

To: Pamela Jarnecke[pjarnecke@blm.gov]; Allison Ginn[aginn@blm.gov]; Tyler Ashcroft[tashcrof@blm.gov]
Cc: I Blocker[mblocker@blm.gov]
From: Curtis, Aaron
Sent: 2017-10-18T19:27:17-04:00
Importance: Normal
Subject: Fwd: Six Shooter project visual contrast rating
Received: 2017-10-18T19:27:32-04:00
[Indian Ck Res 4.7.17.jpg](#)
[Indian Ck Allot Reservoirs Checklist 4.7.17.docx](#)
[Indian Ck Allot Reservoirs EA 8.13.17.docx](#)
[Proposed Project Pt.shp.xml](#)
[Indian Ck Res 4.7.17.pdf](#)

Matt brought this project proposing up to 7 earthen reservoirs up to 0.5 acres each to my attention because Monticello is having some internal conversations regarding VRM that he needed assistance responding too. After a quick Ctrl+F, I realized the words "national monument," "objects," or "values" don't appear any where in the EA, nor in any meaningful way in the checklist.

I am going to set up a call with Amber to discuss the VRM situation, but could you please confirm with me that we're also going to need to raise NM considerations with them? It'd be nice if we can try to tackle everything at once. Thanks! AJC

----- Forwarded message -----

From: Blocker, Matthew (Matt) <mblocker@blm.gov>
Date: Wed, Oct 18, 2017 at 4:50 PM
Subject: Six Shooter project visual contrast rating
To: Robert Sweeten <rsweeten@blm.gov>
Cc: Aaron Curtis <acurtis@blm.gov>

Hey Aaron and Rob,

Can you help me with an email to Amber Johnson in Monticello to describe why it is necessary to complete a visual contrast rating form for this six shooter project? I have attached the EA and map location of the proposed reservoirs locations. Below is my attempt at an email justifying the contrast rating and the contrast rating process.

Hey Amber,

Thank you for reaching out for clarification on the need to complete a visual contrast rating form for the six shooter project. Of course the decision is always up to management. The visual contrast rating (VCR) process assists with the planning and design of proposed actions to avoid and minimize visual contrast. The VCR process is used as the basis for conducting visual impact assessment to characterize impacts to visual resources (i.e., the landscape) and potential viewers. The outcome confirms whether the potential visual impacts from proposed project will meet the visual resource management (VRM) class objectives and allowable level of change established for the area. For the Six Shooter project the project is located within VRM II, which the objective for class II is *to retain the existing character of the landscape. Allowed Level of Change: The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes*

must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.

The steps in completing a contrast rating form are:

1. View the project description DONE
2. Identify the VRM Objectives DONE
3. Select Key Observation Points (KOP's) FIELD TRIP
4. Prepare visual simulations FIELD TRIP

Further guidance can be found in the BLM VRM Manual 8400 and at the following website
<http://blmwyomingvisual.anl.gov/assess-simulate/blm/index.cfm>

Matt Blocker
Recreation and Visitor Services Lead
Bureau of Land Management, Utah State Office
Salt Lake City, UT
Phone: (801) 539-4021

----- Forwarded message -----

From: **Worth, Casey** <cworth@blm.gov>
Date: Thu, Aug 24, 2017 at 5:00 PM
Subject: Re: View shed analysis tool
To: "Blocker, Matthew (Matt)" <mblocker@blm.gov>

Hope this isn't too much info at once.
Thanks

Casey Worth
Outdoor Recreation Planner
Monticello Field Office
PO Box 7
Monticello, UT 84535
Phone: (435) 587 1519
Fax: (435) 587 1518

On Thu, Aug 24, 2017 at 4:38 PM, Blocker, Matthew (Matt) <mblocker@blm.gov> wrote:

Matt Blocker
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Salt Lake City, UT
Phone: (801) 539-4021

----- Forwarded message -----

From: **Blocker, Matthew (Matt)** <mblocker@blm.gov>

Date: Tue, Aug 15, 2017 at 4:45 PM

Subject: View shed analysis tool

To: Aaron Curtis <acurtis@blm.gov>, "Wysong, Sheri" <swysong@blm.gov>, "Davenport, Julie" <jmdavenport@blm.gov>, mmoffitt@blm.gov, "Boivin, Emily" <eboivin@blm.gov>, Amanda Leaman <aleaman@blm.gov>

Here are instructions on how to use the viewshed analysis tool in Google Earth. You can also do 3D models

Matt Blocker

Recreation and Visitor Services Lead

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Aaron Curtis

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**United States Department of the Interior
Bureau of Land Management**

**Environmental Assessment
DOI-BLM-UT-Y020-2017-0029-EA**

August 13, 2017

Indian Creek Allotment Reservoirs

Location: San Juan County, Utah

Applicant(s): Bureau of Land Management, Monticello Field Office
The Nature Conservancy (TNC) – Grazing Permittee

Monticello Field Office
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Indian Creek Allotment Reservoirs DOI-BLM-UT-Y020-2017-0029-EA

1.0 PURPOSE & NEED

1.1 Introduction

This Environmental Assessment (EA) has been prepared to disclose and analyze the potential environmental consequences of constructing seven earthen reservoirs to detain and hold surface water run-off on the Indian Creek Allotment as proposed by the Bureau of Land Management's (BLM) Monticello Field Office (MFO) and The Nature Conservancy (TNC) (grazing permittee). The EA is a site-specific analysis of potential impacts that could result with the implementation of a proposed action or alternatives to the proposed action. The EA assists the BLM in project planning and ensuring compliance with the National Environmental Policy Act (NEPA), and in making a determination as to whether any "significant" impacts could result from the analyzed actions. "Significance" is defined by NEPA and is found in regulation 40 CFR 1508.27. An EA provides evidence for determining whether to prepare an Environmental Impact Statement (EIS) or a statement of "Finding of No Significant Impact" (FONSI). If the decision maker determines that this project has "significant" impacts following the analysis in the EA, then an EIS would be prepared for the project. If not, a Decision Record may be signed for the EA approving the selected alternative, whether the proposed action or another alternative. A Decision Record (DR), including a FONSI statement, documents the reasons why implementation of the selected alternative would not result in "significant" environmental impacts (effects) beyond those already addressed in Monticello Field Office Resource Management Plan (RMP, 2008).

1.2 Background

The proposal occurs on the Indian Creek Allotment (#04815) that encompasses approximately 228,184 BLM administered acres. TNC holds preference to a grazing permit for 1,004 cows with a grazing period of 10/01 through 06/15 that totals 8,518 Active Animal Unit Months (AUMs). The subject allotment has been grazed by domestic livestock since the late 1800's.

The project area is located approximately 25 miles northwest of Monticello, Utah in San Juan County. See Appendix B for a map of the proposed project.

BENM

1.3 Purpose and Need for the Proposed Action

The purpose and need for the action is to enhance adaptive livestock management and control on the Indian Creek Allotment through additional water developments. Thereby, the project may allow greater adherence to the Standards and Guidelines for Healthy Rangelands by facilitating greater livestock distribution and improved control of grazing patterns and forage use levels (BLM, 2005).

The MFO's underlying need is to respond to the applicant's request for the reservoirs and to allow for multiple uses of BLM administered lands in accordance with the Federal Land Policy and

Management Act of 1976 (FLPMA) and the MFO Record of Decision (ROD) and approved RMP. Additionally, livestock grazing and developments are recognized as an appropriate use of public lands in the MFO RMP that provides management direction. The BLM is considering approval of the water wells in accordance with FLPMA and grazing regulations found within Title 43 of the Code of Federal Regulations (CFR) part 4100.

1.4 Conformance with BLM Land Use Plan(s)

The Proposed Action described below is in conformance with the MFO RMP, approved in November of 2008 (RMP, 2008). Although the Proposed Action is not specifically mentioned in the plan, it is consistent with the goals, objectives, and decisions as they relate to the Livestock Grazing program as outlined on pages 75-78 of the RMP. The RMP identifies the Indian Creek Allotment as being available for livestock grazing (RMP, 2008, Appendix F). Associated with livestock grazing are range improvements (e.g. reservoirs, fences, wells etc.), such as proposed, that facilitate grazing management.

