maintaining the continuing cultural identity of the community (National Park Service 1998). EO 13007 “Indian Sacred Sites” requires that Federal agencies with legal or administrative responsibility for management of Federal lands, “to the extent practicable permitted by law, and not clearly inconsistent with essential agency functions, to: (1) accommodate access to, and ceremonial use of, Indian sacred sites by Indian religious practitioners; and (2) avoid adversely affecting the physical integrity of such sacred sites”.

In accordance with the Programmatic Agreement prepared for the TTF, a Class I and Class III Cultural Resource Survey were completed that included the RMWTF (Ezzo 1995 and White 1996, respectively). During the Class III inventory, two historic era cultural resource sites were located within the boundaries of the RMWTF. The Nevada State Historic Preservation Officer (SHPO) concurred with Reclamation’s determination that the sites were not eligible for listing on the National Register of Historic Places. No cultural resources were discovered during the construction of the RMWTF. If artifacts are uncovered during construction of the Proposed Action, all ground-disturbing activities in the area of the find will be temporarily halted or redirected. A Reclamation Archaeologist will be contacted to evaluate the find, determine its significance, and make recommendations regarding additional mitigation. The information will be provided to Reclamation for consultation with the SHPO and appropriate Native American group(s), if applicable. Construction in the area of the resource will not resume until the additional mitigation measures have been completed. Therefore, impacts to cultural resources, Indians Sacred Sites or Traditional Cultural Properties are not anticipated.

- Earth Resources – According to the analysis conducted for the TTF, the Proposed Action area is located in an area of low potential for paleontological resources.

Proposed Action mitigation measures include actions that would be taken if any fossils are uncovered during ground disturbance (see Appendix A). Therefore, impacts to earth resources are not anticipated. Note that drainage and erosion analyses are included in Soils/Hydrology Section 3.8.

- Environmental Justice – EO 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations) directs federal agencies to determine whether their programs, policies, and activities have disproportionately high and adverse human health or environmental effects on minority and low-income populations. In accordance with CEQ guidance, minority populations should be identified if the minority population in the Proposed Action area “exceeds 50 percent” or if the percentage of minority population in the Proposed Action area is meaningfully greater than the “minority population percentage in the general population or other appropriate unit of analysis” (CEQ 1997). Communities should be identified as “low income” based on the annual statistical poverty thresholds from the U.S. Census Bureau (CEQ 1997).

No high and adverse human health or environmental effects were identified from the Proposed Action, but data on minority populations and poverty in the Proposed Action area was reviewed to assure compliance with the EO. The most current U.S. Department of the Census data on minority populations and poverty for the Census Tract where the Proposed Action would be located was compared to the same data for the State of Nevada and Clark County (U.S. Census 2013). Minority populations in the Census Tract did not exceed 50 percent, so did not meet the thresholds identified for Environmental Justice analysis. The percent of individuals below poverty levels in the Census Tract was compared to those for Nevada and Clark County. The poverty levels in the Census Tract were either below or only slightly higher than those for Nevada and Clark County. This information confirmed that the Proposed Action would not result in disproportionately high and adverse human health or environmental effects on minority and low-income populations.

- Floodplains and Wetlands – Federal activities in floodplains and wetlands are guided in part by two EOs. EO 11988 “Floodplain Management” and EO 11990 “Protection of Wetlands” direct Federal agencies to minimize impacts to these resources and restore and preserve the natural and beneficial values served by floodplains and wetlands when acquiring, managing, and disposing of Federal land and facilities, conducting or funding construction, or conducting programs affecting land use. There are no floodplains or wetlands located in the vicinity of the Proposed Action, and therefore there would be no impact to these resources.
- Human Health – There would be no impacts to human health. All employees and contractors would be required to adhere to the appropriate health and safety plans and emergency response plans. All construction and operation contractors would be trained and required to operate under a health and safety program that meets industry and OSHA standards. The Proposed Action area would be located within an existing secured perimeter fence with a manned guard gate. To further ensure the safety of the public and the facility, the site would be secured with an additional 7-foot-tall chain-link barbed-wire fence. Access to the site would be controlled and gates would be installed to provide the required access to the site.

The site may also have closed circuit television that would be monitored from a remote location.

- Indian Trust Assets (ITA) – ITAs are defined as “legal interests in property held in trust by the United States for Indian tribes or individuals” (Reclamation 1993). ITAs are those properties, interests, or assets of a Federally-recognized Indian tribe or individual Indian over which the Federal government also has an interest, either through administration or direct control. Examples of ITAs include lands, minerals, timber, hunting rights, fishing rights, water rights, in-stream flows, and other treaty rights. All Federal bureaus and agencies are responsible for protecting ITAs from adverse impacts resulting from their programs and activities. There would be no impact to ITAs as none are located in the Proposed Action area.
- Land Use and Socio-Economics – Impacts to land use and socio-economics are not anticipated. The Proposed Action would not conflict with the general land use intended for the RMWTF and described in the TTF FEIS. Nor does the Proposed Action conflict with any existing land use policies, designations or restrictions governing the site. Positive socioeconomic impacts are expected if non-renewable energy sources are replaced by renewable energy sources for the RMWTF. This will allow for the use of a more sustainable and environmentally-friendly alternative energy supply. The Proposed Action scope is limited to the provision of energy generated by the solar PV electricity generation facility to the RMWTF, and therefore, no direct impacts to the tourism economy are expected.
- Recreation – The Proposed Action would be located exclusively within the existing RMWTF which is fenced with a guarded entrance. Although public access was planned for the RMWTF area, following the September 11, 2001 attacks on the World Trade Center, all plans to allow for public access were abandoned. Currently, there are still no plans to allow for public access or recreation within the fenced RMWTF area and therefore adverse effects to recreation are not anticipated. Effects from noise and effects to visual resources, which may affect recreational-type experiences (e.g., the nearby Burkholder and River Mountains Loop trails), would be minor and are discussed in detail in Sections 3.7 and 3.10, respectively.
- Water Resources – The Proposed Action will require approximately 29 acre-feet of water during construction and approximately 0.5 to 0.7 acre-feet of water two to three times per year plus approximately 1 to 2 acre-feet of water one time per year for general operation and maintenance activities. All water required for the Proposed Action would be provided by SNWA and trucked via tanker trucks. No new water sources will be needed. Due to the small amount of water needed for the Proposed Action and since no new water sources will be necessary, the Proposed Action will not cause negative effects to surface or groundwater quantity. Further, there are no major or minor surface water flows within or directly adjacent to the Proposed Action area. All waste and rubbish will be regularly disposed and all fuel or hazardous waste leaks, spills, or releases will be immediately cleaned up. The dielectric fluid (mineral oil) used in the transformers would be located in a containment area. A comprehensive spill prevention, control, and countermeasure plan would be developed as applicable in accordance with State and Federal regulations. Any hazardous materials would be stored in appropriate storage locations and containers. Flammable materials would be stored in nonflammable material storage cabinets with built-in

containment sumps. The HMMP developed for the Proposed Action would include procedures for hazardous materials handling, use, and storage; emergency response; spill control and prevention; and employee training. Hazardous wastes would be either recycled or disposed of at a permitted and licensed treatment and/or disposal facility, and only transported by a licensed and permitted hazardous waste hauler. The washing fluid to clean the solar panels will be either pure water or a water-based Reclamation-approved washing fluid. Therefore, the Proposed Action will not cause adverse effects to surface or groundwater quality.

3.2 Resources Discussed Further

The following resources are addressed in this document because they would be potentially impacted by the Proposed Action.

- Air Quality/Greenhouse Gases/Climate Change
- Biological Resources
- Energy Resources
- Noise
- Soils/Hydrology
- Traffic Circulation
- Visual Resources

3.3 Past, Present, and Reasonably Foreseeable Future Projects

Since the time the TTF FEIS was completed and a Record of Decision issued, additional actions have occurred or are expected to occur within the vicinity or timeframe of the Proposed Action. These projects are considered in the cumulative impacts analysis for each resource.

- A segment of the Burkholder Trail has been constructed adjacent to the Proposed Action area. The paved trail was completed in 2010.
- A portion of the River Mountains Loop Trail has been constructed adjacent to the Proposed Action area. The trail includes paved and concrete segments and was completed in 2012.
- A number of relatively smaller-scale projects have been constructed within the vicinity of the Proposed Action, including flood control channels and detention basins and underground and above ground utilities such as water and telephone lines.
- In March 2014, First Solar Development LLC submitted an application to Reclamation to construct the Magic Solar Facility on approximately 575 acres of Reclamation land in the River Mountains. Although First Solar Development LLC has had initial discussions with the City of Henderson, SNWA, and adjacent landowners on the project, the project is currently on hold and the NEPA process has not been initiated.
- Several proposed transmissions lines are planned to occur within an existing utility corridor within the vicinity of the Proposed Action area and include the Eastern Nevada Transmission, Southern Nevada Intertie, and Transwest Express projects, as well as a number of relatively smaller-scale existing power lines.

