United States Department of the Interior
Bureau of Land Management

Environmental Assessment
DOI-BLM-UT-C030-2016-0022-EA

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Permit Renewals for the Warner Ridge, Dome, Warner Valley, and Hurricane Grazing Allotments

Location: Salt Lake Base Meridian

Warner Ridge: T. 43 S., R. 14 W. Sec. 6, 7, 18, 19
T. 42 S., R. 15 W. Sec. 36
T. 43 S., R. 15 W. Sec. 1, 12, 13, 24

Dome: T. 42 S., R. 15 W. Sec. 24, 25, 36
T. 42 S., R. 14 W. Sec. 19, 20, 29, 30, 31

Warner Valley: T. 42 S., R. 14 W. Sec.15, 16, 21, 22, 27, 28. 29, 32

Hurricane: T. 42 S., R. 13 W. Sec. 27, 34, 35
T. 43 S., R. 13 W. Sec. 3, 4

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1.0 CHAPTER 1—PURPOSE AND NEED

1.1 INTRODUCTION

This Environmental Assessment (EA) has been prepared to disclose and analyze the environmental consequences of the Bureau of Land Management's (BLM) proposal to renew 10 year term grazing permits for the Warner Ridge, Dome, Warner Valley and Hurricane Allotments. There are four grazing permits associated with these four allotments. This 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 will 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 the St. George Field Office Record of Decision and Resource Management Plan (RMP; BLM 1999).

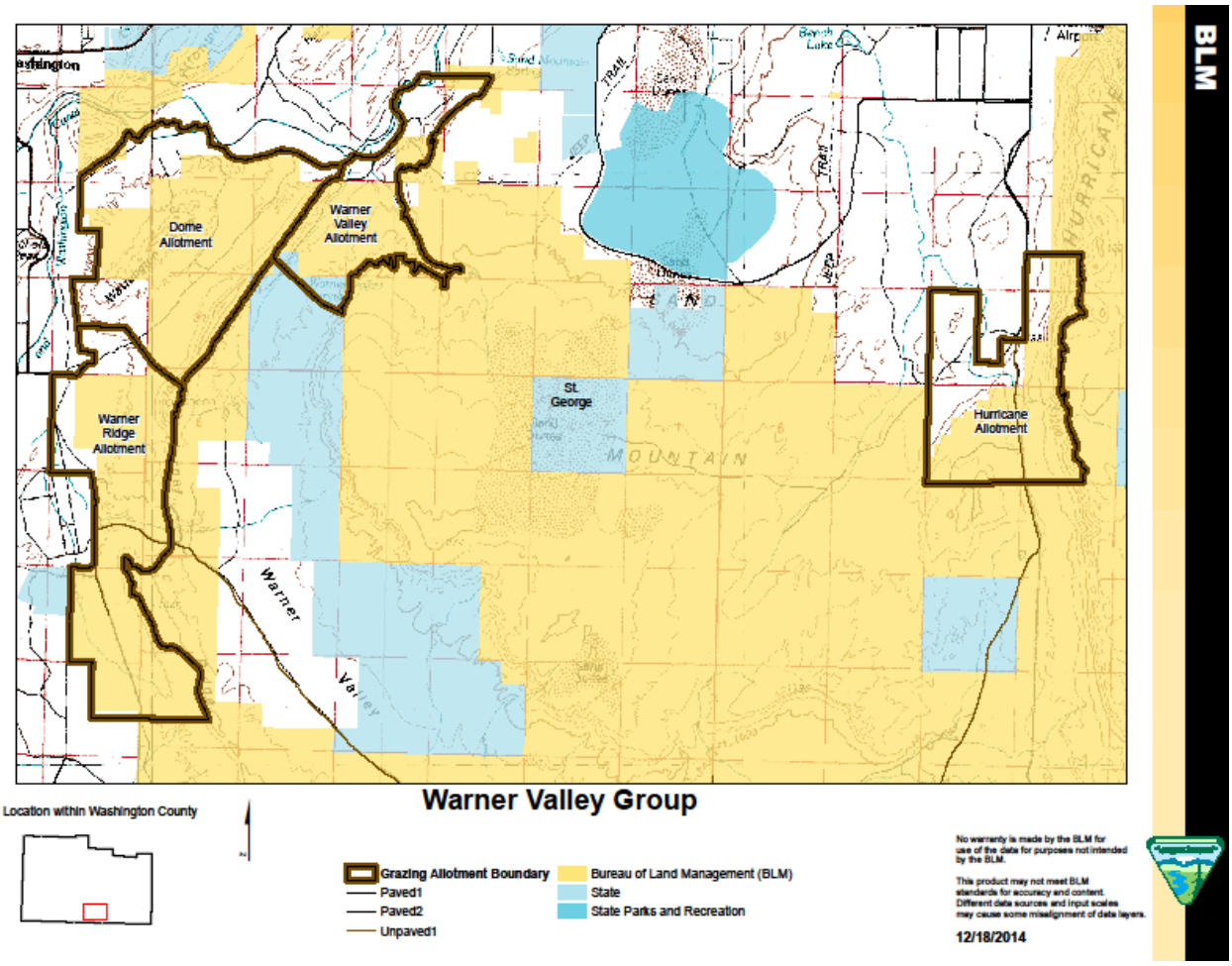


Figure 1-1. Allotment Locations

1.2 BACKGROUND

The federal action addressed by this EA is the proposed renewal of ten-year term permits to license domestic livestock grazing within four allotments that encompass 6,765 acres of public land. The renewal would authorize livestock grazing at appropriate levels to protect public land resources, consistent with Utah Public Lands Standards for Rangeland Health and Guidelines for Grazing Management (Standards and Guides), approved by the Secretary of the Interior on May 20, 1997. The four allotments are close in proximity to each other and, as a group, are located just east of St. George, UT and south of Hurricane, UT (see Figure 1-1). The allotments are evaluated together in this group EA because of their close proximity and similar environmental characteristics.

Rangeland Health Assessment studies were completed for each of the four allotments in the fall of 2014. The assessments were completed by an interdisciplinary team of BLM resource specialists.

An Environmental Assessment was prepared for the four allotments and completed in 2006, for the previous renewal of these permits. Some changes have occurred since the previous EA was completed and will be discussed later in this EA.

1.3 NEED FOR THE PROPOSED ACTION

The need for action is derived from the legal requirement under NEPA that federal agencies disclose to the public information about those projects or activities authorized by federal agencies that have the potential to "significantly" impact the human environment. Livestock grazing on public lands is a federally authorized activity that could have important environmental consequences; the issuance of a term grazing permit would normally trigger the requirements for analysis and disclosure of those consequences, in compliance with NEPA.

The development of a range of alternatives for the grazing permit renewal EA was based on results of interdisciplinary Rangeland Health Assessments, conducted by BLM within the four allotments during September 2014. The Rangeland Health Assessments indicated that current livestock grazing management in these four allotments was meeting all rangeland health objectives and standards, as defined by the Standards and Guidelines.
The current ten-year term grazing permits for the Warner Ridge, Dome, Warner Valley and Hurricane Allotments will expire in 2017, but due to the projected workload in subsequent years, it was decided that the Warner Valley group EA will be completed in 2016.

1.4 PURPOSE FOR THE PROPOSED ACTION

The purpose of the federal action is to renew 4 ten-year term grazing permits to the authorized livestock operators of the Warner Ridge, Dome, Warner Valley and Hurricane Allotments and thus, continue to authorize livestock grazing within these allotments. Livestock grazing on public lands is a valid use of public lands, authorized through several legal authorities, including the Taylor Grazing Act, the Public Rangelands Improvement Act, and the Federal Land Policy Management Act (FLPMA).

Livestock grazing on public lands is managed according to regulations contained in the Code of Federal Regulations (CFR) at 43 CFR Part 4100. BLM is responsible for determining the appropriate levels of grazing and management strategies for livestock grazing on an allotment that will protect public land resource values and maintain rangeland health. Grazing permits issued must be in compliance with the mandates of FLPMA, unless superseded by subsequent legislative authority, as well as the implementing regulations that established the Fundamentals of Rangeland Health (at 43 CFR Part 4180) and Utah's Rangeland Health Standards (1997).

1.5 CONFORMANCE WITH BLM LAND USE PLANS

Activities authorized on BLM-managed public lands must be in conformance with the land use plan, called Resource Management Plans or RMPs, which have been developed through a public process. The Proposed Action, to renew term grazing permits for the Warner Ridge, Dome, Warner Valley and Hurricane Allotments, is in conformance with management objectives and decisions from the St. George Field Office RMP (1999). Stated objectives for rangeland management from the RMP include:

a) *Promotion of healthy, sustainable rangeland ecosystems that produce a wide range of public values such as wildlife habitat, livestock forage, recreation opportunities, clean water, and safe and functional watersheds;*
b) *Restoration and improvement of public rangelands to properly functioning condition, where needed;*
c) *Providing for sustainability of the western livestock industry and communities that are dependent upon productive, healthy rangelands;*
d) *Ensuring public land users and stakeholders have a meaningful voice in establishing policy and managing public rangelands.*

The Proposed Action is in conformance with Range Decisions GZ-01, GZ-02, GZ-09, and GZ-11 found in the RMP Record of Decision (ROD) (BLM 1999, pgs. 2.32 and 2.34).

- GZ-01 relates to the Standards for Rangeland Health and Guidelines for Grazing Management for BLM Lands in Utah, approved by the Secretary of the Interior on May 20, 1997 (BLM 1997). BLM applies these standards and guides to its grazing management program throughout Washington County.
- GZ-02 provides for review and revision of allotment categories, where needed, to respond to changing resource conditions.
- GZ-09 states that rangeland projects may be developed where assessments show the need to improve livestock management by establishing proper livestock control or distribution.
- GZ-11 provides a list of guidelines that will be applied to grazing management in order to help achieve approved standards on public lands within Washington County.

The Proposed Action would not conflict with other decisions from the RMP.

1.6 RELATIONSHIP TO STATUTES, REGULATIONS, AND OTHER PLANS

This section contains information about other guidance related to grazing on these allotments. The Proposed Action would be consistent with federal, state, and local laws, regulations, and plans including the following:

- Taylor Grazing Act of 1934
- FLPMA of 1976 (43 U.S.C. 1701 et seq.)
- Public Rangelands Improvement Act of 1978
- Endangered Species Act of 1973, as amended.
- Wilderness Act (1966)
- National Historic Preservation Act (1969)
- Omnibus Public Land Management Act of 2009

The Fundamentals of Rangeland Health and Utah's Standards and Guidelines (43 CFR Part 4180) address watersheds, ecological condition, water quality, and habitat for special status species. These resources are addressed on the attached IDT Analysis Record (Appendix A) and, if potentially impacted, are analyzed in Chapter 4 of this document.

The St. George Field Office collaborates with other agencies to achieve consistency (to the extent possible) between plans that may address the same resources. Livestock grazing is consistent with management objectives from the Washington County General Plan, adopted in

2010, which supports livestock grazing as a valid use of public land within the county (Washington County 2010).
The Proposed Action is consistent with other plans that address other resources and uses within the geographic location of the allotments, including the Utah State Comprehensive Outdoor Recreation Plan, water quality and watershed management plans, the Virgin Spinedace Conservation Agreement and Strategy, and regional plans for game and non-game wildlife management.

The proposed action and alternatives are consistent with all federal laws, state and local laws, regulations, and relevant plans.

1.6.1 Consistency with State and Local Plans

Livestock grazing on public lands is consistent with the Washington County General Plan, which identifies lands within the allotments as open for economic uses such as livestock grazing (Washington County General Plan, 2010) and the County Resource Management Plan, which states, the county supports preserving the natural scene, and maintaining AUMs (Animal Unit Month) for agriculture, a long-term use, to support the local economy (County Resource Management Plan, 2009). The Proposed Action is consistent with other plans that address other resources and uses within the geographic location of the allotments, including the Utah State Comprehensive Outdoor Recreation Plan, water quality and watershed management plans, and regional plans for game and non-game wildlife management.

1.6.2 Other NEPA Analysis That Limit the Scope of This EA

This EA is tiered to the Environmental Impact Statement (Draft 1995, Final 1998) that supported the St. George RMP; to the Final Hot Desert Grazing Management Environmental [Impact] Statement (BLM 1978), and to the Kanab Escalante Grazing Environmental [Impact] Statement (BLM 1980). The latter two analyses evaluated BLM's livestock grazing management program in Washington County. The resource impacts that could result from a range of livestock grazing alternatives, including a No Grazing Alternative, were disclosed in the Environmental Impact Statements. The St. George Field Office RMP incorporated by reference the analyses of livestock grazing management from the two Grazing Management Environmental Impact Statements.

1.7 IDENTIFICATION OF ISSUES

Issues are essentially an effect on a particular resource component. Issues for consideration in this analysis were determined by input from the BLM Interdisciplinary Team (IDT), results of the rangeland health evaluations, and input from other governmental agencies and the public.

Public notification of BLM's intent to renew the Warner Ridge, Dome, Warner Valley and Hurricane Allotments term grazing permits through a NEPA process was posted on the BLM-NEPA national register ePlanning website (https://eplanning.blm.gov/epl-front-office/eplanning/nepa/nepa_register.do), a web-based site available for public review. The initial posting was made on 05/16/2016. A BLM point of contact was identified and federal and state agency representatives (e.g., UDWR) and the interested public were invited to participate in the

process and identify issues of concern (see Chapter 5, Consultation and Coordination for additional details).

The BLM Interdisciplinary Team (IDT) of resource specialists reviewed the Proposed Action and evaluated its potential effects to the human environment in order to identify resource issues that would be carried forward for analysis in the EA. Documentation of that review is attached as Appendix A, the IDT Analysis Record Checklist, which lists all resources and values considered by the IDT. The findings of the qualitative assessments of rangeland health that were conducted in 2014 in conjunction with quantitative monitoring and inventory data, were used to assess resource conditions and identify relevant issues. Resources or land uses that are not present in the project area or that would not be affected by the Proposed Action are identified on the checklist and a clear rationale provided for not carrying them forward for analysis in the EA.

1.7.1 Issues Carried Forward for Analysis

1.7.1.1 Cultural Resources

Section 106 of the National Historic Preservation Act (NHPA) directs agencies to take into account the effects of their actions on archaeological sites that are determined eligible for listing on the National Register of Historic Places (NRHP). Certain types of archeological sites are susceptible to impacts related to livestock grazing, such as damage to structural features.

The four allotments have a moderate potential for the occurrence of prehistoric and historic period sites that are eligible for listing to the NRHP. Sites would be expected along the Virgin River terraces, and around springs and seeps. Previous archaeological inventories conducted within the allotments have identified two sites that have been determined eligible for listing on the NRHP. The potential effects of the proposed renewal of the term grazing permits on cultural resources are carried forward in this EA.

1.7.1.2 Areas of Critical Environmental Concern (ACEC)

The Warner Ridge Fort Pearce ACEC encompasses a large majority of the Warner Ridge allotment, and a very small portion of the Dome allotment. This ACEC received its designation because it contains the endangered dwarf bear claw poppy (*Arctomecon humilis*), the threatened siler pincushion cactus (*Pediocactus sileri*), and highly erodible soils. It also houses important riparian values and historic sites (not within the boundaries of the allotments being evaluated in this EA). Livestock grazing could potentially impact some of the high quality characteristics that require the special management attention conferred by ACEC status.

1.7.1.3 Special Status Animals

Special status species include federal and state listed Threatened and Endangered (T&E) species, BLM sensitive species, and Utah state species of special concern. Livestock grazing could alter habitat that supports special status animal species. Several T&E and sensitive species do occur in these allotments. Therefore, the potential effects of the proposed renewal of the term grazing permits on Special Status Animals are carried forward in this EA.

1.7.1.4 General Wildlife

General wildlife includes all wildlife not considered Threatened, Endangered, Sensitive, or otherwise of special concern. Because livestock grazing can impact available forage, wildlife cover, and water availability, the consideration of potential impacts on general wildlife is carried forward in this EA.

1.7.1.5 Migratory Birds and Species of Conservation Concern

Grazing can occur during the breeding and nesting season for migratory birds or other birds that are considered to be Species of Conservation Concern by the USFWS. Grazing could cause short-term disturbances to these birds and could impact vegetation that may provide habitat for these species. Improper livestock grazing management practices or excessively high stocking rates can impact migratory bird populations and the quality of habitats that support them. The potential effects of the proposed renewal of the term grazing permits on migratory birds and Species of Conservation Concern are carried forward in this EA.

1.7.1.6 Special Status Plants

Livestock grazing could alter habitat that supports special status and/or threatened, endangered or candidate plant species. Both the dwarf bear claw poppy (federally endangered) and the siler cactus (federally endangered) occur in these allotments. The potential effects of the proposed renewal of the term grazing permits on Special Status Plants are carried forward in this EA. Additionally Parry's sandpaper plant (BLM sensitive) occurs and is addressed in this EA.

1.7.1.7 Livestock Grazing

Permit renewal is required to authorize continued livestock grazing. How grazing can impact the resources within the Warner Ridge, Dome, Warner Valley and Hurricane allotments is the purpose of this EA and is addressed in detail

1.7.1.8 Vegetation

Livestock grazing could result in over-grazing in areas where cattle might concentrate, such as at water sources. Selective grazing of preferred species, such as native bunchgrasses, could also be detrimental to vegetation, reducing overall productivity levels or resulting in changes in plant community composition. Properly managed grazing can be beneficial to these preferred plant species through regrowth stimulation, this can lead to an increase in overall production and contribute to wildlife habitat.

Invasive exotic annual grasses (e.g., cheatgrass [*Bromus tectorum*] and red brome [*Bromus rubens*]) are present within these allotments. The potential impacts of livestock grazing on native vegetation and on the introduction and/or spread on non-native species are analyzed in this EA.

1.8 ISSUES CONSIDERED, BUT ELIMINATED FROM FURTHER ANALYSIS

1.8.1 Water Quality

As part of the rangeland monitoring program, surface waters within grazing allotments are monitored for water quality standards. The Virgin River, which runs along the west side of the allotments on private land, has been and continues to be monitored by the Utah Division of Water Quality. The segment of the stream between the Warner Valley Allotment and where Pah Temple Hot Springs enters the Virgin River is considered not meeting Utah Water Quality Standards due to the increase amount of salt entering the system at the hot springs. This factor is due to natural geological formations and not a result of livestock use. Livestock use on the Virgin River riparian areas is not negatively impacting water quality.

1.8.2 Riparian Resources

There is a possibility of impacts of livestock grazing on riparian resources along the Virgin River located in the Warner Valley Allotment. However, this area is located on private land and will not be further discussed in this EA

1.8.3 Rangeland Health Standards

Allotment evaluations were conducted on each of the four allotments being considered for permit renewal. All four allotments were determined to be meeting the Utah Standards and Guidelines for livestock grazing.

