

Environmental Assessment:

Table of Contents

1. Introduction	1
1.1. Identifying Information:	1
1.1.1. Title, EA number, and type of project:	1
1.1.2. Location of Proposed Action:	1
1.1.3. Name and Location of Preparing Office:	2
1.2. Purpose and Need for Action:	2
1.3. Scoping, Public Involvement and Issues:	2
2. Proposed Action and Alternatives	3
2.1. Description of the Proposed Action:	5
2.2. Description of Alternatives Analyzed in Detail:	5
2.3. Alternatives Considered but not Analyzed in Detail	5
2.4. Conformance	6
3. Affected Environment:	7
3.1. Threatened, Endangered Species	15
3.2. Wildlife	15
3.3. Visual Resources	16
3.4. Socio-Economics	16
4. Environmental Effects:	17
4.1. Visual Resources	19
4.1.1. Proposed Action	19
4.1.2. No Action	19
4.2. Threatened, Endangered Species	19
4.2.1. Proposed Action	19
4.2.2. No Action	20
4.3. Wildlife	20
4.3.1.	20
4.3.2. No Action	20
4.4. Socio-Economic	20
4.4.1. Proposed Action	20
4.4.2. No Action	20
5. Tribes, Individuals, Organizations, or Agencies Consulted:	21
6. List of Preparers	25

List of Tables

Table 3.1. Affected Resources	10
Table 5.1. List of Persons, Agencies and Organizations Consulted	23
Table 6.1. List of Prepares	27

Chapter 1. Introduction

1.1. Identifying Information:

Red Rock Fire Station was developed to support fire suppression needs in the Red Rock Canyon and surrounding area. It is the largest station on the district and is the primary station with employees working or living at it 12 months a year. Currently Red Rock Canyon Fire Station contains no line service utilities. Diesel fuel is imported to power an electrical generator to provide for the stations needs. Currently maintenance and oil changes leave the station without power, sometimes for hours at a time. In the event of a generator malfunction residents of the station are left without power and sometimes forced to relocate to local hotels until the problem is repaired.

Logandale Fire Station is located west of the I-15 at exit 93 in close proximity to a Nevada Department of Transportation maintenance facility. The station consists of an engine barn (2 bay) and attached training room, and a barrack facility. The existing disturbance area, of the facility, is 2.17 acres; no additional disturbance will result from this project.

Pahrump Fire Station is located in Nye County, 0.8 miles from SR 160 on Carpenter Canyon road. The site is on the fringe of Pahrump urbanized zone and consists of an engine barn (2 bay), and a barrack facility. The existing disturbance, of the facility, is also 2.17 acres.

Description: The Bureau of Land Management has approved funding for new improvements at Red Rock, Logandale, and Pahrump Fire Stations. The station entered into service in 2003 and is located in the Red Rock Canyon National Conservation Area. The approved funding is for the installation of solar panels and battery storage buildings at the Red Rock Fire Station. At Logandale and Pahrump only covered parking style panels will be installed as they are attached to grid power. This project aligns with Instruction Memorandum No. 2007-097 which states that “The BLM will evaluate the feasibility of installing PV systems on administrative facilities and on range improvement, resource monitoring, public safety, and recreation projects. Project planning and design should incorporate an appropriate analysis to determine the feasibility, cost and benefits of using PV systems.”

1.1.1. Title, EA number, and type of project:

Southern Nevada Fire Station Solar Project

DOI-BLM-NV-S010-2010-0053-EA

Solar Power Installation

1.1.2. Location of Proposed Action:

Mt. Diablo PM

Red Rock Fire Station

Red Rock National Conservation Area

T21S R59E Section 8

Logandale Fire Station

Exit 93 I-15 N

T14S, R67E, Sec. 32 NW NW SW

Pahrump Fire Station

7501 Chromium Blvd

Pahrump NV 89061

T21S, R54E, Sec. 02 NW NW

1.1.3. Name and Location of Preparing Office:

U.S. Department of the Interior

Bureau of Land Management

Southern Nevada District Office

4701 N. Torrey Pines Drive

Las Vegas, NV 89130

1.2. Purpose and Need for Action:

Currently Red Rock Canyon Fire Station contains no line service utilities. Diesel fuel is imported to power an electrical generator to provide for the stations needs. Currently maintenance and oil changes leave the station without power, sometimes for hours at a time. In the event of a generator malfunction residents of the station are left without power and sometimes forced to relocate to local hotels until the problem is repaired. This problem impacts the response times of station resources in the event of a wildland fire due to electric gate and bay door control being disabled. To avoid these concerns a more stable supply of power is needed at Red Rock Fires Station.