The Indian Creek Allotment is categorized as “I - Improve” in the RMP, which states “there is potential for positive economic return on public investment,” and “these allotments have potential to improve, or have conflicts that can be resolved through changes in grazing management or investment in range improvement projects.” RMP’s Management Action for Livestock Grazing (GRA)-1; “Manage grazing according to Standards for Rangeland Health and Guidelines for Grazing Management.”

It has been determined that the proposed action would not conflict with other decision throughout the plan.

1.5 Relationship to Statutes, Regulations, or Other Plans

The proposed action would comply with the following laws and regulations:

- Taylor Grazing Act (TGA) of 1934
- Federal Land Policy and Management Act (FLPMA) of 1978
- Public Rangeland Improvement Act (PRIA) of 1978
- Endangered Species Act (ESA) of 1973 as amended
- Section 106 of the National Historic Preservation Act (NHPA), 1966, as amended
- 43 Code of Federal Regulations (CFR) 4100 Grazing Administration-Exclusive of Alaska

The proposed action would comply with the federal regulations of 43 CFR 4120.3 – Range Improvements. This regulation states, in part:

- “Range improvements shall be installed, maintained, and/or modified on the public lands, or removed from these lands, in a manner consistent with multiple-use management.”
- “Prior to installing, using, maintaining, and/or modifying range improvements on public lands, permittees or lessees shall have entered into a cooperative range improvement agreement with the BLM or must have an approved range improvement permit.”
- “A range improvement permit or cooperative range improvement agreement does not convey to the permittee or cooperator any right, title, or interest in any lands or resources held by the United States.”

- “Proposed range improvement projects shall be reviewed in accordance with the requirements of the National Environmental Policy Act of 1969.”

The proposal would be consistent with the 2017 San Juan County Resource Management Plan (SJCRRMP, 2017). The SJCRRMP states that BLM administered lands be managed under principles of “multiple use and sustained yield” and recognizes livestock grazing as one of the multiple uses. The plan goes on to state that “livestock and grazing in San Juan County is important for the natural, cultural, social, and economics benefits it provides...” and that “rangeland is an important part of the agricultural economy in San Juan County.” An objective of the plan states “the livestock industry is a viable and sustainable component of the County’s economy, heritage, and culture.” Policies of the plan include “support the management of the range resource within its productive capabilities for grazing and browsing animals in harmony with other resources and activities to provide sustained yield and improvement of the forage resource...”, “support a “no net loss” in active livestock AUMs as supported by range science...”, and “support the implementation of rangeland improvement projects...”.

The action is consistent with Fundamentals of Rangeland Health and Utah’s Standards and Guidelines for Healthy Rangelands as it enables grazing management practices that improve public land conditions. Guideline 1(h) states to “give priority to rangeland improvement projects and land treatments that offer the best opportunity for achieving Standards” (BLM, 1997).

The EA is prepared in accordance with NEPA and in compliance with all applicable statutes, regulations, and executive orders.

1.6 Identification of Issues

An issue is defined as a point of disagreement, debate, or dispute with a proposed action based on some anticipated environmental effect. Issues point to environmental effects and may lead to identification of design features incorporated into the proposed action or mitigation measures.

The proposed Harts Draw Allotment Water Wells was posted on the internet at BLM’s ePlanning website on 04/07/2017 to notify the public about this action and that an EA was being initiated. The public has not provided any input or identified additional issues regarding the proposed reservoirs in response to the posting.

BLM mailed letters on 08/14/2017 to designated *Interested Publics* for livestock grazing on the Indian Creek Allotment. The letters consulted with them on the proposed reservoirs and sought input into the action. The BLM received one response in support of the proposed action.

BLM internal processes to identify potential issues resulting from the action include the introduction of the project to an interdisciplinary team. Then an Interdisciplinary Team Checklist is developed to determine if the action has a potential impact or no impact to various resources, or if the resource is not present. The following issues have been identified that have the potential to be impacted as a result of the alternatives (see Appendix A):

1.6.1 Livestock Grazing

- Reservoirs could affect control of livestock distribution, movements, and grazing patterns.

1.6.2 Vegetation Excluding USFWS Designated Species

- Reservoir construction and having available water to livestock would disturb vegetation communities.

1.7 Summary

This chapter has presented the purpose and need of the proposed project, as well as the relevant issues, i.e., those elements of the human environment that could be affected by the implementation of the proposed project. In order to meet the purpose and need of the proposed project in a way that resolves the issues, the BLM has considered and/or developed a range of action alternatives. These alternatives are presented in Chapter 2. Chapter 3 documents the affected environment or existing condition of resources being analyzed. The potential environmental impacts or consequences resulting from the implementation of each alternative considered in detail are analyzed in Chapter 4 for each of the identified resources.

2.0 DESCRIPTION OF ALTERNATIVES, INCLUDING PROPOSED ACTION

2.1 Introduction

The EA focuses on the Proposed Action and No Action Alternatives. The development of the range of alternatives is based upon input from the Interdisciplinary Team (IDT), grazing permittee, State of Utah's Grazing Improvement Program (GIP), and Interested Publics. This took into consideration management objectives, allotment configuration, livestock management, Standards and Guidelines for Healthy Rangelands, costs, and benefits.

2.2 Alternative A – Proposed Action

The proposed action is the construction of seven earthen reservoirs to detain and hold surface water run-off for livestock and other secondary beneficial uses such as wildlife. They would be constructed on the Indian Creek Pastures on the Indian Creek Allotment (see attached map). The reservoirs would increase livestock management opportunities to allow greater adherence to the Standards and Guidelines for Healthy Rangelands by providing additional water sources that facilitates enhanced livestock distribution and improved control of grazing patterns and forage use levels.

Construction would be done by mechanized equipment (e.g. bulldozer) to create an earth filled embankment and adequate spillway within ephemeral drainages to capture surface run-off water. The slope of the dams would be a minimum 3 to 1 on the upstream face and a minimum of 2 to 1 on the downstream face. Each reservoir may disturb up to 0.50 acres, thus total disturbance for seven reservoirs could be 3.5 acres on BLM administrated lands.

Access to the sites would require no new road construction and any off road travel by equipment would be with the blade up. Access routes would be identified and cleared for cultural resources

prior to construction. All work would be completed to BLM specification as outlined in BLM Handbook 1741-2 (Water Developments).

Reclamation / reseeding, using a native seed mix, may be implemented dependent upon the extent of impacts post construction, which may consist of spreading seed on the newly constructed banks. Yet it is anticipated reclamation efforts would not be required along the access routes because the disturbance to vegetation would be minimal, limited along a narrow linear path, equipment would travel with the blade or bucket up, and plant cover and seed bank production is likely sufficient given the site and species involved.

The proposal would be completed when time and funding allow (there are no timing restrictions). Equipment used for construction activities would be power washed prior to work to help control the potential for noxious weeds. Construction and future maintenance of the proposed reservoirs would be responsibility of the grazing permittee with a BLM Cooperative Range Improvement Agreement (Form 4120-6) signed prior to construction. Maintenance would consist of keeping the reservoirs in a functional condition to hold water that would likely require periodic cleaning out accumulated sediment and/or fixing washouts. This would require periodic future access to the reservoirs with heavy equipment (e.g. bulldozer / front end loader) to perform needed maintenance activities. All maintenance work would be done within the original footprint of the project and construction zone. If the project were to be abandoned, it would be the responsibility of the grazing permittee to rehabilitate / reseed the site if needed to BLM specifications.

The proponent will provide a Class III intensive pedestrian survey of the area of potential effect (APE) for seven proposed stock ponds and associated access routes in the Indian Creek Allotment, San Juan County, Utah. The APE is defined as a 100-meter radius around each proposed stock pond location, and a 15 meter corridor along the access routes. The 100-meter buffer is intended to facilitate avoidance of cultural resources by livestock concentration by allowing for the on-site adjustment of construction activities. The proponent shall propose access routes to be surveyed concurrently with the stock ponds. Access routes shall avoid all cultural resources by 25 feet.