Resources or land uses that are present but that would not be measurably affected by the current proposal are identified on the IDT Checklist in Appendix A.

1.8.4 Lands/Access

A portion of the Warner Ridge and Dome allotments has been transferred to the state of Utah. 398 acres was transferred in January of 2015 for the construction of the southern parkway. The livestock permittees were notified and the necessary adjustments were made to the livestock permits. Those adjustments are carried over into the proposed action and no action alternatives.

2.0 CHAPTER 2−DESCRIPTION OF ALTERNATIVES

2.1 INTRODUCTION

This chapter contains a description of the alternatives discussed during formulation of this proposal. The purpose of the proposal is to renew four ten year grazing permits through the NEPA analysis and public review processes.

2.2 ALTERNATIVE A-PROPOSED ACTION

This alternative would renew the livestock term grazing permits for a period of 10 years and authorize livestock grazing to continue. Grazing under this alternative would be licensed, with stocking levels, class of livestock, and season of use as depicted below in Figure 2-1.

Allotment	Number of Livestock	Type of Livestock	Season of Use	AUMs	% Public Land
Warner Ridge	16	Cattle	12/1 – 4/30	81	100
Dome	43	Cattle	12/1 – 5/10	212	93
Warner Valley	22	Cattle	12/1 – 5/14	119	100
Hurricane	6	Cattle	11/1 – 5/31	42	100

Figure 2-1. Livestock Grazing Permitted Use under the Proposed Action and No Action Alternatives.

2.2.1 Monitoring

Trend and utilization studies would be read as scheduled. Regular monitoring of species and sites would be conducted to determine whether vegetative conditions and objectives are being achieved. Adjustments would be made to the licensed grazing use for this allotment, if studies indicate that rangeland health standards are not being met as a result from current grazing management.

BLM resource specialists would continue to monitor and assess range conditions during the life of the term permits to ensure that conditions continue to meet Utah Standards and Guidelines for Rangeland Health. Range studies and monitoring would be conducted in accordance with BLM procedures and AMP requirements.

2.2.2 Permit Terms and Conditions

1) Actual use information must be reported within 15 days after completing annual grazing use.

2) No supplemental feeding of roughage is allowed on public lands except in emergency conditions, then only by written permission by the BLM.

3) Maintenance for all structural range improvements and other projects assigned to the permit holder(s) through cooperative agreements and/or range improvement permits are the responsibility of the permit holder(s). Failure to maintain assigned projects may result in suspending the permit until maintenance is completed.

4) BLM would continue to monitor and assess rangeland conditions during the life of the term permits to ensure that conditions continue to meet Utah Standards and Guidelines for Rangeland Health.

5) Grazing permit or lease terms and conditions and the fees charged for grazing use are established in accordance with the provisions of the grazing regulations now or hereafter approved by the Secretary of the Interior.

6) Permits are subject to cancellation, in whole or in part, at any time because of:

7) Noncompliance by the permit holder/lessee with rules and regulations.
8) Loss of control by the permit holder/lessee of all or a part of the property upon which it is based.
- *A transfer of grazing preference by the permit holder/lessee to another party.*
- *A decrease in the lands administered by the BLM within the allotment(s) described.*
- *Repeated willful unauthorized grazing use.*
- *Loss of qualifications to hold a permit or lease.*

9) Permits are subject to the terms and conditions of the AMPs (Allotment Management Plan) if such plans have been prepared.

10) Those holding permits or leases must own or control and be responsible for the management of livestock authorized to graze.

11) The authorized officer may require counting and/or additional or special marking or tagging of the livestock authorized to graze.

12) The permit holder's/lessees grazing case file is available for public inspection as required by the Freedom of Information Act.

13) Grazing permits or leases are subject to the nondiscrimination clauses set forth in Executive Order 11246 of September 24, 1964, as amended. A copy of this order may be obtained from the authorized officer.

14) Livestock grazing use that is different from that authorized by a permit or lease must be applied for prior to the grazing period and must be filed with and approved by the authorized officer before grazing use can be made.

15) Billing notices are issued which specify fees due. Billing notices, when paid, become a part of the grazing permit or lease. Grazing use cannot be authorized during any period of delinquency in the payment of amounts due, including settlement for unauthorized use.

16) Grazing fee payments are due on the date specified on the billing notice and must be paid in full within 15 days of the due date, except as otherwise provided in the grazing permit or lease. If payment is not made within that time frame, a late fee (the greater of $25 or 10% of the amount owed but not more than $250) will be assessed.

17) No Member of, or Delegate to, Congress or Resident Commissioner, after his/her election of appointment, or either before or after he/she has qualified, and during his/her

continuance in office, and no officer, agent, or employee of the Department of the Interior, other than members of Advisory committees appointed in accordance with the Federal Advisory Committee Act (5 U.S.C. App.1) and Sections 309 of the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1701 et seq.) shall be admitted to any share or part in a permit or lease, or derive any benefit to arise there from; and the provision of Section 3741 Revised Statute (41 U.S.C. 22), 18 U.S.C. Sections 431-433, and 43 CFR Part 7, enter into and form a part of a grazing permit or lease, so far as the same may be applicable.

18) *This permit: 1. conveys no right, title or interest held by the United States in any lands or resources and 2. is subject to (a) modification, suspension or cancellation as provided by land plans and applicable law; (b) review and modification of terms and conditions as appropriate; and (c) the Taylor Grazing act, as amended, the Federal Land Policy and Management Act, as amended, the Public Rangelands Improvement Act, and the rules and regulations now or hereafter promulgated there under by the Secretary of the Interior.*

2.3 ALTERNATIVE B-NO ACTION

Under the No Action Alternative, the current 10 year term grazing permits for the Warner Ridge, Dome, Warner Valley, and Hurricane Allotments would remain valid until their expiration date, with no changes to the terms and conditions that were attached to those permits when they were issued. Licensed grazing use would then be renewed under the appropriations act, if available, and remain as currently authorized. While the No Action alternative does not satisfy the purpose and need for federal action at this time, it is carried forward in this EA to provide a baseline for the comparison of impacts related to the Proposed Action.

2.3.1 Monitoring

Under the No Action Alternative, BLM resource specialists would continue to monitor and assess rangeland conditions during the duration of the term permits to ensure that conditions continue to meet Utah Standards and Guidelines for Rangeland Health. Range studies and monitoring would be conducted in accordance with BLM manual procedures and requirements.

2.3.2 Permit Terms and Conditions

The new permit Terms and Conditions, as shown in Section 2.2.2 above, would not be applied to the current permit. Under this alternative the permits would operate under their currently issued terms and conditions.

2.4 ALTERNATIVES CONSIDERED BUT NOT ANALYZED IN DETAIL

2.4.1 No Livestock Grazing Alternative

An alternative for No Grazing, wherein livestock grazing would not be permitted on any of these four allotments, was evaluated by the BLM IDT, but was not carried forward for detailed study, because the IDT did not find any unresolved conflicts or issues that could be addressed through the elimination of grazing.

The No Grazing alternative would not meet the purpose and need to authorize a legitimate use of public lands, consistent with federal legal mandates, including the Taylor Grazing Act and FLPMA. It would also not be in conformance with the St. George Field Office RMP, in which these allotments were made available to grazing.

Without unresolved conflicts, a No Grazing alternative would conflict with the Taylor Grazing Act. This act authorizes BLM to allow for and regulate livestock use of public lands, to adequately safeguard grazing privileges, to provide for the orderly use, improvement, and development of the range, and to stabilize the livestock industry dependent upon the public range.

Without unresolved conflicts, an alternative that proposes to close the four allotments to grazing would be inconsistent with the intent of FLPMA, which requires that public lands be managed on a "multiple use and sustained yield basis" (FLPMA Sec. 302 (a) and Sec. 102(7)). FLPMA includes livestock grazing as a principal or major use of the public lands. FLPMA's multiple use mandate does not require that all lands be used for livestock grazing. However, without identified resource conflicts that can only be resolved through closure to grazing, the removal of livestock grazing would be arbitrary and would not meet the principle of multiple use and sustained yield.

Without unresolved conflicts, a No Grazing alternative would not be in conformance with the management decisions and analysis in the St. George RMP/EIS (DEIS 1995/FEIS 1998, ROD-BLM 1999). The RMP carried forward most decisions related to livestock grazing on public lands in Washington County from the Hot Desert Grazing Environmental Impact Statement (BLM 1978) and the Kanab Escalante Grazing Environmental Impact Statement (BLM 1980). Implementation of the No Grazing alternative would require a plan amendment.

The BLM has considerable discretion, through its grazing regulations, to determine and adjust stocking levels, seasons-of-use, and grazing management activities. If, at some point in the future, monitoring indicates any of the allotments are not in compliance with the Rangeland Health Standards and Guidelines, or if any resource conflicts arise, administrative actions would be taken to modify the terms and conditions of the permit or to withhold the permit. The permit or lease may be canceled, suspended, or modified in whole or in part to meet the requirements of applicable laws and regulations.

The Proposed Action and No Action alternatives represent a reasonable range of alternatives, where additional action alternatives are not required to better address resource issues. For these reasons, the No Grazing alternative is not addressed further in this EA.

3.0 CHAPTER 3—AFFECTED ENVIRONMENT

3.1 INTRODUCTION

This chapter discusses the existing potentially affected environment of the impact area as identified in the checklist found in Appendix A. This chapter includes a description of the environment, potentially affected by the alternatives described in Chapter 2 and provides the

baseline for comparison of effects described in Chapter 4. Information for this chapter came from existing NEPA analyses and the most recent available data from the allotments.

3.2 GENERAL SETTING

The four allotments are located in the central portion of Washington County, Utah, just east of St. George, UT and south of Hurricane, UT (refer to Figure 1-1). The following description of the physical site characteristics applies to the four allotments.

Washington County is located at the junction between three major physiographic provinces: the Colorado Plateau, the Great Basin, and the Mojave Desert. The region's landscape characteristics are highly variable, creating a rich biological diversity that is rather uncommon within the arid, intermountain west.

These four allotments are located at the eastern edge of the Mojave Desert (also known as the Mojave basin and range). Creosote bush dominates the shrub community, which distinguishes the Mojave Basin and Range from the saltbush-greasewood and sagebrush-grass associations that occur to the north in the Central Basin and Range and the Northern Basin and Range. Creosote bush also distinguishes the Mojave Basin and Range from the paloverde-cactus shrub and saguaro cactus that occur in the Sonoran Basin and Range to the south.

The topography of the allotments ranges from sand dunes, fault lines, and creosote flats. The Hurricane cliffs, a natural fault line presents itself as the natural boundary line along the east side of the Hurricane allotment and the boundary or the Hurricane sand dunes along the west. The Warner Ridge, Dome and Warner Valley are bordered along the east by the sand dunes and the west by the community of Washington City, Utah. Elevations range from about 2,800 feet to 3,000 feet. The Virgin River runs along the north boundary of the Warner Valley Allotment. Soils in the allotments range from a very sandy range site in the upland portion or the Warner Valley Allotment (see Photo 3-1) to sand loam in the other three allotment (see photo 3-2). Runoff is medium and the hazard of erosion is moderate, occurring primarily on the steeper slopes during high intensity or long duration storm events. The average annual precipitation varies from 8 to 10 inches. Precipitation events occur primarily during two periods of the year, in winter from early December to late March and in late summer from August to mid-September.

Resources which were reviewed for this EA are included in the Interdisciplinary Team Review Record (checklist), contained in Appendix A. Resources which may be impacted include Areas of Critical Environmental Concerns (ACEC), Special Status Animal Species, Migratory Birds and Species of Conservation Concern, Special Status Plants Species, Livestock Grazing, Paleontology Resources, and Vegetation. These resources are described below. Resource values that are not identified as having potential impacts, conflicts or issues will not be discussed further in this EA.

Photo 3-1. Typical range site in Warner Valley Allotment.

Photo 3-2. Typical range site in the Warner Ridge, Dome and Hurricane Allotments.

3.2.1 Land Use Management

To date, uses of these lands have consisted mostly of livestock grazing, game and bird hunting hiking and off road vehicle use. The public lands of the allotments provide important habitat for small mammals, birds, and other wildlife. The land use management tool that applies to most of these lands includes the Warner Ridge/Fort Pearce ACEC.

3.3 CULTURAL RESOURCES

As noted above in Section 1.7.1.1, the NHPA requires that BLM take into account the effects of their actions on cultural resources that are eligible for or listed on the NRHP. The identification efforts used, to identify effects to cultural resources, are consistent with those outlined in Instruction Memorandum No UT-2010-026 and BLM Utah Handbook 8120, Appendix 10, and consisted of a Class I literature review, and monitoring.

The Class I literature review was performed by Geralyn McEwen in June of 2011, and included a review of cultural resource databases housed at the Utah Division of State History (CURES), the St. George Field Office cultural database files, and the BLM internet site containing historical General Land Office (GLO) records located at http://www.glorecords.blm.gov. The Class I literature review identified 54 Class III field inventories that have been conducted within the 4 allotments.

Twenty-eight archaeological sites have been identified within the allotment boundaries. Twenty of these sites have been determined "eligible" NRHP. Eligible sites include surface scatters of lithic, ceramics, and ground stone, lithic source sites, rock shelters, Ancestral Pueblo habitation sites, historic erosion control features and historic irrigation systems. Consistent with BLM policy, a representative sample of nine sites was monitored to assess effects from grazing. Minimal effects were observed.

3.4 AREAS OF CRITICAL ENVIRONMENTAL CONCERN

The Warner Ridge/Fort Pearce ACEC which is 4,281 acres in size, encompasses 1,671 acres of the Warner Ridge allotment and 183 acres of the Dome Allotment (see figure 3-2, in special status plants). Under the St. George RMP, the management objectives for this ACEC include preserving the endangered dwarf bear claw poppy, the threatened siler pincushion cactus, important riparian values along the Fort Pearce Wash and historic sites and highly erodible soils all of which are at risk from off-road travel, road proliferation, urban growth, and human encroachment.

Monitoring and assessment programs as specified in the Utah Monitoring Manual for Upland Rangelands have been implemented in both allotments that are located within the ACEC and have shown that the Standards for Rangeland Health are being met.

Additionally, the SGFO is establishing long-term study plots in areas of the Warner Ridge allotment containing the best dwarf bear claw poppy habitat, to monitor the general health of individual plants and any noticeable effects of grazing activities.

3.5 SPECIAL STATUS ANIMALS

Livestock grazing activities may directly or indirectly impact special status species. Special status species that may occur within the four allotments include federally-listed T&E species and state listed species of special concern. Literature reviews were conducted using species lists obtained from the FWS and Utah Division of Wildlife Resources and background information from Nature Serve Explore.

Mojave desert tortoise (*Gopherus agassizii*; hereafter, tortoise) is the only federally listed wildlife species occurring within the Warner Ridge, Dome, Warner Valley, and Hurricane grazing allotments (known collectively as the Warner Valley Group Grazing Allotments; WVGGA). Although WVGGA lands are outside of USFWS Upper Virgin River Recovery Unit designated critical habitat and the Washington County Habitat Conservation Plan area, tortoises are known to be present in low densities, especially in areas where stratified rock outcrops create potential denning sites and where creosote/bursage vegetation exists. Within the WVGGA, the Dome allotment contains the best tortoise habitat which is evidenced by a recent survey there (McLuckie 2015) that documented 6 live tortoises (3 adults, 2 immat., 1 juv.) and 13 shelter sites (3 pallets, 3 burrows, 7 dens). Tortoises typically hibernate from October through February, and are active/may be observed outside of burrows mid-March through October, with primary activity occurring mid-March through May.

The following BLM Sensitive species may occur in the Warner Valley group of allotments: Arizona toad (permanent resident, fairly common), bald eagle (winter visitor, fairly common), burrowing owl (permanent resident, uncommon), ferruginous hawk (permanent resident, fairly common), grasshopper sparrow (transient, rare), short-eared owl (transient, rare), big- free-tailed bat (summer resident, rare), fringed myotis (permanent resident, uncommon), kit fox (permanent resident, uncommon), spotted bat (permanent resident, rare), Townsend's big-eared bat (permanent resident, fairly common), common chuckwalla (permanent resident, uncommon), gila monster (permanent resident, rare), sidewinder (permanent resident, fairly common), Western banded gecko (permanent resident, uncommon), Western threadsnake (permanent resident, rare) and zebra-tailed lizard (permanent resident, fairly common). No nests, dens, roosts, or other special use areas for BLM Sensitive species have been identified in these allotments.

From the rangeland health assessment completed within these allotments, it was determined that all sites were functioning properly (see health assessment summary). It was also determined that the ecosystem met the Utah Rangeland Standards and conformed to all the Grazing Management Guidelines. Under the proposed action, the vegetation within these allotments should be properly utilized by livestock and the habitat maintained in good condition for all special status animals. The maintenance of fences, waters, and other livestock operations should not cause significant disturbances to special status animals and their habitat.

3.6 GENERAL WILDLIFE

General wildlife found in these allotments include: badgers, antelope ground squirrels, kangaroo rats, deer mice, desert wood rats, Gambel's quail, mourning doves, common ravens, wrens, house finches, side-blotched lizards, and Western whiptails. Infrequently, larger animals such as

raptors, coyotes, gray fox, and mule deer may pass through these allotments. From the rangeland health assessment completed within these allotments, it was determined that all sites were functioning properly (see health assessment summary). It was also determined that the ecosystem met the Utah Rangeland Standards and conformed to all the Grazing Management Guidelines.

3.7 MIGRATORY BIRDS AND BIRDS OF CONSERVATION CONCERN

Migratory bird species (e.g., raptors, songbirds, and shorebirds) are protected under the Migratory Bird Treaty Act (MBTA) of 1918, Executive Order 13186, and the Bald and Golden Eagle Protection Act (BGEPA). The MBTA protects species or families of birds that live, reproduce, or migrate within or across international borders during their life cycle. Under authority of the MBTA, it is unlawful to take, kill, or possess migratory birds, their parts, nests, or eggs—including the disturbance or destruction of a migratory bird nest that results in the loss of eggs or young. Executive Order 13186 was enacted, in part, to ensure that environmental analyses of federal actions evaluate the impacts of actions and agency plans on migratory birds. It also states that emphasis should be placed on species of concern, priority habitats, and key risk factors and it prohibits the take of any migratory bird without authorization from the USFWS. The BGEPA makes it illegal to take (e.g., disturb, molest), possess, sell, purchase, barter, or transport any Bald or Golden eagle, alive or dead, or any part, nest, or egg thereof.