- The Boulder City Bypass Phase I project is anticipated to begin construction in 2015 and involves traffic improvements to U.S. 93 in the Boulder City, Nevada area.
- The City of Henderson has applied to Reclamation for a renewal of a permit for an existing 9.34 acre water reservoir (tank) site and access road near Railroad Pass in Henderson adjacent to U.S. Highway 93/95. The permit renewal will allow for continued use of the existing 3 million gallon tank for water deliveries and construction of a second 3 million gallon tank to increase the reliability of the system and allow for maintenance of the existing tank.

3.4 Air Quality/Greenhouse Gases/Climate Change

3.4.1 Affected Environment

Air Quality

The U.S. Environmental Protection Agency (USEPA) establishes National Ambient Air Quality Standards (NAAQS) for the following common air pollutants: ozone, nitrogen dioxide, carbon monoxide (CO), sulfur dioxide (SO₂), particulates less than 2.5 microns and less than 10 microns (PM_{2.5}, PM₁₀), and lead. They have developed primary and secondary NAAQS for these air pollutants to protect human health and prevent environmental and property damage. Currently, Clark County meets the ozone, PM_{2.5}, CO, and nitrogen dioxide NAAQS, and is unclassifiable for SO₂ and lead. The Las Vegas Valley (Hydrographic Area 212) within Clark County is classified as “serious” nonattainment for PM₁₀ (Clark County Department of Air Quality and Environmental Management [DAQEM] 2015).

The primary factors that determine air quality of a region are the locations of the air pollutant emission sources, amounts and types of pollutants emitted, and local meteorological conditions over a period of time. The nearest air quality monitoring station is located approximately 7 miles west-northwest of the Proposed Action area in Henderson, Nevada (AQS# 32-003-0298). The primary objective of this station is to monitor meteorological conditions, PM₁₀ and continuous and filter-based PM_{2.5} (DAQEM 2015). The DAQEM has been delegated authority to implement and enforce an air pollution control program in Clark County.

Greenhouse Gases and Climate Change

Ongoing scientific research into global climate change correlates increasing atmospheric concentrations of greenhouse gases (GHGs), including CO₂, methane (CH₄), nitrous oxide (N₂O), water vapor, and several trace compounds, with observed trends of increasing temperatures and changes in the amount and seasonal variability of precipitation.

The State of Nevada requires that a statewide GHG inventory be prepared and issued, at least every four years beginning in 2008. The report includes the origin, types and amounts of GHG emitted throughout the State, and all supporting analyses and documentation. It includes all six GHGs covered by the United States and other national and international inventories: CO₂, CH₄, N₂O, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. These gases have characteristic global warming potentials (GWP) and therefore contribute differently to the overall atmospheric greenhouse effect. GWP is used to derive a common metric, CO₂-equivalent (CO₂eq), which uses the GWP of CO₂ as a reference unit. The use of CO₂-equivalent allows

estimating and comparing total GHG emissions from sources emitting different GHGs. The latest report, issued in 2012, covers the period from 1990 to 2010 (historical and current emissions), and projects future emissions to 2030 (Nevada Department of Environmental Protection 2012).

In the recent report, *Nevada Statewide Greenhouse Gas Inventory and Projections* (Nevada Department of Environmental Protection 2012), net CO₂eq 2010 annual emissions are tabulated for several sectors across the State and for the United States in total. These emissions may be summarized as follows in Table 3:

Table 3. Net Carbon Dioxide-Equivalent 2010 Annual Emissions for Nevada and United States

	Nevada 2010 (million metric tons/year carbon dioxide equivalent)	United States 2010 (million metric tons/year carbon dioxide equivalent)
Agriculture	1.17	402.3
Commercial	2.34	344.8
Electricity Generation	14.82	1,954.0
Industry	4.68	1,206.9
Residential	2.73	287.3
Transport (Vehicles)	13.26	1,551.7
TOTALS	39.0	5,747.0

3.4.2 Environmental Consequences

3.4.2.1 No Action Alternative

Under the No Action Alternative, the Proposed Action would not be constructed; therefore, no project-related effects on air quality, GHG, or climate change would occur.

3.4.2.2 Proposed Action Alternative

Temporary and minor increases in air pollutant and GHG emissions would occur from the use of construction equipment (i.e., combustible emissions) and the disturbance of soils (i.e., fugitive dust) during site grading and placement of the solar panels and conduits. Construction workers would temporarily increase the combustible emissions in the air shed during their commute to and from the Proposed Action site.

Construction of the Proposed Action will take approximately 5 months. Construction traffic is estimated at 80 trips per day and 40 workers per day during the 1 month clearing and grading phase and 240 trips per day and 120 workers per day during the 3 months mechanical and electrical installation phase. During the last month, the average number of trips per day and number of workers will reduce to 40 trips daily with an average of 40 workers per day. The emissions for the paved road components were based upon maximum trucks per month and number of workers at peak construction.

During site development, the Proposed Action would include grading up to approximately 100 acres of the 400-acre RMWTF site, resulting in localized, short-term increases in fugitive dust

(PM₁₀ emissions). The increase in PM₁₀ would be primarily from soils disturbed during clearing and grubbing of vegetation and grading the site. To quantify dust emissions from facility construction, an “emission factor” method is generally accepted by regulatory agencies. An emission factor of 0.19 ton PM₁₀/acre-month was used to derive construction activity emissions estimates for each phase of the Proposed Action, in accordance with recommendations for construction in western states (Western Regional Air Partnership 2006). This emission factor generally applies to “uncontrolled” conditions as it does not assume a particular set of mitigation measures. The mitigation measures to be applied during the construction phase, comprising application of water and control of vehicle speeds, would act to provide a control efficiency of 50 percent compared to the uncontrolled emission factor.

A relatively small portion of the emitted particulate from clearing and grubbing operations is within the smaller-diameter fraction referred to as PM_{2.5}, (aerodynamic diameter less than 2.5 micrometers), which is a regulated criteria air pollutant. Guidance from the USEPA indicates that emissions of PM_{2.5} are to be quantified as a fraction of the total PM₁₀ emissions. The ratio of PM_{2.5} to PM₁₀ emissions for construction dust emissions was taken as 0.208, based on documentation in USEPA Document AP-42 and in other publications (USEPA 1995, South Coast Air Quality Management District [SCAQMD] 2006).

Criteria pollutant emissions during construction activities would result from employee and construction vehicles, and heavy equipment moving across the site during site preparation and the installation of the solar arrays. Exhaust from construction vehicles and equipment would result in localized, short-term increases in CO, nitrogen oxides, volatile organic compound, and SO₂ emissions. The SCAQMD has compiled a set of emissions factors for diesel-engine-powered construction equipment (SCAQMD 2009). For this analysis, emission factors were applied for the 2015 operating year based on the planned construction schedule and roster of construction equipment described in Section 2.2.2. For current equipment, the SCAQMD factors are based on at least Tier II engine performance, and use of ultra-low sulfur diesel fuels that are now mandatory for urban areas in the western states.

For construction phase GHG emissions, the direct tailpipe emissions from construction equipment were considered. The combustion of fuels for non-road vehicles and equipment will result in formation and release of CO₂, CH₄ and N₂O. The SCAQMD has published composite emission factors for non-road engines and vehicles, and these factors were used for the inventory calculations (SCAQMD 2009). GHGs other than CO₂ have a higher GWP due to their molecular structure. This factor is accounted for when converting the individual emission rates of the gases to CO₂eq. For combustion-related species, CH₄ and N₂O, the GWPs are 25 and 298, respectively, relative to CO₂ (USEPA 2014).

The criteria air pollutant emissions for the facility construction are summarized in Table 4. These levels are well below the major source thresholds considered for new source review permitting, and are a small fraction of current GHG emissions in Nevada. It can be concluded that Proposed Action emissions will not have major negative air quality effects. The total construction emission totals for GHG are also shown in Table 4, based on mass emission rates for three combustion-related GHG constituents, and expressed as metric tons of CO₂eq for each Proposed Action phase.

Table 4. Criteria Air Pollutant Emissions (tons/year) Over the Approximate 5-Month Proposed Action Construction Duration

Criteria Air Pollutant Emission (tons/year)	PM_{2.5}	PM₁₀	NO_x	CO	VOC	SO₂	GHG (metric tons CO₂eq)
Initial Site Preparation	2.41	10.79	2.56	1.43	0.35	0.0046	10897
Construction of Solar Field	5.03	16.49	77.16	44.94	3.66	0.258	48297
Commissioning and Reclamation	2.03	9.56	1.88	0.99	0.19	0.0035	15939
Project Wide Total	9.47	36.84	81.60	47.36	4.20	0.27	75134
Conformity Thresholds	N/A	70	100	100	N/A	100	N/A

PM_{2.5} (particulates less than 2.5 microns), PM₁₀ (particulates less than 10 microns), NO_x (nitrogen oxides), CO (carbon monoxide), VOC (volatile organic compounds), SO₂ (sulfur dioxide), GHG (greenhouse gas), and CO₂eq (carbon dioxide equivalent).

Based on the Proposed Action air emissions inventory, an air quality conformity applicability analysis was performed to facilitate Reclamation’s consideration of Clean Air Act conformity evaluation requirements for the Proposed Action. Since the Proposed Action is located in a non-attainment area for at least one criteria pollutant, an analysis is required to compare project-wide total emissions to specific annual thresholds that may initiate a full Conformity Analysis for the Proposed Action.