2.3 Alternative B – No Action

The No Action Alternative is the continuation of the current situation on the Indian Creek Allotment. Thereby, no new reservoir construction would be authorized. Livestock control and movement would continue using existing water sources (e.g. reservoirs, spring, snow, etc.). Grazing would still continue in the allotment and be managed in accordance with the Utah Rangeland Health Standards (BLM, 1997).

3.0 AFFECTED ENVIRONMENT

3.1 Introduction

This chapter presents the potentially affected existing environment (i.e., the physical, biological, social, and economic values and resources) of the impact area as identified in the Interdisciplinary Team Checklist found in Appendix A and presented in Chapter 1 of this assessment. This chapter provides the baseline for comparison of impacts/consequences described in Chapter 4.

3.2 General Setting

The project area is situated in the lower Indian Creek watershed near Highway 211. The area has rugged topography consisting of rolling terrain bisected by canyons and mesas. Associated ecological sites of the action area are predominately Desert Sandy Loam (blackbrush), Semidesert Sandy Loam (fourwing saltbush), and Semidesert Shallow Sandy Loam (Juniper – Pinyon), which primarily occur on structural benches composed of eolian deposits derived from sandstone (NRCS, 2017). Elevation in the project area ranges from approximately 5,000 to 5,300 feet. Average precipitation for the water year (October – September) is 8.49 inches at nearby Canyonlands National Park – Needles (WRCC, 2017).

3.3 Resources/Issues Brought Forward for Analysis

3.3.1 Livestock Grazing

The proposed reservoirs would be located in the Indian Creek Pastures (Corral Pocket, Creek, Lavender, Davis, and Drill) on the Indian Creek Allotment (#04815). These pastures account for 37,538 total acres. They are used with other pastures for a deferred grazing rotation program on the allotment. Cattle use is rotated between various pastures and trail to the adjacent U.S. Forest Service (USFS) allotment in the spring, and then return to the allotment in the fall. The Indian Creek Allotment has a grazing season from 10/01 to 06/15 with 1,004 cows at 100% Public Land for 8,518 Active Animal Unit Months (AUMs). The allotment contains approximately 228,184 BLM administrated acres. The proposed action contains no change to permitted livestock numbers, AUMs, or to the grazing season. The allotment contains broken topography of mesas, benches, and canyons that are not easily delineated into tight control and/or pasture movement, thus water, is often used to further control livestock.

The Nature Conservancy (TNC) holds the grazing permit (#4306710) on the Indian Creek Allotment and is in good standing with the BLM. TNC uses the grazing permit and associated livestock to promote sustainable grazing management practices. Also, TNC is partnered with the Canyonlands Research Center at the Dugout Ranch to facilitate research, education, and collaboration for understanding the interactive effects of land use and climate in a semi-arid landscape. The permittee is diligent in controlling cattle, maintaining existing range improvements (e.g. fences), and adaptive in management for improved livestock grazing practices and range conditions. The permittee was active in choosing the location and layout of the proposed reservoirs. TNC is committed to the proposal and has invested resources for the development of the reservoirs.

The BLM *Apparent Range Trend and Monitoring Report for the Indian Creek Allotment* dated 11/01/2016 outlines management objectives, monitoring data, and recommendations actions (BLM, 2016). A recommendation of the report is:

“BLM, in conjunction with the permittee, identify potential range improvements (fences, reservoirs, wells, springs, etc.) to promote the Guidelines for Grazing Management in consideration of the Standards for Rangeland Health. Such improvements may include

additional water supplies in Beef Basin, Dark Canyon Plateau, and in the Indian Creek Pastures...” (BLM, 2016).

A lack of reliable and constant waters can account for uneven use of rangelands by livestock, which is particularly problematic in an arid and desert environment (Holechek, 2001). This situation occurs on the Indian Creek Allotment, where livestock grazing is magnified at areas with available water, such as along Indian Creek.

The suitability of the site for livestock grazing is good. It provides proper grazing for cattle during fall, winter, and spring with management practices that maintain or improve rangeland vegetation through managed grazing use, a planned grazing system, and appropriate location of water developments (NRCS, 2017).

The MFO RMP classifies the Indian Creek Allotment as “Improve”, where appropriate management actions will be applied on the allotment to resolve issues and concerns and meet objectives. As such, opportunities exist for positive economic return from public investments, such as proposed (RMP, 2008).

The proposed fenceline would implement recommendations of the 2016 *Apparent Range Trend and Monitoring Report for the Indian Creek Allotment*. This report identified the potential need for additional water in the Indian Creek Pastures to aid in distribution and control of cattle (BLM, 2016).

3.3.2 Vegetation Excluding USFWS Designated Species

The predominant Ecological Sites at the proposed reservoir sites are Desert Sandy Loam (blackbrush), Semidesert Sandy Loam (fourwing saltbush), and Semidesert Shallow Sandy Loam (Juniper – Pinyon), which primarily occur on structural benches composed of eolian deposits derived from sandstone (NRCS, 2017). Vegetation associated with these sites consist primarily of scattered woodlands composed of pinyon (*Pinus edulis*) and juniper (*Juniperus osteosperma*), fourwing saltbush (*Atriplex canescens*) and blackbrush (*Coleogyne ramosissima*) communities. The understory of these sites includes grasses such as sand dropseed (*Sporobolus cryptandrus*), Indian ricegrass (*Oryzopsis hymenoides*), and galleta grass (*Hilaria jamesii*). In average years, plants begin growth in March and ends in October.

The *Apparent Range Trend and Monitoring Report for the Indian Creek Allotment* dated 11/01/2016 outlines issues/concerns and potential solutions, management objectives, monitoring data, and makes recommendations (BLM, 2016). The report states key plant species for management consideration in the area of the proposed action are sand dropseed, galleta grass, needle-and-thread (*Stipa comata*), Indian ricegrass, blue grama (*Bouteloua gracilis*), alkali sacaton (*Sporobolus airoides*), Mormon tea (*Ephedra torreyana / viridis*), sagebrush (*Artemisia tridentate*), and fourwing saltbush. Relevant vegetation objectives of the report are:

- Manage for Utah’s Guidelines for Grazing Management to ensure that the Standards for Rangeland Health are met or progress is made towards meeting them.

- Manage for a mid to late seral ecological condition that meets the goals and objectives of the 2008 MFO RMP.
- A 50% utilization level on the current year's forage production that is consumed or removed by animals is the management guideline.
- Manage plant communities for a stable to upward long-term vegetative trend in the frequency of occurrences for key plant species to achieve the fundamentals of rangeland health.
- Meet the physiological requirements of desired plants, and facilitate reproduction and maintenance of desired plants to the extent natural conditions allow.
- Provide for multiple-use and sustain yield of renewable resources to promote healthy rangelands, and allow for restoration and improvement of public lands to properly functioning conditions.

Studies on range utilization of key plant species on the Indian Creek Pastures indicate a consistent rate of light (21-40%) to low moderate (41-60%) on the allotment. This utilization level is within or below the objectives of the RMP for sustained yield of forage resources that leaves sufficient residual forage behind to protect the soil from wind and water erosion, meets the physiological requirements of desired plants, allows for plant development and recovery, and facilitates reproduction and maintenance of desired plants to the extent natural conditions allow (BLM, 2016). In addition, there are rangelands that receive sporadic, little, and/or no utilization by livestock due to a lack of available and reliable waters, such as the Corral Pocket Pasture. These factors indicate that livestock distribution is a key element for even utilization rates on vegetation to further meet forage utilization level objectives, which available water directly influences.

Long-term vegetation monitoring studies have been established across the Harts Draw Allotment, including near the proposed action on the Indian Creek Pastures. These nested frequency studies are established in Key Areas. Key Areas are a portion of a representative rangeland selected for its ability to detect changes within the plant community and variations in rangeland health conditions for a larger ecological site. The 2016 monitoring report shows the trend summary of key plant species on the Indian Creek Pastures as having an overall stable trend in the frequency of occurrence for desired plant communities. Specifically, it states that:

“Generally there is a transitioning shift occurring in plant structure groups with sand dropseed (warm season grass) increasing and Indian ricegrass (cool season grass) decreasing in frequencies. Galleta grass (warm season grass) has typically remained stable or increased in frequency. Blackbrush has increased in frequency in areas it occurs. This is likely a result of climatic variations and shifting precipitation patterns. Cheatgrass, invasive / non-native species, was essentially absent or decreased in frequency in 2016. Crested wheatgrass (seeded) has remained stable / dominant in areas treated (e.g. Salt Creek Mesa). There has been an improvement in plant communities between 2009 and 2016, likely in response to favorable monsoonal moisture the last several years” (BLM, 2016).