The decline of Neotropical migratory birds (NTMBs; i.e., landbirds that breed north of Mexico and then migrate to Mexico, Central and South America, and the Caribbean) in North America is well documented (Rappole and McDonald 1994). Partners in Flight (PIF) is a cooperative partnership program involving Federal and State Governmental agencies (e.g., BLM, USFWS, Utah Division of Wildlife Resources; UDWR) that focuses on the conservation of migratory birds (e.g., NTMBs) and maintains a PIF High-Priority Bird Species list (Parrish et al. 2002). The USFWS maintains a list of Birds of Conservation Concern for each Bird Conservation Region in the United States (USFWS 2008). Washington County is in USFWS Bird Conservation Regions 6, the Mountain-Prairie Region. In cooperation with the UDWR, Utah-BLM maintains an avian Sensitive Species list (UDWR 2015; http://dwrcdc.nr.utah.gov/ucdc/ViewReports/SS_List.pdf).

A variety of migratory bird species (≥ 302 spp.) have been documented using habitats within Washington County, for breeding, nesting, foraging, and migratory habitats (Fridell and Comella 2007, Parrish et al. 2002; see Appendix B), including USFWS-BLM-PIF listed species of conservation concern (see Appendix C).

3.8 SPECIAL STATUS PLANT SPECIES

Several of the allotments in this group provide habitat for threatened and endangered plants (see figure 3-2). The dwarf bear claw poppy (federally endangered) occurs on 331 acres in the Warner Ridge allotment and 67 acres in the Dome allotment. The siler Cactus (federally endangered) occurs on 194 acres of the Warner Ridge Allotment. Habitat for the dwarf bear claw poppy and siler cactus are void of most livestock forage plants; so these areas provide little opportunities for livestock grazing. Livestock do occasionally trail through the areas and may utilize some of the palatable vegetation; however, both the dwarf bear claw poppy and the siler cactus are unpalatable to livestock and should not be eaten.

The ACEC where these species occur is completely fenced and gates are locked in order to keep OHV's from impacting the area. Some of the gates are opened for a short period of time during the authorized grazing period to allow the cattle to enter those areas and utilize the palatable forage. The livestock operators are well aware of the threatened and endangered plants that occur in these areas and are careful to keep all livestock waters and supplements well clear of them. Recently (within the past 3-5 years), little to no livestock use has occurred in the Warner Ridge Allotment within the fenced-in area of the Warner Ridge/Fort Pearce ACEC.

The SGFO is establishing long-term study plots in areas of the Warner Ridge allotment containing the best dwarf bear claw poppy habitat, to monitor the general health of individual plants and any noticeable effects of grazing activities.

Several of the allotments in this group provide habitat for the Parry's sandpaper plant (*Petalonyx parryii*). This BLM sensitive plant occurs in both the Warner Ridge and Dome allotments. Habitat for sandpaper plant is generally void of most livestock forage plants; so these areas provide little opportunities for livestock grazing.

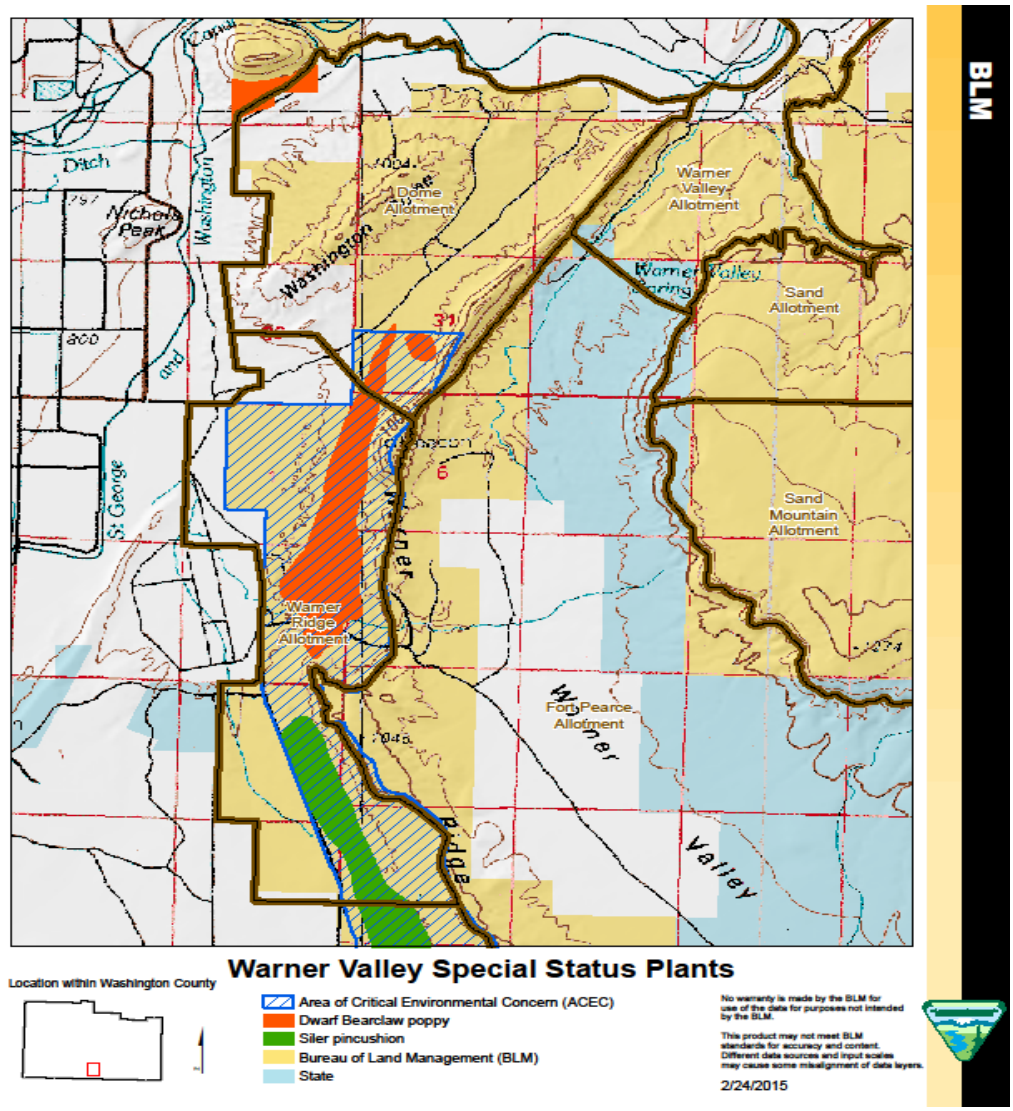


Figure 3-1. Warner Ridge/Ft. Pearce ACEC and Special Status Plants Species.

3.9 LIVESTOCK GRAZING

Since 1950, domestic cattle have been the primary livestock grazed in these four allotments. Prior to that, domestic sheep were commonly grazed in the area. In the 1960's, BLM began to develop and implement AMPs to improve rangeland health.

There are four grazing permits being assessed in this document. The permits are for grazing on the Warner Ridge, Warner Valley, Hurricane and Dome Allotments. Figure 1-1 above shows the allotment boundaries.

Five types of monitoring data are used to evaluate the impact livestock are making on these allotments; precipitation, actual use, trend, Utilization and Rangeland Health Assessments. Actual use, trend, utilization and the Rangeland Health Assessments are summarized under each individual allotment, precipitation data is general information based on rain gauges located

closest to the allotments; the St. George Range Gauge is the closest in elevation and distance to the four allotments monitored in this EA. That information is presented below in Figure 3-4.

Two of the allotments (Warner Valley and Hurricane) in this EA are classified as Custodial. Custodial allotments are typically small areas of public land intermingled with larger blocks of private land. In some cases, the public land has low forage productivity or limited amounts of land suitable for grazing. A grazing lease is issued for the amount of livestock forage produced annually on the public lands and is allotted on an AUM basis as for non-custodial leases. BLM does not control the adjacent private lands owned by the permit holders. The livestock operator assumes grazing management responsibility with the intent to maintain or improve existing resources. Livestock are to be grazed on public lands only during the established season of use. If private land is used during different periods, it is the permittee's responsibility to keep livestock off the public land during non-grazing periods. BLM retains the right to manage the public lands for multiple uses and to make periodic inspections to ensure that overgrazing does not occur. If overgrazing should occur, then BLM would work with affected partners to identify and prescribe actions to be taken that would return the allotment to compliance.

Figure 3-2. St. George Rain Gauge Station Results.

Year	Station	Yearly Amount	% of Normal
2003	St. George	5.87	72
2004	St. George	5.15	63
2005	St. George	15.96	195
2006	St. George	4.59	56
2007	St. George	6.43	79
2008	St. George	5.31	65
2009	St. George	5.81	71
2010	St. George	7.57	93
2011	St. George	9.47	116
2012	St. George	7.28	89
2013	St. George	5.48	67

3.9.1 Warner Ridge Allotment

The Warner Ridge Allotment includes 1,685 federal acres, with private and state inholdings, for a total acreage of 2,535 total acres, some of which are unsuitable for livestock grazing due to the steep rocky terrain. This allotment is classified as Custodial due to the small amount of federal land involved and the small amount of land suitable for grazing. The public land within the allotment has been determined to provide 99 AUMs and is authorized for 20 cattle grazing for 5 months from December 1 to April 30 of each year. The Warner Ridge Allotment is bordered by the city of St. George Airport along the west side and the Ft. Pearce Allotment on the east side. Recently a portion of this allotment was transferred to the State of Utah to accommodate the new southern parkway that runs along the west side of the allotment. A small reduction in acreage and AMU’s resulted from the exchange. The new numbers are reflected above.

3.9.2 Dome Allotment

The Dome Allotment includes 2,110 acres of public land, with private and state holding, for a total of 2,830 acres. This allotment is classified as Maintain (M). (M) allotments are allotments where land health standards are met or where livestock grazing on public land is not a significant causal factor of not meeting the standards. The current permit was issued for 43 cattle from December 1 to May 10, with 93 percent of the livestock use on public land (total of 212 AUMs on public land). The new southern parkway runs through this allotment splitting the allotment almost in half. Although both sides of the parkway are available for livestock use it is likely that due to the lack of water on the west side minimal use may occur. Monitoring use will likely increase on the east side to assure utilization levels don't exceed desired use.

3.9.3 Hurricane Allotment

The Hurricane Allotment includes 1,700 federal acres, with private and state inholdings, for a total acreage of 1,850 total acres, some of which are unsuitable for livestock grazing due to the steep rocky terrain of the Hurricane Cliffs. This allotment is classified as Custodial due to the small amount of federal land involved and the small amount of land suitable for grazing. The public land within the allotment has been determined to provide 42 AUMs and is authorized for 6 cattle grazing for 7 months from November 1 to May 31 of each year.

3.9.4 Warner Valley Allotment

The Warner Valley Allotment includes 2,065 federal acres, with private and state inholdings, for a total acreage of 2,535 total acres, some of which are unsuitable for livestock grazing due to the steep rocky terrain. This allotment is classified as Custodial due to the large amount of private land involved and the small amount of land suitable for grazing. The public land within the allotment has been determined to provide 119 AUMs and is authorized for 22 cattle grazing from December 1 to May 14 of each year.

3.10 ALLOTMENT HEALTH MONITORING

Resource specialists from BLM regularly conduct inventories and assessments of natural resource conditions on public lands. The need for natural resource inventories was established in 1976 by Congress in Section 201(a) of the FLPMA and reaffirmed in 1978 in Section 4 of the Public Rangelands Improvement Act (PRIA). These acts mandate that federal agencies develop and maintain inventories of range conditions and trends on public rangelands and update inventories on a regular basis (BLM 2001).

The allotments evaluated in this EA have been monitored using actual use, precipitation, frequency trend studies and rangeland health assessments. The frequency studies collect two types of information. First, the percent cover of bare ground, litter, small rock, large rock, and vegetation cover are estimated along a permanent 100-foot transect. Second, the number of plants of each species is counted. This data can be compared over time to identify trends in plant growth, productivity, and composition. The purpose of a Rangeland Health Assessment is to identify "the degree to which the integrity of the soil, vegetation, water, and air, as well as the ecological processes of the rangeland ecosystem are balanced and sustained". Integrity is defined to mean the "maintenance of the functional attributes characteristic of a locale, including normal variability". These definitions were developed by a federal ad hoc committee established

in 1995 to integrate relatively recent concepts regarding rangeland health into various agencies' rangeland inventories and assessments. For the assessments, BLM uses a qualitative assessment protocol presented in the technical reference, "Interpreting Indicators of Rangeland Health". In general, this protocol is designed to provide a qualitative evaluation of the integrity of ecological processes important to rangeland health; the water cycle, energy flow, and the nutrient cycle. The results help land managers identify areas that are potentially at risk of degradation. The information collected focuses on critical ecosystem properties and processes. This qualitative assessment provides a relatively fast survey technique to rate site protection indicators, including both plant and soil components.

Three interrelated attributes are evaluated to assess the status of the ecological processes, including soil/site stability, hydrologic function, and integrity of the biotic community. Soil/site stability is the capacity of the site to limit redistribution and loss of soil resources (including nutrients and organic matter) by wind and water. Hydrologic function is the capacity of the site to capture, store, and safely release water from precipitation and run-off, to resist a reduction in this capacity, and to recover this capacity following degradation.

The integrity of the biotic community is the capacity of the site to support characteristic functional and structural communities in the context of normal variability, to resist loss of this function and structure due gauge the condition of the three attributes described above. Since the attributes are interrelated, several of the indicators provide an assessment of more than one attribute. The indicators include soil rills, water flow patterns, pedestals and/or terracettes, bare ground, gullies, wind-scoured blowouts and/or deposition areas, litter movement, soil surface resistance to erosion, soil surface loss or degradation, plant community composition and distribution relative to infiltration and runoff, compaction layer, functional and structural plant groups, plant mortality and decadence, litter amount, annual plant production, invasive plants, and reproductive capability of perennials.

For an assessment, each indicator is rated based on the degree of departure from the ecological site description or characteristics of the ecological reference area. The ratings of departure from expected conditions are none to slight, slight to moderate, moderate, moderate to extreme, and extreme.

Members of the BLM Interdisciplinary Team conducted Rangeland Health Assessments on the four allotments in the fall of 2014. Grazing permit holders as well as the general public (notice in ENBB) were invited to participate in the assessments on the allotments. Rangeland Health Assessments, trend data and historical data collected during previous field studies are available at the BLM-St. George Field Office.

3.10.1 Warner Ridge Allotment Health Monitoring Results

A frequency study was conducted previously along an established transect in the trend plot in 1993 and repeated in 2004 (see Figure 3-6). Figure 3-6 shows an upward trend in both cover and key species. A new trend plot was established in 2013 using the new Utah protocol for monitoring rangeland health. The plot was established on the same site (see Photo 3-4), the results of the plot are identified in Figure 3-5, 6.

Figure 3-3. Results of Old Frequency Studies on the Warner Ridge Allotment.

Warner Ridge Allotment Frequency Summary	• ***Sample Date***	
	1993	**2004**
Groundcover Characteristic	***Percent Cover***	
Vegetative Cover	7	8
Plant Species	***Number of Occurrences along Transect***	
Big galleta	19	27

Photo 3-3. Trend Photo at the South Key Area of the Warner Ridge Allotment using new protocol

Figures 3-4 and 3-5 present the summary of the new cover and frequency data collected using the new method identified to determine trend in the Utah protocol for monitoring rangeland health. Trend data on this allotment will be collected on 5-8 year intervals.

Figure 3-4. Results of New Cover and Frequency Study for the North Key Area of the Warner Ridge Allotment

Frequency Summary

Site Class: BLM - Utah || Color Country District || St George Field Office || Warner Ridge Allotment

Date: 7/30/2013

Site ID: Warner Ridge 2 North 2013

Examiner(s): MP AF

% Frequency								
Species	6x6 in		12x12 in		24x12 in		24x24 in	
	#Hits	% Freq.	#Hits	% Freq.	#Hits	% Freq.	#Hits	% Freq.
Ambrosia dumosa	38	19	54	27	80	40	99	50
Bromus rubens							1	
Ephedra nevadensis	2	1	6	3	7	4	12	6
Eriogonum inflatum			1		2	1	5	2
Hilaria jamesii	1		1		1		1	
Larrea tridentata	12	6	16	8	21	10	24	12
Opuntia			1		1		1	

Frequency Summary

Site Class: BLM - Utah || Color Country District || St George Field Office || Warner Ridge Allotment

Date: 7/23/2013

Site ID: Warner Ridge 2013

Examiner(s): AF MP JR DC

% Frequency								
Species	6x6 in		12x12 in		24x12 in		24x24 in	
	#Hits	% Freq.	#Hits	% Freq.	#Hits	% Freq.	#Hits	% Freq.
Achnatherum hymenoides			3	2	6	3	8	4
Ambrosia dumosa	71	36	105	53	129	65	158	80
Bromus rubens	3	2	6	3	10	5	14	7
Bromus tectorum	1	1	1	1	2	1	2	1
Opuntia							2	1
Ephedra nevadensis	6	3	9	5	13	7	21	11
Ephedra viridis-epvi							4	2
Eriogonum inflatum			1	1	2	1	2	1
Gutierrezia sarothrae	1	1	3	2	3	2	5	3
Hilaria jamesii	2	1	15	8	33	17	47	24
Larrea tridentata	7	4	8	4	13	7	16	8
Unknown 1					1	1	1	1
Unknown 2-shrub	1	1	1	1	2	1	2	1
Unknown 3-forb- wheatgrass lik			1	1	1	1	1	1

Figure 3-5. Results of New Cover and Frequency Study for the South Key Area of the Warner Ridge Allotment.

Actual Use on the Warner Ridge Allotment

The average percentage of AUMs used over the past 15 years has been approximately 39 percent of the permitted use (see Figure 3-7 below).

Figure 3-6. Actual Use on the Warner Ridge Allotment

Warner Ridge Actual Use		
Year	**AUMs Used**	**% Used of Permitted AUMs**
2014	69	70%
2013	Non-use	0%
2012	33	33%
2011	65	66%
2010	Non-use	0%
2009	47	47%
2008	94	95%
2007	Non-use	0%
2006	73	74%
2005	40	40%
2004	Non-use	0%
2003	Non-use	0%
2002	Non-use	0%
2001	79	80%
2000	77	78%

Utilization on the Warner Ridge Allotment
Utilization studies done in 2012 showed an average utilization of 8 percent for the allotment. In 2014 another study was done that showed average utilization again being 8 percent. Main forage species were galleta grass, Nevada jointfir, indian ricegrass, sand dropseed, and desert marigold.

Summary of Allotment Health Assessment
Based on the results of the rangeland health assessments, actual use, utilization data, rain gauge information and the frequency and cover data, BLM's Interdisciplinary Team concluded the Warner Ridge Allotment is in conformance with the Standards for Rangeland Health under the current AMP. Therefore, no changes in current livestock management measures are needed.

