

Draft Grazing EIS 10-23-03 (Word)

1 TITLE PAGE

2
3 LIVESTOCK GRAZING ON PUBLIC LAND

4 5 Draft Environmental Impact Statement

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7
8 Prepared by

9
10 The Department of the Interior
11 Bureau of Land Management

12
13 DEAR READER LETTER

14 EXECUTIVE SUMMARY (including tables comparing alternatives and comparing effects)

15 ABSTRACT

16
17 CHAPTER 1. INTRODUCTION

18 19 **1.1 Background**

20 In this Draft Environmental Impact Statement (DEIS) the Bureau of Land Management (BLM)
21 considers the effects of a proposed rulemaking to amend the regulations governing livestock
22 grazing on public land. The BLM, and all Federal agencies, are required by the National
23 Environmental Policy Act (NEPA) to prepare an EIS if a proposed action has effects that are
24 expected to be significant and that are not fully covered in an existing EIS.

25 **1.1.1 Laws Governing the BLM Grazing Program**

- 26 1. The Taylor Grazing Act (TGA) of 1934
- 27 2. The Federal Land Policy and Management Act (FLPMA) of 1976
- 28 3. The Public Rangelands Improvement Act (PRIA) of 1978

29 These laws, among other things, mandate managing resources on public land in a way that
30 maintains or improves its condition. The TGA directs that occupation and use of the range must
31 be regulated to preserve the land and its resources from destruction or unnecessary injury, and to
32 provide for the orderly use, improvement, and development of the range. FLPMA also provides
33 authority and direction for multiple use and sustained yield of public land. PRIA established a
34 national policy to improve the condition of public rangelands, required a national inventory and
35 consistent federal management policies, and provided funds for range improvement projects.

36 **1.1.2 Grazing Regulations**

1 The BLM administers its grazing program under 43 CFR 4100 of the Code of Federal
2 Regulations (CFR). The regulations carry out the laws enacted by Congress. The grazing
3 regulations have been amended numerous times over the years in big and small ways. The most
4 recent large-scale change in the regulations came in 1995 in an effort known as Rangeland
5 Reform.

6 Rangeland Reform '94, which was proposed in partnership with U.S. Department of Agriculture
7 and the Forest Service, resulted in changes to BLM's grazing regulations in 1995. The broad
8 purpose of Rangeland Reform was to improve ecological conditions while allowing for
9 sustainable development.

10 One of the two most important changes of Rangeland Reform was to create Resource Advisory
11 Councils (RACs) to allow for meaningful public participation in and advice to BLM resource
12 management programs. The RACs replaced the BLM grazing advisory boards and district
13 advisory councils, and were set up to represent diverse interests and employ consensus decision-
14 making. The other important change was to create Standards and Guidelines for Grazing
15 Administration in order to have measurable criteria to ensure the health of rangeland. These
16 guidelines are based on fundamental measures of rangeland health such as water quality and
17 plant communities. Once they are established for a geographical area, with the help of the
18 appropriate RAC, significant progress toward achieving them must be achieved or management
19 practices have to be changed by the next grazing season. Other changes from Rangeland
20 Reform were:

- 21 • Penalties for certain prohibited acts including violations of laws protecting wildlife,
22 archeological sites, and water quality were added.
- 23 • BLM would be able to reach nonmonetary settlements when unauthorized use is clearly
24 unintentional, incidental, causes no resource damage, and where no substantial forage is
25 consumed.
- 26 • Conservation use could be authorized for extended periods to meet resource condition
27 objectives of existing land use plans and to comply with standards and guidelines. This
28 enables permittees to rest an area for as long as 10 years for no fee while preserving their
29 ability to resume grazing in the future.
- 30 • Water rights were made consistent with Forest Service practice and BLM policy before
31 the early 1980s. New water rights for livestock grazing are to be acquired in the name
32 of the United States to the extent allowed by State law.
- 33 • Title to new and permanent grazing-related improvements would be held by the United
34 States. Permittee contributions toward improvement are to be recorded for future
35 reimbursement should they cease to hold their permit or lease.
- 36 • BLM Range Improvement Funds would be distributed to be consistent with Forest
37 Service policy and would apply to a wider range of activities to maintain and improve
38 rangeland health. Under this provision, grazing fee receipts can be used to plan, design,
39 build, and monitor the effectiveness of range improvement projects.
- 40 • Automatic suspension of appealed BLM grazing decisions was changed to conform with
41 Department of the Interior regulations governing other BLM program decisions.

- 1 • Allowed authorized subleasing to give permittees maximum flexibility to manage their
- 2 businesses.
- 3 • Required applicants to have a satisfactory performance record.
- 4 • Changed the term "Affected Interest" to "Interested Public" to ease public involvement.

5 The BLM further administers the grazing program through internal policy guidance in its
6 manuals and handbooks.

7 **1.1.3 Land Use Plans**

8 BLM's 162 land use plans provide the basis for every action and approved use that takes place
9 on land the agency manages, and are created with the help of interested groups from the public
10 and government. Every BLM Field Office must have one and grazing is an element in each.

11 Land Use Plans are designed to set goals for land use and future conditions that BLM and
12 others believe are desirable. They also identify land for retention, disposal, or acquisition, and
13 establish management direction for land that may come under BLM jurisdiction in the future.

14 FLPMA mandates land use plans and that the public must be involved to create them, and NEPA
15 states that a "systematic and interdisciplinary" approach must be used to manage the
16 environment.

17 In formulating land use plans, BLM follows the principles of multiple use and sustained yield,
18 identifies and manages areas of critical environmental concern, considers effects on local
19 economies, and relies on inventories of land and resources. It also considers present and
20 potential public land uses, identifies scarce values and considers ways to increase their
21 abundance, weighs the long-term versus the short-term benefits to the public, complies with
22 applicable pollution laws, and coordinates with other governmental entities and tribes.

23 BLM uses a process to create or update land use plans which is fully integrated with the NEPA
24 process and Council on Environmental Quality guidelines. The first major steps are to identify
25 the issues with the help of the public, develop guidelines and decide what will be considered,
26 and produce a report for the public. BLM then assembles inventory data, analyzes the
27 characteristics and condition of the land and resources, and identifies and analyzes the effects of
28 a range of reasonable action alternatives. From these alternatives, BLM identifies a preferred
29 alternative and submits a Notice of Availability (NOA) of a Draft Plan–Draft Environmental
30 Impact Statement, which the public has 90 days to review. Once the 90-day period ends, BLM
31 analyzes and considers public comment and releases a NOA of Proposed Plan–Final EIS.
32 There then is a 30-day protest period and a concurrent 60-day Governor's review. Once any
33 protests are resolved, BLM issues a NOA for the Record of Decision–Final Plan and
34 implements plan decisions, and monitors the plan.

35 **1.1.4 Overview of the Livestock Grazing Program**

1 All allowed uses on BLM lands, such as grazing, are described in land use plans. Currently,
2 these plans provide that about 160 million acres in the West are suitable for livestock grazing.
3 The instrument that authorizes grazing use is called a grazing permit or lease. A BLM grazing
4 permit or lease authorizes a permittee (or lessee) to graze livestock on one or more grazing
5 administrative units called allotments. Permittees or lessees can be individual citizens or
6 business entities such as corporations, associations and partnerships. Allotments range in size
7 from small (1,000 acres or less) to vast (more than a million acres).

8 The Taylor Grazing Act in 1934, mandates the government to determine, for the western
9 public lands, how much forage is available for livestock grazing, who should get the grazing
10 permits, and how grazing is to occur. Congress said that preference to a permit should be given
11 to nearby landowners engaged in the livestock business, settlers, those who owned water or
12 water rights and other stockowners as necessary to permit the proper use of the owned land or
13 water. Once this system was established, Congress intended that the grazing privilege was to
14 be safeguarded as long as it comported with sound land management practices. This means
15 that when a permit expires, provided grazing continues to be an appropriate use of the land,
16 permittees who comply with their permits and other applicable rules and regulations should
17 receive first priority for renewal of those permits.

18 The government developed a system to keep records regarding who has priority for grazing
19 privileges on public land. Whoever owns or controls private property in land or water (known
20 as base property) near the public grazing land in question has priority or "preference" and is
21 granted the permitted grazing use. This system also allows for preference to be transferred from
22 one property to another, or from one person to another.

23 The amount of forage that a permittee may graze on an allotment each year is called "active use"
24 and the lessee or permittee is obligated to graze livestock at this level. When the owner or
25 lessee of a base property applies for grazing use, they are issued a permit that specifies which
26 allotment(s) are to be used, the number of livestock to be allowed, when they can graze, and
27 other management terms and conditions. Often, there is an "Allotment Management Plan"
28 (AMP) that describes in detail how grazing is to occur on a specific allotment, and these plans
29 become part of the grazing permit or lease.

30 Sometimes operators do not wish to graze all of the active use allowed by their permits or leases.
31 When this happens, BLM can temporarily authorize another operator to make that use through a
32 nonrenewable permit or it can approve the nonuse to help conserve resources. In a good
33 growth year, forage is temporarily available on the range that exceeds the amount of permitted
34 use obligated to a permittee. When this happens, BLM may temporarily authorize grazing use
35 that exceeds the established level of permitted use.

36 BLM allows operators to graze livestock owned by another entity on their permitted allotments.
37 When this happens, they must submit a livestock control agreement to BLM and pay an extra
38 fee.

1 BLM can cancel a permit or lease and the preference for the permitted use that was attached to
2 the base property for grazing rules violations or when the base property owner fails to apply for
3 the permitted use. This happens in few cases but when it does, BLM may award the forage to a
4 new applicant.

5 Permits can also be issued through implementation of the Standards and Guidelines (S&G)
6 process in which data (i.e., vegetation, watershed, wildlife, and others) are collected and a BLM
7 interdisciplinary team analyzes them. The team also considers any other resource and land use
8 plan issues and then determines if an allotment has met the standards for rangeland health.

9 If the standards aren't met, the BLM has until the next grazing season to ensure the allotment is
10 significantly progressing toward meeting them. Whether an allotment does or does not meet a
11 standard for rangeland health, the grazing permit is processed through an environmental
12 assessment.

13 Another tool for maintaining or improving land conditions is to install rangeland improvement
14 projects, such as water pipelines, reservoirs, or fences. Although permittees, the BLM, or
15 conservation organizations can contribute funding or labor for these projects, title is held by the
16 United States.

17 A permittee may request to not graze the land in any grazing year or season. Nonuse may be
18 appropriate when the range is depleted, for restoring rangeland, for lack of forage or water, for
19 resting the range, or for removing livestock. In the fiscal year ending in October 2002, there
20 were 18,142 grazing permits or leases held on BLM land. Of 12.7 million Animal Unit Months
21 (AUMs) within these authorizations, 7.9 million AUMs were in use and 4.8 million AUMs were
22 in nonuse.

23 **1.2 The Purpose and Need for the Proposed Action**

24 **1.2.1 General Purpose and Need**

25 The present regulations are being amended to comply with court decisions, provide greater
26 flexibility to managers and permittees, improve administrative procedures and business
27 practices, promote community-based conservation and citizen-based stewardship of public land,
28 and to provide for practical mechanisms to protect the rangeland.

29 The BLM is committed to making changes to reflect the Secretary of the Interior's "4 C's"
30 philosophy of "consultation, cooperation, and communication all in the service of conservation"
31 and to provide for economically viable ranching operations and rangeland health.

32 The regulatory changes are narrow in scope, make no changes in grazing fees or the standards
33 and guidelines for assessing the health of the land, and otherwise leave the vast majority of the
34 1995 Rangeland Reform effort in place. These changes that are proposed are driven by specific
35 issues and concerns that have come to BLM's attention..

1 With these proposed changes, BLM and the interested public can obtain better information
2 about observed trends in the vegetative communities of the West. BLM can clarify some of the
3 administrative processes so they are not a barrier to meaningful understanding about the issues.
4 We hope to sharpen our focus on the issues that are truly in need of attention as we seek to
5 conserve the rural landscapes of the West.

6 **1.2.2 General Purpose and Need by Topic**

7 Here we discuss the following major issues that drive the proposed rulemaking and this EIS, and
8 the present problem or need that BLM intends to address. As stated before, these issues came to
9 the fore as areas where the BLM could:

- 10 · Increase greater flexibility for managers and permittees
- 11 · Improve administrative procedures and business practices
- 12 · Promote community-based conservation and citizen-based stewardship of public land
- 13 · Comply with court decisions

14 The major areas of focus are:

15 **(a) Social, Economic, and Cultural Considerations**

16 **(b) Implementation of Changes in Grazing Use**

17 **(c) Range Improvement Ownership**

18 **(d) Cooperation with State, Local, and County Established Grazing Boards**

19 **(e) Review and Comment on Biological Assessments**

20 **(f) Temporary Nonuse**

21 **(g) Noxious Plants**

22 **(h) Basis for Rangeland Health Determinations**

23 **(i) Timeframe for Taking Action to Meet Rangeland Health Standards**

24 **(j) Conservation Use**

25 **(k) Grazing Preference**

26 **(l) Interested Public**

- 1 **(m) Water Rights**
- 2 **(n) Satisfactory Performance**
- 3 **(o) Temporary Changes Within Terms and Conditions of Permit or Lease**
- 4 **(p) Service Charges**
- 5 **(q) Prohibited Acts**
- 6 **(r) Grazing Use Pending Resolution of Appeals**
- 7 **(s) Biological Assessments (Blake Decision)**

8 **1.2.2.1 Social, Economic, and Cultural Considerations**

9
10 NEPA and the NEPA regulations require that all Federal agencies use qualified people from the
11 various scientific and social disciplines to perform analysis, such as Environmental Assessments,
12 under this law. In addition to assessing effects on various environmental elements such as air
13 and water quality, the law and NEPA regulations require the BLM to assess effects on economic,
14 social, and cultural environments. No specific reference to these elements exists in the present
15 BLM grazing regulations. As a result, current BLM practice is to always consider these
16 elements, but not necessarily address them in the NEPA document if there is no effect on them.
17 The question remains whether BLM should conform its grazing regulations to NEPA
18 requirements by including language concerning the analysis of economic, social, and cultural
19 effects, thereby enhancing consistency and clarity. Many grazing operators feel that these
20 factors are not adequately considered by BLM and that they should always be part of the written
21 analysis in NEPA documents.

22
23 **1.2.2.2 Implementation of Changes in Grazing Use**

24
25 When BLM implements changes in a permittee's active use, this is sometimes done within a
26 timeframe that causes a sudden adverse economic effect, reduces the ability to make operation
27 adjustments, or does not allow enough time for a herd to be rebuilt. Prior to the 1995
28 Rangeland Reform changes, there was a 5-year phase-in period in the regulations for the
29 implementation of such changes.

30 **1.2.2.3 Range Improvement Ownership**

31
32 The regulations that went into effect in 1995 said that title to new range improvements belongs
33 to the Federal government, even if a grazing user builds them. This was meant to conform with
34 the common law concept that title to improvements should go to the landowner, which in this
35 case is the Federal government. This change was meant to conform to the practice of the Forest
36 Service and to BLM's own practice before changes took place in the early 1980s. However,

1 many grazing operators have said that having range improvements jointly owned by the Federal
2 government and the operator contributes to healthy range conditions and allows them to more
3 easily obtain loans for their operations. They also say that joint ownership would offer
4 incentive for operators to construct improvements, and that the current situation leaves them
5 with little incentive to invest in improvements if they can't claim the value of their contribution
6 when they sell their base ranch.

9 **1.2.2.4 Cooperation with State, Local, and County Established Grazing Boards**

10 The current grazing regulations provide that the BLM will cooperate with other agencies and
11 units of government that have responsibilities for grazing on public lands, and specifically
12 states that the BLM will "cooperate with State, county, and Federal agencies in the
13 administration of laws and regulations relating to livestock, livestock diseases, sanitation, and
14 noxious weeds including (a) State cattle and sheep sanitary or brand boards.....and (b) County
15 or other local weed control districts....."

16 Most western States have State, county or locally established grazing advisory boards that
17 provide guidance on range improvements on public lands. Section 401 (b)(1) of FLPMA states
18 that a portion of the grazing fees collected are set aside for range betterment. After BLM
19 consults with the local user representatives, which generally usually include the grazing
20 boards, half the fee amount is to be used in the area where the fees were collected for range
21 rehabilitation, protection, and improvements.

22 Grazing interests and State and local governments have raised concerns that the grazing
23 advisory boards have not been used effectively by the BLM and are underutilized as a tool for
24 gathering local input for BLM decisions on range improvements and allotment management
25 planning.

26 **1.2.2.5 Review and Comment on Biological Assessments**

27
28 When Biological Assessments are included within the body of information that is used to
29 support changes in grazing permits, we will make these assessments available for comment and
30 review by the affected permittees and lessees, the interested public and State agency staff. (*Re-*
31 *check with Ken for reasons for this change*)

32 33 **1.2.2.6 Temporary Nonuse**

34
35 Before the 1995 Rangeland Reform changes a permittee could choose to hold an allotment in
36 nonuse of grazing for personal or business reasons for the entire length of the permit if need be.
37 Under those regulatory changes, a permittee could hold an allotment in nonuse for the entire
38 length of the permit under the newly created Conservation Use Permit. Therefore, in order to
39 provide for temporary nonuse when a permittee did not want a Conservation Use Permit, the
40 1995 regulations provided for the BLM the authority to authorize a maximum of 3 years of no
41 grazing of an allotment for conservation or other purposes. However, since Conservation Use

1 Permits were declared illegal by the 10th Circuit, thus eliminating that avenue for continued
2 nonuse after three years, permittees must now begin grazing operations after three years
3 regardless of the health of the land. Many conservation and restoration actions require more
4 time to accomplish their objectives. Therefore, there is a need for a mechanism to allow for
5 more time to ensure the health of rangelands

6 7 **1.2.2.7 Noxious Plants**

8
9 Under current regulations, there is no provision to penalize the knowing or willful spreading of
10 noxious plants on public land.

11 12 **1.2.2.8 Basis for Rangeland Health Determinations**

13
14 The current regulations do not explain how the BLM decides that existing grazing management
15 practices or levels of grazing use on public land are significant factors in failing to achieve the
16 rangeland health standards and conform with the guidelines for grazing administration.

17 18 **1.2.2.9 Timeframe for Taking Action to Meet Rangeland Health Standards**

19
20 The BLM has environmental standards for ensuring the health of rangeland within geographic
21 regions at least the size of a State. The agency engages in monitoring and evaluation to make
22 certain that these standards and the guidelines, which grazing operators are to follow to meet
23 them, are resulting in a healthy range. If BLM determines that operators' grazing practices
24 within a region are significant factors resulting in range standards not being met or that
25 guidelines are not being conformed to, it must, under the current regulations, ensure that
26 appropriate action is taken before the start of the next grazing season. This time frame has
27 proven to be too short in many instances, especially given that NEPA and other environmental
28 laws must be satisfied.

29 30 **1.2.2.10 Conservation Use**

31 The 1994 Rangeland Reform regulations authorized that the BLM could issue "Conservation
32 Use Permits" to groups or individuals for the purpose of not grazing livestock on their allotment.

33 The issue was challenged in court, with the result that the Tenth Circuit Court of Appeals held
34 that the Taylor Grazing Act stipulated that the primary purpose of issuing a grazing permit is to
35 permit grazing and that BLM could not issue permits exclusively for conservation purposes.
36 This decision was not appealed to the Supreme Court and thus is the final judicial determination
37 on this issue. Therefore, the current regulations do not conform with the court's finding.

38 39 **1.2.2.11 Grazing Preference**

40 In the current regulations, grazing preference has been defined since 1995 as a priority position
41 against others for the purpose of receiving a grazing permit or lease. This priority is attached to
42 base property owned or controlled by the permittee or lessee. The livestock industry feels that
43 this definition should be changed because the Taylor Grazing Act intended the term to specify a

1 preference level of Federal AUMs of livestock forage to ranchers who have qualified for grazing
2 permits and leases.

3 4 **1.2.2.12 Interested Public**

5
6 The current regulations define “interested public” as an individual, group, or, organization that
7 has: (a) submitted a written request to the BLM to be provided an opportunity to be involved in
8 the decision-making process for the management of livestock grazing on a specific allotment, or
9 (b) has submitted comments to BLM regarding the management of livestock grazing on a
10 specific allotment. This definition has resulted in BLM staff being overburdened with a
11 “interested public” workload that interferes with their ability to manage grazing day-to-day. In
12 some cases, this has caused scarce BLM staff resources to primarily manage and process
13 interested public requests for participation, such as organizing and updating mailing lists, and
14 taking care of logistics for group “field tours” rather than on everyday grazing management
15 matters such as monitoring resource conditions.

16 17 **1.2.2.13 Water Rights**

18 The present regulation on water rights for livestock grazing is unnecessary, somewhat
19 ambiguous, and does not allow as much flexibility as possible. In 1995, the BLM added a
20 provision to the regulations that stated that such rights would be sought solely in the name of the
21 United States under State water law. This was added because BLM wanted to: (1) clarify its
22 policy, and (2) make its policy consistent with that of the Forest Service. BLM explained in the
23 1995 rulemaking that seeking water rights under State law had been its policy since 1981, and it
24 would not be creating any new Federal reserved water rights or affecting valid existing rights.
25 The present regulation is unnecessary for the following reasons:

26 · Except for Federal reserved water rights for Public Water Reserves, livestock watering rights
27 are not Federal rights. They are State-based rights that require the United States, like any other
28 entity, to comply with State substantive and procedural requirements to obtain them.

29 · It is somewhat ambiguous because it states that grazing water rights will be sought solely by
30 the United States, but while BLM has done this, it has also obtained joint rights with permittee.
31 It has also obtained water rights in other ways. The 1995 rulemaking acknowledged these other
32 ways of obtaining water rights, but the regulation itself appears to limit BLM to obtaining rights
33 in the name of the United States only.

34 · It is not needed because BLM can obtain state-based water rights under State law without it.
35 Depending on the requirements of the State where the land is located, BLM can obtain water
36 rights for livestock watering purposes in a number of ways. **(Bill Brookes needs to review this**
37 **in light of the Nevada legislation)**

38 **1.2.2.14 Satisfactory Performance**

1 BLM must determine whether applicants who apply for a new grazing permit or lease have a
2 satisfactory record of past performance. BLM may find that operators have an unsatisfactory
3 record by, among other ways, recognizing that an operator has had a Federal grazing permit or
4 lease or a State grazing permit or lease cancelled for a violation. The cancellation must have
5 taken place in the 36 months immediately before the operator applies for a Federal permit or
6 lease for land within the same grazing allotment where the cancellation applied. Determinations
7 of unsatisfactory performance in cases such as these are complicated by the wording of the
8 current regulations. This is because the wording is too broad and this has resulted in BLM
9 offices coming to different conclusions as to which actions ought to be considered violations,
10 especially that some offices have identified certain actions not related to grazing activities to be
11 violations.

12 **1.2.2.15 Temporary Changes Within Terms and Conditions of Permit or Lease**

13 The current regulations state that changes within the terms and conditions of the permit or lease
14 may be granted by the BLM and that applications for such use filed after billing notices are
15 subject to a service charge.

16 **1.2.2.16 Service Charges**

17 Regulations allow BLM to assess a service fee for processing each crossing permit, transfer of
18 grazing preference, and cancellation and replacement of a grazing fee billing. Under FLPMA,
19 these service charges should reflect BLM's processing costs and should be adjusted periodically
20 as costs change. A \$10 service fee currently is assessed for each of the above actions. This fee
21 does not cover BLM's costs to provide these services.

22 **1.2.2.17 Prohibited Acts**

23 Regulatory changes from 1978 through the 1995 Rangeland Reform regulatory amendments
24 established several prohibited acts that are part of the current regulations. Currently, there are
25 certain acts, such as a violation of the clean water laws related to one's grazing operation, for
26 which a grazing permittee can be cited both by BLM under the grazing regulations and the
27 agency having primary jurisdiction over federal water pollution laws. This system of a layering
28 of violations is considered by many grazing operators to be unfair and not helpful to enhanced
29 enforcement of clean water laws. A BLM citation under these circumstances also carries the
30 possibility that the grazing operator could lose his or her lease. Also, the current regulations
31 provide no way to penalize permittees who knowingly spread invasive species of vegetation on
32 public land. The BLM believes that its current discretionary application of this prohibited acts
33 provision has not significantly improved the overall administration of the rangelands or the
34 grazing program, Instead it has confused matters and increased potential for inconsistent
35 application of the prohibited acts and the grazing regulation penalty provisions.

36 **1.2.2.18 Grazing Use Pending Resolution of Appeals**

1 Under current regulations, all BLM grazing decisions are implemented after the appeal period
2 expires unless the Office of Hearings and Appeal or the Interior Board of Land Appeals stays the
3 decision in response to a petition for a stay. The current regulations allow a petition for a stay to
4 be filed by a permittee, lessee, or interested member of the public.

5 **1.2.2.19 Biological Assessments (Blake Decision)**

6 BLM must provide the permittee, the pertinent State, and the interested public an opportunity to
7 review and comment on reports that are used to support decisions to make changes in grazing
8 use. Such reports include biological assessments. Current regulations do not specifically
9 address this review of biological assessments, which are prepared to comply with the
10 Endangered Species Act, and this has resulted in uneven application of the review opportunity
11 by BLM field offices. Additionally, according to the Blake Decision of the Interior Board of
12 Land Appeals, biological assessments are considered proposed decisions subject to protest and
13 appeal. This decision adds a significant workload to BLM staff to process protests and appeals,
14 and causes further delay in processing changes in grazing use.

15 **1.3 Scoping**

16 **1.3.1 Summary of Scoping**

17 BLM published an Advance Notice of Proposed Rulemaking (ANPR) and Notice of Intent
18 (NOI) to Prepare an EIS in the Federal Register on March 3, 2003. These notices requested
19 public comment to assist BLM in the scoping process for both these documents. The comment
20 period for both ended on May 2, 2003.

21
22 In the Notice of Intent to prepare the EIS, BLM stated that it was considering changes that would
23 encourage partnerships in public land stewardship and establish new options for BLM and
24 rangeland users in the administration and management of public land. It asked for comments
25 on topics under consideration that were related to both the EIS and proposed rule. Copies of
26 these two publications can be found in the appendix of this EIS.

27
28 BLM held four public meetings in March 2003 in Albuquerque, New Mexico; Reno, Nevada;
29 Billings, Montana; and Washington, D.C., to take comments and suggestions for the proposed
30 rule and the draft EIS.

31
32

	Approximate Attendance	Number of Speakers from the Public
Reno, Nevada	200	25
Billings, Montana	60	23
Albuquerque, New Mexico	50	27
Washington, D.C.	25	5

33
34

1 In addition to the above topics, public scoping identified the following areas of concern:
2

- 3 • Determination of what constitutes **satisfactory past grazing user performance** to obtain
4 a new grazing permit or lease
- 5 • Who has **standing to appeal** a BLM grazing decision, **and whether BLM decisions**
6 **adverse to a grazing applicant should automatically be suspended** during the time the
7 appeal is being considered by the Department of the Interior.
- 8 • How long **temporary nonuse** should be granted
- 9 • Whether a **grazing permit or lease should be protected from expiring** before it can be
10 renewed.
- 11 • How long BLM should have to make changes **when standards and guidelines for**
12 **rangeland health are not being met**
- 13 • How much certain **service charges** should be

14 **1.3.2 Results of Scoping**

15 We received [8,139 comments as of June 17] on the ANPR and the NOI. Most of the comments
16 were form letters opposing any changes to legislation passed in 1995. However, we received
17 about 35 letters containing substantive comments from special interest organizations and State
18 and Federal agencies.

19
20 In many cases, the comments submitted by interest groups echoed comments of other like-
21 minded organizations. Their supporters also provided duplicate or similar comments.

22
23 Groups and individuals who opposed most or all of BLM's proposals criticized BLM for
24 initiating the proposed rulemaking "only in response to the desires of public lands ranching
25 permittees who feel aggrieved by the Range Reform regulations BLM (adopted) in 1995."

26
27 (Molly's comments: A full text of comment letter and transcripts of the public meetings should
28 also be available to the public...the most efficient method being on the internet. The complete
29 summary of comments should also be available, probably as a separate document rather than as
30 an appendix to the EIS.)(Once we decide how all this will be handled, we can explain that here.

31 **1.4 Rulemaking and EIS Process and Schedule**

32 BLM usually drafts a proposed rule to respond to new legislation, a policy decision, or a court
33 order. Federal rulemakings are governed by the Administrative Procedures Act which, among
34 other things, gives the public, with some exceptions, the right to participate in the rulemaking
35 process by commenting on proposed rules. When the BLM publishes a proposed rulemaking in
36 the Federal Register, it sets a period of time (30 to 120 days) for the receipt of comments from
37 the public. This period may be extended for good reason. All comments are considered by
38 BLM and changes can be made to the final rulemaking based on comments received. The final
39 rulemaking is also published in the Federal Register with the effective date of usually 30 days
40 from the publication date. The rulemaking is then incorporated into the Code of Federal
41 Regulations in the next yearly edition.

1

2 When a proposed action, including a proposed policy or legislative recommendation, is
3 projected to have a significant effect on the quality of the human environment, an environmental
4 impact statement must be prepared. An EIS is intended to provide decision makers and the
5 public with a complete and objective evaluation of significant environmental effects, both
6 beneficial and adverse, resulting from a proposed action and all reasonable alternatives. An EIS
7 is a major vehicle for fulfilling the substantive environmental goals set forth in NEPA.

8

9 The EIS process includes:

10

- 11 • Providing for a public scoping period
- 12 • Conducting the analysis and preparing the draft EIS
- 13 • Issuing the draft EIS
- 14 • analyzing the comments and preparing the final EIS
- 15 • Issuing the final EIS
- 16 • Reaching and recording the decision.

17

18 The purpose of scoping, among other things, involves the public and affected agencies early in
19 the process and helps identify significant issues to be analyzed as well as alternatives and
20 potential effects to be addressed.

21 *(Insert graphic on EIS and Rulemaking process)*

22 **1.5 Relation to Other Policies, Programs, and Plans**

23 The primary related element to this EIS is the Sustaining Working Landscapes (SWL) policy
24 effort. This initiative recognizes that ranching has played a key role in the history and
25 development of the American West, and it remains important to the livelihood of many families,
26 to the social and cultural identity of the West, and to the economic vitality of Western rural
27 communities. Rangeland also provides open space and wildlife habitat in the rapidly growing
28 West.

29 The SWL consists of two components: one dealing with changes that would require revision of
30 current grazing regulations, the other looking at new approaches that could be implemented
31 within existing rules. This document is a part of the former.

1 As for the nonregulatory policy component, on March 25, 2003, the BLM announced the
2 initiation of a public process to gather input on actions the BLM could take to achieve the goals
3 of the Sustaining Working Landscapes initiative. The idea was to begin identifying means for
4 improving the long-term health and productivity of the public lands through innovative
5 partnerships with permittees and lessees within the current regulatory framework.

6 Twenty three public workshops were held in the west and one was held in Washington, D.C. At
7 those workshops we introduced several concepts for consideration, including: Conservation
8 Partnerships, Reserve Common Allotments, Voluntary Allotment Restructuring, Conservation
9 Easements, and Endangered Species Mitigation. The public raised many valuable comments
10 and legitimate concerns. As a result of the workshops as well as a national meeting of BLM
11 Resource Advisory Council representatives held in Washington, D.C. in April, it was decided
12 that we would benefit from more involvement and advice from our established advisory councils
13 throughout the west before moving forward with this initiative.

14 Furthermore, we decided to not try to develop policy guidance – even in draft form – at this
15 time. Rather BLM has reviewed the comments from the workshops and attempted to provide
16 responses to many of the questions raised on some of the policy concepts we had identified.

17 *(This will have to be updated before going to press. Not sure where we stand at the moment.)*

18 The major changes, which can be made without regulatory revisions, are the following: _

19 **(1) Forming Conservation Partnerships with Grazing Permittees and Lessees.**

20 Authorized under FLPMA, Conservation Partnerships allow permittees and lessees, to
21 voluntarily enter into contracts or agreements with BLM to achieve upland recovery, riparian–
22 wetland restoration, enhanced or improved water quality and quantity, improved wildlife or
23 fisheries habitat, and listed species recovery. In return, conservation partnerships would allow
24 permittees and lessees to seek grants to pay for labor and materials invested in conservation
25 practices or provide increased management flexibility within agreed upon parameters.

26 **(2) Voluntary Allotment Restructuring by Permittees to Improve Range Conditions.**

27 Voluntary allotment restructuring involves merging two or more allotments in which one or
28 more of the permittees or lessees agrees to temporarily not graze their livestock. The other
29 permittees or lessees would then be allowed to graze their herds over the entire area, resulting
30 in lighter grazing use. The goal is to improve range conditions while supporting permittee
31 economic viability.

32 **(3) Establishment of NonRegulatory Policy for Reserve Common Allotments.**

33 Reserve Common Allotments would be managed as reserve forage areas to restore and recover
34 rangeland. BLM would allow RCAs to be used by permittees and lessees who are engaged in
35 rangeland restoration and recovery activities that require them to rest their customary allotments.

1 By temporarily shifting their livestock to RCAs, permittees and lessees would be able to rest
2 their allotments while still meeting their economic needs.

3 **(4) Promoting Conservation Easements to Protect Grazing Lands from Development.**

4 Conservation easements are land-use restrictions that landowners voluntarily place on property
5 to advance conservation goals. In many areas of the west, land ownership patterns are
6 intermingled among State, private, Federal and other entities. In some areas, small parcels of
7 public land managed by the BLM are completely surrounded by larger parcels of private land,
8 which leads to an unmanageable situation. Often these small parcels of public land are identified
9 in agency land use plans for disposal. Under this concept, prior to disposal, BLM would place a
10 conservation easement on the small parcel. In exchange for the value of the small parcel with
11 the conservation easement, the owner of the adjacent private land would place a similar
12 conservation easement on their surrounding private land. The results would be larger blocks of
13 land that would preserve the conservation values in accordance with the covenants of the
14 conservation easement.

15 **(5) Encouraging Creative Ways to Achieve Endangered Species Act Objectives.**

16 The above elements all provide options to mitigate affects to listed species resulting from
17 livestock grazing. For example, Conservation Partnerships could be used to restore rangelands,
18 which benefit listed species. RCAs are intended to be grazed intermittently, but not to a point
19 inconsistent to their long-term conservation objective. Restructured allotments incorporate
20 forage reserves for grazing. Conservation easements automatically include mitigating factors for
21 some listed species. Mitigation banks could also be an option under these concepts. They would
22 permanently preserve or create listed species habitat, and then use that habitat as a source of
23 mitigation credits to be sold to other land users to mitigate land development effects on listed
24 species as required by the Endangered Species Act.

25 The needs that these policies are intended to rectify are the following:

26 (1) The BLM needs a simple way for permittees to enter into agreements to restore rangelands
27 without halting grazing activity, (2) there should be more ways for those outside the ranching
28 industry to partner with ranchers to meet range recovery and restoration goals on land units
29 larger than a single allotment, more incentives are needed for livestock operators to participate
30 in forage recovery efforts, (3) because it is difficult for operations to be economically viable
31 while also pursuing rangeland recovery and restoration, (4) building on open space threatens the
32 ability of the BLM to properly manage public lands and undermines sustainable livestock
33 operations, and (5) there should be more ways to resolve conflicts that arise when listed species
34 under the Endangered Species Act conflict with livestock use, while both satisfying
35 environmental objectives of conservation groups and economic needs of livestock operators.

36 Other efforts related to this proposed EIS are:

37 **Healthy Forest Initiative**

1 The Healthy Forests Initiative is a regulatory and legislative initiative that aims to reduce
2 unnecessary regulatory obstacles and allow for more effective and timely forest health actions.
3 It will speed forest and woodland thinning as well as rangeland treatments. The Initiative
4 will also shorten the time for appeals of forest health decisions, expedite Endangered Species
5 Act consultations, and streamline environmental assessments. These measures will help protect
6 grazing lands from devastating wildfires caused by excessive forest fuel buildup.

7 The objective is to reduce unnecessary red tape and the endless delays that have often brought
8 fuels treatment projects to a standstill.

9 The new procedures preserve the principle of partnerships with local communities and
10 interests. Most fuels treatment projects carried out under the Healthy Forests Initiative will use a
11 collaborative process that includes all stakeholders and partners at the local level.

12 **National Fire Plan**

13 The Department of the Interior and the Forest Service are collaborating on the implementation
14 of the National Fire Plan. The agencies have installed tracking and reporting mechanisms to
15 provide accountability as accomplishments are made in firefighting, rehabilitation and
16 restoration, hazardous fuels reduction, community assistance and research.

17 The National Fire Plan is a long-term investment that will help protect communities, natural
18 resources, and the lives of firefighters and the public. It is a long-term commitment based on
19 cooperation and communication among federal agencies, States, local governments, tribes and
20 interested publics.

21 Like the Healthy Forests Initiative, an integral element of the National Fire Plan is to reduce
22 excess forest fuels, which contribute to catastrophic fires and can harm adjoining grazing land.

23 **Vegetation EIS**

24 The BLM is preparing a national programmatic EIS to update and replace four existing EISs for
25 13 western States, and to analyze vegetative treatments in four other western States and Alaska.
26 Under the proposed action, up to six million acres would be treated annually using such methods
27 as prescribed fire, herbicides and biological control agents, and mechanical and manual
28 extraction.

29 As part of the EIS, the BLM will also evaluate the potential risks to humans, fish, and wildlife
30 from several new herbicides that were not evaluated in earlier EISs, but that it would like to
31 use. The BLM will also develop protocols as part of the EIS that will allow it to evaluate risks
32 from chemicals that may be developed in the future.

33 The vegetation EIS will analyze restoration activities prescribed fire, understory thinning,
34 forest health treatments, or other activities related to restoring fire-adapted ecosystems.

1 1.6 Format of this Environmental Impact Statement

2 This EIS is set out in five chapters, plus appendixes, as follows:

3 · **Chapter I, Purpose and Need** outlines, in basic fashion, the purpose and need for the EIS, the
4 background of the grazing program and relevant recent events, a description of public scoping,
5 a discussion of primary issues, a description of the proposed action and the alternative, effects
6 that were analyzed, issues that were not addressed, and a description of the EIS process.

7 · **Chapter II, Description of the Proposed Action and Alternatives**, describes the proposed
8 action and the alternatives.

9 · **Chapter III, Affected Environment**, describes the environment that is affected by the issues
10 and actions discussed in this EIS. The environment is described both generally and by specific
11 elements, such as air quality and economics.

12 · **Chapter IV, Environmental Consequences**, describes the effect of the proposed action and
13 the alternative on the affected environment cumulatively and by individual element. It also
14 discusses assumptions and analysis guidelines that were used to make these findings.

15 · **Chapter V, Consultation and Coordination**, describes consultation that was done during the
16 preparation of the EIS and public participation, and lists the preparers of the document.

17 · **The Appendixes** contain detailed methodologies used and other further documentation
18 regarding EIS issues.

19 20 CHAPTER 2. DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

21
22 Chapter 2 contains detailed descriptions of the grazing regulation alternatives. These
23 alternatives provide an array of options that respond to both the purpose of and need for
24 regulatory changes and the issues and concerns raised in scoping as discussed in Chapter 1. The
25 alternatives include: Alternative 1—No Change in Regulations, which is also known as the “No
26 Action” Alternative (Section 2.1); Alternative 2—the Proposed Action, which presents the
27 BLM’s proposed amendments to the regulations (Section 2.2); and Alternative 3—the Modified
28 Action Alternative, which is similar to the proposed action with some modifications (Section
29 2.3). The regulatory alternatives address 19 key elements as follows:

- 30
- 31 ▪ Social, Economic and Cultural Considerations in the Decision-Making Process
 - 32 ▪ Implementation of Changes in Grazing Use
 - 33 ▪ Range Improvement Ownership
 - 34 ▪ Cooperation with State, Local, and County Established Grazing Boards
 - 35 ▪ Review and Comment on Biological Assessments
 - 36 ▪ Temporary Nonuse
 - 37 ▪ Introduction or Spread of Noxious Plants

- 1 ▪ Basis for Rangeland Health Determinations
- 2 ▪ Timeframe for Taking Action to Meet Rangeland Health Standards
- 3 ▪ Conservation Use
- 4 ▪ Definition of Grazing Preference, Permitted Use, and Active Use
- 5 ▪ Definition and Role of the Interested Public
- 6 ▪ Water Rights
- 7 ▪ Satisfactory Performance of Permittee or Lessee
- 8 ▪ Changes in Grazing Use Within Terms and Conditions of Permit or Lease
- 9 ▪ Service Charges
- 10 ▪ Prohibited Acts
- 11 ▪ Grazing Use Pending Resolution of Appeals When Decision Has Been Stayed
- 12 ▪ Treatment of Biological Assessments in the Grazing Decision-Making Process

13
 14 Alternatives considered but not analyzed in detail are presented in Section 2.4. These
 15 alternatives include some proposals that were initially considered by the BLM as well as
 16 recommendations from the public. The rationale for not considering these alternatives is
 17 discussed.

18
 19 A comparison of all alternatives by key elements is presented in Section 2.5, Table 2.5, of this
 20 Chapter. In Section 2.6, Table 2.6, a summary comparison of effects across the alternatives is
 21 presented.

22
 23 See Appendix A for a highlighted strike-and-replace version of the proposed regulations and
 24 Appendix B for a side-by-side comparison of the text of the existing and proposed regulations.

25
 26 In addition to the key elements identified above, there are some additional text clarifications and
 27 minor modifications. These latter changes are shown in the strike-and-replace and side-by side-
 28 versions of the proposed rule.

29
 30 **2.1 ALTERNATIVE 1: NO CHANGE IN REGULATIONS (NO ACTION)**

31
 32 The regulations that direct BLM in administering their rangeland management program are
 33 found in 43 Code of Federal Regulations (CFR) 4100. The objectives of these regulations are to:

- 34 1. Promote healthy sustainable rangeland ecosystems;
- 35 2. Accelerate restoration and improvement of public rangelands to properly functioning
 36 conditions;
- 37 3. Promote the orderly use, improvement, and development of the public lands;
- 38 4. Establish efficient and effective administration of grazing of public rangelands; and
- 39 5. Provide for the sustainability of the western livestock industry and communities that are
 40 dependent on productive, healthy public rangelands.
- 41
- 42

43 Under the “No Action” alternative there would be no change in the regulations and BLM would
 44 continue to operate in accordance with existing regulations and policies. The following are the
 45 key elements of the present regulations that are addressed in this Proposed Rule–Draft EIS.

1
2 **2.1.1 Social, Economic, and Cultural Considerations in the Decision-Making Process**
3

4 The existing grazing regulations do not contain language specifically addressing the need for
5 compliance with the National Environmental Policy Act (NEPA) of 1969 (Public Law 91-90; 42
6 U.S.C. 4321 et seq.) nor do they explicitly require the BLM to document consideration of social,
7 economic or cultural issues in the making decisions on changes in grazing use.

