



Jarbidge

Draft Resource Management Plan and Environmental Impact Statement

Volume 3: Maps, Appendices, Glossary, & Index



August 2010



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**APPENDIX A:
STIPULATED
SETTLEMENT
AGREEMENT**

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APPENDIX A: STIPULATED SETTLEMENT AGREEMENT

The Stipulated Settlement Agreement in the case of Western Watersheds Project v. Bennett et al. (Case No. CV-04-181-S-BLW) (D. Idaho) is inserted into this document in the format provided by the District Court of Idaho. As such, the page numbering does not correspond with the remainder of this volume.

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[NAMES AND ADDRESSES OF COUNSEL
APPEAR ON SIGNATURE PAGE]

**UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF IDAHO**

WESTERN WATERSHEDS PROJECT,)	
)	
Plaintiff,)	No. CV-04-181-S-BLW
)	
vs.)	
)	STIPULATED SETTLEMENT
K LYNN BENNETT, et. al.)	AGREEMENT
)	
Defendants.)	

Plaintiff WESTERN WATERSHEDS PROJECT (“Western Watersheds”); Federal Defendants K LYNN BENNETT, BUREAU OF LAND MANAGEMENT et al. (“BLM”); Intervenor J.R. SIMPLOT SELF-DECLARATION OF REVOCABLE TRUST, CEDAR CREEK CATTLE CO., DICK SHOOTER CATTLE CO., SIMPLOT LIVESTOCK CO., WINTERCAMP LIVESTOCK CO. and FRANK ASTORQUIA (“Simplot”); and Intervenor BLUE BUTTE GRAZING ASSOCIATION, OWYHEE LAND AND LIVESTOCK, JOE BLACK & SONS, FRANK BACHMAN, and BRACKETT RANCHES LTD (“Other Intervenor”), hereby stipulate and agree as follows:

I. RECITALS.

1. The above-identified parties enter into this Stipulated Settlement Agreement in response to the Court’s Memorandum Decision and Order entered August 1, 2005, in order to settle their disputes with respect to livestock grazing and related management actions on the Jarbidge Field Office allotments identified herein.

2. In general, this Stipulated Settlement Agreement provides that:

A. BLM will prepare a revised Jarbidge Resource Management Plan (“RMP”) and supporting Environmental Impact Statement (“EIS”), consistent with the Federal Land Policy and Management Act (“FLPMA”), the National Environmental Policy Act (“NEPA”), and all other provisions of law; and BLM will then issue site-specific NEPA reviews and ten-year grazing permit decisions for all Jarbidge Field Office allotments, based on the revised Jarbidge RMP and EIS; and

B. During the interim period until BLM has issued the revised Jarbidge RMP, EIS, and grazing decisions, this Stipulated Settlement Agreement establishes terms and conditions to govern interim grazing on the Jarbidge Field Office allotments identified below.

3. All parties enter into this Stipulated Settlement Agreement as a compromise and settlement, in order to serve the long-term interests of the Jarbidge Field Office. Nothing in this Stipulated Settlement Agreement should be construed as waiving any claim, defense, or other position of any party, except as expressly set forth herein; nor as setting precedent for other actions or decisions within the Jarbidge Field Office or elsewhere on the public lands administered by BLM, or pending before any court of competent jurisdiction.

4. This Stipulated Settlement Agreement expressly replaces and supersedes the prior Stipulated Settlement Agreement between Western Watersheds and Simplot.

5. In executing this Stipulated Settlement Agreement, all parties agree and stipulate that the Court should modify the injunction contained in the Memorandum Decision and Order entered on August 1, 2005, in order to adopt the provisions set forth herein as a modified injunction of the Court.

6. The Simplot and Other Intervenors take no position on the Interim Grazing

Management Plans set forth below for permittees who are not parties to this action.

II. JARBIDGE RMP, EIS, AND GRAZING DECISIONS.

7. The parties agree to cooperate with one another, and to work with BLM, as BLM prepares the revised Jarbidge RMP and EIS. The Jarbidge RMP and EIS, plus the subsequent site-specific NEPA reviews, will provide authorization of new ten-year grazing permit decisions for all Jarbidge allotments, consistent with FLPMA, NEPA, and all other provisions of law.

Plaintiff and Intervenor reserve the right to challenge the legal or scientific sufficiency of the revised RMP and EIS, or subsequent site-specific NEPA reviews and related permits.

8. BLM will promptly initiate the process for preparing the revised Jarbidge RMP and EIS, which is expected to be completed within an estimated four-year period from this date, i.e., by September 30, 2009. BLM has already identified certain funding within its existing appropriations in order to help initiate the Jarbidge RMP and EIS process.

9. BLM has advised, and the other parties acknowledge, that completion of the revised Jarbidge RMP and EIS may take an additional year beyond the timeframe set forth above, for various reasons. The parties thus concur that the deadline for BLM's completion of the revised Jarbidge RMP and EIS may be extended by agreement of the parties or the Court for another year, i.e., to September 30, 2010, upon a determination that BLM is diligently proceeding with the RMP and EIS but needs such additional time to complete the process.

10. BLM will initiate the revised Jarbidge RMP and EIS process by undertaking the following steps, among others:

A. Beginning in calendar year 2005, BLM will initiate internal reviews, confer with the parties, and pursue contracts with outside parties, as necessary to undertake the gathering and analysis of "baseline" data and other information that BLM

determines is needed; and

B. BLM will initiate “scoping” as soon as possible, which will help inform its data collection and analysis for the RMP and EIS; and BLM anticipates publishing a scoping notice in the Federal Register by February 1, 2006.

11. BLM will use the revised Jarbidge RMP and EIS process to conduct an assessment and analysis of current conditions, including ecological conditions, and multiple uses of the public lands of the Jarbidge Field Office, and to make determinations for future management of the Jarbidge Field Office, consistent with the requirements of FLPMA, NEPA, implementing regulations, and BLM’s Planning Manual and Handbook.

12. In preparing the revised Jarbidge RMP and EIS, and consistent with NEPA, FLPMA and their implementing regulations, BLM will employ open, public procedures to ensure that the public, including (but not limited to) Plaintiff and Intervenors, has full opportunity to provide BLM with perspectives, data, scientific literature, and other input, so that BLM may consider such input in the analysis and decision-making process, including (but not limited to) its formulation of alternatives, its analysis of environmental impacts, and its adoption of final decision(s).

13. In contributing their perspectives, data, scientific literature, and other input to the BLM’s open public process, Plaintiff and Intervenors will provide such input in a constructive, timely, and efficient manner, with due recognition of the time constraints identified in this Stipulated Settlement Agreement, to facilitate the timely completion of the RMP and EIS and subsequent grazing permit decisions.

14. In gathering data and preparing the analysis for the revised Jarbidge RMP and EIS, the parties agree that BLM will follow valid scientific methodologies; and that BLM will at a minimum:

A. Visit the sites designated in the prior Ecological Site Inventory prepared by BLM for the Jarbidge Field Office, to (1) update the Ecological Site Inventory and assess current native vegetative conditions across the public lands of the Jarbidge Field Office; and (2) assess production and current conditions in non-native sites, using sound methodologies and protocols;

B. Establish appropriate protocols and develop data necessary to evaluate current populations and habitats for BLM-designated “sensitive” species on the Jarbidge Field Office; and

C. Consider utilization, trend, and other monitoring data that is available.

15. BLM will confer with Plaintiff and Intervenors to apprise them of BLM’s plans for obtaining the information called for in the preceding paragraph. BLM reserves the sole right to determine all staff or contractors utilized for the Jarbidge RMP and EIS process.

16. In preparing the Jarbidge RMP and EIS, BLM will follow the provisions of FLPMA, BLM’s land use planning regulations, BLM’s Manual, and BLM’s Land Use Planning Handbook (H-1601-1, rev. 3/11/05). BLM will address issues identified through scoping, including (but not limited to) the following issues, which are of importance to Plaintiff:

A. Identify the desired outcomes, allowable uses, and management actions, as described in the Planning Handbook and its Appendix C subsections for “Soil and Water,” “Vegetation,” “Special Status Species,” “Fish and Wildlife,” and “Areas of Critical Environmental Concern” (ACECs), within Section I, “Natural, Biological and Cultural Resources”;

B. As provided in the BLM Land Use Planning Handbook, Appendix C, p. 14, identify lands available or not available for livestock grazing, considering factors including other

uses of the land; terrain characteristics; soil, vegetation, and watershed characteristics; the presence of undesirable vegetation, including significant invasive weed infestations; and the presence of other resources that may require special management or protection, such as special status species, special recreation management areas (SRMAs), or areas of critical environmental concern (ACECs).

C. BLM will consider no grazing and other alternatives. BLM will retain full authority to determine which alternatives are to be analyzed in detail, consistent with law; however, BLM will analyze in detail at least one alternative in the EIS addressing significantly reduced grazing levels in those areas demonstrating livestock-related conflicts with other multiple use values.

D. BLM will identify, maintain, and/or establish reference areas (i.e., exclosures and/or isolated areas) including upland and riparian areas, that are representative of a variety of ecosystem components, vegetation types and elevational gradients, that are ungrazed by livestock in order to allow comparisons for future evaluation of livestock grazing impacts on public lands of the Jarbidge Field Office.

E. BLM will establish guidelines for drought management and future water developments related to livestock grazing.

17. BLM acknowledges and agrees that protecting and restoring sage grouse and their habitat on the Jarbidge Field Office is a high priority and consistent with FLPMA and other laws. In preparing the Jarbidge RMP and EIS, BLM will follow its National Sage-Grouse Habitat Conservation Strategy (1.3.1 Guidance for Addressing Sagebrush Habitat Conservation in BLM Land Use Plans) to identify and provide for desired outcomes, strategies, restoration

opportunities, use restrictions, and management actions to conserve and restore sage grouse habitat.

18. The parties agree that, after BLM completes the final Jarbidge RMP and EIS, it will then conduct site-specific NEPA reviews and issue new ten-year grazing permit decisions for all Jarbidge allotments, which will be tiered to the revised RMP and EIS. This process of issuing new site-specific reviews and grazing decisions is expected to take three years following completion of the RMP and EIS.

19. The new ten-year grazing permit decisions to be made by BLM, as provided herein, will be based on appropriate NEPA analysis and apply the criteria adopted in the final Jarbidge RMP and EIS. They will reflect the results of the updated Ecological Site Inventory, and other monitoring information and other data obtained by BLM during the RMP/EIS process. They will address at least the following:

- A. Each permit's active permitted use, and other terms and conditions as required by 43 C.F.R. Part 4100;
- B. Other site-specific factors (including utilization levels, seasonal restrictions, and other management requirements); and
- C. Reasonable and necessary measures to conserve sage grouse habitats, as well as other sensitive plant and animal species' habitats, consistent with the revised Jarbidge RMP and EIS.

20. All parties reserve their right to participate in any decisions or processes contemplated herein, as they may deem appropriate and as provided by law. All parties also reserve their right to challenge any decision or process taken herein in accordance with the standards of judicial review set forth in the APA, or as otherwise provided by law.

III. INTERIM GRAZING MANAGEMENT PLANS.

21. The parties further agree – as a compromise and in order to promote long-term solutions – to the following Interim Grazing Management Plans to govern grazing on the Jarbidge Field Office allotments grazed by the Simplot and Other Intervenors, that are subject to the injunctive relief in the Court’s Memorandum Decision and Order entered August 1, 2005, under the following terms and conditions.