Pahrump and Logandale are both served by grid power but were identified as prime candidates for solar power through a current American Recovery and Reinvestment Act (ARRA) project.

The proposed action is to install solar panels at the station to provide more reliable and ecologically conscious power generation. The action will install solar panels in the form of covered parking and will result in the construction of buildings to house batteries to store collected solar energy. The Proposed Action at the Pahrump and Logandale Fire Stations will install solar panels as covered parking but will not included the construction of battery storage buildings. All of the construction associated with this project will take place within the footprint of the stations.

1.3. Scoping, Public Involvement and Issues:

Internal scoping was performed to identify potential issues present with the Proposed Action. The issues identified as present were socio-economics, wildlife, visual resource management, and threatened and endangered species.

Chapter 2. Proposed Action and Alternatives

2.1. Description of the Proposed Action:

A. Information

The Proposed Action is the installation of solar panels and battery storage building at Red Rock Fire Station. This action will reduce the stations dependence on generator power, providing a more stable power supply to support the fire suppression mission of the Southern Nevada District. In addition solar panels will be installed at the Pahrump and Logandale Fire Stations. At these stations grid power is used so the construction of battery storage buildings will not be necessary. Pahrump and Logandale were identified through an ARRA project as prime stations to install solar panels, along with other stations from around the state.

B. Methods

1. A contrast rating evaluation will be done for Visual Resource Management at Red Rock Fire Station.
2. Solar panels will be installed in the form of covered parking as shown in the artists rendering.
3. Battery storage buildings will be constructed inside the fenced boundary of the station
4. Additional paving will result from the construction, improving the site drainage.

C. Schedule

Upon completion of this analysis and finalization of plans, then the contracting process will begin. Contractors will be advised of mitigating conditions and special resource considerations that are identified in this document.

D. Maintenance

Maintenance of the solar panel will comply with manufacturers recommendations and cleaning will be done monthly to ensure that panel are performing optimally.

Standard Operating Procedures

2.2. Description of Alternatives Analyzed in Detail:

No Action

The Proposed Action will not be undertaken. If no action is taken Red Rock Fire Station will continue to be served by generator power alone. Pahrump and Logandale will continue to receive grid power, however, the potential economic benefit of power production will not be realized.

[Describe other reasonable alternatives here, including a "No Action" alternative.]

2.3. Alternatives Considered but not Analyzed in Detail

No alternatives were considered or analyzed in detail.

2.4. Conformance

The EA is in conformance with the Las Vegas Resource Management Plan, 1998; Activity: Visual Resource Management VS-1. It is also in conformance with the Red Rock Canyon General Management Plan, 2000; Activity: Visual Resource Management. In addition the Proposed Action aligns with Instruction Memorandum No. 2007-097 which states that “The BLM will evaluate the feasibility of installing PV systems on administrative facilities and on range improvement, resource monitoring, public safety, and recreation projects. Project planning and design should incorporate an appropriate analysis to determine the feasibility, cost and benefits of using PV systems.”.

Chapter 3. Affected Environment:

The table below summarizes the environmental attributes that have been reviewed, whether they will be affected by the Proposed Action, and rationale for that determination. Elements that will not be affected will not be discussed further while affected elements will be carried through for further analysis.

Table 3.1. Affected Resources

Resource	Not Present	Present/Not Affected	Present/Affected	Rationale
Air Quality		X		Ensure contractor meets the air quality requirements of Clark County. If a dust permit is required for this project, ensure one is obtained and is in compliance for the duration of the project. If Clark County determines this project does not require a dust permit, ensure compliance with dust regulations and best management practices for the duration of the project.
Areas of Critical Environmental Concern	X			The proposed project area is not within an ACEC or any critical desert tortoise habitat
BLM Natural Areas	X			Not Present
Cultural Resources	X			The BLM Archaeologist has determined that the undertaking as proposed is exempt from Section 106 review as per Appendix C.2 of the 2009 State Protocol Agreement with the Nevada State Historic Preservation Office (SHPO): "...modifying existing facilities that [does] not disturb