4.0 ENVIRONMENTAL IMPACTS

4.1 Alternative A – Proposed Action

4.1.1 Livestock Grazing

The proposed reservoirs would provide seven additional water sources across the 37,538 BLM acres in the Indian Creek Pastures of the Indian Creek Allotment. The allotment is categorized as “Improve” in the 2008 RMP, thus gives priority to improvement projects that offer the best opportunity for achieving the standards for healthy rangelands, such as offering cattle additional water sources as proposed.

These reservoirs could provide additional water during the grazing period to more effectively control livestock distribution patterns, grazing intensity, utilization of the forage, and provide greater livestock grazing rotation opportunities, as water is often a limiting factor. Livestock numbers and/or Animal Unit Months (AUMs) would not be increased because of the proposed reservoirs, as existing authorized cattle would use the new water sources.

Water can be a limiting factor for livestock grazing on the allotment as identified in the *Apparent Range Trend and Monitoring Report for the Indian Creek Allotment* (BLM, 2016). Enhancing distribution and productivity of the permitted cows by authorizing additional water sources allow greater opportunities to improve vegetation conditions (see Vegetation section of this EA). More uniform distribution of livestock grazing allows for more even utilization of the rangelands (Holecheck, 2001). These factors would increase adaptive livestock management opportunities by the applicant / grazing permittee to allow greater adherence to Utah’s Standards and Guidelines for Healthy Rangelands by further enabling livestock pasture movements and improved control of grazing patterns and forage use levels (BLM, 1997).

Short-term impacts to TNC (permittee) would be labor and finances associated with the initial construction of the reservoirs, which they have fully committed to. Risks of the project are constructing the reservoirs and they prove to be unreliable in holding water, wash out, and/or prematurely fill with sediment.

Long-term impacts to the permittee are operational workloads, which would be lessened as cattle could be more effectively controlled as they graze through the area once the reservoirs are built and providing water. Future maintenance of the reservoirs to keep them in functional conditions would be the responsibility of the permittee as outlined in a BLM Cooperative Range Improvement Agreement. Reservoirs are generally a cost-effective type of water development (BLM, 1990).

The additional reservoirs would decrease travel distance by cattle to water, which in turn decrease energy expenditures by the animal that can otherwise go into production and increase grazing and resting times. This can result in improve cattle performance and productivity (Holechek, 2001).

4.1.2 Vegetation Excluding USFWS Designated Species

Short-term direct impacts to vegetation are estimated at 3.5 acres associated with constructing the seven earthen reservoirs with a dozer on public rangelands in the Indian Creek Allotment. Short-term direct impacts to vegetation from construction are negligible and would not further accelerate the natural erosion process. This is due to the 3.5 acres being spread across seven sites at 0.5 acre each, vegetation is sparse in these localities (i.e. ephemeral drainages in a desert environment),

and the minimum disturbance necessary would take place to construct the reservoirs with a proper spillway to dissipate excess overland flows.

Travel by construction equipment to the point of entry for the reservoir sites would be from designated roads in the Monticello Travel Management Plan (TMP). Vehicular travel on designated routes is not considered a surface disturbing activity (RMP, 2008). Final access to the sites for equipment would require cross-country travel. No road construction would occur as the equipment would travel with its blade / bucket up and traverse dry wash beds to the extent possible, yet some trampling of vegetation would occur. This level of anticipated impact to vegetation is expected to be nominal as no blading would occur, it is a one-time activity, and native herbaceous plants would remain intact and alive. This would allow sufficient opportunities for vegetation recovery along these narrow linear routes.

Long-term direct impacts to vegetation may occur once the reservoirs are completed, as livestock would tend to trail and concentrate around the water sources, thereby trampling vegetation at the immediate site because stock water is the center for grazing activity. This level of anticipated impact to vegetation is estimated to be 0.5 acres per reservoir, or 3.5 acres total. Shrubs, such as fourwing saltbush, could receive the greatest impact from this action through breakage, yet it is anticipated they would recover post construction in 1-2 years or replaced by native herbaceous plants. Native grasses, such as galleta, sand dropseed, and Indian ricegrass, could be trampled by the action and may decrease in frequency and in ground cover rates immediately adjacent to the reservoirs. Yet this anticipated impact to vegetation is nominal in relation to the available ecological sites and other vegetation in the immediate area on the 37,538 total acres in the affected Indian Creek Pastures.

Indirect impacts to vegetation from the additional reservoirs would result from greater control and enhanced distribution of livestock on the 37,538 total acres on the lower Indian Creek Pastures. This would further disperse the existing utilization on forage / vegetation with proposed waters. Thereby, a more effective deferred rotation on vegetation resources could be implemented. For example, the Corral Pocket Pasture must be used with snow on-the-ground for effective distribution, which limits its ability in a deferred rotation program. This provides a better opportunity for key plant species and preferred areas to maintain and gain vigor by allowing greater opportunities to facilitate plant reproduction, recovery, vigor, and maintenance of desired plants to the extent natural conditions allow. These situations would further enable management of the predominant Desert Sandy Loam (blackbrush) and Semidesert Sandy Loam (fourwing saltbush) ecological sites in a mid to late seral ecological condition, with a stable long-term vegetative trend in the frequency of occurrences for key plant species to the degree natural environments dictate. Vegetation in the Semidesert Shallow Sandy Loam (Juniper – Pinyon) ecological site would likely remained unchanged as it contains sparse herbaceous understory due to woodland dominance and natural exposure of rock.

Long-term indirect impacts to vegetation may occur once the reservoirs are completed, as livestock would tend to trail and concentrate around the water. This level of anticipated impact to vegetation, estimated at 0.5 acres at each site, totals 3.5 acres of potential disturbance. This can lead to trampled vegetation at the immediate site, as stock water is the center for grazing activity. Shrubs, such as fourwing saltbush, could receive the greatest impact from this action through breakage, yet it is anticipated they would recover post construction in 1-2 years or replaced by native

herbaceous plants. Native grasses, such as galleta grass, sand dropseed, and Indian ricegrass, could be trampled by the action and may decrease in frequency and in ground cover rates around the immediate perimeter (~200 feet) of the reservoirs. Yet this anticipated impact to vegetation is nominal in relation to the available ecological sites and other vegetation in the immediate area. Also, the 3.5 acres of disturbance is dispersed across seven localities in the 37,538 total acres on the lower Indian Creek Pastures.

PULL LIVESTOCK OFF INDIAN CREEK = RIPARIAN PLANTS

FUTURE MAINTENANCE 5/10 years?

The management guideline of a 50% utilization level, or less, on the current year's forage production would be adhered in the East and Shay Mesa Pastures served by the proposed water wells (BLM, 1999). The proposed water well would allow more uniform utilization levels at a moderate degree on the forage resources through increased grazing distribution across the rangelands due to having reliable waters available. This forage use level meets the livestock grazing management actions in the MFO RMP (RMP, 2008).

Reclamation / seeding would be done if monitoring post construction show inadequate natural plant recovery and response at the proposed well and perimeter fence site. This would provide a seed base for the establishment and growth of seeded plants to provide ground cover and competition against undesired plant species in the area of disturbance (~3.50 acres).

Overall, under the proposed action, biotic integrity would continue and be maintained at levels appropriate for the site and species involved, and it would have no negative influence on the landscape's ability to achieve the Standards for Rangeland Health. Multiple use of the rangelands would continue under the proposal and allow for the sustain yield of the vegetation.

4.1.3 Mitigation Measures

No measures other than those incorporated into the proposed action have been identified.