Emissions of criteria pollutants were calculated as summarized in Table 4 for three distinct Proposed Action construction elements, including:

- Initial site work (clearing, grubbing, grading, and trenching)
- Construction of the solar field (mechanical and electrical work)
- Commissioning of the facility and disturbed area reclamation

The Proposed Action-wide totals listed in Table 4 for all criteria pollutants are below the thresholds that would initiate a complete Conformity Analysis for any pollutant.

During construction of the Proposed Action, proper and routine maintenance of all vehicles and other construction equipment would be implemented to ensure that emissions are within the design standards of all construction equipment. Dust suppression methods such watering of disturbed areas, would be implemented to minimize fugitive dust. Prior to construction activities, an air quality permit would be obtained by the contractor from DAQEM. The contractor would be responsible for implementing dust control measures in accordance with Federal and State air quality regulations. By using these BMPs, air emissions from constructing the Proposed Action would be temporary, and potential effects on air quality in Clark County would be minimal.

Air emissions during the operational phase of the Proposed Action would include employee commuter vehicles traveling to and from the site. It should be noted the number of permanent daily employees will be small compared to typical industries covering the same area. PV operation does not involve complex mechanical or thermal processes that would require the larger operating and maintenance staff needed for fossil-fuel electricity generation.

Although portions of the Proposed Action site would be graded and disturbed, the majority is undisturbed, and long-term dust potential is mitigated because the minimum necessary grading and vegetation clearing would be performed to install PV modules, plant facilities, and other hardware. Where applicable, topsoil and cacti would be salvaged, and areas that are disturbed will form a crust that will reduce the entrainment of windblown dust.

Maintenance vehicle operation at the Proposed Action site on unpaved roads can generate small and intermittent emissions of fugitive dust. As described in Section 2.2.2, two permanent access roads would be constructed between the grouped solar panels, with one road having an additional 30 feet of width to accommodate inverter/transformer pads. One permanent 26-foot-wide access road would be constructed around the perimeter of the Proposed Action site. Operation and maintenance vehicles would include trucks (pickups, flatbeds, and dump trucks), forklifts, and loaders for routine and unscheduled maintenance, and water trucks for solar panel washing. Large heavy-haul transport equipment may be brought to the site infrequently for equipment repair or replacement.

Based on the considerations described above, long-term operational phase air emissions can be characterized as de minimis (i.e., minimal), and small in comparison to other existing emission sources in the vicinity. Consequently, the Proposed Action would result in no long-term impacts on existing ambient air quality.

The Proposed Action provides long-term beneficial effects on local air quality and GHG emissions. The use of solar panels to generate electricity for the RMWTF reduces dependence on fossil fuels that emit GHGs, reduces energy-related emissions from the RMWTF, and has long-term benefits to air quality in Clark County.

3.4.2.3 Cumulative Impacts

If construction of reasonably, foreseeable future projects listed in Section 3.3 were to occur at the same time as the Proposed Action (July 2015 through December 2015), their construction activities may contribute individually and cumulatively to impacts to local and regional air quality. However, each project would be required to implement emission and dust control measures to comply with Federal, State, and local air quality regulations. As such, cumulative impacts to air quality are not anticipated. Long-term beneficial impacts from the Proposed Action would be the displacement of electricity generated from higher-polluting fossil fuels.

3.5 Biological Resources

3.5.1 Affected Environment

This section describes the biological environment within the Proposed Action area and incorporates findings from previous literature reviews and field studies conducted as part of the TTF FEIS. Within the Proposed Action area, the primary vegetation community is Mojave creosote bush scrub, and includes creosote bush (*Larrea tridentata*) and white bursage

(*Ambrosia dumosa*) as the dominant species. Common cacti include pencil cholla (*Cylindropuntia ramosissima*), beavertail cholla (*Opuntia basilaris*), silver/golden cholla (*Cylindropuntia echinocarpa*), and barrel cactus (*Ferocactus cylindraceus*). Although suitable habitat exists, no special-status plant species were observed during field surveys conducted as part of the TTF FEIS or during examination of current biological research databases. Primary resident animal species include a diversity of reptiles, rodents, and small songbirds. Although the open vegetative structure and prey base available within this desert scrub habitat provides foraging opportunities for a variety of raptors and mammalian predators, these predatory species are typically associated with a contiguous geographical area and may require other habitat features such as trees or cliffs to fulfill habitat requirements, none of which occur within the fenced Proposed Action area. Animal species of concern that may occur within the Proposed Action project area include the desert tortoise (*Gopherus agassizii*) (Threatened), western burrowing owl (*Athene cunicularia hypugaea*) (Federal candidate species), banded gila monster (*Heloderma suspectum cinctum*) (Federal candidate species and Nevada state protected), and common chuckwalla (*Sauromalus obesus*) (Federal candidate species). Desert bighorn sheep (*Ovis Canadensis nelsoni*) (Nevada game species) are also prevalent within the adjacent River Mountains range.

The 1996 Biological Opinion for the TTF (File No. 1-5-95-F-334), analyzed the entire RMWTF area to be disturbed, and desert tortoise habitat compensation fees for the entire TTF area were paid in full. On June 9, 2008 Reclamation re-consulted with the U.S. Fish and Wildlife Service (USFWS) for the TTF. This consultation provided for 10 “injury/kill” and 50 “harassment/move” take.

In addition to the mitigation measures outlined in the 1996 Biological Opinion for the TTF, an additional biological clearance survey was conducted for the Proposed Action area and adjacent suitable habitat within the fenced RMWTF the week of February 23, 2015 by a USFWS Authorized Desert Tortoise Biologist. During the survey, no desert tortoise or western burrowing owls were observed, two burrows had old burrowing owl pellets present but were unoccupied, and all burrows discovered during the survey were confirmed unoccupied prior to collapsing. No banded gila monsters or chuckwallas were observed and no desert bighorn sheep were observed within the surrounding area (desert bighorn sheep are not anticipated to occur within the Proposed Action area since it is entirely fenced).

Common resident or migratory birds that could occur in the Proposed Action area and surrounding habitat include Bell’s sparrow (*Amphispiza belli*), black-throated sparrow (*Amphispiza bilineata*), sagebrush sparrow (*Amphispiza nevadensis*), American pipit (*Anthus rubescens*), golden eagle (*Aquila chrysaetos*), great horned owl (*Bubo virginianus*), red-tailed hawk (*Buteo jamaicensis*), house finch (*Carpodacus mexicanus*), killdeer (*Charadrius vociferous*), lesser nighthawk (*Chordeiles acutipennis*), common raven (*Corvus corax*), yellow-rumped warbler (*Dendroica coronata*), horned lark (*Eremophila alpestris*), greater roadrunner (*Geococcyx californianus*), ash-throated flycatcher (*Myiarchus cinerascens*), phainopepla (*Phainopepla nitens*), rock wren (*Salpinctes obsoletus*), Say’s phoebe (*Sayornis saya*), Brewer’s sparrow (*Spizella breweri*), LeConte’s thrasher (*Toxostoma lecontei*), western kingbird (*Tyrannus verticalis*), and mourning dove (*Zenaida macroura*). During the February 2015 biological clearance survey, the following migratory birds were observed: common raven, black-throated sparrow, Brewer’s sparrow, house finch, and horned lark.

3.5.2 Environmental Consequences

3.5.2.1 No Action Alternative

Under the No Action Alternative, the solar facility would not be constructed and the Proposed Action area would not be disturbed. Although there would be no loss of individual species or their potential habitat due to the construction of a solar facility, the perimeter of the RMWTF would continue to be fenced, making the area a non-contiguous geographical area and essentially separate from the surrounding environment for many species. Further, the area may be disturbed regardless in the future with any potential expansion of the RMWTF.

3.5.2.2 Proposed Action Alternative

Direct impacts include the loss of approximately 100 acres of habitat for migratory birds, small mammals, reptiles, and other ground-dwelling wildlife able to get through the existing RMWTF fence (including the tortoise fence). No impacts to desert tortoise are anticipated as a result of the Proposed Action because the area has been fenced since 2004 and cleared of tortoise multiple times. No designated critical habitat occurs within the Proposed Action area. Construction activities will be temporary in nature and limited to an existing granted ROU, within the tortoise-proof fenced area. Increased human activity on the project site will be temporary, with the largest presence occurring during the construction period. An estimated two to three employees would be required for operation, maintenance, and security of the site. Lighting used during construction, operation, and maintenance would be limited, used for safety and security reasons, and directed down and not into surrounding areas. Operation and maintenance activities will be relatively low in noise level, reducing the level of disturbance to wildlife species in adjacent areas. Due to the small amount of water necessary for the Proposed Action, long-term ponding of water, which may attract sensitive species to the area, is not anticipated.

Indirect impacts include the presence of humans which may temporarily displace wildlife in the surrounding area. Wildlife may also be displaced from lighting used during construction, operation, and maintenance activities, and from noise and vibration caused by construction activities.

The following measures would be implemented to reduce impacts to biological resources:

- Trash and waste removal from the Proposed Action area will occur on a daily basis and disposed of at an appropriate facility;
- Invasive species management will include proper cleaning of vehicles and heavy equipment prior to entering and before leaving the site;
- Adherence to a speed limit of 25 miles per hour on unmarked Clark County roads;
- Workers will check under vehicles and heavy equipment prior to moving them; and
- Implementation of dust control measures using water.

