

Introduction

Identifying Information:

Title, EA number, and type of project:

Streamgage Installation at Rainbow Spring in Red Rock Canyon National Conservation Area

DOI-BLM-NV-S020-2014-0015-EA

Location of Proposed Action:

T22S R58E Section 7 NENE

Name and Location of Preparing Office:

Southern Nevada District Office

Red Rock/Sloan Field Office (FO)

4701 N Torrey Pines Drive

Las Vegas, NV 89130

Identify the subject function code, lease, serial, or case file number:

DOI-BLM-NV-S020-2014-0015-EA

Applicant Name:

Bureau of Land Management (BLM)

Purpose and Need for Action:

A continuous streamgage is needed to collect baseline data from Rainbow Spring to quantify streamflow and to make informed decisions about land management in the area. Also, a BLM special status species, the Spring Mountain pyrg (*Pyrgulopsis deaconi*) (a BLM sensitive springsnail) inhabits this recently restored spring. By monitoring water flow at this spring, we can ensure the proper management of this BLM sensitive species.

Decision to be made: The BLM will decide whether or not to install a streamflow gage at Rainbow Spring in Red Rock Canyon NCA.

Scoping, Public Involvement and Issues:

This assessment has been scoped and reviewed internally by BLM resource specialists to ensure that all natural, cultural and social resource issues and concerns are being identified and addressed appropriately. Their comments and evaluations are included in the affected environments section within this environmental assessment (EA). External scoping was not conducted because no issues were identified. However, upon completion of the EA, this document will be uploaded to the NEPA Register website where the public may view a project summary.

Proposed Action and Alternatives

Description of the Proposed Action:

One streamgage would be installed on the left bank of Rainbow Spring approximately 30 ft south from the spring, next to the fence marking the wilderness boundary and hidden behind several large holly bushes. The proposed gage would consist of a gage enclosure (steel highway box, dimensions approximately 2 ft by 2.5 ft by 8 inch deep or smaller if possible) mounted on two 4x4 inch wooden posts set vertically 1-1.5 ft into the ground and secured with one-two 60 lb bags of concrete per post. A pressure transducer line housed in ½ inch conduit would be buried and would run from the gage to the spring to measure water levels. The line and conduit would be buried approximately 4-8 inches deep to prevent a tripping hazard and to preserve the wilderness aspects of Rainbow Spring. The end of the line in the spring would be anchored by two ¼ inch concrete anchors and a pipe strap attached to a boulder in the stream. Another pipe strap may be used for additional security and would also be installed on the same boulder. A data logger in the gage enclosure would record stage every 15 minutes and transmit the collected stage data via satellite to an antenna receiver and computer for near-real-time display on the US Geological Survey (USGS) web page.

A reference point would also be included with the installation. A reference point consists of a 3/8 inch concrete anchor drilled into a boulder in the stream. The reference point would be installed protruding no more than ¼ inch from the boulder. For the schematic of the proposed gage see Figure 2-1. The new gage would be visited every six weeks by USGS personnel. Each visit would take approximately two hours, with the exception of installation which should take two 8 hour work days. The gage would be accessed by driving until the road ends, then hiking the rest of the way in. Installation may require the use of one ATV, which would only be driven on existing roads.

All equipment would be removed when the gage is decommissioned in approximately 2 to 10 years, based on funding and data collection needs. Any anchor bolts installed into bedrock or boulders would be cut sheer with the rock, covered with epoxy, and painted to match the rock when the gage is decommissioned.

Below are avoidance and minimization measures would be implemented as design features in order to minimize potential environmental effects by the proposed action:

Cultural Resources:

- Should any subsurface cultural remains be identified during the installation, the RRC/Sloan FO Archaeologist would be contacted of the discovery within 48 hours.

Invasive Species/Noxious Weeds:

- All project actions must conform to applicable Best Management Practices (BMPs) and standard BLM weed stipulations.

Migratory Birds:

- To prevent direct impacts to migratory birds, habitat-altering projects or portions of projects should be scheduled outside bird breeding season. In upland desert habitats and ephemeral washes containing upland bird species, the season generally occurs between February 15th and August 31st.

- If a project that may alter any breeding habitat has to occur during the breeding season, then a qualified biologist must survey the area for nests prior to commencement of construction activities. This shall include burrowing and ground nesting species in addition to those nesting in vegetation. If any active nests (containing eggs or young) are found, an appropriately-sized buffer area (size depending on the habitat requirements of the species) should be delineated and the entire area avoided to prevent destruction or disturbance to nests until they are no longer active and birds have fledged. As the above dates are a general guideline, if active nests are observed outside this range they are to be avoided as described above.