4.1.4 Monitoring and/or Compliance

BLM has existing long-term vegetation monitoring studies (e.g. nested frequency) established in key areas in the vicinity of the proposed action. These studies would continue to be maintained and read by the BLM periodically to show long-term vegetation trends and influences of modified grazing patterns resulting from the proposed well. Other BLM rangeland monitoring would include periodic Range Utilization (Key Species Method) of forage to assess use levels (BLM, 1999), Actual Use Reports of Livestock Grazing, and precipitation measurements. These monitoring methods and data would help facilitate an understanding of rangeland conditions and management objectives for making decisions on the Indian Creek Allotment.

4.2 Alternative B No Action

4.2.1 Livestock Grazing

The No Action Alternative is the continuation of the current situation; thereby TNC (permittee) would not be authorized to construct the reservoirs on BLM administered lands. This would eliminate the opportunity for additional water in the uplands. There would be no need for TNC to maintain them in the future. This might incentivize the permittee to construct reservoirs on State of Utah Lands or on private property in the Indian Creek Allotment, thereby concentrating water sources. Livestock grazing would continue as currently authorized and be managed in accordance with BLM Utah's Standards and Guidelines for Healthy Rangelands (BLM, 1997). The opportunities for further adaptive livestock management under the proposed action would be eliminated. Also, the opportunities for positive economic return from public investments on the Indian Creek Allotment would be foregone.

4.2.2 Vegetation Excluding USFWS Designated Species

The No Action Alternative is the continuation of the current situation; thereby the proposed earthen reservoirs would not be constructed. There would be no direct and/or indirect impacts (e.g. trampling / crushing of plants) to vegetation on the 3.5 acres associated with the proposal.

The 37,538 BLM acres on the Indian Creek Allotment would not be further served by well water in areas currently lacking reliable water sources. The opportunities for greater livestock distribution and more uniform use of the vegetative resources would be eliminated. Livestock would continue their reliance on Indian Creek for water, thus concentrating utilization on vegetation along the corridor. Therefore, minimal change in vegetation conditions would be expected outside of any climatic variations. Multiple-use of the rangelands would continue.

4.2.3 Mitigation Measures

No mitigation measures have been identified.

4.2.4 Monitoring and/or Compliance

Same as the Proposed Action Alternative (see section 4.1.4)

4.3 Cumulative Impact Analysis

4.3.1 Livestock Grazing:

The cumulative impact area of analysis for livestock grazing is the Harts Draw Allotment, which contains approximately 28,760 BLM acres, because it forms the boundary of potential authorized livestock use in the area of the proposed action. The timeframe for analysis of cumulative impact for livestock grazing is 10 years, because the associated grazing permit on the Harts Draw Allotment is issued in 10 year intervals.

Past, present, and reasonably foreseeable actions ongoing in the cumulative impact area are livestock grazing and recreational activities such as hunting, camping, hiking, sight-seeing, and

off-highway vehicle (OHV) use. Except for OHV use, most of these activities have been occurring over the past 80-100 years, and all activities will likely continue into the foreseeable future.

Livestock grazing in the region has evolved and changed considerably since it began in the late 1800's. At the turn of the century, large herds of livestock grazed on unreserved public domain in uncontrolled open range. Eventually, the range was stocked beyond its capacity, thereby causing undesirable changes in vegetation, soil, and water relationships. In response to these problems on open ranges, livestock grazing reform began in 1934 with the passage of the Taylor Grazing Act. Subsequent laws, regulations, and policy changes have resulted in adjustments in livestock numbers, season-of-use changes, and other management alterations. These past modifications to grazing practices, and the proposed water well, were done to provide positive improvement of rangeland conditions with modified grazing pressure and patterns in areas previously affected by livestock.

The cumulative effects to livestock grazing from the past, present, and reasonably foreseeable actions consist primarily of those past actions described for livestock grazing. Recreational activities are not expected to appreciable impact livestock grazing during the 10 year timeframe.

Livestock grazing would be managed in adherence with Utah's Guidelines for Grazing Management to meet, or make progress towards meeting, the Standards for Rangeland Health. The Proposed Action Alternative is not expected to appreciably contribute to the cumulative impacts to livestock grazing within the Harts Draw Allotment. The No Action Alternative would not result in an accumulation of effects.

4.3.2 Vegetation Excluding USFWS Designated Species:

The cumulative impact area of analysis for vegetation resources are #10 Hydrologic Unit Boundaries (HUC) because watersheds are a natural boundary reflecting landscape processes between vegetation, soils, and hydrologic functions. The area of the proposed well encompasses the Hart Draw HUC that contains 79,360 acres. The timeframe for analysis of cumulative impact for vegetation is 10 years because grazing permits are issued for a 10 year term.

Past, present, and reasonably foreseeable actions ongoing in the cumulative impact area for vegetation resources are livestock grazing and recreational activities such as hunting, camping, hiking, sight-seeing, and off-highway vehicle (OHV) use. Except for OHV use, most of these activities have been occurring over the past 80-100 years, and all activities will likely continue into the foreseeable future.

Livestock grazing in the region has evolved and changed considerably since it began in the late 1800's. At the turn of the century, large herds of livestock grazed on unreserved public domain in uncontrolled open range. Eventually, the range was stocked beyond its capacity, thereby causing undesirable changes in vegetation, soil and water relationships. In response to these problems on open ranges, livestock grazing reform began in 1934 with the passage of the Taylor Grazing Act. Subsequent laws, regulations, and policy changes have resulted in adjustments in livestock numbers, season-of-use changes, and other management alterations. These past modifications to grazing practices, and the proposed well, were done to provide positive improvement of rangeland

vegetative conditions with modified grazing pressure and patterns in areas previously affected by livestock.

The cumulative effects to vegetation from the past, present, and reasonably foreseeable actions consist primarily of those past actions described for livestock grazing. Recreational activities are not expected to appreciably impact vegetation during the 10 year timeframe.

The proposed action is the drilling five water wells to facilitate adaptive livestock management to allow more uniform use of the vegetation resources. The action is not expected to appreciably contribute to the cumulative impacts for vegetation within this HUC. The No Action Alternative would not result in an accumulation of effects.

5.0 CONSULTATION AND COORDINATION

5.1 Introduction

The issue identification section of Chapter 1 identifies those issues analyzed in detail in Chapter 4. The ID Team Checklist provides the rationale for issues that were considered but not analyzed further (Appendix A). The issues were identified through public and agency involvement processes.

5.2 Summary of Public Participation

During the preparation of the EA, the public was notified of the proposed action by posting on the internet at BLM's ePlanning homepage on 05/31/2017. The public has made no response or inquiries to the BLM due to the posting.

In addition, the public participation included mailing coordination letters on 08/14/2017 to *Interested Publics* on the Harts Draw Allotment that requested their input. The BLM received one response in support of the proposed action.

5.3 List of Preparers - Table

Name	Title	Responsible for the Following Section(s) of this Document
Jed Carling	Rangeland Management Specialist	Team Lead, Livestock Grazing, Vegetation, Riparian, Floodplains, Rangeland Health, Socio Economics, Environmental Justice, Water Quality Woodlands.
Patrick Lionberger	Wildlife Biologist	T&E Animals / Plants, Wildlife and Fish Species, Migratory Birds
Cliff Giffen	Natural Resource Specialist	Soils, Air Quality
Nephi Noyes	Rangeland Management Specialist	Invasive Species / Noxious Weeds, Waste

Name	Titl	Responsible for the Following Section(s) of this Document
Ted McDougall	Geologist	Mineral Resources
John Chmelir	Archeologist	Cultural Resources, Native American Concerns
Casey Worth	Recreation Planner	ACEC, Recreation, Wild and Scenic Rivers, Natural Areas, Wilderness / WSA, Wilderness Characteristics, Visual Resources
Paul Plemons	Fuels Technician	Fuels / Fire Management
Rebecca Hunt Foster	Paleontologist	Paleontology
Norbert Norton	Assistant Field Manager	Lands / Access

6.0 REFERENCES, GLOSSARY AND ACRONYMS

6.1 References Cited

Bureau of Land Management (BLM). 2016. Apparent Range Trend and Monitoring Report for the Indian Creek Allotment, 11/01/16. Carling, Jed.