3.10.2 Dome Allotment Health Monitoring Results

Rangeland Health Assessments were conducted on the Dome Allotment in the fall of 2014. For the purpose of determining whether the Dome Allotment is meeting standards for Rangeland Health the old trend data identified below was utilized along with the new trend data collected on the Dome Allotment as well as the 2013 Health Assessments, actual use and the precipitation data (Figure 3-8 through 3-11 provides the information on the old studies and the new study completed in 2013)

Light livestock use and slight deer use was noted throughout the allotment. Disturbance by OHV's has led the Hydrologic functions and soil stability functions to be rated in the slight to moderate rating rather than the none to slight rating that they might otherwise be in. Because this allotment is located in close proximity to such a large population, this is very difficult to prevent. The functional/structural group indicator met the criteria for a "slight to moderate departure"

rating, based on a slightly lower frequency of cool season grasses than expected. The cause for this departure was not readily obvious but it appears to be a general trend throughout the field office even on un-grazed areas. Frequency studies had been conducted in the Dome allotment trend plot in 1986, 1989, 1992, and 2004. Figure 3.8 presents the results of these studies.

Figure 3-7. Frequency Trend Dome Allotment.

Dome Allotment Frequency Summary				
Year	**1986**	**1989**	**1992**	**2004**
Groundcover Characteristic				
Bare ground	70	77	60	64
Small rock	----	----	----	----
Large rock	-----	----	----	----
Litter	26	22	37	35
Vegetative hits	4	1	3	1
Plant Species				
Galleta	35	42	45	43
Sand dropseed	15	18	9	0
Indian ricegrass	3	1	4	0
Bursage	2	1	0	1
Brigham tea	9	9	10	5
Opuntia	4	5	5	3

Photo 3-4. Trend being conducted at the Dome Allotment.

Figure 3-8. New trend method at the Dome Allotment.

Frequency Summary

Site Class: BLM - Utah || Color Country District || St George Field Office || Dome Allotment

Date: 11/14/2011

Examiner(s): brewer and schowalter

Site ID: 14019-cep-01

Frequency								
Species	6x6 in		12x12 in		24x12 in		24x24 in	
	Hits	% Freq.	Hits	% Freq.	Hits	% Freq.	Hits	% Freq.
Opuntia							1	T
Chrysothamnus viscidiflorus	4	2	5	3	7	4	16	8
Coleogyne ramosissima	16	8	19	10	22	11	28	14
Ephedra nevadensis	14	7	20	10	27	14	31	16
Gutierrezia sarothrae	1	T	1	T	1	T	2	1
Krameria erecta	3	2	5	3	6	3	9	5
Larrea	1	T	2	1	2	1	2	1
Opuntia			2	1	3	2	4	2
Achnatherum hymenoides	1	T	3	2	4	2	9	5
Pleuraphis rigida	17	9	27	14	37	19	55	28
Sporobolus cryptandrus			1	T	1	T	3	2
Baileya multiradiata			1	T	3	2	7	4
Eriogonum inflatum	2	1	5	3	10	5	14	7
Bromus rubens	38	19	79	40	102	51	122	61
Bromus tectorum	132	66	186	93	192	96	196	98
Erodium cicutarium	115	58	157	79	164	82	173	87
Stephanomeria			1	T	1	T	1	T
Unknown 1-GUSA LIKE	1	T	1	T	2	1	2	1
Unknown 1-sand cove forb	18	9	47	24	72	36	96	48
Unknown 1-SHRUB	1	T	1	T	1	T	1	T
Unknown 1-white subshrub	14	7	21	11	22	11	32	16

Adjusted Vegetation Cover by Transect

Site Class: BLM - Utah || Color Country District || St George Field Office || Dome Allotment

Date: 11/14/2011

Examiner(s): brewer and schowalter

Site ID: 14019-cep-01

Adjusted Vegetation Cover (Point Intercept)														
Category/Species	Symbol	# Hits Transect 1	2	3	4	5	6	7	8	9	10	Total	% Cover	% Comp.
Adjusted Vegetation Cover														
Species														
Chrysothamnus viscidiflorus	CHVI8	0	0	0	0	0	1	1	1	1	9	13	1.6	13.8
Coleogyne ramosissima	CORA	0	0	5	6	2	0	8	5	3	5	34	4.3	36.2
Coleogyne ramosissima - SD	CORA - SD	0	0	0	0	0	0	0	0	1	3	4	0.5	4.3
Ephedra nevadensis	EPNE	0	2	4	4	7	2	0	2	5	1	27	3.4	28.7
Eriogonum inflatum	ERIN4	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
Erodium cicutarium	ERCI6	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
Gutierrezia sarothrae	GUSA2	1	0	0	0	0	0	0	0	0	0	1	0.1	1.1
Krameria erecta	KRER	1	1	0	0	0	1	0	0	1	3	7	0.9	7.5
Larrea tridentata var. tridentata	LATRT	0	0	0	0	0	0	0	0	0	1	1	0.1	1.1
Opuntia	OPUNT	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
Opuntia - Cholla	CHOLLA	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
Pleuraphis rigida	PLRI3	0	0	0	0	0	2	1	2	1	0	6	0.8	6.4
Unknown 1 - GUSA LIKE	UNKN1 - GUSA	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
Unknown 1 - sand cove forb	UNKN1 - sand cove	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0
Unknown 1 - white subshrub	UNKN1 - white	0	0	1	0	0	0	0	0	0	0	1	0.1	1.1
Total Adjusted Vegetation Cover		**2**	**3**	**10**	**10**	**9**	**6**	**10**	**10**	**12**	**22**	**94**	**11.8**	**100.0**

Actual Use on the Dome Allotment
The average percentage of AUMs used over the past 15 years has been approximately 73 percent of the permitted use (see Figure 3- below).

Figure 3-9. Actual Use on the Dome Allotment

Dome Actual Use		
Year	**AUMs Used**	**% Used of Permitted AUMs**
2015	136	93%
2014	138	65%
2013	153	72%
2012	218	103%
2011	218	103%
2010	218	103%
2009	200	94%
2008	165	78%
2007	171	81%
2006	154	73%
2005	159	75%
2004	122	58%
2003	88	42%
2002	53	25%
2001	61	29%
2000	192	91%

Utilization on the Dome Allotment
The only utilization study done over the past 15 years was in 2013, which showed an average utilization of 19 percent for the allotment.

Summary of Allotment Health Assessment
Based on the results of the rangeland health assessments, actual use, utilization data, rain gauge information and the frequency and cover data, BLM's Interdisciplinary Team concluded the Dome Allotment is in conformance with the Standards for Rangeland Health under the current AMP. Therefore, no changes in current livestock management measures are needed.

3.10.3 Warner Valley Health Monitoring Results

Figure 3-10 presents the summary of the new cover and frequency data collected using the new method identified to determine trend in the Utah protocol for monitoring rangeland health. Trend data on this allotment will be collected on 5-8 year intervals.

Frequency Summary

Site Class: BLM - Utah || Color Country District || St George Field Office || Warner Valley Allotment

Date: 2/11/2014

Site ID: WARNER VALLEY

Examiner(s): FOSTER, PEEBLES, ROAQUE

% Frequency

Species	6x6 in		12x12 in		24x12 in		24x24 in	
	#Hits	% Freq.	#Hits	% Freq.	#Hits	% Freq.	#Hits	% Freq.
Achnatherum hymenoides	2	1	7	4	9	4	20	10
Acamptopappus sphaerocephalus	9	4	11	6	16	8	24	12
Ambrosia dumosa	1		2	1	4	2	5	2
Artemisia filifolia	27	14	33	16	38	19	49	24
Bromus tectorum	9	4	25	12	32	16	46	23
Dalea amoena	6	3	7	4	8	4	8	4
Ephedra nevadensis			1		1		2	1
Gutierrezia sarothrae	28	14	40	20	51	26	67	34
Hilaria jamesii							1	
Lomatium foeniculaceum	6	3	13	6	18	9	24	12
Sporobolus flexuosus	2	1	9	4	18	9	29	14
Unknown 1-FORB	20	10	48	24	67	34	88	44
Unknown 2-ANNUAL GRASS	21	10	52	26	64	32	86	43
Unknown 3-FUZZY FORB	2	1	5	2	11	6	15	8
Unknown 4-CARROT FORB	6	3	9	4	13	6	15	8

Soil Cover and % Bare Ground By Transect

Site Class: BLM - Utah || Color Country District || St George Field Office || Warner Valley Allotment **Date:** 2/11/2014

Site ID: WARNER VALLEY **Examiner(s):** FOSTER, PEEBLES, ROAQUE

Cover (Point-Intercept)

Species	Transect (#Hits)											% Cover*
	1	2	3	4	5	6	7	8	9	10	Total	
Bare Ground	33	35	45	45	47	39	42	48	28	27	389	48.63
Embedded Litter	5	7	1	1	2	2		3	2	5	28	3.50
Other Litter	10	16	12	12	7	8	4	11	7	8	95	11.88
Woody Litter >5mm	7	8	2	3	2	2	1		3	5	33	4.13
Lichens	2	2	3	3	2	7	9	5	10	12	55	6.88
Acamptopappus sphaerocephalus	1	2	1	1	2	3		2	3		15	1.88
Achnatherum hymenoides		1			1				1	1	4	0.50
Ambrosia dumosa					1	3			2		6	0.75
Artemisia filifolia	4	4	6	2	9	2	10	4	12	5	58	7.25
Dalea amoena						3	1		5	1	10	1.25
Gutierrezia sarothrae	12	3	5	4	5	7	7	3	5	14	65	8.13
Sporobolus flexuosus	4	2	4	6		1	2	2		1	22	2.75
Unknown 2 - ANNUAL GRASS					1						1	0.13

* Number of decimal places does not imply level of precision

Actual Use on the Warner Valley Allotment

The average percentage of AUMs used over the past 15 years has been approximately 57 percent of the permitted use (see Figure 3- below).

Figure 3-11. Actual Use on the Warner Valley Allotment.

Warner Valley Actual Use		
Year	**AUMs Used**	**% Used of Permitted AUMs**
2015	45	37%
2014	81	68%
2013	Non-use	72%
2012	62	52%
2011	75	63%
2010	43	36%
2009	120	101%
2008	43	36%
2007	120	101%
2006	43	36%
2005	Non-use	75%
2004	15	13%
2003	Non-use	42%

2002	43	36%
2001	30	25%
2000	120	101%

Utilization of Warner Valley Allotment
Utilization was done in July of 2015 and showed an average of 3.5%. Distribution of utilization was very uniform ranging from 3.45% on the majority of the allotment to a maximum of 7% in some areas. Dominant vegetation includes sand sagebrush, broom snakeweed, yucca, and cacti.

Summary of Allotment Health Assessment
Based on the results of the rangeland health assessments, actual use, utilization data, rain gauge information and the frequency and cover data, BLM's Interdisciplinary Team concluded the Warner Valley Allotment is in conformance with the Standards for Rangeland Health under the current AMP. Therefore, no changes in current livestock management measures are needed.

3.10.4 Hurricane Health Monitoring Results

Figure 3-12 presents the summary of the new cover and frequency data collected using the new method identified to determine trend in the Utah protocol for monitoring rangeland health. Trend data on this allotment will be collected on 5-8 year intervals.

Frequency Summary

Site Class: BLM - Utah || Color Country District || St George Field Office || Hurricane Allotment **Date:** 8/21/2013

Site ID: Hurricane Trend 2013 **Examiner(s):** AF MP

% Frequency

Species	6x6 in		12x12 in		24x12 in		24x24 in	
	#Hits	% Freq.	#Hits	% Freq.	#Hits	% Freq.	#Hits	% Freq.
Bromus rubens	23	12	41	20	55	28	69	34
Bromus tectorum			2	1	4	2	7	4
Ephedra nevadensis	1		1		1		3	2
Hilaria jamesii	6	3	9	4	16	8	21	10
Krascheninnikovia lanata			2	1	3	2	4	2
Larrea tridentata	39	20	51	26	63	32	75	38
Sporobolus cryptandrus					2	1	3	2
Sphaeralcea					2	1	2	1

Adjusted Vegetation Cover by Transect

Site Class: BLM - Utah || Color Country District || St George Field Office || Hurricane Allotment **Date:** 8/21/2013

Site ID: Hurricane Trend 2013 **Examiner(s):** AF MP

Cover (Point-Intercept)

Species	Transect (#Hits)											% Cover*
	1	2	3	4	5	6	7	8	9	10	Total	
Ephedra nevadensis			2								2	0.25
Hilaria jamesii					2		1	2			5	0.63
Krascheninnikovia lanata									1		1	0.13
Larrea tridentata	8	19	13	14	8	12	10	6	20	13	123	15.38

* Number of decimal places does not imply level of precision

Actual Use on the Hurricane Allotment

The average percentage of AUMs used over the past 15 years has been approximately 20 percent of the permitted use (see Figure 3- below).

Figure 3-13. Actual Use on the Hurricane Allotment

Hurricane Actual Use		
Year	**AUMs Used**	**% Used of Permitted AUMs**
2015	42	100%
2014	42	100%
2013	Non-use	0%
2012	Non-use	0%
2011	Non-use	0%
2010	Non-use	0%
2009	Non-use	0%
2008	42	100%
2007	Non-use	0%
2006	44	105%
2005	Non-use	0%
2004	Non-use	0%
2003	Non-use	0%
2002	Non-use	0%
2001	Non-use	0%
2000	Non-use	0%

Utilization of Hurricane Allotment

A utilization study conducted in 2014 showed an average utilization of 13 percent for the allotment. Galleta grass and sand dropseed were the main forage available.

Summary of Allotment Health Assessment

Based on the results of the rangeland health assessments, actual use, utilization data, rain gauge information and the frequency and cover data, BLM's Interdisciplinary Team concluded the Hurricane Allotment is in conformance with the Standards for Rangeland Health under the current AMP. Therefore, no changes in current livestock management measures are needed.

3.11 VEGETATION

The objective for vegetation management identified in the St. George RMP (page 2.21) is to ensure that the vegetation on public lands consists of desired plant communities that produce the vegetation necessary to meet or exceed management objectives for a given ecological site. These communities will sustain a desired level of productivity for wildlife, livestock, and non-consumptive purposes while maintaining functioning ecological conditions.

Vegetation is directly affected by livestock grazing. The BLM health assessment protocol uses several indicators to assess vegetation health, including plant community composition and distribution relative to infiltration and runoff, compaction layer, functional/structural groups, plant mortality/decadence, litter amount, annual production, and reproductive capability of perennial plants. Key species include grasses and shrubs grazed by livestock. Trend plots are established sample plots in which more detailed data is periodically collected to evaluate long-term trends in rangeland condition.

Based on the results of the assessments, vegetation in the four allotments consists of desired communities and is providing desired functions and maintaining expected productivity levels. These communities are effectively supporting livestock and providing appropriate habitat and forage for wildlife.

Figure 3-14. Common Plant Species on the Allotments

Scientific Name	**Common Name**
Hilaria jamesii	Big galleta
Coleogyne ramosissima	Blackbrush
Artemisia filifolia	Sand sagebrush
Elymus elymoides	Squirreltail
Larrea tridentada	Creosotebush

4.0 CHAPTER 4—ENVIRONMENTAL IMPACTS

4.1 INTRODUCTION

The potential consequences or effects of each alternative are discussed in this chapter. The intent is to provide a basis for comparison of the effects of each alternative on the resources described in Chapter 3. All known mitigation measures have been included in the Proposed Action alternative; therefore consequences described below are minor in most cases. It is assumed that the alternatives will be implemented as described, using accepted grazing management guidelines, and that the permittees will meet the terms and conditions specified in the description of the alternatives.

The analysis period for this assessment is 10 years, the renewal period of the term grazing permit. The condition and trend of the allotments over the next 10 years is expected to remain static.

4.2 ALTERNATIVE A - PROPOSED ACTION

Direct effects are those caused by the action and occur at the same time and place. Indirect effects are those that are reasonably foreseeable consequences of the action but are later in time or further removed in distance from direct effects. Both of these types of effects are discussed in this section.

4.2.1 Cultural Resources

Factors of site condition and ongoing impacts were considered prior to making a Determination of Effect finding related to any impacts to NRHP eligible properties that could be directly related to livestock grazing on these four allotments. The following thresholds were used as the basis for a Determination of Adverse Effect, should one be warranted:

1. Indications of actively ongoing erosion that is caused by, or exacerbated by, livestock use of the site area.

2. Indications of direct impacts due to livestock, where it is apparent that the livestock are impacting portions of the site or features in the site that were not previously impacted by earlier use of the site area by livestock.

3. Indications of direct impacts by livestock, where it is apparent that the levels of adverse impacts are beyond those previously suffered by the site (or portion of the site) and intact areas are now losing integrity and research potential.

The BLM cultural resource specialists who completed this evaluation have recommended that a finding of ”No Adverse Effects” is warranted for the SGFO’s proposal to renew the ten-year term grazing permits on the Warner Valley Group Allotments. This finding is based on a Class I literature review, and monitoring sites within the allotments that are eligible for the NRHP. None of the thresholds for a Determination of Adverse Effects were triggered, based on the site condition assessments.

The overall finding of the site condition assessments was that implementation of the Proposed Action to renew term grazing permits for the Warner Valley Grazing Allotments would have “No Adverse Effect’ on NRHP eligible properties. This finding of effect was sent to the Utah State Historic Preservation Officer (SHPO) for Section 106 consultations under the National Historic Preservation Act on September 22, 2011. The SHPO concurred with this finding on October 25, 2011, under SHPO Case No. 11-2121.

4.2.2 Areas of Critical Environmental Concern

The objective of the Warner Ridge/Fort Pearce ACEC is to protect the endangered Dwarf Bear-claw poppy, the threatened siler pincushion cactus, historic sites, and highly erodible soils, all of which are at risk from off-road travel, road proliferation, urban growth, and human encroachment. If standards and objectives are not being met, BLM is to work with user groups to modify land uses determined to be contributing factors. Based on the results of all rangeland studies, all parameters characterizing soil/site stability, hydrologic function, and biotic integrity are functioning as expected.

Watershed integrity is largely related to the health of vegetation communities and stability of soils relative to erosion and the capacity of the soil to support healthy plant communities. The rangeland health assessments and frequency trend studies show plant communities appear to be either maintaining or improving. Soils are stable and resistant to erosion and degradation. Water quality sampling on the Virgin River by the state of Utah, show state water quality standards are not being impacted by livestock use. The riparian habitat is in proper functioning condition. These results demonstrate that the watershed integrity is being maintained in all allotments.