BLM Sensitive Springsnails:

- If equipment has been previously used for work in another spring, decontaminate all equipment before and after use with a 10% bleach solution or 409 solution which may harbor foreign chemical or biological matter following established protocols.
- Minimize physical disturbance to the waterway, banks, and surrounding vegetation. Use only existing travel routes and travel through open upland areas whenever possible.
- Provide education and guidance to USGS personnel on-site about springsnails to minimize any adverse impacts from work activities. Any in-stream work should be minimized to the extent practicable. Any need to enter the stream would be cleared of springsnails in the immediate area prior to entering the spring.
- If sedimentation is expected from work in and near stream, sediment, runoff, and erosion control measures would be installed before starting work (e.g., temporary silt fences immediately below work area). These would be cleared of any rocks and/or vegetation that may contain springsnails.
- If needed, salvage springsnails from the immediate area of disturbance where the streamgage is to be placed. Collect substrates with springsnails (e.g. vegetation, rocks) and place these in a container with water collected from the spring. Move salvaged springsnails and all vegetation and rocks to like habitat with similar water quality (e.g. temperature, pH, turbidity, dissolved oxygen, and free of chemical contaminants), substrates, depth, and flow to prevent or limit mortality.
- Restore all areas disturbed as a result of streamgage installation.
- The above BMPs would be followed during all monitoring activities of the streamgage.

Wilderness:

- The BLM shall ensure that no project components are installed within the boundaries of the wilderness. If questions regarding the wilderness boundary arise, the proponent shall contact the BLM Wilderness Specialist immediately.
- The BLM shall ensure that no uses which are prohibited within wilderness (i.e., motorized equipment [power drills, generators] or mechanical transport and equipment [wheelbarrows, hand drills, carts]) cross into the wilderness during installation activities.

Figure 1. Schematic of proposed streamgage

Streamgage Installation at Rainbow Spring —
 Environmental Assessment DOI-BLM-NV-
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Location:

The township, range, section is NE1/4 Sec 7, R58E, T22S. The location is 634207 m E, 3990808 m N.

Intensity: Site establishment will require 3 people and 1-2 pickup trucks, plus one ATV. The trucks and ATV will only be driven and parked on established roads. Site operation and maintenance will require 1 or 2 people driving 1 truck that will be driven and parked on established roads. Quantifying streamflow from Rainbow Spring involves measuring stage by a pressure transducer and manually making discharge measurements until a stage/discharge rating can be computed. Discharge from the spring will be directly measured by flume or volumetric methods. Once the rating is computed, manual discharge measurements will continue to be made to calibrate the rating.

Description of Alternatives Analyzed in Detail:

No Action Alternative:

Under the No Action Alternative, a streamgage would not be installed and continuous discharge measurements from Rainbow Spring would not be available.

Alternatives Considered but not Analyzed in Detail

Alternative options for the placement of the streamgage were considered. Alternatives included:

- placing the streamgage in the wilderness; and
- placing the measurement point and gage structure further downstream.

It was determined that (1) placing electronic equipment associated with a streamgage in a wilderness was not in conformance with the La Madre Mountain Wilderness and Rainbow Mountain Wilderness Final Wilderness Management Plan, (2) placing the measurement point and gage structure further downstream would lead to less reliable measurements. Hence, the solution presented in the proposed action would provide a sustainable solution to obtain continuous discharge measurements in the most efficient manner.

Conformance

This document is prepared in compliance with the National Environmental Policy Act (NEPA). Its purpose is to analyze the effects of the proposed action, alternatives, and recommended mitigation measures that would eliminate or lessen environmental impact.

The action is also in conformance with all applicable laws, regulations, and BLM guidance. The proposed action is in conformance with the BLM Red Rock Canyon NCA Resource Management Plan (RMP) approved May 20, 2005.

Affected Environment:

A detailed description of the of the affected environment is contained in the 2005 Red Rock Canyon Nation Conservation Area Resources Management Plan (RRCNCA RMP).

The table below (Table 1) summarizes the environmental attributes that have been reviewed, whether they may be affected by the proposed action, and the rationale for that determination. Elements that are not present or are present but would not be affected will not be discussed further in this EA. If resources that are present and may be affected by the proposed action would be analyzed further in the Affected Environment and Environmental Consequences section of this EA.