In order to maintain the native seedbed and promote the return of native vegetation throughout the Proposed Action area, topsoil would be salvaged and replaced. Vegetation will be allowed to establish, but will be maintained as low-growing to reduce any potential for fire. Cacti that cannot be avoided during construction will be salvaged and transplanted back to the Proposed Action area or within the fenced RMWTF, where feasible. In order to reduce the spread of

weeds into the Proposed Action area, any necessary fill material used during construction will be certified noxious weed-free. Reclamation will be notified about any noxious weed infestations and an appropriate treatment approach will be determined.

3.5.2.3 Cumulative Impacts

Construction of past, present, and reasonably foreseeable future projects listed in Section 3.3 may have led to or may lead to increased compacted soils and soil erosion, loss of habitat, crushed or removed vegetation, altered hydrology, weed invasions, and/or increased non-point source pollution. However, constructing within utility corridors and/or permitted boundary areas would minimize surface disturbance and habitat fragmentation. Furthermore, adherence by all projects to weed management and restoration plans would minimize the introduction and spread of noxious and invasive species during and following construction.

3.6 Energy Resources

3.6.1 Affected Environment

Energy resources within the Proposed Action area were analyzed as part of the TTF FEIS, and this section incorporates those findings by reference. Although electrical power, natural gas, and other fossil fuels were examined as sources of potential energy for the RMWTF, solar energy generated and used at the RMWTF was not. In July 2014, SNWA considered and exercised this option by signing a PPA with SunEdison, the parent company of the Applicant. As mentioned, for the first 20 years, SNWA will purchase all the power generated from the solar facility for use at the RMWTF, with the option to extend the term for two additional, 5-year periods. At various times during, and at the end of the term of the agreement, SNWA will have the opportunity to purchase the solar facility from the Applicant for continued operation.

The TTF FEIS examined several potential local electrical power sources as potentially providing power to SNWA for the TTF, including, but not limited to, the Nevada Power Company, Western Area Power Administration, and Colorado River Commission of Nevada. For the Proposed Action, the Western Area Power Administration will provide the scheduling of the Proposed Action's power, along with the power from the transmission facilities of the TTF to the RMWTF's loads.

3.6.2 Environmental Consequences

3.6.2.1 No Action Alternative

Under the No Action Alternative, the solar facility would not be constructed and the option to power a portion of the RMWTF with renewable energy from the Proposed Action, and provide for a more environmentally-responsible way to treat and deliver the water, would not be available. The RMWTF would continue to be powered by the current energy sources.

3.6.2.2 Proposed Action Alternative

Undesirable effects to energy resources would not occur from the Proposed Action, since energy requirements for the construction and operation of the solar facility would not exceed the capacity of the existing energy infrastructure, requiring the development and/or construction of otherwise unplanned energy resources and infrastructure. To the contrary, the Proposed Action

would provide an additional energy resource entirely for the RMWTF and that is renewable, offsetting the current non-renewable energy source for the RMWTF by 5 percent.

3.6.2.3 Cumulative Impacts

The electrical requirements of the Proposed Action, combined with electrical requirements of other projects (see Section 3.3) in the vicinity, are considered minor relative to the available supply of electricity in the region. Further, the existing and planned transmission lines are meant to augment electrical supplies. Therefore, no negative cumulative impacts would occur since negative impacts from the Proposed Action are not anticipated. Rather, positive cumulative impacts will occur since the Proposed Action will generate power that offsets other energy use in the region.

3.7 Noise

3.7.1 Affected Environment

Noise is generally described as unwanted sound, which can be based either on objective impacts (i.e., hearing loss, damage to structures, etc.) or subjective judgments (e.g., community annoyance). Sound is usually represented on a logarithmic scale with a unit called the decibel (dB). Sound on the dB scale is referred to as sound level. The threshold of human hearing ranges from 0 dB to 120 dB. Some statistical noise levels are stated in terms of decibels on the A-weighted scale (dBA). Noise levels stated in terms of dBA reflect the response of the human ear by filtering out some of the noise in the low and high frequency ranges that the ear does not detect well.

Noise levels occurring at night generally produce a greater annoyance than do the same levels occurring during the day. The USEPA has developed criteria using a day-night average sound level metric. This metric is a 24-hour average noise level calculated by obtaining the daytime noise levels from the hours of 7:00 a.m. to 10:00 p.m. and applies a 10 dB penalty for the more restrictive quietest nighttime noise levels between the hours of midnight to 7:00 a.m. and 10 p.m. to midnight. According to USEPA guidelines, a day-night average sound level of 45 dBA indoors and 55 dBA outdoors for residential areas is identified as the maximum allowable noise level that has no effects on public health and welfare.

Sensitive Receptors

Sensitive noise receptors are, in general, those areas of human habitation or substantial use where the intrusion of noise has the potential to adversely impact the occupancy, use, or enjoyment of the environment. These include residences, schools, religious institutions, hospitals, parks and other outdoor recreation areas, and places of business requiring low levels of noise.

Existing Conditions

The existing ambient noise environment in the vicinity of the Proposed Action site is from natural sounds from the undeveloped areas surrounding the RMWTF, vehicle noise from local roadways, and community activity in the vicinity of the residential development located approximately 0.5 miles south and west of the Proposed Action site. The area is located beneath an aviation approach and departure flight path.

3.7.2 Environmental Consequences

3.7.2.1 No Action Alternative

The No Action Alternative would not change ambient noise levels in the local area.

3.7.2.2 Proposed Action Alternative

Construction of the Proposed Action will result in temporary increases in ambient noise levels for approximately 5 months. A variety of construction equipment such as scrapers, concrete trucks, graders, excavators, dump trucks, backhoes/ graders, and lightweight trucks will generate noise during daylight hours. Table 5 lists the range of typical noise levels associated with various construction equipment types. The actual noise level from construction activities will vary during the different activity periods depending upon the activity location(s) and the number and types of equipment being used.

Sound typically dissipates at a rate of 4.5 dBA to 6.0 dBA for each doubling of distance depending on the topography of the area and environmental conditions (e.g., atmospheric conditions and noise barriers, either vegetative or manufactured). Thus, based on a sound dissipation rate of 6.0 dBA per doubling of distance, a sound level of 96 dBA at 50 feet from the noise source would be approximately 90 at a distance of 100 feet, 84 dBA at a distance of 200 feet, and so on.

Table 5. A-Weighted (dBA) Sound Levels of Construction Equipment and Modeled Attenuation at Various Distances

Noise Source	50 feet	250 feet	500 feet	1,000 feet	5,000 feet
Bulldozer / Scraper	85	71	65	59	45
Concrete mixer	85	71	65	59	45
Concrete pump	82	68	62	56	42
Crane, mobile	83	69	63	57	43
Front-end loader	85	71	65	59	45
Generator	81	67	61	47	41
Grader	85	71	65	59	45
Shovel (pneumatic)	82	68	62	56	42
Truck	85	79	73	55	49

Source: Federal Highway Administration 2007. The decibels on the A-weighted scale (dBA) at 50 feet is measured noise emission. An assumed propagation rate is 6 dBA per doubling of distance. The 100, 250, 500, 1,000, and 5,000 feet are modeled emissions.

Sensitive receptors in the Proposed Action area include recreational users along the Burkholder and River Mountains Loop trails, which are located less than 50 feet from the Proposed Action boundary, and residential areas located approximately 0.5 miles west and south.

Construction activities would last for approximately 5 months and would generally occur between 6:00 a.m. and 7:00 p.m. Monday to Friday. Recreational users along the Burkholder and River Mountains Loop trails may be temporarily exposed to noise emissions greater than 75 dBA when construction activities are ongoing. Although the residential area is more than 0.5 miles from the Proposed Action area, large trucks traveling to and from the construction site may

increase the ambient noise along Burkholder Boulevard. Construction related traffic would be a short-term impact on local roadways during the approximate 5 months of construction. As a result, short-term increases in traffic noise would be considered a minor impact.

To mitigate noise impacts during construction, the construction contractor will be required to comply with the City of Henderson noise ordinance. A noise complaint telephone number will be made available in the local area so that noise disturbances can be reported and investigated. An area with concentrated complaints will be inspected, and if deemed necessary, surveyed by a qualified noise and vibration specialist. The results of the inspection and/or noise monitoring survey will be provided to the construction manager so that the need for additional mitigation can be clearly identified and implemented.

Temporary noise barriers may be used to protect against excessive noise levels if construction activities occur in an area closer than 100 feet from noise sensitive land uses (i.e., Burkholder and River Mountains Loop trails).

Operational noise from the solar facility will be negligible and will not increase ambient levels. Performing outdoor maintenance activities will temporarily increase ambient noise levels, but these activities will be short-term and will not adversely affect sensitive receptors.

Any work conducted during the night would be rare and include only maintenance activities such as those during an emergency or forced outage. During these rare events, no heavy equipment would be used with only light vehicles used to transport workers and equipment. Therefore noise impacts would be minor.