A. **Simplot Allotments.**

22. Interim Grazing Authorizations:

(a) Wintercamp Livestock Co.:

- i. Echo 4 Allotment: The “Active use” shall be limited to 3732 AUMs.
- ii. Echo 5 Allotment: The “Active use” shall be limited to 13,712 AUMs.

(b) Dickshooter Cattle Co.:

- i. Bruneau Hills Allotment: The “Active use” shall be limited to 4200 AUMs.

(c) Simplot Livestock Co.:

- i. Flat Top Allotment: The “Active use” shall be limited to 5515 AUMs.
- ii. 71 Desert Allotment: The "Active use" shall be limited to 3000 AUMs.
- iii. Blackrock Pocket Allotment: The “Active use” shall be limited to 1890 AUMs.

(d) Cedar Creek Cattle Company:

- i. Grassy Hills Allotment: The "Active use" shall be limited to 658 AUMs.
- ii. Camas Slough Allotment: The “Active use” shall be limited to 180 AUMs.
- iii. Coonskin Butte AMP Allotment: The "Active use" shall be limited to 3109 AUMs.
- iv. Pigtail Butte Allotment: The "Active use" shall be limited to 3000 AUMs.
- v. Noh Field Allotment: The "Active use" shall be limited to 1000 AUMs.

- vi. Brackett Bench and North Fork Field Allotments: The combined "Active use" shall be limited to 2386 AUMs within both the Brackett Bench and North Fork Field Allotments. In addition, the China Creek Pasture of the Brackett Bench Allotment and the North Fork Field Allotment shall be rest rotated on an every other year basis. For example, in 2005, China Creek Pasture will be grazed and the North Fork Field Allotment will be rested, but in 2006, North Fork Field Allotment will be grazed and China Creek Pasture will be rested.
- vii. East Juniper Draw Allotment: The "Active use" shall be limited to 2000 AUMs.
- viii. Cedar Creek Allotment: The "Active use" shall be limited to 4200 AUMs.

23. Interim Grazing Management Conditions: The Simplot Allotments are subject to the following requirements:

(a) Wintercamp Livestock Co.:

- i. Echo 4 Allotment:
 - a. The Grazing terms and conditions set forth in Table 2, Admin. R. 802257.
 - b. The Management Guidelines set forth in Table 3, Admin. R. 802258.
 - c. The Monitoring set forth at Admin. R. 802259-260.
- ii. Echo 5 Allotment:
 - a. The Grazing terms and conditions set forth in Table 1, Admin. R. 800608-609.
 - b. The Management Objectives and Guidelines set forth at Admin. R. 800609-610, except in paragraph 1(b) at Admin. R. 800609, the utilization level relative to Management Objectives and Guidelines shall be 35%, instead of 40%.
 - c. The Monitoring set forth at Admin. R. 800610-611.

(b) Simplot Livestock Company:

- i. Flat Top, 71 Desert, and Blackrock Pocket Allotments:
 - a. The Grazing terms and conditions set forth in Table 2, Admin. R. DN 76, Ex. 40 Part 1, pp. 5-6.

- b. The Management Guidelines Specific to Pastures set forth in Table 3, Admin. R. DN 76, Ex. 40 Part 1, pgs. 6-8, except the utilization level relative to Management Guideline 1 shall be 35%, instead of 40%.
- c. The Monitoring set forth in Admin. R. DN 76, Ex. 40 Part 1, pgs. 9-10.

(c) Dickshooter Cattle Company:

i. Bruneau Hill Allotment

- a. The Grazing terms and conditions set forth in Table 1, Admin. R. DN 76, Ex. 43 Part 1, p. 5.
- b. The Management Guidelines specific to pastures set forth in Table 2, Admin. R. DN 76, Ex. 43 Part 1, pgs. 6-7, except the utilization level relative to Management Guideline 1 shall be 35%, instead of 40%; and
- c. The Monitoring set forth in Admin. R. DN 76, Ex. 43 Part 1 pgs. 7-8.

(d) Cedar Creek Cattle Company:

i. Brackett Bench, Grassy Hills, North Fork Field, Camas Slough, Coonskin Butte AMP, Pigtail Butte, Cedar Creek, East Juniper Draw, and Noh Field Allotments:

- a. The Grazing terms and conditions set forth in Table 2, Admin. R. 801591.
- b. The Management Guidelines set forth in Table 3, Admin. R. 801592-595, except the utilization level relative to Management Guideline 1 shall be 30%, instead of 40%.
- c. The Monitoring set forth at Admin. R. 801595-596.

B. Other Intervenor Allotments.

24. Interim Grazing Authorizations:

(a) Frank Bachman ("Bachman"):

- i. Flat Top Allotment: The "Active use" shall be limited to 354 AUMs.
- ii. Echo Jewett (Canyon View) Allotment: The "Active use" shall be limited to 1,082 AUMs.
- iii. Echo Clover Allotment: The "Active Use" shall be limited to 1,492 AUMs.

iv. Clover Crossing Allotment: The "Active Use" shall be limited to 5,000 AUMs in 2005 and 2006, and 6,500 AUMs beginning in 2007.

(b) Blue Butte Grazing Association ("Lehmann"):

i. Kubic Allotment: The "Active use" shall be limited to 4,299 AUMs.

(c) Joe Black & Sons ("Black"):

i. Brown's Gulch Allotment: The "Active use" shall be limited to 3,100 AUMs in 2005; 3,800 AUMs in 2006; and 4,300 AUMs beginning in 2007.

(d) Brackett Ranches Ltd. ("Brackett"):

i. Juniper Butte Allotment: The "Active use" shall be limited to 2,300 AUMs.

25. Interim Grazing Management Conditions: The Other Intervenor Allotments are subject to the following requirements:

(a) Bachman:

i. Flat Top Allotment:

a. The Grazing terms and conditions set forth in Table 2 at Admin. R. 801822-823.

b. The Management Guidelines set forth in Table 3 at Admin. R. 801823-824, except that in paragraph number 1 at Admin. R. 801823, the utilization level relative to Management Guideline 1 shall be 35%, instead of 40%.

c. The "Monitoring" set forth at Admin. R. 801824-801825.

ii. Echo Jewett, Echo Clover, and Clover Crossing Allotments:

a. The Grazing terms and conditions set forth in Table 2 at Docket No. 78, Exhibit 53, p. 5.

b. The Management Guidelines set forth in Table 3 at Docket No.78, Exhibit 53, pages 6-7, except that

Bachman will divide the "Bridge Field" Pasture and will rest (i.e., not graze) the Bridge Field South Pasture until the Record of Decision on the revised RMP is issued; and the utilization level relative to Management Guideline 1 shall be 30%, instead of 40%, except for the Bridge Field North Pasture, where the utilization level will remain 40%.

- c. The Monitoring set forth at Docket No. 78, Exhibit 53, pp. 7-9.

(b) Lehmann:

i. Kubic Allotment:

- a. The Grazing terms and conditions set forth in Table 2, including terms 1-4, at Admin. R. 800423, 800387.
- b. The Management Guidelines set forth in Table 3 at Admin. R. 800424-425, 800388-389, except that the utilization level relative to Management Guideline 1 shall be 30%, instead of 40%.
- c. Pasture 12 will be rested (i.e., not grazed) until the Record of Decision on the revised RMP is issued.
- d. The monitoring set forth within the Management Guidelines at Admin. R. 800423-800424, 800387-388. See also Admin. R. 6552-6553.

(c) Black:

i. Browns Gulch Allotment:

- a. The Grazing terms and conditions set forth in Table 2 at Docket No. 78, Exhibit 52, p. 5.
- b. The Management Guidelines set forth in Table 3 at Docket No. 78, Exhibit 52, p. 6.
- c. The "Monitoring" set forth at Docket No. 78, Exhibit 52, pp. 6-7.

(d) Brackett:

i. Juniper Butte Allotment:

- a. The Grazing terms and conditions set forth in Table 2,

including terms 1-5, at Admin. R. 800908-909.

- b. The Management Guidelines set forth in Table 3 at Admin. R. 800911, including Admin. R. 800912, except the utilization level relative to Management Guideline 1 shall be 30%, instead of 40%.
- c. Of three pastures with occupied slickspot peppergrass (Lepa) habitat, no grazing will occur on one of these pastures between February 1 and October 1 of each year, and no grazing will occur on another one of these pastures between February 1 and June 15 of each year. Of the one pasture that is grazed prior to June 15, grazing will be stocked at no more than 20 percent of the production level within the pasture.
- d. The monitoring set forth within the Management Guidelines at Admin. R. 800909-910. See also Admin. R. 6548-6551.

C. Non-Party Permittee Allotments.

26. Interim Grazing Authorizations: The following grazing authorizations may apply to the following allotments subject to the August 1, 2005 Memorandum Decision and Order, in place of the injunctive relief set forth therein, provided that the respective permittee(s) dismiss any pending administrative appeals over such allotments and further abide by the provisions of paragraph 43 herein:

(a) Antelope Springs Ranch:

- i. Antelope Springs Allotment: The "Active use" shall be limited to 5,965 AUMs.

(b) Guerry, Inc.:

- i. Antelope Springs Allotment: The "Active use" shall be limited to 81 AUMs.
- ii. Cedar Creek Allotment: The "Active use" shall be limited to 21 AUMs.
- iii. Coonskin Allotment: The "Active use" shall be limited to 1,674 AUMs.
- iv. Pigtail Butte Allotment: The "Active use" shall be limited to 2,146 AUMs.

(c) Salmon Falls Land & Livestock Co., Inc.:

- i. Cedar Butte Devils Creek Allotment: The "Active use" shall be limited to 2,288 AUMs.
- ii. Yahoo Allotment: The "Active use" shall be limited to 2,952 AUMs.

(d) Wilda Lehmann:

- i. Hallelujah Allotment: The "Active use" shall be limited to 1,500 AUMs in 2005 and 2006; and 1,885 AUMs beginning in 2007.

(e) Kip Gould:

- i. Crawfish Allotment: The "Active use" shall be limited to 650 AUMs.
- ii. Three Creek #8 Allotment: The "Active use" shall be limited to 798 AUMs.

27. Interim Grazing Management Conditions: The Non-Party Allotments are subject

to the following requirements:

(a) Antelope Springs Ranch:

- i. Antelope Springs Allotment:
 - a. The Grazing terms and conditions set forth in Table 2, including terms 1-5, at Admin. R. 801962.
 - b. The Management Guidelines set forth in Table 3 at Admin. R. 801962-964, except the utilization level relative to Management Guideline 1 shall be 30%, instead of 40%, in Pasture 8; and shall be 35%, instead of 40%, in other MG-1 pastures.
 - c. The monitoring set forth within the Management Guidelines at Admin. R. 801964-966.

(b) Guerry, Inc.:

- i. Antelope Springs, Cedar Creek, Coonskin and Pigtail Butte Allotments:
 - a. The Grazing terms and conditions set forth in Table 2, including terms 1-5, at Admin. R. 802530-531.
 - b. The Management Guidelines set forth in Table 3 at

Admin. R. 802531-534, except the utilization level relative to Management Guideline 1 shall be 30%, instead of 40%, in Pasture 8 of the Antelope Springs Allotment and the East Trail Pasture of the Pigtail Butte Allotment; and shall be 35%, instead of 40%, on the remaining MG-1 pastures.

- c. The monitoring set forth within the Management Guidelines at Admin. R. 802534-535.