Table 1. Affected Resources Table

Resource or Resource Use	Not Present	Present but Not Affected	Present / May be Affected	Rationale
Air Resources		X		No new disturbances.
Areas of Critical Environmental Concern (ACEC)	X			The proposed project area is not within an ACEC or any critical desert tortoise habitat on BLM managed lands.
BLM Natural Areas	X			The proposed action is not within North Fork Pine Creek Natural Area.
Cultural Resources		X		The proposed action would not affect any known cultural resources in the vicinity. Per the current BLM-State Historic Preservation Office (SHPO) Protocol Agreement, the BLM determines <i>no historic properties affected</i> for the proposed action.
Greenhouse Gas Emissions		X		Currently there are no emission limits for suspected Greenhouse Gas (GHG) emissions, and no technically defensible methodology for predicting potential climate changes from GHG emissions. However, there are, and would continue to be, several efforts to address GHG emissions from federal activities, including BLM authorized uses.
Environmental Justice	X			It is unlikely that any minority or low-income communities are present in project area.
Farmlands (Prime or Unique)	X			There are no prime or unique farmland designations in the District.
Fish and Wildlife Excluding Federally Listed Species		X		While mammals, birds, and reptiles, including BLM Sensitive species such as chuckwalla, banded Gila monster, Mojave shovel-nosed snake, desert glossy snake, and Desert bighorn sheep, may be present in the proposed area, the proposed action includes avoidance and minimizations measures described in the Proposed Action section of this EA. Thus potential impacts to the wildlife and associated habitat is likely to be minimized, and no further analysis is needed.
Floodplains	X			There are no FEMA designated floodplains present in the project area.

Fuels/Fire Management		X		Compliance with fire restrictions current at time of project implementation would mitigate any risks introduced by the proposed actions. Specific, noncompliant activities may be waived on a case by case basis by a line officer after review and approval by the Fire Management Officer.
Geology / Mineral Resources/Energy Production		X		Lands within the RRC NCA have been removed from mineral entry.
Hydrologic Conditions		X		The proposed action includes minimal surface disturbance, there would be no impacts to hydrologic conditions.
Invasive Species/Noxious Weeds		X		Minimal surface disturbance in this project poses no serious threats to spread of Invasive Species / Noxious Weeds.
Lands/Access		X		As the project site is accessed by existing roads, there are no issues.
Livestock Grazing	X			The proposed action area is not located in any authorized grazing allotments.
Migratory Birds		X		While migratory birds may be present in the proposed area, the proposed action includes avoidance and minimizations measures described in the Proposed Action section of this EA. Thus potential impacts to migratory birds and associated habitat is likely to be minimized, and no further analysis is needed.
Native American Religious Concerns		X		Based on coordination/consultations concerning the area, there have not been any Native American issues of religious concern identified.
Paleontology	X			A review of the relevant maps and literature revealed that are not any paleontological resources of concern in the area.
Rangeland Health Standards		X		Four fundamentals of rangeland health are listed in Title 43 CFR § 4180.1. These include watersheds, ecological processes, water quality, and habitats. Potential impacts to these values are analyzed as part of the vegetation, hydrology, wildlife and federally listed species sections and are not analyzed in this section since the other resource analyses are adequate.
Recreation		X		The site is a low use access point for dispersed recreation within the NCA. No conflicts with recreation are expected.
Socio-Economics		X		The Proposed Action may provide social and economic benefit as it collects data on the streamflow and precipitation at Rainbow Spring, but not to a degree that analysis would be required.
Soils		X		Minimal disturbance. No impacts to local soil resources.
Threatened, Endangered or Candidate Plant Species	X			Based on known locations and habitat requirements, Threatened, Endangered or Candidate plant species are not present.

Threatened, Endangered or Candidate Animal Species	X			<p>This project would be in compliance with section 7 of the Endangered Species Act of 1973 as amended (16 U.S.C. 1531 et seq.) for consultation with the USFWS on effects to federally listed and candidate species. The above proposed action has a no effect determination for the threatened desert tortoise (<i>Gopherus agassizii</i>). This project would have no effect on any other federally listed species or designated critical habitat.</p> <p>The proposed project site is situated above 5000 feet in elevation; therefore, tortoise habitat is not present. Multiple site visits verify the absence of tortoise habitat. No impacts to desert tortoises are expected.</p> <p>This notice would serve as the Section 7 Determination and no additional paperwork would be provided (Sec 7 Log # NV-052-14-197).</p>
Wastes (hazardous or solid)	X			Not present.
Water Resources/Quality (drinking/surface/ground)		X		The Proposed Action would not cause any major changes in the runoff characteristics of the site and would not use local water resources for construction.
Wetlands/Riparian Zones		X		As there would be no permanent disturbance associated with the proposed action, there would be no impact to wetlands/riparian zones.
Wild and Scenic Rivers	X			Resource not present.
Woodland / Forestry		X		Only minimal surface disturbance would occur and vehicle access is limited to existing roads and disturbed areas. Cactus and yucca may be present within the project impact area. Cactus and yucca are considered government property and are regulated under the Nevada BLM forestry program. To the extent practical, cacti and yucca within the project area should be avoided by this action. If cactus and yucca are unable to be avoided, due to the small amount of disturbance associated with this project, impacts would be considered negligible.