Resource	Not Present	Present/Not Affected	Present/Affected	Rationale
				additional surface area or historic properties; [and] where the facility itself is not a historic property.”
Greenhouse Gas Emissions		X		Present but emissions not calculable. No issues
Environmental Justice	X			Not Present
Farmlands (Prime or Unique)	X			Not Present
Fish and Wildlife Excluding Federally Listed Species		X		Wildlife species in the general area include small mammals, rodents, birds and reptiles. Although there is no new surface disturbance associated with this project and the project area has been fenced, direct impacts associated with mortality of wildlife from vehicular traffic may result during construction and upon subsequent use of the project area.
Floodplains	X			Not Present
Fuels/Fire Management		X		No new disturbance will occur as the result of this project. No issues.
Geology/Mineral Resources/Energy Production	X			No mining claims or mining operations present
Hydrologic Conditions		X		No Impact

Resource	Not Present	Present/Not Affected	Present/Affected	Rationale
Invasive Species/Noxious Weeds				No new disturbance. No issues.
Lands/Access		X		No issues
Livestock Grazing	X			The proposed action is not within a grazing allotment.
Migratory Birds		X		As there will be no new surface disturbance associated with the proposed action, there will be no impact on migratory birds.
Native American Religious Concerns	X			Not Present.
Paleontology	X			Not Present.
Rangeland Health Standards		X		No impact
Recreation (RRNCA, Pahrump, LV)	X			No issues.
Socio-Economics			X	Carried forward for analysis.
Soils		X		No Impact
Threatened, Endangered, or Candidate Plant Species	X			Not present
Threatened, Endangered, or Candidate Animal Species		X		Rationale Assessed in EA.
Wastes (hazardous or solid)				
Water Resources/Quality (drinking/surface/ground)		X		No Impact
Wetlands/Riparian Zones	X			Not Present
Wild and Scenic Rivers	X			
Wilderness/WSA				

Resource	Not Present	Present/Not Affected	Present/Affected	Rationale
Woodland/Forestry	X			Not Present
Vegetation Excluding Federally Listed Species	X			Not Present
Visual Resources		X		<p>The proposed action is located in Visual Resource Management class II, which is managed for the retention of the existing landscape. Levels of change to the landscape should be low and changes may be seen but should not attract attention. A contrast rating analysis was performed to determine the level of visual impact of the proposed action. Due to the topography of the surrounding landscape, the proposed action would not be seen from the Key Observation Points and therefore meets the management criteria for VRM Class II. Please see the Affected Resources and Environmental Effects section of the EA for contrast rating analysis details.</p> <p>Logandale and Pahrump Fire Stations occur</p>

Resource	Not Present	Present/Not Affected	Present/Affected	Rationale
				in Visual Resource Management Class III, which allows for moderate levels of change to the existing landscape. Contrast rating analysis was not performed for Logandale and Pahrump fire stations because the proposed action is consistent with VRM objectives for Class III.
Wild Horse and Burros		X		The proposed action is within the Red Rock Herd Management Area, however this action will occur within the footprint of the existing building site.
Areas with Wilderness Characteristics	X			The proposed action is located within an area which does not meet the criteria for areas with wilderness characteristics.

3.1. Threatened, Endangered Species

Threatened and endangered species are placed on a federal list by the U. S. Fish and Wildlife Service (USFWS) and receive protection under the Endangered Species Act of 1973, as amended. The only T & E species known to occur in the vicinity of the project area is the threatened desert tortoise (*Gopherus agassizii*).

The habitat requirements needed for a desert tortoise to survive include sufficient suitable plants for forage and cover, suitable substrates for burrow and nest sites, and freedom from disturbance. In the Mojave region, the desert tortoise occurs primarily on flats and bajadas with soils ranging from sand to sandy-gravel characterized by scattered shrubs and abundant inter-shrub space for herbaceous plant growth. They are also found on rocky terrain and slopes. The desert tortoise comes out of hibernation sometime during the month of March and returns to hibernation in November depending on temperature. Past monitoring data in southern Nevada shows that tortoise activity peaks in April, May, September and October. Historical survey data indicates that the area surrounding the project site is low density tortoise habitat. BLM Wildlife Biologist conducted a site visit to the project site on January 19, 2009 and confirmed that the project area has been fenced and cleared of tortoise from the construction of the fire station. This site visit identified a gap in the fencing at the ingress and egress gate.

Historical survey data indicates that the area surrounding the Red Rock and Logandale project site is low density tortoise habitat and the area surrounding the Pahrump project site is moderate density tortoise habitat. BLM Wildlife Biologist and a GBI Natural Resource Specialist conducted a site visit to the project site on January 19, 2010 and March 11, 2010 and confirmed that the project areas have been fenced and cleared of tortoise from the construction of the fire stations. These site visits identified gaps in the fencing at the ingress and egress gate, wherein a juvenile desert tortoise may enter the project areas.