(c) Salmon Falls Land & Livestock Co., Inc.:

i. Cedar Butte Devils Creek Allotment:

- a. The Grazing terms and conditions set forth in Table 2, including terms 1-5, at Admin. R. 800075-076.
- b. The Management Guidelines set forth at Admin. R. 800076-077, except the utilization level relative to Management Guideline 1 shall be 30%, instead of 40%, in the Horse Pond and Coonskin Butte Pastures; and shall be 35%, instead of 40%, on the remaining MG-1 pastures.
- c. The monitoring set forth within the Management Guidelines at Admin. R. 800076 and 006547.

ii. Yahoo Allotment:

- a. The Grazing terms and conditions set forth in Table 2, including terms 1-5, at Admin. R. 801091.
- b. The Management Guidelines set forth at Admin. R. 801091-093, except the utilization level relative to Management Guideline 1 shall be 30%, instead of 40%, in the Tuana 2 Pasture; and shall be 35%, instead of 40%, in the remaining MG-1 pastures.
- c. The monitoring set forth within the Management Guidelines at Admin. R. 801091-092.

(d) Wilda Lehmann:

i. Hallelujah Allotment:

- a. The Grazing terms and conditions set forth in Table 2, including terms 1-5, at Admin. R. 800255-256.

- b. The Management Guidelines set forth at Admin. R. 800256-257.
- c. The monitoring set forth within the Management Guidelines at Admin. R. 006573 and 800255-256.

(e) Kip Gould:

i. Crawfish Allotment:

- a. The Grazing terms and conditions set forth in Table 2, at Admin. R. 801316.
- b. The Management Guidelines set forth at Admin. R. 801317-18, except that the utilization level relative to Management Guideline 1 shall be 30%, instead of 40%.
- c. The monitoring set forth within the Management Guidelines at Admin. R. 801319.

ii. Three Creek # 8 Allotment:

- a. The Grazing terms and conditions set forth in Table 2, at Admin. R. 801316.
- b. The Management Guidelines set forth at Admin. R. 801317-18, except that the utilization level relative to Management Guideline 1 shall be 30%, instead of 40%.
- c. The monitoring set forth within the Management Guidelines at Admin. R. 801319.

D. Other Interim Grazing Provisions Applicable To All Allotments.

28. BLM will consult with permittee(s) and interested publics, including (but not limited to) Western Watersheds, Idaho Department of Lands, and Idaho Department of Fish & Game, as part of the Annual Grazing Plan process and before an Annual Grazing Plan is completed by BLM.

29. The "Annual Grazing Plans" are mandatory.

30. The "Monitoring" prescribed above is mandatory, including the methods for monitoring stated therein. BLM will communicate with permittees, Western Watersheds and other interested publics, Idaho Department of Lands, and Idaho Department of Fish & Game concerning its monitoring.

31. No Nonrenewable Grazing Permits (aka TNR) related to the above Jarbidge Field Office Allotments will be authorized during the Interim Grazing Management Plan period, pursuant to 43 C.F.R. § 4160.6-2 or other authority; and the permittees agree not to utilize any such TNR related to the above allotments, even if authorized.

32. BLM is authorized to provide crossing permits for trailing through said allotments. Such permits will include the minimum distance livestock must travel per day, the route to be followed, any holdover areas (for overnighting), and any additional terms and conditions that are needed.

33. Any transfers of grazing preference, in whole or in part, which occur during the Interim Grazing Management period shall be subject to the Interim Grazing Management Plan.

34. The above-identified Allotments are subject to all management actions imposed by BLM as a product of the Clover Fire or any other events that may occur during the Interim Grazing Management Plan period, in accordance with 43 C.F.R. § 4110.3-3(b) and all other applicable authority.

35. The Interim Grazing Management Plans above shall remain in effect until the end of the 2009 grazing year, when the revised Jarbidge RMP and EIS is expected to be completed. The parties further agree that, in the event the RMP and EIS completion date is extended for another

year pursuant to paragraph 9 above, the Interim Grazing Management Plans will also be extended for another year.

36. After the expiration of the period provided in the preceding paragraph, the parties agree that they will reevaluate the Interim Grazing Management Plans. Plaintiff and Intervenor will confer over further interim grazing management authorization on the respective allotments during the period until site-specific reviews and new long-term grazing permits are issued, involving BLM as needed and taking into account current conditions, determinations made by BLM in the revised Jarbidge RMP and EIS, and other factors. In the event that all the parties cannot reach agreement on the authorization for further interim grazing on the respective allotments until new long-term grazing permits are issued, then the parties agree to engage in mediation before a mutually-agreeable (or court-appointed) neutral mediator. In the event mediation proves unsuccessful, the parties reserve the right to seek judicial relief as may be necessary.

IV. OTHER PROVISIONS.

37. Assuming the Court approves this Stipulated Settlement Agreement and adopts the Interim Grazing Management Plans set forth above, BLM and Intervenor agree not to appeal the Court's August 1, 2005 Memorandum Decision and Order, as modified by this Stipulated Settlement Agreement. Western Watersheds agrees to dismiss the claims with prejudice adjudicated in the August 1, 2005 Memorandum Decision and Order with respect to the allotments identified herein, when the terms and conditions of this Stipulated Settlement are completed.

38. Provided the Court approves this Stipulated Settlement Agreement and adopts the Interim Grazing Management Plans set forth above, Western Watersheds and Intervenor each

agree to dismiss without prejudice all pending administrative appeals concerning the allotments identified herein, including (but not necessarily limited to) appeals over the Hallelujah, Browns Gulch, North Fork, and other allotments; and in addition, J.R. Simplot Self-Declaration of Revocable Trust dba Wintercamp Livestock Co. (as related to Echo 5 Allotment), agrees to dismiss without prejudice its Complaint filed in consolidated case number CIV-04-237-S-EJL pursuant to Federal Rule of Civil Procedure 41(a).

39. Provided the Court approves this Stipulated Settlement Agreement and adopts the Interim Grazing Management Plans set forth above, the Intervenors further agree not to pursue legislative remedies inconsistent with this Stipulated Settlement Agreement or relief relating to this litigation or the respective Allotments, other than to seek funding and other legislative support to implement this Stipulated Settlement Agreement, during the pendency of the Interim Grazing Management Plans.

40. For its part, Western Watersheds agrees not to initiate new litigation or administrative challenges or claims over the Jarbidge Field Office allotments identified above, during the pendency of the Interim Grazing Management Plans. Western Watersheds also will not encourage, cooperate or assist with any other conservation group in bringing administrative challenges, claims and/or litigation, or pursue legislative remedies inconsistent with this Stipulated Settlement Agreement over the identified Allotments either; and it will use its influence, as necessary, to seek the support of other conservation groups for this Stipulated Settlement Agreement.

41. Western Watersheds will notify the Idaho Congressional delegation of this Stipulated Settlement Agreement and use its best efforts to obtain the support of the delegation and funding to achieve all BLM's obligations called for in this Agreement.

42. Intervenors will notify the Idaho Congressional delegation of this Stipulated Settlement Agreement and use their best efforts to obtain the support of the delegation and funding to achieve all BLM's obligations called for in this Agreement.

43. Even if a legislative "rider" or other new legislation is approved for the Jarbidge Field Office, which might otherwise allow or authorize Intervenors to undertake livestock grazing on the above-identified Jarbidge allotments different than the terms and conditions of this Stipulated Settlement Agreement, Intervenors each agree that they shall adhere to the terms set forth herein.

44. The parties agree and understand that BLM's obligations under this Stipulated Settlement Agreement are contingent upon the availability of appropriated funds, and that nothing in this Agreement shall be construed as a commitment or requirement that BLM obligate or pay funds in contravention of the Anti-Deficiency Act, 31 U.S.C. § 1341, or other applicable law. However, if sufficient funds are not made available for BLM to carry out all obligations called for under this Agreement, then all parties reserve the right to seek relief from the Court as may be appropriate or necessary.

45. All parties reserve the right to seek relief from the Court pursuant to F.R.Civ.P. 60(b), as may be necessary.

46. The parties agree that each will give prior notice and confer to attempt to resolve any dispute over the implementation of this Stipulated Settlement Agreement, before seeking any intervention of the Court.

47. Nothing in this Stipulated Settlement Agreement is intended to cause or result in any violation of law, including (but not limited to) FLPMA, NEPA, the Federal Advisory Committee Act, or others.

48. In light of the foregoing terms, conditions, and compromises, the parties jointly move the Court to approve this Stipulated Settlement Agreement, and to modify the August 1, 2005 Memorandum Decision and Order in order to adopt the revised Jarbidge RMP and EIS provisions set forth herein, and to authorize interim grazing on the above-identified Jarbidge Allotments consistent with the terms and conditions herein.

IT IS SO STIPULATED AND AGREED.

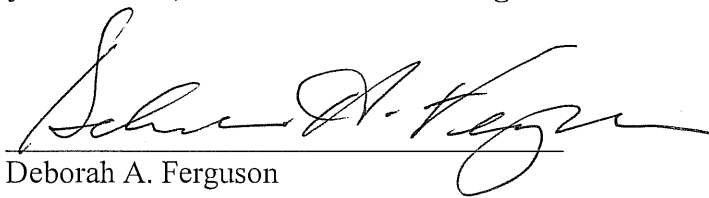
Dated: September 30, 2005.

For Plaintiff Western Watersheds Project:



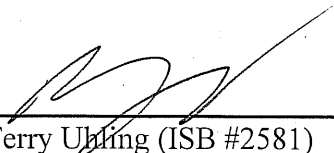
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For Federal Defendants K Lynn Bennett, Bureau of Land Management et al:

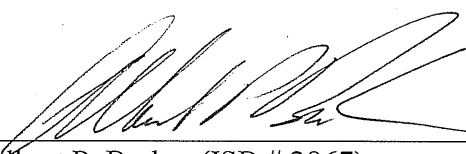


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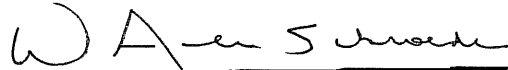
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FRANK ASTORQUIA, and WINTERCAMP LIVESTOCK CO.

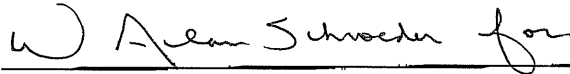
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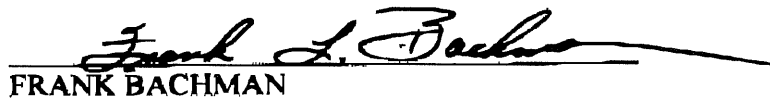
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Approved by Authorized Representatives for Other Intervenors:



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Approved by Authorized Representatives For Non-Party Permittees:

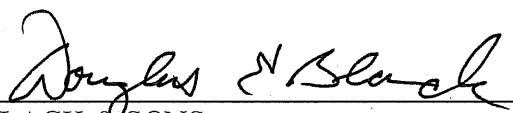
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**APPENDIX B:
SPECIFIC MANDATES
AND AUTHORITIES**

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APPENDIX B: SPECIFIC MANDATES AND AUTHORITY

The development of the revised Jarbidge RMP followed all applicable laws, regulations, and policies, including, but not limited to, those listed in Table B- 1. The Interdisciplinary Team will continue to refine this list throughout the planning process. For more detail on what is required by these documents, please refer to the original document.