8
9 However, all grazing decisions are subject to compliance with NEPA. NEPA compliance
10 requires the BLM to use a systematic interdisciplinary approach which ensures the integrated use
11 of natural and social sciences and the design arts in planning and decision-making affecting the
12 human environment. Environmental analyses prepared under NEPA are required to address the
13 effects of proposed actions and alternatives considered. Effects are defined under NEPA to
14 include ecological, aesthetic, historic, cultural, economic, social, or health effects, whether
15 direct, indirect, or cumulative (40 CFR 1508.8).
16

17 **2.1.2 Implementation of Changes in Grazing Use**
18

19 As indicated in the present grazing regulations, at §4110.3-3, after all consultation requirements
20 are fulfilled, reductions in grazing use must be implemented through a documented agreement or
21 by decision of the authorized officer. Such decisions must be issued as proposed decisions
22 subject to the provisions of §4160.1, except where immediate protection of resources or
23 imminent likelihood of significant resource damage necessitates full force and effect grazing use
24 closures or modifications. There are no further regulatory requirements on how decisions to
25 reduce use are implemented.
26

27 **2.1.3 Range Improvement Ownership**
28

29 Range improvement projects are categorized as either “structural” or “nonstructural”. Structural
30 range improvements may be either “permanent” or “temporary”. Examples of permanent
31 structural range improvements include fences, wells, pipelines, guzzlers, and gabions. Examples
32 of temporary structural range improvements include dip tanks, loading chutes, or portable water
33 troughs. Nonstructural range improvements include vegetation treatments (spraying, vegetative
34 seeding, chaining, and others). Either a “Cooperative Range Improvement Agreement” or a
35 “Range Improvement Permit” is used to authorize construction of range improvement projects
36 on lands administered by the BLM (§4120.3-1).
37

38 “Cooperative Range Improvement Agreements” are used when the BLM and the livestock
39 permittee or lessee cooperatively cost share the labor, equipment, or materials to build the
40 project (§4120.3-2(a)). In such instances, the “Cooperative Range Improvement Agreement”
41 outlines the costs contributed by each party and responsibilities for building and maintaining the
42 improvement. Under the present regulations, title is held in the name of the United States to all
43 permanent range improvements such as fences, wells, and pipelines authorized under
44 “Cooperative Range Improvement Agreements” after August 21, 1995 (§4120.3-2(b)). All new

1 permanent water developments such as spring developments, wells, reservoirs, stock tanks, and
2 pipelines are required to be authorized under a “Cooperative Range Improvement Agreement.”
3

4 A “Range Improvement Permit” is used to authorize removable range improvements where all
5 costs of the project are borne by the livestock permittee or lessee (§4120.3-3). Under the present
6 regulations, permittees or lessees may hold title to temporary (removable) structural range
7 improvements such as corrals, creep feeders, portable water troughs placed on public lands
8 under permit (§4120.3-3(c)).
9

10 Permittees or lessees hold a financial interest in proportion to their contribution for permanent
11 structural and nonstructural range improvements even though they do not hold title. If a grazing
12 permit or lease is cancelled in order to devote the public lands to another public purpose, the
13 permittee or lessee shall receive reasonable compensation from the United States for the adjusted
14 value of their interest in the authorized improvement. Where a range improvement is authorized
15 by a range improvement permit, the livestock operator may elect to salvage material owned by
16 them and perform rehabilitation measures necessitated by that removal rather than be
17 compensated for the adjusted value (§4120.3-6).
18

19 The present regulations state, at §4120.3-1(e), that a “Cooperative Range Improvement
20 Agreement” or “Range Improvement Permit” does not convey to the permittee or cooperator any
21 right, title, or interest in any lands or resources held by the United States. Furthermore, range
22 improvement work performed by a cooperator or permittee on the public lands does not confer
23 the exclusive right to use the improvement or the land affected by the range improvement work
24 (§4120.3-2(d)).
25

26 **2.1.4 Cooperation with State, Local, and County Established Grazing Boards** 27

28 The present regulations include a provision (§4120.5-2) stating that, in managing the grazing
29 program, the BLM will cooperate with involved agencies and governmental entities. Such
30 cooperation is limited to those agencies and governmental units that have programs and
31 responsibilities involving grazing on public lands. Such cooperation must be consistent with
32 applicable laws of the United States. Cooperation is required with State, county, and Federal
33 agencies in the administration of laws and regulations relating to livestock, livestock diseases,
34 sanitation, and noxious weeds. Specific governmental agencies with which BLM must
35 cooperate are cited in the regulations, including: State cattle and sheep sanitary or brand boards
36 and County or other local weed control districts.
37

38 **2.1.5 Review and Comment on Biological Assessments** 39

40 Although the present regulations do not specifically mention biological assessments, they do
41 require (in §4130.3-3) the BLM to provide affected permittees or lessees, States having lands or
42 responsibility for managing resources within the affected area, and the interested public an
43 opportunity to review, comment and give input during the preparation of reports that evaluate
44 monitoring and other data that are used as a basis for making decisions to increase or decrease
45 grazing use or to change the terms and conditions of a permit or lease. This would include

1 biological assessments. Thus under present regulations, BLM should be providing permittees,
2 lessees, States, and the interested public with an opportunity to comment on and provide input to
3 the preparation of biological assessments.
4

5 **2.1.6 Temporary Nonuse**

6
7 Under existing regulations at §4130.2(g), grazing permittees or lessees may submit an annual
8 application for temporary nonuse for reasons including but not limited to financial conditions or
9 annual fluctuations of livestock. Temporary nonuse is defined as the authorized withholding, on
10 an annual basis, of all or a portion of permitted livestock use at the request of a permittee or
11 lessee. Such use may be approved by BLM on an annual basis for no more than 3 consecutive
12 years. Additional forage temporarily available as a result of authorized nonuse may be
13 apportioned annually on a nonrenewable basis to qualified applicants (§4130.2(h); §4130.6-2).
14

15 **2.1.7 Introduction or Spread of Noxious Plants**

16
17 There are no provisions in the grazing regulations or elsewhere that specifically prohibit the
18 introduction or spread of noxious plants. Although the BLM may include a term or condition in
19 an authorization, for example, requiring the use of certified weed free hay (e.g., in a special
20 recreation use permit for an equestrian event), there are no regulatory provisions for controlling
21 and enforcing the introduction and spread of noxious plants.
22

23 **2.1.8 Basis for Rangeland Health Determinations**

24
25 Standards and guidelines for grazing management are developed by BLM State Directors in
26 consultation with affected BLM resource advisory councils (§4180.2(b)). The standards and
27 guidelines developed by State Directors must provide for conformance with the fundamentals of
28 rangeland health set forth in 4180.1 of the grazing regulations. The fundamentals for rangeland
29 health, as defined by BLM, include (1) watersheds that are in or are making significant progress
30 toward proper functioning physical condition, (2) ecological processes that support or are
31 making significant progress toward attaining healthy biotic populations and communities, (3)
32 water quality that complies with State standards and achieves or is making significant progress
33 toward achieving BLM management objectives and (4) habitats for Federal threatened and
34 endangered species, Federal Proposed, Category 1 and 2 Federal candidate and other special
35 status species that are maintained or restored or are making significant progress towards being
36 maintained or restored (43 CFR 4180.1).
37

38 The BLM authorized officer is required to take appropriate action when a “determination” had
39 been made that grazing management practices or levels of grazing use on public lands are
40 significant factors in failing to achieve the standards and conform with the guidelines for grazing
41 management (§4180.2(c)). There are no requirements under the present regulations on how those
42 determinations are made.
43
44

45 **2.1.9 Timeframe for Taking Action to Meet Rangeland Health Standards**

1
2 If existing grazing management practices or levels of use are determined by the authorized
3 officer to be significant causal factors in failing to achieve standards and conform with guideline
4 for grazing administration, then the BLM must take appropriate action soon as possible but no
5 later than the start of the next grazing year to initiate movement toward meeting the
6 fundamentals (§4180.1(a) and §4180.2(c)).
7

8 This means that once the “determination” has been made, the BLM authorized officer must
9 consult, cooperate and coordinate with the permittee or lessee, the State and the interested
10 public on possible actions to achieve standards, must complete any NEPA analysis requirements
11 and documentation, must comply with any other applicable laws and requirements (e.g., Section
12 7 consultation under the Endangered Species Act if the proposed action “may affect” a listed
13 species), must issue a proposed and final decision subject to protest and appeal, and must
14 implement the “appropriate action” —no later than the start of the next grazing year.
15

16 **2.1.10 Conservation Use**

17
18 The existing regulations define conservation use as an activity, excluding livestock grazing, on
19 all or a portion of an allotment for purposes of (1) protecting the land and its resources from
20 destruction or unnecessary injury; (2) improving rangeland conditions; or (3) enhancing resource
21 values, uses, or functions (§4100.0-5). Provisions are included in the existing regulations for
22 authorizing conservation use for as long as 10 years under certain conditions.
23

24 The provisions regarding conservation use were included in the 1995 grazing regulation
25 amendments. These rules were challenged and in 1998 the 10th Circuit Court determined, and
26 the Supreme Court upheld in 2000, that the Secretary did not have the authority to issue
27 conservation use permits. Thus, though there are provisions in the present regulations, the BLM
28 does not issue conservation use permits and no such permits are in place.
29

30 **2.1.11 Definition of Grazing Preference, Permitted Use and Active Use**

31
32 In the present regulations, grazing preference or preference is defined as a superior or priority
33 position against others for the purpose of receiving a grazing permit or lease. This priority is
34 attached to base property owned or controlled by the permittee or lessee (§4100.0-5).
35

36 Permitted use is defined as the forage allocated by, or under the guidance of, an applicable land
37 use plan for livestock grazing in an allotment under a permit or lease and is expressed in AUMS
38 (§4100.0-5). Under present regulations, the term permitted use encompasses active use and
39 suspended use.
40

41 Active use means present authorized use, including livestock grazing and conservation use.
42 Because conservation use was determined to be illegal by the 10th Circuit Court (finding was
43 upheld by the Supreme Court), active use encompasses only authorized livestock grazing use.
44 Active use may constitute a portion, or all, of permitted use. Active use doesn't include
45 temporary nonuse or suspended use within all or portion of an allotment (§4100.0-5).

1
2 **2.1.12 Definition and Role of the Interested Public**
3

4 Under the present regulations, interested public is defined as an individual, groups or
5 organization that has submitted a written request to the authorized officer to be provided an
6 opportunity to be involved in the decision-making process for the management of livestock
7 grazing on specific allotments or has submitted written comments to the authorized officer
8 regarding the management of livestock grazing on a specific allotment (§4100.0-5).
9

10 Generally, under present regulations, whenever the BLM is required to consult, cooperate and
11 coordinate with or seek review and comment from affected permittees or lessees or the State
12 having lands or responsible for managing resources within the area, they are also required to do
13 so with the interested public.
14

15 The following summarizes those instances where the BLM is required, under the present
16 regulations, to consult, cooperate and coordinate with the interested public:

- 17 • Designating and adjusting allotment boundaries (§4110.2-4).
- 18 • Apportioning additional forage (§4110.3-1(c)).
- 19 • Reducing permitted use (§4110.3-3(a)).
- 20 • Emergency closures or modifications (§4110.3-3(b)).
- 21 • Development or modification of allotment management plan (§4120.2(a)).
- 22 • Planning of the range developments or improvement programs—Consult only (§4120.3-
23 8(c)).
- 24 • Issuing or renewing grazing permit or lease (§4130.2(b)).
- 25 • Modifying a permit or lease (§4130.3-3)
- 26 • Issuing temporary nonrenewable grazing permits (§4130.6-2).
27

28 Under the present regulations, the BLM is also required to provide the interested public an
29 opportunity to review and comment and give input during the preparation of reports that evaluate
30 monitoring and other data used as a basis for making decisions to increase or decrease grazing
31 use or to change terms and conditions of a permit or lease (§4130.3-3)
32

33 In addition, under the present regulations, the BLM is required to send copies of proposed and
34 final decisions to the interested public (§4160.1(a) and §4160.3(b)).
35

36 **2.1.13 Water Rights**
37

38 Under the present regulations (§4120.3-9), any right acquired on or after August 21, 1995 to use
39 water on public land for the purpose of livestock watering on public land shall be acquired,
40 perfected, maintained and administered under the substantive and procedural laws of the State
41 within which such land is located. To the extent allowed by the law of the State within which
42 the land is located, any such water right shall be acquired, perfected, maintained, and
43 administered in the name of the United States.
44

1 The BLM recognizes the key role of the States in grazing-related water rights issues. Generally,
2 BLM applies for water rights under State law and protests private applications for water rights
3 on lands administered by BLM. Where a water-related range improvement project is authorized
4 under a Cooperative Range Improvement Agreement, BLM files as co-owner of the water rights,
5 where allowed by State law. The BLM would apply for either sole or joint ownership of the
6 water right for water-related range improvement projects authorized and constructed under a
7 Range Improvement Permit.

8 9 **2.1.13 Satisfactory Performance of Permittee or Lessee**

10 Present regulations identify requirements for satisfactory performance which must be met by an
11 applicants for renewal of existing or issuance of new permits and leases (§4110.1(b)).

12
13
14 For a renewal, an applicant must be in substantial compliance with the terms and conditions of
15 the existing permit or lease and with the rules and regulations applicable to the permit or lease in
16 order to be deemed to have a satisfactory record of performance. The authorized officer may
17 take into account circumstances beyond the control of the applicant seeking renewal of a permit
18 or lease in making determinations of satisfactory performance (§4110.1(b)(1)).

19
20 For a new permit or lease, an applicant shall be deemed not to have a record of satisfactory
21 performance when: they have had any Federal grazing permit or leased cancelled for violations
22 of the permit or lease within 36 months of their application; they have had any State grazing
23 permit or lease, for lands within the grazing allotment for which they are applying, cancelled for
24 violations within 36 months of their application; or they are barred from holding a Federal
25 grazing permit or lease by order of a court (§4110.1(b)(2)).

26 27 **2.1.15 Changes in Grazing Use Within Terms and Conditions of Permit or Lease**

28
29 Under the present regulations, changes in grazing use within the terms and conditions of the
30 permit or lease may be granted by the authorized officer (4130.4). The regulations identify the
31 following applications for changes covered by this section: to activate forage in temporary
32 nonuse or conservation use; to place forage in temporary nonuse or conservation use; to use
33 forage that is temporarily available on designated ephemeral or annual ranges.

34
35 There are no regulatory provisions that define what is meant by “within the terms and conditions
36 of the permit or lease.”

37 38 **2.1.16 Service Charges**

39
40 Regulations allow the BLM to assess a service fee for each crossing permit, transfer of grazing
41 preference, application for solely nonuse and replacement or supplemental billing notice, except
42 for actions initiated by the BLM (§4130.8-3). Pursuant to the Federal Policy Management and
43 Policy Management Act of 1976 (43 U.S.C. 1734[a]), the service charge should reflect the
44 processing costs and will be adjusted periodically as the processing costs change. The existing

1 regulations do not specify service charge. A \$10 service charge is presently assessed for each
2 action described above.

3 4 **2.1.17 Prohibited Acts**

5
6 Violation of any provision of the grazing regulations by a livestock permittee or lessee could
7 lead to one of several civil actions on the part of the BLM. The BLM may (1) withhold issuance
8 of a grazing permit or lease, (2) suspend grazing use authorized under a grazing permit or lease,
9 in whole or in part, or (3) cancel a grazing permit or lease and preference in whole or in part
10 (§4170.1). Some actions could also be subject to the penal provisions under the Taylor Grazing
11 Act or the penal provisions under the Federal Land Policy and Management Act (§4170.2).

12
13 In Subpart 4140, the present regulations have several provisions dealing with the consequences
14 of violations of certain specified prohibited acts. Some of the prohibited acts apply only to
15 grazing permittees or lessees whereas others apply to anyone who violates those acts while on
16 public lands administered by the BLM.

17
18 There are basically three different categories of "prohibited acts" in the present regulations.

19
20 The first category is set forth in §4140.1(a) and basically states that permittees and lessees that
21 perform the prohibited acts listed under this section may be subject to civil penalties (e.g.,
22 cancellation of permit). Six prohibited acts are identified in this section including: violations of
23 terms and conditions of permits or leases; failing to make substantial grazing use as authorized
24 for 2 consecutive years; placing supplemental feed on public lands without authorization; failing
25 to comply with terms, conditions and stipulation of cooperative range improvement agreements
26 or range improvement permits; refusing to install, maintain, modify, or remove range
27 improvements when so directed by the BLM; and unauthorized leasing or subleasing. This first
28 category of prohibited acts is a major vehicle used by BLM to address grazing violations and to
29 take direct action against permittees or lessees who are violating their permit.

30
31 A second category of prohibited acts are set forth in §4140.1[b]. Any person (not just a
32 permittee or lessee) who violates the eleven prohibited acts in this section will be subject to civil
33 and criminal penalties. The prohibited acts identified in this section include: allowing livestock
34 or other privately owned or controlled animals to graze on or be driven across public lands
35 without a permit or lease and an annual grazing authorization or in violation of any
36 authorization; installing, using, maintaining, modifying, or removing range improvements
37 without authorization; cutting, burning, spraying, destroying, or removing vegetation without
38 authorization; damaging or removing U.S. Property without authorization; molesting, harassing,
39 injuring, poisoning, or causing death of livestock authorized to graze on these lands and
40 removing authorized livestock without the owner's consent; littering; interfering with lawful
41 uses or users including obstructing free transit through or over public lands by force, threat,
42 intimidation, signs, barrier or locked gates; knowingly and willfully making a false statement or
43 representation in base property certifications, grazing applications, range improvement permit
44 applications, cooperative range improvement agreements, actual use reports or amendments
45 thereto; failing to pay any fee required by the authorized officer pursuant to the part, or making

1 payment of grazing use of public lands with insufficiently funded checks on a repeated and
2 willful basis; failing to reclaim and repair any lands, property, or resources when required by the
3 authorized officer; and failing to reclose any gate or other entry during periods of livestock use.
4 The prohibited acts listed in this section provide some of the most important tools BLM uses for
5 enforcement actions on BLM public lands.
6

7 The third category of prohibited acts is identified in §4140.1[c]. Under this provision, the BLM
8 may take civil action against a grazing permittee or lessee that violates these prohibited acts if
9 the following four conditions are met: (1) public land is involved or affected; (2) the violation is
10 related to grazing use authorized by a BLM-issued permit or lease; (3) the permittee or lessee
11 has been convicted or otherwise found to be in violation of any of these laws or regulations by a
12 court or by final determination of any agency charged with the administration of these laws; and
13 (4) No further appeals are outstanding. For this category of prohibited acts, unlike the first two
14 categories, the primary responsibility for enforcement rests with another Federal or State agency,
15 not the BLM. Prohibited acts in this category include:

- 16 (1) Violation of Federal or State laws or regulations pertaining to the placement of
17 poisonous bait or hazardous devices designed for the destruction of wildlife; application
18 or storage of pesticides, herbicides, or other hazardous materials; alternation or
19 destruction of natural stream courses without authorization; pollution of water sources;
20 illegal take, destruction, or harassment, or aiding and abetting in the illegal take,
21 destruction or harassment of fish and wildlife resources; and illegal removal or
22 destruction of archeological or cultural resources;
- 23 (2) Violation of the Bald Eagle Protection Act, Endangered Species Act, or the regulations
24 concerning the protection and management of wild horses and burros;
- 25 (3) Violation of State livestock laws or regulations relating to the branding of livestock;
26 breed, grade, and number of bulls; health and sanitation requirements; and violating
27 State, county, or local laws regarding the stray of livestock to areas that have been
28 formally closed to open range grazing.
29

30 **2.1.18 Grazing Use Pending Resolution of Appeals When Decision Has Been Stayed**

31
32 The BLM's administrative remedies regulations are set forth in Subpart 4160 and describe in
33 detail the procedures issuing and protesting proposed decisions (§4160.1 and §4160.2) and
34 issuing appealing final decisions (§4160.3 and §4160.4). Procedures for requesting a stay of a
35 final decision and allowable grazing use if a final decision is stayed is identified in §4160.3.
36

37 When the Office of Hearing and Appeals stays a final decision regarding an application for
38 grazing authorization, an applicant who was granted grazing use in the preceding year may
39 continue a that level of authorized grazing use during the time the decision is stayed. This
40 provision does not apply if the grazing use in the preceding year was authorized on a temporary
41 nonrenewable basis. Where the applicant had no authorized grazing use during the previous
42 year, or the application is for designated ephemeral or annual rangeland grazing use, the grazing
43 use under the stay shall be consistent with the final decision pending a final determination on the
44 appeal (§4160.3(d)).
45

1 When the Office of Hearing and Appeals stays a final decision to change the authorized grazing
2 use, the grazing use authorized to the permittee or lessee during the time that the decision s
3 stayed shall not exceed the permittee’s or lessee’s authorized use in the last year during which
4 any use was authorized (§4160.3(e)).

5
6 **2.1.19 Treatment of Biological Assessments in the Grazing Decision-Making Process**
7 **(Blake Decision)**

8
9 The present regulations do not specifically address biological assessments. However, as
10 previously indicated, the general requirement for BLM to provide an opportunity for review and
11 comment and giving input on reports that evaluate monitoring and other data that are used as a
12 basis for making decisions to increase or decrease grazing use or to change the terms and
13 conditions of a permit or lease also applies to the preparation of biological assessments.

14
15 In practice, the BLM is now required to treat biological assessments as decisions subject to
16 protest and appeal. In the 2002 Blake et al. v. Bureau of Land Management decision (156 IBLS
17 280 (2002)), the IBLA affirmed its ruling in a 1998 opinion that a biological assessment
18 prepared under section 7 of the Endangered Species Act (ESA) for a proposed action to permit
19 grazing must be treated as a BLM decision subject to the protest and appeal. Thus based on this
20 IBLA ruling, biological assessments are defined as decisions under present regulations.

21
22 **2.2 ALTERNATIVE 2: PROPOSED ACTION**

23
24 Alternative 2 is the BLM’s Proposed Action which responds to the purpose and need described
25 in Chapter 1 by changing certain elements of the agency’s present grazing regulations. The
26 proposed changes are described below by element. In addition to the key elements, there are
27 several nonsubstantive or editorial changes that would be made under this alternative.
28 Nonsubstantive or editorial changes are shown in the strike and replace copy of the proposed
29 regulations in Appendix A.

30
31 **2.2.1 Social, Economic, and Cultural Considerations in the Decision-Making Process**

32
33 The Proposed Action would add a provision in §4110.3 that would require BLM to document
34 consideration of any effects of proposed changes in grazing use on relevant social, economic and
35 cultural factors. Such documentation would be incorporated in the appropriate NEPA document.

36
37 **2.2.2 Implementation of Changes in Grazing Use**

38 The proposed regulation would modify how BLM would implement changes in active use. This
39 modification to §4110.3-3 would provide that changes in active use of more than 10% would be
40 phased in over a 5-year period unless the affected permittee or lessee agrees to a shorter period
41 or the changes must be made before 5 years have passed to comply with applicable law. When
42 possible, the 5-year phase in period for changes in active use would provide time for gradual
43 operational adjustments by grazing permittees or lessees to lessen sudden adverse economic
44 effect that may arise from a reduction, or to allow time to build their herd in the event of an

1 increase. This 5-year phase in period is similar to that as specified by the regulations in effect in
2 1994.

3 4 **2.2.3 Range Improvement Ownership**

5 The proposed action would require that title to all new permanent, structural grazing-related
6 range improvements authorized under a Cooperative Range Improvement Agreement and
7 constructed on public lands, or made to the vegetation resource on the public lands, except
8 temporary or removable improvements, would be held jointly between the cooperator(s) and the
9 United States in proportion to their initial contribution to on-the-ground project development and
10 construction costs (§4120.3-2(b)). Such structural improvements include wells, pipelines, or
11 fences constructed on BLM managed public lands. This would return the provision on how title
12 for improvements constructed under Cooperative Range Improvement Agreements was shared
13 before the 1995 change in regulations. Granting title to a structural improvement on public lands
14 does not grant title to the underlying lands themselves. Cooperative Range Improvement
15 Agreements will continue to include provisions that protect the interests of the United States in
16 its lands and resources. The ownership of existing range improvements would not be affected.

17
18 Permittees would continue to own temporary structures such as dip tanks, loading chutes, or
19 portable water troughs placed on public lands under a Range Improvement Permit.

20 21 **2.2.3 Cooperation with State, Local, County Established Grazing Boards**

22 BLM is proposing to amend §4120.5-2 by adding State, local, and county-established grazing
23 boards to those groups we would routinely cooperate with in administering laws and regulations
24 relating to livestock, livestock diseases, sanitation, and noxious weed eradication and control. In
25 most States there are State, county, or locally established grazing advisory boards whose
26 function is to provide guidance on range improvements on public lands.

27 28 **2.2.5 Review and Comment on Biological Assessments**

29 Under the proposed regulations at §4130.3-3, specific language is added stating that when a
30 Biological Assessment, or other report prepared under the Endangered Species Act (ESA) is
31 used to support decisions that modify grazing use, BLM must provide an opportunity to the
32 affected permittee or lessee, the State, and the interested public to review and comment on the
33 biological assessment while it is being prepared. Biological assessments are part of the informal
34 consultation process that federal agencies undertake with the Fish and Wildlife Service to help
35 determine if an action they propose, such as modifying a grazing permit or lease, is “likely to
36 adversely affect” a listed or proposed species under the ESA. The informal consultation process
37 provides the best opportunity for developing a proposed action that has no effect or “is not likely
38 to adversely affect” a listed or proposed species.

39 40 **2.2.6 Temporary Nonuse**

1 BLM proposes to move provisions addressing approval of “temporary nonuse” from §4130.2 to
2 §4130.4 and amend them to allow BLM to have the discretion to approve applications to
3 temporarily not use all or part the grazing use authorized by a permit or lease on a year-to-year
4 basis when the nonuse is warranted by rangeland conditions or the personal or business needs of
5 the permittee or lessee. Events such as drought, fire or less than average forage growth
6 typically result in “rangeland conditions” that will prompt the need for temporary nonuse of all
7 or part of the grazing use allowed by the permit or lease. When the BLM and operator agree
8 that rangeland conditions are such that less grazing use would be appropriate, BLM encourages
9 operators, if they have not done so already, to apply for nonuse for “conservation and protection
10 of rangeland resources.” This is the simplest way to temporarily reduce use to respond to
11 rangeland condition needs. In some cases, approval of an application for temporary nonuse
12 precludes the need for BLM to issue a decision to temporarily suspend use under §4110.3-3(b),
13 although BLM retains the discretion to do this. “Personal and business needs” of the grazing
14 operator are actions operators take in the course of managing their business, such as livestock
15 sale, that result in temporary herd size reductions
16
17

18 **2.2.7 Introduction or Spread of Noxious Plants**

19
20 BLM proposes to include a definition for noxious plants, aggressive nonnative plants that have
21 become a significant environmental factor throughout the West, in the grazing regulations at
22 §4100.0-5. BLM would define noxious plants as invasive and noxious weeds that infest large
23 areas or cause economic and ecological damage to an area. The term noxious weed has legal
24 ramifications in some States that maintain official lists of weeds they consider to be noxious or
25 invasive.
26

27 BLM also proposes to add a provision making knowing and willful introduction of noxious
28 plants onto BLM-managed public lands a prohibited act subject to civil or criminal penalties
29 (4140.1(b)). BLM would give a citizen who unwittingly introduces such noxious weeds ample
30 opportunity to remove the weed source to avoid a penalty. BLM would focus on educating the
31 public about the effects of introducing noxious weeds and our authority to prohibit the knowing
32 and willful introduction of such hazardous species. This provision would complement and
33 support Executive Order 13112, Invasive Species, which clarifies that BLM must strive to
34 prevent the introduction of invasive species of plants and animals.
35

36 **2.2.8 Basis for Rangeland Health Determinations**

37
38 Under the new regulations in §4180.2, determinations that existing grazing management
39 practices or levels of grazing use are significant factors in failing to achieve standards and
40 conform with guidelines would be based on the results of standards assessment and monitoring
41 data. This would provide a minimum standard for the basis for rangeland health determinations.
42

43 **2.2.9 Timeframe for Taking Action to Meet Rangeland Health Standards**

44

1 To allow sufficient time to complete all consultation and other legally mandated requirements,
2 the Proposed Action would require the BLM to formulate, propose, and analyze appropriate
3 actions to address the failure to meet the rangeland health standards or to conform to the
4 guidelines for grazing management no later than 24 months after the determination. The
5 conclusion of this process would be documented by either execution of an applicable and
6 relevant documented agreement or issuance of an applicable final decision. Following execution
7 of an agreement or when all administrative appeals of the final decision have been resolved, the
8 BLM would be required to take appropriate action to change the livestock management as soon
9 as practicable but not later than the start of the next grazing year (§4180.2(c)).

10
11 BLM has certain specific requirements for consultation, cooperation and coordination prior to
12 issuing any proposed decisions related to changes in active use, modifications of grazing permits
13 and leases, changing of allotment boundaries, preparation and modification of allotment
14 management plans and resource activity plans, and issuance of nonrenewable grazing permits
15 and leases. Furthermore, as part of the planning and decision-making process, the BLM is
16 required to comply with applicable laws and regulations, including but not limited to the NEPA,
17 the Endangered Species Act (ESA), and the Archeological Resources Protection Act (ARPA).
18 After a determination has been made that livestock grazing or levels of use are responsible for
19 failure to achieve rangeland health standards, the BLM must comply with the above analysis and
20 consultation requirements mandated by these laws and regulations prior to implementing any
21 decision. Under the proposed modification, the BLM will have 24 months to complete the
22 analysis and consultation requirements and arriving at a proposed decision.

23 24 **2.2.10 Conservation Use**

25
26 Under the Proposed Action, all references to and provisions on “conservation use” would be
27 deleted from the regulations. This would bring the regulations into conformance with the 1995
28 10th Circuit Court decision (Public Lands Council v. Babbitt, 929 F.Supp. 1436 (D. Wyo. 1996),
29 rev'd in part and aff'd in part, 167 F.3d 1287 (10th Cir. 1995), aff'd, 529 U.S. 728 (2000)).

30 31 **2.2.11 Definition of Grazing Preference, Permitted Use, and Active Use**

32
33 BLM is proposing to define “grazing preference” or “preference” as “the total number of animal
34 unit months on public lands apportioned and attached to base property owned or controlled by a
35 permittee, lessee, or an applicant for a permit or lease. Grazing preference includes active use
36 and use held in suspension. Grazing preference holders have a superior or priority position
37 against others for the purpose of receiving a grazing permit or lease.” This definition is similar
38 to how the term was defined when it first was defined in the grazing regulations in 1978, and to
39 how it was defined before 1995. The concept of grazing preference as it would be defined in
40 this rulemaking includes two elements: (1) a livestock forage allocation on public lands; and (2)
41 that priority for receipt of that allocation is attached base property. Ownership or control of base
42 property gives the owner control or preference for receipt of a grazing permit or lease
43 authorizing grazing use to the extent of the active preference as well as priority for receipt of
44 forage that may later be determined to be available for livestock grazing, to the extent of the
45 suspension.

1
2 Under the proposed regulations, BLM would also remove the term “permitted use” from the
3 definitions (4100.0-5) and generally replace this term wherever it occurs in the regulations with
4 either “grazing preference” or “preference,” or “active use” depending on the regulatory context.
5 The definition of “active use” would also be modified to mean that portion of the grazing
6 preference that is available for livestock grazing use based on rangeland carrying capacity and
7 resource conditions in an allotment under a permit or lease, and that is not in suspension
8 (4100.0-5). This change would remove the term “conservation use” and “livestock use” and
9 make it clear that “active use” refers to a forage amount that it is based on the carrying capacity
10 of, and resource conditions in, an allotment and that it does not refer to forage that had been
11 allocated at some point in the past but has since been determined to be no longer present and
12 which now is held in suspension.

13
14 Although the connection between land use plans and grazing preference would not be stated in
15 the definition of “grazing preference” as it is being proposed, the regulatory text would reflect
16 the relation between “active use” and land use plans at §§ 4110.2-2 , 4110.3(a)(3), 4110.3-1 and
17 between grazing permits and leases and land use plans at §4130.2.

18
19 The forage amount available on public lands that is available for livestock grazing use would
20 continue to fluctuate because of changed resource conditions or changed administrative or
21 management circumstances. It is well settled that livestock forage allocations made before
22 enactment of the Federal Land Policy and Management Act of 1976 may be adjusted based on
23 BLM land use planning decisions, or the need to change grazing use to meet objectives specified
24 in land use plans (see, for example, Public Lands Council v. Babbitt, 529 U.S. 728 (2000)).

25 26 **2.2.12 Definition and Role of the Interested Public**

27
28 BLM proposes amending the present definition of “interested public” to mean an individual,
29 group, or organization that has submitted a written request to BLM to be given an opportunity to
30 be involved in BLM decision-making process for the management of livestock grazing on public
31 lands and who as followed up on that request by commenting on or otherwise participating in the
32 decision-making process as to the management of a specific allotment, or, who has submitted
33 written comments to the authorized officer regarding the management of livestock grazing on
34 specific allotment, as part of the process leading to a BLM decision on the management of
35 livestock grazing on the allotment.

36
37 This proposed rulemaking would remove the *requirement* that BLM consult with the interested
38 public before:

- 39 (1) Designating and adjusting allotment boundaries;
 - 40 (2) Changing active use;
 - 41 (3) Issuing emergency closures or modifications;
 - 42 (4) Issuing or renewing a grazing permit or lease;
 - 43 (5) Modifying a grazing permit or lease; and
 - 44 (6) Issuing temporary nonrenewable grazing permits.
- 45

1 Generally, the above actions involve the day-to-day operational aspects of the grazing program.
2 All of these actions are also covered by NEPA and all NEPA documents are made available for
3 public review. In addition, these changes would not remove BLM's discretion to consult at its
4 option.

5
6 BLM would retain the interested public requirements for the following BLM actions:

- 7 (1) Apportioning additional forage on BLM managed lands;
- 8 (2) Developing or modifying an allotment management plan or grazing activity plan;
- 9 (3) Planning of the range development or improvement program (with the exception of State
10 programs);
- 11 (4) Reviewing and commenting on grazing management evaluation reports; and
- 12 (5) Providing copies of proposed grazing decisions. The interested public would still have
13 standing to protest (with the exception of States.)

14
15 This change would require consultation with the interested public where such input would be of
16 the greatest value, such as when planning vegetation management objectives in an allotment
17 management plan, or by providing input to reports evaluating range conditions, while allowing
18 BLM and the grazing operator the discretion to determine and implement the most appropriate
19 on-the-ground management actions to achieve the objectives or respond to the conditions.

20 21 **2.2.13 Water Rights**

22
23 BLM proposes to amend this section by removing the reference date in the first sentence and the
24 second sentence in total. This would remove the requirement that the United States must
25 acquire livestock water rights to the maximum extent allowed by the laws of the States where the
26 rights would be acquired. This would provide BLM greater flexibility in negotiating with
27 grazing operators the arrangements and terms of construction and use of livestock watering
28 facilities.

29 30 **2.2.14 Satisfactory Performance of Permittee or Lessee**

31
32 BLM would move provisions regarding what constitutes "satisfactory performance" of an
33 applicant for a permit or lease from § 4110.1 to 4130.1-1(b) to better organize the regulations.
34 The section addressing what constitutes satisfactory performance for applicants for new permits
35 and leases would be revised.

36
37 The present rule provides that applicants for renewal of permits and leases would be deemed to
38 *have* a satisfactory record of performance if they have substantially complied with the terms and
39 conditions of the expiring permit or lease and other rules applicable to the permit or lease, while
40 applicants for new permits or leases would be deemed to *not have* a satisfactory record if they
41 have had a Federal or State lease cancelled within the previous 36 months, or have been legally
42 barred from holding a grazing permit or lease. The existing sentence construction does not limit
43 the circumstances under which BLM will consider an applicant for a new permit or lease to not
44 have a satisfactory record of performance.

1 The proposed rules would change the sentence construction for applicants for new permits or
2 leases to reflect what would be required for an applicant for a new permit or lease to *have* a
3 satisfactory record of performance. Basically the regulations would state that BLM will deem
4 applicants for new permits or leases to have a record of satisfactory performance when the
5 applicant or affiliate has not had any Federal grazing permit or lease cancelled for violations of
6 the permit or lease within the 36 months immediately preceding the date of the application; or
7 the applicant or affiliate has not had any State grazing permit or lease, for lands within the
8 grazing allotment for which a Federal permit or lease is sought, canceled for violation of the
9 permit or lease within 36 months of the date of the application ; or the applicant or affiliate is not
10 barred from holding a Federal grazing permit or lease by order of a court of competent
11 jurisdiction. The changes proposed would confine the scope of the criteria that BLM would
12 consider when determining whether an applicant for a new permit has a satisfactory record of
13 performance to that stated in the regulations.

15 **2.2.15 Changes in Grazing Use Within Terms and Conditions of Permit or Lease**

17 BLM is proposing to amend section §4130.4 to indicate what we mean by the phrase “within the
18 terms and conditions of the permit or lease.” BLM proposes that when we refer to “temporary
19 changes within the terms and conditions of the permit or lease,” we mean changes to the number
20 of livestock and period of use that may be granted in any one grazing year in response to annual
21 variations in growing conditions that arise from normal year-to-year fluctuations in temperature
22 and the timing and amounts of precipitation.

24 BLM proposes that we would allow such changes if they:

- 25 1) do not result in removing more forage than the “active use” specified by the permit or lease;
- 26
- 27 2) provide that grazing use begins no earlier than 14 days before the grazing begin date
- 28 specified by the permit or lease, and
- 29 3) provide that grazing use ends no later than 14 days after the grazing end date specified by the
- 30 permit or lease.

32 Livestock periods-of-use established by the grazing permits are based on the anticipated average
33 dates that the range is “ready” to be grazed. “Range readiness” is the stage of plant growth at
34 which grazing may begin without doing permanent damage to vegetation or soil. The point
35 where the range is “ready” for grazing use can and does vary from year to year around a long-
36 term average date of readiness. BLM believes that a 14-day flexibility period on either side of
37 the grazing begin and end dates specified by the permit or lease is a reasonable way to allow for
38 minor adjustments in grazing use in response to these variations.

40 BLM would consider applications for changes in grazing use “within the terms and conditions of
41 the permit or lease” on a case-by-case basis. If BLM approves the change, no formal action
42 other than the issuance and payment of a relevant grazing fee billing would be required. The
43 change would not constitute a formal permit or lease modification. In other words, a temporary
44 change that was allowed in one year to respond to the conditions of that year would not be
45 carried forward to the next year. An application for grazing use that falls outside of this

1 flexibility would be not be considered “within the terms and conditions” of the authorizing
2 permit or lease.

3 4 **2.2.16 Service Charges**

5
6 Under the Proposed Action, the service charge for processing various actions would more
7 closely reflect the processing costs. The following service charges would be assessed for the
8 following actions, except when initiated by the BLM:

- 9 • Issuing a crossing permit—\$75
- 10 • Transfer of grazing preference—\$145
- 11 • Cancellation and replacement of a grazing fee billing—\$50

12 13 **2.2.17 Prohibited Acts**

14
15 As indicated in the discussion of the No Action Alternative, there are three categories of
16 prohibited acts. Under the proposed change, several prohibited acts would be deleted from the
17 third category of prohibited acts set forth in §4140.1(c). This provision states that if a permittee
18 or lessee violates these acts in situations where public lands are involved or affected, the
19 violation is related to grazing use authorized by a BLM permit or lease, and the violator is
20 convicted or otherwise found to be in violation of the act by a court or final determination of an
21 agency, then BLM could take civil action against the permittee or lessee, i.e., withhold issuance,
22 suspend, or cancel a permit or lease or other authorized use.

23 The violation of Federal or State laws or regulations pertaining to the following acts would be
24 deleted from §4140.1(c):

- 25 • Placement of poisonous bait or hazardous devices designed for the destruction of
26 wildlife;
- 27 • Application or storage of pesticides, herbicides, or other hazardous materials;
- 28 • Alteration or destruction of natural stream courses without authorization;
- 29 • Pollution of water sources;
- 30 • Illegal take, destruction or harassment, or aiding and abetting in the illegal take,
31 destruction or harassment of fish and wildlife resources; and
- 32 • Illegal removal or destruction of archeological or cultural resources.

33
34 BLM is proposing to retain the provisions that allow us to withhold, suspend or cancel all or part
35 of a grazing permit if the lessee or permittee is convicted of violating any of the following:

- 36 • The Endangered Species Act (16 U.S.C. 1531 et seq.),
- 37 • The Bald Eagle Protection Act (16 U.S.C. 668 et seq.), and
- 38 • The regulations under the Wild Horse and Burro Act 43 CFR 4700,
- 39 • State livestock laws or regulations.

40
41 Both the Endangered Species Act and the Bald Eagle Protection Act provide specifically that if
42 they are violated by a federal grazing permit or lease holder, the agency that issued the permit or
43 lease may suspend or cancel it.

44 45 **2.2.18 Grazing Use Pending Resolution of Appeals When Decision Has Been Stayed**

1
2 Although the present regulations address what actions would be taken by the BLM when a stay
3 is granted on an appeal of a decision to modify or renew a permit or lease, they do not address
4 actions that would be taken when a stay is granted on an appeal of a decision on a permit or lease
5 application submitted in conjunction with a preference transfer. The Proposed Action in
6 §4160.4 provides that if a stay is granted by the Office of Hearing and Appeals on: (1) an appeal
7 of a modification to a permit or lease; (2) an appeal of a permit or lease offered in conjunction
8 with a preference transfer, or (3) an appeal of a renewal of a permit or lease, the BLM would
9 offer the permittee or lessee a new permit or lease that contains the same terms and conditions as
10 the immediately preceding or expiring permit or lease. Upon resolution of the appeal, the BLM
11 would replace the above referenced permit or lease with one that conforms with the final
12 resolution of the appeal.

13
14 In addition, there are some clarifications in Subpart 4160 that are of some importance to
15 understanding how the appeals process will work under the proposed regulations. Many of the
16 procedural requirements set forth in existing §4160.4 are restatements of the requirements found
17 in §4.470 et seq for appealing grazing decisions. Recent modifications in OHA rules resulted in
18 clarifications of the process and definitions used by OHA in their proceedings. Rather than
19 reiterate these changes in §4160.4, the Proposed Action would delete requirements that are
20 already set forth in §4.470 and instead would indicate that those who wish to appeal or seek a
21 stay of a BLM grazing decision would follow the requirements set forth in §4.470.

22
23 The following is a summary of some of the relevant changes in the OHA rules:

- 24 • Defines who may appeal a decision as “a party to a case who has been adversely affected
25 by a final decision”.
- 26 • A “party to a case” is defined as one who:
 - 27 ○ Has taken action that is the subject of the decision on appeal
 - 28 ○ Is the object of that decision; or,
 - 29 ○ Has otherwise participated in the process leading to the decision under appeal, by
30 commenting on an environmental document, or by filing a protest to a proposed
31 decision.
- 32 • States that a party to a case may raise an appeal only on those issues raised in their prior
33 participation, as referenced above.
- 34 • The party would be considered “adversely affected” by the authorized officer’s decision
35 when the party has a “legally cognizable interest”, and the decision on appeal has caused,
36 or will cause, injury to that interest.

37 38 **2.2.19 Treatment of Biological Assessments in the Grazing Decision-Making Process** 39 **(Blake Decision)**

40
41 The Proposed Action also stipulates in §4160.1(d) that a biological assessment prepared in
42 accordance with Section 7 of the Endangered Species Act is not a proposed decision for
43 purposes of protest or appeal. This would address issues related to the 2002 IBLA Blake
44 decision (Blake et al. v. Bureau of Land Management, 156 IBLA 280 (2002)) wherein a
45 biological assessment was found to be a decision and thus subject to the protest and appeals

1 provisions. Clearly stating in the proposed regulations that biological assessments are not
2 proposed or final decisions would eliminate the confusion created by this ruling.
3
4

5 **2.3 ALTERNATIVE 3: MODIFIED ACTION**

6
7 Alternative 3 is essentially the same as Alternative 2 (Proposed Action) with modifications to
8 three key elements. Modifications involve the following elements: Implementation of Grazing
9 Decisions, Temporary Nonuse; and the Basis for Rangeland Health Determinations.
10

11 **2.3.1 Implementation of Grazing Decisions**

12
13 Same as proposed action, except that the 5-year phase in of changes in use would be
14 discretionary rather than mandatory. In other words, changes in active use in excess of 10% may
15 not have to be implemented over a 5-year period. The BLM authorized officer may at his or her
16 discretion determine that a shorter or no phase-in period is warranted. If, for example, a special
17 status species is being affected by grazing management or levels of use, the BLM may decide to
18 immediately implement a reduction in use, following all required consultations and allowing for
19 protest and appeal of the decision, to avoid a potential listing of the species under the
20 Endangered Species Act.
21

22 **2.3.2 Temporary Nonuse**

23
24 Under this proposal, permittees or lessees could submit and BLM could approve applications for
25 nonuse for no more than five consecutive years. All other provisions related to the authorization
26 of temporary nonuse would be the same as for the Proposed Action.
27
28

29 **2.3.3 Basis for Rangeland Health Determinations**

30
31 Same as proposed action except that BLM would not be required to use both assessments and
32 monitoring as basis for determinations i.e., rangeland health determinations could be based on
33 either standards assessments, monitoring data or both. This would allow the manager greater
34 flexibility and discretion in determining priorities for monitoring.
35
36
37

38 **2.3 ALTERNATIVES CONSIDERED BUT NOT ANALYZED IN DETAIL**

39
40 Many substantive issues and recommendations were provided by the public during the scoping
41 period. Public comments were fully considered and many of their recommendations are
42 reflected in the proposed action or in the modified action alternative. Many other issues raised
43 or recommendations made were considered but not analyzed in detail in this Draft EIS, because
44 they are either beyond the scope of the document, did not meet the basic purposes of these

1 proposed changes to the regulations, or BLM decided they do not require regulatory action to
2 implement, i.e. we could better address the issues through policy.

3
4 The following are alternatives we considered but have not analyzed in detail in this EIS:

- 5
6 • **Increasing grazing fees and restructuring grazing based on market demand** are not
7 addressed because they are outside the scope of this proposed rule.
- 8 • **Reestablishing grazing advisory boards** to provide local advice and recommendations to
9 BLM on grazing issues are not addressed because Grazing Advisory Boards were “sunset”
10 on December 31, 1985, by FLPMA. This proposed rulemaking, however, would provide
11 that BLM would cooperate with State and County established grazing boards in reviewing
12 range improvements and allotment management plans on public lands. This review would
13 supplement the counsel of Resource Advisory Councils that were established in 1995 to
14 advise and recommend strategies for managing public lands under the multiple use
15 mandate.
- 16 • **Changing management of wild horses and burros.** Any changes to The Wild Horse and
17 Burro Act are outside the authority and scope of this proposed rule.
- 18 • **Changing Conversion Ratio for Sheep for Billing Purposes .** Counting seven sheep,
19 rather than the present five, as the equivalent of one animal unit for the purposes of
20 calculating grazing fee billings. Matters involving the grazing fee are outside the scope of
21 this proposed rule.
- 22 • **Establishing “Reserve Common Allotments”.** In the ANPR, BLM considered proposing
23 provisions to define, establish a regulatory framework, and otherwise support the creation
24 of Reserve Common Allotments. BLM has decided not to proceed with developing
25 Reserve Common Allotments at this time for several reasons. During BLM’s public
26 scoping period many commenters expressed concern about adding special provisions for
27 Reserve Common Allotments in the grazing regulations. Many commenters said they did
28 not think such regulatory provisions were warranted or necessary. Ranching interests
29 indicated they would rather have “normal” allotments while environmental interests
30 questioned whether this would be the best use of the land. After considering the
31 unenthusiastic reception to this concept BLM determined it was not in the public interest to
32 proceed with this provision through regulations. BLM will continue to examine the
33 concept of forage reserves through policy making processes.
- 34 • **Grazing Fee Surcharge.** The grazing fee surcharge was added by the 1995 regulations to
35 address concerns raised by to the General Accounting Office and Office of the Inspector
36 General regarding the potential for rancher “windfall profits” arising from BLM's practice
37 of allowing for the subleasing of public land grazing privileges. Some BLM grazing
38 permittees enter pasturing agreements wherein they take temporary control of a third
39 party's livestock and graze them under their permit or lease. The permittee pays the federal
40 grazing fee and charges the third party an amount negotiated between them for the forage
41 and care of the livestock. BLM assesses a fee surcharge in this circumstance that equals
42 35% of the difference between the present federal grazing fee and the private grazing land
43 lease rate unless the livestock grazed under the permit are owned by children of permittees
44 and lessees. BLM continues to believe that the surcharge is an equitable manner in which
45 to address the issue of potential windfall profiteering by BLM permittee and lessees who

1 choose to enter into pasturing agreements. This issue is not addressed in the Draft EIS
2 because grazing fees are outside the scope of this effort.

- 3 • **Assigning Burden of Proof.** Several commenters recommended that BLM consider
4 including a provision in the proposed rule requiring BLM to assume the burden of proof in
5 an appeal before the Office of Hearings and Appeals. The Administrative Procedure Act
6 (APA) at 5 U.S.C. 556(d) provides that “except as otherwise provided by statute, the
7 proponent of a rule or order has the burden of proof.” The burden of proof has recently
8 been clarified by the Supreme Court to mean the “burden of persuasion” which refers to
9 “the notion that if evidence is evenly balanced, the party who bears the burden of
10 persuasion must lose.” Previously the burden of proof had been confused with the burden
11 of production which refers to a party’s obligation to come forward with evidence to
12 support its claim. The burden of proving a fact remains where it started, but once the party
13 with this burden establishes a prima facie case, the burden to produce evidence shifts. The
14 burden of persuasion, on the other hand, does not shift except in the case of affirmative
15 defenses.
- 16 • **Monitoring.** Few commenters directly addressed the definition of “monitoring” although
17 many of the comments we received pertained to procedural matters, that is,
18 recommendations on how BLM should conduct monitoring. We received many comments
19 from the livestock industry, and environmental and conservation groups asking BLM to
20 increase monitoring efforts on public lands. BLM considered including new language
21 regarding monitoring intending to provide explicit direction on the development of
22 allotment-specific resource management objectives and short and long term monitoring
23 programs in consultation with the permittee or lessee. The present regulations already
24 allow BLM to develop resource management objectives and monitoring plans as part of its
25 allotment management plans. BLM determined that establishing monitoring
26 methodologies and working with permittees and lessees in collecting and interpreting data
27 and developing monitoring reports are more appropriately handled through BLM’s policy
28 guidance in Manuals and Handbooks.
- 29 • **Requiring Applications for Permit or Lease Renewals.** The present regulations do not
30 explicitly state whether or not a permittee or lessee must submit an application to BLM
31 when their permit expires. We are especially interested in public comment on this
32 question.
- 33 • **Providing for Appeals to the State Director.** During the scoping period BLM received
34 comments recommending we consider adding another opportunity for administrative
35 remedy by allowing a protesting party to appeal a BLM field office decision to the BLM
36 State Director. Such a provision would allow the BLM State Director to have authority to
37 stay a decision pending further review. BLM determined it was not advisable to include
38 this provision in the proposed rule. Such an authority would cause the appeals process to
39 become too cumbersome and would result in more delays in the decision-making process
- 40 • **Redefining Affected Interest and Interested Public.** Some commenters urged BLM to
41 remove the definition of interested public from the grazing regulations and incorporate the
42 use of “affected interest” as it was defined in the regulations before 1995. . Under such a
43 change, BLM would consider an “affected interest” to be a party who has expressed an
44 interest in management of a specific allotment and which BLM has determined to be an
45 affected interest. This change would require that BLM focus its limited resources on

1 determining who is, and who is not, an affected interest. BLM desires that meaningful
2 public involvement in developing grazing-related resource management objectives or
3 actions not be unduly restricted or hindered by BLM processes and procedure. BLM's
4 experience with the interested public provisions of these regulations has found that there
5 are interested public who express initial interest in management of a grazing allotment but
6 do not maintain meaningful involvement in the process leading to creating allotment
7 resource objectives and strategies to achieve those objectives. . This proposed rule would
8 modify the definition of interested public to provide that once a party becomes an
9 interested public by expressing in writing an interest in management of an allotment, they
10 maintain that status by their continued participation in the decisionmaking process for that
11 allotment and would narrow the circumstances where BLM **must** involve the interested
12 public before taking a management action.. BLM believes that these changes will maintain
13 meaningful public involvement while streamlining BLM processes leading to day-to-day
14 on-the-ground grazing management decisions.