3.2. Wildlife

The RRCNCA supports a rich community of nearly 300 diverse wildlife species. The project area supports wildlife characteristic of the north-eastern Mojave Desert. Biological diversity varies according to topography, plant community, and proximity to water, soil type, and season. Many of these species have adapted complex life strategies for survival in the desert environment. Wildlife species in the general area include small mammals, rodents, birds and reptiles. Based on ecological sensitivity factors, three groups of priority management concern are the bats, raptors, and reptiles and amphibians. The remaining RRCNCA wildlife group, carnivores and hoofed animals, represent a mix of unrelated species. Carnivores include foxes, coyotes, ringtails, badgers, bobcats and mountain lions. The hoofed animals of the RRCNCA are mule deer, bighorn sheep and elk. Several common species of reptiles would be represented in the surrounding habitat types. These species include the western whip-tail (*Cnemidophorus tigris*), desert iguana (*Dipsosaurus dorsalis*), side-blotched lizard (*Uta stansburiana*), zebra-tail lizard (*Callisaurus draconoides*), desert tortoise (*Gopherus agassizii*), western shovel-nosed snake (*Chionactis occipitalis*) and garter snake (*Thamnophis sp.*). Common bird species that would be represented include the rock wren (*Salpinctes obsoletus*), black-throated sparrow (*Amphispiza quinquestriata*), turkey vulture (*Cathartes aura*), common raven (*Corvus corax*), phainopepla (*Phainopepla nitens*), red-tailed hawk (*Buteojamaicensis*), and western burrowing owl (*Athene cunicularia*

hypugea). Common mammal species include the black-tailed hare (*Lepus californicus*), and the desert cottontail (*Sylvilagus audubonii*). Abundant evidence during the course site visit suggested the presence of common Mojave Desert rodent inhabitants such as cactus mice (*Peromyscus eremicus*), Merriam kangaroo rats (*Dipodomys merriami*) and species associated with rocky habitats including the wood rat (*Neotoma lepida*). All of these species maintain dens and nest, hunt and forage, and rely on close ecological relationships to the habitat in which they live.

3.3. Visual Resources

The Visual Resource Management Program strives to manage and maintain the quality of the visual environment and reduce the visual impact of development activities, while maintaining effectiveness in all Bureau resource programs. Through a broad range of authorities, BLM is required to manage BLM administered lands in a manner that will preserve scenic values. The Federal Land Policy and Management Act of 1976 (FLPMA) and the National Environmental Policy Act of 1969 (NEPA) include Federal mandates for VRM, while other guidance can be found in BLM Manual 8400, BLM Handbook H-8410-1, and BLM Handbook H-1601-1.

The Red Rock Fire Station and the proposed action occur in Visual Resource Management Class II, which manages for retention of the existing landscape. Levels of change to the existing landscape should be low, and should repeat the basic elements of form, line, color and texture found in the surrounding environment. Management activities may be seen but should not attract attention of the casual observer. Red Rock Canyon is well known for its scenic values and scenic viewing is the activity that attracts the highest percentage of visitors to Red Rock Canyon.

The area surrounding the fire station is comprised of a prominent rugged mountain in the middle ground and gently undulating hills in the foreground. Vegetation is not dominant and is comprised mainly of low-lying creosote bush scrub. Sparse Joshua Trees add some vertical structure. Colors in the landscape range from beige to dark brown with yellowish green and grey vegetation. Lines in the existing landscape are predominantly horizontal. The existing structures associated with the fire station are blocky and smooth textured and are pink and off-white in color.

3.4. Socio-Economics

Chapter 4. Environmental Effects:

4.1. Visual Resources

4.1.1. Proposed Action

The installation of solar panel parking structures and associated facilities as described would add both vertical structure (the poles and panels themselves) and converging lines (formed by the alignments of panels) to the existing landscape. The rectangular forms of the panels and the addition of black color to the area would create contrast. However since the panels will be angled south and away from Moenkopi Road, the reflection will be reduced.

At the site itself, proceeding with the proposed action would create a moderate level of contrast. However, due to the location of the fire station, this view will not be frequently seen by the casual observer. Key observation points are chosen where it is most likely that the casual observer may see the proposed action. There are three key observation points for this project: 1. along SR159, 2. at the pull-off near the beginning of Moenkopi Road, 3. at the Red Rock Campground. Due to landscape characteristics or the hills surrounding the station, the proposed action will not be visible from any of these key observation points, resulting in a no contrast rating. The proposed action will only be visible for a short stretch while driving along Moenkopi Road (about 0.3 miles). There are no pull-offs or reasons to stop along this stretch of the road, so the proposed action will only be visible for a short period of time. Due to the lack of visibility of this site, the proposed action meets Visual Resource Management objectives for Class II. The proposed action will be visible, but will not attract the attention of the casual observer. Efforts should be made to further reduce visual impact by painting the associated structures a color that is harmonious with the surrounding landscape and existing structures and keeping the height of the solar array and structures as low as reasonably possible.