3.7.2.3 Cumulative Impacts

Cumulative noise impacts may occur if other reasonably, foreseeable future projects were to occur nearby (less than 1 mile) or at the same time as the Proposed Action. As of April 2015, there are no other nearby projects that are anticipated to be constructed during the same time as the Proposed Action (July 2015 through December 2015).

3.8 Soils/Hydrology

3.8.1 Affected Environment

A Technical Drainage Study was completed for the Proposed Action area by HDR in February 2015 (see Appendix B). Major findings of the study concluded that the Proposed Action:

- Is in general compliance with the “Drainage Laws”, Uniform Regulations and the previously approved drainage studies for the site, as all off-site and on-site flows are being returned to their historic flow paths;
- Has used the Clark County Hydrologic Criteria and Drainage Design Manual and other generally accepted engineering practices in its hydrologic and hydraulic design of the proposed facilities;
- Will be effective in controlling storm runoff (i.e., the 100-year storm) regarding its proposed drainage facilities; and
- Will result in minimal effects to off-site property and facilities, since discharges exiting the site will result in minimal differences from the existing condition.

3.8.2 Environmental Consequences

3.8.2.1 No Action Alternative

Any potential drainage and/or erosion issues associated with the construction of a solar facility would not occur under the No Action Alternative. However, the area may be disturbed in the future with any potential expansion of the RMWTF.

3.8.2.2 Proposed Action Alternative

Off-site and on-site flows will not be altered, but will be allowed to return to their historic flow paths (see Appendix B). Site-specific BMP's developed for the Proposed Action will be effective in controlling storm runoff, and minimal effects to off-site properties and facilities would occur (see Appendix A).

Grading and construction procedures will be designed to minimize topographic changes. Vegetation and topsoil removal would be limited and any topsoil removed would be returned to the site in order to maintain the native seedbed, promote vegetation growth, and therefore reduce exposed soils. Low-growing vegetation will be allowed to establish, and any cacti that cannot be avoided during construction will be salvaged and transplanted back to the Proposed Action area, where feasible. A construction storm water permit would be obtained and all associated permit requirements would be implemented, including site stabilization requirements. A SWPPP would be prepared and include specific measures to control erosion of soils during and following construction. Therefore, potential adverse effects with regard to site drainage and erosion are not anticipated for the Proposed Action.

3.8.2.3 Cumulative Impacts

The existing and proposed actions within the vicinity of the Proposed Action described in Section 3.3 each required or will require the preparation of a site-specific SWPPP. Construction contractors are required to implement site-appropriate erosion and sediment control BMPs to maintain compliance with their SWPPP. Therefore, cumulative impacts from the Proposed Action and these other actions would not occur.

3.9 Traffic Circulation

3.9.1 Affected Environment

The Proposed Action site is located within the RMWTF boundaries at 1350 Richard Bunker Avenue in Henderson, Nevada. Principal regional highways in the vicinity of the site include U.S. 93, Boulder Highway (State Route 582), and Lake Mead Parkway (State Route 564). Local arterials in the vicinity include Burkholder Boulevard, North Major Avenue, South Pueblo Boulevard, South Racetrack Road, and Magic Way. Access to the site is via Burkholder Boulevard from Lake Mead Parkway. Lake Mead Parkway is a four-lane divided highway, starting where Interstate 215 ends at its junction with Interstate 515 / U.S. 93 / U.S. 95.

The Nevada Department of Transportation maintains Annual Average Daily Traffic County Stations. The nearest to the site, Station 0030243, is located on Boulder Highway, about 0.2 miles south of Lake Mead Parkway. Annual Average Daily Traffic at this station is shown in Table 6 below.

Table 6. Annual Average Daily Traffic Nearest to the Proposed Action Location

Year	2005	2006	2007	2008	2009	2010	2011	2012	2013
Nevada Department of Transportation Station 0030243	28,000	28,100	27,000	27,000	29,000	25,000	24,000	22,000	20,500

Source: Regional Transit Commission of Southern Nevada 2013.

Other transportation resources near the Proposed Action area include non-motorized transportation facilities including bicycle paths, pedestrian sidewalks and trails. Public recreation trails bound the site to the north (Burkholder Trail) and to the east (River Mountains Loop Trail).

3.9.2 Environmental Consequences

3.9.2.1 No Action Alternative

The No Action Alternative would not change traffic circulation in the local area.

3.9.2.2 Proposed Action Alternative

Construction traffic would use Boulder Highway, Lake Mead Parkway, and Burkholder Boulevard to reach the Proposed Action site. During peak construction, an estimated average of approximately 350 daily trips (>2% annual average) for arriving/departing construction workers and 20 truck trips per day will be required to supply concrete, construction materials, and equipment to the Proposed Action site. Although there will be a temporary increase in traffic during the approximate 5-month construction period, traffic will disperse over time during the different construction phases.

To ensure that Proposed Action-related construction traffic does not contribute to unacceptable levels of service on area roadways, the Applicant will develop and implement a Construction Traffic Management Plan. The Plan will encourage employee car-pooling as well as shuttling of employees between peripheral/off-site parking areas and the work site. Material deliveries will be scheduled during off-peak periods (10:00 a.m. and 3:00 p.m.), as feasible.

3.9.2.3 Cumulative Impacts

Cumulative traffic impacts may occur if other reasonably, foreseeable future projects were to occur nearby (less than 1 mile) or at the same time as the Proposed Action. As of April 2015, there are no other nearby projects that are anticipated to be constructed during the same time as the Proposed Action (July 2015 through December 2015).

3.10 Visual Resources

3.10.1 Affected Environment

Visual resources were analyzed for the RMWTF as part of the TTF FEIS and conclusions are incorporated by reference. Although construction of the RMWTF had a visual impact on the landscape, with mitigation measures in place, these effects were minor. An additional analysis

was conducted specifically for the Proposed Action by EPD Solutions, Inc. March 2015 (see Appendix C). The Proposed Action area occurs on a broad alluvial fan on the western slope of the River Mountains and within the boundaries of the RMWTF. The entire RMWTF is fenced with chain-link barbed-wire or a combination of chain-link barbed-wire with masonry pilaster. The undisturbed portion of the RMWTF is covered with low-lying Mojave creosote bush scrub vegetation. Public recreational trails bound the site to the north (Burkholder Trail) and to the east (River Mountains Loop Trail). Also along the east, and to the south, are high-tension power lines.

3.10.2 Environmental Consequences

3.10.2.1 No Action Alternative

Under the No Action Alternative, the proposed solar facility would not be constructed. The existing view shed would remain as is until plans to further develop the RMWTF are implemented.

3.10.2.2 Proposed Action Alternative

The analyses by EPD Solutions, Inc. for the Proposed Action concluded that the effects as viewed from all the key observation points would be minor. Although the solar facility would be visible within the RMWTF from some of the key observation points, the solar facility would not create a major change in the existing view of the RMWTF and surrounding landscape due to the following reasons:

- The relatively low height of the major solar facility features which are, viewed at a distance, approximately the same height as the existing RMWTF fencing;
- The solar panels represented as a minor element of the landscape compared to the surrounding natural features (i.e., River Mountains) and urban development;
- The presence of other manmade features, including roads, power lines, and fencing, which are a more substantial and visible feature in the environment;
- The minor change to long-distance views of the Las Vegas Valley and the McCullough Range by the Proposed Action; and
- From a distance, the solar panels visible only as a dark blue patch on the horizon and located at the base of the River Mountains, therefore not impeding the long-distance views of the foothills or upper reaches of the mountains.

Still, in order to further reduce effects to visual resources, applicable mitigation measures from the TTF FEIS will be implemented for the Proposed Action (see Appendix A).

3.10.2.3 Cumulative Impacts

The existing and proposed actions within the vicinity of the Proposed Action described in Section 3.3 have each added or will add to the overall visual impact of the analysis area. However, each project, including the Proposed Action, has been or would be required to undergo a separate NEPA analysis to address visual impacts from their actions. The proposed transmission lines would be located within an existing utility corridor and grouping of their facilities within the corridor will minimize overall cumulative effects on a regional basis through consolidation. The remaining projects have been or will be constructed within permitted boundary areas, which would also minimize adverse visual effects. Further, mitigation measures

implemented as part of each existing and proposed project at the design stage will reduce potential negative visual effects.

With regard to the potential construction of the Magic Solar Facility, it is not known if or when this project may be constructed. Although the project applicant has initiated discussions with stakeholders, the project is currently on hold and the NEPA process has not been initiated. Due to this uncertainty, the potential visual impacts of this project are not known. However, if this project is constructed, it would add an additional area of solar panels to the west of the Proposed Action area, and there would be cumulative impacts that are not measureable at this time. The visual analysis conducted for the Proposed Action determined that the solar panels would not create a major change in the view of the RMWTF and surrounding landscape. Therefore, the incremental impact of the Proposed Action is not expected to be large.