Bureau of Land Management (BLM). 2005. Interpreting Indicators of Rangeland Health, Version 4 (Technical Reference 1734-6). Denver CO.

Bureau of Land Management (BLM). 1999. Utilization Studies and Residual Measurements (Technical Reference 1734-3). Denver CO.

Bureau of Land Management (BLM). 1997. Rangeland Health. Standards and Guidelines for Healthy Rangelands. Utah State Office.

Bureau of Land Management (BLM). 1990. BLM Manual Handbook H-1741-2 –Water Developments.

Holechek, Jerry L., Pieper, R.D., and Herbel, C.H. 2001. Range Management Principles and Practices; 4th Edition. Prentice-Hall, Upper Saddle River, New Jersey.

Natural Resource Conservation Service (NRCS). 2017. Ecological Site Descriptions. <http://www.ut.nrcs.usda.gov/technical/technology/range/ecosites.html>

Resource Management Plan (RMP). 2008. Monticello Field Office, Record of Decision and Approved Resource Management Plan. Prepared by Bureau of Land Management, Monticello Field Office, November 2008. BLM-UT-09-004-1610, UT-090-2007-40

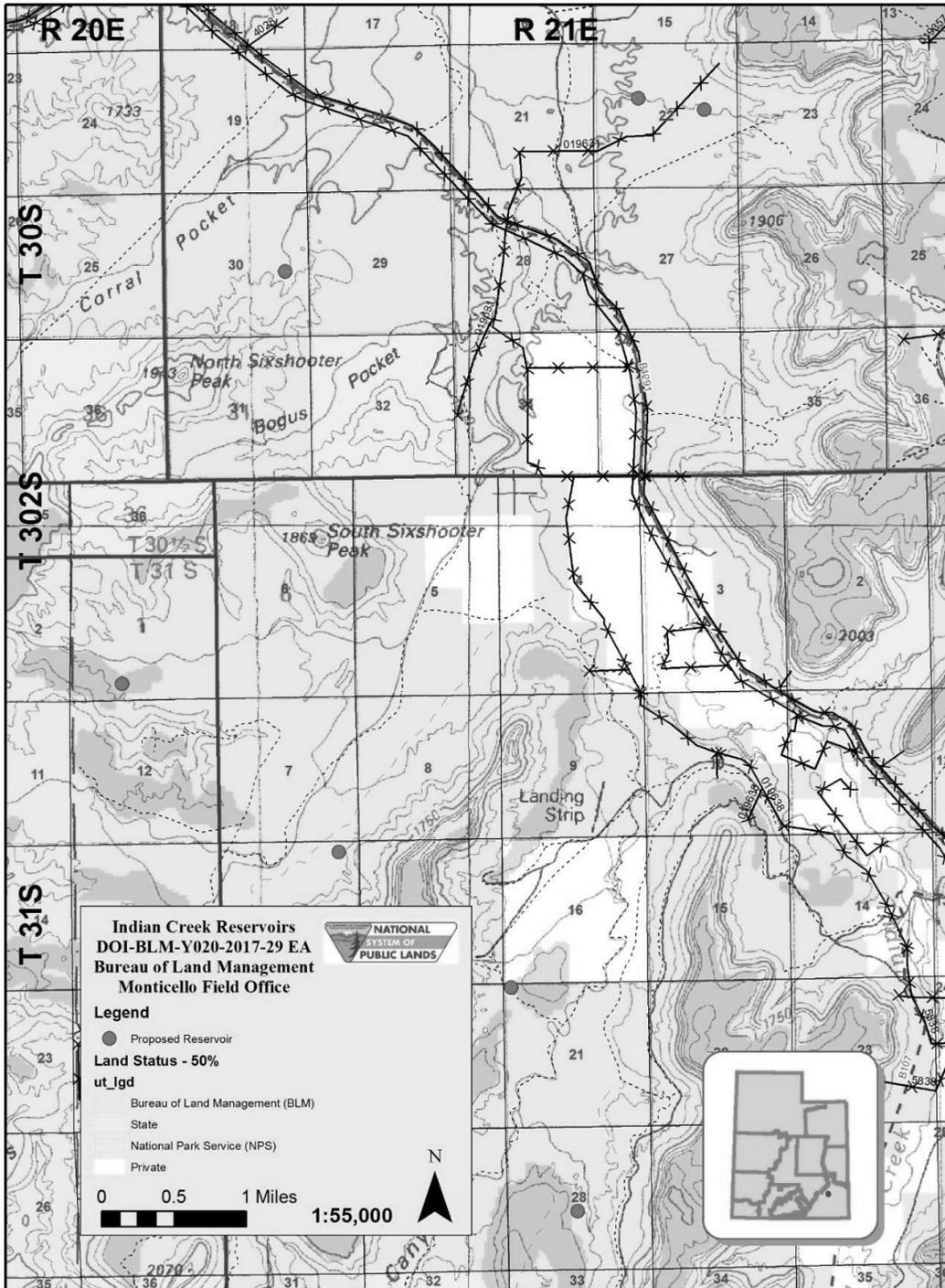
San Juan County Resource Management Plan (SJCRMP). 2017. General Plan Update.
<http://sanjuancountyplan.org/wp-content/uploads/2017/07/San-Juan-RMP-Book-7.30.pdf>

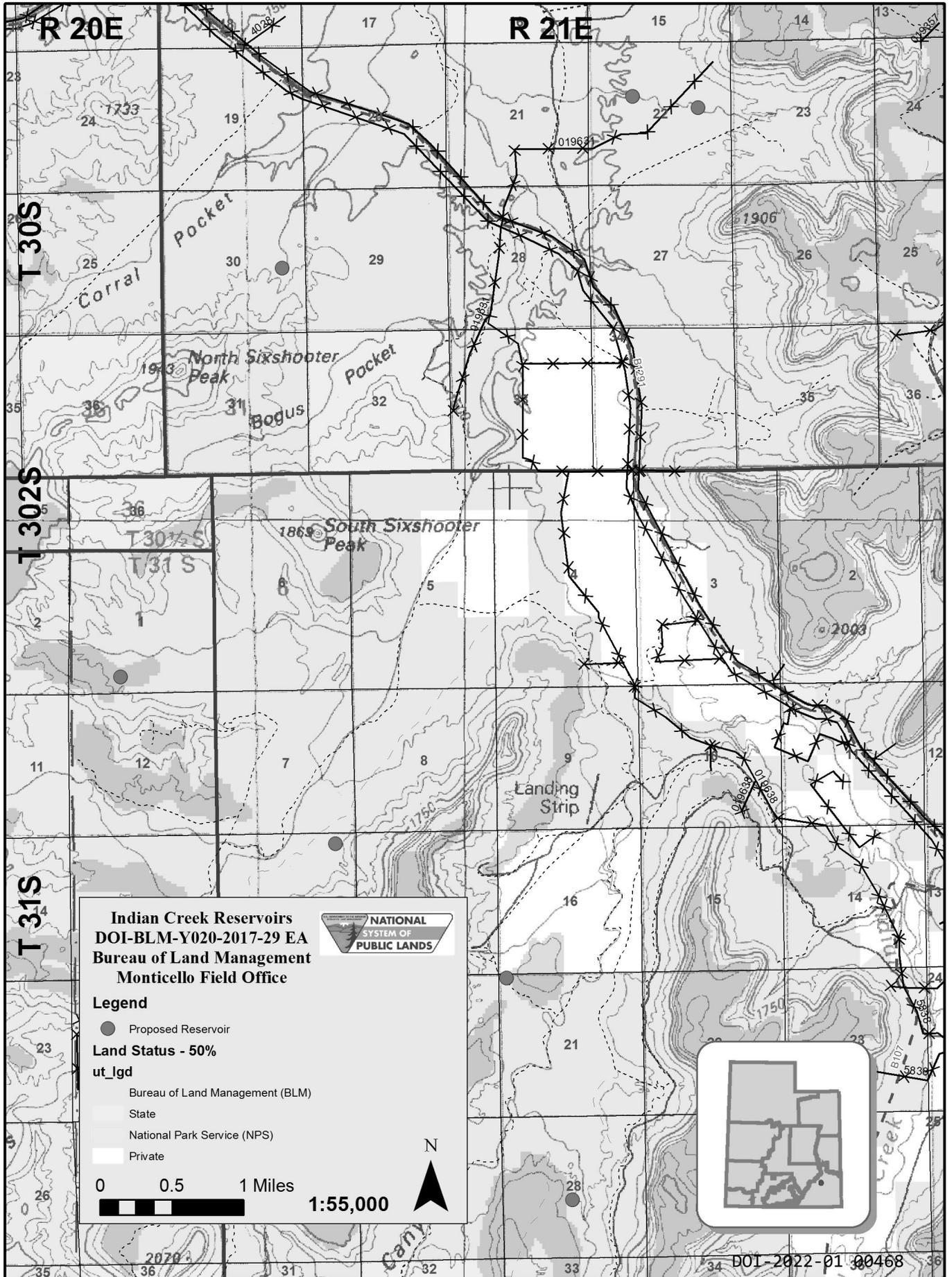
Western Regional Climate Center (WRCC). 2017. Canyonlands the Needle, Utah.
<https://wrcc.dri.edu>