4.1.2. No Action

If no action is undertaken the Visual Resources around the Fire Stations will remain unchanged.

4.2. Threatened, Endangered Species

4.2.1. Proposed Action

There will be no new disturbance associated with this action and all activated will take place within the existing fence. The proposed action has a no affect determination on the threatened desert tortoise (*Gopherus agassizii*). This project will have no affect on any other federally listed species or designated critical habitat. Compliance with the special stipulations below will help to ensure that no affect to desert tortoise occurs and that the opportunity for any desert tortoise to wander onto the site will be improbable.

- 1) The proponent is required to maintain existing desert tortoise fence around the perimeter of the project areas to prevent tortoises from wander into the project area.
- 2) While heavy equipment is being used for the proposed project, the gap in the fencing at the ingress and egress gates shall be at least temporarily modified to include tortoise proof fencing at the base to prevent tortoises from wander into the project area.

- 3) Should a desert tortoise enter the area of activity, all activity shall cease until such time as the animal has left the area of its own accord.
- 4) Workers will be instructed to check underneath all vehicles before moving them as tortoises often take cover underneath parked vehicles.
- 5) Workers will be provided educational information on the desert tortoise with includes the legal protection and consequences for the violation of the Endangered Species Act.
- 6) A speed limit of 25 miles per hour shall be required for all vehicles travelling on the existing access road.

4.2.2. No Action

If no action is undertaken then T and E species will not be impacted due to construction.

4.3. Wildlife

4.3.1.

Although there is no new surface disturbance associated with this project and the project area has been fenced, there may be opportunities for wildlife species to enter the project area. Direct impacts associated with mortality of wildlife from vehicular traffic may result during construction and upon subsequent use of the project area.

4.3.2. No Action

If no action is undertaken then wildlife species will not be impacted.

4.4. Socio-Economic

4.4.1. Proposed Action

Once the proposed project is completed, there will be an immediate and ongoing benefit to the fire station as they will not incur power outages because of having the stored solar power in reserve supply. There will also be a long-term economic benefit of alternative energy supply to the fire station as it will reduce energy costs to the fire station

4.4.2. No Action

If no action is undertaken then the environment, district, and station will not receive the benefits of having a reliable energy source. The costs of running the diesel generator will remain high and reliance on delivered fuel will continue.

Chapter 5. Tribes, Individuals, Organizations, or Agencies Consulted:

[Describe consultation efforts here.]

Table 5.1. List of Persons, Agencies and Organizations Consulted

Name	Purpose & Authorities for Consultation or Coordination	Findings & Conclusions
Enter Name		
Enter Name		

Chapter 6. List of Preparers

[Enter the Preparers List here.]

Table 6.1. List of Prepares

Name	Title	Responsible for the Following Section(s) of this Document
Lisa Christianson	Air Resources Specialist	Air Quality, Greenhouse Gas Emissions
Susanne Rowe	Archeologist	Cultural Resources, Paleontology, Native American Religious Concerns
Susan Farkas	Planning and Environmental Coordinator	Environmental Justice, Socio-Economics
Amelia Savage	Wildlife Biologist	ACEC, T&E Species, Fish and Wildlife, Migratory Birds
Sarah Peterson	Hydrologist	Floodplains, Hydrologic Conditions, Soils, Wetlands and Riparian Zones
Evan Allen	Geologist	Geology, Mineral Resources, Energy Production
Nora Caplette	Weeds Specialist	Invasive and Noxious Weeds
Krystal Johnson	Wild Horse and Burro Specialist	Wild Horse and Burros, Rangeland Health Standards, Farmlands and Livestock Grazing
Lee Kirk, Marc Sanchez	Outdoor Recreation Planner	Recreation, Wild and Scenic Rivers
Fred Edwards	Botanist	T&E Plants, Woodland and Forestry, Vegetation
Sendi Kalcic	Wilderness Planner	Wilderness and WSA, Areas with Wilderness Characteristics
Lauren Brown	Restoration Ecologist	Visual Resources
Dorothy Dickey, Frederick Marcell	Realty Specialist	Lands/Access
Lucas J. Rhea	Fuels Specialist	Fuels/Fire Management, BLM Natural Areas