- 15 • **Providing for control of water developments authorized under a range improvement**
16 **permit.** During the scoping period BLM received recommendations that the proposed
17 regulations include provisions explicitly stating that the use of stock ponds, wells and
18 pipelines authorized under a range improvement permit would be controlled by the
19 permittee or lessee holding the permit. The present rule does not allow for water
20 developments under a range improvement permit. Other commenters asked that BLM
21 propose that the permittee or lessee could enter into an MOU with the BLM allowing the
22 improvements to be used other than by livestock owned or controlled by the permit holder
23 to use them.
- 24 • **Establishing criteria for full force and effect decisions.** Some commenters recommend
25 that BLM develop criteria that would be necessary to obtain a stay of a BLM decision,
26 placed in Full Force and Effect, from the Interior Board of Land Appeals. BLM disagrees
27 that such criteria are necessarily relevant to the decision to issue a full force and effect
28 decision to protect resources.
- 29 • **Modifying exchange of use agreements provisions.** BLM BLM received comment
30 requesting that BLM remove the requirement that private lands offered in exchange of use
31 be located in the same allotment being permitted for grazing to allow for “trade-of-use”
32 arrangements such as that described below. A possible need for a “trade-of-use”
33 arrangement, for example, is illustrated by the situation where one permittee or lessee
34 owns or controls unfenced intermingled private lands which are not within his allotment,
35 but rather, within a second permittee’s allotment. Because the first permittee is not
36 authorized to graze in the second permittee’s allotment, the first permittee cannot derive
37 economic gain from the grazing use made on his private lands by the second permittee,
38 absent action to proactively control use of his land such as through fencing or through sale
39 of the land or assignment of the land lease to the second permittee. The commentor urged
40 that BLM facilitate the “trade-of-use” between these permittee’s by collecting a grazing fee
41 from the second permittee for grazing use of lands owned by the first permittee but located
42 in the second permittee’s allotment, and by crediting the fees collected from the second
43 permittee for these lands to the first permittee’s grazing fee billing. BLM does not agree
44 that this type of arrangement is best handled through the regulation change suggested by
45 the commentor, and invites comment on whether we should accommodate this type of

1 management situation by regulation change or leave the arrangements for compensation for
2 use of private lands to the owners of the private lands involved.

- 3 • **Nonwillful unauthorized livestock use.** BLM received comment urging that BLM
4 modify the regulations to allow BLM to have unfettered discretion to determine
5 circumstances that would warrant nonmonetary settlement of a nonwillful grazing trespass.
6 The present regulations identify the following four conditions—all of which must be
7 satisfied before BLM can approve a nonmonetary settlement for nonwillful unauthorized
8 livestock use:

- 9 1. Evidence that unauthorized use occurred through no fault of the operator.
- 10 2. The forage used was insignificant.
- 11 3. Public lands have not been not been damaged.
- 12 4. Nonmonetary settlement is in the best interest of the United States.

13 We believe this is a reasonable approach, and therefore BLM has decided not to change
14 this provision.

- 15 • **Eliminate Secretarial approval of amendments to regional standards for healthy**
16 **rangelands.** BLM received comment urging that we revise the process for approving
17 standards for rangeland health to allow approval of revisions to the standards by BLM
18 State Directors, Resource Advisory Councils and other advisory boards established by
19 State or local governments. BLM believes that the requirement for Secretarial approval
20 of Standards developed by BLM State Directors ensures that the basic components of
21 rangeland health are reflected by the regionally developed standards and is not proposing
22 any changes to the applicable provisions of the regulations.
- 23 • **Locked gates.** Commenters were nearly unanimously opposed to the idea of BLM
24 allowing grazing operators to temporarily lock gates on public lands when necessary to
25 protect private property or livestock. This provision was not further considered.
- 26 • **Prohibited Acts.** BLM received a number of comments asking us to keep the present
27 regulatory provision that the conviction of a permittee of violations of the Archaeological
28 Resources Protection Act (ARPA) and the Clean Water Act (CWA), where such
29 violation was related to grazing use authorized by BLM, constitutes a prohibited act
30 subjecting the relevant grazing permit to penalty action. This punitive action would be
31 in addition to any penalties incurred as provided by the law itself. BLM will retain, in
32 these regulations, that a permittee’s conviction of violation of the Endangered Species
33 Act and the Bald Eagle Protection Act will subject the relevant permit to penalty action.
34 These acts specifically provide their violation may result in any federal permit or lease
35 held by the violator being cancelled. With respect to permittee or lessee violation of
36 other environmental laws, BLM believes that the penalties contained within these laws
37 are sufficiently punitive and that the “layering” of an additional penalty of suspension or
38 cancellation of the offender’s grazing permit or lease is not warranted.
- 39 • **Competitive bidding for assigning permits and leases.** Some commenters asked BLM
40 to develop a competitive bidding process to replace the present system for assigning
41 grazing permits and allocating grazing preference and the present grazing fee formula.
42 This recommendation would require legislative action, which is outside the scope of this
43 rulemaking.
- 44 • **Requiring posting a bond before filing an appeal.** BLM received comments asking us
45 to require a bond before a party filed an appeal. BLM considered the implications and

1 challenges to such a provision and has determined that this provision is not feasible.
2 Therefore, it is not included it in either the proposed rule or the EIS.
3 • **Fundamentals of Rangeland Health.** Some commenters recommended that BLM
4 move the general requirements related to public land health standards and guidelines to
5 BLM’s planning regulations at 43 CFR 1610. BLM did not consider the timing of such
6 an action appropriate and therefore it is not included in either the proposed rule, or as an
7 alternative in the EIS.
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1 **2.5 Comparison of the Alternatives**

Improving Working Relations with Permittees and Lessees			
Elements	No Action–No Change Alternative 1	Proposed Action Alternative 2	Modified Alternative 3
Social, Economic and Cultural Considerations	* No provisions specifically address NEPA documentation of social, economic and cultural considerations in the regulations regarding changes in permitted use.	* A new provision would be added stating that before changing permitted use, BLM would document compliance with NEPA. The documentation would include BLM’s consideration of any effects of the proposed change on relevant social, economic and cultural factors.	
Phase-In of Changes in Use	* The present regulations do not address the timing of implementation of decisions to change grazing use.	* Changes in active use in excess of 10% would be implemented over a 5-year period unless: an agreement is reached with the permittee or lessee to implement the increase or decrease in less than 5 years agree; or the changes must be made before 5 years to comply with applicable law (e.g., Endangered Species Act).	*Same as proposed action, except that the 5-year phase in of changes in use would be discretionary , i.e., change in active use in excess of 10% may be implemented over a 5-year period.
Range Improvement Ownership	* Under the present regulations, the United States holds title to permanent range improvements such as fences, wells, and pipelines authorized after August 21, 1995.	* Title to permanent range improvements such as fences, wells, and pipelines authorized under a cooperative range improvement agreement would be shared among cooperators (e.g., permittees or lessees) in proportion to their initial contribution to on-the-ground project development and construction costs.	
Cooperation with State, county, and Federal agencies	* Under present regulations, it is provided that the BLM will cooperate with involved agencies and government entities.	* Under the proposed regulations, a requirement is added for the BLM to cooperate with State, local, and County established grazing boards in reviewing range improvements and allotment management plans on public lands.	

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Elements	No Action–No Change Alternative 1	Proposed Action Alternative 2	Modified Alternative 3
Review and Comment on Biological Assessments	* Present rules do not specifically mention biological assessments, however the present regulations require that BLM, to the extent practicable, provide affected permittees or lessees, the State having lands or responsible for managing resources within the area, and the interested public an opportunity to review, comment and give input during the preparation of reports that evaluate monitoring and other data that are used as a basis for making decisions to increase or decrease grazing use, or to change the terms and conditions of a permit or lease. This provision has been interpreted to include biological assessments.	* Biological assessments prepared under the Endangered Species Act are specifically identified as reports that BLM is required to provide affected permittees or lessees, the State having lands or responsibility for managing resources within the area, and the interested public an opportunity to review, comment and give input during preparation.	

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<i>Protecting the Health of the Rangelands</i>			
Elements	No Action–No Change Alternative 1	Proposed Action Alternative 2	Modified Alternative 3
Temporary Nonuse	* Grazing permittees or lessees may submit and BLM may approve an annual application for temporary nonuse for no more than three (3) consecutive years. Reasons for temporary nonuse include but are not limited to financial conditions or annual fluctuations of livestock	* Grazing permittees or lessees could submit and BLM could approve nonuse for no longer than one year at a time for resource reasons as well as for business or personal needs of the permittee or lessee (i.e., no limit on consecutive years of nonuse).	* Permittees or lessees could submit and could annually approve an application for nonuse for no more than five consecutive yrs.
Noxious Plants	* Present regulations do not address noxious plants.	* Under proposed regulations, any person who knowingly or willingly introduces or spreads a noxious plant to or on the public lands would be subject to civil and criminal penalties.	
Basis for Rangeland Health Determinations	*The present regulations do not prescribe how the authorized officer determines that existing grazing management practices or levels of grazing use on public lands are significant factors in failing to achieve the rangeland health standards and conform with the guidelines for grazing administration.	Determinations that existing grazing management practices or levels of grazing use are significant factors in failing to achieve standards and conform with guidelines would be based on standards assessment and monitoring.	* Same as proposed action except that BLM would not be required to use both assessments and monitoring as basis for determinations, i.e., may be based on assessment or monitoring.
Timeframe for Meeting Rangeland Health Standards	* Under present regulations, the BLM is required to take appropriate action as soon as practicable but not later than the start of the next grazing year on determining that existing grazing management needs to be modified to ensure that the fundamentals of rangeland health conditions exist or progress is being made toward achieving rangeland health	* The BLM would take appropriate action as soon as practicable but not later than the start of the next grazing year that follows BLM’s completion of relevant and applicable requirements of law, regulations and consultation requirements to ensure fundamentals of rangeland health conditions exist or progress is being made toward achieving rangeland health.	

	<p>* Upon determining that existing grazing practices or levels of use are significant factors in failing to achieve standards and guidelines for grazing administration, the authorized officer shall take appropriate action as soon as practicable but not later than the start of the next grazing year.</p>	<p>* Upon determining that existing grazing practices or levels of use are significant factors in failing to achieve standards and guidelines, the BLM would, in compliance with applicable laws and with the consultation requirements, formulate, propose and analyze appropriate action to address failure to meet standards or conform to guidelines no later than 24 months after determination. Upon execution of agreement or documented decision, the BLM would implement appropriate action(s) as soon as practicable but not later than start of next grazing year.</p>	
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Increasing Administrative Efficiency and Effectiveness			
Elements	No Action–No Change Alternative 1	Proposed Action Alternative 2	Modified Alternative 3
Conservation Use	* Conservation Use is defined in the regulations, is identified as component of permitted use, may be authorized for up to 10 years, and is addressed in other provisions.	* All references to and provisions on conservation use would be deleted.	
Grazing Preference	In the present regulations, <u>grazing preference or preference</u> is defined as a superior or priority position against others for the purpose of receiving a grazing permit or lease. This priority is attached to base property owned or controlled by the permittee or lessee.	<u>Grazing preference or preference</u> would mean the total number of animal unit months on public lands apportioned and attached to base property owned or controlled by a permittee, lessee or an applicant for a permit or lease. Grazing preference would include active use and use held in suspension. Grazing preference holders would have a superior or priority position against others for the purpose of receiving a grazing permit or lease .	
	In the present regulations, <u>permitted use</u> is defined as the forage allocated by, or under the guidance of, an applicable land use plan for livestock grazing in an allotment under a permit or lease and is expressed in AUMS. The term permitted use encompasses authorized use including livestock use, suspended use and conservation use.	The term <u>permitted use</u> would be dropped from the regulations and basically replaced with the term grazing preference throughout the regulations .	
	In the present regulations, <u>active use</u> means present authorized use, including livestock grazing and conservation use. Active use may constitute a portion, or all, of permitted use. Active use doesn't include temporary nonuse or suspended use within all or portion of an allotment.	- <u>Active use</u> would be redefined to mean that portion of the present authorized use which is available for livestock grazing based on rangeland carrying capacity and resource conditions in an allotment under a permit or lease and is not in suspension.	
Elements	No Action–No Change Alternative 1	Proposed Action Alternative 2	Modified Alternative 3

<p>Definition and Role of Interested Publics</p>	<p>* Under the present regulations, <u>interested public</u> is defined as an individual, groups or organization that has submitted a written request to the authorized officer to be provided an opportunity to be involved in the decision-making process for the management of livestock grazing on specific allotments or has submitted written comments to the authorized officer regarding the management of livestock grazing on a specific allotment.</p>	<p>* <u>Interested public</u> would be defined as an individual, group or organization that has: (1) Submitted a written request to BLM to be provided an opportunity to be involved in the process leading to a decision for management of livestock grazing and followed up on that request by commenting on or otherwise participating in the decision-making process on management of a specific allotment; or (2) Submitted written comments to the BLM regarding management of livestock grazing on a specific allotment, as part of the process leading to a BLM decision on the management of livestock grazing on the allotment.</p>	
	<p>* The BLM is required to consult, cooperate and coordinate with or seek review and comment from the interested public on the following actions:</p> <ul style="list-style-type: none"> *Designating and adjusting allotment boundaries. *Apportioning additional forage *Reducing permitted use *Emergency closures or modifications *Development or modification of grazing activity plan. *Planning of the range development or improvement program *Renewing or issuing grazing permit or lease *Modifying a permit or lease *Reviewing or commenting on grazing evaluation reports. *Issuing temporary nonrenewable grazing permits. <p>*In addition, under the present regulations, the BLM is required to send copies of proposed and final decisions to the interested public.</p>	<p>Requirements to consult, cooperate and coordinate with or seek review and comment from the interested public would be modified as follows:</p> <ul style="list-style-type: none"> • Removed • Retained • Removed • Removed • Retained • Retained • Removed • Removed • Retained • Removed <p>* BLM would still be required to send copies of proposed and final decisions to the interested public</p>	

Elements	No Action–No Change Alternative 1	Proposed Action Alternative 2	Modified Alternative 3
Water Rights	* Present regulations state that any right acquired on or after 8/21/95 to use water on public land for the purpose of livestock watering shall be acquired, perfected, maintained and administered under the substantive and procedural laws of the State within which land is located. To the extent allowed by State law, any such water right shall be acquired, perfected, maintained, and administered in the name of the United States.	* The second sentence of this provision —stating that, to the extent allowed by State law, any water right would be acquired, perfected, maintained, and administered in the name of the United States— would be dropped .	
Satisfactory Performance	Present regulations identify requirements for satisfactory performance for renewal of permits and leases and for new permits or leases.	The provisions on satisfactory performance would be moved from the section on “mandatory qualifications” to the section on “filing applications”. Minor editorial changes would be made in the definition of “satisfactory performance” for new applicants – basically changing the definition from a negative (what “is not” satisfactory performance) to a positive (what “is” satisfactory performance) .	

Elements	No Action–No Change Alternative 1	Proposed Action Alternative 2	Modified Alternative 3
Changes in grazing use within the terms and conditions of the permit or lease	The present regulations state that changes within the terms and conditions of the permit or lease may be granted by the authorized officer and that applications for such use filed after billing notices shall be subject to a service charge..	The proposed regulations would provide that BLM may authorize temporary changes in grazing within the terms and conditions of a permit or lease to respond to annual fluctuations in timing and amount of forage production; or to meet locally established range readiness criteria. The BLM would consult with the permittee or lessee on such changes. “Within terms and conditions” would be defined to mean temporary changes to livestock number, period of use, or both that would result in grazing use that results in forage removal that does not exceed the amount of active use specified in the permit or lease; and occurs either no earlier than 14 days before the begin date specified on the permit or lease, and no later than 14 days after the end date specified on the permit or lease.	

Elements	No Action–No Change Alternative 1	Proposed Action Alternative 2	Modified Alternative 3
Service Charges	* A service charge may be assessed for each crossing permit, transfer of grazing preference, application solely for nonuse and each replacement or supplemental billing notice except for actions initiated by the authorized officer. A specific fee is not identified in the present regulations, however the present fee for these actions is \$10.	* Service charges would be specified as follows: Except where BLM initiates the action, BLM would assess a service charge as shown below: (1) Issuance of crossing permit: \$75; (2) Transfer of grazing preference: \$145; (3) Cancellation and replacement of grazing fee billing: \$50	
Prohibited Acts	* Permittees or lessees may be subject to civil penalties for violations of Federal or State laws or regulations pertaining to placement of poisonous bait or hazardous devices, destruction of wildlife; application or storage of pesticides, herbicides, or other hazardous materials; alteration or destruction of natural stream courses without authorization; pollution of water sources; illegal take, destruction, harassment, or aiding or abetting in illegal take, destruction or harassment of fish and wildlife resources; and illegal removal or destruction of arch. or cultural resources.	Provisions regarding prohibited acts related to violations of Federal or State laws or regulations as set forth in this section would be deleted.	
Grazing Use Allowed When a Stay is Granted	Under the present regulations, if a decision is stayed, the permittee or lessee will graze in accordance with the authorization issued the previous year. If the applicant had no authorized grazing use the previous year or the application is for ephemeral or annual grazing use, then grazing use will be consistent with the final decision pending resolution of the appeal.	The provisions would be moved and editorial changes would be made to clarify these requirements. In addition, a provision would be added addressing the stay of a decision on a permit or lease offered to a preference transferee. If a stay is granted on a decision to offer a permit or lease to a preference transferee, then the applicant would be offered a new permit or lease with the same terms and conditions of the previous permit or lease.	
Biological Assessments – Application of Protest and Appeal Provisions	* Present regulations do not specifically address biological assessments prepared in compliance with the Endangered Species Act. However, in accordance with the IBLA Blake decision, biological assessments would be considered proposed decisions subject to protest	* In the proposed regulations a biological assessment prepared for ESA consultation or conference would not be a proposed decision for purposes of protest or appeal.	

Elements	No Action–No Change Alternative 1	Proposed Action Alternative 2	Modified Alternative 3
	and appeal.		

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6 CHAPTER 3. AFFECTED ENVIRONMENT

7 3.1 GENERAL SETTING

8 3.2 PHYSIOGRAPHIC SETTING

9 The physiographic setting is classified according and directly derived from Dr. Robert G.
10 Bailey's ecoregion division classifications and descriptions for the United States (Bailey 1995,
11 1997). Bailey delineated ecoregions utilizing a scale based on macroclimates. Through
12 consideration of macroclimatic conditions, in combination with the plant formations produced
13 by the macroclimates, Bailey subdivided the United States into ecoregions composed of three
14 levels of detail.

15 The broadest level of detail is reflected within the domain level. The two domain levels within
16 the effected environment in the United States are delineated primarily by the related climate, for
17 example, the humid domain versus the dry domain. Within the two domain levels in the
18 affected environment, Bailey further delineated 6 divisions. These divisions are classified
19 according to the seasonality of precipitation or the degree of dryness and cold. Corresponding
20 climate diagrams that assist in explaining the division description can be found in Bailey 1998a
21 and 1998b.

22 The 6 divisions are divided further into 13 providences and 6 mountain providences. The
23 providence level provides the greatest level of detail. The organization of providences is mainly
24 concentrated on the uniformity of climate subtypes and corresponding plant formations.
25 Mountain environments that further characterized providences through altitudinal zonation
26 compromise the mountain providences.

27
28

3.2.1 Marine

29 Situated on the Pacific coast between latitudes 40° and 60° N is a zone that receives abundant
30 rainfall from maritime polar air masses and has a rather narrow range of temperatures because it
31 borders on the ocean.

32 Trewartha (1968) classifies the marine west coast climate as Do—temperate and rainy, with
33 warm summers. The average temperature of the warmest month is below 72 ° F (22 ° C), but at
34 least 4 months per year have an average temperature of 50° F (10° C). The average temperature
35 during the coldest month of the year is above 32 ° F (0° C). Precipitation is abundant throughout
36 the year, but is markedly reduced during summer. Although total rainfall is not great by tropical
37 standards, the lower air temperatures here reduce evaporation and produce a very damp, humid

1 climate with much cloud cover. Mild winters and relatively cool summers are typical. Coastal
2 mountain ranges influence precipitation markedly in these middle latitudes. The mountainous
3 coasts of British Columbia and Alaska annually receive 60 to 80 inches (1,530 to 2,040 mm) of
4 precipitation and more. Heavy precipitation greatly contributed to the development of fiords
5 along the coast: heavy snows during the glacial period fed vigorous valley glaciers that
6 descended to the sea, scouring deep troughs that reach at their lower ends below sea level.

7 Natural vegetation in the Marine Division is needleleaf forest. In the coastal ranges of the Pacific
8 Northwest, Douglas-fir, red cedar, and spruce grow to magnificent heights, forming some of the
9 densest of all coniferous forests with some of the world's largest trees.

10 Soils are strongly leached, acid Inceptisols and Ultisols. Due to the region's cool temperatures,
11 bacterial activity is slower than in the warm tropics, so vegetative matter is not consumed and
12 forms a heavy surface deposit. Organic acids from decomposing vegetation react with soil
13 compounds, removing such bases as calcium, sodium, and potassium.

14 3.2.2 Mediterranean

15 Situated on the Pacific coast between latitudes 30° and 45 ° N is a zone subject to alternate wet
16 and dry seasons, the transition zone between the dry west coast desert and the wet west coast.

17 Trewartha (1968) classifies the climate of these lands as Cs, signifying a temperate, rainy
18 climate with the dry, hot summers indicated by the symbols. The combination of wet winters
19 with dry summers is unique among climate types and produces a distinctive natural vegetation of
20 hardleaved evergreen trees and shrubs called sclerophyll forest. Various forms of sclerophyll
21 woodland and scrub are also typical. Trees and shrubs must withstand the severe summer
22 drought (2 to 4 rainless months) and severe evaporation.

23 Soils of this Mediterranean climate are not susceptible to simple classification. Alfisols and
24 Mollisols typical of semiarid climates are generally found.

25 3.2.3 Tropical–Subtropical Steppe

26 Tropical steppes border the tropical deserts on both the north and south, and in places on the east
27 as well. Locally, because of altitude, plateaus and high plains within what would otherwise be
28 desert have a semiarid steppe climate. Steppes on the poleward fringes of the tropical deserts
29 grade into the Mediterranean climate in many places. In the United States, they are cut off from
30 the Mediterranean climate by coastal mountains that allow tropical deserts to extend farther
31 north.

32 Trewartha (1968) classifies the climate of tropical–subtropical steppes as BSh, indicating a hot,
33 semiarid climate where potential evaporation exceeds precipitation, and where all months have
34 temperatures above 32 ° F.

1 Steppes typically are grasslands of short grasses and other herbs, and with locally developed
2 shrub- and woodland. On the Colorado Plateau, for example, there is pinyon–juniper woodland.
3 To the east, in Texas, the grasslands grade into savanna woodland or semideserts composed of
4 xerophytic shrubs and trees, and the climate becomes semiarid–subtropical. Cactus plants are
5 present in some places. These areas are able to support limited grazing, but are not generally
6 moist enough for crop cultivation without irrigation. Soils are commonly Mollisols and
7 Aridisols, containing some humus.

8 9 3.2.4 Tropical–Subtropical Desert

10 South of the Arizona–New Mexico mountains are the continental desert climates, which have
11 not only extreme aridity, but also extremely high air and soil temperatures. Direct sun radiation
12 is extremely strong, as is outgoing radiation at night, causing extreme variations between day
13 and night temperatures and a rare nocturnal frost. Annual precipitation is less than 8 inches
14 (200 mm), and less than 4 inches (100 mm) in extreme deserts. These areas have climates that
15 Trewartha (1968) calls BWh.

16 The region is characterized by dry-desert vegetation, a class of xerophytic plants that are widely
17 dispersed and provide negligible ground cover. In dry periods, visible vegetation is limited to
18 small, hard-leaved or spiny shrubs, cacti, or hard grasses. Many species of small annuals may be
19 present, but they appear only after the rare but heavy rains have saturated the soil.

20 In the Mojave–Sonoran Deserts (American Desert), plants are often so large that some places
21 have a near-woodland appearance. Well known are the treelike saguaro cactus, the prickly pear
22 cactus, the ocotillo, creosote bush, and smoke tree. But much of the desert of the Southwestern
23 United States is in fact scrub, thorn scrub, savanna, or steppe grassland. Parts of this region have
24 no visible plants; they are made up of shifting sand dunes or almost sterile salt flats.

25 A dominant pedogenic process is salinization, which produces areas of salt crust where only salt-
26 loving (halophytic) plants can survive. Calcification is conspicuous on well-drained uplands,
27 where encrustations and deposits of calcium carbonate (caliche) are common. Humus is lacking
28 and soils are mostly Aridisols and dry Entisols.

29 30 3.2.5 Temperate Steppe

31 Temperate steppes are areas with a semiarid continental climatic regime in which, despite
32 maximum summer rainfall, evaporation usually exceeds precipitation. Trewartha (1968)
33 classifies the climate as BSk; the letter k signifies a cool climate with at least 1 month of average
34 temperatures below 32° F (0° C). Winters are cold and dry, summers warm to hot. The
35 vegetation is steppe, sometimes called shortgrass prairie, and semidesert. Typical steppe
36 vegetation consists of numerous species of short grasses that usually grow in sparsely distributed
37 bunches. Scattered shrubs and low trees sometimes grow in the steppe; all gradations of cover
38 are present, from semidesert to woodland. Because ground cover is generally sparse, much soil
39 is exposed. Many species of grasses and other herbs occur. Buffalo grass is typical of the
40 American steppe; other typical plants are the sunflower and locoweed.

1 The semidesert cover is xerophytic shrub vegetation accompanied by a poorly developed
2 herbaceous layer. Trees are generally absent. An example of semidesert cover is the sagebrush
3 vegetation of the middle and southern Rocky Mountain region and the Colorado Plateau.

4 In this climatic regime, the dominant pedogenic process is calcification, with salinization on
5 poorly drained sites. Soils contain a large excess of precipitated calcium carbonate and are very
6 rich in bases. Mollisols are typical in steppe lands. The soils of the semidesert shrub are
7 Aridisols with little organic content, pedogenic and (occasionally) clay horizons, and (in some
8 places) accumulations of various salts. Humus content is small because the vegetation is so
9 sparse.

10

11

3.2.6 Temperate Desert

12 Temperate deserts of continental regions have low rainfall and strong temperature contrasts
13 between summer and winter. In the intermountain region of the western United States between
14 the Pacific coast and Rocky Mountains, the temperate desert has characteristics of a sagebrush
15 (*Artemisia*) semidesert, with a pronounced drought season and a short humid season. Most
16 precipitation falls in winter, despite a peak in May. Aridity increases markedly in the rain
17 shadow of the Pacific mountain ranges. Even at intermediate elevations, winters are long and
18 cold, with temperatures falling below 32° F (0° C).

19 Under the Koppen–Trewartha system, this is true desert, BWk. The letter k signifies that at least
20 1 month has an average temperature below 32° F (0° C). These deserts differ from those at lower
21 latitudes chiefly in their far greater annual temperature range and much lower winter
22 temperatures. Unlike the dry climates of the tropics, dry climates in the middle latitudes receive
23 part of their precipitation as snow.

24 Temperate desert climates support the sparse xerophytic shrub vegetation typical of semidesert.
25 One example is the sagebrush vegetation of the Great Basin and northern Colorado Plateau.
26 Recently, because of overgrazing and trampling by livestock, semidesert shrub vegetation
27 seems to have invaded wide areas of the Western United States that were formerly steppe
28 grasslands. Soils of the temperate desert are Aridisols low in humus and high in calcium
29 carbonate. Poorly drained areas develop saline soils, and dry lake beds are covered with salt
30 deposits.

31

3.3 DROUGHT

32 Drought is a normal, recurrent insidious hazard of nature. It is a temporary component of
33 climate; it differs from aridity, which is restricted to ecosystems, where low rainfall is a
34 permanent feature of climate. On the majority of rangelands managed by the BLM it is not a
35 question of if drought will occur, but rather when it will occur and how long will it persists.

36 Drought may have a variety of definitions dependant upon the economic, social or
37 environmental impacts. Drought originates from a deficiency of precipitation over an extended

1 period of time. Drought is defined by the Society for Range Management as "prolonged dry
2 weather when precipitation is less than 75% of the average amount" (SRM 1989).

3 During drought the quantity of moisture drawn from storage by transpiration increases,
4 exhausting soil moisture early in the growing season. This is reflected in lower water levels in
5 shallow wells and in deep wells subject to recharge in the drought area. High temperatures
6 aggravate the situation by increasing transpiration and evaporation requirements.

7 During drought, low soil moisture levels limit plant growth and thus cause reduced forage yields.
8 Further, root growth is limited making range plants less able to extract scarce soil moisture.
9 Litter, the dead ungrazed portion of the previous season's plant growth, insulates rangeland soils
10 and thus reduces evaporative water loss. When moisture is scarce rangelands with adequate
11 litter reserves produce more forage than those with less litter. During drought grazing at normal
12 stocking levels hasten litter breakdown, intensify drought effects and prolonging range recovery.

13 Grazing early, if growth has begun, during drought will further stress range plants and leave them
14 with lower energy reserves. Over a series of drought or dry years, heavily grazed ranges will
15 show a shift in plant species to weedy, shallow-rooted, less productive species.

16 The results of heavy use during drought include: (1) reduced gains due to increased energy
17 expenditure while foraging, (2) poor body condition in cows by fall and greater wintering costs,
18 (3) more open cows and late conception, which means fewer and smaller calves the subsequent
19 year, (4) a lighter calf crop, and (5) disease problems like dust pneumonia.

20 The watershed goal should be to increase or maintain water infiltration into the soil, rather than
21 overland flow. The best way to accomplish this goal is to maintain a healthy plant community
22 and plant residues (litter) on the soil surface. Failure to maintain plant cover and soil litter,
23 results in accelerated erosion. The long-term consequences of accelerated erosion are a reduction
24 in soil depth, a decline in soil structure and a resultant decrease in infiltration rate and water
25 storage capacity. Wind velocity and its potential to detach and transport dry soil, exponentially
26 increases near the ground as vegetation's sheltering effect is reduced. Substantial nutrient loss is
27 associated with wind erosion.

28 Maintenance of rangeland health during drought requires adjustment of stocking rates to
29 provide forage reserve; monitoring utilization of preferred forage species to make sure that
30 adequate leaf area is maintained to support a healthy root system and assure recovery from
31 drought; maintaining adequate plant and litter cover to prevent soil erosion and maintain long-
32 term site productivity; and, making stocking adjustments before onset of damage to forage plants
33 and soils has occurred. If key species have been lost or severe erosion occurred, recovery may
34 not be possible, even with major restoration efforts or drastic change(s) in grazing management.

35 3.4 GRAZING ADMINISTRATION

36 Excluding Alaska, the BLM administers 164 million acres in grazing allotments. Congressional
37 authority and direction expressed through laws authorize or affect BLM grazing administration

1 on these allotments. These authorities primarily include the Taylor Grazing Act of June 30,
2 1934, as amended; Federal Land Policy and Management Act of 1976; and the Public
3 Rangelands Improvement Act of 1978.

4 The Department of Interior Code of Federal Regulations (CFR), BLM manuals and manual
5 handbooks, Instruction Memorandums, Information Bulletins and Interior Board of Land Appeal
6 orders and decisions further guides the BLM's grazing administration program. The CFR are
7 the regulations that the Department of Interior establishes to carry out the laws enacted by the
8 legislative branch. The regulations that govern grazing administration (excluding Alaska) are
9 contained within 43 CFR Part 4100 Grazing Administration—Exclusive of Alaska.

10 The grazing administration program includes the issuing of permits, leases and annual grazing
11 licenses, inspections to verify that permittees and lessees are in compliance with the terms and
12 conditions of their permits and federal regulations, preparing land use and activity plans,
13 identifying and planning rangeland improvement projects, obtaining livestock management
14 agreements, reviewing base property leases for compliance, and conducting vegetative
15 monitoring studies.

16 17 3.4.1. Issuing, Modifying, or Renewing Permits or Leases

18
19 From 1999 through 2002, the BLM processed 13,098 grazing permits and leases under the
20 Annual Appropriation Act. During the same time period, the BLM processed 10,026 permits.
21 The processed permits reflect those permits issued, which may not be the same as permits
22 expired. The discrepancy is reflected due to transfers of permits, rangeland health assessments
23 or other actions that may result in a new permit being generated. The future projections indicate
24 that the BLM will process 8015 permits in the next 5 years (2003–2007).

25
26 For each of the permits or leases issued, in which there was a change in management (i.e.,
27 grazing dates, species grazing, or season of use), the BLM analyzed the effects according to the
28 NEPA process. The critical environmental elements are analyzed to document whether a
29 consequence occurred or did not occur to the element. While NEPA guidelines contain the
30 process for analysis, the grazing regulations contain no context to the NEPA requirements for
31 permit or lease actions or specify any additional critical elements that must be analyzed prior to
32 the issuance of a permit or lease.

33 34 3.4.2 Implementing Changes in Grazing Use

35
36 The BLM may decrease the permitted use of a permit or lease through the issuance of a
37 suspension. This decrease may be suspended on a temporary basis or on a long term basis. A
38 long term change of permitted use to suspended use is authorized when monitoring or field
39 observations demonstrate that the grazing use is: (1) not consistent with Rangeland Health
40 Standards; (2) causing unacceptable grazing utilization patterns; or (3) when use exceeds
41 livestock carrying capacities.

1 The reduction of grazing use is implemented through the grazing decision process or a
 2 documented agreement with the permittee or lessee. Unless the reduction is needed for
 3 rangeland resource protection, the grazing decision is issued as a proposed decision and then
 4 becomes final through the decision process specified in 4160.1. If the reduction is required for
 5 resource protection the BLM may close the allotment and immediately issue a final decision.
 6 The final decision will usually specify the timing for the reduction. For example, the reduction
 7 is immediately in effect for the grazing season or the reduction is being implemented over a
 8 period of years.

3.4.3 Range Improvements

11 The BLM cooperates in planning and in financial partnership with permittees or lessees and
 12 other entities, i.e. conservation organizations, in the construction of range improvement projects.
 13 Prior to 1982 and from 1995 to present, rangeland improvement projects were held in sole title
 14 to the US Government. From 1982 to 1994, rangeland improvement projects may be held in
 15 joint ownership. The joint ownership is usually in a case where the second party is contributing
 16 financially to a rangeland improvement project. From 1982 to 1994 the BLM developed 25,280
 17 rangeland improvement projects which may or may not be held in the sole title of the US
 18 Government. From 1995 to 2002 the BLM developed 9,684 rangeland improvement projects
 19 which are held in sole title of the U.S. government (Table 3.4.3.1).

Table 3.4.3.1 Number of Rangeland Improvement Projects By State

Fiscal Year	AZ	CA	CO	ID	MT	NM	NV	OR	UT	WY	Total
1982	120	125	280	290	410	209	243	318	227	177	2399
1983	180	103	245	333	481	242	191	491	428	211	2905
1984	120	128	192	245	437	161	165	202	232	183	2065
1985	112	173	181	213	332	148	159	209	188	390	2105
1986	110	88	180	232	312	148	181	149	198	135	1733
1987	114	119	216	231	284	113	159	159	246	238	1879
1988	168	120	275	164	255	155	121	146	257	161	1822
1989	155	70	189	214	246	228	117	190	243	196	1848
1990	142	34	179	233	300	183	141	138	183	183	1716
1991	66	64	267	192	328	180	163	228	145	204	1837
1992	56	46	282	156	329	249	102	160	133	217	1730
1993	61	47	286	147	323	300	62	214	119	134	1693
1994	69	46	213	133	286	218	125	197	107	154	1548
1995	67	44	242	116	159	278	70	241	102	181	1500
1996	44	34	172	91	118	106	70	204	125	98	1062
1997	25	35	225	91	211	118	76	161	118	141	1201
1998	20	38	183	104	224	92	82	161	102	102	1108
1999	29	44	178	133	165	99	111	217	86	167	1229
2000	58	55	243	112	209	106	122	244	140	169	1458
2001	31	41	130	133	141	50	132	140	40	138	976
2002	83	49	180	145	283	49	52	114	34	161	1150

Total	1830	1503	4538	3708	5833	3432	2644	4283	3453	3740	34964
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1 Source BLM Rangeland Improvement Projects System
2
3

4 3.4.4 Involvement of Interested Publics 5

6 The grazing administration program includes a definition for the involvement of interested
7 publics in the decision making process. The regulations define interested publics as an
8 individual, group, or organization that has submitted a written request to the authorized officer to
9 be provided an opportunity to be involved in the decision-making process for the management of
10 livestock grazing on a specific allotment or has submitted written comments to the authorized
11 officer regarding the management of livestock grazing on a specific allotment. Within the
12 present regulations the interested public may decline to participate in the preliminary decision
13 making process (i.e. formulation of a proposed grazing decision), but at a later date may become
14 involved in the final decision making process. In addition, the grazing regulations specify that
15 the BLM will cooperate, within the applicable laws, with state, county, or federal agencies in
16 regard to state cattle or sheep sanitary or brand boards and county or other local weed control
17 districts.
18

19 The BLM is required to consult, cooperate, and coordinate or seek review from the interested
20 publics on the following actions: (1.) Designating and adjusting allotment boundaries; (2)
21 Apportioning additional forage; (3) Reducing permitted use; (4) Emergency closures or
22 modifications; (5) Development or modification of grazing activity plan; (6) Planning of the
23 range development or improvement program; (7) Renewing or issuing grazing permit or lease;
24 (8) Modifying a permit or lease; (9) Reviewing or commenting on grazing evaluation reports;
25 and (10) Issuing temporary nonrenewable grazing permits.
26
27

3.4.5 Authorizing Temporary Changes in Use

28 In Fiscal Year 2002, 18,142 grazing permits or leases were in existence. Grazing permits and
29 leases are normally issued for 10-year terms, but may be issued for less i.e. rule of law, estate
30 rules, and base property lease. For Fiscal Year 2002, the grazing permit system obligated 12.7
31 million Animal Unit Months (AUMs), with 7.9 million AUMs of authorized use and 4.8 million
32 AUMs not used (Table 3.4.5.1).

Fiscal Year	Authorized Use	Nonuse
2002	7,872,819	4,824,362
2001	8,112,008	4,664,361
2000	9,837,588	2,972,899
1999	10,087,988	2,906,895
1998	10,353,032	2,662,271
1997	9,445,482	3,624,694
1996	9,738,638	3,547,697

1 Source BLM Public Land Statistics fy96–02

2
3 Temporary nonuse is typically utilized for permittee or lessee convenience (i.e. personal,
4 financial, etc.) The permittee or lessee may apply for temporary nonuse for up to 3 years and
5 the BLM has the discretion to accept or reject the application for nonuse. The BLM uses other
6 methods, for example permittee or lessee mutual agreements, allotment closures, suspension
7 through grazing decisions, etc., to address resource or vegetative concerns.

8 A permittee or lessee may apply for changes in permitted use that is maintained within the terms
9 and conditions of the permit and the BLM may approve the application. The regulations contain
10 no text to what is meant for “within the terms and conditions of the permit”. If the application is
11 received after the billing notice has been issued the permittee or lessee would be subject to a
12 service charge.

13 3.4.6 Prohibited Acts

14 The grazing regulations contain prohibited acts in which the authorized officer has the ability to
15 withhold issuance, suspend or cancel a grazing permit or lease, free use permit or any other
16 grazing authorization. These prohibited acts are classified under three sections within the
17 grazing regulations.

18 In general, the first set of prohibited acts states that permittees and lessees which perform the
19 prohibited acts listed under subsection 4140.1(a) may be subject to civil penalties (e.g.,
20 cancellation of permit). Included in the list of prohibited acts under section (a), for example, are:
21 "violating special terms and condition incorporated in permits or leases"; "unauthorized leasing
22 or subleasing"; "failing to comply with the terms, conditions, and stipulations of cooperative
23 range improvement agreements or range improvement permits", etc. This first section of
24 prohibited acts is a major vehicle used by BLM to address grazing violations or to take direct
25 action against permittees or lessees who are violating their permit.

26 The second set of prohibited acts classified under 4140.1(b) applies to any persons (not just
27 permittees or lessees) performing the prohibited acts included in this subsection. Anyone that
28 violates these prohibited acts is subject to civil and criminal penalties. Included in this list are
29 things like: "allowing livestock...to graze on [BLM-administered] lands...without a permit or
30 lease"; "damaging or removing U.S. property without authorization"; "molesting, harassing,
31 injuring, poisoning, or causing death of livestock authorized to graze on these lands and
32 removing authorized livestock without the owner's consent"; "littering"; "interfering with lawful
33 uses or users including obstructing free transit through or over public lands by force, threat,
34 intimidation, signs, barrier or locked gates", etc.

35 The third set of prohibited acts is included within 4140.1(c). Performance by a permittee or
36 lessee of any of these prohibited acts is subject to civil penalties. However, there is an important
37 distinction between these prohibited acts and those identified in first two sets. Violations of
38 these acts are subject to civil penalties if the following four conditions are met: (1) public land is
39 involved or affected; (2) the violation is related to grazing use authorized by a BLM-issued

1 permit or lease; (3) the permittee or lessee has been convicted or otherwise found to be in
2 violation of any of these laws or regulations by a court or by final determination of any agency
3 charged with the administration of these laws; and (4) No further appeals are outstanding. The
4 BLM has been unable to find an instance in which the BLM has utilized the third set of
5 prohibited acts to take an adverse action against or penalize a BLM permittee or lessee.

6 3.4.7 Appeals

7 The grazing regulations contain prohibited acts in which the authorized officer has the ability to
8 withhold issuance, suspend or cancel a grazing permit or lease, free use permit or any other
9 grazing authorization. These prohibited acts are classified under three sections within the
10 grazing regulations.

11 In general, the first set of prohibited acts states that permittees and lessees which perform the
12 prohibited acts listed under subsection 4140.1(a) may be subject to civil penalties (e.g.,
13 cancellation of permit). Included in the list of prohibited acts under section (a), for example, are:
14 "violating special terms and condition incorporated in permits or leases"; "unauthorized leasing
15 or subleasing"; "failing to comply with the terms, conditions, and stipulations of cooperative
16 range improvement agreements or range improvement permits", etc. This first section of
17 prohibited acts is a major vehicle used by BLM to address grazing violations or to take direct
18 action against permittees or lessees who are violating their permit.

19 The second set of prohibited acts classified under 4140.1(b) applies to any persons (not just
20 permittees or lessees) performing the prohibited acts included in this subsection. Anyone that
21 violates these prohibited acts is subject to civil and criminal penalties. Included in this list are
22 things like: "allowing livestock....to graze on [BLM-administered] lands...without a permit or
23 lease"; "damaging or removing U.S. property without authorization"; "molesting, harassing,
24 injuring, poisoning, or causing death of livestock authorized to graze on these lands and
25 removing authorized livestock without the owner's consent"; "littering"; "interfering with lawful
26 uses or users including obstructing free transit through or over public lands by force, threat,
27 intimidation, signs, barrier or locked gates", etc.

28 The third set of prohibited acts is included within 4140.1(c). Performance by a permittee or
29 lessee of any of these prohibited acts is subject to civil penalties. However, there is an important
30 distinction between these prohibited acts and those identified in first two sets. Violations of
31 these acts are subject to civil penalties if the following four conditions are met: (1) public land is
32 involved or affected; (2) the violation is related to grazing use authorized by a BLM-issued
33 permit or lease; (3) the permittee or lessee has been convicted or otherwise found to be in
34 violation of any of these laws or regulations by a court or by final determination of any agency
35 charged with the administration of these laws; and (4) No further appeals are outstanding. The
36 BLM has been unable to find an instance in which the BLM has utilized the third set of
37 prohibited acts to take an adverse action against or penalize a BLM permittee or lessee.

38 3.4.8 Fundamentals of Rangeland Health

1 The grazing regulation changes in 1995 initiated the implementation for assessment of
2 allotments for conformance to the standards for rangeland health. In general, these regulations
3 specify that allotments must meet certain standards for rangeland health. The determination of
4 whether an allotment meets or not meets the standards for rangeland health is formulated
5 through an allotment assessment and if available historical monitoring data.

6 When an allotment does not meet one of the standards for rangeland health and livestock grazing
7 is a factor for the standard not being met, the grazing regulations directs the authorized officer to
8 ensure that some type of action (i.e. grazing plan, noxious weed treatment, etc.) to be
9 implemented prior to the start of the next grazing season.

10 At the conclusion of fiscal year 2002, the BLM has assessed 7,437 allotments (58,711,307 acres)
11 of BLM lands. The BLM concluded that 5,671 allotments (32,332,345 acres) met all the
12 standards for rangeland health. The remaining 1766 allotments (26,378,962 acres) did not meet
13 one or more of the standards. Of the 1766 allotments, livestock was the causal factor for 1213
14 allotments not meeting standards. For the 1213 allotments not meeting standards with livestock
15 grazing being a causal factor, 1047 allotments had appropriate action taken by the end of fiscal
16 year 2002 to ensure the allotments are making significant progress towards meeting the
17 standards.

18 19 3.5 VEGETATION

20 21 3.5.1 General

22 The dominant vegetation within the affected environment exists on a type of land that is referred
23 to as rangeland. Rangeland is classified as an area where the natural vegetation is dominated by
24 grasses, forbs, and shrubs and the land is managed as a natural ecosystem (SRM 1999). In
25 addition to providing forage for livestock and wildlife, rangelands also provide clean air, high
26 quality water, habitat for native plant species, open space, and recreational opportunities.

27 Over time, numerous terms have been used to describe rangeland condition. The term "health"
28 gained acceptance when the National Research Council used the term in the title of their 1994
29 report, *Rangeland Health—New Methods to Classify, Inventory, and Monitor Rangelands*.
30 Although this was not the first time "health" was used to describe rangeland condition, it was the
31 first time the term was applied in a broad sense and made available for the general public in a
32 book published for nontechnical audiences.

33 In an effort to provide a definition for rangeland health that multiple audiences could understand
34 and accept, a working task force composed of research institutions, Federal agencies, and private
35 organizations met in 1995 to develop standardized definitions for range management terms.
36 The task force defined rangeland health as "the degree to which the integrity of the soil,
37 vegetation, water, and air, as well as the ecological processes of the rangeland ecosystem, are
38 balanced and sustained. Integrity is defined as maintenance of the structure and functional
39 attributes characteristic of a locale, including normal variability (SRM 1999)."

1 Whereas the soil, vegetation, water, and air are visible components of rangeland health, several
2 essential ecological processes are often overlooked as important factors that contribute to
3 rangeland health. The ecological processes include the water cycle (the capture, storage, and
4 redistribution of precipitation), energy flow (conversion of sunlight to plant and animal matter),
5 and nutrient cycle (the cycle of nutrients through the physical and biotic components of the
6 environment; Pellant 2000). Within normal variation, these ecological processes will enable a
7 rangeland to support a specific plant community.

8 If the ecological processes control the plant community, then management should concentrate on
9 ecological processes to evaluate if rangeland is healthy, since ecological processes determine the
10 composition of the plant community (Pellant 2000, Stringham 2003). Once one of the
11 ecological processes has deteriorated past the point of self repair, the rangeland no longer meets
12 the definition of a healthy rangeland. Managing to maintain stable ecological processes within
13 the plant community contributes to overall rangeland health.

14 3.5.2 Upland

15 In the early 1900s, the rangeland management field was undergoing a formation of theories for
16 the understanding of how vegetation responds to introduced activities, such as livestock grazing,
17 and natural disturbances, such as fire. In 1916 Clements introduced the theory that rangeland
18 has a single persistent state, "the climax" in the absence of grazing (Clements 1916). This
19 theory is referred to as the Clementsian theory of range succession and became widely embraced
20 within the ecological field.

21 The Clementsian theory provides a linear nature of vegetation succession. As described by
22 Stoddard, Smith, and Box (1975) as "retrogression may be caused by drought, fire, or grazing.
23 If this action is temporary, a succession leading back to climax follows." In other words, once a
24 disturbance, i.e. grazing, was removed from an area, that area would return to the vegetative
25 community that existed prior to the disturbance.