Since the Proposed Action would continue the current AMPs as described in Chapter 2 the Proposed Action is expected to continue to meet the goals and objectives for the Warner Ridge/Fort Pearce ACEC in both the short-term and long-term.

4.2.3 Special Status Animals

One special nesting area for raptor species has been identified in the Hurricane allotment. This area the Hurricane Cliffs provides nesting opportunities for such raptors as golden eagles, peregrine falcons and prairie falcons. Livestock grazing does not occur near the cliffs where nesting occurs, so no impacts to nesting birds are anticipated from grazing. No other special nesting or roosting areas have been identified in these grazing allotments. From the rangeland health assessment completed within these allotments, it was determined that all sites were functioning properly (see health assessment summary). It was also determined that the ecosystem met the Utah Rangeland Standards and conformed to all Grazing Management Guidelines. Under the proposed action, the vegetation in these allotments should be properly utilized by livestock and the habitat maintained in good condition for special status animals. The maintenance of fences, waters, and other livestock operations should not cause significant disturbances to special status animals and their habitat.

Mojave desert tortoise (*Gopherus agassizii*; hereafter, tortoise) is the only federally listed wildlife species occurring within the Warner Ridge, Dome, Warner Valley, and Hurricane grazing allotments. Tortoises are known to be present in low densities, especially in areas where stratified rock outcrops create potential denning sites and where creosote/bursage vegetation exists. Although grazing and the maintenance of fences, waters, and other livestock operations are not expected to cause significant disturbance to tortoises, in order to reduce risks of injury/death during mid-March through October, vehicle/equipment speeds need to be reduced and the underside of parked vehicles/equipment need to be checked for tortoises seeking shelter.

From the rangeland health assessment completed within these allotments, it was determined that all sites were functioning properly (see health assessment summary). It was also determined that the ecosystem is currently meeting the Utah Rangeland Standards and conforming to all the Grazing Management Guidelines. Under the proposed action, the vegetation within these allotments will be properly utilized by livestock and the habitat maintained in good condition for BLM sensitive species. The maintenance of fences, waters, and other livestock operations are not expected to cause significant disturbances to BLM sensitive species and their habitat.

Over the long-term, implementation of term permit renewals under the Proposed Action are anticipated to maintain healthy, functional rangelands. These areas are should continue to provide suitable foraging and adequate cover for tortoises. The 10 year permit renewal in these allotments, may affect, but not likely to adversely affect tortoises.

4.2.4 General Wildlife

Under the proposed action, the BLM would continue to monitor and assess rangeland conditions during the life of the term permits to ensure that conditions continue to meet Utah Standards and Guidelines for Rangeland Health. By following the allotment management plans the vegetation within these allotments should be properly utilized by livestock and the habitat maintained in good condition for all wildlife species (Refer to section 3.6 of this EA for list of general wildlife species that occur within these 4 allotments). The maintenance of fences, waters, and other livestock operations are not anticipated to cause significant disturbances to general wildlife and their habitat.

4.2.5 Migratory Birds and Birds of Conservation Concern

Under the Proposed Action, potential impacts associated with grazing would be negligible to minor and short-term for migratory birds and Species of Conservation Concern.

A number of migratory birds species use these grazing allotments yearlong, or for a portion of the year. Within Washington County, the nesting season can be divided into 2 major timeframes: (1) Early Nesting Season: February 1–April 01, e.g., raptors (owls, falcons, hawks, and eagles; note: Golden eagles can nest in Jan.); and (2) Primary Nesting Season: April 01–August 15, e.g., songbirds, flycatchers, cuckoos and the majority of species. One special nesting area for raptor species has been identified in the Hurricane allotment. This area in the Hurricane Cliffs provides nesting opportunities for such raptors as golden eagles, peregrine falcons and prairie falcons. Livestock grazing does not occur near the cliffs where nesting occurs, so no impacts to nesting birds are anticipated from grazing. No other special nesting or roosting areas have been identified in these grazing allotments.

Recent rangeland health assessments (2014) determined that all sites were functioning properly (see health assessment summary). It was also determined that the ecosystem met the Utah Rangeland Standards and conformed to all Grazing Management Guidelines. Vegetative cover, plant community composition, litter production, plant biomass and seed production all were within acceptable ranges based on the ecological site descriptions for these allotments and the precipitation averages for the past decade.

Therefore, over the long-term, implementation of term permit renewals under the Proposed Action should maintain healthy, functional riparian areas and rangelands. These areas would continue to provide adequate cover, suitable foraging, breeding, and roosting opportunities, and support an adequate prey base, for migratory birds and Species of Conservation Concern. The maintenance of fences, waters, and other livestock operations should not cause significant disturbances to migratory bird species/Species of Conservation Concern and their habitat. The overall impact to migratory birds and Species of Conservation Concern as a result of the proposed action is expected to be negligible to minor.

4.2.6 Special Status Plants

Several of the allotments in this group provide habitat for threatened and endangered plants. The dwarf bear claw poppy (federally endangered) and siler pincushion cactus (federally threatened) both occur in the Warner Ridge allotment; and dwarf bear claw poppy occurs in the Dome allotment. Habitat for both dwarf bear claw poppy and siler pincushion cactus are void of most livestock forage plants; so these areas provide little opportunities for livestock grazing. Livestock do trail through the areas and may utilize some of the vegetation; however, both of these species are unpalatable to livestock and as previously explained in section 3.7 should not be eaten or otherwise negatively impacted.

With the intensity of the livestock grazing in these areas, no measurable impacts to dwarf bear claw poppy or siler pincushion cactus are anticipated. No livestock waters are located in or near dwarf bear claw poppy or siler pincushion cactus habitat, so livestock should not be concentrated in these areas. The maintenance of fences, waters, and other livestock operations should not cause significant disturbances to these federally listed species or their habitat. The proposed action may affect, but not likely to adversely affect dwarf bear claw poppy or siler pincushion cactus.

The SGFO is establishing long-term study plots in areas of the Warner Ridge allotment containing the best dwarf bear claw poppy habitat, to monitor the general health of individual plants and any noticeable effects of grazing activities.

The Parry's sandpaper plant (*Petalonyx parryii*) also occurs in both the Warner Ridge and Dome allotments and is considered BLM sensitive. Habitat for sandpaper plant is generally void of most livestock forage plants; so these areas provide little opportunities for livestock grazing. Utilization monitoring and land health assessments show that livestock grazing is not generating damage to this plant within these allotments.

4.2.7 Livestock Grazing

Utah Standards and Guidelines for Rangeland Health, and data from related monitoring and assessment programs, have been employed to determine if the public lands within the Warner Ridge, Dome, Warner Valley, and Hurricane Allotments are meeting these standards and functioning properly under present conditions.

This Proposed Action would authorize livestock grazing for 10 years with the same licensed use (e.g. number and class of livestock, and season of use) as the current permit. The utilization rate on key species is established at 50% and tracked through utilization monitoring. BLM would also continue to perform trend, utilization, actual use, precipitation and compliance monitoring and assess rangeland conditions during the life of the term permit to ensure conditions make progress toward meeting or continue to meet Utah Standards and Guidelines for Rangeland Health.

The proposed action would have a positive effect on the livestock grazing permittees on the Warner Ridge, Dome, Warner Valley, and Hurricane Allotments by renewing each term grazing permit. The proposed action would maintain the current level of livestock grazing authorized for the permittees, while continuing to meet the Utah Standards and Guidelines for Rangeland Health. This would provide a substantial degree of stability for the permittees livestock operation.

4.2.8 Vegetation

In three of the four trend plots for the allotment group, the percent cover of vegetation has increased overall. The percent of the area of bare ground has generally decreased, while the percent cover of litter has increased. The total number of plants counted in the trend plots has decreased in three plots and remained static in one. Increased plant mortality has occurred primarily between the last two sampling events and is largely attributable to drought. The increases in percent cover of vegetation and litter indicate vegetation is healthy and that the growth rate is exceeding the rates of grazing, predation, and mortality. Percent cover of vegetation, plant community composition, litter production, plant biomass production, and seed production all were as expected based on the ecological site descriptions for these allotments and climatic conditions over the past several years.

The Proposed Action is expected to maintain the current health of the vegetation communities within the allotments in the short-term. Over the long-term, vegetation communities are expected to continue to increase in percent cover of vegetation and litter until the plant communities reach a balance between growth rates and the levels of grazing by livestock and wildlife.

4.2.9 Mitigation Measures

No mitigation measures beyond those included in the Proposed Action have been identified

4.2.10 Monitoring

As stipulated in the Livestock Grazing Management Decision (GZ-01) in the St. George RMP (page 2.32), BLM would continue to monitor rangeland health standards in allotments to determine if standards are being met.

BLM would continue to conduct the following monitoring studies on a regular basis:

- Rangeland health assessments,
- Utilization
- Trend studies,

- Riparian assessments, and
- Water quality monitoring.

Where monitoring indicates livestock grazing activities are wholly or partly responsible for an allotment not meeting Standards for Rangeland Health or specific objectives for resources identified in the St. George RMP, BLM would work with affected partners to determine why standards are not being achieved. In consultation with affected operators, BLM would prescribe actions to take that would return the allotment to compliance.

The SGFO is also establishing long-term study plots in areas of the Warner Ridge allotment containing the best dwarf bear claw poppy habitat, to monitor the general health of individual plants and any noticeable effects of grazing activities.

4.3 ALTERNATIVE B - NO ACTION

If the Proposed Action were rejected, there would be no direct, indirect, or cumulative impacts from the Proposed Action. Livestock grazing by nature directly impacts vegetation due to trampling and grazing. These impacts can be beneficial as grazing stimulates regrowth and plant vigor, and trampling can assist in seedbed preparation and water infiltration. Livestock grazing also directly impacts accessible surface waters through grazing, trampling, and generating pollutants in the form of nutrients and bacteria. The objectives of livestock management programs for public lands are to minimize these unavoidable impacts to the extent that all identified resources and uses are protected and sustained for the future.

Under Alternative B, the existing grazing leases would be renewed without change. Grazing management would continue to follow the existing AMPs and applicable decisions in the St. George RMP. Results of the allotment studies summarized in Chapter 3 indicate that under these existing management programs these allotments are meeting all rangeland health standards and therefore, supporting other resources and uses of these public lands.

4.3.1 Cultural Resources

In the short term, the No Action Alternative would renew the term grazing permits for the 7 allotments considered in this EA under the authority of the legislative "rider" attached to the Appropriations Act, under the current Terms and Condition of the each permit (**Figure 2.1**). Since the current Term and Conditions are the same as those contained in the Proposed Action, the direct and indirect impacts on the following resources would be the same as those disclosed for the Proposed Action: Cultural Resources, Invasive, Non-Native Species, Threatened and Endangered Species, Special Status Species, Riparian Resources, Water Quality and vegetation.

Longer term, should Congress no longer continue the legislative rider authority for term grazing permit renewals, each permit would have to be renewed, following the NEPA process requirements and in compliance with all other federal legal mandates.

4.3.2 Areas of Critical Environmental Concern

The impacts under Alternative B would be the same as under the Proposed Action.

4.3.3 Special Status Animals

No changes to impacts on special status species would occur under Alternative B as compared to existing conditions.

4.3.4 General Wildlife

No changes to impacts on general wildlife would occur under Alternative B as compared to existing conditions.

4.3.5 Migratory Birds and Birds of Conservation Concern

No changes to impacts on migratory birds and Species of Conservation Concern would occur under Alternative B as compared to existing conditions.

4.3.6 Special Status Plants

No changes to impacts on special status species would occur under Alternative B as compared to existing conditions.

4.3.7 Livestock Grazing

Under the No Action Alternative, livestock grazing would continue under the same terms and conditions as the Proposed Action.

4.3.8 Vegetation (Including Invasive/Non-Native Species)

Alternative B would have the same impacts as the Proposed Action. Continued livestock grazing would continue to cause a minor level of direct impacts to vegetation throughout grazing areas within the allotments. However, by managing livestock grazing activities per the St. George RMP and the site-specific AMPs, all existing habitats are in proper functioning condition and are expected to continue to generate appropriate productivity levels of vegetation and maintain species richness and structural complexity appropriate to each habitat type.

4.3.9 Mitigation Measures

No measures other than those currently incorporated into grazing management practices have been identified.

4.3.10 Monitoring

Grazing monitoring schedules would remain the same as at present. No additional monitoring or studies would occur under the No Action alternative and the allotments would remain in there management category.

4.4 CUMULATIVE IMPACTS

“Cumulative impacts” are those impacts resulting from the incremental impact of an action when added to other past, present, or reasonably foreseeable actions regardless of what agency or person undertakes such other actions.

4.4.1 Cumulative Impact Area

The Cumulative Impact Area is defined as the Warner Ridge, Dome, Warner Valley, and Hurricane Allotments, which is comprised of approximately 6,765 acres of public lands managed by BLM, St. George Field Office.

4.4.2 Past and Present Actions

Past or ongoing actions that affect the same components of the environment as the proposed action have included the construction of livestock management facilities, including pasture fencing, water sources, and corrals. A small number of unimproved roads have developed over time throughout the four allotments. These are used by the livestock permittees, hunters and other recreational users. Some private land in-holdings are found within the allotment areas.

Communities in Washington County experienced dramatic population growth over the last 20 years (e.g., 84 percent growth between 1990 and 2000 [OPB 2002a]). With this growth has come increased numbers of people using the remote public lands within the Warner Valley, Dome, Warner Ridge and Hurricane allotments for such recreational activities as mountain biking, hunting, OHV riding, camping, rock climbing, hiking, and equestrian trail riding. Although OHV activities are limited to existing roads and trails through the St. George RMP, unauthorized cross-country riding does occur with regularity.

Large catastrophic wild land fires have increased in frequency and severity on public lands in western and central Washington County during the past decade, resulting in the loss of native vegetation on thousands of acres of public rangeland. These fires have been fueled by periods of drought followed by higher than average winter precipitation that supported dense stands of invasive, warm season grasses, such as cheat grass. The grasses have carried fire in ecosystems that were never adapted to annual fire regimes, including the Mojave Desert and eastern Great Basin of Washington County. This trend is expected to continue under current models of climate change.

4.4.3 Reasonable Foreseeable Action Scenario (RFAS)

The following reasonably foreseeable action scenario (RFAS) identifies the future actions that have the potential to cumulatively affect the same resources as the Proposed Action and No Action Alternatives.

With the recent construction of the southern corridor, increased OHV and off road use in the target area is expected. Because the Warner Ridge\Ft Pearce ACEC includes much of the Warner Ridge allotment, it is expected that the fences and locked gates will keep use in those sensitive areas to a minimum. The southern corridor is a controlled access highway, with only two access points along the target area. It is expected that this will have a positive impact on encouraging OHV's to travel along designated routes.
The southern corridor runs through the Warner Ridge and Dome allotments, separating several sections to the west from the larger portion of the allotments to the east. In the reasonably foreseeable future these areas on the west side will be heavily impacted by the development of the surrounding private lands. The BLM has received several requests for rights of ways through

these parcels, and it is very likely that these lands will be traded or sold for development in the future.
Additionally, a Warner Valley Reservoir has been proposed which will take in a large portion of the Warner Valley allotment. It is estimated that this reservoir will be constructed within the next five to ten years, in order to meet the increasing demand for water in the St. George area. Although the exact plans have not been solidified, the Lake Powel Pipeline is in the planning process and will very likely run though a portion of the target area. The impacts of the pipeline will depend on the finalized plans, and will be included in the NEPA documents of that project.

4.4.4 Cumulative Impacts Analysis

No federal projects or actions are reasonably foreseeable within the four allotments that would result in cumulative adverse impacts on the human environment. Domestic livestock (both sheep and cattle) have grazed on federally-managed lands in Washington County for more than 150 years. Since enactment of the Taylor Grazing Act in 1934 and other related grazing management laws, management controls and restrictions on livestock grazing have been developed, to achieve balanced and sustainable use of public land resources. The grazing of sheep is no longer authorized on BLM-administered public lands in Washington County. Since the 1960's and 1970's the number of authorized AUMs for cattle has been decreased dramatically in the four allotments, to adapt to range conditions and ensure rangeland health. The development of grazing systems and rangeland improvements has effectively helped to protect the watershed and recreation resource values of the Ft. Pearce/Warner Valley ACEC. Water quality monitoring and riparian assessments show that livestock grazing at current levels is not causing degradation of water quality or adversely affecting native or sport fisheries.

Since the mid-19th century non-native warm season grasses, e.g., cheatgrass and red brome have spread to many areas of the public lands, altering the natural fire cycle of these areas. Large areas of public land in Washington County are now susceptible to catastrophic burn-re-burn fire regimes that damage native vegetative communities and impact soils. The Hurricane Allotment has been impacted by wildfire. Cheatgrass and red brome contribute to a more frequent fire cycle that is likely to continue, as these invasive plants flourish within previously burned sites. Current grazing levels and management strategies do not contribute to the spread of the non-native species and may help to reduce the volume of light fuels, as livestock will graze on cheatgrass.

Overall, the economic viability of livestock operations dependent on public lands in Washington County have been, and will continue to be, affected by periodic droughts, loss of forage to wildfires, restriction on grazing during wildfire rehabilitation projects, urban growth and the loss of open space, market fluctuations, and management constraints imposed for the protection of threatened or endangered species and other sensitive resources. The St. George RMP retains public lands in homogenous blocks within the western portion of the administrative unit, which includes the four allotments, and maintains more than 90 percent of the AUMs on public land available for livestock grazing, providing some stability for existing operators.

For a more complete analysis of cumulative impacts from actions proposed to occur on public lands in Washington County, including livestock grazing, refer to the Dixie Resource Area Proposed Resource Management /Final EIS (1998, pages 3.59-3.69) and the St. George RMP (1999).

4.4.5 Cultural Resources

Factors of site condition and ongoing impacts were considered prior to making a Determination of Effect finding related to any impacts to NRHP eligible properties that could be directly related to livestock grazing on these four allotments.

The BLM cultural resource specialists who completed this evaluation have recommended that a finding of "No Adverse Effects" is warranted for the SGFO's proposal to renew the ten-year term grazing permits on the Warner Valley Group Allotments. This finding is based on a Class I literature review, and monitoring sites within the allotments that are eligible for the NRHP. None of the thresholds for a Determination of Adverse Effects were triggered, based on the site condition assessments.

The overall finding of the site condition assessments was that implementation of the Proposed Action to renew term grazing permits for the Warner Valley Grazing Allotments would have "No Adverse Effect' on NRHP eligible properties. This finding of effect was sent to the Utah State Historic Preservation Officer (SHPO) for Section 106 consultations under the National Historic Preservation Act on September 22, 2011. The SHPO concurred with this finding on October 25, 2011, under SHPO Case No. 11-2121.