Table B- 1. Specific Mandates and Authority

Document Name
Laws
General Mining Law of 1872, as amended (30 USC 21)
Antiquities Act of 1906 (16 USC 431-433)
Migratory Bird Treaty Act of 1918 (16 USC 703 et seq.)
Mineral Leasing Act of 1920, as amended (30 USC 181)
Recreation and Public Purposes Act of 1926, as amended (43 USC 869)
Taylor Grazing Act of 1934, as amended (43 USC 315)
Soil Conservation and Domestic Allotment Act of 1935 (16 USC 590)
Food, Drug, and Cosmetic Act of 1938 and the Miller Amendment to the Act (21 USC 301 et seq.)
Federal Insecticide, Fungicide, and Rodenticide Act of 1947, as amended (7 USC 136 et seq.)
Appropriations Act of 1952, McCarran Amendment (43 USC 666)
Watershed Protection and Flood Prevention Act of 1954, as amended (16 USC 1001 et seq.)
Sikes Act of 1960, as amended (16 USC 670 et seq.)
Water Resources Planning Act of 1962 (42 USC 1962 et seq.)
Classification and Multiple Use Act of 1964 (43 USC 1411-18)
Land and Water Conservation Fund Act of 1964, as amended (16 USC 460 et seq.)
Wilderness Act of 1964 (16 USC 1131 et seq.)
Fish and Wildlife Coordination Act of 1965 (16 USC 661 et seq.)
National Historic Preservation Act of 1966, as amended, (16 USC 470) in accordance with the National Programmatic Agreement, the Idaho State Protocol Agreement, and implementing regulations 36 CFR 60 and 36 CFR 800
National Trails System Act of 1968 (16 USC 1241-1251)
Wild and Scenic Rivers Act of 1968, as amended. (16 USC 1271 et seq.)
National Environmental Policy Act of 1969 (42 USC 4321 et seq.)
Mining and Mineral Policy Act of 1970, as amended (30 USC 21)
Clean Air Act of 1970, as amended (42 USC 7401 et seq.)
Control of Pollution from Federal Facilities Act of 1970 (33 USC 1323)
Horse Protection Act of 1970 (15 USC 1821 et seq.)
Wild and Free-Roaming Horses and Burros Act of 1971 (16 USC 1331 et seq.)
Federal Environmental Pesticide Control Act of 1972 (7 USC 136 et seq.)
Endangered Species Act of 1973 (16 USC 1531 et seq.)
Archaeological and Historic Preservation Act of 1974 (16 USC 469)
Federal Noxious Weed Act of 1975 (7 USC 2801 et seq.)
Federal Land Policy and Management Act of 1976, as amended (43 USC 1701 et seq.)
Surface Mining Control and Reclamation Act of 1977 (30 USC 1201)
Clean Water Act of 1977, as amended (30 USC 1251)
Safe Drinking Water Act Amendments of 1977 (42 USC 201)
Soil and Water Resources Conservation Act of 1977 (16 USC 2001)
American Indian Religious Freedom Act of 1978 (42 USC 1996)
Public Rangelands Improvement Act of 1978 (43 USC 1901 et seq.)
Migratory Bird Conservation Act of 1979, as amended (16 USC 715)
Archaeological Resources Protection Act of 1979, as amended (16 USC 470 et seq.); implementing regulations 43 CFR 7

Document Name
Emergency Wetland Resources Act of 1986 (16 USC 3901)
Federal Cave Resources Protection Act of 1988 (16 USC 4301 et seq.)
Native American Graves Protection and Repatriation Act of 1990 (25 USC 301) and implementing regulations 43 CFR 10
Pollution Prevention Act of 1990 (42 USC 13101 et seq.)
Energy Policy and Conservation Act Reauthorization of 2000, as amended (PL 106-469)
Energy Policy Act of 2005 (PL 109-58)
Wild Horse and Burro Sale-Authority, within Consolidated Appropriations Act of 2005 (PL 108-447, Sec 142)
Executive Orders and Memoranda
Executive Order of April 17, 1926, Public Water Reserve No. 107
Executive Order 11514, Protection and Enhancement of Environmental Quality, March 5, 1970 (35 FR 4247)
Executive Order 11593, Protection and Enhancement of the Cultural Environment, May 13, 1971 (36 FR 8921)
Executive Order 11644, Use of Off-Road Vehicles on Public Lands, February 8, 1972 (37 FR 2877), as amended by Executive Order 11989
Executive Order 11738, Providing for administration of the Clean Air Act and the Federal Water Pollution Control Act with respect to Federal contracts, grants or loans, September 10, 1973 (38 FR 25161)
Executive Order 11752, Prevention, control, and abatement of environmental pollution at Federal facilities, December 17, 1973 (38 FR 34793)
Executive Order 11987, Exotic Organisms, May 24, 1977 (42 FR 26949)
Executive Order 11988, Floodplain Management, May 24, 1977 (42 FR 26951), as amended by Executive Order 12148
Executive Order 11990, Protection of Wetlands, May 25, 1977 (42 FR 26961)
Executive Order 12088, Federal Compliance with Pollution Control Standards, October 17, 1978 (43 FR 47707)
Executive Order 12372, Intergovernmental Review of Federal Programs, July 14, 1982 (47 FR 30959)
Executive Order 12898, Federal actions to address environmental justice in minority populations and low-income populations, February 11, 1994 (59 FR 7629)
Executive Order 12962, Recreational Fisheries, June 7, 1995 (60 FR 30769)
Executive Order 13007, Indian Sacred Sites, May 24 1996 (61 FR 104)
Executive Order 13084, Consultation and Coordination with Indian Tribal Governments, May 14, 1998 (63 FR 27655)
Executive Order 13112, Invasive Species, February 3, 1999 (64 FR 6183)
Executive Order 13186, Responsibilities of Federal Agencies To Protect Migratory Birds, January 10, 2001 (66 FR 3853)
Executive Order 13287, Preserve America, March 5, 2003 (68 FR 43)
Executive Order 13443, Facilitation of Hunting Heritage and Wildlife Conservation (72 FR 46537)
Executive Memorandum, Government-to-Government Relations with Native American Tribal Governments, April 29, 1994
Regulations
40 CFR, Protection of Environment
43 CFR, Public Lands: Interior
50 CFR, Wildlife and Fisheries
Departmental Guidance
Secretarial Order 3602, American Indian Tribal Rights, Federal Tribal Trust Responsibilities, and the ESA
BLM Manuals
BLM Manual 1553, Planning and Creating Graphics
BLM Manual 1610, Land Use Planning
BLM Manual 1613, ACECs
BLM Manual 1737, Riparian and Wetland Management
BLM Manual 1790, NEPA
BLM Manual 3031, Energy and Mineral Resource Assessment
BLM Manual 4180, Rangeland Health Standards
BLM Manual 4700, Wild Free-Roaming Horse and Burro Management

Document Name
BLM Manual 6500, Wildlife and Fisheries Management
BLM Manual 6521, State Agencies
BLM Manual 6525, Sikes Act Wildlife Programs
BLM Manual 6600, Fish, Wildlife, and Special Status Plant Resources Inventory and Monitoring
BLM Manual 6840, Special Status Species Management
BLM Manual 7000, Soil, Water, and Air Management
BLM Manual 8110, Identifying Cultural Resources
BLM Manual 8120, Tribal Consultation under Cultural Resources
BLM Manual 8160, Native American Coordination and Consultation
BLM Manual 8300, Recreation Management
BLM Manual 8170, Interpreting Cultural Resources for the Public
BLM Manual 8270, Paleontological Resource Management
BLM Manual 8351, Wild and Scenic River Policy
BLM Manual 8400-1, Visual Resource Management
BLM Manual 9211, Fire Planning
BLM Handbooks
BLM Handbook H-1601-1, Land Use Planning Handbook
BLM Handbook H-1624-1, Planning for Fluid Mineral Resources
BLM Handbook H-1790-1, National Environmental Policy Act Handbook
BLM Handbook H-3070-1, Economic Evaluation of Coal Properties
BLM Handbook H-3070-2, Economic Evaluation of Oil and Gas Properties
BLM Handbook H-3600-1, Mineral Materials Disposal
BLM Handbook H-4120-1, Grazing Management
BLM Handbook H-4180-1, Rangeland Health Standards
BLM Handbook H-8120-1, General Procedural Guidance for Native American Consultation
BLM Handbook H-8210-1, Tribal Consultation under Cultural Resources
BLM Handbook H-8270-1, Paleontological Resource Management
BLM Handbook H-8410-1, Visual Resource Inventory Handbook
BLM Handbook H-8550-1, Interim Management Policy for Lands under Wilderness Review
BLM Handbook H-9211-1, Fire Management Activity Planning
BLM Handbook H-9214-1, Prescribed Fire Handbook

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**APPENDIX C:
ORGANIZATIONS ON THE
JARBIDGE RMP MAILING
LIST**

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APPENDIX C: ORGANIZATIONS ON THE JARBIDGE RMP MAILING LIST

The following organizations, businesses, and government entities were on the Jarbidge RMP mailing list:

Organizations

- "71" Livestock Association
- Advisory Council on Historic Preservation
- American Horse Defense Fund
- American Sportfishing Association
- Animal Welfare Institute
- Archery Trade Association
- Association of Fish and Wildlife Agencies
- Backcountry Hunters and Anglers
- Bear Trust International
- BlueRibbon Coalition
- Boise ATV Trail Riders
- Boone and Crockett Club of America
- Bowhunting Preservation Alliance
- Buhl Chamber of Commerce
- Campfire Club of America
- Center for Biological Diversity
- Committee for the High Desert
- Congressional Sportsman's Foundation
- Conservation Force
- Dallas Safari Club
- Delta Waterfowl Foundation
- Ducks Unlimited
- Elko Area Chamber of Commerce
- Elko County Cooperative Extension Office
- Elko County Economic Diversification Authority
- Elmore County Agri-Business Coalition, Inc.
- Elmore County Cooperative Extension Office
- Foundation for North American Wild Sheep
- Friends of the Mustang
- Glens Ferry Chamber of Commerce
- Golden Springs Homeowners
- Grand View Chamber of Commerce
- Great Plains Restoration Council
- Hagerman Valley Chamber of Commerce
- High Desert Back Country Horsemen
- High Desert Coalition, Inc.
- Houston Safari Club
- Idaho Archaeological Society
- Idaho Association of Soil Conservation Districts
- Idaho ATV Association, Inc.
- Idaho Cattle Association
- Idaho Conservation League
- Idaho Environmental Council
- Idaho Fish and Wildlife Foundation
- Idaho Migrant Council

- Idaho Museum of Natural History
- Idaho Native Plant Society
- Idaho Native Plant Society, Loasa Chapter
- Idaho Outfitters and Guides Association
- Idaho Professional Archaeological Council, Inc.
- Idaho Rivers United
- Idaho State 4X4 Association
- Idaho State Snowmobile Association
- Idaho Wool Growers Association
- International Mountain Bike Association
- Izaak Walton League of America
- Jarbidge Sage-Grouse Local Working Group
- Magic Valley Cattlemen's Association
- Magic Valley Gem Club
- Magic Valley Trail Machine Association
- Mountain Home ATV Club
- Mountain Home Chamber of Commerce
- Mule Deer Foundation
- Mule Deer Foundation, Idaho
- Mule Deer Foundation, Nevada
- National Assembly of Sportsmen's Caucuses
- National Association for the Advancement of Colored People
- National Association for the Advancement of Colored People, Treasure Valley Branch
- National Audubon Society, Prairie Falcon Chapter
- National Rifle Association of America
- National Shooting Sports Foundation
- National Trapper's Association
- National Trust for Historic Preservation
- National Wild Turkey Federation
- Nevada Bureau of Mines
- Nevada Cattlemen's Association
- Nevada Mining Association
- North American Bear Foundation
- North American Grouse Partnership
- Northwest Power Planning Council
- Oregon-California Trails Association
- Oregon-California Trails Association, Idaho Chapter
- Orion-The Hunters Institute
- Owyhee Cattlemen's Association
- Owyhee County Cooperative Extension Office
- Owyhee County Historical Society
- Owyhee Gem and Mineral Society
- Pheasants Forever
- Pheasants Forever, Region 7
- Pope and Young Club
- Preservation Idaho-Idaho Historic Preservation Council
- Public Lands Foundation
- Quail Unlimited
- Quality Deer Management Association
- Recreational Boating and Fishing Foundation
- Rocky Mountain Elk Foundation
- Ruffed Grouse Society
- Safari Club International