26 In 1949, Dyksterhuis utilized the principles of the Clementsian theory to classify the condition of
27 rangeland. This rangeland condition classification and succession process relied on comparing
28 the present vegetation of an area to the vegetation that was thought to be original to the site,
29 referred to as the "climax vegetation" (Dyksterhuis 1949). Using the climax vegetation at the
30 pristine condition, Dyksterhuis proposed classifying rangeland as excellent (climax vegetation),
31 good, fair, or poor. A graphic of the classic range condition model is contained in Figure
32 3.5.2.1.

33 The Dyksterhuis range succession model was adopted worldwide to provide the framework for
34 the management of rangelands. But overtime researchers and land managers recognized that the
35 Clementsian theory and the Dyksterhuis range condition model did not adequately describe the
36 ecological situation that exists in arid and semiarid rangelands. These arid and semiarid
37 rangelands were not returning to the original vegetative community once a disturbance was
38 removed from the system.

1 Westoby et al. (1989) introduced the state-and-transition model that provided the framework for
2 modeling the vegetative changes occurring on arid and semiarid regions. The main departure
3 from the Clementsian theory was that arid or semiarid rangelands may never return to the
4 original vegetative community once a disturbance is removed. The framework they provided
5 allowed for states, "an abstraction encompassing a certain amount of variation in space and time"
6 and transitions "the movement between states".

7 Freidel (1991) added to the state-and-transition model by envisioning that once a threshold is
8 crossed a new state is formed, and without intensive inputs, a return to the original state is not
9 possible. Additional research and comments (Laycock 1991, Tauch et al. 1993, Iglesias and
10 Kothmann 1997, Stringham 2003, and Bestelmeyer 2003) provided additional refinement and
11 illustrated applications of the state-and-transition model.

12 A state-and-transition model for arid and semiarid rangeland contains state, transitions, and
13 threshold definitions:

- 14 • State—A variety of vegetative communities that are a function of the soil complex and
15 the vegetative community that inhabits the complex (Stringham et al. 2003).
- 16 • Transition—A change from the present stable state that is triggered by natural events,
17 management actions, or both (Stringham et al. 2003). A transition can be:
 - 18 ○ Reversible if it occurs within the state and it is possible to return the existing
19 vegetative community back to the original vegetative community without large
20 inputs and is in managerial timeframe
 - 21 ○ Irreversible if the transition crosses a threshold where it is impossible to return to
22 the original vegetative community without large inputs of energy.
- 23 • Threshold—A point in space and time at which a state is no longer able to maintain its
24 present condition. Once this threshold is crossed a new state is formed and it is not
25 possible to revert back to original state without significant inputs.

26 With the incorporation of the additional information, state-and-transition models were and are
27 presently being refined to provide an accurate description of how upland vegetation responds to
28 management activities or natural disturbances. Figure 3.5.2.2 illustrates how a state-and-
29 transition model would be applied to upland vegetation.

30 *Vegetation Types*

31 The classification of vegetation types within the affected environment are displayed in Table
32 3.5.2.1. The map units in Figure 3.5.2.3 represent the subclass level of Table 3.5.2.1. These
33 vegetation types were selected due to their consistency with the Federal Geographic Data
34 Committee and the National Vegetation Classification Standard. The plant communities
35 contained within the 14 vegetation types are listed in Table 3.5.2.3.

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Table 3.5.2.1. Vegetation classification noting the division, order, and subclass of vegetation.

Division	Order	Class	Subclass
Vegetated	Tree Dominated	Closed Canopy	Evergreen Forest
			Deciduous Forest
			Mixed Evergreen–Deciduous Forest
		Open Tree Canopy	Evergreen Woodland
			Deciduous Woodland
			Mixed Evergreen–Deciduous Woodland
	Shrub Dominated	Shrubland	Evergreen Shrubland
			Deciduous Shrubland
			Evergreen Dwarf–Shrubland
			Deciduous Dwarf–Shrubland
	Herb Dominated	Herbaceous Vegetation	Perennial Graminoid
			Annual Graminoid or Forb
			Perennial Forb
	Not included in National Vegetation Classification Standard		

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Table 3.5.2.2. Plant communities depicted within each of the 14 vegetation types.

Vegetation State	Plant Communities within Vegetative State
Evergreen Forest	Subalpine Spruce Fir–Mountain Hemlock, Red Fir, Mixed Sugar Pine, Ponderosa Pine, Ponderosa Pine/Shrub, Ponderosa Pine/Oak–Juniper–Pinyon, Jeffery Pine, Monterey Pine, Bishop Pine, Lodgepole Pine–Douglas Fir, White Fir–Douglas Fir, White Fir–Douglas Fir/Shrub, Douglas Fir–White Fir–Blue Spruce, Coastal Lodgepole Pine, California Bay, Eucalyptus, Inland Douglas Fir, Inland Douglas Fir–Western Red Cedar, Inland Western Red Cedar–Western Hemlock, Douglas Fir–Tanoak–Pacific Madrone, Douglas Fir–Sugar Pine–Ponderosa Pine, Douglas Fir–Ponderosa Pine–Incense Cedar, Pacific Silver Fir, Sitka Spruce, Ponderosa Pine–Lodgepole Pine, Colorado Mixed Forest, Western Larch–Grand Fir, Western White Pine, Grand Fir–Douglas Fir, Western Larch–Douglas Fir, Westside Western Hemlock–Western Red Cedar, Westside Douglas Fir–Western Hemlock,

	Westside Douglas Fir, Mountain Shrub/Clearcut, Costal Redwood
Deciduous Forests	Aspen, Aspen–Conifer, Bur Oak, Cypress, Ash, Maple, Russian Olive
Mixed Evergreen–Deciduous Forest	Combinations of the Evergreen and Deciduous Forest Types
Evergreen Woodland	Subalpine Fir, Knobcone Pine, Limber Pine, Manrean Pine, California Foothill Pine, Juniper, Pinyon Pine, Pinyon–Juniper, Chihuahua–Apache Pine, Madrean Pinyon Juniper
Deciduous Forest	Oregon White Oak, California Oak, Mixed Oak, Mesquite
Mixed Evergreen–Deciduous Woodland	Oregon White Oak–Conifer, California Oak–Conifer
Evergreen Shrubland	Southern Rockies Oak–Mahogany Shrub, Southern Rockies Oak–Manzanita Scrub, Bitterbrush, Interior Chaparral, California Chaparral, Mountain Mohogany, Sagebrush, Sagebrush/Perennial Grass, Rabbitbrush, Salt Desert Shrub, Blackbrush, Creosote–Bursage, Mojave Mixed Scrub, Great Basin Mormon Tea, Joshua Tree, Great Basin Saltbush Scrub, Mojave Creosotebush–Yucca, Shadscale–Mixed Grass–Mixed Scrub, Paloverde–Mixed Cacti–Scrub, Crucifixon Thorn Chihuahuan Creosotebush Scrub, Costal Dune Scrub, Costal Sage, Costal Scrub, Sandsage Shrubland
Deciduous Shrubland	Mesic Upland Shrub/Hardwoods, Warm Mesic Shrub, Greasewood, Hopsage, Catclaw Acacia, Smoketree, Scotch Broom
Evergreen Dwarf Shrubland	No examples on BLM Lands
Deciduous Dwarf Shrubland	Alaska and not within the affected environment of this EIS
Perennial Graminoid	Introduced Wheatgrass (e.g. Crested Wheatgrass, Intermediate Wheatgrass), Meadow, Forest Meadow, Alpine/Subalpine Meadows, Great Basin Grassland California Native Perennial Grassland, Foothills Grassland, Shortgrass Prairie Midgrass Prairie, Tallgrass Prairie, Desert Grassland, Semidesert Tobosa Grass–Scrub, Semidesert Mixed Grass, Chihuahuan Grassland
Annual Graminoid or Forb	California Disturbed Grassland (the annual plant dominated Central Valley portion of California), Cheatgrass/Mustard, Medusahead, Red Brome, Japanese Brome Ventenata, Diffused Knapweed (annual or perennial), Yellow Starthistle
Perennial Forb	Spotted Knapweed, Russian Knapweed, Squarrose Knapweed, Rush Skeletonweed, Canada Thistle, Scotch Thistle (biennial), Whitetop (<i>Cardaria</i> spp.), Leafy Spurge, Mediterranean Sage, Purple Loosestrife, Dalmatian

	Toadflax
Riparian–Wetland	Wet Graminoid, Wet Forb

1

2 *Evergreen Forests*

3 Evergreen forests are a tree dominated landscape. The canopy of the trees has overlapping
4 crowns generally forming 60 to 100% of the vegetative cover. In the evergreen forests subclass
5 the evergreen species contribute greater than 75% of the total tree cover.

6 *Deciduous Forest*

7 Deciduous forests are a tree dominated landscape. The canopy of the trees has overlapping
8 crowns generally forming 60 to 100% of the vegetative cover. In the deciduous forests subclass
9 the deciduous species contribute greater than 75% of the total tree cover.

10 *Mixed Evergreen–Deciduous Forests*

11 Mixed evergreen–deciduous forests are a tree dominated landscape. The evergreen and
12 deciduous species each generally contribute 25 to 75% of the total tree cover. This would
13 include semideciduous, semievergreen, mixed evergreen–deciduous xeromorphic, and mixed
14 needle-leaved evergreen–cold deciduous woody vegetation.

15 *Evergreen Woodland*

16 Evergreen woodland is a tree dominated landscape. The area is classified as open stands of
17 trees with crowns not usually touching. The trees generally form 25 to 60% of the vegetative
18 cover. There are instances when tree cover may be less than 25% in cases when the cover of
19 each of the other life forms present (i.e. shrub, dwarf shrub, herb, nonvascular) is less than 25%
20 and tree cover exceeds the cover of the other life forms. Evergreen species contribute greater
21 than 75% of the total tree cover.

22 *Deciduous Woodland*

23 Deciduous woodland is a tree dominated landscape. The area is classified as open stands of
24 trees with crowns not usually touching. The trees generally form 25 to 60% of the vegetative
25 cover. There are instances when tree cover may be less than 25% in cases when the cover of
26 each of the other life forms present (i.e. shrub, dwarf shrub, herb, nonvascular) is less than 25%
27 and tree cover exceeds the cover of the other life forms. Deciduous species contribute greater
28 than 75% of the total tree cover.

29 *Mixed Evergreen–Deciduous Woodland*

30 Mixed evergreen–deciduous woodland is a tree dominated landscape. The area is classified as
31 open stands of trees with crowns not usually touching. The trees generally form 25 to 60% of

1 the vegetative cover. There are instances when tree cover may be less than 25% in cases when
2 the cover of each of the other life forms present (i.e., shrub, dwarf shrub, herb, nonvascular) is
3 less than 25% and tree cover exceeds the cover of the other life forms. Evergreen and
4 deciduous species contribute 25 to 75% of the total tree cover. This would include
5 semideciduous, semievergreen, mixed evergreen–deciduous xeromorphic and mixed needle-
6 leaved evergreen–cold deciduous woody vegetation.

7 *Evergreen Shrubland*

8 Evergreen shrubland is a shrub dominated landscape. The shrubland classification has shrubs
9 greater than 0.5 meters tall with individuals or clumps not touching to overlapping. The shrub
10 component generally forms greater than 25% of the canopy cover. The tree cover is generally
11 less than 25%. Shrub cover may be less than 25% in cases where each of the other life forms
12 present is less than 25% and the shrub cover exceeds the other life forms. The evergreen shrub
13 species contribute greater than 75% of the total shrub cover.

14 *Deciduous Shrubland*

15 Deciduous shrubland is a shrub dominated landscape. The shrubland classification has shrubs
16 greater than 0.5 meters tall with individuals or clumps not touching to overlapping. The shrub
17 component generally forms greater than 25% of the canopy cover. The tree cover is generally
18 less than 25%. Shrub cover may be less than 25% in cases where each of the other life forms
19 present is less than 25% and the shrub cover exceeds the other life forms. The evergreen shrub
20 species contribute greater than 75% of the total shrub cover.

21 *Evergreen Dwarf Shrubland*

22 There are no examples of evergreen dwarf shrublands on BLM lands.

23 *Deciduous Dwarf Shrubland*

24 Vegetation types included within the deciduous shrubland subclass are located in Alaska and are
25 not within the affected environment.

26 *Perennial Graminoid*

27 A perennial graminoid area is dominated by at least 25% of the total vegetative cover formed of
28 perennial graminoids. Trees, shrubs, and dwarf-shrubs form less than 25% of the total
29 vegetative cover. Perennial graminoid cover may be less than 25% of the total vegetative cover,
30 but it will still exceed the total vegetative cover of other life forms.

31 *Annual Graminoid or Forb*

32 An annual graminoid or forb area is dominated by at least 25% of the total vegetative cover
33 formed of annual graminoid or forb. Trees, shrubs, and dwarf-shrubs form less than 25% of the

1 total vegetative cover. Annual graminoid or forb cover may be less than 25% of the total
2 vegetative cover, but it will still exceed the total vegetative cover of other life forms.
3 Vegetation types included within the annual graminoid or forb subclass are

4 *Perennial Forb*

5 A perennial forb area is dominated by at least 25% of the total vegetative cover formed of
6 perennial forb. Trees, shrubs, and dwarf-shrubs form less than 25% of the total vegetative
7 cover. Perennial forb cover may be less than 25% of the total vegetative cover, but it will still
8 exceed the total vegetative cover of other life forms. Vegetation types included within the
9 perennial forb subclass are

10 *Riparian–Wetland*

11 Various definitions of riparian–wetlands exist in the publications. In general, the riparian–
12 wetland subclass is highly influence by the presence of water in the form of flowing rivers,
13 streams, or creeks or in the form of standing water as in reservoirs, bogs, and pits. Vegetation
14 types within riparian–wetland areas would include wet graminoids and wet forbs.

15 *Other*

16 Other is largely classified as private farm lands and is not within the affected environment.

17 *Condition and Trends*

18 Upland vegetative conditions have been classified by using various methods throughout the
19 years. The present methodology to classify upland conditions utilizes the early seral to potential
20 natural community concept. Under this classification the typical management desire is to have
21 the vegetative community as the potential natural community. Exceptions may exist where
22 management desires a disturbance (i.e., an overgrazed site that would result in an early seral
23 rating) for the management of disturbance related species. The vegetative condition rating
24 from the 2002 National Rangeland Inventory is:

25 Potential Natural Community—6%

26 Late Seral—31%

27 Mid Seral—34%

28 Early Seral—12%

29 Unknown or Unclassified—17%

30 Monitoring and data collection that is used to determine upland conditions is also used to
31 formulate the trend for the upland vegetation. Trend is classified as up, static, down or

1 undetermined. An "up" trend rating is correlated with the upland vegetation progressing toward
2 the potential natural community. A downward trend is correlated with the upland vegetation
3 moving away from the potential natural community. Static trend is classified as the vegetation
4 not moving away from or toward the potential natural community for the upland vegetative
5 communities. The national trend from the 2002 National Rangeland Inventory for vegetation
6 is:

7 Up—21%

8 Static—51%

9 Down—12%

10 Undetermined—16%

11 3.5.3 Riparian

12
13 Riparian areas are a highly productive and unique wetland environment that is found adjacent to
14 rivers and streams. Riparian communities are often referred to as “ribbons of green” in the arid
15 western United States, since in many landscapes, the riparian areas along watercourses provide
16 the only visible green vegetation. Though estimates vary, it is generally agreed that riparian
17 ecosystems comprise less than 1% of the surface area in the 11 western States (Cooperrider et al.
18 1986; Ohmart 1996). Riparian communities in the western States are the most productive
19 habitats in North America (Johnson et al. 1977), and provide irreplaceable wildlife habitat for
20 breeding, wintering, and migration. An estimated 75% of the vertebrate species in Arizona and
21 New Mexico depend on riparian habitat for some portion of their life history (Johnson et al.
22 1977). Numerous classification systems have been developed for riparian communities, but the
23 system proposed by Dick-Peddie and Hubbard (1977) was used for BLM’s Range Reform 1994
24 EIS, and remains appropriate for this effort.

25 26 3.5.3.1 Riparian, Wetland, and Aquatic Communities

27
28 Riparian areas were greatly altered by early grazing practices before 1934, when the Taylor
29 Grazing Act established some control over livestock grazing practices on the public domain
30 (Leopold 1946). Nonetheless, numerous recent studies clearly document that livestock grazing
31 continues to degrade riparian habitats (Elmore and Kaufman 1994; Ohmart 1996; Belsky et al.
32 1999). Although many riparian systems respond quickly to improved management or livestock
33 exclusion, Clary et al. (1996) found that past grazing practices at their study site in eastern
34 Oregon had probably altered habitat conditions so drastically that a wide range of grazing
35 treatments (including no grazing) for a period of 7 years resulted in few differential responses by
36 plants or animals. Natural recovery of native riparian vegetation may be very slow, even with
37 reduction or elimination of cattle grazing due to deterioration of stream condition (downcutting,
38 widening), dominance of nonnative annuals within the riparian area, and loss of native seed
39 sources (Clary et al. 1996). The continuing decline in the condition of many western U.S.

1 riparian areas is partly attributable to the more than doubling of the number of cattle grazing
2 western rangelands between 1940 and 1990 (Trimble and Mendel 1995).

3
4 Riparian areas combine the presence of water, increased vegetation, shade, and a favorable
5 microclimate to create the most biologically diverse habitat found on BLM lands. Riparian areas
6 are highly prized for their recreation, fish and wildlife, water supply, cultural, and historic
7 values, as well as for their economic values related to livestock production, timber harvest, and
8 mineral extraction (BLM 1998). In the semiarid West, healthy functioning riparian areas
9 perform several critical functions:

- 10
- 11 • Improve water quality via filtering and sediment removal
- 12 • Stabilize streambanks
- 13 • Foster soil retention
- 14 • Dissipate stream energy during high flow events (reduced flood damage)
- 15 • Provide water, forage, and shade for wildlife and livestock
- 16 • Act as migration corridors for wildlife and birds
- 17 • Create opportunities for recreation (fishing, camping, picnicking, hiking)
- 18 • Maintain in-stream flows and restore perennial flow
- 19 • Maintain aquatic habitat for healthy fish populations
- 20 • Raise and maintain the water table
- 21 • Increase habitat diversity for wildlife and plants
- 22 • Enhance aesthetics

23
24 Livestock grazing causes numerous changes in plant communities. Removal of streamside
25 vegetation can lead to channel downcutting or incision, which lowers the water table near the
26 stream. As the water table drops, riparian plant species and their associated wildlife species are
27 replaced by upland species (sagebrush and juniper), which can tolerate drier soils (Belsky et al.
28 1999). Removal of vegetation leads to increases in noxious weeds which invade the bare
29 ground. Once established, these weed species crowd out native riparian species and lead to a
30 decline in riparian functioning. Belsky et al. (1999) concluded that many riparian and their
31 associated aquatic habitats have been converted into communities that are now dominated by
32 habitat generalists and weedy species such as cheatgrass (*Bromus tectorum*), cowbirds
33 (*Molothrus spp.*), smallmouth bass (*Micropterus dolomieu*), and by upland or common species
34 such as sagebrush, juniper, and speckled dace (*Rhinichthys oscuslus*).

35
36 Livestock are adapted to mesic habitats, and spend a disproportionate amount of their time in
37 riparian areas. Since riparian areas are among the biologically richest communities in the arid
38 western United States, many of the adverse effects associated with grazing are magnified in
39 riparian habitats (Fleischner 1994). Several studies have shown that damage to riparian habitat
40 as a result of livestock grazing can be reduced by improving grazing methods, herding or fencing
41 cattle away from streams, reducing livestock numbers, or increasing the period of rest from
42 grazing (Armour et al. 1994; Elmore and Kauffman 1994). Studies have shown that improved
43 livestock management allows damaged and denuded streambanks to revegetate and for erosion
44 rates to decline (Elmore and Kauffman 1994). However, Elmore and Kauffman (1994)
45 concluded that the most dramatic and rapid rates of ecosystem recovery are obtained by

1 livestock exclusion. The results of recent studies and literature reviews (Armour et al 1994;
2 Elmore and Kauffman 1994; Ohmart 1996; Belsky et al. 1999) only serve to validate Platts
3 (1982) conclusion that livestock grazing is the major cause of impaired stream and riparian
4 environments and reduced fish populations throughout the arid western United States.

5 6 3.5.3.2 Riparian Conditions and Trends 7

8 In 1993, BLM adopted the Process for Assessing Proper Functioning Condition (BLM 1993) as
9 its standard methodology for determining the condition on riparian resources on public lands.
10 The BLM has aggressively undertaken the task of conducting PFC assessments on its lands,
11 resulting in a decrease of sites classified as Unknown from 55% in 1993 to only 4% in 2001.
12 As a result of its commitment to the standardized PFC assessment technique, BLM has compiled
13 several years of information on the status and trends of riparian conditions on lands under its
14 management.

15
16 Riparian habitat on BLM lands in the lower 48 States include 34,137 miles adjacent to flowing
17 water (lotic systems) and 328,660 acres of riparian habitat associated with standing water (lentic
18 systems). As of October 2001, the condition of approximately 96% of lotic riparian areas on
19 BLM lands in the lower 48 States had been assessed by using the Proper Functioning Condition
20 (PFC) assessment technique (BLM 2002). Overall, 42% were classified as being in Proper
21 Functioning Condition, 43% as Functioning-At-Risk (FAR), 11% as Non-Functional, and 4% as
22 Unknown (see Figure 3.5.3.2.1; BLM 2002). Of the miles in the FAR category, 36% were in an
23 upward trend, indicating that the condition is improving and no changes in management are
24 immediately needed. In September 1990, BLM published its Riparian–Wetland Initiative for the
25 1990’s (BLM 1990). The Initiative set the goal of restoring or maintaining riparian–wetland
26 areas so that 75% or more would be in PFC by 1997. Because only 42% of BLM’s lotic riparian
27 areas were classified as PFC in 2001 indicates that BLM still has a long way to go before this
28 goal is met.

29
30 As of October 2001, the condition of approximately 67% of lentic riparian areas on BLM lands
31 in the lower 48 States had been assessed using the PFC assessment technique (BLM 2002).
32 Overall, 51% were found to be in PFC, 15% in FAR, 2% in Non-Functional, and 32% were
33 Unknown (BLM 2002; see Figure 3.5.3.2.2).

34
35 Over the past 15–20 years, BLM has focused a great deal of its restoration efforts on riparian
36 areas. Riparian areas typically respond quickly to management changes, and in some instances
37 recovery has been dramatic. Many of the restoration efforts have been in highly visible areas,
38 where the public has taken the lead in changing land management practices. Despite several
39 highly publicized and visible successes, trends indicate that the overall improvement in the
40 condition of riparian habitat on BLM lands is minimal. A comparison of lotic riparian
41 conditions on BLM lands in the lower 48 States from 1998 to 2001 shows little improvement in
42 overall condition of riparian areas (Table 3.5.3.2.1). While the percentage of miles in PFC has
43 increased over the 4-year period, the percentage of miles classified as Non-Functional has also
44 increased. The largest change from 1998 to 2001 is in the Unknown category, which dropped
45 from 20% to 4%, demonstrating BLM’s commitment to actively evaluating the condition of its

1 riparian resources. A similar comparison of lentic riparian conditions on BLM lands in the
 2 lower 48 States from 1998 to 2001 shows slightly more improvement in overall condition of
 3 lentic riparian–wetland areas (Table 3.5.3.2.2). The percentage of acres in PFC has increased
 4 over the 4-year period, while the percentage of acres classified as Functioning-at-Risk and as
 5 Non-Functional have changed very little. Once again, for lentic areas the largest change from
 6 1998 to 2001 is in the Unknown category, which dropped from 44% to 32%, demonstrating
 7 BLM’s commitment to actively evaluating the condition of its riparian resources.

8
 9 **Table 3.5.3.2.1**
 10 **Comparison of Condition of Lotic Riparian Habitat on BLM Lands, 1998 vs. 2001**
 11

Condition of Riparian Area	1998		2001		Change (%)
	Total Miles in Lower 48 States	(%)	Total Miles in Lower 48 States	(%)	
Proper Functioning Condition	13,230	36%	14,314	42%	+6%
Functioning-At-Risk	12,900	35%	14,657	43%	+8%
Non-Functional	3,251	9%	3,688	11%	+2%
Unknown	7,310	20%	1,478	4%	-16%

12
 13
 14 **Table 3.5.3.2.2**
 15 **Comparison of Lentic Riparian–Wetland Habitat on BLM Lands, 1998 vs. 2001**
 16

Condition of Riparian Area	1998		2001		Change (%)
	Total Acres in Lower 48 States	(%)	Total Acres in Lower 48 States	(%)	
Proper Functioning Condition	147,923	41%	166,796	51%	+10%
Functioning-At-Risk	45,135	13%	48,320	15%	+2%
Non-Functional	7,557	2%	6,409	2%	0%
Unknown	166,819	44%	107,135	32%	-12%

17
 18 **3.6 FIRE AND FUELS**
 19

20 Recurring fires are often an essential part of the natural environment—as natural as the rain,
 21 snow, or wind (Hardy et al. 2001). Evidence of past fires can be found in charcoal layers of
 22 lakes, in fire scars on trees, and adaptations of many plants. Many ecosystems in North America
 23 are fire dependant (Heiselman 1978).

24
 25 Before European settlement, fire was the most common influence on the landscape in the
 26 Intermountain West (Gruell 1983), and in most of the Southwest (Wright 1990). In the drier
 27 parts of the West, the significance of the effects of fire on vegetation is difficult to separate from
 28 the effects of drought (Wright 1990). Woody species have become dominant in areas where
 29 frequent fires used to control them. Successional changes on some land today probably did not
 30 happen before the 1600s, when frequent fires suppressed woody vegetation (Gruell 1983). A

1 loss of species diversity and site degradation has occurred from human intervention in fire
2 regimes. This has correlated into larger and more severe fires in the last few decades.

3
4 After Europeans settled the West, grazing and cultivation reduced fuels and organized fire
5 suppression began. Thus the number and size of fires was drastically decreased (Gruell 1983;
6 Swetnam 1990). Fire exclusion has had the greatest affect on ecotones, where naturally
7 occurring fires previously removed woody species. Ferry and others (1995) concluded that
8 altered fire regimes was the principal agent of change affecting the vegetative structure,
9 composition, and biological diversity in five major plant communities totaling over 350 million
10 acres in the United States. Leenhouts (1998) compared the estimated land area burned 200–400
11 years ago (preindustrial) to data in the contemporary contiguous United States. The result
12 suggests that ten times more acreage burned annually in the preindustrial era than does in
13 modern times. After accounting for loss of wildland area due to land use changes such as
14 urbanization and agriculture, Leenhouts concluded that the remaining wildland is burned about
15 50% less than fire frequency under historical fire regimes.

16
17 For more than 50 years the fire policy of fire exclusion has had major effects on ecosystem
18 health. The problems have been foreseen for some time. Sixty years ago Weaver (1943)
19 reported that the “complete prevention of forest fires in the ponderosa pine region of California,
20 Oregon, Washington, northern Idaho, and western Montana has certain undesirable ecological
21 and silvicultural effects [and that]...conditions are already deplorable and are becoming
22 increasingly serious over large areas.” Also, Cooper (1961) stated, “...fire has played a major
23 role in shaping the world’s grassland and forests. Attempts to eliminate it have introduced
24 problems fully as serious as those created by accidental conflagrations.” Recently concerns
25 about the loss of biodiversity have surfaced as a result of the suppression of fire.

26
27 In 2000, the fire season was one of the worst on record and thus prompted then President Clinton
28 to ask the Secretaries of Agriculture and Interior to prepare a report that recommends how best
29 to respond to the year’s severe wildfires, reduce the effects of those fires on rural communities,
30 and ensure sufficient firefighting resources in the future (USFS 2000). This report has shaped
31 the role of fire management for the past few years. In August of 2001, the Federal Land
32 Management Agencies published the Ten-Year Comprehensive Strategy, thus setting the stage
33 for fire management practices for the next 10 years. In this document, one of the five key goals
34 is to restore fire-adapted ecosystems. Four guiding principles and eight action items under this
35 goal are the driving forces of fire and fuels treatments that are to enhance ecological health.

36
37 In August of 2002, President Bush visited the Squires fire in Oregon and announced his Forest
38 Health Initiative. This Initiative is meant to help the Federal Land Management agencies to
39 conduct fuels projects in a more efficient manner and stay within the scope of the National
40 Environmental Policy Act (NEPA).

41 42 **3.6.1 Fire Regimes**

43
44 There are many different fire regimes throughout the West. These range from frequent, low-
45 intensity fires to long fire return intervals with stand replacement fires. A standard vegetation

1 type characterizes each fire regime. Fire regimes are classified as: understory, mixed, and stand
2 replacement. The vegetation classes are shrublands, woodlands, and grassland ecosystems.
3 Shrublands include sagebrush, desert shrub, southwestern shrub steppe, and chaparral mountain
4 ecosystems. Woodlands include southwestern ponderosa pine, pinyon–juniper, and oak.
5 Grasslands include plains, mountain, desert, and annual grass ecosystems (Paysen et al. 2000).

6 7 3.6.2 Understory Fire Regimes

8
9 Fires were frequent and of low intensity. Light surface fires burned at intervals averaging less
10 than 10 years and as often as every 2 years (Weaver 1951; Dieterich 1980). All material was
11 consumed on the forest floor during a fire. Trees were not usually killed and the damage was
12 highly variable (Paysen et al.).

13
14 Over the past 100 years, the structural and compositional changes in ponderosa pine have been
15 repeatedly documented (Cooper 1960; Biswell et al. 1973; Brown and Davis 1973). What was
16 once an open, parklike ecosystem maintained by frequent, low-intensity fires is now a crowded,
17 stagnated forest. In addition to stand changes, general fire absence has led to
18 uncharacteristically large accumulations of surface and ground fuels (Kallender 1969).

19
20 Pre-1900 and early 1900s photos document that ponderosa pine stands were much more open.
21 Explorers, soldiers, and scientists described a forest quite different from that seen today. The
22 open presettlement stands, characterized by well-spaced older trees and sparse pockets of
23 younger trees, had vigorous and abundant herbaceous vegetation (Cooper 1960; Biswell et al.
24 1973; Brown and Davis 1973). Frequent naturally occurring fires maintained this situation.
25 Large woody fuels in the form of branches or tree boles, which fall infrequently, rarely
26 accumulated over a large area. When they were present, subsequent fires generally consumed
27 them, reducing grass competition and creating mineral soil seedbeds, which favored ponderosa
28 pine seedling establishment (Cooper 1960).

29
30 In the early 1900s, forest practices and reduced incidence of fire led indirectly to stagnation of
31 naturally regenerated stands and unprecedented fuel accumulation (Biswell et al. 1973). Stand
32 stagnation occurs on tens of thousands of acres throughout the southwest (Cooper 1960;
33 Schubert 1974) and still exists where mechanical treatments or fire have not taken place.

34
35 A combination of heavy forest floor fuels and dense sapling thickets acting as ladder fuels,
36 coupled with drought conditions, frequent lightning, and human-caused ignitions, has resulted in
37 a drastic increase in high-severity wildfires in recent years.

38 39 3.6.3 Mixed Fire Regimes

40
41 The pinon–juniper woodlands cover about 47 million acres in the Western United States (Evans
42 1988). Pinon–juniper woodlands in the United States are commonly divided into the
43 Southwestern and the Great Basin woodland ecosystems on the basis of species composition
44 (Paysen et al. 2000). True pinon is common in the Southwest and is usually associated with one
45 or several species of junipers, including one-seed, Utah, alligator, and Rocky Mountain junipers.

1 Singleleaf pinon is identified with the Great Basin and is generally associated with Utah Juniper.
2 Other species of pinon occur in southern California, Arizona, south of the Mogollon Rim, along
3 the United States–Mexico border, and in Texas (Bailey and Hawksworth 1988). Long-term fire
4 frequencies for pinon–juniper woodlands have not been clearly defined and are the topic of
5 continuing study and discussion. However, there is an agreement that fire was the most
6 important natural disturbance before the introduction of livestock, particularly the large herds of
7 the nineteenth century (Gottfried et al. 1995). It is suspected that before the introduction of
8 livestock use, large areas of savanna and woodland periodically burned. These fires could have
9 occurring during dry years that followed wet years when substantial herbaceous growth
10 developed (Rogers and Vint 1987; Swetnam and Baisan 1996).

11
12 In the Intermountain West, presettlement mean fire intervals of less than 15 years were
13 documented in the sagebrush steppe where western juniper now dominates (Miller and Rose
14 1999). In three sample areas in New Mexico, pinon trees have mean fire return intervals of 28
15 years with a range of 10–49 (Wilkins 1997). In areas of low productivity, fire return intervals
16 could be greater than 100 years, and occurred more frequently in extreme conditions. However
17 where grass cover was more continuous, fire return intervals were more frequent (10 years;
18 Paysen et al. 2000). In the Great Basin, fire susceptibility depends on the stage of stand
19 development (Meeuwig et al. 1990). In young stands, ground cover may be sufficient to carry a
20 fire, but in older stands ground cover is sparser and may not be sufficient to carry a fire.

21
22 In Western oak forest, the fire regimes have been historically classified as frequent low intensity;
23 however, in more recent times these have become more intense with longer return intervals.

24 25 3.6.4 Stand Replacement Fire Regimes

26
27 Vegetation types with this fire regime are varied. Broadly speaking, they include grassland and
28 shrubland vegetation types. Shrublands consist of desert shrublands and the chaparral mountain
29 shrub type.

30
31 Fire frequencies cannot be measured precisely, but most likely occurred every 4 to 20 years
32 (Gruell 1985a). Lightning was probably more important in valleys surrounded by forests than in
33 the grasslands (Gruell 1985b). Fires would burn over large areas in the grasslands, with only
34 natural barriers or weather changes to stop them. These fires would sometimes cover hundreds
35 of square miles (Paysen et al. 2000).

36
37 In Wyoming, big sage fire intervals ranged from 10 to 70 years (Young and Evans 1981; Vincent
38 1992). In arid land, fire history reports fire intervals between 5 and 100 years (Wright 1986).
39 Griffiths (1910) and Leopold (1924) reported that before 1880, desert grasslands produced more
40 grass and fire recurred at approximately 10-year intervals.

41
42 In chaparral, fire intervals for large fires (more than 5,000 acres) typically ranged from 20 to 40
43 years (Wright and Bailey 1982).

44 45 3.7 SOILS

3.7.1 Upland Soils

Soils in the analysis area are highly diverse, reflecting the enormous range in environmental conditions found on public lands in the West. Soil development and formation are controlled by five soil-forming factors: (1) climate, especially temperature and precipitation; (2) living organisms, such as native vegetation, microorganisms, and animals; (3) parent material properties, such as chemical and mineralogical composition, grain size, and resistance to weathering; (4) topographic variables such as slope steepness and shape, aspect, position on the landscape, and drainage pattern; and (5) the relative time soils are subject to the soil forming processes (Jenny 1961). These soil-forming factors have combined in the development of seven major soil orders common on public lands in the West. The soils represented by these soil orders have unique properties that greatly influence the productivity, ability to respond to management, and susceptibility to degradation of the public lands of the West (Figure 3.7.1.1).

Alfisols are moderately leached forest soils that occur in cool, moist regions. They are moderately well developed soils that contain an appreciable clay accumulation in their subsoil. Alfisols are common in the coniferous and deciduous forests and mountain shrub communities at higher elevations, and areas influenced by moist maritime weather patterns in the West. These soils are relatively productive and respond favorably to improved land management practices. Andisols are soils that formed in volcanic ash or other volcanic ejecta. The poorly crystalline volcanic glass composition give them unique chemical and physical properties, including high water-holding capacity and the ability to make large quantities of phosphorus unavailable to plants. These soils are mainly concentrated in forested mountains of the Marine and Temperate Steppe Divisions. They are highly productive and respond favorably to improved land management practices.

Aridisols are soils that developed in very dry conditions. They are light colored; low in organic matter; and may contain accumulations of calcium carbonate, soluble salts, sodium, or gypsum. Aridisols are extensively found in the Temperate Desert and Tropical–Subtropical Desert Divisions and drier regions of the Temperate Steppe and Tropical–Subtropical Steppe Divisions.

They support millions of acres of rangeland vegetation communities such as desert shrub, sagebrush, and pinyon–juniper. Their dry moisture status much of the year and low organic matter content reduces their productivity. This results in a slower or decreased ability to respond favorably to improved land management practices. The typically harsh environmental conditions can also make them more susceptible to degradation from poor land management practices.

Entisols are soils with weakly developed profiles and are considered young in the soil forming processes. They often occur in recently deposited material or on steep, highly erosive topographic positions. Entisols are very extensive on public lands in the West and are most common in the Temperate Desert and Tropical–Subtropical Desert Divisions arid and semiarid environments supporting desert shrub and sagebrush communities. These soils may respond more slowly to improved land management practices and are often susceptible to degradation from poor land management practices.

Inceptisols have more well-developed profiles than Entisols but are still considered young soils with weakly developed profiles. They are widely distributed and occur under a wide range of ecological settings, including steep slopes, young geomorphic surfaces, and resistant parent

1 materials. Inceptisols are common in the coniferous and deciduous forests of mountainous
2 portions of the Marine and Temperate Steppe Divisions, are fairly productive when provided
3 adequate moisture, and respond well to improved land management practices.

4 Mollisols are characterized by a thick, dark surface horizon with high organic matter content.
5 These fertile soils are extensive in the grasslands of the Temperate Steppe, Mediterranean,
6 Temperate Desert and Tropical–Subtropical Steppe Divisions. Mollisols support the plains
7 grassland, chaparral–mountain shrub, mountain and plateau grasslands, higher precipitation
8 sagebrush steppe, and coniferous–deciduous forest community types with an appreciable grass
9 understory. These soils are highly productive and respond well to improved land management
10 practices.

11 Vertisols are soils very high in clay content that have extreme shrink–swell properties. These
12 soils are found on minor acreage in the Mediterranean, Tropical–Subtropical Steppe, and
13 Temperate Steppe Divisions. Vertisols support a variety of grassland and shrubland vegetation
14 communities. These soils present considerable engineering problems, including fence building.

15 Depending on available rainfall, Vertisols can be productive and respond well to improved land
16 management practices.

17 The long-term productivity and health of the soil depends on maintenance of the soil physical,
18 chemical and biological properties in a favorable condition. Water and wind erosion are
19 influenced by climate, topography, soil properties and condition, watershed cover, and land use.

20 Cover is especially important in protecting the soil from the erosive forces of water and wind.
21 Live plant cover and litter intercept precipitation, reducing raindrop effect and overland flow,
22 and allowing more infiltration and less runoff and erosion. Cover and soil surface roughness
23 also reduce wind speed, thus minimizing wind erosion.

24 Upland rangeland water erosion processes include sheet–rill erosion, gully erosion and
25 landslides. Sheet–rill erosion is less noticeable but is very widespread and can slowly reduce
26 the productivity of rangeland soils. Gully erosion is more noticeable and can alter the
27 hydrology of the landscape. Uplands on many rangeland landscapes have an extensive gully
28 network, replacing former grass-covered swales. This has altered water flow patterns, resulting
29 in increases in size and frequency of runoff events and sediment yield to streams. Landslides
30 mainly occur on very steep slopes with enough precipitation to saturate the soil to a restrictive
31 layer and are not prevalent on the majority of rangelands.

32 Soil compaction can result from persistent trampling or vehicle traffic during periods when the
33 soil is moist and least able to resist structural degradation. Soil compaction can reduce water
34 infiltration, water movement through the soil profile, water availability to plants, and soil
35 aeration, and increase runoff.

36 Soil organisms have a profound effect on the maintenance of soil productivity and health.
37 Biological soil crusts play a critical role in carbon and nitrogen fixation, soil surface stability,
38 and reduction of annual grass invasion in many rangeland ecosystems. They can also influence
39 infiltration, runoff, and soil moisture retention depending on crust structural characteristics, soil
40 surface texture, and other factors. Many rangeland shrubs and bunchgrasses depend on
41 mycorrhizal fungi to help them obtain water and nutrients. Soil bacteria are important in
42 nitrogen fixation and formation of stable soil aggregates on rangelands. Bacteria are capable of
43 filtering and degrading a large variety of humanmade pollutants in the soil and groundwater so
44 that they are no longer toxic. Soil arthropods and other soil animals create large soil pores
45 essential for infiltration and soil water movement. They also help mix soil layers and

1 incorporate soil organic matter into the soil. These and other soil organisms help maintain the
2 soil food web that is essential for cycling of nutrients and other vital functions on rangelands.
3 As much as 90% of rangeland productivity occurs in the soil (Coupland and Van Dyne 1979).
4 Soil organisms depend on soil organic matter to survive. Any activities that permanently reduce
5 soil organic matter content will have a profound effect on rangeland health and long-term
6 productivity.

7 8 3.7.2 Riparian 9

10 Riparian soils are formed by sediment eroded from adjacent uplands and deposited in the valley
11 bottoms, stream sediment deposition during overbank flooding, lateral deposition of sediment
12 from stream meander migration, and sediment deposition on lake bottoms and shores. The
13 pedogenic properties of riparian soils dominantly result from repeated periods of saturation,
14 flooding or ponding. Saturation combined with anaerobic, without oxygen, microbial activity
15 often causes a depletion of oxygen in the soil. This process can result in the accumulation of
16 organic matter and the reduction, translocation, or accumulation of iron, manganese, sulfur, or
17 other reducible elements (USDA Natural Resources Conservation Service 1998). These
18 processes create complex patterns of soil characteristics, such as texture, age, and degree of
19 formation, over relatively small areas in riparian systems.

20 Riparian soils are vitally important for capturing, storing, and releasing water in riparian areas,
21 supporting productive vegetation communities, groundwater recharge, perching groundwater,
22 streambank formation, storing nutrients, filtering pollutants, streambank erosion protection, and
23 determination of sediment characteristics. Disturbances which result in reduction of plant cover
24 or deep rooting characteristics, streambank sloughing, accelerated erosion, compaction, loss of
25 the capability to perch water, or other soil characteristics can degrade the functional integrity of
26 a riparian area.

27 28 3.8 WATER RESOURCES 29

30 3.8.1 Riparian Hydrology

31 Riparian communities support several hydrological interactions that benefit the overall
32 ecosystem. Vegetation overhanging streambanks helps regulate water temperature, indirectly
33 maintaining dissolved oxygen levels needed for aquatic life. Dense vegetation and relatively
34 level slopes slow runoff from uplands as it passes through the riparian zone, thereby allowing
35 sediment to be deposited and groundwater to recharge. Similarly, natural floodplain
36 obstructions, like vegetation, control overbank flooding. Being fed by alluvial groundwater,
37 streams often remain perennial during dry seasons and extended droughts. In addition to
38 overbank flooding and upland runoff, groundwater is recharged during high flows through
39 channel banks.

40 Stream channels formed in alluvium depend upon the adjacent riparian zone for their stability.
41 Channels regulate the energy of flowing water by adjusting channel features, including width
42 and depth, streambed slope, and the roughness of the channel bed and banks. (Features such as
43 vegetation, bed materials, and gravel bars cause Roughness.) Streams functioning in a state of

1 dynamic equilibrium, in which there is a balance between erosion and deposition, experience no
2 net loss or gain in sediment load. As flow and sediment supply vary, channel features adjust in
3 an attempt to achieve a new balance.

4 The adjustments observed are all in factors related to the dissipation or conservation of energy,
5 and to the distribution of energy expenditure (Leopold 1994).

6 Riparian communities are degraded by on and off-site disturbances. Sensitive hydrologic
7 interrelations exist between the condition of uplands and their associated riparian communities.
8 Uplands in nonfunctioning condition often experience accelerated surface runoff, higher
9 sediment yields, and increased erosion within the channel systems (DeBano and Schmidt 1989).
10 Direct disturbance, resulting from removal of protective riparian vegetation, decreases the
11 function and stability of the riparian community.

12 Stream-riparian systems experiencing increases in runoff and sediment from upland disturbances
13 or increased susceptibility to erosion from direct disturbances often cannot adjust their channel
14 features to achieve equilibrium. If sediment increased beyond the stream's ability to carry it,
15 channels tend to aggrade and form multiple interwoven braided channels. In another type of
16 system, where channel erodability or streamflow is increased, with relatively low sediment
17 production, channels will erode.

18 Streams with coarse-textured substrates and fine-textured banks tend to laterally erode,
19 becoming shallower and wider, often creating braided conditions. Stream channels with fine-
20 textured substrates, common at lower elevations, usually erode vertically, forming gullies.

21 Shallow and wide streams are sensitive to overgrazing because the stability of their bank
22 depends on the type and vigor of the streamside vegetation. Such streams are considered
23 hydrologically nonfunctioning because streamflow and sediment supply are not in balance and
24 these streams have lost many beneficial riparian functions: overbank flooding, floodplain
25 sediment deposition and soil forming processes, alluvial groundwater recharge, maintenance of
26 water quality, and reduction of peak flows.

27 When disturbance factors are removed, most riparian-stream systems begin a relatively rapid
28 recovery toward proper functioning condition. Incised or laterally widened streams, however,
29 with low sediment yields, with or without fluctuating flow patterns, do not recover rapidly.

30 3.8.2 Water Quality

31 The primary water quality issues associated with livestock grazing on Federal lands in the study
32 area are nonpoint source pollutants, including: sediment, fecal coliform bacteria (used as an
33 indicator for other fecal-borne pathogens), nutrients, and salinity.

34 The Water Quality Act of 1987 (P.L. 100-4) sets forth agency responsibility for nonpoint source
35 water quality management on public lands (Section 313).

1 It is recognized that Best Management Practices (BMPs) are the primary mechanism for
2 enabling the achievement of water quality standards. The BLM strategy by which nonpoint
3 source controls including BMPs are selected to achieve water quality standards includes the
4 following iterative process: (1) design of BMPs based upon site specific conditions, technical,
5 economic, and institutional feasibility, and the water quality standards of those waters potentially
6 effected; (2) monitoring to ensure that practices are correctly designed and applied; (3)
7 monitoring to determine: a) the effectiveness of practices in meeting water quality standards, and
8 b) the appropriateness of water quality criteria in reasonably assuring protection of beneficial
9 uses; and (4) the adjustment of BMPs when it is found that water quality standards are not being
10 protected to a desired level, or the possible adjustments of water quality standards on the basis of
11 considerations in 40 CFR 131.

12 The leading causes of nonpoint source water quality impairment are siltation (sediment),
13 nutrients, bacteria, metals (primarily mercury), and oxygen depleting substances. Water
14 pollution threatens public health both directly through the consumption of contaminated food or
15 drinking water, and indirectly through skin exposure to contaminants present in recreational or
16 bathing waters. Contaminants that threaten human health include toxic chemicals and
17 waterborne disease causing pathogens such as viruses, bacteria, and protozoan.

18 In Water Quality Act Section 305(b) reports to the Environmental Protection Agency (EPA) in
19 2000 the 11 western states that contain lands managed by the BLM reported that, statewide,
20 aquatic life on 63% of their stream miles assessed were supported or threatened. Thus, 36% of
21 the stream miles assessed were partly or not supporting aquatic life. Nonpoint sources of
22 pollution from urban and agricultural lands are reported as the leading source of water quality
23 impairment.

24 BLM participates in a Federal program directed by the Colorado River Salinity Control Act (P.L.
25 98-569) to reduce salt loading in the Colorado River. Salt concentrations on Federal lands are
26 highest in marine shale geologic settings, where annual precipitation averages less than 12
27 inches.

28 It has been estimated that Federal land contributes 8% of the total salt load of the Upper
29 Colorado River Basin from nonpoint sources (BLM 1980). Salinity from nonpoint sources
30 increases with sediment yield. Vegetation cover is the most important management variable
31 influencing runoff and sediment yields (BLM 1987). Salinity and vegetation management are a
32 consideration in all projects initiated in the Colorado River Basin.