4.0 Coordination and Consultation

4.1 Persons/Agencies Consulted

Persons and agencies consulted for the TTF, which includes the RMWTF area, are listed in the TTF FEIS. Additional persons and agencies consulted for the Proposed Action include:

- Reclamation
- USFWS
- Nevada Department of Wildlife (NDOW)
- City of Henderson

4.2 Agency Approvals/Processes

Agency approvals obtained and processes implemented for the RMWTF, are included in the TTF FEIS. Additional agency approvals obtained and processes implemented for the Proposed Action include:

- SNWA submitted a request for a Conditional Use Permit to install the Proposed Action at the RMWTF per the City of Henderson’s Development Code. The agenda item was heard and approved at the City of Henderson’s December 11, 2014 Planning Commission Meeting.
- HDR, on behalf of the Applicant, submitted a Technical Drainage Study for the Proposed Action dated February 13, 2015 and an addendum dated April 21, 2015 to the City of Henderson for review and approval. The City of Henderson approved the study in a letter dated May 14, 2015 (included at the end of Section 4.0).
- The current International Fire Code (IFC 2012) requirement states there must be a “10-foot no-brush zone” around any solar panel. However, this requirement conflicts with Federal and State requirements. SNWA requested that the City of Henderson’s Building and Fire Safety Division consider a low-growing, manicured native vegetation around and under the ground-mounted solar arrays. The City of Henderson approved SNWA’s request via a letter dated January 28, 2015.
- USFWS – Authorized Desert Tortoise Biologist status application submitted February 12, 2015 and approved February 13, 2015.
- NDOW – Special Purpose Permit application submitted March 24, 2015 and approved June 3, 2015 (notification via email). Energy Planning and Conservation Fund application and fee submitted June 9, 2015, pending approval.

4.3 Scoping/Public Involvement

Scoping Summary

The Applicant and SNWA conducted an open house to obtain public scoping comments for the Proposed Action on November 17, 2014. The open house was held at the Heritage Park Senior Facility, 300 Racetrack Road, and located within walking distance for many neighbors. The public was invited to the open house through direct mail notification, which was distributed on November 3, 2014 to 564 homes identified within a potential view radius near the proposed facility. The notification consisted of a cover letter on SNWA letterhead and a Proposed Action fact sheet prepared by the Applicant. Both documents provided clear contact information and reflected the “largest scenario” Proposed Action description to provide full disclosure to the community. A notice was also posted at the Heritage Park Senior Facility, and direct phone calls were placed to key community leaders and City of Henderson personnel. Information was also available on the Applicant’s web site.

The open house featured displays showing visual renderings from four neighborhood locations, an aerial map clearly marking the locations, photographs of similar SNWA solar facilities, and knowledgeable staff from the Applicant, SNWA, and Reclamation, who were available to describe the Proposed Action and answer questions. A representative from the City of Henderson Planning Commission was also present to observe and note the process.

Scoping Comments and Responses

Four members of the public attended the open house and four written or verbal comments were received either prior to the open house or at the meeting. Staff responded to comments as described below:

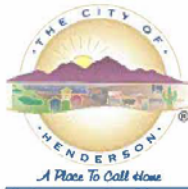
1. An out-of-town property owner telephoned on November 6, 2014, to say he was unfamiliar with the area and wanted clarification about the Proposed Action location map. After the location was thoroughly described, the property owner had no further concerns. The property owner was invited to attend the open house but did not.
2. A neighbor near the Proposed Action area telephoned on November 6, 2014 to express support for renewable energy. The individual also expressed concerns about construction traffic and noise, and visibility of the panels. Both concerns were addressed to the individual’s immediate satisfaction, and the individual was invited to the open house to view renderings but did not attend.
3. An email was received on November 13, 2014 from a neighbor stating the individual was unable to attend the public meeting. The neighbor had two concerns: 1) if the solar plant would interfere with radio/television reception and 2) if the panels extend all the way down to Magic Way. The individual also expressed hope that there would be minimal noise involved with the Proposed Action, especially at night. All questions and concerns were answered to the individual’s satisfaction by reply email.
4. Two individuals attended the open house and expressed concern about the present and future ownership of the Proposed Action, the Proposed Action site, and the

power to be generated from the panels. Their concern focused on the potential for ownership of the Proposed Action to be transferred to a foreign company. Project staff addressed their concerns by explaining the facility would be built and operated by the Applicant, a subsidiary of the California-based company SunEdison. Additionally, the PPA between SNWA and the Applicant includes an assignment clause giving SNWA the right to approve or deny assignment to another entity (foreign or otherwise). Finally, all power generated at the facility will be for the sole benefit of the SNWA RMWTF. Staff encouraged the couple to attend the City of Henderson Planning Commission meeting on December 10, 2014. They did not attend.

4.4 Distribution List

Notification of the initiation of a 30-day public comment period on the Draft EA was sent to a distribution list which includes the individuals who provided scoping comments, Federal, State, and City of Henderson contacts; non-governmental organizations; and other interested parties. A news release regarding the availability of Draft EA was sent to newspapers and other media and posted on Reclamation's website at <http://www.usbr.gov/newsroom/newsreleases>.

A Notice of Availability of the FONSI and Final EA will be sent to this same list as well as all those who provide comments on the Draft EA or who specifically request a copy of the Final EA. This Final EA will also be posted on Reclamation's website at <http://www.usbr.gov/lc/region/g2000/envdocs.html>. All requested copies of the Draft EA and Final EA will be provided via compact disk unless paper copies are specifically requested.



CITY OF HENDERSON
240 Water Street
P. O. Box 95050
Henderson, NV 89009

May 14, 2015

Mark A. Fountain, P.E.
HDR
3200 E. Camelback Road, Ste. 350
Phoenix, AZ 85018

Re: Technical Drainage Study
SNWA River Mountain Solar
Permit Number: PHYD 2015730019

Dear Mr. Fountain:

This letter provides comments on the above referenced drainage study dated February 13, 2015 and the addendum dated April 21, 2015. The City of Henderson reviewed this study and based on the documents submitted, **the subject study is approved**. The following items are part of the approved study:

1. The project site is located on and proposes to discharge to property under the jurisdiction of the Bureau of Reclamation. The engineer must continue to coordinate with the Bureau of Reclamation for the proposed improvements.
2. The following grading plan comments must be addressed prior to submittal of the civil improvement plans:
 - a. Sheet C-801: Relocate the basin drain pipes at PA-1 and PB-2 to ensure the pipes have adequate cover
 - b. Sheet C-501: Add culverts PA-1 and PA-2 to the culvert schedule or specify the rip rap size at these locations on the plan
3. Please provide a copy of the Hydrology Study Approval Letter with the submittal of the civil improvement plans.

Any work within washes or channels conveying jurisdictional Waters of the United States (e.g. Lower Las Vegas Wash), regardless of whether the flow is ephemeral or perennial, may require concurrence from the U.S. Army Corps of Engineers.

Projects that disturb over one (1) acre or any area adjacent to a water way must submit to the Nevada Division of Environmental Protection: (1) a "Notice of Intent" to discharge that certifies a stormwater pollution prevention plan has been developed and is maintained on site, (2) a

Mark A. Fountain, P.E.
SNWA River Mountain Solar
May 14, 2015
Page 2

request for inclusion in the Stormwater General Permit No. NVR100000. A phased construction unit in a contiguous subdivision is considered under construction until paving, building construction or planting has covered all stripped or disturbed surface areas. For more information, including forms and applications contact the Nevada Division of Environmental Protection at <http://ndep.nv.gov/bwpc/storm01.htm> or call (775) 687-9429.

Please be aware that as additional information becomes available and/or restudies of Flood Insurance Studies are performed, the information submitted by the above named engineering firm may be superseded. Compliance with the regulatory elements and design standards specified in the Uniform Regulations for the Control of Drainage does not imply a guarantee that properties will be free from flooding or flood damage.

Please contact me if you have any questions concerning these comments.

Sincerely,



Albert J. Jankowiak, P.E., CFM
Project Engineer II

Reviewer: Chris O. Stone, P.E., Willdan Engineering

5.0 References

- Clark County Department of Air Quality and Environmental Management (DAQEM). 2015. Available at: http://airquality.clarkcountynv.gov/cgi-bin/site_photo.pl?cams=298. Accessed on March 7, 2015.
- _____. 2015. Available at: <http://www.clarkcountynv.gov/depts/airquality/Pages/StateImplementationPlans.aspx>. Accessed on March 7, 2015.
- Council on Environmental Quality (CEQ). 1997. Environmental Justice Guidance Under the National Environmental Policy Act. December 10, 1997.
- Ezzo, J.A. 1995. A Class I Cultural Resources Survey for the Southern Nevada Water Authority Treatment and Transmission Facility, Clark County, Nevada. 1995.
- Federal Highway Administration. 2007. Special Report: Highway Construction Noise: Measurement, Prediction, and Mitigation, Appendix A Construction Equipment Noise Levels and Ranges. <http://www.fhwa.dot.gov/environment/noise/highway/hcn06.html>.
- International Fire Code (IFC). 2012. Available at: <http://publicecodes.cyberregs.com/icod/ifc/2012/index.htm>.
- National Park Service. 1998. Guidelines for Evaluating and Documenting Traditional Cultural Properties.
- Nevada Division of Environmental Protection. 2012. Nevada Statewide Greenhouse Gas Emission Inventory and Projections, 1990-2020.
- Regional Transit Commission of Southern Nevada. 2013. NDOT Traffic Counts for Clark County.
- South Coast Air Quality Management District (SCAQMD). 2006. Krause, M, et al., Methodology to Calculate Particulate Matter (PM) 2.5 and PM2.5 Significance Thresholds. South Coast Air Quality Management District, October 2006.
- _____. 2009. CEQA Handbook; Off-Road Mobile Source Emission Factors, South Coast Air Quality Management District. Recent updates provided on <http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/off-road-mobile-source-emission-factors>.
- United States Bureau of Reclamation (Reclamation). 1993. Indian Trust Asset Policy. July 2, 1993.
- United States Census Bureau. 2009 - 2013. American Factfinder. Available at: <http://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml>.