4.4.6 Areas of Critical Environmental Concern

No cumulative impacts are expected to occur as a result of renewing the Warner Ridge, Dome, Warner Valley, and Hurricane Allotments term grazing permits.

4.4.7 Special Status Animals

Mojave desert tortoise is the only federally listed wildlife species occurring within the WVGGA. Tortoises are known to be present in low densities, especially in areas where stratified rock outcrops create potential denning sites and where creosote/bursage vegetation exists. Grazing and maintenance of fences, waters, and other livestock operations can cause short-term disturbances to tortoises and could impact vegetation that may provide food and habitat for the species. However, grazing should not cause significant short-term disturbances to tortoises and their habitat.

Recent rangeland health assessments (2014) determined that all sites were functioning properly, met the Utah Rangeland Standards, conformed to all Grazing Management Guidelines, and the vegetative cover, plant community composition, litter production, plant biomass and seed production all were within acceptable ranges based on the ecological site descriptions for these allotments. Over the long-term, implementation of term permit renewals under the Proposed Action should maintain healthy, functional rangelands. These areas would continue to provide suitable foraging and adequate cover for tortoises.

Therefore, the cumulative impacts to tortoises as a result of the Proposed Action is expected to be negligible to minor. The 10-year permit renewal in these allotments, may affect, but not likely to adversely affect tortoises.

Livestock may consume some forage that might otherwise be available to Special Status Animals and that over time, considering the livestock use on these four allotments and all the other allotments in the general area, some unexpected impact may occur. However, these allotments are winter use only. By grazing off the dry feed in the winter months, the forage plants are cleared of much of the old growth which allows the new green growth preferred by wildlife to thrive through the growing season. This is expected to have a positive impact on all special status animals.

4.4.8 General Wildlife

Livestock may consume some forage that might otherwise be available to the general wildlife and over time, considering the livestock use on these four allotments and all the other allotments in the general area, some unexpected impacts may occur. However, these allotments are winter use only. By grazing off the dry feed in the winter months, the forage plants are cleared of much of the old growth which allows the new green growth preferred by wildlife to thrive through the growing season. This is expected to have a positive impact on all wildlife species.

Recent rangeland health assessments (2014) determined that all sites were functioning properly, met the Utah Rangeland Standards, conformed to all Grazing Management Guidelines, and the vegetative cover, plant community composition, litter production, plant biomass and seed production all were within acceptable ranges based on the ecological site descriptions for these allotments. Over the long-term, implementation of term permit renewals under the Proposed Action should maintain healthy, functional rangelands. These areas would continue to provide suitable foraging and adequate cover for wildlife.

The cumulative impacts to general wildlife as a result of the Proposed Action is expected to be negligible to minor. The 10-year permit renewal in these allotments, may affect, but not likely to adversely affect wildlife.

4.4.9 Migratory Birds and Birds of Conservation Concern

Grazing can occur during the breeding and nesting season for migratory birds or other birds that are considered to be Species of Conservation Concern by the USFWS. Grazing and maintenance of fences, waters, and other livestock operations can cause short-term disturbances to these birds and could impact vegetation that may provide habitat for these species. However, grazing should not cause significant short-term disturbances to migratory birds/Species of Conservation Concern and their habitat.

Recent rangeland health assessments (2014) determined that all sites were functioning properly, met the Utah Rangeland Standards, conformed to all Grazing Management Guidelines, and the vegetative cover, plant community composition, litter production, plant biomass and seed production all were within acceptable ranges based on the ecological site descriptions for these allotments. Over the long-term, implementation of term permit renewals under the Proposed Action should maintain healthy, functional rangelands. These areas would continue to provide adequate cover, suitable foraging, breeding, and roosting opportunities, and support an adequate prey base, for migratory birds and Species of Conservation Concern. The maintenance of fences,

waters, and other livestock operations should not cause significant disturbances to migratory bird species/Species of Conservation Concern and their habitat.

Therefore, the cumulative impacts to migratory birds and Species of Conservation Concern as a result of the Proposed Action is expected to be negligible to minor.

4.4.10 Special Status Plants

Livestock do occasionally trail through areas where special status and threatened plants occur, however none of the special status plants are utilized by livestock. What little ground disturbance that occurs as a result of hoof action may affect the plants; there is no evidence that it is having a detrimental affect however. The SGFO is establishing long-term study plots in areas of the Warner Ridge allotment containing the best dwarf bear claw poppy habitat, to monitor the general health of individual plants and any noticeable effects of grazing activities.

4.4.11 Livestock Grazing

Although the allotments were found to be in proper functioning condition, it is well known that livestock use does have some impact on the environment, either through competition for forage with wildlife, the consumption of vegetation that would otherwise be left in place and or the increase nitrogen levels in the streams. Though difficult to measure there is likely a cumulative impact especially when considering all the other allotments in the general area. These impacts are not necessarily negative, wildlife tend to seek after the fresh tender regrowth after livestock have grazed an area. Proper grazing will stimulate regrowth and plant vigor, resulting in healthier more productive plants.

4.4.12 Vegetation

See 4.4.10 Livestock Grazing

4.4.13 Irreversible and/or Irretrievable Commitments of Resources

Irreversible commitments are those that cannot be reversed, except in the extreme long-term, and irretrievable commitments are those that are lost for a period of time. There would not be any irreversible or irretrievable commitments of resources from implementation of the Proposed Action or No Action alternatives. Energy requirements and conservation measurements would not be affected.

5.0 CHAPTER 5—PERSONS, GROUPS, AND AGENCIES CONSULTED

5.1 PERSONS, GROUPS, AND AGENCIES CONSULTED

Table 1: Persons, Agencies, and Organizations Consulted

Name	Purpose & Authorities for Consultation or Coordination	Findings & Conclusions
Livestock operators of Warner Valley Allotment.	Development of Proposed Action and alternatives	Recommended the Proposed Action

Livestock operators of Dome Allotment.	Development of Proposed Action and alternatives	Recommended the Proposed Action
Livestock operators of Warner Ridge Allotment.	Development of Proposed Action and alternatives	Recommended the Proposed Action
Livestock Operators of Hurricane Allotment.	Development of Proposed Action and alternatives	Recommended the Proposed Action
Utah Division of Wildlife Resources.	Development of Proposed Action and alternatives, data concerning mule deer and other wildlife populations in allotments	Identified no concerns related to mule deer habitat conditions and livestock grazing management in the four allotments.
U.S. Fish and Wildlife Service	Information Consultation, under section 7 of the Endangered Species Act (16 USC 1531). BLM has determined that the proposed action "May Affect but is not likely to Adversely Affect" the Bald Eagle and California Condor, two federally listed species that may utilize area within the allotments.	The preliminary EA was provided to the Service for review and comment during the 30 day public review in August, 2006. s
Paiute Indian Tribe of Utah Shivwits Band Cedar City Band Indian Peaks Band Kanosh Band Kaibab Tribe	Consultations as required under National Historic Preservation Act, American Indian Freedom Act, and Executive Order 13007	Consultations were conducted with the Paiute Indian Tribe of Utah and its respective Bands, pursuant to protocol established in the Memorandum of Understanding signed between Utah-BLM and the Tribe in 1999.

5.2 LIST OF EA PREPARERS

Appendix A contains the Interdisciplinary (ID) Team Checklist for reference.

Table 2: BLM EA Preparers

Name	Title	Responsible for the Following Resource(s)
Ryan Reese	Rangeland Management Specialist	Livestock Grazing, Vegetation, Invasive Species/Noxious Weeds
Jackie Roaque	Rangeland Management	Range/Livestock Grazing, Vegetation, Weeds

	Specialist	
Dave Corry	Natural Resource Specialist	Wildlife, Soils, Air Quality, Water Quality, Watershed, Water Rights, Wetlands/Riparian Zones, Farmlands, Floodplains
Robert Douglas	Wildlife Biologist	Special Status Plants and Wildlife Species.
John Kellam	Wildlife Biologist	Mojave desert tortoise (*Gopherus agassizii*), Migratory Birds and Birds of Conservation Concern.
Tim Croissant	Wildlife Biologist	T&E Wildlife Species, Environmental Justice, Socioeconomics
Kyle Voyles	Recreation Planner	Wilderness, Recreation, Wild and Scenic Rivers, Visual Resources
Teresa Burke	Realty Specialist	Lands/Access, Rights-of-Way/Easements
Bill Banek	Archeologist	Cultural Resources
Geralyn McEwen	Archeological Technician	Cultural Resource Site Condition Assessments

6.0 APPENDICES

6.1 Appendix A Interdisciplinary Team Checklist

Maps and preliminary construction drawings referenced in the checklist are not included here. More detailed maps are included in this EA and updated preliminary construction drawings are included in Appendix D.

Project Title: Renewal of Term Grazing Permits for the Warner Ridge, Dome, Warner Valley and Hurricane Grazing Allotments, Washington County, UT

NEPA Log Number: DOI-BLM-UT-C030-2016-0022-EA

Project Leader: Ryan Reese

Project Description: An EA is being prepared to analyze the effects to the human environment that could result from the renewal of 10-year term grazing permits for the Warner Ridge, Dome, Warner Valley, and Hurricane Allotments. Health assessments were completed on the allotments in 2014. The 2014 health assessment indicated the allotments were meeting the Utah Standard and Guidelines for Range Land Health.

The Proposed Action would renew the 10 year term permits without changes to the current licensed grazing management. No new range improvements are proposed in this EA.

Allotment	Number of Livestock	Type of Livestock	Season of Use	AUMs	% Public Land
Warner Ridge	20	Cattle	12/1- 4/30	99	100
Dome	43	Cattle	12/1 – 5/10	212	93
Warner Valley	22	Cattle	12/1 – 5/14	119	100
Hurricane	6	Cattle	11/1 – 5/31	42	100

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.

Determination	Resource	Rationale for Determination*	Signature	Date
RESOURCES AND ISSUES CONSIDERED (INCLUDES SUPPLEMENTAL AUTHORITIES APPENDIX 1 H-1790-1)				
NI	Air Quality	Air quality standards would not be exceeded by this proposal. Particulates that may result from livestock trailing are generally minimal.	D. Corry	1/2/15
PI	Areas of Critical Environmental Concern	The Dome Allotment is 2,817 acres, with 189 of those acres (6%) within the Fort Pearce/Warner Ridge ACEC. The Warner Ridge allotment is 3,105 acres, with 2,520 acres (81%) within the ACEC.	J. Kellam	1/4/16

Determination	Resource	Rationale for Determination*	Signature	Date
NP	BLM Natural Areas	There are no BLM Natural Areas within, or affected by, the proposed action	D. Kiel	1/4/16
PI	Cultural Resources	A Technical Report Addressing the Effects to Cultural Properties on Public Lands Related to 10 Year Term Grazing Permit Renewals for the Dome, Hurricane, Sand, Sand Mountain, Warner Ridge and Warner Valley Grazing Allotments; Washington County, Utah. State Authorization Project Number U-11-BL-0504b, State Case Number 11-2121	G. McEwen	1/4/16
NI	Greenhouse Gas Emissions	No Impact	D. Corry	1/2/15
NI	Environmental Justice	According to the EPA Region VIII, State of Utah, Environmental Justice Map, the region has been categorized as a minority population area of 10-20% and a poverty population area of 10-20%. 5-10% of the population speaks English "Less than Well". This data shows that low income and high minority populations are generally located in the St. George/Santa Clara/Washington areas in locations not adjacent to BLM managed lands. (see http://epamap14.epa.gov/ejmap/entry.html, 11/29/12). (NI) No disproportionately high or adverse health or environmental effects would result to minority or low income populations as a result of implementing the Proposed Action	D. Corry	1/2/15
NI	Farmlands (Prime or Unique)	A review of Prime and Unique Farmlands for Washington County indicates that there are no farmlands in these grazing allotments.	D. Corry	1/2/15
PI	Fish and Wildlife Excluding USFW Designated Species	The following BLM Sensitive species may occur in the Warner Valley group of allotments: Arizona toad (permanent resident, fairly common), bald eagle (winter visitor, fairly common), burrowing owl (permanent resident, uncommon), ferruginous hawk (permanent resident, fairly common), grasshopper sparrow (transient, rare), short-eared owl (transient, rare), big- free-tailed bat (summer resident, rare), fringed myotis (permanent resident, uncommon), kit fox (permanent resident, uncommon), spotted bat (permanent resident, rare), Townsend's big-eared bat (permanent resident, fairly common), common chuckwalla (permanent resident, uncommon), gila monster (permanent resident, rare), sidewinder (permanent resident, fairly common), Western banded gecko (permanent resident, uncommon), Western threadsnake (permanent resident, rare) and zebra-tailed lizard (permanent resident, fairly common). No nests, dens, roosts, or other special use areas for BLM Sensitive species have been identified in these allotments. General wildlife found in these allotments include: badgers, antelope ground squirrels, kangaroo rats, deer mice, desert wood rats, Gambel's quail, mourning doves, common ravens, wrens, house finches, side-blotched lizards, and Western whiptails. Infrequently, larger animals such as raptors, coyotes, gray fox, and mule deer may pass through these allotments. From the rangeland health assessment completed within these allotments, it was determined that all sites were functioning properly (see health assessment summary). It was also determined that the ecosystem met the Utah Rangeland Standards and conformed to all the Grazing Management Guidelines. Under the proposed action, the vegetation within these allotments should be properly utilized by livestock and the habitat	B. Douglas	01/02/15

Determination	Resource	Rationale for Determination*	Signature	Date
		maintained in good condition for BLM Sensitive species and other wildlife species. The maintenance of fences, waters, and other livestock operations should not cause significant disturbances to BLM Sensitive species and general wildlife and their habitat.		
NP	Floodplains		D. Corry	1/2/15
NI	Fuels/Fire Management	Permit renewal would not affect fire management. There currently are no fuels projects proposed for these allotments	D. Corry	1/2/15
NI	Geology / Mineral Resources/Energy Production	The proposed action would not impact the Geology and Mineral Resources in the area.	D. Corry	1/2/15
NI	Hydrologic Conditions	The proposed action would not impact Hydrologic Conditions	D. Corry	1/2/15
NI	Invasive Species/Noxious Weeds	Though livestock grazing can facilitate the spread of noxious and invasive species, there were only a handful of infestations recorded historically within the boundaries of these allotments. The size and species of these infestations are unknown.	J. Roaque	12/18/14
NI	Lands/Access	A portion of the Warner Ridge allotment was transferred to the State of Utah. 398 acres was transferred in January 2015. The permitee has been notified of the transfer. A portion of the Dome Allotment was included in the land exchange. The permitee has been notified of this exchange.	T. Burke	1/4/16
PI	Livestock Grazing	Permit renewal is required to authorize continued livestock grazing	J. Roaque	12/18/14
PI	Migratory Birds.	A number of migratory birds species use these grazing allotments yearlong, or for a portion of the year. Nesting by migratory bird species generally occurs in the spring and summer (February 1 to August 31). One special nesting area for raptor species has been identified in the Hurricane allotment. This area the Hurricane Cliffs provides nesting opportunities for such raptors as golden eagles, peregrine falcons and prairie falcons. Livestock grazing does not occur near the cliffs where nesting occurs, so no impacts to nesting birds are anticipated from grazing. No other special nesting or roosting areas have been identified in these grazing allotments. From the rangeland health assessment completed within these allotments, it was determined that all sites were functioning properly (see health assessment summary). It was also determined that the ecosystem met the Utah Rangeland Standards and conformed to all Grazing Management Guidelines. Under the proposed action, the vegetation in these allotments should be properly utilized by livestock and the habitat maintained in good condition for migratory bird species. The maintenance of fences, waters, and other livestock operations should not cause significant disturbances to migratory bird species and their habitat. No measurable impacts to migratory bird species are anticipated.	B. Douglas	01/02/15
NP	Native American Religious Concerns	There are no previously known or identified sacred sites used for ceremonial purposes within the project area.	G. McEwen	1/4/16
NI	Paleontology	Paleontological resources have been visited and evaluated. There are total of 23 sites with paleo resources identified within the listed allotments, some of which are located on private and state lands. These sites have been reviewed by a certified paleontologist and no significant possible impacts have been identified.	R. Reese	2/9/16

Determination	Resource	Rationale for Determination*	Signature	Date
NI	Rangeland Health Standards	Allotment Health assessments have been completed and these allotments have been determined to meet the Utah Standards and Guidelines for Rangeland Health.	R. Reese	1/27/16
NI	Recreation	Recreation opportunities would not be affected by the proposed action.	D. Kiel	1/4/16
NI	Socio-Economics	The proposed action would have no impact on socio-economic conditions in Washington County	D. Kiel	1/4/16
NI	Soils	The proposed action should not negatively impact soil stability or productivity on these allotments.	D. Corry	1/2/15
PI	Threatened, Endangered or Candidate Plant Species	Several of the allotments in this group provide habitat for threatened and endangered plants. The dwarf bear claw poppy (federally endangered) and siler pincushion cactus (federally threatened) both occur in the Warner Ridge allotment; and dwarf bear claw poppy occurs in the Dome allotment. Habitat for both dwarf bear claw poppy and siler pincushion cactus are void of most livestock forage plants; so these areas provide little opportunities for livestock grazing. Livestock do trail through the areas and may utilize some of the vegetation; however, both of these species are unpalatable to livestock and should not be eaten. With the intensity of the livestock grazing in these areas, no measurable impacts to dwarf bear claw poppy or siler pincushion cactus are anticipated. No livestock waters are located in or near dwarf bear claw poppy or siler pincushion cactus habitat, so livestock should not be concentrated in these areas. The maintenance of fences, waters, and other livestock operations should not cause significant disturbances to these federally listed species or their habitat. The proposed action may affect, but not likely to adversely affect dwarf bear claw poppy or siler pincushion cactus. It is recommended that long-term study plots be established in areas of the Warner Ridge allotment containing the best dwarf bear claw poppy habitat, to monitor the general health of individual plants and any noticeable effects of grazing activities.	B. Douglas	01/02/15
PI	Threatened, Endangered or Candidate Animal Species	Mojave desert tortoise (*Gopherus agassizii*; hereafter, tortoise) is the only federally listed wildlife species occurring within the Warner Ridge, Dome, Warner Valley, and Hurricane grazing allotments (known collectively as the Warner Valley Group Grazing Allotments; WVGGA). Although WVGGA lands are outside of USFWS Upper Virgin River Recovery Unit designated critical habitat and the Washington County Habitat Conservation Plan area, tortoises are known to be present in low densities, especially in areas where stratified rock outcrops create potential denning sites and where creosote/bursage vegetation exists. Within the WVGGA, the Dome allotment contains the best tortoise habitat which is evidenced by a recent survey there (McLuckie 2015) that documented 6 live tortoises (3 adults, 2 immat., 1 juv.) and 13 shelter sites (3 pallets, 3 burrows, 7 dens). Tortoises typically hibernate from October through February, and are active/may be observed outside of burrows mid-March through October, with primary activity occurring mid-March through May. Although the maintenance of fences, waters, and other livestock operations are not expected to cause significant disturbance to tortoises, in order to reduce risks of injury/death during mid-March through October, vehicle/equipment speeds need to be reduced and the underside of parked vehicles/equipment need to be checked for tortoises seeking shelter. The 10 year	J. Kellam	02/26/16