33 3.9 AIR QUALITY

34 The Clean Air Act of 1990(P.L. 101-549) required the EPA to develop standards for the
35 maximum concentration of certain pollutants that should appear in healthy ambient air. These
36 standards are called National Ambient Air Quality Standards (NAAQS). The EPA has establish
37 NAAQS for seven criteria pollutants: Oxides of Sulphur (SOX), Oxides of Nitrogen (NOX),
38 Ozone (O₃), Carbon Monoxide (CO), Particulate Matter with a diameter less than 10 microns
39 (PM10), Particulate Matter with a diameter less than 2.5 microns (PM2.5) and lead. The EPA

1 reevaluates the NAAQS periodically to ensure the limits accurately reflect the most present
2 health data for air pollution.

3 Regions are required to monitor ambient area for compliance with NAAQS standards. If a
4 region exceeds a standard for a pollutant, EPA can designate the area as a non-attainment area.
5 Nonattainment areas then must submit plans to EPA called State Implementation Plans (SIPs)
6 that show the limits and regulations the region will impose as well as modeling data to show
7 EPA the SIP will bring the area into compliance with the NAAQS standard.

8 Attainment regions are regulated by Prevention of Significant Deterioration (PSD) requirements.
9 To ensure that the levels of pollutants in clean air areas do not rise unnecessarily, the Clean Air
10 Act separates areas into PSD Class I, II, and III designations depending on the need for
11 significant protection.

12 PSD Class I areas, predominantly National Parks and certain wilderness areas, have the greatest
13 limitations. Virtually any degradations would be significant. Areas where moderate,
14 controlled growth can occur are designated PSD Class II. PSD Class III areas allow the greatest
15 degree of effects.

16 A total of 114 Class I areas have been designated in the EIS area, consisting predominantly of
17 lands administered by the National Park Service, U.S. Fish and Wildlife Service, and the Forest
18 Service. Most Class I areas are in mountainous regions, but some are at lower elevations. All
19 BLM-administered lands are classified PSD Class II.

20 The air quality above most western Federal lands cannot be easily described, since monitoring
21 data have not been gathered for most pollutants outside urban areas. In less-developed portions
22 of the West however, ambient pollutant levels are expected to be near or below the measurable
23 limits. Less developed areas with large amounts of dry or disturbed vacant lands can, however,
24 approach or even exceed the NAAQS for PM10, since large amounts of particulate matter can be
25 produced by strong winds blowing over vacant lands.

26 3.10 WILDLIFE

27 3.10.1 Terrestrial

28 3.10.2 Migratory Birds

29 3.10.3 Riparian, Wetland, and Aquatic Communities

30

31 Riparian ecosystems are extremely productive and offer a unique combination of habitat niches
32 for fish and wildlife. Riparian communities provide abundant food, shelter, and water, and are
33 used extensively by wildlife at all stages of their life history. Riparian ecosystems are important
34 for a wide range of physical and biological features, including:

35

- 36 • Dense vegetation cover for shelter, shade, nesting, and resting
- 37 • Presence of surface water and abundant soil moisture
- 38 • Diverse vegetation structure provides a range of habitat types
- 39 • Linear nature provides protected pathways for wildlife migration

1
2 Numerous studies have documented the effects of livestock grazing and trampling on aquatic
3 and riparian species in the western United States. Belsky et al. (1999) summarized these effects
4 and their effects on various species groups. Their findings are summarized as follows:
5

- 6 • Fish species diversity, abundance, and productivity decline due to higher water
7 temperatures, increased turbidity, lower summer flows, decreased dissolved oxygen,
8 damaged spawning beds, loss of plant cover, fewer insects, and decreased hiding cover.
9 These habitat changes lead to loss of salmonids and other cold-water species, loss of
10 avian and mammalian predators, and replacement of cold-water aquatic species with
11 warm-water species.
- 12 • Aquatic invertebrate abundance, diversity, and species composition is altered by higher
13 water temperatures, increased fine sediments, lower dissolved oxygen levels, and lower
14 late season flows. Alteration of the aquatic invertebrate community results in loss of
15 species that require clean, cold water and coarse substrate, increase in algae feeders,
16 fewer palatable species, and less food for higher trophic levels.
- 17 • Amphibian and reptile abundance and species composition declines as a result of loss of
18 prey base, loss of thermal cover and protection from predators, increased aridity, and
19 decreased vegetation structure. Declines in amphibian and reptile numbers leads to loss
20 of biodiversity and prey for higher trophic levels and loss of native species.
- 21 • Bird diversity, abundance, and species composition is altered due to reduction in food,
22 water quality and quantity, loss of perches, nesting sites, and protective plant cover. The
23 alteration of bird species composition results in a reduction in biodiversity, replacement
24 of riparian specialists by upland species and generalists, and loss of some neotropical
25 migrants.
- 26 • Mammal diversity, abundance, and species composition is often altered due to loss of
27 food sources, change to a warmer, drier, more exposed environment, and behavioral
28 modifications such as avoidance of livestock. Changes in the mammal population lead to
29 changes in predator-prey relations, lessened beaver activity and loss of wetlands they
30 create, and replacement of riparian species with upland species and generalists.
- 31 • The abundance of threatened and endangered species is reduced due to loss of habitat,
32 disturbance, livestock herbivory, competition with livestock, and habitat fragmentation.
33 The reduction in the abundance of threatened and endangered species could lead to
34 possible extinction.
35

36 Due to their importance to a wide range of both terrestrial and aquatic species, riparian
37 ecosystems serve as repositories for biodiversity throughout the West (Belsky et al. 1999).
38 Several studies have shown that livestock grazing has led to a decline in neotropical migratory
39 birds that utilize riparian habitat (Saab et al. 1995). The declines are particularly apparent for
40 ground-nesting species and species that forage in riparian areas with heavy shrub or ground
41 cover (Saab et al. 1995). Riparian areas attract a disproportionate number of migrating birds and
42 provide primary habitat for waterfowl and shorebirds (BLM 1994). Wet meadow areas and
43 riparian zones serve as critical feeding and watering sources for sage grouse (Hockett 2002).
44 Larger vertebrate species also depend on riparian areas. Mule deer and elk use riparian areas for
45 food and cover and for travel and migration corridors (Thomas et al. 1979). Pronghorn antelope

1 use riparian areas extensively in summer (Cooperrider et al. 1986). Flather et al. (1994)
2 reported that livestock grazing was the fourth leading cause of species endangerment in the U.S.
3 and the second leading cause of plant endangerment. The same report also found that within the
4 Arizona Basin and the Colorado–Green River Plateau, livestock grazing is the primary cause of
5 species being federally listed as threatened or endangered. Livestock grazing often indirectly
6 affects wildlife associated with spring and seep ecosystems. Throughout the west, seeps and
7 springs have been altered, and in many cases completely dewatered, in order to provide water for
8 livestock. Springs are developed and their water is piped to a trough or pond, resulting in loss of
9 riparian vegetation and the animals that are dependant on the natural spring ecosystem.
10 Springsnails are aquatic mollusks that occur primarily as relict populations of formerly
11 widespread species (BLM 2001). There are several species of springsnails on the federal
12 endangered species list and numerous others are found on BLM sensitive species lists.
13 Livestock grazing directly effects springsnail populations through trampling, spring channel
14 alteration, and degradation of water quality (Frest 2002).

15 16 3.10.3.1 Cold Water Fisheries

17
18 Fish populations are directly affected by changes in riparian habitat. Numerous studies
19 document reduced trout populations as a result of habitat loss and degradation caused by
20 livestock grazing (Platts 1991; Behnke 1992). Ungrazed streams on the Tonto and Santa Fe
21 National Forests had twice as many trout and twice the trout biomass as did grazed streams
22 (Rinne and Lafayette 1991). The native cutthroat trout population in Huff Creek, Wyoming,
23 increased from 36 fish per mile to 444 fish per mile in response to livestock exclusion followed
24 by improved livestock management (Chaney et al. 1990). Measurements showed that Huff
25 Creek’s channel narrowed by about one-third, doubled in depth, and water temperatures declined
26 in response to changes in livestock management (Chaney et al. 1990). BLM’s efforts to protect
27 and expand populations of native cutthroat trout have been hampered by livestock grazing in
28 some areas. Changes in riparian and aquatic habitat due to livestock grazing often give
29 nonnative trout a competitive advantage over native trout (Griffith 1988). Increased sediment
30 loads and higher summer water temperatures due to riparian degradation favor exotic introduced
31 trout species over native cutthroat trout (Stefferd 1988).

32
33 Streamside grazing removes vegetation, leading to warmer water temperatures due to loss of
34 shade, and higher levels of sediment in the stream as a result of increased soil erosion. Increased
35 sediment can smother fish eggs in spawning areas and lead to reduced abundance of young fish.
36 Livestock remove vegetative cover and compact soils, which slows the rate of water percolation
37 and infiltration, resulting in unnaturally high and frequent runoff events. The increased erosion
38 and subsequent frequent flood events alter cold water fish habitat by filling pools and substrate
39 with silt, uprooting riparian vegetation, widening stream channels, and lowering water tables
40 (Bock et al. 1992). Wider and shallower stream channels provide less hiding cover for fish and
41 leave them more susceptible to predation. There is a clear and documented connection between
42 the health of upland vegetation and the health of riparian communities and aquatic habitat.
43 Chaney et al. (1993) noted that accelerated runoff from uplands triggers downcutting of soft
44 substrate streams. The downcutting lowers both the streambed and water table, desiccates the
45 riparian area, destabilizes streambanks, and increases erosion and further accelerates runoff.

1 The cumulative effect of declining riparian condition is that coldwater species such as trout and
2 salmon decline, and are replaced by less valuable and more tolerant species (Belsky et al. 1999).

3
4 Livestock grazing has major effects on stream channel morphology. As the protective riparian
5 vegetation is removed, livestock shear off streambanks and the banks begin to erode (Bowers et
6 al. 1979). After the streambanks become broken down and eroded, the stream channel becomes
7 wider and shallower. Wide shallow streams have much greater surface area exposed to solar
8 radiation and evaporation. Eroding streambanks contribute excessive sand and silt accumulation
9 over the stream substrate, leading to loss of aquatic invertebrates and smothering of fish eggs
10 (Armour 1978).

11
12 Figure 3.10.3.1.1 shows the sequential degrading of a stream channel and its associated riparian
13 community (BLM 1993). A healthy riparian community protects streambanks from erosion and
14 maintains a high water table and productive habitat for fish and aquatic invertebrates (State A in
15 Figure 3.10.3.1.1). As the stream channel erodes, the wet meadow areas become disconnected
16 from the water table and dry out (State B in Figure 3.10.3.1.1). Sagebrush and rabbitbrush
17 encroach on the site resulting in a reduction in the amount and quality of forage. In the absence
18 of protective riparian vegetation, the stream channel is likely to become incised and form a new
19 base level (State C in Figure 3.10.3.1.1). Once the channel becomes incised, it is classified as
20 nonfunctional. Over time, the incised channel widens and a new floodplain begins to develop at
21 the new base level (State D in Figure 3.10.3.1.1). Figure 3.10.3.1.2 shows the stages in the
22 recovery of a stream-associated riparian area.

23 24 25 3.11 SPECIAL STATUS SPECIES

26 3.12 WILD HORSES AND BURROS

27
28 The Wild and Free-roaming Horse and Burro Act of 1971, as amended, states that wild horses
29 and burros are living symbols of the historical West and, as such, contribute to the diversity of
30 life forms within the Nation. It is the policy of Congress that wild and free-roaming horses and
31 burros shall be protected and managed for a thriving natural ecological balance within areas they
32 were found in 1971. These Herd Management Areas (HMAs) are found in 10 western States—
33 Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, and
34 Wyoming. Appropriate managements levels (AMLs) are or will be established on all Herd
35 Management Areas by 2005. The estimated AML for the Bureau is __ horses and __ burros.
36 Removals are conducted on HMAs that exceed these levels, and excess animals are either
37 adopted by qualified persons or transported to long-term holding facilities in the Midwest to live
38 out their lives. Management on the range to reduce and maintain viable populations consists of
39 selective removals, fertility control, population modeling, gathering of genetics information, and
40 research applications.

41
42 At the end of the 1992–1993 gather season (July to February), there were __ horses and __ burros
43 occupying 208 HMAs. Horses are not removed during the foaling season, which is March
44 through June. Burros are not removed during peak summer months (July through August)
45 because of the heat.

1
2 Wild horses use the same forage species—usually grasses and forbs—and water sources as
3 livestock. Wild horses and burros range significant distances from water to graze and do not
4 normally congregate around water. Burros tend to be browsers, using shrubs, forbs, and some
5 grasses. Wild horses normally move in bands with numbers ranging from 2 to 40 animals.
6 Burros are more solitary but will form small bands of jennies and their offspring. Within an
7 HMA, wild horses move into the higher country in summer (because of high temperatures and
8 insects) and lower country in winter (to avoid snow). Most of the burros are located in southern
9 California, southern Nevada, and Arizona. Their movements are temperature-related; they are
10 mostly looking for shade in summer. During the rainy season, they will disperse looking for
11 available forage.

12
13 Wild horses and burros will affect upland and riparian areas when their numbers are not kept in
14 balance with the available resources. Achieving and maintaining AMLs are important
15 components of any management system.

16 17 3.13 RECREATION

18
19 Public lands managed by the BLM provide important recreational opportunities in the western
20 United States in the form of camping, sightseeing, hiking, horseback riding, off-highway vehicle
21 activities, water activities, hunting, fishing, snow activities, and other specialized or newly
22 emerging interests. The recreational setting varies from primitive, nonmotorized access onto
23 the public lands to dispersed motorized activities and to highly developed access on paved scenic
24 drives and overlooks. Most recreational uses depend on the natural qualities of the land and a
25 limited number of facilities to aid in use and access. Some recreational activity includes use of
26 livestock for riding or packing and may include grazing of those animals on the public lands.

27
28 The availability of the public lands for recreation contributes to many regional economies in the
29 West. In 2002, recreational use exceeded 67 million visitor use days to BLM-administered
30 lands. Demand for newly developed sites and facilities and greater availability of public lands
31 for dispersed or primitive recreational activities is increasing in some areas. Increasing interest
32 is most evident in regions near urban areas and where populations are rapidly growing.

33
34 Intensive recreation occurs at approximately 2,700 developed sites. Less than 1% of BLM-
35 administered rangeland contains developed recreation sites and facilities. More than half of all
36 recreational visits to the public lands are dispersed visits. Dispersed recreation depends on
37 open landscapes, with few developments, that allow for self-initiated exploration and discovery.
38 Most areas providing dispersed recreation opportunities are utilized for livestock grazing.
39 Where water and adjacent riparian areas exist, recreational use occurs during all or a portion of
40 many visits. Riparian areas account for approximately 1% of BLM-administered rangeland.

41
42 Recreational use permits are issued for competitive and commercial activities. These include
43 off-highway vehicle races, outfitter and guide services, equestrian races, sightseeing tours, and
44 festivals. Recreational use permits are also issued for individuals and groups at many
45 developed sites, high-use areas, and environmentally sensitive areas. Permits may limit the

1 number of visitors to an area at any one time. Recreation permits usually require a fee and, in
2 2002, brought revenues of more than \$9 million to BLM.

3
4 Public lands administered by BLM contain diverse scenic and visual resources. In many areas,
5 expansive views, steep terrain, colorful and varied geology, or appealing plant communities
6 create highly scenic settings. In other areas where scenery may be plain, openness and limited
7 development create a pleasing aesthetic. These qualities attract visitors for the purpose of
8 sightseeing, as well as to form the backdrop for many outdoor activities.

10 3.14 SPECIAL AREAS

11 The Bureau of Land Management (BLM) provides special management consideration for public
12 lands possessing unique and important historical, anthropological, ecological, biological,
13 geological, and paleontological features. These lands include undisturbed wilderness tracts,
14 critical habitat, natural environments, open spaces, scenic landscapes, historic locations, cultural
15 landmarks, and paleontologically rich regions. Management designations for public lands
16 containing special features are created by Congress, presidential proclamation, or established
17 under BLM administrative procedures. BLM manages these special areas to preserve, protect,
18 and evaluate significant components of our national heritage.

19 3.14.1 National Landscape Conservation System

20 The National Landscape Conservation System (NLCS), established in June 2000 by the BLM,
21 provides guidance, organization, and leadership for protecting many of the Nation's most
22 remarkable and beneficial working landscapes (Figure 3.14.1.1). The NLCS consists of
23 National Monuments, designated by the President, and congressionally designated National
24 Conservation Areas, National Wilderness Areas, Wilderness Study Areas (also designated by
25 agency), National Wild and Scenic Rivers, and National Scenic and Historic Trails (descriptions
26 follow). The NLCS contains 828 units totaling approximately 15% (42 million acres) of BLM-
27 managed public land—an area larger than the State of Florida. These NLCS units provide
28 preservation, protection, conservation, and enhancement of open space; solitude; recreation
29 opportunities; and scientific, cultural, educational, and ecological values, while allowing
30 compatible resource uses.

31 NLCS remote wildlands and working landscapes, managed within the BLM multiple-use
32 framework, provide sources of livelihood as well as havens of solitude and peacefulness.
33 Specifically, livestock grazing, an authorized activity within the NLCS is managed through
34 existing applicable law, regulation, and proclamation.

35 The following definitions briefly describe the NLCS units:

36 National Monument: A National Monument is an area designated by the President, under the
37 authority of the Antiquities Act of 1906, to protect objects of scientific and historical interest that
38 are located on Federal lands.

1 National Conservation Areas: Areas are designated by Congress to provide for the conservation,
2 use, enjoyment, and enhancement of certain natural, recreational, paleontological, and other
3 resources, including fish and wildlife habitat. The BLM presently manages 13 National
4 Conservation Areas encompassing a total of nearly 4 million acres.

5 Wilderness: An area designated by Congress and defined by the Wilderness Act of 1964 as a
6 place "where the earth and its community of life are untrammelled by man, where man himself is
7 a visitor who does not remain." Designation is aimed at ensuring that these lands are preserved
8 and protected in their natural condition. Wilderness areas, which are generally at least 5,000
9 acres or more in size, offer outstanding opportunities for solitude or a primitive and unconfined
10 type of recreation; such areas may also contain ecological, geological, or other features that have
11 scientific, scenic, or historical value. The BLM manages 148 Wilderness Areas encompassing
12 6.3 million acres.

13 Wilderness Study Area: An area designated by a Federal land management agency (Bureau of
14 Land Management, Forest Service, National Park Service, or the Fish and Wildlife Service) as
15 having wilderness characteristics, thus making it worthy of consideration by Congress for
16 wilderness designation. While Congress considers whether to designate a Wilderness Study
17 Area (WSA) as permanent wilderness, the Federal agency managing the WSA does so in such a
18 way as to prevent impairment of the area's suitability for wilderness designation. The BLM
19 manages 604 WSAs encompassing 17.2 million acres.

20 Wild and Scenic River: A river or river section designated by Congress or the Secretary of the
21 Interior, under the authority of the Wild and Scenic Rivers Act of 1968, to protect outstandingly
22 remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural, or other similar
23 values and to preserve the river or river section in its free-flowing condition. The law
24 recognizes three classes of rivers—wild, scenic, and recreational. The BLM manages 36 Wild
25 and Scenic Rivers (20 percent of the national system) amounting to 2,056 miles of river,
26 equaling about 1 million acres.

27 National Scenic Trail: These trails were designated by Congress under the National Trails
28 System Act of 1968, as an extended trail that offers maximum outdoor recreation potential and
29 provides enjoyment of the various qualities—scenic, historical, natural, and cultural—of the
30 areas through which these trails pass. The BLM manages portions of the Continental Divide
31 and Pacific Crest National Scenic Trails, amounting to 641 miles of trail.

32 National Historic Trail: These trails were designated by Congress under the National Trails
33 System Act, as an extended trail that follows as closely as possible the original trails or routes of
34 travel with national historical significance. Designation identifies and protects historical routes
35 and their historical remnants and artifacts for public use and enjoyment. A designated trail must
36 meet certain criteria, including having a significant potential for public recreational use or
37 interest based on historical interpretation and appreciation. The BLM manages nine National
38 Historic Trails totaling 3,623 miles, including the Iditarod, Juan Bautista De Anza, California
39 Immigrant, Nez Perce, Lewis and Clark, Oregon, Mormon Pioneer, Pony Express, and the El
40 Camino Real de Tierra Adentro.

1 BLM manages other special designation areas outside of the NLCS including Areas of Critical
2 Environmental Concern, Research Natural Areas, National Natural Landmarks, and National
3 Recreation Trails.

4 3.14.2 Areas of Critical Environmental Concern

5 Areas of Critical Environmental Concern (ACEC) are BLM designations meant to highlight
6 public lands where special consideration is warranted. BLM establishes and manages ACECs
7 to protect and prevent irreparable damage to historical, cultural, and scenic values; fish or
8 wildlife resources; as well as other natural systems or processes. ACECs can also be
9 established to protect human life and provide safety from natural hazards. The designation
10 recognizes that an area has significant values, and that those values will be protected through
11 planned special management measures. ACEC resources and values must be accommodated as
12 directed through their designation documents when planning for future management actions and
13 land use proposals.

14 3.14.3 Research Natural Areas

15 Research Natural Areas (RNAs) contain important ecological and scientific values and are
16 managed for minimum human disturbance. RNAs are primarily used for nonmanipulative
17 research and baseline data gathering on relatively unaltered community types. Since natural
18 processes are allowed to dominate, RNAs also make excellent controls for similar communities
19 that are being actively managed. In addition, RNAs provide an essential network of diverse
20 habitat types that will be preserved in their natural state for future generations. BLM manages
21 152 RNAs containing over 300,000 acres.

22 3.14.4 National Natural Landmarks

23 BLM cooperates with the National Park Service to implement the National Natural Landmarks
24 Program. The program recognizes and encourages the conservation of outstanding examples of
25 natural history. Landmarks are designated by the Secretary of the Interior and are the best
26 examples of biological and geological features in both public and private ownership. The
27 program includes 45 Landmarks comprising over 4000,000 acres.

28 3.14.5 National Recreation Trails

29 The Recreational Trails Program provides funds to develop and maintain recreational trails and
30 trail related facilities. The program supports both nonmotorized and motorized recreational trail
31 pursues.

32 3.15 PALEONTOLOGICAL AND CULTURAL RESOURCES

33

34 3.15.1 Paleontological Resources

1 Paleontological resources are the remains of plants and animals preserved in soils and
 2 sedimentary rocks. They are important for understanding past environments, environmental
 3 change, and the evolution of life. Federal legislation (e.g., Federal Land Policy and
 4 Management Act, National Environmental Policy Act) directs agencies to manage
 5 paleontological resources to preserve them for scientific and public uses.

6 The BLM has more than 25 million acres of sensitive, fossil-bearing geological deposits on
 7 western BLM-administered land. The fossils range in age from the Precambrian (more than 500
 8 million years ago) to the recent (the last 10,000 years) and include examples of all extinct and
 9 living phyla.

10 Paleontological remains range from mammoths associated with the Ice Ages about 10,000 years
 11 ago to the microorganisms associated with the earliest evidence of life some 2.8 billion years
 12 ago. Paleontological items discovered on Federal land include dinosaur remains in Nevada,
 13 Utah, Colorado, Wyoming, California, and Montana; fossil fish deposits from the Green River
 14 Formation; insect and plant fossils found in Nevada; and large petrified trees in Arizona and
 15 Nevada.

16 Paleontological resources can be found in any sedimentary formation or soil deposition context,
 17 but badlands shale, sandstone, limestone outcrops, fault scarps, and eroded lands have a high
 18 potential for containing fossils.

19

20 3.15.2 Cultural Resources

21 Cultural resources consist of the fragile and nonrenewable remains of human activity. Cultural
 22 resources are divided into cultural properties and traditional lifeway values. Cultural properties
 23 consist of historic districts, sites, buildings, objects, and artifacts that are important in past and
 24 present human events. A group's shared traditional lifeway values are abstract, nonmaterial,
 25 ascribed ideas that cannot be discovered except through discussions with members of the group.
 26 A traditional lifeway value is important for maintaining a specific group's traditional system of
 27 religious belief, cultural practice, or social interaction. Lifeway values may or may not be
 28 closely associated with definite locations.

29 About 15,475,300 acres of the 264,200,000 acres of BLM-administered lands have had cultural
 30 resource inventories. The results of cultural resource inventories are shown in Table 3.15.2.1;
 31 significant areas are listed by designation in Table 3.15.2.2. (Public Land Statistics 2001)

32 Table 3.15.2.1. Bureau of Land Management Cultural Resource Inventory Data.

Total BLM-administered lands (acres)	Total acres inventoried	Percentage of lands inventoried	Number of cultural properties recorded	Number of cultural properties eligible for the National Register of Historic Places
264,200,000	15,475,300	5.9%	255,252	13,952

33

34

1 Table 3.15.2.2. Bureau of Land Management Significant Cultural Resource Areas.
 2
 3

Designation	Number
National Historic Trails	15 (total mileage: 26,373 miles)
Properties listed on the National Register of Historic Places	4,206
National Historic Landmarks	22
World Heritage Sites	5

4 Cultural resources are managed through several legal authorities, but mainly through the Section
 5 106 (National Historic Preservation Act) compliance process.¹ Before authorizing surface
 6 disturbance, the BLM must identify cultural properties eligible for inclusion on the National
 7 Register of Historic Places and consider the effects of the proposed undertaking through the
 8 consultation process in Section 106 of the National Historic Preservation Act (NHPA) of 1966,
 9 as amended. This process is implemented in accordance with 36 CFR 800. In many States,
 10 procedures for adapting the process to local needs have been developed through programmatic
 11 agreements between the BLM, the State Historic Preservation Officer, and the Advisory Council
 12 on Historic Preservation.

13 Section 106 of NHPA does not prohibit disturbing cultural resources. In fact, an authorized
 14 officer may permit activities that damage or destroy them. In addition, mitigation is required
 15 only if disturbance would affect a property's attributes that make it eligible for the National
 16 Register.

17 In recent years, with an awareness and appreciation of cultural properties and traditional lifeway
 18 values, the inventory, protection, stabilization, and enhancement of cultural resources have
 19 become integral parts of BLM practices.

20 3.15.3 Cultural Resources Through Time

21 Cultural resources in the United States extend back to the earliest human migrations to the
 22 Western Hemisphere, some 15,000 years ago. These resources range from isolated artifacts, to
 23 small-scale habitation sites, to complex agricultural villages and densely populated pueblos, to
 24 natural landscape features of special significance. Prehistoric human occupations were rarely

¹ Legal authorities are the Antiquities Act of 1906, Recreation and Public Purposes Act of 1926, Historic Sites Act of 1935, Reservoir Salvage Act of 1960 as amended by the Archaeological and Historic Preservation Act of 1974, National Preservation Act of 1966, National Environmental Policy Act of 1969, Executive Order 11593 ("Protection and Enhancement of the Cultural Environment"), Federal Land Policy and Management Act of 1976, American Indian Religious Freedom Act of 1978, Archaeological Resources Protection Act of 1979, Native American Graves Protection and Repatriation Act of 1990, Executive Order 13007 ("Indian Sacred Sites"), and Executive Order 13287 ("Preserve America").

1 uniform over large areas, particularly where there were significant ecological changes over short
2 distances. Consequently, site types, sizes, and densities are extremely variable.

3 Across the western region, however, water was (and continues to be) one of the most important
4 factors affecting human settlement and survival. As such, many prehistoric, historic, and
5 modern era cultural properties are located near or around water sources.

6 Prehistoric cultural resources have been organized into early, middle, and late periods, with the
7 early period commonly referred to as Paleoindian (15,000–8,000 years ago), the middle period
8 as Archaic (8,000–2,000 years ago), and the final period as Late Prehistoric (2,000–200 years
9 ago).

10 Cultural resources from the Paleoindian period are found in high-elevation coniferous and
11 deciduous forests as well as lower elevation plains grasslands and in areas of the desert
12 Southwest, mainly near water sources and in alluvial and colluvial soil deposits. People
13 surviving during this period often hunted megafauna, such as mammoth and giant bison, that are
14 now extinct.

15 Prehistoric cultural resources from the Archaic period reflect a shift from an exploitation of
16 megafauna to an emphasis on hunting and collecting a variety of resources, such as fish, large
17 and small game, and edible plants and nuts. Hunting sites, plant gathering sites, and temporary
18 camps are probably scattered in most western ecosystems.

19 Beginning about 2,000 years ago, the Archaic period phased into the Late Prehistoric period with
20 the introduction of agriculture, ceramics, the bow and arrow, and sedentary lifeways as major
21 adaptive elements. In general, site types and patterns were similar during archaic times except
22 where lifeways shifted to an agricultural base.

23 The Prehistoric era began blending into the Historic era in 1492 when Europeans started
24 migrating to and settling in the Americas; however, the Historic era did not start at the same time
25 everywhere across the West. In the Southwest, the historic period began in the 1500s with the
26 Spanish *entrada*. In the Pacific Northwest and the Great Basin, significant Euro-American
27 migrations did not begin before the middle of the 1800s; in the Rocky Mountains and Plains the
28 Historic era did not begin until the exploitation of the region by the fur trade in the late 1700s
29 and early 1800s. As many Euro-Americans moved north and west, they took with them a
30 lifeway emphasizing livestock ranching; in the Southwest, ranching began as early as the 1600s,
31 whereas in the northern areas it began in the 1850s. The identity of many small towns and
32 communities in the West is associated with this tradition.

33 Cultural properties related to the Historic era continue to include indigenous remains such as
34 Indian agency buildings and missions. A majority of historic resources in the West, however,
35 are artifacts, sites, and landscapes associated with early Euro-American exploration, the fur
36 trade, mining, logging, ranching, farming, transportation, manufacturing, and early urban
37 development.

1 Beginning about 1900, the Historic era merged into modern times. At the turn of the century,
2 the picture of the "Wild West" was changing; the people and places that characterized the
3 "western frontier"—the cowboys, outlaws, Indians, prospecting miners, and military cavalry—
4 were all fading into memory as stories and icons of a bygone era. American society began to
5 shift from a largely rural society to a more urban society. People moved off of farms and
6 ranches into the big cities with increasing industrialization. Native Americans were settled onto
7 reservations with a government policy of assimilation and acculturation. Many mining towns
8 boomed only to become busted ghost towns within a few decades.

9 These recent changes can be seen in an array of cultural resources and traditional cultural
10 properties. Depression and later era mining camps, abandoned rural hamlets and post offices,
11 World War II bases and installations, artifacts and objects left behind by migrant sheep herders,
12 Civilian Conservation Corps construction works and camps, or even the Interstate Highway
13 System, all document the changing West.

14 Despite attempts at assimilation and settlement, many Native American tribes have held onto
15 their traditional lifeways and beliefs. They have continued to use their environment to gather
16 native plants, animals, and minerals for use in religious ceremonies, folk medicine, subsistence,
17 and crafts. They have maintained treaty rights into the Modern era to exploit traditional plant
18 gathering and hunting areas. For Native American tribes and individuals, any environment can
19 contain specific places that are significant for spiritual purposes. Those sacred places
20 embodying spiritual values are often associated with indigenous rock art, medicine wheels, rock
21 cairns and effigy figures, spirit trails and spirit gates, caves, rock formations, and springs or
22 lakes. Contemporary use areas are associated with traditional plant and mineral collection
23 locales, vision quest sites, sun dance grounds, shrines, and traditional trails.

24 The traditional western ranching lifeway also has an associated landscape characterized by
25 livestock on the range, developed springs, wells and watering tanks, and fencelines. It also
26 contains a series of potential traditional cultural properties that include wild horse traps, corrals,
27 ranch houses, sheep herding camps, shearing pens, loading chutes, grange halls and community
28 centers, and one-room school houses. Notwithstanding the radical and sometimes rapid changes
29 the West underwent through the 20th century, western ranching lifeways carried forward a
30 significant part of the world's image of America and America's image of itself. Modern western
31 ranching communities have traditional activities, social behaviors, and values that are part of the
32 Nation's historical, cultural, and natural heritage.

33

1 3.16 ECONOMIC CONDITIONS

2 3.17 SOCIAL CONDITIONS

3
4 Demographic Trends

5
6 The West is the fastest growing region in the United States. Table 3.17.1 indicates that the
7 populations of all but two of the States in the West grew at rates greater than the Nation as a
8 whole from 1990 to 2000. The populations of five States grew faster than 25% during this
9 period, with Nevada growing by more than 66%. In addition, the West as a region grew faster
10 than other regions in the country. While the nation as a whole grew about 13%, the West grew
11 more than 19%, far outpacing the Northeast and Midwest in population growth.

12
13 As a region, the West is the most urbanized area in the United States. Urbanization is the
14 proportion of a population that lives in urban areas. Table 3.17.2 shows that more than 88% of
15 the population of the West lived in urban areas in 2000. This proportion is even greater than the
16 heavily urbanized northeastern region. Nationally, 79% of the population lived in urban areas
17 in 2000. Seven States in the West exceeded the national urban proportion, with six States
18 having more than an 80% urban population. This proportion grew rapidly for some western
19 States. Urban populations in Idaho and Oregon grew at 9% and 8%, respectively, between 1990
20 and 2000. Where growth occurs will significantly determine its effect on uses of and
21 involvement in the politics of public lands. Growing pressure to use public lands for recreation
22 and solitude will continue to come from population growth in both urban centers and rural
23 places.

24
25 A relevant trend is the relation between the amount of public land and population growth in
26 western counties. In creating a typology of rural counties, the Economic Research Service
27 (ERS) of the U.S. Department of Agriculture designated a county as a "Federal Lands County" if
28 federally owned lands made up 30% or more of a county's land area in 1987. In the eleven
29 western States in 1994, ERS classified 89 counties as metropolitan counties; 128 as
30 nonmetropolitan, nonpublic land counties; and 194 as nonmetropolitan, public land counties
31 (Cook and Miser 1994). Population growth rates from 1990 to 2000 differed for these three
32 categories of counties. Table 3.17.3 displays population change during this period for
33 metropolitan, nonmetropolitan, and nonmetropolitan public land counties in the West. The
34 proportion of the population in western States accounted for by metropolitan counties was stable
35 at about 87% from 1990 to 2000. However, nonmetropolitan public land counties grew by 25%
36 more than the period, much faster than the other two types of counties. While the West was
37 growing rapidly as a region, public land counties were growing faster as a group than other
38 counties. Such growth is changing the social context of ranching throughout the West (Sheridan
39 2001).

40
41 Ranchers

42
43 These population trends, their cause, and numerous arguments concerning their effect on
44 communities are well documented. Migration is clearly the major force underlying this
45 population growth (Nord and Cromartie 1997; McGranahan 1999). In addition, the role of

1 physical amenities, quality of life, proximity to designated wilderness, and other arguments are
2 frequently forwarded as both a cause of migration to public land counties and as a policy goal
3 (Clark and Murphy 1996; Duffy-Deno 1998; McGranahan 1999; Deller et al. 2001; Hansen et al
4 2002; Lorah and Southwick 2003).

5
6 The effect of these population changes on ranches is difficult to generalize because ranchers and
7 ranch operations in the West present a very heterogeneous population. The local and regional
8 variations in terrain, climate, and ecological systems are almost matched by local and regional
9 differences in the social, economic, and institutional contexts within which ranches operate
10 (Gentner and Tanaka 2002). Each ranch has a unique economic structure, participates in a
11 certain type of regional economy, has a particular type of family relation to the business, and
12 maintains certain types of ties to a local community and a larger regional, possibly urban, area
13 (Darden et al. 2001). Ranchers make decisions in different ways for different reasons, and will
14 therefore experience differing social effects from changes in their economic, social, and
15 institutional relations. This heterogeneity must be accounted for to understand potential social
16 effects on ranchers, their operations, and their communities.

17
18 Gentner and Tanaka (2002) provide a comprehensive classification of public land grazing
19 permittees. A random sample of 2000 ranchers was drawn from more than 21,000 Bureau of
20 Land Management (BLM) and U.S. Forest Service (USFS) permittees and evaluated by using a
21 mail survey. A set of rancher attributes was used to capture goals and objectives of ranchers,
22 educational attainment, business organization, number of livestock, sources of labor, income by
23 source, debt load and financial stress, and other social and economic indicators. Cluster
24 analysis identified eight groups of ranchers on the basis of these attributes. Two general groups
25 emerged—hobby ranchers (50.5%) and dependent ranchers (49.5%). The two main groups are
26 differentiated most notably by their dependence on ranch income for their livelihoods: the hobby
27 group received less than 22% of their family income from the ranch, whereas the dependent
28 group received more than 72% of their income from the ranch (see Table 3.17.4). This
29 detachment of the ranch operation from the majority of household income for more than half of
30 this sample has social ramifications. Part-time and hobby ranchers may retain attitudes and
31 local social ties similar to full-time ranchers and be relatively immune to the economic
32 fluctuations of ranching. The motivation and ability of these ranchers to remain in ranching
33 even under difficult economic circumstances may actually be higher than those relying directly
34 on the ranch for their livelihood.

35
36 The general characteristics and percentage of the Gentner and Tanaka (2002) sample for each
37 group are as follows:

38
39 Small Hobbyist (11%): Small operations, small herds, lowest dependence on ranch income, high
40 dependence on off-ranch income, highly educated, slightly lower dependence on Federal forage.

41
42 Retired Hobbyist (18%): Older, small operations, higher dependence on ranch income, very high
43 dependence on retirement income, slightly lower dependence on Federal forage.

1 Working Hobbyist (15%): Highest dependence on off-ranch income, youngest, small operations,
2 ranching the longest, highest dependence on Federal forage among hobbyists.

3
4 Trophy Hobby Rancher (6%): Large operations, large deeded acreage, highest use of hired labor
5 among hobbyists, highest reliance on corporate organizations among hobbyists, highly educated.

6
7 Diversified Family Rancher (13%): Dependent on ranch income, more diversified into other
8 nonranching income sources, smallest herd size among professional ranches, relative
9 dependence on family labor, highest reliance on sole proprietorship as business organization,
10 higher reliance on Federal forage.

11
12 Dependent Family Rancher (19%): Highest dependence on ranch income, lowest diversification
13 into other income sources, least educated, highest debt load, highest reliance on formal
14 partnerships for ranch business organization, higher reliance on Federal forage.

15
16 Corporate Rancher (13%): High reliance on ranch income, largest herd size, large deeded
17 acreage, lowest reliance on Federal forage among professional ranches, high reliance on
18 corporations as business organization.

19
20 Sheep Herder Rancher (4%): Depend on sheep for primary ranching operations, large herds,
21 large deeded acreage, highest use of hired labor, highly dependent on ranch income, highest
22 dependence on Federal forage.

23
24 Clearly, permittees have very different attributes, motivations, and goals. An important
25 question concerns whether ranchers seek to maximize profit or whether other factors are as
26 important or even primary in explaining why ranchers continue in a difficult environment.
27 Many studies lead to a firm conclusion that most ranchers do not hold maximizing profit as their
28 sole, or even primary, goal in ranching (Smith and Martin 1972; Harper and Eastman 1980;
29 Bartlett, 0 et al. 1989; Torell et al. 2001; Rowe et al. 2001). Smith and Martin (1972) used such
30 terms as "farm fundamentalism" to describe social motivations for ranching when economic
31 returns were consistently poor. Bartlett et al. (1989) found that an ethic of the land and the role
32 ranching plays in family life were important to Colorado ranchers. Rowe et al. (2002) provided
33 a confirmation that rural ways of life coupled with family concerns were more important to
34 ranchers in two Colorado counties than profit alone.

35
36 Gentner and Tanaka (2002) found that professional ranchers valued family tradition, ranching as
37 a good way to raise a family, living closer to friends and families, desire to pass the ranch on to
38 children, and return on investment more than did hobby ranchers (See Table 3.17.5).

39 Maintaining a family tradition and passing the ranch on to children were the most highly ranked
40 goals for both categories of ranchers, resulting in no significant statistical difference between
41 categories. Other goals did show significant differences. Professional ranchers strongly
42 believed that ranches were a good place to raise a family, to stay near friends and family, as well
43 as to pursue profit. Hobby ranchers did not hold these goals as strongly.

44

1 Significant family labor is required for some of the ranchers in this sample. Table 3.17.6 shows
2 that most of the professional ranchers require from 20 to 27 months of family labor to run the
3 ranch. This is mixed with very different levels of hired labor. Diversified and dependent
4 professional ranchers use little hired labor in relation to use by corporate and trophy ranchers.
5 The nature of sheep ranching requires significant hired labor in addition to the two full-time
6 family laborers required to run a modern operation.

7
8 The social environment of ranching therefore has multiple dimensions. With the exception of
9 the trophy hobbyists, the permittees in the Gentner and Tanaka survey had family tenure on their
10 ranches of well over 20 years, with most having tenure of 30 years or more. Most of these
11 permittees have ranched as Federal grazing permittees for decades and are familiar with the
12 growing complexities and stress associated with being a public land grazer.

13
14 This willingness to accept low economic returns to meet other goals is also reflected in the
15 economics of ranch real estate. Torell and Bailey (2000) estimated that only 27% of the value
16 of New Mexico ranches is related to their livestock productivity. Thus, recent buyers of New
17 Mexico ranches are motivated not by their value to produce livestock, but rather by a host of
18 other values commonly associated with ranches. Torell and Bailey found wildlife amenities,
19 proximity to a population center, and type of terrain were more important determinants of ranch
20 sale prices than cattle operations. These new ranchers, along with new residents, bring different
21 demands for space as an amenity (Huntsinger et al. 1997; Bastian et al. 2002; Inman et al. 2002).

22 Even in this environment, many ranches continue to operate with the knowledge that the ranch
23 can be sold at a significant premium to people with other interests in the land.

24 25 Communities

26
27 As mentioned previously, populations in the rural West have grown dramatically over the last
28 decade. Population growth complicates any assessments of how changes in public land policy
29 might affect ranches and the communities in which they operate. To understand the broader
30 implications range policy changes may have for a community, a discussion of four general social
31 forces affecting communities is necessary. These four community social organization processes
32 occur within and are affected by the social interactions in rural communities, their social and
33 economic histories, and other factors.

34
35 Differentiation is the process of expanding the range of values and interests represented in a
36 community. In the West, this is presently influenced by population growth and the decreasing
37 reliance on traditional resource industries for employment. As population increases, social
38 diversity increases and brings about differentiation in the needs, demands, and expectations
39 people have of their community. Economic and employment changes can result in greater
40 differentiation of occupational characteristics in the community, along with shifts between
41 interest groups that enter into community interaction. This process often produces short-run
42 social conflict as those seeking some ideal about their rural community clash with those who
43 lives are not compatible with that ideal (Walker 2003). In addition, conflict over how to view
44 "nature," ranching, and landscapes in general seems to be inherent in the process of

1 differentiation (Chilson 1997; Eisenhauer et al. 2000; Hull et al. 2001; Sheridan 2001; Paolisso
2 2002; Bieling and Plieninger 2003).

3
4 Extra-local linkage is a process through which resources and demands flow back and forth
5 between communities and the larger society. This is best viewed as the extent to which local
6 institutions, economies, and decision makers are influenced by people and social processes
7 outside of the community, and the extent to which they might call on those resources for support.

8 Issues like public land management are highly visible and increase local linkages to extra-local
9 social units. In this sense, public land controversy engenders a higher degree of extra-local
10 linkages to outside groups. Population growth stemming from the conscious choice to move to
11 a public land community implies that people will bring their extra-local social networks with
12 them, complete with values, attitudes, and beliefs. Further, the very nature of the Federal public
13 land management process engenders significant extra-local involvement in decisions affecting
14 local communities. The opportunities of many different groups, local and extra-local, to
15 become directly involved in decisions affecting even small changes in management is much
16 greater in this arena than are opportunities to affect private land decisions.

17
18 Stratification refers to the differential distribution of access to resources for meeting needs
19 among populations. This is one of the most important processes—perhaps the most important
20 process. It has wide-ranging implications for local populations. A primary social process
21 affected by public land policies is the distribution of access to local economic opportunity. As
22 traditional resource industries (timber, mining, ranching) are supplanted by the new resource
23 industries (commodification of nature and its amenities), the economic opportunity structure,
24 family status, and arrangements of social power in communities change as well. For example,
25 ranching communities have historically been stratified by access to and control of property
26 (Stinchcombe 1961). Ranchers continue to hold property in greater proportion to most local
27 people, but many landowners now have significant access to land, wealth, and political power,
28 both local and extra-local. In addition, this change is accompanied by a shift in the nature of the
29 local economy. This shift puts significant pressure on ranchers and other residents: "The irony
30 of the New West is that newcomers attracted to diverse imaginaries of rural lifestyles often make
31 real rural livelihoods unavailable" (Walker 2003; see also Jobes 1987). Thus, significant
32 dimensions of stratification now include access to employment that allows families to live well
33 and remain in the community.

34
35 Integration is the process by which relations among people in a community are coordinated and
36 interconnected. This is the most complex and rich aspect of social organization, for it focuses
37 on the process of organizing and focusing the activities of various elements of a community.
38 Cohesion, attachment, density of acquaintanceship, social capital, and sense of place are all
39 examples of social relations either derived from or dependent on social integration. Increased
40 differentiation and extra-local linkages present specific challenges for integration, but also carry
41 the potential for new forms of integration to emerge. The degree of integration in a community
42 before the implementation of a policy determines, to a great degree, the ability of that
43 community to take any actions necessary to manage change (Harp et al. 2001). Sufficient
44 community integration is a necessary condition for communities to take action to mitigate social
45 and economic effects of policy decisions (Wilkinson 1970, 1991). Low levels of integration are

1 often associated with community discussions and decisions being dominated by small groups
2 whose interests may not be attributable to the community as a whole. This is historically the
3 situation in rural communities dominated by one industry, such as timber. However, the
4 question is less one of dominance than it is one of the generalized legitimacy of the decisions
5 being made. Hence, a small group may make a decision and the community as a whole
6 generally agrees with both the process and the outcome of the decision. Thus, social integration
7 plays a part in the legitimization of the decisions.

8
9 These organization processes overlap and interact, sometimes working in concert and other
10 times not. Examples of their application to ranching communities are presented in Table 3.17.7.

11 Few empirical studies of how these processes play out in ranching communities are available.
12 These processes and their relations to local economic processes in ranching are reviewed in Harp
13 et al. (1998).

14
15 One related example is a study that examined the relations between social network ties and
16 community cohesion, integration, and attachment in Owyhee County, Idaho (Harp et al. 2001).
17 Seven communities were examined and survey methods were used to estimate the importance of
18 social networks and to construct scales of community cohesion, community integration, and
19 community attachment. Cohesion is high when social relations between people produce a sense
20 of belonging to a group with shared beliefs and common behavioral assumptions, and a feeling
21 of recognition as members of that group (Buckner 1988; Jensen 1998; McClure and Broughton
22 2000; Rajulton, et al. 2003). In essence, people come to see themselves as part of a larger social
23 group that shares their own beliefs and actions. Integration is high when people do not feel
24 isolated or anonymous in their community, and can participate actively in community life
25 (Brown et al. 1989). Activities that are evidence of integration include visiting, and borrowing
26 and lending between neighbors. When integration is high, people are more willing to trust their
27 neighbors in both a social and material fashion (Brown 1993; Cowell and Green 1994).
28 Attachment is high when people feel a strong sense of social connection to their community that
29 makes them reluctant to leave or withdraw from social relations (Kasarda and Janowitz 1974;
30 Goudy 1990; Brown 1993; Liu et al. 1998).

31
32 Social networks are patterns of repeated relations between social actors. They have a number of
33 conceptually useful attributes, such as the number or strength of social ties to family and friends.