- Sage Community Resources
- Sagebrush Sea Campaign
- Sand County Foundation
- Sierra Club, Middle Snake Group
- Snake River Canyon Krawlers
- Society for Range Management, Idaho Section
- South Central Idaho Tourism and Recreation Development Association
- Southern Idaho Off-Road Association
- Southwestern Idaho Desert Racing Association
- Sporting Arms and Ammunition Manufacturers Institute
- Sportsmen for Fish and Wildlife
- Students Promoting Environmental Action and Knowledge, Cookeville High Chapter
- Texas Wildlife Association
- The College of Idaho
- The Nature Conservancy
- The Wilderness Society
- The Wilderness Society, BLM Action Center
- Theodore Roosevelt Conservation Partnership
- Treasure Valley Trail Machine Association
- Trout Unlimited
- Twin Falls Chamber of Commerce
- Twin Falls Research and Extension Center
- University of Idaho
- University of Idaho Extension
- US Sportsmen's Alliance
- Wake Forest University
- Western Watersheds Project
- Whitetails Unlimited
- Wild West Off Roaders
- Wildlife Forever
- Wildlife Management Institute
- Wood River Land Trust

Businesses

- AT&T Wireless Services, Inc.
- Ace Black Ranches
- Advocates for the West
- American Tower Corp.
- Barker River Expeditions
- Bell Rapids Mutual Irrigation
- Black Mesa Farms
- Blue Butte Grazing Association LLC
- Brackett Ranches
- Brackett Ranches LTD
- Buhl Herald
- C.E. Brackett Cattle Company
- Camas Creek Cattle Association LLC
- Cedar Creek Farms
- Cedar Mesa Reservoir and Canal
- Cellular One
- Chevron Pipeline Company
- Conservation Geography

- Conservation Seeding and Restoration, Inc.
- Cooper Norman
- Devil Creek Ranch, Inc.
- Driscoll Brothers Partnership
- Ecology and Environment, Inc.
- Elmore County Farm Bureau
- Far and Away Adventures
- Farm Development Corp.
- Faulkner Land and Livestock
- Flying Triangle, Inc.
- Frog Hollow Ranch
- Gadda Law Offices
- Guerry, Inc.
- Half Moon Ranches
- Hammett Livestock Company
- High Desert Ecology
- House Creek Grazing Association LLC
- ID Holding LLC, C/O AllTell Communication
- Idaho Guide Service, Inc.
- Idaho Mountain Express
- Idaho Power Company
- Intermountain Range Consultants
- J.R. Simplot Company
- Joe Black and Sons
- King Hill Irrigation District
- Kinyon & Kinyon
- KLIX 96.5 FM/KEZJ 95.7 FM
- KMVT Channel 11
- KSAW Channel 51/KTFT Channel 38
- National Public Lands News
- Nevada Power Company
- Nextel WIP Lease Corp.
- Northwest Pipeline
- Owyhee County Farm Bureau
- Pacificorp Property Management
- Progressive Rancher
- RES America Developments, Inc.
- Redwillow Research, Inc.
- Ringert Clark Chartered
- River Odysseys West
- Rockin S Ranch
- Roseworth Farms LLC
- Rural Telephone Co.
- Sage Ecosystem Science
- Salmon Falls Land and Livestock Co.
- Schroeder and Lezamiz Law Offices
- Seawest Windpower, Inc.
- Simplot Livestock Company
- Stetson & Jordan
- Stowell Ranches
- Tews Land and Livestock, Inc.
- The Idaho Statesman
- The Times-News

- Trinity Exploration, Inc.
- Twin Falls County Farm Bureau
- URS Corporation
- Verizon Business
- Verizon Wireless
- Wells Livestock, Inc.
- Wilderness River Outfitters
- Windvestments, LLC
- Wintercamp Livestock Company
- Wood River Ranches
- Y-3 Ranch

Government Entities

- Animal and Plant Health Inspection Service, Wildlife Services, Gooding Office
- Animal and Plant Health Inspection Service, Wildlife Services, Idaho Office
- Balanced Rock Soil Conservation District
- BLM Boise District Office
- BLM Bruneau Field Office
- BLM Elko Field Office
- BLM Fire and Aviation, National Interagency Fire Center
- BLM Idaho State Office
- BLM Twin Falls District Resource Advisory Council
- BLM Washington Office
- BLM Wells Field Office
- Boise District Grazing Board
- Bruneau Dunes State Park
- Bruneau River Soil Conservation District
- Buhl Highway District
- Bureau of Reclamation, Pacific Northwest Regional Office
- Bureau of Reclamation, Snake River Area Office-East
- Bureau of Reclamation, Snake River Area Office-West
- City of Bliss
- City of Buhl
- City of Castleford
- City of Filer
- City of Glenns Ferry
- City of Grand View
- City of Hagerman
- City of Mountain Home
- City of Twin Falls
- Elko County Board of Commissioners
- Elko County Highway Department
- Elko County Planning Commission
- Elko County Public Land Use Advisory Commission
- Elko County Weed Control
- Elmore County Board of Commissioners
- Elmore County Growth and Development Department
- Elmore County Weed Control
- Elmore Soil Conservation District
- Environmental Protection Agency, Region 10
- Federal Aviation Administration, Northwest Mountain Region
- Federal Highway Administration

- Glens Ferry Highway District
- Hagerman Highway District
- Hagerman Translator District
- Idaho Beef Council
- Idaho Commission on Hispanic Affairs
- Idaho Conservation Data Center
- Idaho Department of Commerce
- Idaho Department of Education
- Idaho Department of Environmental Quality
- Idaho Department of Fish and Game
- Idaho Department of Lands
- Idaho Department of Parks and Recreation
- Idaho Department of Transportation
- Idaho Department of Water Resources
- Idaho Fish and Game Commission
- Idaho Governor's Office of Species Conservation
- Idaho House of Representatives, Office of the District 22 Representative, House Seat A
- Idaho House of Representatives, Office of the District 22 Representative, House Seat B
- Idaho House of Representatives, Office of the District 23 Representative, House Seat A
- Idaho House of Representatives, Office of the District 23 Representative, House Seat B
- Idaho House of Representatives, Office of the District 24 Representative, House Seat A
- Idaho House of Representatives, Office of the District 24 Representative, House Seat B
- Idaho Office of Energy Resources
- Idaho Office of the Attorney General
- Idaho Office of the Governor
- Idaho Office of the Lieutenant Governor
- Idaho Outfitters and Guides Licensing Board
- Idaho Park and Recreation Board
- Idaho Rangeland Resource Commission
- Idaho Rural Partnership
- Idaho Secretary of State's Office
- Idaho Senate, Office of the District 22 Senator
- Idaho Senate, Office of the District 23 Senator
- Idaho Senate, Office of the District 24 Senator
- Idaho Sheep Commission
- Idaho Soil Conservation Commission
- Idaho Soil Conservation Districts, Division III
- Idaho Soil Conservation Districts, Division IV
- Idaho State Department of Agriculture
- Idaho State Historic Preservation Office
- Idaho State Historical Society
- Idaho State Historical Society, District 4
- Idaho State Historical Society, District 5
- Jackpot Advisory Board
- Jarbidge Advisory Board
- Malad Gorge State Park
- Mountain Home Air Force Base, 366 CES/CEVA
- National Oceanic and Atmospheric Administration, National Marine Fisheries Service
- National Park Service, Hagerman Fossil Beds National Monument
- National Park Service, Mojave National Preserve
- National Park Service, National Trails System
- Natural Resources Conservation Service, Elko Service Center
- Natural Resources Conservation Service, Marsing Service Center

- Natural Resources Conservation Service, Mountain Home Service Center
- Natural Resources Conservation Service, Twin Falls Service Center
- Natural Resources Conservation Service, Washington Office
- Nevada Department of Agriculture
- Nevada Department of Transportation
- Nevada Division of Environmental Protection
- Nevada Division of Forestry, Region 2
- Nevada Division of State Lands
- Nevada Division of Wildlife, Region 2
- Nevada Natural Heritage Program
- Nevada Office of the Governor
- Nevada Rangeland Resources Commission
- Nevada State Historic Preservation Office
- Nevada State Land Use Planning Agency
- Northeast Elko Conservation District
- Owyhee Conservation District
- Owyhee County Board of Commissioners
- Owyhee County Natural Resources Committee
- Owyhee County Planning and Zoning Commission
- Owyhee County Road and Bridge
- Owyhee County Weed Control
- Snake River Soil Conservation District
- Thousand Springs State Park
- Three Creek Good Road District
- Three Island Crossing State Park
- Twin Falls County Board of Commissioners
- Twin Falls County Planning and Zoning Commission
- Twin Falls County Weed Control
- Twin Falls Highway District
- Twin Falls Soil and Water Conservation District
- US Army Engineer, Northwestern Division
- US Coast Guard
- US Department of Agriculture, Agricultural Research Service, Northwest Irrigation and Soils Research Lab
- US Department of Agriculture, National Agriculture Library
- US Department of Energy
- US Department of Justice, US Attorney's Office for the District of Idaho
- US Department of the Interior, Office of the Solicitor, Pacific NW Region
- US Fish and Wildlife Service, Pacific Northwest Region, Idaho Fish and Wildlife Office
- US Fish and Wildlife Service, Pacific Southwest Region, Nevada Fish and Wildlife Office
- US Forest Service, Humboldt-Toiyabe National Forest
- US Forest Service, Ruby Mountains/Jarbidge Ranger District
- US Forest Service, Sawtooth National Forest
- US Forest Service, Washington Office
- US Geological Survey, Water Resources Division, Twin Falls Field Office
- US House of Representatives, Office of the Representative of Idaho's 1st Congressional District,
- US House of Representatives, Office of the Representative of Idaho's 2nd Congressional District
- US House of Representatives, Office of the Representative of Nevada's 2nd Congressional District
- US Senate, Offices of the Senators of the State of Idaho
- US Senate, Offices of the Senators of the State of Nevada

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**APPENDIX D:
AQUATIC AND RIPARIAN
MANAGEMENT STRATEGY**

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APPENDIX D: AQUATIC AND RIPARIAN MANAGEMENT STRATEGY

Introduction

The Aquatic and Riparian Management Strategy (ARMS) provides the Bureau of Land Management (BLM) Jarbidge Field Office (FO) guidance and programmatic direction for watershed and subwatershed riparian and aquatic conservation and restoration, as required by direction in the Interior Columbia Basin Strategy and Aquatic Framework (USFS, NOAA, BLM, FWS, & EPA, 2004). Conservation of fish, other aquatic wildlife and plants, and habitats at risk of degradation should be considered together with the full array of broad-scale ecosystem components addressed by the strategy, which includes landscape dynamics, terrestrial source habitats, aquatic species, and riparian and hydrologic processes. Management will balance short-term risks to aquatic and other resources with long-term benefits as actions are considered to move these resources toward a natural variability of conditions or desired conditions. The ARMS was prepared using *Guidance for Developing Aquatic Conservation Strategies for BLM Resource Management Plans in the Interior Columbia Basin* (BLM, 2008).