Determination	Resource	Rationale for Determination*	Signature	Date
		permit renewal in these allotments, may affect, but not likely to adversely affect tortoises.		
NI	Wastes (hazardous or solid)	No known issues for the renewal of these grazing allotments	D. Corry	1/2/15
NI	Water Resources/Quality (drinking/surface/ground)	The Virgin River which runs along the west side of the allotments on private land is considered by the State Water Quality Division as being impaired. Total Dissolved Solids (TDS) exceeds the State of Utah Water Quality Standards. However the exceedance is not considered a result of livestock use. The proposed action would not impact water quality standards in the Virgin River.	D. Corry	1/2/15
NI	Wetlands/Riparian Zones	There is a small portion on the Virgin River and its associated riparian vegetation included in the Warner Valley Allotment. This area however is located on private land.	D. Corry	1/2/15
NP	Wild and Scenic Rivers	There are no Wild and Scenic River segments, either eligible, suitable, or designated, that would be affected by the proposed action	D. Kiel	1/4/16
NP	Wilderness/WSA	There are no designated wilderness areas or wilderness study areas that would be affected by the proposed action	D. Kiel	1/4/16
NI	Woodland / Forestry	Permit renewal would not impact the woodland resource or harvest of vegetative products.	D. Corry	1/2/15
PI PI	Vegetation Excluding USFW Designated Species	Utilization monitoring and land health assessments show that livestock grazing is not generating damage to vegetation within these allotments. Several of the allotments in this group provide habitat for a BLM Sensitive plant. The Parry's sandpaper plant (Petalonix parryii) occurs in both the Warner Ridge and Dome allotments. Habitat for sandpaper plant is generally void of most livestock forage plants; so these areas provide little opportunities for livestock grazing. Livestock do trail through the areas and may utilize some of the vegetation; however, this species is unpalatable to livestock and should not be eaten. With the intensity of the livestock grazing in these areas, no measurable impacts to the sandpaper plant is anticipated. No livestock waters are located in or near habitat, so livestock should not be concentrated in these areas. The maintenance of fences, waters, and other livestock operations should not cause significant disturbances to the sandpaper plant or its habitat.	J. Roaque B. Douglas	12/18/14 01/02/15
NI	Visual Resources	All four of the grazing allotments are within areas designated as VRM Class III or IV. Livestock grazing, in the amounts listed in the proposed action would have no impact on visual resources	D. Kiel	1/4/16
NP	Wild Horses and Burros		D. Corry	1/2/15
NP	Lands with Wilderness Characteristics	There are no inventoried lands with wilderness characteristics that would be affected by the proposed action	D. Kiel	1/4/16

FINAL REVIEW:

Reviewer Title	Signature	Date	Comments
Environmental Coordinator		5/16/16	
Authorized Officer	Dawna Lee Rowley Acting For F.O.M.	5/16/2016	

6.2 Appendix B Washington County Migratory Bird Species

Appendix B
Birds Protected By the Migratory Bird Treaty Act
Occurring in Washington County, Utah

Common Name	Scientific Name	Common Name	Scientific Name
Greater White-fronted Goose	*Anser albifrons*	Hammond's Flycatcher	Empidonax hammondii
Snow Goose	*Chen caerulescens*	Gray Flycatcher	Empidonax wrightii
Ross's Goose	*Chen rossii*	Dusky Flycatcher	Empidonax oberholseri
Canada Goose	*Branta canadensis*	Pacific-slope Flycatcher	Empidonax difficilis
Trumpeter Swan	*Cygnus buccinator*	Cordilleran Flycatcher	Empidonax occidentalis
Tundra Swan	*Cygnus columbianus*	Black Phoebe	Sayornis nigricans
Wood Duck	*Aix sponsa*	Eastern Phoebe	Sayornis phoebe
Gadwall	*Anas strepera*	Say's Phoebe	Sayornis saya
Eurasian Wigeon	*Anas penelope*	Vermilion Flycatcher	Pyrocephalus rubinus
American Wigeon	*Anas americana*	Ash-throated Flycatcher	Myiarchus cinerascens
Mallard	*Anas platyrhynchos*	Brown-crested Flycatcher	Myiarchus tyrannulus
Blue-winged Teal	*Anas discors*	Cassin's Kingbird	Tyrannus vociferans
Cinnamon Teal	*Anas cyanoptera*	Western Kingbird	Tyrannus verticalis
Northern Shoveler	*Anas clypeata*	Eastern Kingbird	Tyrannus tyrannus
Northern Pintail	*Anas acuta*	Loggerhead Shrike	Lanius ludovicianus
Green-winged Teal	Anas crecca	Northern Shrike	Lanius excubitor
Canvasback	Aythya valisineria	Bell's Vireo	Vireo bellii
Redhead	Aythya americana	Gray Vireo	Vireo vicinior
Ring-necked Duck	Aythya collaris	Plumbeous Vireo	Vireo plumbeus
Greater Scaup	Aythya marila	Cassin's Vireo	Vireo cassinii
Lesser Scaup	Aythya affinis	Blue-headed Vireo	Vireo solitarius
Surf Scoter	Melanitta perspicillata	Warbling Vireo	Vireo gilvus
White-winged Scoter	Melanitta fusca	Philadelphia Vireo	Vireo philadelphicus
Black Scoter	Melanitta nigra	Red-eyed Vireo	Vireo olivaceus
Long-tailed Duck	Clangula hyemalis	Gray Jay	Perisoreus canadensis
Bufflehead	Bucephala albeola	Steller's Jay	Cyanocitta stelleri
Common Goldeneye	Bucephala clangula	Blue Jay	Cyanocitta cristata
Barrow's Goldeneye	Bucephala islandica	Western Scrub-Jay	Aphelocoma californica
Hooded Merganser	Lophodytes cucullatus	Pinyon Jay	Gymnorhinus cyanocephalus
Common Merganser	Mergus merganser	Clark's Nutcracker	Nucifraga columbiana
Red-breasted Merganser	Mergus serrator	Black-billed Magpie	Pica hudsonia
Ruddy Duck	Oxyura jamaicensis	American Crow	Corvus brachyrhynchos
Red-throated Loon	Gavia stellata	Common Raven	Corvus corax
Pacific Loon	Gavia pacifica	Horned Lark	Eremophila alpestris
Common Loon	Gavia immer	Purple Martin	Progne subis
Yellow-billed Loon	Gavia adamsii	Tree Swallow	Tachycineta bicolor
Pied-billed Grebe	Podilymbus podiceps	Violet-green Swallow	Tachycineta thalassina
Horned Grebe	Podiceps auritus	Northern Rough-winged Swallow	Stelgidopteryx serripennis
Red-necked Grebe	Podiceps grisegena	Bank Swallow	Riparia riparia
Eared Grebe	Podiceps nigricollis	Cliff Swallow	Petrochelidon pyrrhonota
Western Grebe	Aechmophorus occidentalis	Barn Swallow	Hirundo rustica
Clark's Grebe	Aechmophorus clarkii	Black-capped Chickadee	Poecile atricapillus
American White Pelican	Pelecanus erythrorhynchos	Mountain Chickadee	Poecile gambeli
Double-crested Cormorant	Phalacrocorax auritus	Juniper Titmouse	Baeolophus ridgwayi
American Bittern	Botaurus lentiginosus	Verdin	Auriparus flaviceps
Least Bittern	Ixobrychus exilis	Bushtit	Psaltriparus minimus
Great Blue Heron	Ardea herodias	Red-breasted Nuthatch	Sitta canadensis
Great Egret	Ardea alba	White-breasted Nuthatch	Sitta carolinensis
Snowy Egret	Egretta thula	Pygmy Nuthatch	Sitta pygmaea
Reddish Egret	Egretta rufescens	Brown Creeper	Certhia americana

Cattle Egret	Bubulcus ibis	Cactus Wren	Campylorhynchus brunneicapillus
Green Heron	Butorides virescens	Rock Wren	Salpinctes obsoletus
Black-crowned Night-Heron	Nycticorax nycticorax	Canyon Wren	Catherpes mexicanus
White-faced Ibis	Plegadis chihi	Bewick's Wren	Thryomanes bewickii
Wood Stork	Mycteria americana	House Wren	Troglodytes aedon
Turkey Vulture	Cathartes aura	Winter Wren	Troglodytes troglodytes
California Condor	Gymnogyps californianus	Marsh Wren	Cistothorus palustris
Osprey	Pandion haliaetus	American Dipper	Cinclus mexicanus
White-tailed Kite	Elanus leucurus	Golden-crowned Kinglet	Regulus satrapa
Bald Eagle	Haliaeetus leucocephalus	Ruby-crowned Kinglet	Regulus calendula
Northern Harrier	Circus cyaneus	Blue-gray Gnatcatcher	Polioptila caerulea
Sharp-shinned Hawk	Accipiter striatus	Black-tailed Gnatcatcher	Polioptila melanura
Cooper's Hawk	Accipiter cooperii	Eastern Bluebird	Sialia sialis
Northern Goshawk	Accipiter gentilis	Western Bluebird	Sialia mexicana
Common Black-Hawk	Buteogallus anthracinus	Mountain Bluebird	Sialia currucoides
Red-shouldered Hawk	Buteo lineatus	Townsend's Solitaire	Myadestes townsendi
Broad-winged Hawk	Buteo platypterus	Veery	Catharus fuscescens
Swainson's Hawk	Buteo swainsoni	Swainson's Thrush	Catharus ustulatus
Zone-tailed Hawk	Buteo albonotatus	Hermit Thrush	Catharus guttatus
Red-tailed Hawk	Buteo jamaicensis	Rufous-backed Robin	Turdus rufopalliatus
Ferruginous Hawk	Buteo regalis	American Robin	Turdus migratorius
Rough-legged Hawk	Buteo lagopus	Varied Thrush	Ixoreus naevius
Golden Eagle	Aquila chrysaetos	Gray Catbird	Dumetella carolinensis
American Kestrel	Falco sparverius	Northern Mockingbird	Mimus polyglottos
Merlin	Falco columbarius	Sage Thrasher	Oreoscoptes montanus
Peregrine Falcon	Falco peregrinus	Brown Thrasher	Toxostoma rufum
Prairie Falcon	Falco mexicanus	Bendire's Thrasher	Toxostoma bendirei
Virginia Rail	Rallus limicola	Curve-billed Thrasher	Toxostoma curvirostre
Sora	Porzana carolina	Crissal Thrasher	Toxostoma crissale
Common Moorhen	Gallinula chloropus	Le Conte's Thrasher	Toxostoma lecontei
American Coot	Fulica americana	American Pipit	Anthus rubescens
Sandhill Crane	Grus canadensis	Bohemian Waxwing	Bombycilla garrulus
Black-bellied Plover	Pluvialis squatarola	Cedar Waxwing	Bombycilla cedrorum
American Golden-Plover	Pluvialis dominica	Phainopepla	Phainopepla nitens
Snowy Plover	Charadrius alexandrinus	Tennessee Warbler	Vermivora peregrina
Semipalmated Plover	Charadrius semipalmatus	Orange-crowned Warbler	Vermivora celata
Killdeer	Charadrius vociferus	Nashville Warbler	Vermivora ruficapilla
Mountain Plover	Charadrius montanus	Virginia's Warbler	Vermivora virginiae
Black-necked Stilt	Himantopus mexicanus	Lucy's Warbler	Vermivora luciae
American Avocet	Recurvirostra americana	Northern Parula	Parula americana
Spotted Sandpiper	Actitis macularius	Yellow Warbler	Dendroica petechia
Solitary Sandpiper	Tringa solitaria	Chestnut-sided Warbler	Dendroica pensylvanica
Wandering Tattler	Tringa incana	Magnolia Warbler	Dendroica magnolia
Greater Yellowlegs	Tringa melanoleuca	Black-throated Blue Warbler	Dendroica caerulescens
Willet	Tringa semipalmata	Yellow-rumped Warbler	Dendroica coronata
Lesser Yellowlegs	Tringa flavipes	Black-throated Gray Warbler	Dendroica nigrescens
Whimbrel	Numenius phaeopus	Townsend's Warbler	Dendroica townsendi
Long-billed Curlew	Numenius americanus	Hermit Warbler	Dendroica occidentalis
Marbled Godwit	Limosa fedoa	Yellow-throated Warbler	Dendroica dominica
Red Knot	Calidris canutus	Grace's Warbler	Dendroica graciae
Sanderling	Calidris alba	Prairie Warbler	Dendroica discolor
Semipalmated Sandpiper	Calidris pusilla	Palm Warbler	Dendroica palmarum
Western Sandpiper	Calidris mauri	Blackpoll Warbler	Dendroica striata
Least Sandpiper	Calidris minutilla	Black-and-white Warbler	Mniotilta varia
Baird's Sandpiper	Calidris bairdii	American Redstart	Setophaga ruticilla
Pectoral Sandpiper	Calidris melanotos	Prothonotary Warbler	Protonotaria citrea
Dunlin	Calidris alpina	Worm-eating Warbler	Helmitheros vermivorum
Stilt Sandpiper	Calidris himantopus	Northern Waterthrush	Seiurus noveboracensis
Short-billed Dowitcher	Limnodromus griseus	Louisiana Waterthrush	Seiurus motacilla
Long-billed Dowitcher	Limnodromus scolopaceus	Kentucky Warbler	Oporornis formosus
Wilson's Snipe	Gallinago delicata	MacGillivray's Warbler	Oporornis tolmiei
Wilson's Phalarope	Phalaropus tricolor	Common Yellowthroat	Geothlypis trichas
Red-necked Phalarope	Phalaropus lobatus	Hooded Warbler	Wilsonia citrina
Red Phalarope	Phalaropus fulicarius	Wilson's Warbler	Wilsonia pusilla
Franklin's Gull	Larus pipixcan	Painted Redstart	Myioborus pictus

Bonaparte's Gull	Larus philadelphia	Yellow-breasted Chat	Icteria virens
Heermann's Gull	Larus heermanni	Summer Tanager	Piranga rubra
Ring-billed Gull	Larus delawarensis	Scarlet Tanager	Piranga olivacea
California Gull	Larus californicus	Western Tanager	Piranga ludoviciana
Herring Gull	Larus argentatus	Green-tailed Towhee	Pipilo chlorurus
Sabine's Gull	Xema sabini	Spotted Towhee	Pipilo maculatus
Black-legged Kittiwake	Rissa tridactyla	Abert's Towhee	Pipilo aberti
Least Tern	Sternula antillarum	Rufous-crowned Sparrow	Aimophila ruficeps
Caspian Tern	Hydroprogne caspia	American Tree Sparrow	Spizella arborea
Black Tern	Chlidonias niger	Chipping Sparrow	Spizella passerina
Common Tern	Sterna hirundo	Clay-colored Sparrow	Spizella pallida
Forster's Tern	Sterna forsteri	Brewer's Sparrow	Spizella breweri
Band-tailed Pigeon	Patagioenas fasciata	Black-chinned Sparrow	Spizella atrogularis
White-winged Dove	Zenaida asiatica	Vesper Sparrow	Pooecetes gramineus
Mourning Dove	Zenaida macroura	Lark Sparrow	Chondestes grammacus
Inca Dove	Columbina inca	Black-throated Sparrow	Amphispiza bilineata
Common Ground-Dove	Columbina passerina	Sage Sparrow	Amphispiza belli
Ruddy Ground-Dove	Columbina talpacoti	Lark Bunting	Calamospiza melanocorys
Yellow-billed Cuckoo	Coccyzus americanus	Savannah Sparrow	Passerculus sandwichensis
Greater Roadrunner	Geococcyx californianus	Grasshopper Sparrow	Ammodramus savannarum
Barn Owl	Tyto alba	Fox Sparrow	Passerella iliaca
Flammulated Owl	Otus flammeolus	Song Sparrow	Melospiza melodia
Western Screech-Owl	Megascops kennicottii	Lincoln's Sparrow	Melospiza lincolnii
Great Horned Owl	Bubo virginianus	Swamp Sparrow	Melospiza georgiana
Northern Pygmy-Owl	Glaucidium gnoma	White-throated Sparrow	Zonotrichia albicollis
Elf Owl	Micrathene whitneyi	Harris's Sparrow	Zonotrichia querula
Burrowing Owl	Athene cunicularia	White-crowned Sparrow	Zonotrichia leucophrys
Spotted Owl	Strix occidentalis	Golden-crowned Sparrow	Zonotrichia atricapilla
Long-eared Owl	Asio otus	Dark-eyed Junco	Junco hyemalis
Short-eared Owl	Asio flammeus	McCown's Longspur	Calcarius mccownii
Northern Saw-whet Owl	Aegolius acadicus	Lapland Longspur	Calcarius lapponicus
Lesser Nighthawk	Chordeiles acutipennis	Chestnut-collared Longspur	Calcarius ornatus
Common Nighthawk	Chordeiles minor	Snow Bunting	Plectrophenax nivalis
Common Poorwill	Phalaenoptilus nuttallii	Rose-breasted Grosbeak	Pheucticus ludovicianus
Black Swift	Cypseloides niger	Black-headed Grosbeak	Pheucticus melanocephalus
Chimney Swift	Chaetura pelagica	Blue Grosbeak	Passerina caerulea
Vaux's Swift	Chaetura vauxi	Lazuli Bunting	Passerina amoena
White-throated Swift	Aeronautes saxatalis	Indigo Bunting	Passerina cyanea
Broad-billed Hummingbird	Cynanthus latirostris	Dickcissel	Spiza americana
Blue-throated Hummingbird	Lampornis clemenciae	Bobolink	Dolichonyx oryzivorus
Magnificent Hummingbird	Eugenes fulgens	Red-winged Blackbird	Agelaius phoeniceus
Ruby-throated Hummingbird	Archilochus colubris	Western Meadowlark	Sturnella neglecta
Black-chinned Hummingbird	Archilochus alexandri	Yellow-headed Blackbird	Xanthocephalus xanthocephalus
Anna's Hummingbird	Calypte anna	Rusty Blackbird	Euphagus carolinus
Costa's Hummingbird	Calypte costae	Brewer's Blackbird	Euphagus cyanocephalus
Calliope Hummingbird	Stellula calliope	Common Grackle	Quiscalus quiscula
Broad-tailed Hummingbird	Selasphorus platycercus	Great-tailed Grackle	Quiscalus mexicanus
Rufous Hummingbird	Selasphorus rufus	Bronzed Cowbird	Molothrus aeneus
Belted Kingfisher	Megaceryle alcyon	Brown-headed Cowbird	Molothrus ater
Lewis's Woodpecker	Melanerpes lewis	Orchard Oriole	Icterus spurius
Red-headed Woodpecker	Melanerpes erythrocephalus	Hooded Oriole	Icterus cucullatus
Acorn Woodpecker	Melanerpes formicivorus	Bullock's Oriole	Icterus bullockii
Williamson's Sapsucker	Sphyrapicus thyroideus	Altamira Oriole	Icterus gularis
Yellow-bellied Sapsucker	Sphyrapicus varius	Scott's Oriole	Icterus parisorum
Red-naped Sapsucker	Sphyrapicus nuchalis	Gray-crowned Rosy-Finch	Leucosticte tephrocotis
Red-breasted Sapsucker	Sphyrapicus ruber	Black Rosy-Finch	Leucosticte atrata
Ladder-backed Woodpecker	Picoides scalaris	Pine Grosbeak	Pinicola enucleator
Downy Woodpecker	Picoides pubescens	Cassin's Finch	Carpodacus cassinii
Hairy Woodpecker	Picoides villosus	House Finch	Carpodacus mexicanus
American Three-toed Woodpecker	Picoides dorsalis	Red Crossbill	Loxia curvirostra
Northern Flicker	Colaptes auratus	Pine Siskin	Carduelis pinus
Olive-sided Flycatcher	Contopus cooperi	Lesser Goldfinch	Carduelis psaltria
Western Wood-Pewee	Contopus sordidulus	Lawrence's Goldfinch	Carduelis lawrencei
Willow Flycatcher	Empidonax traillii	American Goldfinch	Carduelis tristis

Least Flycatcher	Empidonax minimus	Evening Grosbeak	Coccothraustes vespertinus

Source: Birds Protected By the Migratory Bird Treaty Act (Code of Federal Regulations, Part 10, March 1, 2010); and Birds of Washington County, Utah, 2007, Compiled by Rick Fridell (Utah Division of Wildlife Resources, St. George, Utah), and Kristen Comella (Utah Division of Parks and Recreation, Snow Canyon Park, Ivins, Utah).