34 The standard measure of "density of acquaintanceship" was applied. This is the most
35 empirically important single network measure used in community research. It is measured
36 simply by the proportion of close friends a respondent has living in his or her community. The
37 higher the proportion, the more "dense" the local social network for an individual. In other
38 words, the more friends you have where you live, the more likely you will be to see your
39 community in a positive light and choose to interact with people there (Goudy 1990; Stinner et al
40 1990; O'Brien and Hassinger 1992; Beggs et al. 1996; Sharp 2001). In addition, respondents
41 were asked whether they had a friend in the ranching business or one who ran a local business.
42 This tied these economic activities to local social networks.

43
44 Having more of your friends living in the same community as you, having ranchers and local
45 business owners in your social network, being White, and which community you live in all

1 increased respondents' beliefs that theirs was a cohesive and highly integrated community. The
2 significant indicators of attachment attitudes were the size of community the respondent resided
3 in until age 18, respondent's community, density of acquaintanceship, close friends having a
4 business, and how far they drove to work. Hence, the positive social role of ranching was to
5 raise the attitude that the community is a cohesive and integrated place, though not for non-
6 Whites. This is not surprising in the West, given that Latino and Hispanic people are generally
7 stratified into a lower visibility rank with little social or political power. Moreover, this would
8 not be a surprising result even if ethnic groups were themselves ranchers (Raish and McSweeney
9 2001). Finally, ranching had little effect on the degree to which respondents felt attached to
10 their communities.

11
12 There is little doubt that public land ranching and its relation to the land is a social process
13 (Huntsinger and Hopkinson 1996). The relation between social, economic, and ecological
14 issues has been recognized for many years (Adams 1916; Simpson 1975; Abruzzi 1995;
15 Raymond 2002). In many small communities, ranchers play an important social role as decision
16 makers, volunteers, elected officials, and as socially relevant commodity interests. As
17 populations grow, ranches change hands, and this generation of ranchers fades, this role will
18 change. However, the need to recognize community social organization in making management
19 decisions remains important (Curtin 2002).

20 21 National Attitudes

22
23 National attitudes toward ranching in general tap into social and political institutions that may
24 affect public land grazing management. Three studies of attitudes toward grazing are pertinent,
25 although only one is national.

26
27 Brunson and Steel (1996) used a national sample and two Oregon samples to examine how
28 attitudes toward Federal rangeland management vary across the country. First, they split the
29 national sample into eastern and western groups. They found slight differences in regional
30 variations of attitudes and concluded that "...differences in support were slight, and never did
31 one region support a policy that the other rejected."

32
33 Second, they used the two samples from Oregon to create comparisons among the Nation,
34 western Oregon, and eastern Oregon. This allowed for comparisons between urbanized areas in
35 general and rural regions where rangelands are more prominent in the landscape and in the local
36 economy. They concluded, "In all cases, residents of the grazing-dependent region of eastern
37 Oregon were more supportive than the national or statewide samples of statements advocating
38 traditional or utilitarian uses, and less supportive of statements urging greater protection of
39 nonforage resources."

40
41 Finally, Brunson and Steel concluded that attitudes toward range management are frequently
42 simplistic, consisting of dichotomies of good and bad. Thus, entire sets of attitudes were
43 reduced to a "...poorly developed cognitive structure rooted in simplistic, value-based ideas
44 about the goodness or badness of range practices and conditions." Part of this finding is related
45 to a lack of specific knowledge of rangelands on the part of many people. This produces a

1 disconnection between their attitudes and what they actually know about the issue (Lybecker et
2 al. 2002).

3
4 Brunson and Gilbert (2003) studied visitor attitudes toward grazing in the Grand Staircase–
5 Escalante National Monument, Utah. They looked at the relations between visitors' personal
6 characteristics and their reports of how livestock grazing and multiple-use management affect
7 recreation experiences. Hunters saw more effects from grazing but were not put off by them,
8 whereas hikers saw fewer effects but were more likely to say that their experience was degraded
9 by seeing evidence of livestock grazing. Designation of the area as a monument was seen to
10 have little direct effect on attitudes.

11
12 Mitchell et al. (1996) found that almost equal proportions of visitors to a Colorado national
13 forest believed that the presence of grazing enhanced their visit (34%) or detracted from it
14 (33%). Local residents, rural residents, and campers at developed campsites were more tolerant
15 of grazing than those using more remote areas.

16
17 Finally, many organized public interest groups apply pressure to remove grazing from public
18 land. This debate is certainly polarized (Knight et al. 2002; Wuerthner and Matteson 2002).
19 Nonetheless, this has an effect on local areas in that national, regional, and local groups seeking
20 to reduce or end grazing on BLM and U.S. Forest Service lands are involved routinely in
21 political and legal processes down to the allotment level. The effect of these activities on
22 ranching communities is difficult to quantify, although they may be anecdotally cited by local
23 ranchers as a source of personal and family stress.

24
25 Many advocates for the end of public land grazing argue that ranchers often have social and
26 political clout greatly out of proportion to their numbers (Fennemore and Nelson 2001). There
27 is a general assumption that agencies, particularly the BLM, are "captured agents" of the
28 livestock industry and have been since their inception (Cawley 1993; Klyza 1994; Wilkinson
29 1994). This approach assumes that the agencies were set up to protect livestock industries and
30 that they continue to do so. Though this attitude still prevails, it has recently been challenged
31 with evidence from the creation of the BLM (Welsh 2002).

32
33 All of these diverse attitudes compel various national, regional, and local groups to become
34 involved with public land grazing and the ranching industry in many ways. In general, they
35 have significantly raised the level of scrutiny characterizing grazing decisions. It is fair to
36 generalize a conclusion that these attitudes and activities have an effect on ranchers,
37 communities, and larger social institutions, but that this effect is difficult to discern or estimate.

38 39 Case Study of a Small Community: Leadore, Idaho

40 Many permittees and a few others comment frequently about the role ranching and
41 public land grazing play in the economic and social stability of their communities. This short
42 case study of Leadore, Idaho, is intended to illustrate the connections they are identifying in a
43 concrete fashion.

44 Leadore, Idaho, is situated in the southern reaches of the Lemhi River valley in
45 Lemhi County. The Lemhi Mountains sit to the west of Leadore and the Continental Divide and

1 Montana border it to the east. It is a fairly isolated area being about 45 miles south of the
2 county seat in Salmon and about 120 miles north of Idaho Falls. The terrain consists generally
3 of river bottoms, sage steppe and forested slopes at higher elevations. The Bureau of Land
4 Management and U.S. Forest Service manage the majority of the land in the area. Leadore's
5 mining heritage is long gone, and the geography remains dominated by cattle ranching.

6 Idaho's population growth of recent years has not affected Leadore to the extent it
7 has the remainder of Lemhi County. Table 3.17.8 shows population changes for the Census
8 subdivisions of Lemhi County in the last two Census years. While Lemhi County as a whole
9 grew 13% from 1990 to 2000, Leadore's growth was slower at 7%. The Patterson area of the
10 county is even more remote than Leadore, yet its population grew even faster at 27%.

11 The economic and social influence of ranching in this area is significant. In 1991
12 ranching was estimated to constitute 85% of the direct and induced earnings in the Tendoy–
13 Leadore area, and 77% of direct and indirect employment (Harp et al. 2000; Robison 1997).
14 Over 70% of the jobs held in the area by residents were related directly or indirectly to
15 agriculture. Retail, restaurants some small manufacturing augment the Federal, state and local
16 government employment in the area.

17 Interviews reported in that research confirmed that almost all commercial
18 agricultural activity derived from cattle ranching. Direct interviews with producers and others
19 estimated that production cow herd to be just over 14,500 head in the Leadore Census
20 subdivision in 1992 (Harp, et al 2000). At that time, dependence on Federal forage was
21 estimated to be about 28%. This was spit almost evenly between BLM and U.S. Forest Service
22 permits. Since that time, a considerable number of ranches have been consolidated. Recent
23 interviews indicate that one person has purchased all or part of 6 ranches in the last decade and
24 consolidated them into one operation. Another consolidation in the area combined 4 ranches.
25 Many of the previous owners and their families are no longer in the community.

26 According to the 1997 Census of Agriculture, 36 of the 40 farms (90%) in the
27 Leadore zip code area sold cattle and calves and for 22 farms (55%) these sales exceeded
28 \$50,000. Few agricultural products other than cattle and sheep are sold from this area, with the
29 possible exception of buying or selling hay. Total agricultural sales were greater than \$100,000
30 for 30% of the farms.

31 The dominant social feature of Leadore is its social commitment to support a K–12
32 school district, Southern Lemhi District #292. This is a small, rural district with a
33 predominantly agricultural tax base. Table 3.17.9 displays enrollment, graduates and local tax
34 support for the South Lemhi and Salmon Districts of Lemhi County, and for the state of Idaho as
35 a whole. School enrollments fluctuated from a low of 115 to a high of 171. Similarly, the
36 number of graduates ranged from 7 to 23 over the time period. This district has two elementary
37 schools and a high school, with a total of 16 teachers and 1 administrator. In addition, it is not a
38 wealthy district. Table 3.17.9 shows that local taxes per average daily attendance (ADA) are
39 well below the state average for Idaho. While low relative to the state, they are roughly
40 equivalent to the other major district in the county in Salmon. Leadore's enrollment is very low
41 relative to its tax base, with \$421,148 of base per ADA, while Salmon (a much larger
42 community) has \$340,254 per ADA.

43 The seasons of ranching and those of the school are primary points of social
44 organization in this community. The dominance of ranches, both economically and socially,
45 fosters a common social view that the entire community's social future is tied to the fate of

1 ranchers. For example, everyone feels exhausted during calving and its progress dominates
2 discussion at school athletic events. Even for those who own no cattle, social discourse can
3 often consist of talking about cattle. Grappling with the challenges of ranching becomes a
4 social event that fosters a sense of integration and ultimately a sense of community. The social
5 fate of the school district is also seen as being tied to ranching. This is not a fiscal issue.
6 Someone will own the land and pay the taxes to the district. Rather, people in Leadore credit
7 ranchers with a willingness to volunteer for many roles in the schools, including service on the
8 school board. People find the resources to support sports teams and other activities.

9 Both ranchers and other community members firmly believe that the combination
10 of ranch families, community cohesion and a social commitment to Leadore as a ranch
11 community underlie provide the social organization necessary to maintain the school district.
12 The view held by many permittees is that ranching is a source, if not the source, of social and
13 economic stability for their communities. The ability of ranches to keep paying the taxes and
14 contributing time and other resources to keep a small school district functioning reinforces this
15 view. They also firmly believe that the economic loss of the ranches might keep the local tax
16 base intact but that the school itself will not survive. Put another way, the social stability of the
17 community depends on who is operating the ranch rather than on who owns the ranch.

18 3.18 ENVIRONMENTAL JUSTICE

19 CHAPTER 4. ENVIRONMENTAL CONSEQUENCES

20 4.1 INTRODUCTION

21 4.2 ASSUMPTIONS

22 4.3 ALTERNATIVE ONE: NO CHANGE IN REGULATIONS (NO ACTION)

23 4.3.1 Air Quality

24 4.3.2 Grazing Administration

25 4.3.2.1 Issuing, Modifying, or Renewing Permits or Leases

26 Within the no change alternative the BLM would continue to utilize NEPA procedures and
27 requirements in the processing of permit actions (issuance, modification, etc.). The NEPA
28 analysis would concentrate on the effected critical environmental and biological elements. The
29 grazing regulations would contain no requirement for NEPA documentation or clarification on
30 which nonbiological elements should be analyzed within the NEPA process.

31 4.3.2.2 Implementing Changes in Grazing Use

32 The suspension of permitted use would continue to be authorized within the existing regulations.
33 The level of suspended use would be established through the grazing decision process under
34 4160.1 or through a documented agreement with the permittee or lessee. The timeframe for the
35 suspension would be objective (case by case basis) and the BLM would establish the timeline for
36 suspension within the grazing decision.

37 4.3.2.3 Range Improvements

1
2 The ownership of rangeland improvements would be maintained solely in the name of the
3 United States. The present number of rangeland improvements appeared to have stabilized in
4 regard to number and would be expected to be maintained at approximately 1200 rangeland
5 improvement projects per year for the next five years.
6

7 4.3.2.4 Involvement of Interested Publics 8

9 The interested publics would be required to inform the authorized officer that they wish to be
10 involved with an allotment or make comments on an allotment in order to participate in the
11 decision making process. The interested public may decline to become involved in the initial
12 planning of the decision making process. After review of a final decision, the interested public
13 may change their stance and have regulatory standing to become involved in the decision
14 making process. The present method of not requiring the interested public to be involved in the
15 preliminary decision making process increases the workload for the grazing administration
16 program. The delayed involvement results in requiring the decision making process to reanalyze
17 a situation.
18

19 The BLM would continue to cooperate, within the applicable laws, with state, county, or federal
20 agencies in regard to state cattle or sheep sanitary or brand boards and county or other local
21 weed control districts. Additionally, the BLM would still be required to consult, cooperate, and
22 coordinate or seek review from the interested publics on the following actions: (1.) Designating
23 and adjusting allotment boundaries; (2) Apportioning additional forage; (3) Reducing permitted
24 use; (4) Emergency closures or modifications; (5) Development or modification of grazing
25 activity plan; (5) Planning of the range development or improvement program; (6) Renewing or
26 issuing grazing permit or lease; (7) Modifying a permit or lease; (8) Reviewing or commenting
27 on grazing evaluation reports; and (9) Issuing temporary nonrenewable grazing permits.
28

29 4.3.2.5 Authorizing Temporary Changes in Use 30

31 The changes in permitted use that are maintained within the terms and conditions of the permit
32 would be authorized by the BLM. The regulations contain no text to what is meant for “within
33 the terms and conditions of the permit”. Therefore, the approval of the applications would be
34 subjective to definition by the authorized officer. This would create the potential for
35 inconsistent application within the grazing administration program. If the application is received
36 after the billing notice has been issued the permittee or lessee would be subject to a service
37 charge.
38

39 Permittees or lessees could apply and the BLM could approve temporary nonuse for a term of up
40 to three (3) consecutive years. After the three year period has elapsed the permittee must make
41 full use of the allotment. The BLM could issue a grazing decision to suspend the AUMs from
42 the allotment, but this presents a possible deterrence from a permittees or lessees standpoint for
43 declaring nonuse situations. In addition, the grazing decision process would create additional
44 workload on the grazing administration workforce.
45

1 4.3.2.6 Prohibited Acts

2
3 All three sets of prohibited acts would be maintained within the grazing regulations. The first
4 and second set of prohibited acts would be utilized in the future by the BLM in the
5 administration of grazing allotments. The third set, which is the provisions regarding prohibited
6 acts related to violations of Federal or State laws or regulations, would also be maintained, but
7 the historical trend of nonutilization would continue.

8
9 4.3.2.7 Appeals

10
11 The appeal process would continue as outlined within the present regulations. A proposed
12 grazing decision would be issued and in the absence of a protest the proposed grazing decision
13 would become the final grazing decision. The authorized officer would still have the authority
14 to close an allotment and issue a final decision for resource protection issues.

15 The grazing decision process would be utilized in the grazing permit or lease transfer process.
16 This would enable a permittee or lessee to appeal and request a stay of a grazing decision that
17 affects the transfer of the grazing permit or lease. If a stay is granted in favor of the permittee or
18 lessee then the grazing activity would continue as specified on the previous permit. If the
19 permittee or lessee has no historical permit then the grazing activity is authorized according to
20 the final decision.

21
22 4.3.2.8 Fundamentals of Rangeland Health

23
24 The Standards of Rangeland Health would still continue as specified within the present
25 regulations. The determination of the Standards for Rangeland Health would be achieved
26 through following BLM protocol established within state specific EIS documents and BLM
27 manuals. This guidance provides the inclusion of the utilization of the allotment assessment
28 report, and if available, historical monitoring data in the determination process. The permit
29 renewals, which are effected by the completion of the standards for rangeland health
30 determination, would be maintained on the previously established timeframe.

31 If livestock grazing is implied as a causal factor for the allotment not meeting a standard, then
32 the timeframe for the application of appropriate action to ensure the allotment is progressing
33 towards meeting the standard is no latter than the start of the next grazing year. This requires the
34 completion of consultation and NEPA requirements prior to the issuance of a new grazing
35 permit.

36
37 4.3.3 Vegetation

38
39 4.3.4 Fire and Fuels

40
41 Present management would only maintain or slightly decrease the ecosystem health in most
42 regions. Because of economics, permittees or lessees cannot afford to rest their allotments
43 adequately to gain from a fire treatment, thus causing a continuing decrease in range health. Fire
44 is an integral part of all the vegetation types in the West. Fire regimes have been altered because
45 of fire suppression and European influences. Many areas have missed one or more fire cycles

1 and need fire reintroduced to the ecosystem. Some of the vegetation types are so overgrown
2 from these influences that they need a mechanical or chemical treatment before fire is
3 reintroduced. Overgrown vegetation, exotic species, and the lack of fire have caused some
4 historical fire seasons in the early part of the twenty-first century and the latter part of the
5 twentieth century. Without the help of the grazing community, range health could continue to
6 decline.

8 4.3.5 Soils

10 4.3.5.1 Upland Soils

11
12 Short-term environmental consequences of the present management alternative would be
13 minimal except on a local scale. Natural disturbance regimes such as wildfire or high intensity
14 rainfall events would potentially negatively affect local upland watershed conditions by
15 increasing erosion, sedimentation, and runoff. Restoration projects such as prescribed burning
16 and seeding would potentially positively affect local conditions by improving watershed cover.
17 Climatic events, such as drought, would have greater short-term effects on upland watershed
18 conditions than present management in the analysis area.

19
20 Long-term environmental consequences of present management would be maintenance or a slow
21 improvement of upland soil and watershed condition due to implementation of rangeland health
22 standards and guidelines and restoration efforts. These improvements would derive from
23 improved live plant and litter watershed cover and decreased soil compaction. This would result
24 in decreased erosion, sedimentation, and runoff; healing of gullies; greater soil water availability
25 for plants; improved soil aeration; improved biological soil crust cover; and greater soil macro-
26 and microorganism activity. The improvements would be most pronounced in the higher
27 elevation, moister portions of the analysis area. Improvements would be slowest and most
28 difficult to achieve in the drier portions of the Tropical–Subtropical and Temperate Desert
29 divisions.

30
31 The negative effect of a long-term drought cycle would partly offset the improvement of upland
32 soil and watershed condition depending on the severity of the drought cycle. The increased
33 acreage of rangeland ecosystems dominated by cheatgrass, medusahead, and noxious weeds
34 would result in reduction or alteration of important components of the soil biological community
35 on affected acres which would make restoration more difficult. Long-term erosion,
36 sedimentation, and runoff would also be increased on acreage dominated by cheatgrass because
37 of increased wildfire risk and reduced plant cover during severe drought years. Cheatgrass die-
38 off has occurred on over two hundred thousand acres in Nevada in 2003 leaving these sites
39 exposed to severely accelerated erosion and loss of long-term sustainability. The cause and
40 long-term implications of this die-off are unknown at present but could be related to disruption
41 of biological soil function.

42
43 Cumulative effects would be improvement in the condition of the soil resource resulting from
44 continued implementation of rangeland health standards. There would be no unavoidable
45 adverse effects. The relation between short-term use and long term productivity would be

1 maintenance or a slight increase in long-term productivity resulting from continued
2 implementation of rangeland health standards. There would be no irreversible or irretrievable
3 commitment of soil resources.

4 5 4.3.5.2 Riparian Soils 6

7 Short- and long-term environmental consequences of the present management alternative would
8 be similar to those of upland soils except that the high moisture content of riparian soils can
9 accelerate responses to improved management practices. Improved riparian area management
10 would help stabilize riparian areas where the water or sediment supplies are out of balance,
11 promote growth of deep-rooted, riparian vegetation that helps dissipate stream energy, protects
12 streambanks, and filters sediment and pollutants from the stream. Displacement of desirable,
13 deep-rooted riparian vegetation by invasive, exotic riparian plants would potentially reduce
14 streambank protection and reduce groundwater available for maintenance of healthy riparian
15 conditions on invaded acreage.

16
17 Cumulative effects would be improvement in the condition of the soil resource resulting from
18 continued implementation of rangeland health standards. There would be no unavoidable
19 adverse effects. The relation between short-term use and long term productivity would be
20 maintenance or a slight increase in long-term productivity resulting from implementation of
21 rangeland health standards. There would be no irreversible or irretrievable commitment of soil
22 resources.

23 24 4.3.6 Wildlife

25 4.3.6.1 Terrestrial 26

27 The environmental impact changes analysis herein focuses on proposed policy changes and
28 existing regulations for livestock grazing as they affect wildlife populations and their habitats on
29 the 162 million acres grazed by domestic livestock in the western United States. Implicit in
30 these environmental consequences is the analysis of the policy changes and existing regulations
31 as stated, as well as the *practical* and *legal* implications of any changes.

32
33 The No Action alternative includes all of the previous regulations, as well as new proposed
34 policy changes.

35
36 The effects on wildlife resources are most beneficial under the No Action alternative.

37
38 Satisfactory performance for a grazing permit or lease requires that unsatisfactory performance
39 results in having a federal or state permit or lease cancelled. This allows BLM to reward those
40 permittees who are performing well and disciplining those that do not. This results in positive
41 long-term effects for wildlife resources and the ecosystems on which they depend.

42
43 The BLM can presently take action against a grazing permit or lease when a permittee or lessee
44 has been convicted by a court of law or otherwise found to be in violation of several different
45 Federal or State laws or regulations (i.e., placing poisonous bait or hazardous devices to kill

1 wildlife, applying or storing pesticides, herbicides, or other hazardous material on public lands,
2 altering or destroying natural stream courses without authorization, polluting water sources, aidi
3 ng and abetting or directly illegally taking, destroying, or harassing fish and wildlife), where the
4 violation is related to the grazing use authorized by BLM. This provision has had a positive
5 effect on wildlife resources by discouraging grazing permittees from these prohibited acts.
6 Historic, adverse effects have been realized on Lahontan cutthroat trout, black-tailed prairie dogs
7 and therefore black-footed ferrets, gray and Mexican wolves, jaguar, grizzly bears, southwestern
8 willow flycatchers, and many others.

9
10 The existing administrative remedies require that any person whose interest is adversely affected
11 by a final decision may appeal and file a petition for stay. This has had positive effects for
12 wildlife resources as it allows environment organizations to appeal grazing decisions on behalf
13 of wildlife resources. As a result, a stay must be granted by the Office of Hearings and Appeals
14 to suspend implementation of a final decision. This has been positive for wildlife resources.

15
16 Broad public participation in the grazing decision process has increased overall support for
17 achieving ecologically sound resource objectives and resulted in decisions benefiting multiple
18 uses and more diverse ecosystems.

19
20 BLM ownership of range improvements have allowed projects to be more easily built and
21 modified for safe wildlife use.

22 23 4.3.6.2 Migratory Birds [included in 4.3.6.1—doc will need renumbering]

24 25 4.3.6.3 Riparian, Wetland, and Aquatic Communities

26
27 Trends in riparian condition are discussed in Section 3.5.3.2. Riparian habitat conditions on
28 BLM lands in the lower 48 States showed only minimal improvement from 1998 to 2001.
29 Under continuation of existing management and regulations, overall riparian conditions
30 Bureauwide (excluding Alaska) would remain static or improve only slightly from present
31 conditions. Some regions would show noticeable improvements in riparian conditions, while
32 other regions would show declines or no change. The trend from 1998 to 2001 showed an
33 increase in the percentage of riparian areas classified as “properly functioning” from 36% to
34 42% (a rate of 1.5% per year). We can assume that the rate of improvement will decrease as the
35 percentage of sites in the “unknown” category falls to zero. The resulting rate of increase in the
36 percentage of properly functioning riparian areas would be approximately 1% per year. At this
37 rate, it would take BLM until 2036 (nearly 40 years later than the original BLM target of 1997)
38 to reach its goal of having 75% of its lotic riparian areas in proper functioning condition. Thus,
39 the continuation of Present Management will not allow BLM to reach its riparian goals in a
40 timely fashion.

41
42 It is important to realize that riparian areas classified as properly functioning are simply meeting
43 the minimum BLM standard. A designation of proper functioning condition indicates that a
44 riparian site has the necessary physical characteristics in place to withstand a moderate flood
45 event (approximately a 25-year flood). However, riparian areas classified as properly

1 functioning do not necessarily provide quality habitat characteristics that are required for proper
2 biological functioning. Thus, a properly functioning riparian area does not necessarily provide
3 quality habitat for birds, fish, or other animals that rely on riparian areas for some aspect of their
4 life history. Many properly functioning riparian areas still have to improve significantly before
5 they provide proper biological function.
6

7 At the local scale, some improvements in riparian and aquatic habitat would result from the
8 continuing implementation of rangeland standards and guides as mandated under Present
9 Management. The rangeland standards and guides process identifies where livestock grazing is
10 a significant factor contributing to riparian sites not meeting standards. Once these sites are
11 identified, livestock management practices should be modified to allow these sites to recover so
12 that they will meet riparian standards. Improvements in riparian health depend on the
13 willingness of local BLM managers to enforce changes in grazing management where livestock
14 grazing is a significant factor in failing to achieve or make significant progress toward meeting
15 the riparian standard. Once riparian degradation has been documented and livestock grazing is
16 identified as a significant factor, changes in grazing management should lead to improved
17 riparian conditions.
18

19 Regulations under Present Management provide only limited protection for riparian and aquatic
20 habitat. Even with local improvements due to the proper implementation of rangeland standards
21 and guides, in many areas riparian and aquatic conditions will remain static or decline under
22 Present Management. Livestock are adapted to mesic habitats and spend a disproportionate
23 amount of their time in riparian areas. Even with fewer livestock on the range and improved
24 upland conditions in the long-term, livestock will continue to congregate in riparian areas.
25 Livestock grazing and trampling in riparian areas results in reduced abundance and diversity of
26 fish, aquatic invertebrates, amphibians, birds, and threatened and endangered species. The
27 removal of streamside vegetation by livestock leads to increased sedimentation, increased water
28 temperatures due to loss of shading, and wider and shallower stream channels, all of which
29 combine to degrade aquatic habitat.
30

31 4.3.7 Special Status Species 32

33 The BLM Special Status Species Management Policy (Manual 6840) ensures that actions
34 authorized or approved by BLM are consistent with the conservation needs of special status
35 species and do not contribute to the need to list any special status species. Conservation of
36 special status species means the use of all methods and procedures which are necessary to
37 improve the condition of special status species and their habitats to a point where their special
38 status recognition is no longer warranted.
39

40 Special status species are defined as those proposed for listing under the Endangered Species Act
41 (ESA), officially listed as threatened or endangered under the ESA, those listed by a State in a
42 category such as threatened or endangered implying potential endangerment or extinction, or
43 those designated by each BLM State Director as sensitive.
44

1 It is BLM policy to conserve listed species and the ecosystem on which they depend. BLM shall
2 manage species proposed for listing under the ESA as threatened or endangered and proposed
3 critical habitat with the same level of protection provided for listed species. For candidate
4 species, BLM shall implement management plans that conserve the species and habitats and
5 ensure that actions authorized, funded, or carried out by BLM do not contribute to the need to
6 list the species. The protection provided by the 6840 policy for candidate species shall be used as
7 the minimum level for protection for BLM sensitive species. State listed species shall be
8 managed consistent with state laws protecting these species to the extent that they are consistent
9 with FLPMA and other federal laws.

10
11 Timely implementation of grazing decisions for correcting environmental damage has resulted in
12 reducing resource damage, benefiting more diverse, healthier ecosystems. Implementing
13 decisions before an appeal is resolved has resulted in short to long-term increases in herbaceous
14 cover and forage for wildlife. Historic, adverse effects have been realized on Lahontan cutthroat
15 trout, southwestern willow flycatchers, yellow-billed cuckoo, Bell's vireo, northern beardless
16 tyrannulets, and countless threatened, endangered, proposed, and candidate plant species.

17
18 The present grazing regulations favor emphasizing potential natural vegetation communities that
19 favor most special status species. Any increase in the already burdensome grazing appeals
20 process would have an adverse on terrestrial and aquatic wildlife species. Timely
21 implementation of grazing decisions for correcting environmental problems has reduced
22 resource damage, benefiting riparian areas most importantly for aquatic and migratory birds. Of
23 special concern in the future will be the ability to make timely and effective grazing decisions
24 with respect to pygmy rabbits, mountain plover, mountain quail, and Gunnison and greater sage-
25 grouse, all of whom are being considered for listing in the near future. An inability to make
26 effective grazing decisions for these species will result in long-term, adverse effects to these
27 species. Managing rangelands to restore and maintain natural ecosystems has resulted in
28 increased biological diversity, allowing more wildlife and plant species to meet basic life
29 requirements.

30 31 4.3.8 Wild Horses and Burros

32 33 4.3.9 Recreation

34
35 Recreational experiences would be maintained on the public lands or, where land health
36 standards are not yet attained, improved as upland and riparian conditions improve as actions are
37 taken to attain rangeland health standards.

38
39 Recreation uses including sightseeing, wildlife watching, and enjoyment of naturalness would be
40 maintained or improved as vegetation cover increases. Many recreational activities are not
41 centered on sightseeing and enjoyment of naturalness but those qualities contribute to the overall
42 experience and recreational enjoyment of the activity. Most recreational activities would be
43 expected to improve as the setting in which they take place improves. Fishing and hunting
44 opportunities would be expected to be maintained or improved as habitats are maintained or

1 improved to support greater success rates. Both commercial and non-commercial activities
2 would be similarly affected.

4 4.3.10 Special Areas

5
6 Overall assumptions for *all Alternatives*: Special Areas would develop environmental
7 assessments and decisions to identify and resolve specific on-site concerns affecting
8 preservation, protection, conservation, and enhancement of resources, and other values and uses.
9 All proposals would be evaluated using the originating unit proclamations, laws and policies,
10 whichever is appropriate, to determine implementation suitability.

11 12 4.3.10.1 Phase-In of Changes in Use

13 The present situation does not address a time frame for implementing grazing decisions to
14 change active use. Changes in use can be implemented without delay allowing the
15 implementation of corrective actions based on the reduction of livestock numbers. The
16 immediate reduction of livestock numbers in excess of 10% could impose economic difficulties
17 on permittees.

18 19 4.3.10.2 Range Improvement Ownership

20 Alternative 1 continues the present range improvement ownership policy of the United States
21 holding title to permanent and nonstructural range improvements. The existing situation lacks
22 emphasis concerning expense and risk for cooperators when providing nonstructural
23 improvements, and cooperators receive no interest in public land for the nonstructural
24 improvement. Range improvement records indicate that there is no difference between the
25 number of improvements developed when shared title was in place, and during the present
26 situation where the United States has title of the range improvements.

27 28 4.3.10.3 Temporary Nonuse

29 The present situation concerning temporary nonuse limits the nonuse period to not more than
30 three consecutive years. Range restoration actions such as chaining or prescribed fire and
31 seeding take longer than three years to complete. Livestock may be reintroduced prematurely to
32 the recovering allotment as a result of this time constrain. Reasons for temporary nonuse as
33 defined in the present regulations are also constraining in terms of resource values and
34 protection, and meeting rangeland health standards.

35 36 4.3.10.4 Noxious Weeds

37 The present regulations do not specifically address the issue of noxious weeds. Therefore, there
38 is no deterrent in the regulations for someone knowingly or willfully spreading noxious weeds.
39 Presently violators to Executive Order 13113–Invasive Species could not be cited.

40 41 4.3.10.5 Basis for Rangeland Health Determinations

42 Present regulations do not address how the authorized officer determines that existing grazing
43 management practices are significant factors in failing to meet rangeland health standards.
44 Resulting determinations effecting permittee operations could be made with less than sound

1 scientific information. However, it seems impractical that these determinations would be made
2 with less than sound data given the present tendency toward litigation.

3 4 4.3.10.6 Timeframe for Meeting Rangeland Health Standards

5 Existing regulations require BLM to implement appropriate changes in grazing management as
6 soon as possible but no later than the start of the next grazing season if grazing practices are
7 determined to be a causal factor in not meeting significant progress toward the fundamentals of
8 rangeland health. The present timeframe in many instances is unattainable possibly
9 compromising adequate development, review and implementation of appropriate actions and
10 required processes.

11 12 4.3.10.7 Definition and Role of Interested Publics

13 The present situation defines interested public as an individual, groups or organization that has
14 submitted a written request to the authorized officer to be provided an opportunity to be involved
15 in the decision-making process for livestock management of a specific allotment, or has
16 submitted written comments to the authorized officer regarding livestock management of a
17 specific allotment. BLM must consult, cooperate and coordinate (CCC) with or seek review and
18 comment from the interested public on a variety of livestock management actions. In addition,
19 BLM must send copies of proposed and final decisions to the interested public. The existing
20 regulation only requires that an interested public request an opportunity to participate in a
21 decision-making process. The interested public does not have to actually participate to retain
22 interested public status. Also, an interested public can request to be involved with the day to day
23 operational decision-making.

24
25 The present method of obtaining public participation allows interested publics information
26 concerning actions that effect livestock management without actually commenting during the
27 decision making process. Interested publics are made aware of changes to daily operational
28 activities through consultation, and cooperation and coordination efforts. This system develops
29 a large mailing list of interested publics; however comments received in generally low.

30 31 4.3.10.8 Prohibited Acts

32 The existing Prohibited Acts lack clarification concerning non-related grazing permit violations.
33 This misunderstanding has lead to confusion and a feeling of “double jeopardy” by permittees.
34 The present Prohibited Acts contain provisions that are not the direct enforcement responsibility
35 of the Secretary of the Interior and reference punitive actions against grazing permits; or state
36 livestock laws. However, these provisions, directly enforceable or not, may act as a deterrent to
37 would be violators.

38 39 4.3.10.9 Grazing Use Allowed When a Stay is Granted

40 Presently, when a stay is granted on a grazing decision the permittee will graze in accordance
41 with the previous year authorization. If the applicant had no authorized use the previous year
42 grazing use will be consistent with the final decision pending resolution of the appeal. BLM has
43 the opportunity to make an adjustment on grazing use when a grazing preference is transferred.
44 The adjustment in grazing use provides a mechanism for implementing on the ground actions

1 needed to accomplish rangeland health standards. The action by BLM to adjust grazing
2 preference during the sell of a grazing operation may affect the value of the operation.

3 4.3.10.10 No on the Ground Effect

4 Social, Economic and Cultural Considerations

5 Cooperation with State, County and Federal Agencies

6 Review and Comment on Biological Assessments

7 Conservation Use

8 Grazing Preference

9 Water Rights

10 Satisfactory Performance

11 Changes in Grazing Use within the Terms and Conditions of the Permit of Lease

12 Service Charges

13 Biological Assessment-Application of Protest and Appeal Provisions

14

15 4.3.11 Paleontological and Cultural Resources

16 The present management alternative (No Action Alternative, Alternative One) includes all of the
17 present regulations. Review of a federal undertaking by a cultural resource specialist is required
18 during specific project planning or implementation at the local level, land use planning
19 initiatives at the state or regional level, or for regulation revision at the national level. Of the
20 present regulations, only range improvement ownership and the Standard and Guideline
21 appropriate action implementation have had the potential to effect on-the-ground actions which
22 consequently can affect heritage resources. New project developments as a result of these
23 actions have been and will continue to be analyzed for affects on heritage resources on a case-
24 by-case basis. Cultural resource surveys precede management actions that could damage
25 cultural resources (BLM Manual 8100, Cultural Resource Management). Historic and
26 prehistoric archaeological sites found during these surveys would be protected in accordance
27 with the National Historic Preservation Act of 1966 (revised) and other laws or executive orders
28 as stated in the Code of Federal Regulations (36 CFR 800).

29 Prohibited acts under the present regulations allow grazing permits to be cancelled for violation
30 of the "illegal removal or destruction of archaeological or cultural resources" clause. This clause

1 gives protection to a fragile and nonrenewable resource that may be important to regional and
2 national heritage.

3 4.3.12 Economic Conditions

4
5 There would be no effect from Alternative 1: No Action. [QUESTION ON FORMAT: it
6 seems like I should perhaps analyze this alternative 'in reverse,' i.e. talk about effects of not
7 adopting the proposed action.]
8

9 4.3.13 Social Conditions

10 4.3.14 Environmental Justice

11 4.4 ALTERNATIVE 2: PROPOSED ACTION

12 4.4.1 Air Quality

13 4.4.2 Grazing Administration

14 4.4.2.1 Issuing, Modifying or Renewing Permits or Leases

15
16
17 The BLM would continue to adhere to the NEPA requirements for the analysis of grazing permit
18 or lease issuance, modification, or renewals. The regulations would require the authorized
19 officer to document the NEPA compliance procedures for the effected environmental elements,
20 and in particular, the effects of the proposed action on relevant social, economic, and cultural
21 factors. The proposed action would require the formation of BLM-approved documentation
22 procedures or forms to be utilized within the grazing administration program to ensure
23 consistency across BLM jurisdiction boundaries.
24
25
26

27 4.4.2.2 Implementing Changes in Grazing Use

28
29 Reductions in permitted use would be accomplished through the grazing decision process or a
30 documented agreement with the permittee or lessee. If the reduction is greater than 10% of the
31 total permitted use the implementation of the reduction would occur within a 5-year period. This
32 5-year timeframe would be not followed in cases where the permittee or lessee agrees to a
33 shorter timeframe or a shorter timeframe is required in order to comply with applicable law (i.e.
34 Endangered Species Act). The 5-year reduction period would require the grazing administration
35 to allocate additional resources to track the changes to ensure that the present permit and bill
36 reflects the reductions of permitted use.
37

38 4.4.2.3 Range Improvements

39
40 Ownership of range improvements would be shared among the cooperators according to the
41 financial contribution for the project development and construction costs. The present number
42 of rangeland improvements appeared to have stabilized in regard to number and would be
43 expected to be maintained at approximately 1200 rangeland improvement projects per year for
44 the next 5 years.

1
2 4.4.2.4 Involvement of Interested Publics
3

4 Interested publics would be defined as an individual, group, or organization that has: (1)
5 submitted a written request or BLM to be provided an opportunity to be involved in the process
6 leading to the decision for management of livestock grazing and followed up on that request by
7 commenting or participating in the decision making process; or (2) submitted written comments
8 to the BLM regarding management of livestock grazing on a specific allotment, as part of the
9 process leading to a BLM decision on management of the livestock grazing on the allotment.

10
11 The interested publics would be required to inform the authorized officer that they wish to be
12 involved with an allotment or make comments on an allotment in order to participate in the
13 decision making process. If the interested public declines to become involved in the initial
14 planning of the decision making process, the interested public does not have regulatory standing
15 to become involved in the decision making process.

16
17 The specific actions requiring consultation, cooperation, and coordination or seek review and
18 comment from the interested public would be: (1) Apportioning additional forage; (2)
19 Development or modification of grazing activity plans; (3) Planning of range development or
20 improvement program; (4) Reviewing or commenting on grazing evaluation reports.

21
22 Specific actions no longer requiring the consultation, cooperation, and coordination standard
23 would be: (1.) Designating and adjusting allotment boundaries; (2) Reducing permitted use; (3)
24 Emergency closures or modifications; (4) Renewing or issuing grazing permit or lease; (5)
25 Modifying a permit or lease; and (6) Issuing temporary non-renewable grazing permits.

26
27 The clarity of the interested public and the reduction of actions that would require interested
28 public involvement would enable the BLM to increase the focus of the communication efforts
29 with those interested publics that are involved in the significant issues occurring on grazing
30 allotments. This increased focus should increase the efficiency of communication though the
31 reduction of communication to individuals, groups, or organizations that are not providing
32 constructive input to the decision making process on an allotment. The proposed action still
33 maintains that proposed and final decisions are sent to the interested public.

34
35 Lastly, the proposed action would require, that in addition to cooperating with state, county, or
36 federal agencies in regard to state cattle or sheep sanitary or brand boards and county or other
37 local weed control districts, the BLM would also cooperate with grazing boards on the reviewing
38 range improvements and allotment management plans. The review of these items by grazing
39 boards are already occurring on an established basis and therefore the regulation change would
40 only be formalizing these activities.

41
42 4.4.2.5 Authorizing Temporary Changes in Use
43

44 The proposed action would include a definition for “within the terms and conditions” for
45 approving applications for grazing use that is within the terms and conditions of the existing

1 permit. The definition for “within the terms in conditions” would contain temporary changes to
2 livestock numbers; period of use; or both that would result with grazing use that does not exceed
3 the AUMs specified in the permit or lease. Additionally, the use may occur within 14 days of
4 the begin data and no latter than 14 days after the end date of the permit. The inclusion of the
5 definition would provide for standardized application within the BLM. The permittee or lessee
6 would not be subject to a service charge if the application is received after the billing notice has
7 been issued.

8
9 The BLM could approve temporary nonuse for no longer than one year at a time for resource
10 requirements or personal needs of the permittee or lessee. There would be no time limit to the
11 consecutive years of temporary nonuse that may be approved by the BLM. These changes
12 would allow the grazing administration program to continue beneficial temporary nonuse for
13 more than the present 33year term. This beneficial use would maintain the present workload for
14 the grazing administration, while providing greater flexibility to the permittee or lessee.

15 16 4.4.2.6 Prohibited Acts

17
18 The first and second set of prohibited acts would be maintained in the regulations and utilized in
19 the future by the BLM in the administration of grazing allotments. The third set, which is the
20 provisions regarding prohibited acts related to violations of Federal or State laws or regulations,
21 would be eliminated from the grazing regulations. This elimination would not affect the grazing
22 administration program, since the third set of prohibited acts has not been utilized since the
23 incorporation into the grazing regulations.

24
25 The act of knowingly or willfully introducing noxious weeds on public lands would be added to
26 second set (under 4140.1(b)) of prohibited acts and would apply to any person (not just
27 permittees or lessees) introducing noxious weeds to BLM lands. This provision may present
28 enforcement difficulties within the grazing administration program, but may provide education
29 or deterrence to those individuals considering the introducing noxious weeds to BLM lands.

30 31 4.4.2.7 Appeals

32
33 The appeal process would continue as outlined within the present regulations. A proposed
34 grazing decision would be issued and in the absence of a protest the proposed grazing decision
35 would become the final grazing decision. The authorized officer would still have the authority
36 to close an allotment and issue a final decision for resource protection issues.

37 The grazing decision process would be utilized in the grazing permit or lease transfer process.
38 When a stay of a decision concerning a decision on a permit or lease offered to a preference
39 transferee is granted the applicant would be offered a new permit or lease with the same terms
40 and conditions of the previous permit or lease.

41 42 4.4.2.8 Fundamentals of Rangeland Health

43
44 The determination for the Standards of Rangeland Health would be based on the assessment
45 report and monitoring data. If monitoring data is not available then the assessment can not be

1 reach until monitoring is established on the allotment. This process would result in delaying the
2 Standards and Guidelines assessment schedules for allotments, i.e. low priority allotments,
3 which do not have monitoring data available.
4

5 The requirement to collect monitoring data prior to issuing a determination would increase the
6 workload within the grazing administration program and impede the timeline some states have
7 established through a statewide EIS for assessment completion dates. Additional funding for
8 staff and associated costs would need to be available for to ensure monitoring is established. In
9 addition, the monitoring requirement would delay the permit renewal process that is tied to the
10 completion of the standards for rangeland health determination. The proposed action would
11 also create an inconsistency in regards to previously made rangeland health assessments in
12 which monitoring data was not required for the determination.
13

14 The timeline for making progress towards meeting a standard is initiated once the BLM has
15 completed the relevant and applicable requirements of law, regulations and consultation
16 requirements to ensure that rangeland health conditions exist. If livestock grazing is implied as a
17 causal factor for the allotment not meeting a standard, the BLM would be required to take
18 appropriate action to ensure the allotment is progressing towards the stands or conform to the
19 guidelines no later than 24 months after the determination.
20

21 This would include the completion of the NEPA analysis and issuance of a new permit. The
22 extension of time does not mean that 24 months would be required, but that it is the maximum
23 time allowed for the process. The timeline extension would allow the grazing administration
24 process the ability to ensure a professional, well documented, and comprehensively designed
25 product is produced that will effectively address the resource situations.
26

27 4.4.3 Vegetation

28 4.4.4 Fire and Fuels

29
30
31 Fire is a variable, dynamic force with diverse responses and effects. Understanding these
32 processes and interactions is important in determining the role of wildland fire and its effects on
33 the environment. Understanding fire as an ecological process and how it interacts with the
34 environment is critical for developing land management objectives and sustaining rangeland
35 health. The National Fire Plan has increased the pressure on the fire program to increase
36 treatment acres. Some of these regulation changes will aid in the achievement of some of these
37 expectations on the fire program, in turn increasing rangeland health on BLM administered
38 lands.
39

40 Under the proposed action, the only two factors in conjunction with fire that could influence
41 rangeland health are temporary nonuse and range improvement ownership. Fire would not have
42 much of an effect on any other areas of the proposed action and therefore is not analyzed.
43

44 Temporary nonuse would allow the BLM to rest an area that has had rangeland health treatments
45 implemented on the land for a suitable length of time. After a treatment, drought could cause the

1 area to not rehabilitate sufficiently, thus needing more time to rest the treatment area. Having
2 the ability to look at the area every year and determine whether it meets managers' goals is
3 important. Having the option of resting for an unlimited amount of time will probably have a
4 positive effect on the environment and the rangeland health.

5
6 Range improvement ownership could cause some problems in the use of fire to aid in rangeland
7 restoration. With the permittee having some ownership, he or she could resist projects due to the
8 possibility of damages. These should be easily mitigated with agreements between the BLM and
9 the permittee and should have no negative effect on the environment.

10 4.4.5 Soils

11 4.4.5.1 Upland Soils

12
13
14 Phase-in of changes in active use over a 5-year period would have a negative effect on upland
15 soil resources by increasing the time period for recovery of watershed cover on allotments
16 having inadequate live plant and litter cover due to overstocking. Changes in grazing use up to
17 14 days before and up to 14 days after the end date specified on the permit or lease would have a
18 negative effect on upland soil resources on allotments where this resulted in a reduction in
19 watershed cover. Requiring use of both standards assessment and monitoring data to determine
20 that existing grazing management practices or levels of grazing use are significant factors in
21 failing to achieve standards and conform with guidelines would have a negative effect on upland
22 soil resources by increasing the time period for recovery of watershed cover on allotments
23 failing rangeland health standards. Allowing BLM as long as to 24 months to formulate,
24 propose, and analyze appropriate action to address failure to meet rangeland health standards
25 would have a negative effect on upland soil resources by delaying recovery of watershed cover
26 on those allotments. Reduced watershed cover results in increased erosion, sedimentation, gully
27 formation, and runoff, and decreased infiltration. The short- and long-term effects would
28 correspond to the number of acres where upland watershed cover was reduced.

29
30 No limit on number of consecutive years of grazing nonuse would have a beneficial effect for
31 upland soil resources in allotments where greater natural recovery of watershed cover occurred.
32 This rules change would also potentially increase the Bureau's flexibility to rest allotments
33 affected by drought, wildfire, or restoration treatments and thus improve watershed vegetation
34 cover and soil physical characteristics such as compaction. The improvements would be most
35 pronounced in the higher elevation, moister portions of the analysis area. Improvements would
36 be slower and most difficult to achieve in the drier portions of the Tropical-Subtropical and
37 Temperate Desert divisions. Adding a noxious weeds provision to prohibited acts would be
38 beneficial to upland soil resources on allotments where this rule prevented introduction of
39 noxious weeds. Noxious weeds can displace native plants that provide better watershed cover.
40 Noxious weed dominance of a site can also result in the loss of some biological components of
41 the soil, such as mycorrhizal fungi that are needed by many native range plants for survival. The
42 short- and long-term effects would correspond to the number of acres where upland watershed
43 cover was maintained or increased and noxious weed infestations were prevented.

44

1 Cumulative effects would be adverse for upland soil resources due to net loss of watershed
2 cover. The acreage of adverse effects would not be significant. There would be no unavoidable
3 adverse effects. The relation between short-term use and long-term productivity would depend
4 on the maintenance of adequate watershed cover to protect upland soil resources. There would
5 be no irreversible or irretrievable commitment of soil resources.