United States Environmental Protection Agency (USEPA). 1995. Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Sources, Document AP-42, 5th Edition. Recent updates provided on USEPA, TTN Website, CHIEF Database, <http://www.epa.gov/ttn/chief/>.

_____. 2014. USEPA, Emission Factors for Greenhouse Gas Emissions. April 2014.

Western Regional Air Partnership. 2006. Mansell G., 2006. Summary of the Western Regional Air Partnership Fugitive Dust Emissions Inventories. Technical Memorandum, prepared for the Western Governors Association by Western Regional Air Partnership and ENVIRON International Corporation, September 2006.

White, W.G. 1996. Cultural Resource Investigation of the South Valley Lateral, Southern Nevada Water Authority- Treatment and Transmission Facility. Harry Reid Center for Environmental Studies, Marjorie Barrick Museum of Natural History, University of Nevada, Las Vegas. 1996.

6.0 List of Preparers

Erika Brosz
Design Manager
SunEdison

Christina White
Director, North America Solar Project Development
SunEdison

Sandra Fairchild
Principal
Fairchild Consulting Group, Inc.

Chiaki Lowrey
Environmental Planner
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Jessica Stegmeier
Natural Resource Specialist
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James Kangas
Archaeologist
Bureau of Reclamation, Lower Colorado Regional Office

7.0 Public Comments and Responses and Additional Edits

Three comment letters or e-mails were received on the Draft EA. The individual comment letters and e-mails are included in this section. Each letter or e-mail is followed by responses to the substantive comments contained in the letter or e-mail. The responses note any resulting changes made to the Final EA. In addition to these revisions, information on the location of temporary parking and trailers for construction personnel, identified during internal review of the document, was added in Section 2.2.2.1 Construction Activities and in Figure 2.

The following organizations or individuals commented on the Draft EA:

1. Bureau of Land Management
2. NDOW
3. SNWA

RESPONSE: Reclamation appreciates the Bureau of Land Management's review of the Draft EA and the comment has been noted.



BRIAN SANDOVAL
Governor

STATE OF NEVADA
DEPARTMENT OF WILDLIFE

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Reno, Nevada 89512
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June 2, 2015

TONY WASLEY
Director

PATRICK CATES
Deputy Director

JACK ROBB
Deputy Director

NDOW-SR#: 15-157

Faye Streier, NEPA Coordinator
Bureau of Reclamation
P.O. Box 61470
Boulder City, Nevada 89006

Re: River Mountains Solar Energy Project Draft Environmental Assessment LC-15-14 (EA)

Dear Ms. Streier:

The Nevada Department of Wildlife (NDOW) has taken opportunity to review the EA and understand it was tiered from previous NEPA documents and other processes related to SNWA's Treatment and Transmission Facility (TTF). The proposed 18 MW, PV solar energy facility would be contained within the existing fenced area of the TTF and have a footprint of approximately 100 acres. Transmission of the generated energy would go to an existing SNWA substation on site and provide energy for TTF operations. This would contribute to SNWA achieving its 2015 renewable energy portfolio. While NDOW is supportive of measures for reducing reliance on fossil fuel energy sources, we also have obligation to assess land use actions potentially affecting wildlife resources. Hence, the following observations and recommendations are intended as productive input to the present NEPA process.

The level of attention to management of wastewater and other solutions generated as part of construction and operation of the solar facility at the TTF is appreciated. Accumulation of wastewater or other solutions in open reserve pits or evaporation ponds that contained chemicals or substances dangerous¹ to wildlife was not indicated. As such application with NDOW for an Industrial Artificial Pond Permit is not necessary at this time.

Page 4, Section 1.4 Related Laws, Policies and Planning Documents

Recognition of the Endangered Species Act of 1973, as amended, is suggested as much discussion on its relationship to the project (e.g. desert tortoise) was presented.

Page 25, Section 3.5.1, 3rd paragraph on page

Clarification may be helpful on the 6th line as to whether "collapsed burrows" were those inspected prior to actively collapsing them as part of the clearance survey methodology, or if the burrows were in a collapsed condition on their discovery during the survey.

Page 35, Section 4.1 Persons/Agencies Consulted

It is unclear whether NDOW was contacted specific to the Proposed Action.

¹ As interpreted by NAC 502.465, "chemicals or substances" mean man-made or natural material or elements which are used in or result from industrial activities and which may occur in sufficient concentration to cause death to wildlife.

Page 35, Section 4.2 Agency Approvals/Processes

Additional to River Mountains Solar, LLC or its agent obtaining a Special Purpose Permit from NDOW per NAC 503.093 and NAC 503.0935, a separate obligation would appear in need of fulfillment. In March 2012, Energy Planning and Conservation Fund regulations became effective. These regulations require energy proponents filing application for a new project with any other governmental agency in Nevada (federal, state, or local) to concurrently file application with NDOW along with the applicable fee (Nevada Revised Statutes 701.600 – 701.640 and Nevada Administrative Codes 701.800 to 701.820, inclusive). While perhaps informational, to our knowledge River Mountains Solar, LLC has not yet observed this legal obligation and we would request all parties involved to acknowledge this requirement.

Appendix A: Environmental Mitigation Measures:

- Page 5, EMM #21 - Thank you for the opportunity to review the endangered species education program materials prior to their initial presentation.
- Page 8, EMM #31 - Additional to trash clean-up and removal, specific direction to workers not to feed or water any wildlife during the course of normal construction and facility operations will be appreciated.
- Pages 10-12, EMM #'s 41 -49, inclusive - Thank you for including protocols and impact minimization measures for the Gila monster and chuckwalla should these species present themselves. NDOW has ongoing investigations relative to both species and additional to incorporation of NDOW's Gila monster reporting protocols² into the worker education program, contacting Biologist Jason L. Jones for assistance is encouraged. He can be reached at 702-486-5127 x3718, or by e-mail at jljones@ndow.org.
- Page 12, EMM #50 reads - *The worker education program will also cover bighorn sheep sensitivity to disturbance. NDOW biologists will periodically observe bighorn sheep in the vicinity of construction site activity to determine levels of disturbance. River Mountains Solar, LLC and NDOW will determine and establish temporary alternative watering sites as needed.*

NDOW appreciates inclusion of bighorn sheep in the worker education program. However, we are unaware of having agreed to periodic monitoring for determining disturbance to bighorn by construction activities. What is of concern is any activity associated with construction and subsequent operations presenting features or appurtenances (temporary or permanent water ponds or roadway puddles caused by dust suppression efforts) that would attract bighorn to venture and loiter in the project area and vicinity. The concern arises from heightened awareness for the risk of direct or indirect disease transmission potential between domestic livestock kept as pets (e.g. sheep or goats) in the adjacent residential areas, or that may be led along the loop trail and which may water at locations also accessible to bighorn sheep. Avoidance of any such situations is encouraged. We welcome additional discussion on this point prior to EA finalization.

Recommended Mitigation Measure for Birds Protected under the Migratory Bird Treaty Act.

Birds protected under the Migratory Bird Treaty Act (MBTA), including owls, passerines, and nighthawks, are also State Protected (NAC 503.050). Mindful of the existing TTF site situation, NDOW recommends an alternate consideration in lieu of avoiding construction activities during the nesting

² Nevada Department of Wildlife. 2012. *Gila Monster Status, Identification, and Reporting Protocol for Observations*. NDOW Southern Region. 7 September 2012. 3 pp.
Online at: http://www.ndow.org/Nevada_Wildlife/Conservation/

Streier, F. (NDOW-SR#: 15-157)

3

June 2, 2015

season, which for the project area generally occurs from mid-February through August) Performance of a survey by a qualified biologist for determining the presence of active nests, especially those of cryptic and difficult to detect ground-nesting species like the lesser nighthawk, prior to any ground disturbing activities is a reasonable course of action. In the event an active nest (containing eggs or young) is discovered or frequently attended by adult birds, a buffer area around the nest appropriate for the species involved would be identified and avoided until young birds have fledged. This measure would be consistent with preventive actions advocated by the U.S. Fish & Wildlife Service concerning MBTA-protected birds. Because bird species can inherently vary in the timing of nesting, as well as responses to localized environmental factors, survey findings beyond seven (7) days age may lose their validity. Should ground disturbance from construction activities not occur within seven days of an all-clear finding, another nesting survey should be performed.

The NDOW welcomes future opportunities to discuss aspects of this project. Should additional assistance regarding this correspondence arise, please contact me.