The ARMS contains the following key components:

- Establishment of Riparian Conservation Areas (RCAs) where aquatic and riparian-dependent resources receive management emphasis;
- Provisions for multi-scale analysis and how it will be used in project-level decisions;
- Identification of population strongholds of special status fish and areas with priority for restoration of aquatic and riparian habitats;
- Aquatic and riparian management direction including goals, objectives, and management; and
- Monitoring and adaptive management direction for determining if the plan is being implemented and is achieving desired results.

Riparian Conservation Areas¹

RCAs are portions of watersheds where riparian-dependent resources receive management emphasis and that are likely to affect aquatic habitat condition or function. RCAs include riparian corridors, wetlands, intermittent headwater streams, and other areas where proper ecological function is crucial for maintaining water, sediment, woody debris, and nutrient delivery to the stream and either contain or are tributaries to streams that contain special status species or their habitat. Functionally, RCAs 1) influence the delivery of coarse sediment, organic matter, and woody debris to streams; 2) accommodate vegetation that provides root strength for channel stability; 3) provide streamside shade; and 4) protect water quality. RCAs are intended to maintain and restore riparian structure and function; benefit fish and riparian-dependent resources; enhance conservation of organisms dependent on the transition zone between upslope and instream habitats; and improve connectivity of travel and dispersal corridors for terrestrial animals and plants and aquatic organisms.

The important values considered when identifying and managing RCAs may be specific to the riparian area or stream channel. The ARMS allows for adjusting management of RCAs to reflect site-specific conditions (e.g., conditions of specific stream channels, the life stage of specific fish), while also recognizing watershed (e.g., watershed characteristics and land uses) and riparian conditions and trends. RCAs are not intended to be “no management zones;” management activities may be necessary in RCAs since treatments may be essential to achieving or maintaining desired riparian and aquatic conditions.

RCA Widths

RCA widths are to be adequate to protect the stream from non-channelized sediment inputs, to deliver organic matter and woody debris, and to provide stream shade and streambank stability. In the absence

¹ This section addresses material for Component I, Riparian Conservation Areas, in *Guidance for Developing Aquatic Conservation Strategies* (BLM, 2008).

of a watershed or site-specific analysis, the default RCA widths for the stream categories described below will be applied. These default widths were recommended in the Inland Native Fish Strategy (INFISH) (USDA, 1995) and the Interior Columbia Basin Science Assessment and literature review (Quigley & Arbelbide, 1997), which concluded that these prescribed RCA widths are sufficient to provide for riparian function.

Category 1—Fish-bearing streams:

Category 1 RCAs contain the stream and the area from the edges of the active channel, on either edge of the stream, to the top of the inner gorge, the outer edges of the 100-year floodplain, the outer edges of the riparian vegetation, or **300 feet** slope distance (600 feet, including both sides of the stream channel), whichever is greatest.

Category 2—Permanently flowing non-fish-bearing streams:

Category 2 RCAs contain the stream and the area from the edges of the active channel, on either edge of the stream, to the top of the inner gorge, the outer edges of the 100-year floodplain, the outer edges of the riparian vegetation, or **150 feet** slope distance (300 feet, including both sides of the stream channel), whichever is greatest.

Category 3—Ponds, lakes, reservoirs, and wetlands greater than 1 acre:

Category 3 RCAs contain the body of water or wetland and the area from the edges of the body of water or wetland to the outer edges of the riparian vegetation, the extent of the seasonally saturated soil, or **150 feet** slope distance from the edge of the maximum pool elevation of constructed ponds and reservoirs or from the edge of the wetland, pond, or lake, whichever is greatest.

Category 4—Seasonally flowing or intermittent streams and wetlands less than 1 acre, landslides, and landslide-prone areas:

This category includes features with high variability in size and site-specific characteristics. Category 4 RCAs for intermittent streams contain the intermittent stream channel and the area from the edges of the channel to the top of the inner gorge, the outer edges of the riparian vegetation, or **50 feet** slope distance, whichever is greatest. Category 4 RCAs for wetlands less than 1 acre contain the wetland and the area from the edges of the wetland to the outer edges of the riparian vegetation or **50 feet** slope distance, whichever is greatest. Category 4 RCAs for landslides or landslide-prone areas contain the landslide or landslide-prone area and the area within **50 feet** slope distance.

Modification of RCA Widths

Modification of RCA widths requires a watershed- or reach-specific analysis to provide the ecological basis for the change (see the *Watershed Analysis* section below). The RCAs may be modified in the absence of watershed analysis where stream reach or site-specific data support the change. Watershed or reach-specific analysis is not a decision process; it provides information for ecologically appropriate criteria that would support RCA width modification. The criteria for modifying RCA widths will be identified using scientific information in combination with local knowledge and information on riparian and aquatic processes and functions, resource values, and risks. Because stream channel characteristics can vary substantially between geographic areas, RCA modification needs to consider ecological and geomorphic factors of the specific reach.

Application of criteria to modify RCA widths shall occur during project-level planning or implementation of management activities that could affect attainment of riparian and aquatic objectives. Changes to RCA widths, the analysis and rationale justifying the change, as well as the effects of the change would be documented through the appropriate process. Pertinent site-specific, stream reach, and watershed values (e.g., specific riparian or aquatic characteristics, slope, soils, etc.) need to be addressed in the rationale for modifying RCAs and land uses occurring in these areas.

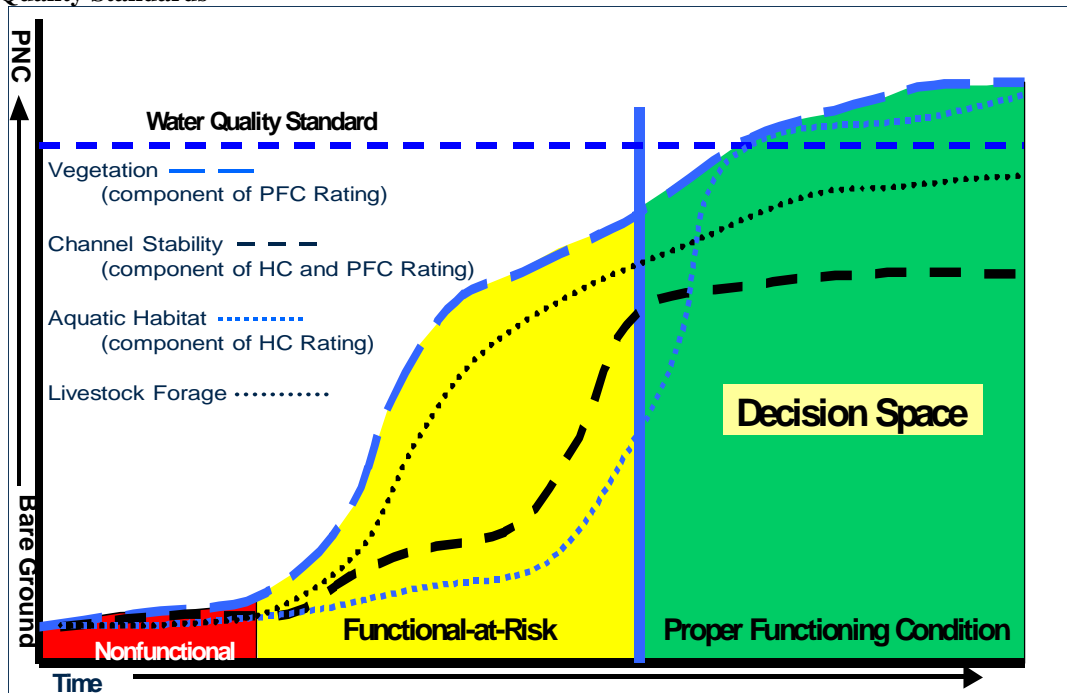
Priorities for Conservation and Restoration of Special Status Species Habitat and Riparian Areas²

Introduction

Relationship between Measures of Instream and Riparian Habitat Condition

Conditions within and near streams can be described from various perspectives. Assessments can focus on the condition of riparian areas, instream habitat for specific species, as well as water quality, and can be based on qualitative or quantitative data. Within the Jarbidge Field Office, data are available to describe riparian conditions in terms of Proper Functioning Condition (PFC), special status fish habitat conditions in terms of Habitat Condition (HC), and water quality in terms of a streams 303(d) listing status. These measures are all interrelated; some measures are even based on similar types of data. The relationships between these condition measures are displayed in Figure D- 1.

Figure D- 1. The Relationship between Riparian Functional Condition, Aquatic Habitat Condition, and State Water Quality Standards



As vegetation improves from non-functional (NF) to functional at risk (FAR), there is little improvement in the other resource values. There is an increased recovery rate of all the resource values within the FAR range. The channel begins to stabilize, and there is some increase in forage and habitat values. At PFC, the stream channel stabilizes at a point when the vegetation, water, and landform are in a relative balance. After a stream reach has reached PFC, vegetation continues toward the potential natural community (PNC), livestock forage increases, and aquatic habitat improves. Improvement in water quality to levels that would result in the delisting of 303(d)-listed streams would not occur until riparian condition improved beyond the initial rating of PFC. When the riparian area is functioning properly, there is an opportunity to make decisions as to the use or uses that will be emphasized.

² This section addresses material for Component II, Protection of Population Strongholds, and Component IV, Restoration Priorities and Guidance, in *Guidance for Developing Aquatic Conservation Strategies* (BLM, 2008).

Indicators of Instream and Riparian Habitat Condition

Indicators of instream and riparian habitat conditions form the basis for instream HC ratings and riparian PFC ratings. HC ratings were used to identify population strongholds for special status fish and determine priorities for special status fish habitat restoration (see *Special Status Fish Habitat* section), while PFC ratings were used to assess priority for riparian restoration (see *Riparian Habitat* section).

The indicators used to develop these ratings include an integrated suite of aquatic (including a biological component), riparian (including riparian-associated terrestrial species), and hydrologic (including uplands) condition measures that are primarily intended to be used at the watershed and subwatershed scale and include both quantitative and qualitative measures. These watersheds and subwatersheds are typically 5th to 6th field Hydrologic Unit Codes; both will be referred to as “watersheds” in the ARMS. These indicators are intended to serve three main purposes:

- To establish priorities and objectives for conservation or restoration of stream reaches;
- To help land managers design projects and determine the appropriateness of management activities with respect to aquatic, riparian, and hydrologic goals and objectives; and
- To serve as measures of the effectiveness of management in attaining broad-scale aquatic, riparian, and hydrologic goals and objectives.

The values for an indicator to be rated as functioning appropriately or properly are not absolute criteria and are rated in comparison to the functional, ecological, or biological conditions of specific stream reaches. The indicators should be used as a suite of integrated indicators and should not be used individually as fixed targets to manage toward or as specific thresholds from which to make project implementation decisions. The indicators should be used to help design appropriate management actions or alter or mitigate proposed activities in order to move watersheds toward desired conditions. If certain indicators highlight a concern in a watershed, an analysis should disclose how proposed management actions could be designed to take into account the concerns or when an action is needed to achieve aquatic, riparian, or hydrologic goals and objectives.

HC ratings, PFC ratings, and the values for the indicators on which these ratings are based can be updated based on monitoring, inventory, scientific literature, or watershed analysis by local experts (e.g., Fisheries Biologist, Ecologist, Botanist, Hydrologist). Updates may be necessary to more accurately depict the characteristics and range of natural variability of aquatic and riparian habitats in the planning area or to reflect changes in condition on the ground. Instream and riparian indicators and thresholds may be refined at the watershed scale to illustrate the variability of conditions among watersheds within a landscape context.