APPENDIX A - Interdisciplinary Team Checklist

INTERDISCIPLINARY TEAM CHECKLIST
OFFICE: Monticello Field Office

APPENDIX B – Maps of the Indian Creek Allotment Reservoirs





INTERDISCIPLINARY TEAM CHECKLIST

Office: Monticello Field Office

Project Title: Indian Creek Allotment Reservoirs

NEPA Log Number: DOI BLM UT Y020 2017 0029 EA

Project Leader: Jed Carling, Rangeland Management Specialist

Project Description:

The proposed action is the construction of seven earthen reservoirs to detain and hold surface water run off for livestock and other secondary beneficial uses such as wildlife. They would be constructed on the Indian Creek Pastures on the Indian Creek Allotment (see attached map). The reservoirs would increase livestock management opportunities to allow greater adherence to the Standards and Guidelines for Healthy Rangelands by providing additional water sources that facilitates enhanced livestock distribution and improved control of grazing patterns and forage use levels.

Construction would be done by mechanized equipment (e.g. bulldozer) to create an earth filled embankment and adequate spillway within ephemeral drainages to capture surface run off water. The slope of the dams would be a minimum 3 to 1 on the upstream face and a minimum of 2 to 1 on the downstream face. Each reservoir may disturb up to 0.50 acres, thus total disturbance for seven reservoirs could be 3.5 acres on BLM administrated lands.

Access to the sites would require no new road construction and any off road travel by equipment would be with the blade up. Access routes would be identified and cleared for cultural resources prior to construction. All work would be completed to BLM specification as outlined in BLM Handbook 1741 2 (Water Developments).

Reclamation / reseeded, using a native seed mix, may be implemented dependent upon the extent of impacts post construction, which may consist of spreading seed on the newly constructed banks. Yet it is anticipated reclamation efforts would not be required along the access routes because the disturbance to vegetation would be minimal, limited along a narrow linear path, equipment would travel with the blade or bucket up, and plant cover and seed bank production is likely sufficient given the site and species involved.

The proposal would be completed when time and funding allow (there are no timing restrictions). Equipment used for construction activities would be power washed prior to work to help control the potential for noxious weeds. Construction and future maintenance of the proposed reservoirs would be responsibility of the grazing permittee with a BLM Cooperative Range Improvement Agreement (Form 4120 6) signed prior to construction. Maintenance would consist of keeping the reservoirs in a functional condition to hold water that would likely require periodic cleaning out accumulated sediment and/or fixing washouts. This would require periodic future access to the reservoirs with heavy equipment (e.g. bulldozer / front end loader) to perform needed maintenance activities. All maintenance work would be done within the original footprint of the project and construction zone. If the project were to be abandoned, it would the responsibility of the grazing permittee to rehabilitate / reseed the site if needed to BLM specifications.

The proponent will provide a Class III intensive pedestrian survey of the area of potential effect (APE) for seven proposed stock ponds and associated access routes in the Indian Creek Allotment, San Juan County, Utah. The APE is defined as a 100 meter radius around each proposed stock pond location, and a 15 meter corridor along the access routes. The 100 meter buffer is intended to facilitate avoidance of cultural resources by livestock concentration by allowing for the on site adjustment of construction activities. The proponent shall propose access routes to be surveyed concurrently with the stock ponds. Access routes shall avoid all cultural resources by 25 feet.

DETERMINATION OF STAFF: *(Choose one of the following abbreviated options for the left column)*

- NP not present in the area impacted by the proposed or alternative actions
- NI present, but not affected to a degree that detailed analysis is required
- PI present with potential for relevant impact that need to be analyzed in detail in the EA
- NC (DNAs only) actions and impacts not changed from those disclosed in the existing NEPA documents cited in Section D of the DNA form. The Rationale column may include NI and NP discussions.

The following are either not present, not applicable or not measurable issues in the Monticello Field Office and have been removed from the checklist: Farmlands (Prime or Unique), Wild Horses and Burros, Greenhouse Gas and Geology. The word "Religious" was removed from the Native American Concerns heading.

Determination	Resource	Rationale for Determination*	Signature	Date
RESOURCES AND ISSUES CONSIDERED (INCLUDES SUPPLEMENTAL AUTHORITIES APPENDIX 1 H-1790-1)				
NI	Air Quality	The proposed project is in conformance with the Monticello RMP, 2008 (RMP Decisions GRA-1 and 7). The impacts to air quality were adequately analyzed in the RMP. As stated in the analysis (PRMP/FEIS 4.3.1.3 (pg. 4-10 and 11) "...managing livestock grazing allotments to ensure proper functioning conditions and forage utilization levels...would not likely affect air quality." The impact to air quality from the proposed action does not require detailed analysis in the EA.	Cgiffen	4/27/17
NI	Floodplains	The proposed 7 reservoirs would be built in ephemeral (i.e. dry) drainages and designed to capture overland flows from storm events. Impacts to floodplains are fully mitigated beyond residual levels due to design features, built in mitigation measures, and natural conditions. The earthen reservoirs would be built to impound water with a sufficient spillway to allow passage of excess water. The slopes of the dams would be designed and built to adequately support and contain impounded water and avoid washouts. The reservoir sites contain no perennial water and have no established riparian vegetation. Potential impacts to floodplains are less than negligible and the limited disturbance (3.5 acres spread across 7 sites) would not accelerate the natural erosion processes. Thereby, for reasons listed above, floodplains are not impacted to a degree that detailed analysis is required.	Jed Carling	5/5/17
	Soils	The proposed project is in conformance with the Monticello RMP, 2008 (RMP Decisions GRA-1 and 7). The primary effect of the proposed action would be an improvement in grazing management. As stated in the proposed action the proposal "The reservoirs would increase livestock management opportunities to allow greater adherence to the	Cgiffen	5/5/17