Wilderness/WSA	X	X	<p>Wilderness: The proposed action is located adjacent to the Rainbow Mountain Wilderness. No buffer zones are created around wilderness and therefore the sights and sounds of non-wilderness activities may be seen or heard from visitors within wilderness. Rainbow Spring originates within the boundaries of the Rainbow Mt. Wilderness, however, flow eventually travels outside of the wilderness. Based on a site visit on 08/19/2014 by R. Kyes with B. Poff and the M. Poff (USGS), it was determined that the streamgage and associated equipment could be installed just outside of the wilderness boundary by a few feet.</p> <p>Indirect negative impacts to wilderness characteristics of undeveloped and solitude would be very localized and temporary in nature. Because the proposed action is located directly adjacent to the wilderness boundary (less than 5–10 feet) it would be visible for the duration of the project from within the wilderness by users. Construction activities may also temporarily impact wilderness users. However, impacts would not occur to a degree that detailed analysis is required.</p> <p>WSA: Resource not present.</p>
Vegetation Excluding Federally Listed Species		X	<p>Only minimal surface disturbance would occur. The following BLM sensitive plant species are known to occur within .2 miles of the project area: Jaeger beardtongue (<i>Penstemon thompsoniae</i> ssp. <i>jaegeri</i>). If Jaeger beardtongue is present, due to the small amount of disturbance, potential impacts to the species would be negligible.</p>
Visual Resources		X	<p>This project would occur within VRM Management Class III that states “Contrast to basic elements caused by management activity are evident, but should remain subordinate to the existing landscape”. The gauge, as described, is consistent with VRM III. No Issues.</p>
Wild Horses and Burros		X	<p>Rainbow Spring is located in the Red Rock Herd Management Area, however, due to the scope of this project, spring location, and temporary nature of the stream gauge there would be no impacts to wild horses or burros.</p>
Lands with Wilderness Characteristics	X		<p>There are no lands managed for wilderness characteristics.</p>

Environmental Effects:

This chapter has no further analysis because no environment effects have been identified. (See previous section.)

Tribes, Individuals, Organizations, or Agencies Consulted:

Based on previous coordination/consultations concerning the area, there have not been any Native American issues of religious concern identified.

Table 1. List of Persons, Agencies and Organizations Consulted

Name	Purpose & Authorities for Consultation or Coordination	Findings & Conclusions
Timbisha Shoshone	Contacted to check if interested in consultation.	Not Interested in activities in the RRC NCA.

List of Preparers

Table 2. List of Preparers

Name	Title	Responsible for the Following Section(s) of this Document
Ben Klink, GBI	District Weeds Management Specialist and ESR Coordinator	Invasive Species/Noxious Weeds and Fuels/ Fire Management
Lisa Christianson	Air Quality Specialist	Air Quality, Greenhouse Gas Emissions, Hazardous Waste
Mark Boatwright	Archaeologist	Cultural Resources, Native American Religious Concerns, Paleontological Resources
Susan Farkas	Planning and Environmental Coordinator	Environmental Justice, Socioeconomics
Ashley Holcomb, GBI	Natural Resource Specialist	Vegetation, Rangeland Health, Threatened / Endangered Plant Species, Livestock Grazing, Woodland/Forestry
Carla Wise	Wildlife Biologist	Fish and Wildlife, ACECs, Migratory Birds, Threatened / Endangered Animal Species
Boris Poff	Hydrologist	Author of document as well as Floodplains, Hydrologic Conditions, Soils, Water, Wetlands and Riparian
Kerri-Anne Thorpe	Realty Specialist	Lands and Access
Evan Allen	Geologist	Geology, Mineral Resources, Energy Production
Josh Travers	Outdoor Recreation Planner	Recreation
Brenda Warner	Outdoor Recreation Planner	Visual Resources
Krystal Johnson	Wild Horse and Burro Specialist	Wild Horse and Burro, Farmlands
Randy Kyes	Wilderness Planner	BLM Natural Areas, Wild and Scenic Rivers, Wilderness, WSAs, Lands with Wilderness Characteristics