The current status of instream and riparian habitat condition indicators is based on BLM stream survey data collected between 1999 and 2007; the majority of these data was collected between 2002 and 2006. BLM-managed lands in the planning area are continuous across watershed and subwatershed boundaries except in a few areas of private and State inholdings and military withdrawals. This land ownership pattern allows for inventory and monitoring efforts to be conducted across broad areas where public land comprises the majority of the land base. Additional details on the methods used to collect and analyze the baseline data can be found in the *Analysis of the Management Situation of the BLM Twin Falls District, Jarbidge Field Office* (BLM, 2007). How these indicators were used to develop priorities for special status fish habitat restoration and riparian restoration are described below.

Special Status Fish Habitat

Identifying Conservation and Restoration Reaches provides a means for prioritizing management direction and for establishing goals, objectives, and management for stream reaches containing special status fish habitat. It also provides a process that considers the most effective and cost-efficient opportunities for conservation and restoration, with consideration for the availability of staff and budgetary resources. Some stream reaches will not be restored to physical or biological potential within the life of the plan because of effects of past land management actions or activities outside the authority of the BLM. These stream reaches would have reduced priority for treatment.

Conservation Reaches

Conservation Reaches are managed to maintain the condition of habitats in these reaches. Conservation Reaches are often associated with aquatic species strongholds and contain populations or subpopulations of high genetic integrity, connectivity, or potential for expansion into nearby stream reaches. Conservation Reaches are located in watersheds that often have outstanding watershed processes or functions that are relatively undisturbed and natural in setting. Hydrologic function, such as sediment routing and flow regimes, are within the natural range of frequency, duration, and intensity. Water quality generally meets the designated or existing beneficial uses. Land uses and human activities do not influence aquatic and hydrologic function, as indicated by low road density and few stream crossings. Examples of areas containing Conservation Reaches include wilderness, roadless areas, and undeveloped subwatersheds; however, Conservation Reaches or portions thereof may be subject to management that allows limited land uses while maintaining natural processes. The goal is to maintain the existing condition of the habitats within these reaches.

In Conservation Reaches, management strategies allow natural disturbance because vegetation composition and structure that trend outside the historic range of variability due to fire suppression may pose a risk to ecological processes. Management strategies in Conservation Reaches also rely on active management to conserve physical and biological processes and patterns. For example, active management to conserve hydrologic and biological processes maintains roads and trails in a condition that minimizes erosion and sedimentation to nearby streams and water bodies. Passive management strategies can also be effective for meeting habitat objectives. As a general rule, minimal investment in these watersheds over time is necessary to maintain function and critical elements on instream and upland habitat in these conservation-designated watersheds.

The criteria for identifying Conservation Reaches, which have important value for protecting populations of special status aquatic species and narrow-range endemics, are described in the *Habitat Dependency Network (Decision Support Model)* and *Habitat Condition Ratings* below. There are currently several stream reaches in the planning area meeting the criteria for designation as Conservation Reaches for special status species. The intent of this designation and management direction for these watersheds is to provide high-quality habitat for species and support the expansion and recolonization of species into adjacent watersheds. These areas should conserve key processes likely to influence the persistence of populations or metapopulations of special status aquatic species.

Restoration Reaches

Restoration Reaches are identified where biological and physical processes and functions do not reflect natural conditions because of past and on-going land disturbances. Common effects of disturbances to Restoration Reaches may include long-term (e.g., decades) increases of sediment input to streams, loss of large woody debris recruitment potential, altered hydrologic (e.g., streamflow) patterns, and elevated water temperatures. Cumulative impacts and natural disturbances such as large fires, landslides, and floods exacerbate altered watershed and biological conditions. The goal for these stream reaches is to restore habitat condition to an identified desired condition.

Active management may be necessary to restore the physical and biological function of systems to their natural range of frequency, duration, and intensity. Identifying and assessing the adverse impacts of management on habitat will allow managers to focus restoration efforts in the most cost-effective manner necessary to achieve hydrologic and biological recovery. This implies that there is a range of treatment intensity and desired landscape responses necessary to achieve land management objectives. Within some Restoration Reaches, opportunities for active restoration management may be limited. In those cases, management that reduces or avoids adverse effects and does not delay achieving desired conditions in the long term also supports the restoration goal. Individual discretion to balance short-term risks to aquatic and other resources with long-term benefits for multiple resources will move these reaches toward the natural range of variability.

The criteria used to identify Restoration Reaches and priorities for restoration of those reaches are described in the *Habitat Dependency Network (Decision Support Model)* and *Habitat Condition Ratings*

section below. Priority ranking (high, moderate, and low) for each Restoration Reach was based on habitat condition indicators, Endangered Species Act (ESA) status, restoration feasibility, the extent of habitat, and relative fish abundance. Characteristics of Restoration Reaches within the three priority types are described below.

High Priority

- High Priority Restoration Reaches have potential for highly productive or unique fish communities with restoration efforts. Loss of connected populations or competition or genetic introgression (hybridizing) with non-native species has caused the loss of diversity of some unique populations, such as key salmonid species. The assumption is that the aquatic community is largely intact but is not resilient to landscape disturbance events, nor does it provide a source of individuals to nearby recovering populations.
- Water quality may not support all designated and existing beneficial uses or municipal water supplies.

Moderate Priority

- Moderate Priority Restoration Reaches have potential for moderately productive fish habitat with restoration efforts. Long-term loss of connected populations or competition or genetic introgression with non-native species has caused the loss of diversity of some unique populations, such as key salmonid species. The assumption is that the aquatic community is largely intact but is not resilient to landscape disturbance events, nor does it provide a source of individuals to nearby recovering populations.
- Water quality may not support all designated and existing beneficial uses or municipal water supplies.

Low Priority

- Low Priority Restoration Reaches have a minor amount of fish habitat. Long-term loss of connected populations or competition or genetic introgression with non-native species has caused the loss of diversity of key salmonid species. The assumption is that the aquatic community is not intact, is not highly resilient to natural events, and does not provide a source of individuals to nearby recovering populations.
- Water quality may not support all designated and existing beneficial uses, and municipal water is not considered as a future use.

Habitat Dependency Network (Decision Support Model) and Habitat Condition Ratings

Habitat dependency networks are used in decision support models to prioritize stream reaches containing special status species habitat based on instream and riparian habitat indicators, which reflect overall watershed condition. NetWeaver³ was used as the decision support model for identifying Conservation and Restoration Reaches in the planning area. Thresholds for habitat functionality for each riparian and stream indicator were developed based on scientific literature, information gathered in the 2006 Jarbidge fish survey, and other habitat data for bull trout. The habitat matrices for bull trout and redband trout (Table D- 1 and Table D- 2) document the indicators and thresholds used in the NetWeaver analysis; these matrices are based on the *Matrix of Pathways and Indicators of Watershed and Watershed and Aquatic Conditions* developed by the National Marine Fisheries Service (NMFS) (FWS, 1998). Indicator thresholds were validated using habitat and fish abundance data for stream reaches within the planning area.

³ NetWeaver was developed by The Heron Group LLC.

Table D- 1. Bull Trout Habitat Condition Indicators and Thresholds

Indicator Category	Indicator	Thresholds		
		Functioning Properly	Functioning at Risk	Functioning at an Unacceptable Risk
Indicators for Species Characteristics				
Subpopulation Characteristics within Subpopulation Watersheds	Subpopulation Size	Mean total subpopulation size or local habitat capacity more than several thousand individuals. All life stages evenly represented in the subpopulation. ^A	<500 but >50 adults in subpopulation. ^A	<50 adults in subpopulation. ^A
	Growth and Survival	Subpopulation has the resilience to recover from short-term disturbances (e.g., catastrophic events) or subpopulation declines within one to two generations (5 to 10 years). ^A The subpopulation is characterized as increasing or stable. At least 10 years of data support this estimate. ^B	When disturbed, the subpopulation will not recover to predisturbance conditions within one generation (5 years). Survival or growth rates have been reduced from those in the best habitats. The subpopulation is reduced in size, but the reduction does not represent a long-term trend. ^A At least 10 years of data support this characterization. ^B If less data are available and a trend cannot be confirmed, a subpopulation will be considered “at risk” until enough data are available to accurately determine trend.	The subpopulation is characterized as in rapid decline or is maintaining at alarmingly low numbers. Under current management, the subpopulation condition will not improve within two generations (5 to 10 years). ^A This is supported by a minimum of 5 years of data.
	Life History Diversity and Isolation	The migratory form is present, and the subpopulation exists in close proximity to other spawning and rearing groups. Migratory corridors and rearing habitat (lakes or large rivers) are in good to excellent condition for the species. Neighboring subpopulations are large with high likelihood of producing surplus individuals or straying adults that will mix with other subpopulations. ^A	The migratory form is present but the subpopulation is not close to other subpopulations or habitat disruption has produced a strong correlation among subpopulations that do exist in proximity to each other. ^A	The migratory form is absent and the subpopulation is isolated to the local stream or small watershed not likely to support more than 2,000 fish. ^A

Indicator Category	Indicator	Thresholds		
		Functioning Properly	Functioning at Risk	Functioning at an Unacceptable Risk
	Persistence and Genetic Integrity	Connectivity is high among multiple (5 or more) subpopulations with at least several thousand fish each. Each of the relevant subpopulations has low risk of extinction. ^A The probability of hybridization or displacement by competitive species is low to nonexistent.	Connectivity among multiple subpopulations does occur, but habitats are more fragmented. Only one or two of the subpopulations represent most of the fish production. ^A The probability of hybridization or displacement by competitive species is imminent, although few documented cases have occurred.	Little or no connectivity remains for reestablishing subpopulations in low numbers, in decline, or nearing extirpation. Only a single subpopulation or several local populations that are very small or that otherwise are at high risk remain. ^A Competitive species readily displace bull trout. The probability of hybridization is high and documented cases have occurred.
Indicators for Habitat Characteristics				
Water Quality	Temperature	Mean maximum weekly temperature in a reach during the following life history stages: ^{A,C}		
		Incubation		
		2-5°C	<2°C or =6°C	<1°C or >6°C
		Rearing		
		4-12°C	<4°C or 13-15°C	>15°C
	Spawning			
	4-9°C	<4°C or =10°C	<4°C or >10°C	
		Also, temperatures in areas used by adults during migration do not exceed 15°C (no thermal barriers).	Also, temperatures in areas used by adults during migration sometimes exceed 15°C.	Also, temperatures in areas used by adults during migration regularly exceed 15°C (thermal barriers present).
	Sediment ^D	Similar to chinook salmon ^A (e.g., <12% fines (<0.85 mm) in gravel ^E); <12% surface fines ^F (≤6 mm ^{G,H})	Similar to chinook salmon ^A (e.g., 12-17% fines (<0.85 mm) in gravel ^E); 12-20% surface fines ^F (≤6 mm ^{G,H})	Similar to chinook salmon ^A (e.g., >17% fines (<0.85 mm) in gravel ^E); >20% fines at surface or depth in spawning habitat ^F (≤6 mm ^{G,H})
	Chemical Contamination /Nutrients	Low levels of chemical contamination from agricultural, industrial, and other sources; no excess nutrients; and no 303(d)-listed reaches. ^I	Moderate levels of chemical contamination from agricultural, industrial, and other sources; some excess nutrients; and one 303(d)-listed reach. ^I	High levels of chemical contamination from agricultural, industrial, and other sources; high levels of excess nutrients; and more than one 303(d)-listed reach. ^I