Sincerely,



D. Bradford Hardenbrook
Supervisory Habitat Biologist
Nevada Department of Wildlife, Southern Region
4747 Vegas Drive, Las Vegas, Nevada 89108
702.486.5127 x3600; 702.486.5133 FAX
bhrdnbrk@ndow.org

DBH:dbh

cc: NDOW, Files
U.S. Fish & Wildlife Service, Las Vegas Field Office

COMMENT: The level of attention to management of wastewater and other solutions generated as part of construction and operation of the solar facility at the TTF is appreciated. Accumulation of wastewater or other solutions in open reserve pits or evaporation ponds that contained chemicals or substances dangerous (as interpreted by NAC 502.465, “chemical or substances” mean man-made or natural material or elements which are used in or result from industrial activities and which may occur in sufficient concentration to cause death to wildlife) to wildlife was not indicated. As such application with NDOW for an Industrial Artificial Pond Permit is not necessary at this time.

RESPONSE: Comment has been noted.

COMMENT: Page 4, Section 1.4 Related Laws, Policies and Planning Documents. Recognition of the Endangered Species Act of 1973, as amended, is suggested as much discussion on its relationship to the project (e.g. desert tortoise) was presented.

RESPONSE: Text added to Section 1.4 Related Laws, Policies and Planning Documents, page 14.

COMMENT: Page 25, Section 3.5.1, 3rd paragraph on page. Clarification may be helpful on the 6th line as to whether “collapsed burrows” were those inspected prior to actively collapsing them as part of the clearance survey methodology, or if the burrows were in a collapsed condition on their discovery during the survey.

RESPONSE: Text added to Section 3.5.1, 3rd paragraph, page 36.

COMMENT: Page 35, Section 4.1 Persons/Agencies Consulted. It is unclear whether NDOW was contacted specific to the Proposed Action.

RESPONSE: Submittal of the Special Use Permit application on March 24, 2015 was considered as consultation with NDOW. However, upon being informed of additional NDOW requirements concerning new energy development applicable to energy generation projects, NDOW was contacted and the proper additional submittals were completed. Text added to Section 4.2 Agency Approvals/Processes, page 46.

COMMENT: Page 35, Section 4.2 Agency Approvals/Processes. Additional to the River Mountains Solar, LLC or its agent obtaining a Special Purpose Permit from NDOW per NAC 503.093 and NAC 503.0935, a separate obligation would appear in need of fulfillment. In March 2012, Energy Planning and Conservation Fund regulations became effective. These regulations require energy proponents filing application for a new project with any other governmental agency in Nevada (federal, state, or local) to concurrently file application with NDOW along with the applicable fee (Nevada Revised Statutes 701.600 – 701.640 and Nevada Administrative Codes 701.800 – 701.820, inclusive). While perhaps informational, to our knowledge River Mountains Solar, LLC has not yet observed this legal obligation and we would request all parties involved acknowledge this requirement.

RESPONSE: Upon being informed of additional NDOW requirements concerning new energy development applicable to energy generation projects, NDOW was contacted and the proper

additional submittals were completed. Text added to Section 4.2 Agency Approvals/Processes, page 46.

COMMENT: Appendix A: Environmental Mitigation Measures. Page 5, EMM #21. Thank you for the opportunity to review the endangered species education program materials prior to their initial presentation.

RESPONSE: Comment has been noted.

COMMENT: Appendix A: Environmental Mitigation Measures. Page 8, EMM #31. Additional to trash clean-up and removal, specific direction to workers not to feed or water any wildlife during the course of normal construction and facility operations will be appreciated.

RESPONSE: Text added to Appendix A: Environmental Mitigation Measures. Page 8, EMM #31.

COMMENT: Appendix A: Environmental Mitigation Measures. Pages 10 - 12, EMM #'s 41 – 49, inclusive. Thank you for including protocols and impact minimization measures for the Gila monster and chuckwalla should these species present themselves. NDOW has ongoing investigations relative to both species and additional to incorporation of NDOW's Gila monster reporting protocols (Nevada Department of Wildlife. 2012. Gila Monster Status, Identification, and Reporting Protocol for Observations. NDOW Southern Region. 7 September 2012. 3 pp. Online at: http://www.ndow.org/Nevada_Wildlife/Conservation/) into the worker education program, contacting Biologist Jason L. Jones for assistance is encouraged. He can be reached at 702-486-5127 x3718, or by e-mail at jljones@ndow.org.

RESPONSE: Comment has been noted.

COMMENT: Appendix A: Environmental Mitigation Measures. Page 12, EMM #50 reads *The worker education program will also cover bighorn sheep sensitivity to disturbance. NDOW biologists will periodically observe bighorn sheep in the vicinity of construction site activity to determine levels of disturbance. River Mountains Solar, LLC and NDOW will determine and establish temporary alternative watering sites as needed.*

NDOW appreciates inclusion of bighorn sheep in the worker education program. However, we are unaware of having agreed to periodic monitoring for determining disturbance to bighorn by construction activities. What is of concern is any activity associated with construction and subsequent operations presenting features or appurtenances (temporary or permanent water ponds or roadway puddles caused by dust suppression efforts) that would attract bighorn to venture and loiter in the project area and vicinity. The concern arises from heightened awareness for the risk of direct or indirect disease transmission potential between domestic livestock kept as pets (e.g. sheep or goats) in the adjacent residential areas, or that may be led along the loop trail and which may water at locations also accessible to bighorn sheep. Avoidance of any such situations is encouraged. We welcome additional discussion on this point prior to EA finalization.

RESPONSE: Text has been removed from EMM #50 (Appendix A: Environmental Mitigation Measures, page 12) regarding periodic monitoring by NDOW for determining the level of disturbance to bighorn sheep by construction activities. A measure has been added to EMM #50

that will reduce the attraction for bighorn sheep to venture and loiter in the Proposed Action area and vicinity.

COMMENT: Recommended Mitigation Measure for Birds Protected under the Migratory Bird Treaty Act. Birds protected under the Migratory Bird Treaty Act (MBTA), including owls, passerines, and nighthawks, are also State Protected (NAC 503.050). Mindful of the existing TTF site situation, NDOW recommends an alternate consideration in lieu of avoiding construction activities during the nesting season, which for the project area generally occurs from mid-February through August. Performance of a survey by a qualified biologist for determining the presence of active nests, especially those of cryptic and difficult to detect ground-nesting species like the lesser nighthawk, prior to any ground disturbing activities is a reasonable course of action. In the event an active nest (containing eggs or young) is discovered or frequently attended by adult birds, a buffer area around the nest appropriate for the species involved would be identified and avoided until young birds have fledged. This measure would be consistent with preventative actions advocated by the U.S. Fish & Wildlife Service concerning MBTA-protected birds. Because bird species can inherently vary in the timing of nesting, as well as responses to localized environmental factors, survey findings beyond seven (7) days age may lose their validity. Should ground disturbance from construction activities not occur within seven days of an all-clear finding, another nesting survey should be performed.

RESPONSE: Previous text for measure EMM #42 (Appendix A: Environmental Mitigation Measures, page 10) has been replaced with the NDOW recommended measure for MBTA-protected birds.



SOUTHERN NEVADA WATER AUTHORITY

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June 3, 2015

Faye L. Streier
National Environmental Policy Act Coordinator
Bureau of Reclamation
Lower Colorado Regional Office
P.O. Box 61470
Boulder City, Nevada 89006-1470

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT FOR RIVER MOUNTAINS SOLAR PROJECT

Dear Ms. Streier:

The Southern Nevada Water Authority (SNWA) appreciates the opportunity to review the Bureau of Reclamation's Draft Environmental Assessment (EA) for the River Mountains Solar Project (Project). As noted in the Draft EA, the Project will be located entirely within the boundaries of SNWA's River Mountains Water Treatment Facility (RMWTF) and will provide power exclusively to SNWA for facility operations. SNWA and River Mountains Solar, LLC executed a Power Purchase Agreement (PPA) dated July 7, 2014, delineating conditions for the Project.

SNWA supports the proposed Project, which will provide renewable energy to meet a portion of SNWA's electrical need and help SNWA meet its renewable energy goals. Since the proposed Project is located within SNWA's RMWTF site, SNWA anticipates that Right-of-Use issued by the Bureau of Reclamation for the Project will be consistent with the conditions in the PPA and support SNWA's current and future uses of the RMWTF site.

If you have any questions about the PPA or need any additional information, please contact Gary A. Wood at (702) 691-5393.

Sincerely,

A handwritten signature in blue ink that reads "Scott P. Krantz".

Scott P. Krantz
Director, Energy Management

SPK:LML:cc

xc: Tabitha Fiddymment, SNWA
Lisa Luptowitz, SNWA
Sharon Kennemer, SNWA

SNWA MEMBER AGENCIES

Big Bend Water District • Boulder City • Clark County Water Reclamation District • City of Henderson • City of Las Vegas • City of North Las Vegas • Las Vegas Valley Water District

RESPONSE: Reclamation appreciates SNWA's review of the Draft EA and the comment has been noted.

RECLAMATION

Managing Water in the West

River Mountains Solar Project Draft Environmental Assessment LC-15-14

APPENDICES

Lower Colorado Region, Boulder City, Nevada



U.S. Department of the Interior
Bureau of Reclamation
Lower Colorado Region
Boulder City, Nevada

June 2015



Appendix A: Environmental Mitigation Measures

Appendix B: Technical Drainage Study

Appendix C: Visual Resource Management Analysis