6 7 4.4.5.2 Riparian Soils

8
9 Short- and long-term environmental consequences of the proposed management alternative
10 would be similar to those for upland soils except that the high moisture content of riparian soils
11 can accelerate responses to improved management practices. The result of enhanced riparian
12 vegetation cover would be improved riparian stability and increased growth of deep-rooted,
13 riparian vegetation that helps dissipate stream energy, protects streambanks, and filters sediment
14 and pollutants from the stream. Reduced desirable riparian cover would result in decreased
15 riparian soil stability. The short- and long-term effects would correspond to the number of acres
16 where desirable riparian watershed cover was enhanced or reduced.

17
18 Cumulative effects would be adverse for riparian soils due to net loss of desirable riparian cover.
19 The acreage of adverse effects would not be significant. There would be no unavoidable adverse
20 effects. The relation between short-term use and long-term productivity would depend on the
21 maintenance of adequate desirable vegetation cover to protect riparian soil resources. There
22 would be no irreversible or irretrievable commitment of soil resources.

23 24 4.4.6 Wildlife

25 26 4.4.6.1 Terrestrial

27
28 The environmental impact changes analysis herein focus on policy and regulation changes for
29 livestock grazing as they affect wildlife populations and their habitats on the 162 million acres
30 grazed by domestic livestock in the western United States. Implicit in the environmental
31 consequences is the analysis of the policy and regulation changes as stated, as well as the
32 *practical* and *legal* implications of these changes.

33
34 The Proposed Action will have a slow, long-term adverse effect on wildlife and biological
35 diversity in general. Upland and riparian habitats will continue to decline due to increasing an
36 already burdensome grazing appeals process, lack of ability to control illegal activities on public
37 lands, and allowing livestock operators to acquire rights to livestock management facilities and
38 vegetation on public lands. The cumulative effects resulting from all these changes will be
39 significant and adverse for wildlife and biological diversity in the long term. The numbers of
40 special status species will continue to increase in the future under this alternative.

41
42 Significant losses of native habitats have been caused by agricultural conversion, rangeland
43 conversion, livestock management, post-fire rehabilitation, wildfire, prescribed fire, structures,
44 conifer expansion, exotic invasive plants, and wild horses and burros.

1 The present trend for upland habitats is unknown, but as the West is in the fifth year of a
2 drought, it can be assumed that upland habitats are in poor and declining condition. The poor
3 and declining trend in many western uplands is a result not only of the drought conditions, but
4 also the inherent inability to make livestock adjustments due to the existing burdensome grazing
5 appeals process. This has had significant, long-term adverse effects on wildlife resources,
6 including threatened and endangered and special status species.
7

8 To improve working relations with permittees and lessees, explicitly stating and emphasizing in
9 the grazing regulations that the economic, social, and cultural elements be considered when
10 making grazing decisions will tend to give emphasis of these considerations over natural
11 resource considerations, such as wildlife and special status species. The BLM is required by the
12 National Environmental Policy Act of 1969 (Public Law 91-90; 42 U.S.C. 4321 et seq.) to use a
13 systematic interdisciplinary approach, which ensures the integrated use of natural and social
14 sciences and the design arts in planning and decision making affecting the human environment.
15 The grazing regulations do not contain language specifically addressing the need for compliance
16 with the NEPA.
17

18 Range improvement ownership has significant meaning with respect to a livestock operator's
19 right to be there. That is, ownership of water or range improvements gives the livestock operator
20 the right to be at any given point in time and any change in that right results in a "take". "Take"
21 results in the permittee either being allowed to be grazing regardless of range condition and thus
22 adversely affect wildlife resources or the permittee must be compensated. In the cases of *Hage v.*
23 *United States*, 35 Fed. Cl. 147, 180 (1996) and *Hage v. United States*, 42 Fed. Cl. 249 (1998),
24 the court held that the operator had indeed ownership of water rights and therefore the right to
25 graze in order to utilize that water. Therefore, by establishing ownership of water or range
26 improvements the livestock operator will have the right to graze and greatly diminishes the
27 ability of the BLM to regulate grazing and will create long-term effects on wildlife resources.
28

29 Authorizing joint title to range improvements will have long-lasting adverse effect to the wildlife
30 of the public lands in the West. The proposed action would require that title to all new
31 permanent, structural grazing-related range improvements constructed on public lands, or made
32 to the vegetation resource on the public lands, except temporary or removable improvements, be
33 held jointly between the cooperator(s) and the United States in proportion to their initial
34 contribution to on-the-ground project development and construction costs. Allowing permittees
35 joint ownership of the vegetation of the public lands would give them ownership and therefore a
36 right to "take" that vegetation regardless of adverse effects to wildlife resources.
37

38 The BLM would continue work cooperatively with other cooperators in the development and
39 construction of water-related range improvement projects including application for it's
40 proportional right to acquire, perfect, maintain and administer water rights, as allowed by State
41 law. Some states, such as Nevada, are passing laws prohibiting the federal government from
42 owning water rights, which adversely affects wildlife resources. Under these laws the BLM
43 would not be able to hold water rights for the wildlife resources on public lands, thus there will
44 be a long-term adverse to wildlife and special status species as BLM will be unable to require
45 that water be made available for wildlife during time periods when livestock are not grazing.

1 Present ability of BLM to hold water rights to benefit wildlife, particularly fish has been
2 significant. Deferring to state water law, as in the case of Nevada, where they prohibit the BLM
3 from holding water rights will have a long-term, adverse effect on wildlife, particularly fish.
4 Where BLM does not have some control over the water, livestock facilities are often shut off
5 when livestock are absent, but wildlife could use the facilities. Exclusive control of water will
6 reduce wildlife habitat quality by promoting wildlife-livestock conflicts.

7
8 Under present regulations, the determination that livestock grazing practices are a significant
9 factor in failing to achieve the rangeland health standards or making significant progress toward
10 the fundamentals of rangeland health, BLM is required to formulate, propose, and analyze
11 appropriate actions to address the failure to meet the rangeland health standards by the next
12 grazing season after the determination. Amending when BLM will make changes in grazing
13 management when not meeting land health standards from the present requirement of the next
14 grazing season to 24 months and that any adjustment in active use in excess of 10% must be
15 implemented over a 5-year period could have significant and long-term adverse effects on wildlife
16 resources and biological biodiversity in general, but could be especially problematic for many of
17 the special status species on public lands, especially plants.

18
19 The proposed changes for protecting the health of the rangelands:

- 20
21 1. Grazing decisions would require not only a land health assessment, but also
22 monitoring data, usually 2-3 years. BLM, in fact, lacks sufficient funding and
23 staffing to perform adequate monitoring.
- 24 2. After a grazing decision record of decision there is a 2-year period allowed
25 prior for making any changes in the grazing operation.
- 26 3. Proposed changes in active use greater than 10% would require a 5 year phase-
27 in period.

28
29 All of these cumulative delaying tactics could result in a protracted 10 year period for full
30 implementation and change and thus would result in a long-term, adverse effect on wildlife
31 resources and biological diversity, including threatened and endangered and special status
32 species.

33
34 The additional provision that determinations that existing grazing management practices or
35 levels of grazing use are significant factors in failing to achieve standards and conform with
36 guidelines must be based on not only the standards and guidelines assessment, but also include
37 monitoring data will further delay the grazing decision process. Present BLM funding and
38 staffing levels do not provide adequate resources for even minimal monitoring and the additional
39 monitoring requirement will further burden the grazing decision process, thus adversely
40 affecting wildlife resources and biological resources in the long term.

41
42 The change in definition of “interested public” will limit the ability of environmental groups to
43 participate in the appeals process in the interest of wildlife. Including all interested parties in
44 the appeals process has had a long-term positive effect for wildlife and special status species.
45 Redefining “interested public” as an individual, group or organization that has: (1) submitted a

1 written request to BLM to be provided an opportunity to be involved in the process leading to a
2 decision for management of livestock grazing and followed up on that request by commenting
3 on or otherwise participating in the decision-making process on management of a specific
4 allotment; or (2) submitted written comments to the BLM regarding management of livestock
5 grazing on a specific allotment, as part of the process leading to a BLM decision on the
6 management of livestock grazing on the allotment will lessen the ability of environmental
7 groups and organizations to participate in weigh in and support wildlife and special status
8 species with regard to public land grazing issues.
9 This should result in long-term, adverse effects to wildlife and special status species on public
10 lands.

11
12 The deletion of the requirements to consult, cooperate and coordinate with or seek review and
13 comment from the “interested public” for designating and adjusting allotment boundaries,
14 reducing permitted use, emergency closures or modifications, renewing or issuing grazing
15 permit or leases, modifying a permit or lease and issuing temporary non-renewable grazing
16 permits will further reduce the ability of environmental groups and organizations to participate
17 in weigh in and support wildlife and special status species with regard to public land grazing
18 issues. This should result in long-term adverse effects on wildlife and special status species on
19 public lands.
20

21 The requirement for the BLM to cooperate with State, local, and County established grazing
22 boards in reviewing range improvements and allotment management plans on public lands will
23 result in giving permittees and lessees greater access to the decision making process at the
24 expense of conservation groups who are advocates for wildlife resources. First, this requirement
25 will give greater emphasis to local entities who favor extraction of forage and water resources at
26 the expense of wildlife and biological diversity. Secondly, this requirement will give local
27 entities greater influence over decision making than national interests who are excluded from
28 this venue. This would be a long-term adverse effect for wildlife and special status species
29 resources.
30

31 Providing permittees and lessees, the state having lands or responsibility for managing resources
32 within the area, and the interested public the opportunity to review and comment on biological
33 assessments prepared under the Endangered Species Act should have no effect on wildlife
34 resources, other than delaying the process, but it is nonetheless a good cooperative business
35 practice. Any required concurrence by the livestock permittee or lessee or other entity would
36 negate the intent of the Endangered Species Act.
37

38 Regarding rangeland health, the requirement that the BLM could approve nonuse for no longer
39 than 1 year at a time for resource reasons as well as for business or personal needs of the
40 permittee or lessee will create an administrative workload for BLM, but should have little effect
41 on wildlife resources.
42

43 Present regulations allow livestock operators to be cited for certain prohibited acts. Elimination
44 of these prohibited acts (i.e., Placing poisonous bait or hazardous devices to kill wildlife,
45 applying or storing pesticides, herbicides, or other hazardous material, altering or destroying
46 natural stream courses without authorization, polluting water sources, aiding and abetting or

1 directly illegally taking, destroying, or harassing fish and wildlife, and illegally removing or
2 destroying archeological or cultural resources) will have a significant, long-term adverse effect
3 on wildlife and special status species. Even though there may be other regulatory mechanisms
4 for enforcement none of these regulatory mechanisms are presently effective. Examples include
5 poisoning prairie dogs and ground squirrels, killing gray and Mexican wolves, grizzly bear
6 jaguars and mt. lions, diverting water sources from historic Lahontan cutthroat habitat, etc. All
7 of these illegal activities are conducted in support of their livestock operations and are thus
8 directly related to livestock grazing activities. While none of the these prohibited acts have been
9 utilized to penalize a permittee, there is no way to ascertain how many permittees were
10 influenced not to perform a prohibited act. We do know that a livestock operator in Montana,
11 not connected to a BLM permit, did poison prairie dogs on public lands with no opportunity for
12 enforcement due to state law permitting prairie dog poisoning.

13
14 Inclusion of prohibited acts as “terms and conditions” in grazing permits has been used rather
15 sparingly and has not historically constituted an effective prohibition.

16
17 The exclusion of certain grazing permit or lease renewals or other proposed actions from EIS or
18 EA analysis will have a negative effect on wildlife resources. Even though they do not
19 individually or cumulatively have a significant effect on the human environment, it will limit
20 wildlife input into allotments needing change to benefit wildlife species. This will also further
21 restrict BLMs ability to assess cumulative effects of livestock grazing on wildlife and special
22 status species.

23
24 Allowing BLM managers to lock gates on public lands at the request of livestock operators will
25 further restrict wildlife recreational users from using the public lands whether for hunting,
26 fishing, or wildlife viewing.

27
28 Timely implementation of grazing decisions for correcting environmental damage has resulted in
29 reducing resource damage, benefiting more diverse, healthier ecosystems. Staying decisions
30 prior to resolving an appeal will have significant adverse effects on such listed species as
31 Lahontan cutthroat trout, desert tortoise, southwestern willow flycatchers, yellow-billed cuckoo,
32 Bell’s vireo, northern beardless tyrannulets, and countless threatened, endangered, proposed, and
33 candidate plant species. It is doubtful that conservation partnerships, RCAs, voluntary
34 restructuring of allotments, or conservation easements would have any beneficial effect to
35 wildlife, especially listed species, unless there is a change within the livestock grazing industry.
36 Traditionally, livestock operators have shown a desire to appeal proposed grazing decisions,
37 regardless of the effects on listed species.

38
39 4.4.6.2 Migratory Birds [included in 4.4.6.1—need to renumber doc]

40
41 4.4.6.3 Riparian, Wetland, and Aquatic Communities

42
43 Under Alternative 2, the Proposed Action, riparian, wetland, and aquatic resources will improve
44 with the implementation of some actions under consideration and decline with the
45 implementation of others. The Proposed Action will change several elements of BLM’s present

1 management policies, regulations, and management practices. Many of the elements in the
2 Proposed Action will lengthen the time of appeals, delay the implementation of grazing changes
3 where livestock are causing degradation to resources, and eliminate BLM's ability to punish
4 livestock operators who undertake certain illegal actions on public lands. Thus, the overall
5 effect of the Proposed Action on riparian, wetland, and aquatic resources will be negative in both
6 the short and long-term. The key elements in the Proposed Action are discussed below,
7 including an analysis of the effect of that change on riparian, wetland, and aquatic resources.

8
9 Add a Provision Documenting NEPA Compliance: The Proposed Action would add a new
10 provision requiring BLM to document compliance with NEPA before changing permitted use.
11 The documentation would include BLM's consideration of any effects of the proposed change
12 on relevant social, economic, and cultural factors. If permitted livestock use is causing
13 degradation of riparian, wetland, or aquatic resources but is allowed to continue because
14 changing permitted use would cause undue social, economic, or cultural hardship to the
15 permittee, then the implementation of this action would have a negative effect on riparian,
16 wetland, and aquatic resources.

17
18 Phase-In of Changes in Use: Allowing changes in active use in excess of 10% to be phased in
19 over a 5-year period may have a negative effect on riparian and aquatic resources. If the change
20 required is a decrease in active use due to livestock degradation of riparian, wetland, or aquatic
21 resources, phasing in the decrease rather than imposing an immediate reduction will allow the
22 negative effects associated with grazing to continue at nearly the same level for up to five years.

23
24 Authorizing Joint Title for Range Improvement Projects: Allowing title to range improvements
25 to be held jointly has the potential to negatively affect riparian or aquatic resources in the long-
26 term. Based on the outcomes of recent court cases in Nevada, joint ownership of range
27 improvements may give livestock operators a right to graze in order to utilize their water right.
28 If the result of these court cases are applied Bureauwide, BLM will lose much of their ability to
29 manage livestock grazing which will result in negative effects to riparian, wetland, and aquatic
30 resources.

31
32 Temporary Nonuse: Eliminating the three consecutive year maximum for temporary nonuse
33 would positively benefit riparian and aquatic resources. Although riparian areas typically
34 respond quickly to the removal of livestock grazing, complete recovery is a slower process.
35 Removing the limit on the number of consecutive years of nonuse would allow adequate time for
36 ecological processes disrupted by livestock grazing (recruitment of young woody species,
37 recovery of vegetation which protects stream banks and attenuates high flows, channel
38 narrowing and stream bank stabilization as riparian vegetation traps sediment, etc.) to recover
39 and function properly. In most cases, more than three years of nonuse is needed for complete
40 recovery of riparian, wetland, and aquatic habitat.

41
42 Introduction of Noxious Plants: Prohibiting the introduction of noxious plants under the
43 Proposed Action would have a positive effect on riparian and aquatic conditions. The spread of
44 aggressive invasive species such as tamarisk (*Tamarix spp.*), purple loosestrife (*Lythrum*
45 *salicaria*), and Russian olive (*Elaeagnus angustifolia*) are negatively affecting riparian

1 communities on public lands. These aggressive invasive species crowd out native riparian
2 species and do not provide the deep roots of willows, sedges (*Carex spp.*), or cottonwoods
3 (*Populus spp.*) that hold the streambank in place during high flow events. Making the
4 introduction of invasive species a prohibited act decreases the likelihood that they will be
5 knowingly introduced.

6
7 Basis for Rangeland Health Determinations: Using both standards assessment and monitoring as
8 a basis for determining that existing grazing management practices or levels of grazing use are
9 significant factors in failing to achieve standards and conform with guidelines would negatively
10 affect riparian and aquatic resources, especially in the short-term. BLM does not have adequate
11 funding or staffing to monitor resource conditions on public lands, so requiring both a land
12 health assessment and monitoring data will delay the determination of what is causing standards
13 not to be met. This delay will allow ongoing degradation of riparian, wetland, and aquatic
14 resources while the necessary monitoring data is collected.

15
16 Timeframe for Meeting Rangeland Health Standards: If livestock grazing is determined to be a
17 significant factor contributing to a riparian area not meeting land health standards, delaying any
18 changes in the grazing permit for up to 24 months, as planned in the Proposed Action, will allow
19 for additional degradation of riparian, wetland, and aquatic habitat. In the case of a riparian area
20 that is functioning-at-risk with a downward trend, one or two additional grazing seasons
21 combined with a high flow event could cause the system to become non-functional.

22
23 Removing the Provision for Conservation Use Permits: Removal of this provision as
24 recommended in the Proposed Action would negatively affect riparian and aquatic resources.
25 Conservation use permits would be issued to groups or individuals who do not plan to graze
26 livestock on their allotment. Under this provision, groups or individuals would actively seek
27 allotments that contain valuable riparian or threatened and endangered species habitat. The
28 removal of livestock from allotments that are most vulnerable to degradation from livestock
29 grazing via the issuance of a conservation use permit would have both short and long-term
30 benefits for riparian, wetland, and aquatic resources.

31
32 Definition and Role of Interested Publics: The proposed action will require the submission of
33 either a written request or written comments to BLM in order for an individual, group, or
34 organization to obtain “interested public” status. Since it will require more effort to gain
35 interested public status for environmental groups or organizations, this change will negatively
36 affect riparian, wetland, and aquatic resources. The removal of BLM’s requirement to consult,
37 cooperate, and coordinate with or seek review and comment from the interested public on certain
38 actions will also negatively affect riparian, wetland, and aquatic resources. In particular,
39 removing the requirement to involve the interested public in the renewing or issuing of a grazing
40 permit or lease, or the modification of a grazing permit or lease, may lead to negative effects on
41 riparian, wetland, and aquatic resources on public lands. In most instances, the “interested
42 public” who comments on the issuance, renewal, or modification of a grazing permit is a
43 conservation organization whose opposition is based on documentation of negative effects from
44 livestock grazing to riparian, fisheries, wildlife, or threatened and endangered species habitat.
45 Conservation organizations help BLM by identifying and documenting detrimental livestock

1 grazing effects on public lands, which enables BLM to more effectively protect riparian,
2 wetland, and aquatic habitat. Removing the ability of the interested public to remain involved in
3 the issuance, renewal, or modification of grazing permits will negatively affect riparian and
4 aquatic resources.

5
6 Water Rights: Deleting the existing provision that, to the extent allowed by State law, any water
7 right would be acquired, perfected, maintained, and administered in the name of the United
8 States would have a long-term adverse affect on riparian, wetland, and aquatic resources. Some
9 states are passing laws that prohibit the Federal government from owning water rights. BLM
10 presently has the ability to hold water rights, and many of these rights are in the form of instream
11 flows specifically acquired to protect fisheries resources. Riparian, wetland, and aquatic habitat
12 will be negatively effected if BLM is prohibited by state law from holding water rights.

13
14 Prohibited Acts: Elimination of several acts prohibited by present regulations would have both
15 short and long term negative effects for riparian and aquatic resources. If BLM loses its
16 enforcement authority to punish violators by not issuing, suspending, or canceling their grazing
17 permits, then these prohibited acts become more likely to occur on public lands. Even if
18 violators of these acts are rarely punished, it is difficult to calculate the number of these acts that
19 were not committed due to the fact that they are prohibited serving as a deterrent. The
20 elimination of five prohibited acts under the Proposed Action would directly and negatively
21 affect riparian, wetland, and aquatic resources. The effects of eliminating these prohibited acts
22 are as follows:

- 23
24 • Placement of poisonous bait or hazardous devices designed for the destruction of
25 wildlife: Placing poisonous bait or hazardous devices to kill wildlife often involves the
26 use of cyanide, which is lethal to fish and aquatic invertebrates.
- 27 • Application or storage of pesticides, herbicides, or other hazardous materials: Improper
28 application of pesticides or herbicides can kill fish and aquatic invertebrates. In addition,
29 riparian vegetation is sometimes targeted for removal with herbicides due to the mistaken
30 perception that willows (*Salix spp.*) and other riparian species dewater streams and
31 ditches. These species are vital to properly functioning riparian systems and, by storing
32 water in stream banks, actually increase late season stream flows by releasing the stored
33 water slowly over time as flows decline.
- 34 • Alteration or destruction of natural stream courses without authorization: Unauthorized
35 alteration of stream courses would lead to loss of aquatic habitat diversity and destruction
36 of riparian vegetation if a stream is straightened or channelized. Streams are often
37 straightened or altered in an effort to bring more agricultural land into production or to
38 facilitate water removal from a stream into an irrigation ditch. Channelization of streams
39 leads to increased erosion and downcutting of the stream channel due to increased stream
40 gradient. As streams downcut, the water table lowers, which leads to loss of riparian
41 vegetation.
- 42 • Pollution of water sources: Polluting water sources directly and negatively affects fish
43 and aquatic invertebrate populations.
- 44 • Illegal take, destruction or harassment, or aiding and abetting in the illegal take,
45 destruction or harassment of fish and wildlife resources: Aiding and abetting in, or

1 directly illegally taking, destroying, or harassing wildlife or fish directly and negatively
2 affects fish populations.

3 4 4.4.7 Special Status Species

5
6 Refer to the impacts section under the previous Wildlife section, as those effects will also apply
7 to special status species and, in many instances, be exacerbated for special status species who are
8 either threatened or endangered or sensitive due to low population levels, degraded habitats, or
9 endemism.

10
11 The BLM Special Status Species Management Policy (Manual 6840) ensures that actions
12 authorized or approved by BLM are consistent with the conservation needs of special status
13 species and do not contribute to the need to list any special status species. Conservation of
14 special status species means the use of all methods and procedures which are necessary to
15 improve the condition of special status species and their habitats to a point where their special
16 status recognition is no longer warranted.

17
18 Special status species are defined as those proposed for listing under the Endangered Species Act
19 (ESA), officially listed as threatened or endangered under the ESA, those listed by a State in a
20 category such as threatened or endangered implying potential endangerment or extinction, or
21 those designated by each BLM State Director as sensitive.

22
23 It is BLM policy to conserve listed species and the ecosystem on which they depend. BLM shall
24 manage species proposed for listing under the ESA as threatened or endangered and proposed
25 critical habitat with the same level of protection provided for listed species. For candidate
26 species, BLM shall implement management plans that conserve the species and habitats and
27 ensure that actions authorized, funded, or carried out by BLM do not contribute to the need to
28 list the species. The protection provided by the 6840 policy for candidate species shall be used as
29 the minimum level for protection for BLM sensitive species. State listed species shall be
30 managed consistent with state laws protecting these species to the extent that they are consistent
31 with FLPMA and other federal laws.

32
33 The proposed changes for protecting the health of the rangelands:

- 34
35 4. Grazing decisions would require not only a land health assessment, but also
36 monitoring data. BLM, in fact, lacks sufficient funding and staffing to perform
37 adequate monitoring.
38 5. After a grazing decision record of decision there is a 2-year period allowed
39 prior for making any changes in the grazing operation.
40 6. Proposed changes in active use greater than 10% would require a 5 year phase-
41 in period.

42
43 All of these cumulative delaying tactics could result in a protracted 7-year period to effect
44 change and thus would result in a long-term, adverse effect on wildlife resources and biological
45 diversity, including special status species. Changes in active use in excess of 10% would be

1 implemented over a 5-year period unless the changes must be made before 5 years to comply
2 with applicable law (e.g., Endangered Species Act). The excepted provision for the Endangered
3 Species Act will result in BLM being able to make necessary adjustments within a reasonable
4 timeframe, thus reducing adverse effects on listed threatened or endangered species.

5
6 All of these cumulative delaying tactics would result in a long-term, adverse effect on special
7 status species and biological diversity, especially special status species such as Gunnison and
8 greater sage-grouse, mountain plover, pygmy rabbit, mountain quail, etc. Wisdom et al. (2003)
9 identified 363 species of conservation concern in the sagebrush ecosystem in the western United
10 States alone, of which 70% are plants. These 363 species are considered to be at risk of regional
11 extirpation owing to habitat or population declines or rarity (Wisdom et al. 2003).

12 13 4.4.8 Wild Horses and Burros [this section is the old original text for proposed 14 action]

15
16 The Proposed Action Alternative would have two major negative effects on wild horses and
17 burros from the following regulation changes. They are (1) limiting appeals to those who have a
18 direct interest (**are we going to have a definition for what constitutes a direct interest?**) and
19 (2) reserve common allotments.

20
21 Limiting appeals to those considered to have a direct interest in livestock grazing decisions could
22 have an affect on wild horse and burro numbers and those who support them (i.e., advocacy
23 groups) if there is no avenue for input into the decision. This could affect the number of animals
24 allowed to graze in concert with livestock.

25
26 Reserve Common allotments would definitely benefit the livestock grazing community, but in
27 the instances where livestock need to be removed to improve the vegetative community (fire
28 rehabilitation, reseeding), wild horses and burros would also need to be removed and either
29 placed on long-term holding facilities (older animals) or in the adoption pipeline (5 years and
30 under). Either way, the horses and burros would not be available to be returned to the range.
31 Certain herds have specific attributes that would be lost. If there are wild horses and burros on
32 the reserve common allotments, increased grazing pressure could result in negative effects to
33 population numbers and herd dynamics.

34
35 If the horses and burros are left on the range, there would be additional forage to support
36 established numbers within identified herd management areas.

37
38 The extension of the unhealthy rangeland determination from one grazing season to 18 months
39 would also negatively affect wild horses and burros by allowing range degradation to continue
40 for a longer time before a determination is made. This could affect wild horse and burro
41 dynamics and population numbers.

42
43 Positive effects could be realized from the addition of the prohibitive act of knowingly and
44 willfully spreading an invasive species (**would be very hard to prove**), as this would benefit the
45 rangeland and grazers such as wild horses and burros. And the extension of temporary nonuse

1 granted for 5 years instead of the 3 years identified previously would allow rangeland health to
2 improve, if overgrazing is the problem, which could positively affect wild horses and burros by
3 reducing competition for key forage species.

4.4.9 Recreation

7 In areas where land health standards are presently attained, there would be no effect on recreation
8 opportunities such as hunting, fishing, sightseeing, and enjoyment of naturalness. Under some
9 circumstances, where rangeland health standards are not attained, improvement to conditions
10 would be delayed under the proposed action. Delays may include allowing for the acquisition of
11 additional monitoring data, additional time for development of corrective actions, and
12 establishment of a 5 year phase in implementation period. The effect of these delays would vary
13 according to site specific circumstances and conditions. In areas where the poorest range
14 conditions exist, degraded recreational opportunities would persist for a longer period of time
15 before actions would be implemented to bring the area into attainment of rangeland health
16 standards. One exception would be where other laws or regulations, such as the Endangered
17 Species Act, take precedence so that implantation would be more immediate.

19 Certain prohibited acts would be removed from the range regulations. However, this would not
20 be expected to result in a decline in land health since those acts would continue to be prohibited
21 in other regulations and may be specifically addressed in the special terms and conditions of the
22 grazing permit. Adding knowingly and willfully introducing noxious weeds to the prohibited
23 acts would affect recreation in two ways. First, the recreational setting and opportunities for
24 enjoyment of naturalness, wildlife observation, hunting, fishing, and access to recreational
25 opportunities could be adversely affected by the introduction or spread of invasive species. The
26 proposal would help protect the recreational setting by providing additional regulatory assistance
27 in reducing the potential for noxious weed introduction. Second, the provision would add
28 complications to recreational use by establishing a new condition of use. The greatest effect
29 would be on horseback use where feed is routinely brought in, although in states where weed
30 free feed is already required, this would not create a significant change. The proposal would be
31 most noticeable to recreational uses that require permits as they are the most highly regulated
32 and monitored.

4.4.10 Special Areas

4.4.10.1 Phase-In of Changes in Use

37 Allowing a change in active use decision in excess of 10 percent to be implemented over a 5-
38 year period would delay implementing corrective action based on a reduction of livestock
39 numbers. Permittees would be able to adjust their operation over a five year period spreading
40 the economic impact of a reduction in use over an extend period of time. BLM could extend the
41 monitoring period and gather additional data used to make a change in active use decision.

4.4.10.2 Range Improvement Ownership

44 The Proposed Action allows cooperators to share structural range improvement title with the
45 United States in proportion to their initial contribution. Nonstructural range improvements are

1 accomplished at cooperator risk. The cooperator acquires no interest in the public land by virtue
2 of the range improvement. Allowing shared title may instill a greater sense of land stewardship
3 and responsibility with the cooperator. Shared title may provide stimulus to increase the number
4 of range improvements, however records indicate this may not be true. Share structural range
5 improvement title may lead to takings related to private property on public lands. Special Area
6 managers could loose some control over operation of the improvement and possibly allotment
7 management.

8 9 4.4.10.3 Temporary Nonuse

10 Allowing no limit on consecutive years of nonuse provides the flexibility needed to adequately
11 allow for suitable allotment restoration and recovery. Special Area managers with allotments
12 undergoing extensive restoration would have the flexibility needed to ensure adequate time for
13 recovery. Having no limit on consecutive years of nonuse may provide a mechanism for
14 removing an allotment from the intended use of livestock grazing.

15 16 4.4.10.4 Noxious Weeds

17 The Proposed Action adds a grazing regulation provision concerning knowingly or willfully
18 introducing or spreading a noxious weed to or on public lands. The regulation would provide a
19 deterrent for introducing or spreading noxious weeds to the general public, including permittees
20 on public lands. BLM law enforcement rangers would have the authority to cite for the
21 violation.

22 23 4.4.10.5 Basis for Rangeland Health Determinations

24 The Proposed Action requires that determinations on grazing practices and levels of grazing as
25 significant factors in failing to meet rangeland health standards be based on standards
26 assessment and monitoring. The additional data may improve the scientific basis for
27 determinations and legal defense. Depending on the length of monitoring the proposal could
28 delay implementation of corrective action and meeting rangeland health standards. Present
29 budgetary constraints concerning monitoring and assessment would also add to corrective action
30 delay. The proposal could also delay developing determinations by requiring both standard
31 assessment and monitoring data. Should a permittee be meeting standards while over-utilizing
32 an adjustment can not be made based on over-utilization. Over-utilization could continue to
33 occur until monitoring indicates that the standards are not being met.

34 35 4.4.10.6 Timeframe for Meeting Rangeland Health Standards

36 Alternative 2 proposes to allow BLM to take appropriate corrective action as soon as practicable
37 but not later than the start of the next grazing year following completion of the relevant and
38 applicable requirement of law, regulations and consultation requirements. Corrective action
39 would ensure that fundamentals of rangeland health conditions exist or progress is being made
40 toward achieving rangeland health. This section describes what action must occur to
41 successfully complete consultation requirements.

42
43 BLM would have up to 24 months, in compliance with applicable laws and with the consultation
44 requirements, to formulate, propose, and analyze appropriate actions that address the failure to
45 meet standards or conform to guidelines. Providing the additional time allows formulation of

1 appropriate alternatives and time to solicit permittee and other public input. This action
2 translates to being more effective with correcting on-the-ground problems. However, the
3 proposal would result in delays with implementation of corrective actions to meet standards.
4

5 4.4.10.7 Definition and Role of Interested Publics

6 The Proposed Action would modify the existing regulations by requiring that interested public
7 actually participate in the selected decision-making process. Participation includes providing
8 written comments or other wise participating in the decision-making process. Simply requesting
9 an opportunity to be involved in a decision-making process would no longer warrant interested
10 public status. Also, the CCC requirement for day to day operational activities would be removed
11 from the regulations. The Proposed Action would focus CCC on significant management issues
12 involving interested publics willing to fully participate. The proposal may reduce the number of
13 interested publics, and would reduce the volume of livestock grazing information provided to the
14 public.
15

16 4.4.10.8 Prohibited Acts

17 Alternative 2 would remove provisions regarding prohibited acts related to violations of Federal
18 or State laws pertaining to poisonous bait/hazardous devices, storage of hazardous materials,
19 altering stream courses, water pollution, illegal take, destruction/harassment of fish/wildlife, and
20 destruction/removal of cultural resources. Deleting these laws and regulations from the
21 prohibited acts limits authority to violations of those laws that are the direct enforcement
22 responsibility of the Secretary of the Interior that reference punitive actions against grazing
23 permits; or state livestock laws. Removing the above provisions may represent a lost of
24 deterrents for would be violators.
25

26 4.4.10.9 Grazing Use Allowed When a Stay is Granted

27 The Proposed Action adds a provision addressing the stay of a decision on a permit or lease
28 offered to a preference transferee. If a stay is granted on a decision to offer a permit or lease to a
29 preference transferee, then the applicant would be offered a new permit or lease with the same
30 terms and conditions of the previous permit lease. The proposal delays the opportunity for BLM
31 to make an adjustment in grazing preference affecting on the ground management of a grazing
32 allotment. The Proposed Action provides economic stability for a permittee selling his grazing
33 operation by offering grazing preference without a decrease in use adjustment.

34 4.4.10.10 No on the Ground Effect

35 Social, Economic and Cultural Considerations

36 Cooperation with State, County and Federal Agencies

37 Review and Comment on Biological Assessments

38 Conservation Use

- 1 Grazing Preference
- 2 Water Rights
- 3 Satisfactory Performance
- 4 Changes in Grazing Use within the Terms and Conditions of the Permit of Lease
- 5 Service Charges
- 6 Biological Assessment-Application of Protest and Appeal Provisions

7
8

4.4.11 Paleontological and Cultural Resources

9 Issues to be considered under the Proposed Action, Alternative Two, include elements relating to
10 improving the working relations between permittees or lessees and the BLM, protecting the
11 health of the rangelands, and increasing administrative efficiency and effectiveness.

12 The majority of the regulation changes, clarifications and additions as stated in the Proposed
13 Action Alternative will have no effect on heritage resources, whether for on-the-ground actions
14 or for the process and requirements of cultural resource management.

15 The five year phase-in provision could have both beneficial and adverse effects on heritage
16 resources. In the case of decreasing use, heritage resources would be subject to continued
17 effects before the decision is fully implemented; alternately, in the case of increasing use, the
18 delay would allow extra time to provide protection or data recovery of sites that may be affected
19 by the change. Changes to the provision of Rangeland Health Determinations would indirectly
20 affect heritage resources by increasing workload due to site or locality monitoring data
21 requirements, which could delay implementation of grazing related actions.

22 Changes to Section 4140.1, Prohibited Acts, will have an adverse effect on heritage resources.
23 Elimination of the “illegal removal or destruction of archaeological or cultural resources” clause
24 would hinder BLM’s ability to take action against the permittee or lessee in the form of
25 withholding issuance, cancellation, or suspension of their permit or lease. Additionally, it would
26 limit BLM’s ability to respond to and prevent future violations as well as being contrary to the
27 policy underlying FLPMA. This could significantly affect BLM’s ability to protect and manage
28 cultural resources as required by the National Historic Preservation Act and the Archaeological
29 Resources Protection Act.

30 Any new projects developed under the changed regulations would be analyzed for affects on
31 heritage resources on a case-by-case basis; all applicable laws, executive orders, regulations and
32 manual requirements and procedures for identification, protection and utilization of, and
33 consultation on heritage resources will be followed.

1 4.4.12 Economic Conditions

2
3 Overall, the local and regional economic effects of the proposed action would be minor. The
4 primary effects would be: 1) increased management flexibility for both permittees and BLM; 2)
5 increased administrative costs to BLM; 3) reduced potential economic effects to permittees by
6 increasing the amount of time to make rangeland health determinations and implement grazing
7 decisions; and 4) increased service charges to permittees undertaking specific actions.

8
9 The following provisions have the greatest likelihood of creating economic and/or administrative
10 effects, though none of the provisions, either individually or cumulatively, is considered
11 significant: 1) Social, Economic, and Cultural Considerations; 2) Phase-In of Changes in Use;
12 3) Temporary Non-Use; 4) Basis for Rangeland Health Determinations; 5) Timeframe for
13 Meeting Rangeland Health Standards; 6) Changes in Grazing Use Within the Terms and
14 Conditions of the Permit or Lease; 7) Services Charges; and 8) Biological Assessments –
15 Application of Protest and Appeal Provisions. Each of these provisions is discussed below.

16
17 Social, Economic, and Cultural Considerations: The primary effect of this provision would be to
18 increase BLM administrative costs, and perhaps time, to complete NEPA analysis of changes in
19 permitted use. NEPA already requires federal agencies to consider the effects on the human
20 environment in all of its analyses, including social, economic, and cultural factors. BLM does
21 consider social, economic, and cultural factors in its decision-making but, in some cases, those
22 considerations are not sufficiently documented. Where offices are already documenting these
23 considerations, there will likely be no additional workload. However, in some offices, more
24 documentation will increase the workload.

25
26 An additional economic effect of this provision may be that, to the extent that social, economic,
27 and cultural factors were not previously documented, decisions on changes in permitted use may
28 change. This could either benefit or harm the permittee, depending on how the decision might
29 change. Likewise, it could benefit or harm other general economic conditions.

30
31 Phase-In of Changes in Use: Decreases or increases in active use exceeding 10% of the existing
32 permit would be phased in over a five-year period unless the permittee agrees to a shorter time
33 period or there is need to comply with applicable law (e.g. the Endangered Species Act). A five-
34 year phase-in of decreases in active use would mitigate the potential economic effect on
35 permittees by allowing ranchers additional time to make alternative arrangements or to simply
36 continue livestock grazing activities at existing levels. However, it may also delay needed long-
37 term improvements in rangeland conditions which may in turn delay the achievement of long-
38 term sustainability of range conditions and the permittee's economic viability. Phasing in
39 increases in use would also allow permittees to better plan future use to the extent that additional
40 time may be needed to increase herd size and/or adjust seasons of use.

41
42 Range Improvement Ownership: Shared title of range improvements could potentially improve
43 permittees' financial condition to the extent that title may increase the value of their operation or
44 increase their ability to obtain financing. However, permittees currently do have shared

1 financial interest in range improvements and are compensated for the contribution they made
2 under a cooperative agreement in the event the permit changes ownership so it is not clear what
3 the net effect of this provision might be. Table 4.4.12.1 shows the annual number of range
4 improvements by state from 1982 through 2002. From 1982 to 1995, ownership of range
5 improvements was held jointly by the U.S. government and permittees. Since 1995, the federal
6 government has held sole title. In some states, there was a noticeable decrease in range
7 improvements from 1995 to 1996, but following 1996 the trends are more erratic. Also, there
8 was an overall declining trend in the numbers of range improvements since 1982 when looking
9 at all states combined. Thus, the data on numbers of range improvements before 1995 and after
10 1995 does not reveal whether permittees became permanently more reluctant to participate in
11 range improvements, or what the effect may have been on the value of their operations. [NOTE
12 TO MYSELF: NEED TO ADD TABLE/TEXT HERE SHOWING \$ SPENT ON R.I.]

13
14 INSERT TABLE 4.4.12.1 HERE
15

16 Temporary Non-Use: This provision would increase the number of years permittees could take
17 non-use. Currently, permittees may only take up to three consecutive years of non-use and this
18 provision would eliminate that three consecutive year limitation. This would be a beneficial
19 economic effect on permittees. Also, it would increase flexibility for both permittees and BLM,
20 since there are a variety of financial and resource-condition reasons for taking non-use beyond
21 three years.

22
23 Basis for Rangeland Health Determinations: Rangeland health determinations would need to be
24 based on standards assessments and monitoring prior to proposing possible changes in permitted
25 use. This may delay some determinations and increase costs to BLM to address additional
26 monitoring requirements. The effect on permittees would be that initiation of proposals for
27 changes in permitted use would be delayed and thus any potential changes in their operations
28 would be delayed. This may be a beneficial effect on permittees, depending on whether resource
29 conditions on their allotments can sustain delays in improvement.

30
31 Timeframe for Meeting Rangeland Health Standards: The effects would be similar to those from
32 the rangeland health determinations in that BLM would have a longer timeframe, up to 24
33 months after determination, to analyze any proposed changes to address resource conditions.
34 This delay could potentially benefit permittees in the same way as the rangeland health
35 determination provision above, assuming that delays in proposed changes to permitted use do
36 not cause continued deterioration in range conditions and thus the economic viability of the
37 permittee's operation.

38
39 Changes in Grazing Use within the Terms and Conditions of the Permit or Lease: This provision
40 would primarily increase management flexibility for both BLM and permittees but would likely
41 have little economic effect because overall forage utilization could not exceed the amount of
42 active use specified in the permit. For example, if resource conditions indicated forage
43 availability earlier than the authorized turn-out date on the permit, BLM could authorize
44 temporary changes in grazing use to allow an earlier turn-out date as long as total use does not

1 exceed the amount of active use authorized by the permit. Without this provision, BLM would
 2 have to issue a temporary nonrenewable (TNR) authorization, which is more time consuming
 3 and costly than simply basing authorization on existing permit/lease. This provision not only
 4 management increases flexibility, it may lower BLM's costs. It could also result in more
 5 efficient utilization of forage because it allows permittees and BLM to respond to annual
 6 fluctuations in timing and amount of forage production. [NOTE TO MYSELF: NEED TO
 7 DISCUSS WITH GROUP CUZ MY RANGE GUY SAYS WE DON'T HAVE TO ISSUE
 8 TNR'S TO DO THIS NOW – HE THINKS THIS WOULD ACTUALLY DECREASE OUR
 9 FLEXIBILITY].

10
 11 **Service Charges: Increasing service charges for certain actions is essentially a cost-**
 12 **recovery measure for the U.S. Treasury. The primary effects of increasing service charges**
 13 **for certain actions would be to transfer some costs from the public (i.e. BLM) to**
 14 **permittees. The current fee is \$10; under the proposed action, fees would increase to:**

- 15
- 16 1) Issuance of crossing permit (\$75)
- 17 2) Transfer of grazing preference (\$145)
- 18 3) Cancellation and replacement of grazing fee billing (\$50)
- 19

20 **To illustrate the effects of this cost-recovery measure, Table 4.4.12.2 below illustrates the**
 21 **effects to the BLM and permittees using the example of grazing preference transfer:**

22

Table 4.4.12.2. Cost Recovery for Grazing Permit Transfers.				
# of Permit Transfers	Service Charge	Total Revenue Collected (Net Cost to Permittees)	Total BLM Direct Costs	Difference (Net Cost to BLM)
1,149	\$10	\$11,490	\$1,784,930	\$1,773,440
1,149	\$145	\$166,600	\$1,784,930	\$1,618,330
Total Change:		+ \$155,110	\$0	- \$155,110
Note: based on FY2000 MIS data -- NEED CITATION				

23

24 **As Table 4.4.12.2 indicates, the cost recovery measure for grazing permit transfers would**
 25 **shift \$155,110 of the total costs of \$1,784,930 from the BLM to about 1,149 permittees.**
 26 **Since permit transfers are typically not recurring events, the costs to permittees represent**
 27 **one-time costs. [NOTE TO MYSELF: ADD TO THIS TABLE COMPARISONS FOR**
 28 **OTHER COST ITEMS. ALSO, CHECK FOR MORE RECENT DATA].**

29 **Biological Assessments—Application of Protest and Appeal Provisions: This provision would**
 30 **primarily create a cost savings to BLM in that BA's would not be considered appealable or**

1 protestable actions. . [NOTE TO MYSELF: I NEED TO ADD MORE ANALYSIS AFTER
2 GETTING FEEDBACK FROM SO’S]

3
4 Grazing Preference and Permitted Use: Deleting the term “permitted use” and changing the
5 definition of “grazing preference” to include the total number of AUMs apportioned and
6 attached to base property would have no economic effect. This change reflects essentially a
7 return to the pre-1995 regulations. The 1995 regulations changed the definition of grazing
8 preference to the superior or priority position against others for the purpose of receiving a
9 grazing permit or lease. The priority is attached to base property owned or controlled by the
10 permittee. In addition, the 1995 regulations added the term “permitted use” to mean the forage
11 allocated by, or under the guidance of, an applicable land use plan, and is expressed in AUMs.
12 There was no economic effect from changing the regulations in 1995 and, likewise, there would
13 be no effect from returning to the prior definitions.

14
15 Definition and Role of Interested Publics: [NOTE TO MYSELF: Still a little unclear on this
16 one. Molly’s view: The removal of some of the requirements for ccc with the interested public
17 could result in reductions in costs for the BLM, but it is assumed that these cost savings would
18 be minor. There are still requirements for ccc with permittees/lessees and the State so relatively
19 little time is saved by removing ccc with the interested public.]

20 21 4.4.13 SOCIAL CONDITIONS

22 4.4.14 Environmental Justice

23 24 4.5 ALTERNATIVE 3: ALTERNATIVE THREE:

25 4.5.1 Air Quality

26 27 4.5.2 Grazing Administration

28 29 4.5.2.1 Implementing Changes in Grazing Use

30
31 The third alternative differs from the proposed action by allowing a discretionary use of the 5-
32 year phase in process for reductions in permitted. The BLM would have the flexibility to
33 implement a reduction according to the consultation and grazing decision process. This would
34 assist the grazing administration program in requiring a suggested guideline for the process in
35 reducing permitted use, while at the same time allowing the BLM flexibility to formulate a
36 specific response to each situation.

37 38 4.5.2.2 Authorizing Temporary Changes in Use

39
40 The only change from the proposed action is the third alternative specifies that permittees or
41 lessees could apply for temporary nonuse and the BLM could approve temporary nonuse for no
42 more than 5 consecutive years. This alternative would no have a significant effect on the
43 grazing administration program, but may provide greater flexibility to permittees or lessees.
44 Nonuse applications would be expected to continue at the present level.

1 4.5.2.3 Fundamentals of Rangeland Health

2
3 The third alternative is the same as the proposed action except the BLM would be not be
4 required to use both assessment and monitoring data for the rangeland health determinations.
5 This alternative would require that, if available, monitoring data be used in combination with the
6 assessment documentation to formulate a determination. This action provides the BLM
7 flexibility to maintain established Rangeland Health assessment scheduling and also provides
8 consistency for those allotments that are already been assessed. In addition, the BLM would
9 maintain the scheduling for permit renewals that are tied to the completion of the standards for
10 rangeland health determinations.

11 4.5.3 Vegetation

12 4.5.4 Fire and Fuels

13
14 Alternative three is the same as the preferred alternative with the exception of temporary nonuse.
15 In some situations, such as drought, an area may need to be rested longer than 5 years to achieve
16 the goals of the land manager. The 5-year limit on temporary nonuse could have a slightly
17 negative effect on the environment
18

19 .
20 4.5.5 Soils

21
22 4.5.5.1 Upland Soils

23
24 Short- and long-term effects of alternative three would be similar to the proposed action **with the**
25 **following differences, which would result in no adverse effects to upland soil resources.** The
26 discretionary 5-year phase in of changes in grazing use would result in less negative effects of
27 that rule change. The 5-year limit on nonuse for grazing would reduce the positive effects of
28 that rule change. The option of using either rangeland health assessments or monitoring as basis
29 for determinations of failure to achieve standards and conform with guidelines would be
30 beneficial since there would be less potential delay in making that determination. Thus,
31 allotments with inadequate watershed cover would be permitted to establish more rapid
32 recovery.