6.3 Appendix C Migratory Bird Species Documented Within Washington County, Utah, That Have Conservation Status (USFWS Birds Of Conservation Concern, Utah-BLM Sensitive Species, Utah-PIF High-Priority Bird Species), And Their Primary-Secondary Breeding and Wintering Habitats.

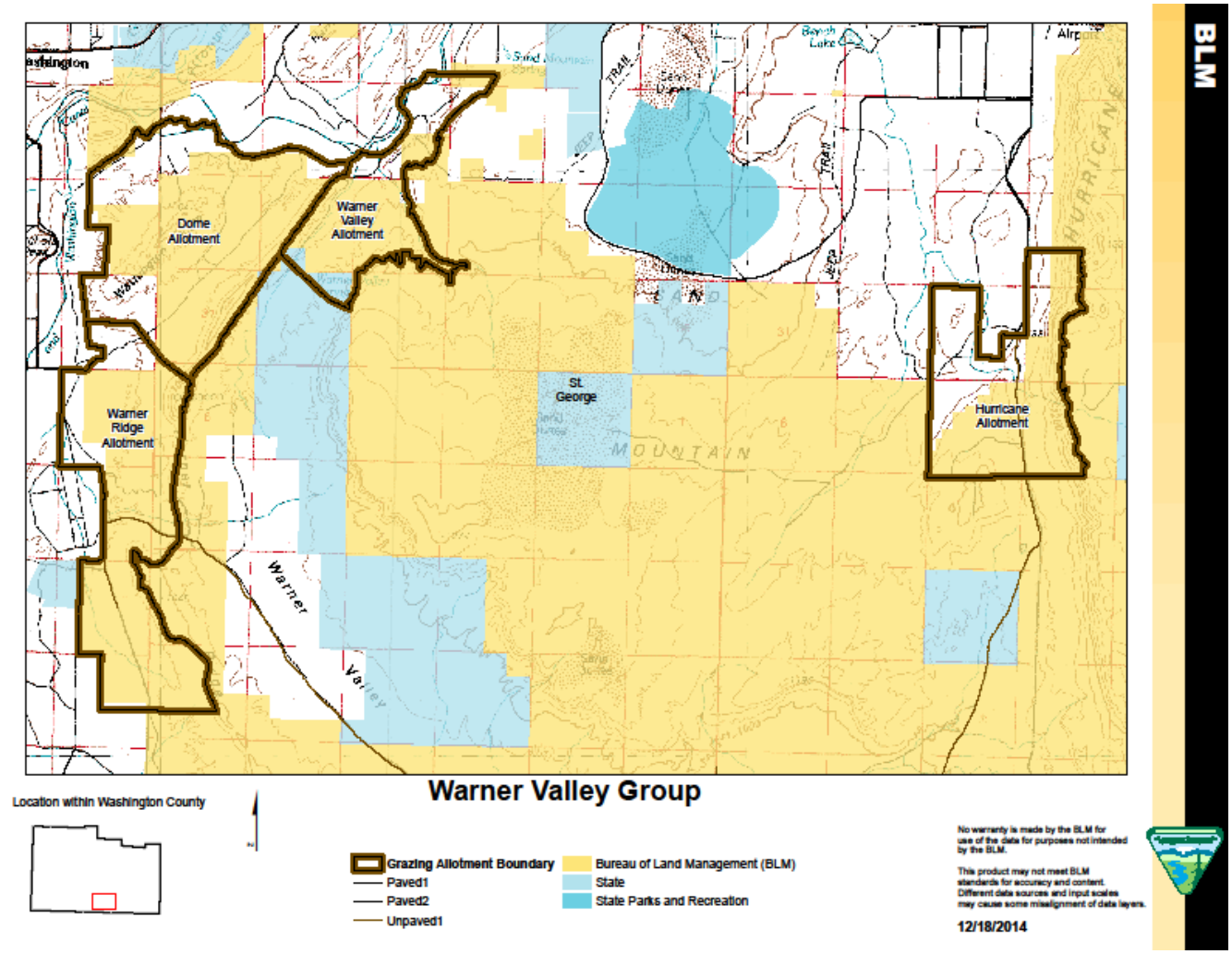
Common Name[1, 2]	Scientific Name[1, 2]	USFWS Birds of Conservation Concern[3]	Utah-BLM Sensitive Bird Species[4]	Utah-PIF High Priority Bird Species[5]	Primary Breeding[, 4, 5]	Secondary Breeding[4, 5]	Winter Habitat[4, 5]
Horned grebe	*Podiceps auritus*	X			Marshes	Ponds	Migrant
American white pelican	*Pelecanus erythrorhynchos*		X	X	Lakes	Marshes	Migrant
American bittern	*Botaurus lentiginosus*	X			Freshwater Marshes	Freshwater Marshes	Migrant
Least bittern	*Ixobrychus exilis*	X			Freshwater Marshes	Brackish Marshes	Accidental
Northern goshawk	*Accipiter gentilis*		X		Conifer Forests	Mixed Forests	Forests
Ferruginous hawk	*Buteo regalis*	X	X	X	Tree-Snag	Cliff	Open Habitats
Golden eagle	*Aquila chrysaetos*	X			Cliff	Tree-Snag	Open Habitats
Bald eagle	*Haliaeetus leucocephalus*	X	X		Tree-Snag	Cliff	Migrant
Prairie falcon	*Falco mexicanus*	X			Cliff	Bank	Open Habitats
Peregrine falcon	*Falco peregrinus*	X			Cliff	Tree-Snag	Open Habitats
Gambel's quail	*Callipepla gambelii*			X	Desert Scrub	Lowland riparian	Desert Scrub
Snowy plover	*Charadrius nivosus*	X			Sand Beaches	Alkaline Flats	Migrant
Mountain plover	*Charadrius montanus*	X		X	Shortgrass Prairie	Sandy Deserts	Migrant
American avocet	*Recurvirostra americana*			X	Marshes	Lake Edges	Migrant
Black-necked stilt	*Himantopus mexicanus*			X	Marshes	Lake Edges	Migrant
Long-billed curlew	*Numenius americanus*	X	X	X	Grasslands	Agricultural Fields	Migrant
Marbled godwit	*Limosa fedoa*	X			Marshes	Shortgrass Prairie	Migrant
Short-billed dowitcher	*Limnodromus griseus*	X			Marshes	Lake Edges	Migrant

Yellow-billed cuckoo	*Coccyzus americanus*			X	Riparian Woodlands	Marshes	Migrant
Short-eared owl	*Asio flammeus*	X	X		Grasslands	Wetlands	Open Habitats
Burrowing owl	*Athene cunicularia*	X			Grasslands	High Desert Scrub	Migrant
Flammulated owl	*Psiloscops flammeolus*	X			Ponderosa Pine	Sub-Alpine Conifer	Migrant
Black swift	*Cypseloides niger*		X	X	Mountain Cliffs	Mountain Waterfalls	Migrant
Broad-tailed hummingbird	*Selasphorus platycercus*			X	Mountain Conifer	Mountain Riparian	Migrant
Red-headed woodpecker	*Melanerpes erythrocephalus*	X			Open Woodlands	Orchards	Accidental
Lewis's woodpecker	*Melanerpes lewis*	X	X	X	Pine/Oak Woodlands	Lowland Riparian	Pine/Oak Woodlands
American three-toed woodpecker	*Picoides dorsalis*			X	Sub-Alpine Conifer	Lodgepole Pine	Sub-Alpine Conifer
Willow flycatcher	*Empidonax traillii*	X			Riparian Habitats	Marshes	Migrant
Loggerhead shrike	*Lanius ludovicianus*	X			High Desert Scrub	Pinyon-Juniper	Open Habitats
Gray vireo	*Vireo vicinior*	X		X	Pinyon-Juniper	Scrub Oak	Migrant
Bell's vireo	*Vireo bellii*	X		X	Scrublands	Riparian Woodlands	Migrant
Pinyon jay	*Gymnorhinus cyanocephalus*	X			Pinyon Pine	Juniper	Pinyon-Juniper
Bewick's wren	*Thryomanes bewickii*	X			Lowland Riparian	Pinyon-Juniper	Brush-Open Woodlands
Sage thrasher	*Oreoscoptes montanus*	X			Sagebrush	Pinyon-Juniper	Migrant
Virginia’s warbler	*Oreothlypis virginiae*			X	Scrub Oak	Pinyon-Juniper	Migrant
Lucy’s warbler	*Oreothlypis luciae*			X	Cottonwood-Mesquite	Dry Desert Washes	Migrant
Black-throated gray warbler	*Setophaga nigrescens*			X	Pinyon-Juniper	Dry Conifer	Migrant
Abert’s towhee	*Melozone aberti*			X	Shrublands	Riparian Woodlands	Shrub-Riparian
Sagebrush sparrow	*Artemisiospiza nevadensis*	X		X	Sagebrush	Desert Scrub	Deserts
Brewer's sparrow	*Spizella breweri*			X	Sagebrush	Pinyon-Juniper	Migrant
Grasshopper sparrow	*Ammodramus savannarum*	X			Grasslands	Prairies	Migrant
McCown's longspur	*Rhynchophanes mccownii*	X			Shortgrass Prairie	Grasslands	Migrant

Chestnut-collared longspur	*Calcarius ornatus*	X			Shortgrass Prairie	Grasslands	Migrant
Bobolink	*Dolichonyx oryzivorus*			X	Wet Meadow	Prairie	Migrant
Black rosy-finch	*Leucosticte atrata*	X		X	Alpine Cliffs	Alpine Habitats	Mountain Valleys
Cassin's finch	*Haemorhous cassinii*	X			Mountain Conifer	Pinyon-Juniper	Mountain Conifer
Source: [1]Chesser et al. 2013; [2]Fridell and Comella 2007; [3]USFWS 2008; [4]UDWR 2015; [5]Parrish et al. 2002.							

6.4 Appendix D Preliminary Construction Drawings

The following preliminary construction drawings are not in their final form and are only a selection from the entire construction document package meant to best illustrate the proposed action.



6.5 Appendix E List of Acronyms Used In This EA

ACEC	Area of Critical Environmental Concern
AMP	Allotment Management Plan
ATV	All-Terrain Vehicle
AUM	Animal Unit Month
BLM	Bureau of Land Management
BMP	Best Management Practice
CFR	Code of Federal Regulations
EA	Environmental Assessment
EIS	Environmental Impact Statement
ENBB	Environmental Notification Bulletin Board
FLPMA	Federal Land Policy and Management Act
FONSI	Finding of No Significant Impact
FY	Fiscal Year
IDT	Interdisciplinary Team
NEPA	National Environmental Policy Act
OHV	Off-Highway Vehicle
RFAS	Reasonably Foreseeable Action Scenario
RMP	Resource Management Plan
ROD	Record of Decision
SRMA	Special Recreation Management Area
SUWA	Southern Utah Wilderness Alliance
SWIFL	Southwestern Willow Flycatcher
UDWR	Utah Division of Wildlife Resources
USFWS	United States Fish and Wildlife Service
VRM	Visual Resource Management
WCD	Water Conservancy District
WSA	Wilderness Study Area
T&E	Threatened and Endangered Species
SS	Special Status Species

7.0 REFERENCES CITED

40 CFR 1508.27. Office of the Federal Register. Regulation on "Significance."

43 CFR 4180. Office of the Federal Register. Fundamentals of Rangeland Health.

Belsky, A.J., and J.L. Gelbard. 2000. Livestock Grazing and Weed Invasions in the Arid West. A Scientific Report Published by the Oregon Natural Desert Association.

Briggs, M.K. 1996. Riparian Ecosystem Recovery in Arid Lands: Strategies and References. Tucson: University of Arizona Press.

Cartron, J.E., S.H. Stoleson, P.L.L. Stoleson, and D.W. Shaw. 2000. Riparian Areas. Pp 281-328. In Jemison, R., and C. Raish (Eds.), Livestock Management in the American Southwest: Ecology, Society, and Economics. Elsevier Press.

Chesser, R.T., R. Banks, F.K. Barker, C. Cicero, J.L. Dunn, A.W. Kratter, I.J. Lovette, P.C. Rasmussen, J.V. Remsen, Jr., J.D. Rising, D.F. Stotz, and K. Winker. 2013. Fifty-Fourth Supplement to the American Ornithologists' Union Check-list of North American Birds. The Auk 130(3):558–572.

Ecosystem Restoration. 2006. Trout Creek Mountain Area Grazing Management Project. Lead Agency: BLM, Vale District Office. http://ecorestoration.montana.edu/rangeland/histories/troutcreek/default.htm

Fridell, R., and K. Comella. 2007. Birds Protected By The Migratory Bird Treaty Act Occurring in Washington County, Utah. Utah Division of Wildlife Resources and Utah Division of Parks and Recreation, unpublished data.

Holechek, J. L., T. T. Baker, J. C. Boren, and D. Galt. 2006. Grazing Impacts on Rangeland Vegetation: What We Have Learned. Society for Range Management:7-13.

Lentsh, Leo D., M. Jane Perkins, and Henry Maddux. 1995. Virgin Spinedace Conservation Agreement and Strategy, UDWR Publication 95-13.

Loftin, S.R., C.E. Bock, J.H. Bock and S.L. Brantley. 2000. Desert Grasslands. Pp. 53-96. In Jemison, R., and C. Raish (eds.), Livestock Management in the American Southwest: Ecology, Society, and Economics. Elsevier Press.

Parrish, J. R., F.P. Howe, R.E. Norvell. 2002. Utah Partners in Flight Avian Conservation Strategy Version 2.0. Utah Partners in Flight Program, Utah Division of Wildlife Resources, Salt Lake City, UT.

Rappole, J.H., and M.V. McDonald. 1994. Cause and Effect in Population Declines of Migratory Birds. The Auk 111(3):652–660.

U.S. Fish and Wildlife Service. 2008. Birds of Conservation Concern 2008. United States Department of Interior, Fish and Wildlife Service, Division of Migratory Bird Management, Arlington, VA. [Online version available at <http://www.fws.gov/migratorybirds/>]

US Fish and Wildlife Service. 2015. California Condor Count Information, What you can do. United States Department of Interior, Fish and Wildlife Service. <www.fws.gov/cno/es/calcondor/CondorCount.cfm>

Utah Division of Wildlife Resources. 2015. UDWR-Utah BLM Avian Sensitive Species List. http://dwrcdc.nr.utah.gov/ucdc/ViewReports/SS_List.pdf).

Utah Governor's Office of Planning and Budget (OPB). 2002a. "Population Projections for Utah's Cities and Unincorporated Areas." Salt Lake City, Utah.

OPB. 2002b. "State of Utah Economic and Demographic Projections." Salt Lake City, Utah.

Sayre, N.F. 2000. Sonoran Desert Conservation Plan: Preserving Ranch Lands in Pima County. http://www.pima.gov/cmo/sdcp/sdcp2/elements/ranch2/rnch 03.htm

Sprinkle, J., et al. Dutchman Butte Revisited – Examining Paradigms for Livestock Grazing Exclusion. 2007. Society for Range Management:21-34.

United States Department of Agricultural Soil Conservation Service (SCS). 1977. Soil Survey of Washington County Area.

United States Census Bureau. 2006. Census Bureau, State and County Quick Facts. http://quickfacts.census.gov.

United States Department of Interior (USDI) Bureau of Land Management (BLM). 2001. Utah Standards and Guidelines for Grazing Management Rangeland Health Assessment Summary and Determination Record for the Apex Slope, Curly Hollow, Box Canyon and River Allotments. May 24th 2012.

USDI BLM. 1999. St. George Field Office (Formerly the Dixie Resource Area) Record of Decision and Resource Management Plan. Utah State Office. March 1999.

USDI BLM. 1998. Dixie Resource Area Proposed Resource Management Plan and Final Environmental Impact Statement. Cedar City District Office. September 1998.

USDI BLM. 1997. Standards for Rangeland Health and Guidelines for Grazing Management.

USDI BLM. 1987. BLM NEPA Handbook H-1790-1, Appendix 5, Critical Elements of the Human Environment.

USDI BLM. 1978. Final Hot Desert Grazing Management Environmental Statement.
United States Fish and Wildlife Service (USFWS). 2002. Letter from USFWS to BLM regarding the Apex Slope, Curly Hollow and Box Canyon Allotments (Sept 12, 2002).

Washington County. 2010. Washington County General Plan, a guide for development in Washington County, Utah.

Western Regional Climate Center (WRCC). 2006. Western U.S. Climate Historical Summaries. http://www.wrcc.dri.edu/climsum.html