Determination	Resource	Rationale for Determination*	Signature	Date
		Standards and Guidelines for Healthy Rangelands by providing additional water sources that facilitates enhanced livestock distribution and improved control of grazing patterns and forage use levels." This improvement in grazing management will comply with RMP grazing decision GRA-1 which states "Manage grazing according to Standards for Rangeland Health and Guidelines for Grazing Management." Rangeland Health and Guideline Standard 1 requires grazing be managed so "Upland soils exhibit permeability and infiltration rates that sustain or improve site productivity, considering the soil type, climate, and landform". The reservoir construction operations will cause approximately 3.5 acres of surface disturbance. This amount of surface disturbance is not significant and will not affect overall soil stability and productivity. Disturbed areas will be seeded to establish vegetative cover and stabilize the soil surface. The impact to the soils resource from the proposed action does not require detailed analysis in the EA.		
NI	Water Resources/Quality (drinking/surface/ground)	The proposed project would create 7 new reservoirs on BLM administered lands. The reservoirs would be used for livestock and all work would be completed to BLM specification as outlined in BLM Handbook 1741-2 (Water Developments).		
NP	Wetlands/Riparian Zones	The proposed seven reservoirs would be built in ephemeral drainages that lacks appreciable surface and/or sub-surface waters for the establishment and maintenance of wetlands / riparian zones. Therefore, defined wetlands / riparian zones are not present at the sites. Indirect beneficial impacts to riparian zones could be achieved by providing additional upland water sources away from Indian Creek and associated riparian plants, thereby diffusing grazing pressure on this system. The analysis of this potential impact will be carried forward in the Vegetation section of the EA, as they are interrelated.	Jed Carling	5/5/17
NP	Areas of Critical Environmental Concern	The proposed fence would not be located in any ACEC's	C. Worth	4/28/17
NI	Recreation	The proposed project is in an area of low recreation use and the time required to construct/maintain the reservoirs is minimal enough to have limited impacts on other recreation in the area.	C. Worth	4/28/17
NP	Wild and Scenic Rivers	There are no Wild and Scenic Rivers in the proposed area	C. Worth	4/28/17
	Visual Resources	The constructed fence would appear as a virtually transparent element in the larger landscape and therefore unlikely to attract the attention of the casual observer. Background elements would be highly visible through the fence, meaning change to line, form, color, and texture would be negligible.		
NP	BLM Natural Areas	The proposed action is not located in any BLM Natural Areas	C. Worth	4/28/17
NI	Socio-Economics	No measurable socio-economic impacts, positive or negative, are likely to occur for this project because of its small scale. Some minor positive impacts to the local economy may result as due to work and construction associated with the proposal.	Jed Carling	5/5/17

Determination	Resource	Rationale for Determination*	Signature	Date
NP	Wilderness/WSA	The proposed action is not located in a wilderness or WSA	C. Worth	4/28/17
	Lands with Wilderness Characteristics	The proposed action would occur on lands that were determined to have wilderness characteristics in the 1999 Dark Canyon wilderness inventory. The construction of a fence in the proposed location will cause no significant contrast between the project features and the existing landscape. The project will not adversely affect the environment and resources will benefit from the additional management.		
	Cultural Resources	Class III inventory did not locate any historic properties within the proposed project area.		
	Native American Concerns	Tribes have not identified any specific concerns within the proposed project area. The project will not hinder access to or use of Native American Religious Sites.		
	Paleontology	Vertebrate fossils and traces could be discovered and impacted during the proposed action, as the action is taking place in PFYC 2-4 units (Unconsolidated sediments and alluvium, Cutler Group, Moenkopi Formation, Chinle Formation). A COA stating that if fossils are encountered during the proposed action, work will stop and the District Paleontologist will be contacted will be provided.	R. Hunt-Foster	8/2/17
NI	Environmental Justice	The project is located in a remote area of San Juan County where no population exists, including minority or low-income populations. The ethnic composition and economic situation of residents in San Juan County indicates that minority or low-income populations are not experiencing disproportionately high or adverse effects from current management actions (MFO FRMP/FEIS, pg 4-421). There would be no impact to Environmental Justice with the approval of the proposed action	Jed Carling	5/5/17
NI	Wastes (hazardous or solid)	The Monticello 2008 RMP, Appendix G contains Standard Operating Procedures (SOPs) for public land use authorizations. The SOPs provide adequate mitigation for handling solid wastes generated at construction sites. No hazardous wastes would be generated, stored, treated or transported as a result of the proposed action.	N. Noyes	4/20/17
NI	Threatened, Endangered or Candidate Animal Species	The project area is within Designated Critical Habitat for Mexican Spotted Owl. But through site visits and the use of Lewis (2014) Ensemble Probability model it has been determined that these sites are not suitable MSO habitat therefore no Section 7 Consultation will be required These ponds will not be built in riparian areas and are not near a major drainage of the San Juan River. Section 7 Consultation for Colorado river fish species will not be required	M. Wardle	8/14/2017
NI	Migratory Birds	The proposed action would occur after breeding and nesting season for migratory birds (May 1-August 31). The proposed reservoirs have the potential to be beneficial to migratory birds and raptors within the project area, creating water sources, habitat and increasing potential prey base.	M. Scott	4/18/17
NI	Fish and Wildlife Excluding USFW Designated Species	The proposed action would not affect wildlife to a degree where further analysis is required. The proposed reservoirs have the potential to be beneficial to wildlife within the project area, creating water sources, habitat and increasing potential prey base.	M. Scott	4/18/17

Commented [WMA1]: Citation for this "Lewis, Leah R., "Habitat Characteristics of Mexican Spotted Owls (*Strix occidentalis lucida*) in the Canyonlands of Southern Utah" (2014)"

Commented [WMA2]: Spent a few hours searching for a BLM example of water depletion done for earthen catchment pond and did not find any. Only examples found where for wells and pumping directly from a stream/river. Also found plenty of pond building examples that make no mention of water depletions.

Determination	Resource	Rationale for Determination*	Signature	Date
NI	Invasive Species/Noxious Weeds	There are no known infestations of State of Utah listed noxious weeds in the immediate vicinity of the proposed action. The MFO does not anticipate any changes in the proportion of controllable spreading agents to contribute in the establishment and spread of invasive plants or noxious weeds as a result of the proposed action. This is because of the limited scope of actual surface disturbance, natural site limitations, and proactive measures taken to help control the potential for invasive and noxious plants (e.g. power washing of equipment before work). In the unlikely event that noxious weeds establish as a result of activities connected to the proposed action, the BLM will control these weeds utilizing BLM's integrated weed management strategies. Thereby, for reasons listed above, invasive species and noxious weeds are not impacted to a degree that detailed analysis is required.	N. Noyes	4/20/17
NP	Threatened, Endangered or Candidate Plant Species	There are no known threatened, endangered or candidate plant species within the proposed project area.	M. Scott	4/18/17
PI	Livestock Grazing	The proposed reservoirs could change livestock grazing patterns.	Jed Carling	5/5/17
NI	Rangeland Health Standards	Utah Standards for Rangeland Health are individually addressed as separate resources for determination of impacts in this checklist (Standard #1-Soils, #2-Riparian, #3-Biotic (vegetation/wildlife), and #4-Water Quality). Thereby, there are no impacts that require detailed analysis to Rangeland Health Standards and Guidelines that are not already being considered by the individual resource.	Jed Carling	5/5/17
PI	Vegetation Excluding USFW Designated Species	The construction of the proposed reservoirs could have short-term impacts to vegetation through construction activities that may remove plants. Also, positive impacts to vegetation could occur through increased adaptive management that improves control of livestock grazing patterns, cattle distribution, and vegetation utilization levels.	Jed Carling	5/5/17
NI	Woodland / Forestry	The proposed project would not affect woodland or forestry resources.	M. Scott	4/18/17
NI	Fuels/Fire Management	The construction and maintenance of water catchment reservoirs within the Indian creek allotment will not affect fuels reduction activities on the landscape. Tamarisk will likely establish within these areas due to increased water availability but the plants are already present in the adjacent riparian areas. The limited size and dispersion of these ponds coupled with routine maintenance will negate any issues related to this noxious plant. The reservoirs may also ultimately aid in fire suppression efforts by providing potential water sources for these actions. Accidental fire ignition during the construction process is low due to the adjacent fuel type and modern construction equipment specifications. Further analysis of fire/fuels will not be needed in this E.A.	P.Plemmons	4/18/17
NI	Mineral Resources/ Energy Production	The proposed action is located within the Bears Ears National Monument (BENM). Pursuant to the Presidential Proclamation, the BENM is withdrawn from all forms of entry, location, selection, sale, or other disposition under the public land laws. This precludes any future exploration and development of mineral resources in the monument, with exception of valid existing rights which are not known to occur in proximity of the proposed action. Therefore, the proposed action would not interfere with mineral development.	T.McDougall	5/4/17

Determination	Resource	Rationale for Determination*	Signature	Date
	Lands/Access	The fence project will not impact prior rights or land use authorizations in the area because the fence will feature an unlocked gate or cattle guard where it crosses SJC road B199. A Master Title Plat review of the area showed one existing right-of-way (ROW) that intersects the fence project. BLM holds a ROW for SJC road B199.	N. Norton	8/2/2017

FINAL REVIEW:

Reviewer Title	Signature	Date	Comments
Environmental Coordinator			
Authorized Officer			