33
34 **Cumulative effects would be neutral to slightly beneficial for upland soils since there would be**
35 **no net loss of watershed cover.** There would be no unavoidable adverse effects. The relation
36 between short-term use and long-term productivity would depend on the maintenance of
37 adequate watershed cover to protect upland soil resources. There would be no irreversible or
38 irretrievable commitment of soil resources.

39
40 4.5.5.2 Riparian Soils

41
42 Short- and long-term environmental consequences of alternative three would be similar to those
43 for upland soils **for this alternative** except that the high moisture content of riparian soils can
44 accelerate responses to improved management practices. The short- and long-term effects would

1 correspond to the number of acres where desirable riparian watershed cover was enhanced or
2 reduced.

3
4 **Cumulative effects would be neutral to slightly beneficial for riparian soils since there would**
5 **be no net loss of desirable riparian cover.** There would be no unavoidable adverse effects. The
6 relation between short-term use and long-term productivity would depend on the maintenance of
7 adequate desirable vegetation cover to protect riparian soil resources. There would be no
8 irreversible or irretrievable commitment of soil resources.

9 10 4.5.6 Wildlife

11 12 4.5.6.1 Terrestrial

13
14 The effects on wildlife species in Alternative Three are identical to those identified for
15 Alternative Two, with the following exceptions:

16
17 The requirement that any change in active use in excess of 10% would be discretionary rather
18 than mandatory would result in BLM being able to make changes on the ground in less than
19 mandated 5 year period. This would greatly reduce the adverse effects on wildlife resources.

20
21 The ability of BLM to base rangeland health determinations on a rangeland health assessment or
22 monitoring data would greatly enhance BLM's ability to take corrective action at the earliest
23 date within existing funding and staffing. This would be a significant improvement over
24 Alternative 2, where monitoring data would be required.

25 26 4.5.6.2 Migratory Birds [included in 4.5.6.1—doc will be renumbered]

27 28 4.5.6.3 Riparian, Wetland, and Aquatic Communities

29
30 Under Alternative 3, effects on riparian, wetland, and aquatic communities would be the same as
31 under Alternative 2, except for the actions discussed below.

32
33 Phase-In of Changes in Use: Making the 5-year phase in of changes in use discretionary instead
34 of mandatory would have a negative effect on riparian, wetland and aquatic resources. If the
35 change required is a decrease in active use due to livestock degradation of riparian, wetland, or
36 aquatic resources, having the discretion to take no action at all rather than phasing in the
37 decrease or imposing an immediate reduction will allow the negative effects associated with
38 grazing to continue.

39
40 Temporary Nonuse: Extending the period for temporary nonuse from a maximum of three years
41 to five years would positively benefit riparian and aquatic resources. Although riparian areas
42 typically respond quickly to the removal of livestock grazing, complete recovery is a slower
43 process. A five year period of rest from livestock grazing would allow ecological processes
44 disrupted by livestock grazing (recruitment of young woody species, recovery of vegetation
45 which protects stream banks and attenuates high flows, channel narrowing and stream bank

1 stabilization as riparian vegetation traps sediment, etc.) to recover and function properly.
2 Extending the maximum amount of time for temporary nonuse from five years to indefinitely
3 would provide even greater benefits in situations where five years of recovery is not adequate to
4 restore ecological function.

5
6 Basis for Rangeland Health Determinations: Using either standards assessment or monitoring
7 (but not both) as a basis for determining that existing grazing management practices or levels of
8 grazing use are significant factors in failing to achieve standards and conform with guidelines
9 should have minimal effect on riparian, wetland, and aquatic resources. The positive effect of
10 this element is greater in Alternative Three than under the Proposed Action due to the
11 requirement that either assessments or monitoring can be used as a basis for determinations. If
12 either assessments or monitoring show that grazing management practices or levels of grazing
13 use are significant factors in failing to achieve standards or conform with guidelines, then the
14 authorized officer can pursue a change in livestock management.

15 16 4.5.7 Special Status Species

17
18 The BLM Special Status Species Management Policy (Manual 6840) ensures that actions
19 authorized or approved by BLM are consistent with the conservation needs of special status
20 species and do not contribute to the need to list any special status species. Conservation of
21 special status species means the use of all methods and procedures which are necessary to
22 improve the condition of special status species and their habitats to a point where their special
23 status recognition is no longer warranted.

24
25 Special status species are defined as those proposed for listing under the Endangered Species Act
26 (ESA), officially listed as threatened or endangered under the ESA, those listed by a State in a
27 category such as threatened or endangered implying potential endangerment or extinction, or
28 those designated by each BLM State Director as sensitive.

29
30 It is BLM policy to conserve listed species and the ecosystem on which they depend. BLM shall
31 manage species proposed for listing under the ESA as threatened or endangered and proposed
32 critical habitat with the same level of protection provided for listed species. For candidate
33 species, BLM shall implement management plans that conserve the species and habitats and
34 ensure that actions authorized, funded, or carried out by BLM do not contribute to the need to
35 list the species. The protection provided by the 6840 policy for candidate species shall be used as
36 the minimum level for protection for BLM sensitive species. State listed species shall be
37 managed consistent with state laws protecting these species to the extent that they are consistent
38 with FLPMA and other federal laws.

39
40 Changes in active use in excess of 10% would be implemented over a 5-year period unless the
41 changes must be made before 5 years to comply with applicable law (e.g., Endangered Species
42 Act). The excepted provision for the Endangered Species Act will result in BLM being able to
43 make necessary adjustments within a reasonable timeframe, thus reducing adverse effects on
44 listed species.

1 4.5.8 Wild Horses and Burros

2 4.5.9 Recreation

3
4 Effects under this alternative would be the same as alternative two, except that alternative three
5 would allow for shortening the phase in time for corrective actions where an allotment is not in
6 attainment of rangeland health standards. The authorized officer may implement more
7 immediate corrective actions that would facilitate recovery and benefit the recreational
8 opportunities within the area.

9
10 4.5.10 Special Areas

11
12 4.5.10.1 Phase-In of Changes in Use

13 Same as the Proposed Action with the exception of the 5-year phase-in for change in active use
14 in excess of 10 percent would be discretionary. This Alternative provides management
15 flexibility for determining if the phase-in is appropriate for specific situations.

16
17 4.5.10.2 Range Improvement Ownership

18 Same as the Proposed Action.

19
20 4.5.10.3 Temporary Nonuse

21 Same as the Proposed Action with the exception that the five year limit removes the possibility
22 of an allotment going into quasi-permanent nonuse.

23
24 4.5.10.4 Noxious Weeds

25 Same as the Proposed Action.

26
27 4.5.10.5 Basis for Rangeland Health Determinations

28 Same as the Proposed Action with the exception that determinations may be based on standards
29 assessment and/or monitoring. This provides greater flexibility for management decisions.

30
31 4.5.10.6 Timeframe for Meeting Rangeland Health Standards

32 Same as the Proposed Action.

33
34 4.5.10.7 Definition and Role of Interested Publics

35 Same as the Proposed Action.

36 4.5.10.8 Prohibited Acts

37 Same as the Proposed Action.

38 4.5.10.9 Grazing Use Allowed When a Stay is Granted

39 Same as the Proposed Action.

40 4.5.10.10 No on the Ground Effect

- 1 Social, Economic and Cultural Considerations
- 2 Cooperation with State, County and Federal Agencies
- 3 Review and Comment on Biological Assessments
- 4 Conservation Use
- 5 Grazing Preference
- 6 Water Rights
- 7 Satisfactory Performance
- 8 Changes in Grazing Use within the Terms and Conditions of the Permit of Lease
- 9 Service Charges
- 10 Biological Assessment-Application of Protest and Appeal Provisions

11
12
13

4.5.11 Paleontological and Cultural Resources

14 Issues to be considered under Alternative Three, Modification of the Proposed Action, are much
15 the same as the Proposed Action except for slight modifications to three of the elements (the five
16 year phase-in provision, the temporary nonuse provision, and Rangeland Health Determinations
17 requirements). All of the previous changes or provisions which would have no effect on heritage
18 resources would also have no affect under Alternative Three, including the slight modification in
19 the temporary nonuse provision. Additionally, the provisions in Alternative Two which would
20 affect heritage resources would also have an effect under Alternative Three.

21 Changes in the remaining two elements, the 5-year phase-in and Rangeland Health
22 Determinations requirements, will have some direct and indirect effects to heritage resources.
23 Having the five year phase-in provision be discretionary rather than mandatory will allow added
24 flexibility to the relation between permittee or lessee and the BLM at the local level. Also, this
25 provision could have both beneficial and adverse effects on heritage resources. In the case of
26 decreasing use, heritage resources would be subject to continued effects before the decision is
27 fully implemented; alternately, in the case of increasing use, the delay would allow extra time to
28 provide protection or data recovery of sites that may be affected by the change. Changes to the
29 provision of Rangeland Health Determinations would indirectly affect heritage resources by
30 increasing workload due to site or locality monitoring data requirements.

31 4.5.12 Economic Conditions

1
2 The economic effects of Alternative 3 would more closely resemble those of under Alternative
3 1: Current Management, with the exception of three provisions: Phase-in of changes in use;
4 temporary non-use; and the basis for rangeland Health Determinations.

5
6 Phase-In of Changes in Use: Under Alternative 3, a 5-year phase in of changes in use exceeding
7 10% would be discretionary rather than mandatory. When the 5-year phase-in is used, the
8 effects would be the same as under the Proposed Action. A phase-in period of less than 5 years
9 may require permittees to make management adjustments more quickly than might be preferred
10 by them. However, a shorter phase-in would accelerate improvements in range conditions which
11 in turn may have a long-term beneficial effect on permittees' operations.

12
13 Temporary Nonuse: Under Alternative 3, temporary nonuse could be annually approved for as
14 long as 5 years. The economic effect of this would be somewhere between Present Management
15 (where 3 consecutive years of nonuse may be approved) and the Proposed Action (where there
16 are no limits on the number of consecutive years of approved nonuse). This provision offers an
17 additional 2 consecutive years of nonuse, which would be a beneficial economic effect on
18 permittees and it would increase flexibility for both permittees and BLM.

19
20 Basis for Rangeland Health Determinations: Under Alternative 3, BLM would have discretion
21 to use assessments or monitoring, or both, as a basis for rangeland health determinations. This
22 differs from the Proposed Action which requires that assessments and monitoring both be used.
23 The provision would give BLM greater flexibility than under the Proposed Action. Currently,
24 all states have some procedures for standards assessments and these may or may not also be
25 accompanied by monitoring data [QUESTION: IS THIS AN ACCURATE STATEMENT]
26 when making determinations. Consequently, there would be no appreciable effect to BLM in
27 terms of administrative costs or workloads, although this may vary from one office to another.
28 The economic effect on permittees would primarily be that determinations might not be delayed
29 and thus proposed changes in use might occur earlier than under the Proposed Action.

30
31 4.5.13 Social Conditions

32
33 4.5.14 Environmental Justice

34
35 4.6 CUMULATIVE EFFECTS

36 4.7 UNAVOIDABLE ADVERSE EFFECTS

37 4.8 RELATION BETWEEN SHORT-TERM USE AND LONG-TERM
38 PRODUCTIVITY

39 4.9 IRREVERSIBLE OR IRRETRIEVABLE COMMITMENTS OF RESOURCES

40
41 CHAPTER 5. CONSULTATION AND COORDINATION

42 5.1 PUBLIC PARTICIPATION

43 5.1.1 Scoping Process

44 5.1.2 Summary of Scoping Comments

45 5.2 CONSULTATION AND COORDINATION ACTIONS

1 5.2.1 Tribal

2
3 ??? What if anything has been done or what is the plan ? [John C.]

4
5 5.2.2 Federal Agencies

6
7 The present management alternative (No Action Alternative, Alternative One) includes all of the
8 present regulations. Review of a federal undertaking by a cultural resource specialist is
9 required during specific project planning or implementation at the local level, land use planning
10 initiatives at the state or regional level, or for regulation revision at the national level. Of the
11 present regulations, only range improvement ownership and the Standard and Guideline
12 appropriate action implementation have had the potential to effect on-the-ground actions which
13 consequently can effect heritage resources. New project developments as a result of these
14 actions have been and will continue to be analyzed for affects on heritage resrouces on a case-
15 by-case basis. Cultural resource surveys precede management actions that could damage
16 cultural resources (BLM Manual 8100, Cultural Resource Management). Historic and
17 prehistoric archaeological sites found during these surveys would be protected in accordance
18 with the National Historic Preservation Act of 1966 (revised) and other laws and executive
19 orders as stated in the Code of Federal Regulations (36 CFR 800).

20 Prohibited acts under the present regulations allow grazing permits to be cancelled for violation
21 of the "illegal removal or destruction of archaeological or cultural resources" clause. This
22 clause gives protection to a fragile and nonrenewable resource that may be important to regional
23 or national heritage.

24
25 5.2.3 Other Coordination

26
27 During this process, the RACs indicated an interest in having the opportunity to provide
28 meaningful and substantive input into the development of the SWL Policy. Each of the States
29 with RACs provided the information to them; in August and September they met and provided
30 each State Director their comments and the State Directors provided this input to the Washington
31 Office (WO220).

32
33 5.3 DISTRIBUTION OF THE DRAFT ENVIRONMENTAL IMPACT STATEMENT

34
35 The effects of the proposed rules and alternatives are analyzed in the draft EIS, which has been
36 released for public review and comment during a 90-day public comment period. Copies of the
37 draft EIS have been sent to Federal agencies, State and local governmental organizations, and
38 many people concerned about the outcome of the Sustaining Working Landscapes initiative. One
39 copy of the EIS has been mailed to those people who were on the mailing list that was prepared
40 from the XXX meetings that were held.

41
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35

36 ACRONYMS AND ABBREVIATIONS

- 37
38 ACEC—area of critical environmental concern
39
40 AML—appropriate management level
41
42 AMP—Allotment Management Plan
43
44 ANPR—Advance Notice of Proposed Rulemaking
45

1 ARPA—Archeological Resources Protection Act
2
3 BLM—Bureau of Land Management
4
5 CFR—Code of Federal Regulations
6
7 CO—carbon monoxide
8
9 DEIS—Draft Environmental Impact Statement
10
11 EA—Environmental Assessment
12
13 ESA—Endangered Species Act
14
15 FLPMA—Federal Land Policy and Management Act
16
17 FAR—Functioning-at-Risk
18
19 GAO—General Accounting Office
20
21 HMA—Herd Management Area
22
23 IMPLAN--Impact Analysis for Planning
24
25 NAAQS— National Ambient Air Quality Standard
26
27 NEPA—National Environmental Policy Act
28
29 NLCS—National Landscape Conservation System
30
31 NOI—notice of intent
32
33 NOX—oxides of nitrogen
34
35 PFC—Proper Functioning Condition
36
37 PLC—Public Lands Council
38
39 PM—particulate matter
40
41 PSD—prevention of significant deterioration
42
43 RAC
44
45 SIP—State Implementation Plan

1
2 SOX—oxides of sulphur
3
4 SWL
5
6 TGA—Taylor Grazing Act
7
8 WSA—Wilderness Study Area
9
10
11 GLOSSARY
12 INDEX
13 APPENDIX A. Highlighted Strike-and-Replace Version of Regulations
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18

	Wyoming
BLM WYOMING STATE DIRECTOR'S SENSITIVE SPECIES LIST	
(ANIMALS AND PLANTS)	
MAMMALS	
Myotis, Long-eared	<i>Myotis evotis</i>
Myotis, Fringed	<i>Myotis thysanodes</i>
Bat, Spotted	<i>Euderma maculatum</i>
Bat, Townsend's Big-eared	<i>Corynorhinus townsendii</i>
Rabbit, Pygmy	<i>Brachylagus idahoensis</i>
Prairie Dog, Whitetailed	<i>Cynomys leucurus</i>
Pocket Gopher, Wyoming	<i>Thomomys clusius</i>
Pocket Gopher, Idaho	<i>Thomomys idahoensis</i>

Fox, Swift	<i>Vulpes velox</i>
BIRDS	
Ibis, White-faced	<i>Plegadis chihi</i>
Swan, Trumpeter	<i>Cygnus buccinator</i>
Goshawk, Northern	<i>Accipter gentilis</i>
Hawk, Ferruginous	<i>Buteo regalis</i>
Falcon, Peregrine	<i>Falco peregrinus</i>
Sage-grouse, Greater	<i>Centrocercus urophasianus</i>
Grouse, Columbian Sharp-tailed	<i>Tympanuchus phasianellus columbianus</i>
Curlew, Longbilled	<i>Numenius americanus</i>
Cuckoo, Yellowbilled	<i>Coccyzus americanus</i>
Owl, Burrowing	<i>Athene cunicularia</i>
Thrasher, Sage	<i>Oreoscoptes montanus</i>
Shrike, Loggerhead	<i>Lanius ludovicianus</i>
Sparrow, Brewer's	<i>Spizella breweri</i>
Sparrow, Sage	<i>Amphispiza belli</i>
Sparrow, Baird's	<i>Ammodramus bairdii</i>
FISH	
Chub, Roundtail	<i>Gila robusta</i>

Chub, Leatherside	<i>Gila copei</i>
Sucker, Bluehead	<i>Catostomus discobolus</i>
Sucker, Flannelmouth	<i>Catostomus latipinnis</i>
Trout, Yellowstone Cutthroat	<i>Oncorhynchus clarki bouvieri</i>
Trout, Colorado River Cutthroat	<i>Oncorhynchus clarki pleuriticus</i>
Trout, Bonneville Cutthroat	<i>Oncorhynchus clarki utah</i>
Trout, Fine-spotted Snake River Cutthroat	<i>Oncorhynchus clarki spp</i>
REPTILES	
Rattlesnake, Midget Faded	<i>Crotalus viridis concolor</i>
AMPHIBIANS	
Frog, Northern Leopard	<i>Rana pipiens</i>
Spadefoot, Great Basin	<i>Spea intermontana</i>
Toad, Boreal (N. Rocky Mt. population)	<i>Bufo boreas boreas</i>
Frog, Spotted	<i>Ranus pretiosa (lutiventris)</i>
PLANTS	
Meadow Pussytoes	<i>Antennaria arcuata</i>
Laramie Columbine	<i>Aquilegia laramiensis</i>
Small Rock Cress	<i>Arabis pusilla</i>

Mystery Wormwood	<i>Artemisia biennis</i> var. <i>diffusa</i>
Porter's Sagebrush	<i>Artemisia porteri</i>
Dubois Milkvetch	<i>Astragalus gilviflorus</i> var. <i>purpureus</i>
Hyattville Milkvetch	<i>Astragalus jejunus</i> var. <i>articulatus</i>
Nelson's Milkvetch	<i>Astragalus nelsonianus</i> - or- <i>Astragalus pectinatus</i> var. <i>platyphyllus</i>
Precocious Milkvetch	<i>Astragalus proimanthus</i>
Trelease 's Milkvetch	<i>Astragalus racemosus</i> var. <i>treleasei</i>
Cedar Rim Thistle	<i>Cirsium aridum</i>
Ownbey's Thistle	<i>Cirsium ownbeyi</i>
Many-stemmed Spider-flower	<i>Cleome multicaulis</i>
Owl Creek Miner's Candle	<i>Cryptantha subcapitata</i>
Evert's Wafer- Parsnip	<i>Cymopterus evertii</i>
Williams' Wafer- Parsnip	<i>Cymopterus williamsii</i>
Wyoming Tansymustard	<i>Descurainia torulosa</i>
Weber's Scarlet- Gilia	<i>Ipomopsis aggregata</i> ssp. <i>weberi</i>
Entire-Leaved Peppergrass	<i>Lepidium integrifolium</i> var. <i>integrifolium</i>
Sidesaddle Bladderpod	<i>Lesquerella arenosa</i> var. <i>agrillosa</i>
Fremont Bladderpod	<i>Lesquerella fremontii</i>
Large-fruited Bladderpod	<i>Lesquerella macrocarpa</i>
Western Bladderpod	<i>Lesquerella multiceps</i>
Prostrate Bladderpod	<i>Lesquerella prostrata</i>

Absaroka Beardtongue	<i>Penstemon absarokensis</i>
Stemless Beardtongue	<i>Penstemon acaulis var. acaulis</i>
Gibbens' Beardtongue	<i>Penstemon gibbensii</i>
Beaver Rim Phlox	<i>Phlox pungens</i>
Tufted Twinpod	<i>Physaria condensata</i>
Dorn's Twinpod	<i>Physaria dornii</i>
Rocky Mountain Twinpod	<i>Physaria saximontana var. saximontana</i>
Persistent Sepal Yellowcress	<i>Rorippa calycina</i>
Shoshonea	<i>Shoshonea pulvinata</i>
Laramie False Sagebrush	<i>Sphaeromeria simplex</i>
Green River Greenthread	<i>Thelesperma caespitosum</i>
Uinta Greenthread	<i>Thelesperma pubescens</i>
Cedar Mtn. Easter Daisy	<i>Townsendia microcephala</i>
Barneby's Clover	<i>Trifolium barnebyi</i>

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APPENDIX D. REGIONAL ECONOMIC EFFECTS OF THE PROPOSED LEGISLATION
CHANGES(olb)

The Bureau of Land Management administers livestock grazing on 162 million acres of BLM land in the continental United States. Most of BLM grazing areas are located in fourteen western states: Arizona, Colorado, California, Idaho, Montana, Nevada, New Mexico, North and South

1 Dakota, Oklahoma, Oregon, Utah, Washington and Wyoming. When the economy of each state
2 is viewed as its entirety, the contribution of the rangeland livestock industry may be
3 insignificant. However, these states comprise counties with different economic characteristics
4 and rural agricultural counties often outnumber urban counties. While the rangeland livestock
5 industry may play a negligible role in urban economies, it is still an important economic base
6 providing employment and income in many rural counties in the West.

7
8 According to the 1997 Census of Agriculture by US Department of Agriculture, National
9 Agricultural Statistics Service (NASS), there are about 110 counties in the fourteen western
10 states where more than half of the total grazing permits are administered by the BLM. Because
11 the jurisdiction of the BLM grazing regulations is limited to the BLM administered grazing
12 lands, the proposed amendments of grazing regulations would have more imposing effects on
13 those counties with large BLM grazing land. This study presents the projected effects of the
14 proposed regulatory changes on the regional economies of three different counties: Lemhi
15 County, ID, Iron County, UT, and Dona Ana County, NM. The study areas were selected to
16 represent a wide range of ecological and economic conditions of the western counties with BLM
17 grazing. While the results of this study cannot paint the complete picture of the overall effects of
18 the proposed regulatory changes, the regional effects on the western counties in similar
19 economic and grazing conditions can be construed from the results.

20
21 The proposed regulatory changes could have economic effects on other industries in the western
22 counties with BLM grazing. For example, the proposed regulatory changes have potential effects
23 on BLM rangeland conditions and wildlife habitats, which would subsequently affect the quality
24 of recreation opportunities offered in BLM lands. The number of recreational visitors and their
25 length of stay might change as a result, which would lead to changes in income and employment
26 in recreation and tourism-related sectors, such as trade and service industries (where recreation
27 occurs), manufacturing industries (where recreational products and supplies are purchased), and
28 transportation industries (to recreational areas). The changes in those industry revenues might
29 have revenue implications for local governments also. However, the proposed amendments of
30 grazing regulations do not directly limit or increase the present recreation access to BLM grazing
31 areas, and potential changes in recreation demand cannot be linked to the proposed regulatory
32 changes at this time. This study focuses on the regional economic effects that stem from the
33 direct financial implications of the proposed regulatory changes to rangeland livestock industry.

34
35 The direct and secondary regional economic effects projected in this study are based on the
36 results from the ranch-level financial modeling that estimated the potential financial
37 consequences of the proposed regulatory changes to individual ranches with BLM grazing. The
38 ranch-level financial analysis primarily focused on the potential effects associated with the
39 creation of a Reserve Common Allotment (RCA) program. The proposed amendments include
40 clarifications of the existing grazing regulations and add new provisions to allow greater
41 flexibility to managers and permittees, improve administrative procedures and business
42 practices, and promote community-based conservation and citizen-based stewardship of public
43 land. However, the economic effects of the proposed amendments, other than the creation of a
44 RCA program, would be indirect and cannot be measured explicitly. In the ranch-level financial
45 modeling, the RCA program was treated as a form of insurance, or an option purchased to hedge

1 range risk in the model, and the maximum option values of the RCA program was estimated for
2 the next 20 years. The details of the ranch-level financial model can be found in *Financial*
3 *Analysis of Proposed Grazing Regulation Changes on Ranch-level Operations* report. Based on
4 the results from this report, the regional economic effects generated by the ranch-level net
5 financial benefits were analyzed with IMPLAN (Impact Analysis for Planning system). The
6 IMPLAN system was originally developed by the U.S. Forest Service, and is available through
7 the Minnesota IMPLAN Group. IMPLAN system includes a database of regional accounts and
8 an economic modeling program that traces money and commodity flows among industries in a
9 region. IMPLAN allows users to build economic models to estimate changes in employment and
10 income due to policy changes.

11
12 Using the IMPLAN system, total changes in sales, employment and income were estimated for
13 each county based on the total financial contribution of the RCA program to individual BLM
14 permittees. The regional economic effects were estimated at 1%, 5% and 10% potential
15 participation rate of BLM permittees. With 1% participation rate, the regional economic effects
16 were minimal in all counties after 5 and 20 years. However, Lemhi County, ID could experience
17 sizable regional economic growth after 20 years, if 10% of all BLM permittees in the county
18 participate in the RCA program every year. The contribution of the cattle sector to the whole
19 economy was relatively higher in Lemhi County, ID than in the other two counties, which could
20 explain the higher level of regional economic benefits. It should be noted that the regional
21 economic effects in this study were modeled without incorporating the potential economic
22 structural changes that these counties are likely to experience in the long run, and the potential
23 differences in the RCA program participation rate among different sizes of cattle operations.

24 25 **Methods**

26 27 **Study Areas**

28 There are 355 counties in the fourteen western states where some types of grazing occur in BLM
29 land. Among these counties, there are 147 counties with greater than 10% of the total land area
30 is in BLM grazing allotment, according to US Census Bureau and BLM Rangeland
31 Administration System (RAS). Among these, three counties in the Western United States were
32 analyzed as representatives of areas across the western states: Lemhi County, ID, Iron County,
33 UT, and Dona Ana County, NM. This study portrays the projected economic effects of the three
34 counties that stem from the proposed BLM grazing regulation changes over the next 5 years and
35 20 years. These three counties were chosen to represent different geographic and economic
36 conditions of the western rural counties with BLM grazing, but are characteristics of the western
37 rural counties with BLM grazing areas.

38
39 Lemhi County, ID and Iron County, UT are areas where grazing on BLM lands occurs on a
40 seasonal basis, while Dona Ana County, NM is the most arid desert area in the U. S. and allows
41 yearlong grazing. According to the rangeland experts in the county extension offices, rangeland
42 production allows about 9 acres per animal unit month (AUM) in Lemhi County, ID, 10 acres
43 per AUM in Iron County, UT, and 35 acres per AUM in Dona Ana County, NM. Lemhi County
44 represents a colder, higher latitude area of the West where grazing on BLM land is seasonal.
45 Most areas of Oregon, Idaho, Montana, Wyoming, and Colorado fall into this category. BLM

1 permittees in these areas tend to let their livestock graze on BLM land during the summers and
 2 feed their livestock off of BLM lands during the winters. BLM permittees are dependent on
 3 BLM lands for grazing acreage about 6 months per year, and BLM forage dependency rate
 4 ranges from 30 to 50 percent among BLM permittees. A small percentage of these permittees
 5 may also have Forest Service permits; however most ranchers are too far from forest service
 6 lands in the area described (Lemhi County Extension, University of Idaho Extension Service).
 7 Iron County represents the areas of the West where BLM grazing is also seasonal, but grazing
 8 occurs during the winters on BLM lands. Large areas of Nevada, Utah and Colorado fall into this
 9 category. BLM permittees are dependent on BLM lands for grazing acreage about 5 months per
 10 year, and BLM forage dependency rate ranges from 30 to 50 percent among BLM permittees.
 11 Many of these permittees also have Forest Service permits used for summer grazing, and many
 12 feed their livestock on the home ranch for part of the year (Iron County Extension, Utah State
 13 Extension Service). Dona Ana County represents the areas of the West where grazing on BLM
 14 lands is yearlong. Most areas of New Mexico, Arizona, southern California, and southern
 15 Nevada fall into this category, and BLM forage dependency rate ranges from 80 to 100 percent
 16 among BLM permittees. A small percentage of these permittees may also have Forest Service
 17 permits or feed their livestock on the home ranch for part of the year; however there are few
 18 Forest Service lands in the area described, and few BLM ranchers are set up to bring livestock
 19 home, as forage is available yearlong on BLM lands (Dona Ana County Extension, New Mexico
 20 State Extension Service).

21
 22 The economic characteristics of three counties are presented in Table 1. The most notable
 23 difference among these three counties, other than their geographic locations, is demographics.
 24 Population growth rate of Lemhi County is comparable to the U.S. average. However,
 25 population of Lemhi County has slightly decreased in recent years, while other two counties
 26 have experienced rapid population growth and demographic changes that are typical in many
 27 western rural communities. Lemhi County also has the smallest acreages of BLM grazing
 28 allotments, but Iron County has the least amount of Active AUMs, which is the number of
 29 AUMs that BLM permittees or lessees could be authorized to use. Dona Ana county seems to be
 30 the poorest with about quarter of the population living under poverty, but its economy is bigger
 31 and diverse with 183 different types of industries. The economy of Lemhi county is the smallest
 32 and least diverse by comparion.

33
 34
 35
 36 Table 1. Economic and Demographic Conditions: Lemhi County, ID, Iron County, UT, and
 37 Dona Ana County, NM.

	Lemhi County, ID	Iron County, UT	Dona Ana County, NM
Population, 20001	7,806	33,779	174,682
Population % change, 1990-20001 (USA: 13.1%)	13.1%	62.50%	28.90%

Median household income, 19991 (USA: \$41,994)	\$30,185	\$33,114	\$29,808
Persons below poverty, percent, 19991(USA: 12.4%)	15.30%	19.20%	25.40%
Personal Income Total ²	\$151,659,008	\$546,902,016	\$3,031,624,960
Employment ²	4,420	19,100	77,362
Number of Industries ²	101	139	183
Land area, 2000 ¹ (Acres)	2,921,152	2,111,040	2,436,736
Farms with grazing permit ³	116	87	64
Number of BLM permits ³	106	69	45
Total Acreages of BLM grazing allotments ⁴ (% of Total Land Area)	568,487 (19.5%)	939,043 (44.5)	1,071,981 (44%)
Active AUMs ^{4,5}	68,445	66,238	95,211
Billed AUMs, 2000 ⁴	50,317	43,936	70,361

1 1 U.S. Census Bureau: State and County QuickFacts, 2003.

2 2 IMPLAN 2000.

3 3 U.S. Dept. of Agriculture, National Agricultural Statistics Service (NASS): 1997 Census of
4 Agriculture

5 4 BLM Rangeland Administration System (RAS) as of 7/23/2003. The percentage of the BLM
6 acres in the allotment which lie in each county was applied to calculate total BLM grazing
7 allotment acreages and Active and Billed AUMs of each county.

8 5 Sum of active aums for all permittees and lessees on the allotment. This is the number of
9 AUMs they could be authorized to use.

10 Regional Economic Impact Analysis with IMPLAN model

11 In order to address the economic effects of the proposed regulatory changes on local
12 communities and the wider region, an input-output method was utilized. A regional economy
13 consists of numerous businesses classified into industries according to types of output and sales.
14 These industries exchange goods and services among one another, and also with industries in
15 other regions. An increase in sales of one business generates more sales and incomes for other
16 businesses and households in the region. By following the transactions among industries, the
17 input-output method describes the economic structure of a defined region, and provides an
18 insight to the overall effects of the proposed regulatory changes on the regional economy. By

1 following the distribution of all purchases and sales in a region, an inter-industry table can be
2 developed. Input-output method is a tool to estimate the economic linkages of industries within a
3 regional economy according to the multipliers, which indicate the size of the total effects of
4 "new money" into the economy. If the proposed regulatory changes create net financial benefits
5 to BLM permittees, they generate an influx of "new money" into the regional economy (direct
6 effects). The effects of "new money" on the local economy do not end there. BLM permittees
7 would buy more goods and services from other local businesses (indirect effects), and employees
8 of the ranch could spend more money also (induced effects). If "new money" generated by the
9 sales of an industry had to be spent mostly on the materials and services brought in from outside
10 the region (leakage), total effect (sum of direct, indirect and induced effects) would be relatively
11 small. If most of the materials and services are supplied within the region, total effects would be
12 relatively large.

13
14 The economic effects of the proposed regulation changes were analyzed with IMPLAN (Impact
15 Analysis for Planning system). The IMPLAN includes a database containing information of
16 regional economies and an economic modeling program that traces the model and service flows
17 and estimates the economic effects of industries on the regional economy. IMPLAN Data files
18 include information for 528 different industries, and 21 different economic variables. The most
19 recent IMPLAN Data files available for three counties was used along with the national input-
20 output structural matrices for the effect analysis. The county level IMPLAN data were derived
21 from the 1997 Census of Agriculture by US Department of Agriculture, National Agricultural
22 Statistics Service, along with the Benchmark Input-output study from the Bureau of Economic
23 Analysis (BEA). The 2000 IMPLAN data set was used for the regional economic impact
24 projection for the next 20 years, in conjunction with the data from other sources such as US
25 Census Bureau, Bureau of Economic Analysis, US Department of Agriculture National
26 Agricultural Statistics Service (NASS), and the BLM Rangeland Administration System (RAS).
27 Also the rangeland experts in the Lemhi County Extension (University of Idaho Extension
28 Service), Iron County Extension (Utah State Extension Service), and Dona Ana County
29 Extension (New Mexico State Extension Service) were contacted for the supplementary
30 information.

31
32 The ranch-level financial analysis provided the estimated net financial benefits of the creation of
33 a RCA program for individual operators with different operation sizes and forage dependency
34 level on BLM lands. To calculate total financial benefit of the RCA program in each county, the
35 number of BLM permittees in each operation size class was estimated and multiplied by the
36 financial benefit per operator in that class. Different level of BLM forage dependency level was
37 assigned to each county based on the nature of different seasonality of grazing on BLM land:
38 50% for Lemhi County and Iron County, and 80% for Dona Ana County. Changes in farm
39 expenditures resulted from the net financial benefits of the RCA program were estimated by
40 applying the typical spending pattern of beef cow operations. The regional purchase coefficients,
41 the IMPLAN estimated fraction of the region's commodity demand met by using locally
42 produced commodity, was applied to calculate the portion of farm expenditure retained in the
43 county.

44

1 Estimated changes in local farm expenditures were traced using the IMPLAN input-output
 2 model, in order to estimate the total economic effects on overall output, income, and number of
 3 employment in each county. Total effects presented in this study are the sum of direct, indirect
 4 and induced effects with all activities of industries, households and factors, which includes
 5 payments to workers (including benefits), taxes, and profits. The direct effects are the changes in
 6 locally spent farm expenditures generated by the net financial benefits from the RCA program,
 7 and the indirect effect are the changes in inter-industry purchases as they respond to the new
 8 demands of the directly affected industries, and the induced effects are the changes in spending
 9 from households as income increases or decreases due to the changes in production.

10 -
 11 -
 12 -
 13 **Results**
 14

15 The contribution of the cattle sector to the county economy was insignificant in Iron County and
 16 Dona Ana County providing less than one percent of employment and income. However, it is a
 17 significant contributor in the economy of Lemhi County, and generates three percent of total
 18 employment and four percent of total income. Table 2 shows the present industry output, and
 19 employment and income of the Cattle sector (except Feedlot) and Sheep, Lambs and Goats
 20 sector for three counties.

21
 22 Table 2. Cattle and Sheep Livestock Industry (except feedlot): Lemhi County, ID, Iron County,
 23 UT, and Dona Ana County, NM.

	Industry Output	Employment	Income	
Lemhi, ID	Cattle	12,169,000	129	6,101,000
Sheep, Lambs&Goats	156,000	7	87,000	
Iron, UT	Cattle	6,310,000	59	1,289,000
Sheep, Lambs&Goats	2,506,000	98	532,000	
Dona Ana, NM	Cattle	9,887,000	164	2,064,000
Sheep, Lambs&Goats	53,000	4	10,000	

24 * All numbers are in dollars in 2000, except employment (Source: IMPLAN, 2000).
 25

26 Based on the BLM billed AUMs from the RAS, the used BLM AUMs by cattle were calculated
 27 after breakout the AUMs used by sheep on BLM lands. An AUM by definition is the forage used
 28 by a 1,000-pound cow with calf in one month. This same AUM can maintain about six sheep.
 29 According to the rangeland experts in the county extension offices, the number of sheep kept
 30 seasonally in BLM grazing allotments is 200 and 4000 heads in Lemhi County and Iron County,

1 respectively. There is no sheep grazing on BLM lands in Dona Ana County. The proportion of
 2 total AUMs for all cattle (not on feedlot) in the county generated in BLM grazing allotments was
 3 applied to calculate the share in the Cattle sector supported by BLM grazing (Table 3). The
 4 contribution of BLM grazing to the Cattle sector is most significant in Iron County, providing
 5 sixteen percent of total output.
 6

7 Table 3. Cattle and Sheep Livestock Industry supported by AUMs from BLM grazing
 8 allotments: Lemhi County, ID, Iron County, UT, and Dona Ana County, NM.

	Industry Output	Employment	Income	
Lemhi, ID	Cattle	1,119,548	11.97	561,292
	Sheep	6,240	0.28	3,480
Iron, UT	Cattle	1,009,600	9.44	206,240
	Sheep	125,300	4.9	2,660
Dona Ana, NM	Cattle	771,186	12.79	160,992

9 * All numbers are in dollars in 2000, except employment (Source: IMPLAN, 2000).
 10

11 The proposed amendments of the existing BLM grazing regulation would affect the BLM
 12 permittees in these three counties. Net financial benefit for each operator was estimated in the
 13 ranch-level financial analysis. In order to estimate the total financial benefit generated by the
 14 RCA program, the number of BLM permittees in each operation size class was estimated. The
 15 farm operation size was grouped as small, medium, and large at the level of 50, 250, 1000
 16 AUMs in the ranch-level financial analysis. For this study, the head of cattle, 1-9 was classified
 17 as small operation, and 10-49 as medium operation, and 50+ as large operation. Although the
 18 size class defined in the ranch level financial impact analysis cannot exactly represent all size of
 19 the cattle operations with BLM grazing, the financial effects of the RCA program would be
 20 similar among the similar size operations. The number of BLM permittees by each operation
 21 size group was estimated by applying the proportional distribution of different farms sizes (Beef
 22 Cow) from the 1997 Census of Agriculture to the number of BLM permits in each county (Table
 23 4).
 24

25 Table 4. BLM permittees by Inventory Size: Lemhi County, ID, Iron County, UT, and Dona Ana
 26 County, NM.

County	Number of Cattle		
	1-9	10-49	50+
Lemhi, ID (Farms)	16	26	63

Iron, UT (Farms)	16	27	26
Dona Ana, NM (Farms)	19	14	11

1
2 Table 5 shows total net financial benefits of the RCA program in each county. Total financial
3 benefits were dependent on how many BLM permittees in each county would participate in the
4 program. Given the nature of the program, large cattle operations may have more incentives to
5 participate in the program; however, the participation rate may vary year-to-year depending on
6 the natural and market conditions. In this study, the equal rate of participation rate across all
7 operation sizes was assumed for the regional economic impact analysis.

8
9 Table 5. Total Financial Benefits (cumulative) of the creation of a RCA program with the
10 voluntary participation rate of 1%, 5% and 10% of all BLM permittees: Lemhi County, ID, Iron
11 County, UT, and Dona Ana County, NM.

County	RCA Participation Rate	Financial benefits Total	
Lemhi, ID	1%	After 5 years	125,080
After 20 years	519,173		
5%	After 5 years	625,401	
After 20 years	2,595,866		
10%	After 5 years	1,250,802	
After 20 years	5,191,731		
Iron, UT	1%	After 5 years	123,542
After 20 years	512,864		
5%	After 5 years	617,711	
After 20 years	2,564,321		
10%	After 5 years	1,235,422	
After 20 years	5,128,642		
Dona Ana, NM	1%	After 5 years	45,706

After 20 years	190,118	
5%	After 5 years	228,528
After 20 years	950,588	
10%	After 5 years	457,056
After 20 years	1,901,176	

* All numbers are in dollars in 2000.

In order to estimate the regional economic effects generated by the creation of a RCA program, the total financial benefits to BLM permittees need to be linked to changes in their farm expenses. Changes in their expenses are the direct effects that create the additional demands in other industries in the region. The additional demands generated were estimated by looking at the typical farm expenditure pattern for beef cow operations. The farm expenditures per one dollar of net income are showed in Table 6. Changes in the farm expenses of BLM permittees were calculated by applying the ratio of farm expense versus net income to the net financial benefits estimated in the ranch-level financial analysis. The categories found in the Farm Income and Expenses report were matched with the IMPLAN industry sectors, and estimated changes in demands for the industries were entered in the IMPLAN system. If a farm expense category matched more than one IMPLAN industry sector, the estimated expenses in the category were equally distributed to the IMPLAN sectors.

Table 6. Beef Cow Operation Farm Expenditures (per one dollar of net income)

Farm Expenditures Categories	IMPLAN Industry Description	Farm Expenditures per net income
Livestock purchases	3 Ranch Fed Cattle 4 Range Fed Cattle	2.246
Feed	12 Feed Grains 13 Hay and Pasture	0.854
Veterinary services and supplies	26 Agricultural Services	0.107
Other livestock-related expenses*	26 Agricultural Services	0.182
Seed and plants	14 Grass Seeds	0.089

Fertilizer and chemicals	202 Nitro.&Phos. fertilizers 203 Fertilizers, Mixing Only 204 Agri. Chemicals, N.E.C	0.325
Labor	4 Range Fed Cattle	0.348
Fuels and oils	444 Gas Prod.&Distribution	0.267
Repairs and maintenance	56 Maintenance and Repair 479 Auto Repair and Services	0.397
Machine-hire and custom work	309 Farm Machinery&Equip.	0.110
Utilities	443 Electric Services	0.144
Other variable expenses**	440 Transportation Services 470 Other Business Services	0.212
Real estate and property taxes	523 State & Local Gov	0.208
Interest on real estate debt	456 Banking 457 Credit Agencies	0.565
Insurance premiums	459 Insurance Carriers 460 Insurance Agents&Brokers	0.149
Rent and lease payments	473 Equip. Rental&Leasing	0.253

1 Source: Farm Operating and Financial Characteristics, 1990 (USDA Economics and Statistics
2 System).

3 *Includes livestock leasing, custom feed processing, bedding, and grazing.

4 **Includes supplies, registration fees, transportation, storage, and general business expenses

5

6 Table 7 presents the projected changes in total output, employment and income in the three
7 counties as a result of the net financial benefits generated by the proposed amendments of the
8 existing BLM grazing regulations. The estimated regional economic impacts vary depending on
9 the potential participation rate of the individual BLM permittees. In this study, the effects were
10 estimated at 1%, 5% and 10% participation level of all BLM permittees in each county.

11 With 1% participation rate, the regional economic effects were minimal in all counties after 5
12 and 20 years. In Dona Ana County and Iron County, the estimated regional economic effects are
13 negligible even with 10% participation rate. However, Lemhi County could experience sizable

1 regional economic growth after 20 years, if more than five percent of all BLM permittees in the
 2 county participate in the RCA program every year. The contribution of the cattle sector to the
 3 whole economy was larger in Lemhi County than in other two counties, which could explain
 4 significant regional economic affects of the proposed regulatory changes in Lemhi County. It
 5 should be noted that the regional economic affects in this study were modeled without
 6 incorporating the potential economic structural changes that these counties are likely to
 7 experience in a long run, and potential differences in the RCA program participation rate among
 8 different sizes of cattle operations.

9
 10 Table 7. Total Regional Economic Impacts (cumulative) of the creation of RCAs with the
 11 voluntary participation rate of 1%, 5% and 10% of all BLM permittees: Lemhi County, Iron
 12 County, and Dona Ana County.

County	RCA Participation Rate	Direct Impacts on Local Sales	Total Increase in Output	Total Increase in Employment	Total Increase in Income	
Lemhi, ID	1%	After 5 years	748,071	947,674	14	379,944
After 20 years	8,335,031	11,071,200	146	5,048,794		
5%	After 5 years	3,740,355	4,738,370	70	1,899,720	
After 20 years	41,675,155	55,356,000	728	25,243,970		
10%	After 5 years	7,480,710	9,476,740	139	3,799,440	
After 20 years	83,350,310	110,712,000	1,455	50,487,940		
Iron, UT	1%	After 5 years	719,759	1,003,707	12	295,553
After 20 years	2,987,958	4,166,720	49	1,226,935		

5%	After 5 years	3,598,795	5,018,535	60	1,477,765	
After 20 years	14,939,790	20,833,600	246	6,134,675		
10%	After 5 years	7,197,590	10,037,070	119	2,955,530	
After 20 years	29,879,580	41,667,200	492	12,269,350		
Dona Ana, NM	1%	After 5 years	286,038	393,794	6	112,224
After 20 years	1,189,791	1,638,009	24	466,796		
5%	After 5 years	1,430,190	1,968,970	30	561,120	
After 20 years	5,948,955	8,190,045	122	2,333,980		
10%	After 5 years	2,860,380	3,937,940	59	1,122,240	
After 20 years	11,897,910	16,380,090	244	4,667,960		

1 * All numbers are in dollars in 2000, except employment.

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3 -

4 **Discussions**

5 -

6 The proposed changes to the BLM grazing regulations would allow greater flexibility to
7 managers and permittees, improve administrative procedures and business practices, and
8 promote community-based conservation and citizen-based stewardship of public land. In this

1 study, the economic impacts of the proposed changes were analyzed focusing on the creation of
2 a RCA program. Based on the results from the ranch-level financial modeling, the regional
3 economic effects generated by the net financial benefits of the RCA program to individual
4 ranchers were estimated in three counties: Lemhi County, ID, Iron County, UT, and Dona Ana
5 County, NM.

6
7 The regional economic effects of the RCA program are dependent on the participation rate of
8 BLM permittees, which would vary year-to year contingent on the market and meteorological
9 conditions. Overall, the regional economic effects of the RCA program seem to be minor
10 compared to the total income and employment of these counties. It should be noted that the
11 regional economic impacts in this study were modeled without incorporating the potential
12 economic structural changes that these counties are likely to experience in a long run, and
13 potential differences in the RCA program participation rate among different sizes of cattle
14 operations. The counties presently experiencing rapid population growth, such as Iron County
15 and Dona Ana County may go through significant economic restructuring within the next 20
16 years. The relative importance of the Cattle sector would be further dwindling, although the
17 exact economic impacts are hard to predict.

18
19 The regional economic impacts estimated for Lemhi County need to be looked at more carefully.
20 The results show that the economy of Lemhi County can be significantly affected by the net
21 financial benefits generated by the RCA program in 20 years when more than five percent of
22 BLM permittees participate in the RCA program every year. Lemhi County is where the
23 contribution of the Cattle sector to the county economy is most significant, and the population is
24 decreasing in recent years (decreasing 2.6% from April 1, 2000-July 1, 2001) according the UC
25 Census Bureau. Unlike many western rural counties experiencing rapid population growth and
26 demographic changes due to interstate in-migration, Lemhi County may not experience
27 diminishing relative importance of the Cattle sectors. The proposed regulatory changes and the
28 creation of a RCA program could make contributions to the western rural counties with BLM
29 grazing where population is declining, if the considerable number of BLM permittees participate
30 in the RCA program.