Indicator Category	Indicator	Thresholds																						
		Functioning Properly	Functioning at Risk	Functioning at an Unacceptable Risk																				
Habitat Access	Physical Barriers ^J	Man-made barriers present in watershed allow upstream and downstream fish passage at all flows.	Man-made barriers present in watershed do not allow upstream and/or downstream fish passage at base/low flows.	Man-made barriers present in watershed do not allow upstream and/or downstream fish passage at a range of flows.																				
Habitat Elements	Substrate Embeddedness ^K	Reach embeddedness <20%. ^{F,L}	Reach embeddedness 20-30%. ^{F,L}	Reach embeddedness >30%. ^{F,L}																				
	Large Woody Debris	Current values are being maintained at >80 pieces/mile that are >24 inches diameter and >5 ft long on the Coast, ^F or >20 pieces/mile that are >12 inches diameter >35 ft long on the Eastside; ^M also, adequate sources of woody debris are available for both long- and short-term recruitment.	Current levels are being maintained at minimum levels desired for “functioning appropriately”, but potential sources for long-term woody debris recruitment are lacking to maintain these minimum values.	Current levels are not at those desired values for “functioning appropriately”, and potential sources of woody debris for short- and/or long-term recruitment are lacking.																				
	Pool Frequency and Quality	Pool frequency in a reach closely approximated: ^G <table border="1"> <thead> <tr> <th>Wetted width (ft)</th> <th># pools/mile</th> </tr> </thead> <tbody> <tr><td>0-5</td><td>39</td></tr> <tr><td>5-10</td><td>60</td></tr> <tr><td>10-15</td><td>48</td></tr> <tr><td>15-20</td><td>39</td></tr> <tr><td>20-30</td><td>23</td></tr> <tr><td>30-35</td><td>18</td></tr> <tr><td>35-40</td><td>10</td></tr> <tr><td>40-65</td><td>9</td></tr> <tr><td>65-100</td><td>4</td></tr> </tbody> </table> <p>Pools have good cover and cool water^E; only minor reduction of pool volume by fine sediment.</p>	Wetted width (ft)	# pools/mile	0-5	39	5-10	60	10-15	48	15-20	39	20-30	23	30-35	18	35-40	10	40-65	9	65-100	4	Pool frequency is similar to values in “functioning appropriately,” but pools have inadequate cover/temperature, ^E and/or there has been a moderate reduction of pool volume by fine sediment.	Pool frequency is considerably lower than values desired for “functioning appropriately;” also, cover/temperature is inadequate, ^E and there has been a major reduction of pool volume by fine sediment.
	Wetted width (ft)	# pools/mile																						
	0-5	39																						
5-10	60																							
10-15	48																							
15-20	39																							
20-30	23																							
30-35	18																							
35-40	10																							
40-65	9																							
65-100	4																							
Large Pools ^N	Each reach has many large pools >1 meter deep. ^E	Each reach has few large pools >1 meter deep. ^E	Reaches have no large pools >1 meter deep. ^E																					
Off-Channel Habitat	Watershed has many ponds, oxbows, backwaters, and other off-channel areas with cover, and side-channels are low-energy areas. ^E	Watershed has some ponds, oxbows, backwaters, and other off-channel areas with cover, but side-channels are generally high-energy areas. ^E	Watershed has few or no ponds, oxbows, backwaters, or other off-channel areas. ^E																					

Indicator Category	Indicator	Thresholds		
		Functioning Properly	Functioning at Risk	Functioning at an Unacceptable Risk
	Refugia	Habitats capable of supporting strong and significant populations are protected and are well distributed and connected for all life stages and forms of the species. ^{O,P}	Habitats capable of supporting strong and significant populations are insufficient in size, number and connectivity to maintain all life stages and forms of the species. ^{O,P}	Habitat refugia do not exist. ^O
Channel Condition and Dynamics	Average Wetted Width/ Maximum Depth Ratio in Scour Pools in a Reach	$\leq 10^{F,G}$	11-20 ^G	$>20^G$
	Streambank Condition	$>80\%$ of any stream reach has $\geq 90\%$ stability. ^G	50-80% of any stream reach has $\geq 90\%$ stability. ^G	$<50\%$ of any stream reach has $\geq 90\%$ stability. ^G
	Floodplain Connectivity	Off-channel areas are frequently hydrogically linked to main channel; overbank flows occur and maintain wetland functions and riparian vegetation/succession.	Reduced linkage of wetland, floodplains, and riparian areas to main channel; overbank flows are reduced relative to historic frequency, as evidenced by moderate degradation of wetland function and riparian vegetation/succession.	Severe reduction in hydrologic connectivity between off-channel, wetland, floodplain, and riparian areas; wetland extent drastically reduced and riparian vegetation/succession altered significantly.
Flow/ Hydrology	Change in Peak/Base Flows	Watershed hydrograph indicates peak flow, base flow, and flow timing characteristics comparable to an undisturbed watershed of similar size, geology, and geography.	Some evidence of altered peak flow, base flow, and/or flow timing relative to an undisturbed watershed of similar size, geology, and geography.	Pronounced changes in peak flow, base flow, and/or flow timing relative to an undisturbed watershed of similar size, geology, and geography.
	Increase in Drainage Network	Zero or minimum increases in active channel length correlated with human caused disturbance.	Low to moderate increase in active channel length correlated with human caused disturbance.	Greater than moderate increase in active channel length correlated with human caused disturbance.
Watershed Condition	Road Density and Location	$<1 \text{ mi/mi}^2$; ^P no valley bottom roads.	1-2.4 mi/mi^2 ; ^P some valley bottom roads.	$>2.4 \text{ mi/mi}^2$; ^P many valley bottom roads.

Indicator Category	Indicator	Thresholds		
		Functioning Properly	Functioning at Risk	Functioning at an Unacceptable Risk
	Disturbance History	<15% Equivalent Clearcut Area of entire watershed with no concentration of disturbance in unstable or potentially unstable areas, refugia, and/or riparian areas; for Northwest Forest Plan area, there is an additional criteria of 15% Late Successional Old Growth in watersheds. ^Q	<15% Equivalent Clearcut Area of entire watershed but disturbance concentrated in unstable or potentially unstable areas, refugia, and/or riparian areas; for Northwest Forest Plan area, there is an additional criteria of 15% Late Successional Old Growth in watersheds. ^Q	>15% Equivalent Clearcut Area of entire watershed and disturbance concentrated in unstable or potentially unstable areas, refugia, and/or riparian areas; does not meet Northwest Forest Plan standard for Late Successional Old Growth.
	RCAs	RCAs provide adequate shade, large woody debris recruitment, and habitat protection and connectivity in subwatersheds; buffer or include known refugia for Sensitive aquatic species (>80% intact); and adequately buffer impacts on rangelands. Percent similarity of riparian vegetation to the potential natural community/composition is >50%. ^R	RCAs have moderate loss of connectivity or function (shade, LWD recruitment, etc.); provide incomplete protection of habitats and refugia for Sensitive aquatic species (70-80% intact); and adequately buffer impacts on rangeland. Percent similarity of riparian vegetation to the potential natural community/composition is 25-50% or better. ^R	RCAs are fragmented or poorly connected; provide inadequate protection of habitats for Sensitive aquatic species (<70% intact, refugia do not occur); and adequately buffer impacts on rangelands. Percent similarity of riparian vegetation to the potential natural community/composition is <25%. ^R
	Disturbance Regime	Environmental disturbance is short lived; predictable hydrograph, high-quality habitat and watershed complexity providing refuge and rearing space for all life stages or multiple life-history forms. ^A Natural processes are stable.	Scour events, debris torrents, or catastrophic fire are localized events that occur in several minor parts of the watershed. Resiliency of habitat to recover from environmental disturbances is moderate.	Frequent flood or drought, producing highly variable and unpredictable flows, scour events, debris torrents, or high probability of catastrophic fire exists throughout a major part of the watershed. The channel is simplified, providing little hydraulic complexity in the form of pools or side channels. ^A Natural processes are unstable.

Indicator Category	Indicator	Thresholds		
		Functioning Properly	Functioning at Risk	Functioning at an Unacceptable Risk
Summary of Species and Habitat Conditions	N/A	Habitat quality and connectivity among subpopulations is high. The migratory form is present. Disturbance has not altered channel equilibrium. Fine sediments and other habitat characteristics influencing survival or growth are consistent with pristine habitat. The subpopulation has the resilience to recover from short-term disturbance within one to two generations (5 to 10 years). The subpopulation is fluctuating around an equilibrium or is growing. ^A	Fine sediments, stream temperatures, or the availability of suitable habitats have been altered and will not recover to predisturbance conditions within one generation (5 years). Survival or growth rates have been reduced from those in the best habitats. The subpopulation is reduced in size, but the reduction does not represent a long-term trend. The subpopulation is stable or fluctuating in a downward trend. Connectivity among subpopulations occurs, but habitats are more fragmented. ^A	Cumulative disruption of habitat has resulted in a clear declining trend in the subpopulation size. Under current management, habitat conditions will not improve within two generations (5 to 10 years). Little or no connectivity remains among subpopulations. The subpopulation survival and recruitment responds sharply to normal environmental events. ^A
<p>^A (Rieman & McIntyre, 1993) ^B (Rieman & Myers, 1997) ^C (Buchanan & Gregory, 1997) ^D Applies to areas of spawning and incubation. Rearing areas are addressed under <i>Substrate Embeddedness</i> indicator. ^E (WTFWCMERC, 1993) ^F (USDA, 1995) ^G (Overton, McIntyre, Armstrong, Whitwell, & Duncan, 1995) ^H (Overton, Wollrab, Roberts, & Radko, 1997) ^I (Regional Interagency Executive Committee & Intergovernmental Advisory Committee, 1995) ^J Subsurface flows impeding fish passage are addressed under the <i>Flow/Hydrology</i> indicator category. ^K Spawning and incubation areas are addressed under the <i>Sediment</i> indicator. ^L (Shepard, Pratt, & Graham, 1984) ^M (Quigley & Arbelbide, 1997) ^N Applies to adult holding, juvenile rearing, and overwintering reaches where streams are >3m in wetted width at base flow. ^O (Frissell, Liss, & Bales, 1993) ^P (Lee, Sedell, Rieman, Thurow, & Williams, 1997) ^Q (USDI and USDA, 1994) ^R (Winward, 1989)</p>				

Table D- 2. Redband Trout Habitat Condition Indicators and Thresholds

Indicator Category	Indicator	Thresholds																														
		Functioning Properly	Functioning at Risk	Functioning at an Unacceptable Risk																												
Habitat Elements	Pools/Pool Frequency	<p>Pool frequency falls within described natural conditions: All streams: Geology-Volcanic</p> <table border="1"> <thead> <tr> <th>Average width (ft)</th> <th># pools/mile</th> </tr> </thead> <tbody> <tr> <td colspan="2">Channel Type A</td> </tr> <tr> <td>0-15</td> <td>33</td> </tr> <tr> <td>15-20</td> <td>3</td> </tr> <tr> <td colspan="2">Channel Type B</td> </tr> <tr> <td>0-10</td> <td>28</td> </tr> <tr> <td>10-15</td> <td>59</td> </tr> <tr> <td>15-20</td> <td>24</td> </tr> <tr> <td>20-25</td> <td>21</td> </tr> <tr> <td colspan="2">Channel Type C</td> </tr> <tr> <td>0-10</td> <td>6</td> </tr> <tr> <td>10-15</td> <td>19</td> </tr> <tr> <td>15-20</td> <td>24</td> </tr> <tr> <td>20-25</td> <td>22</td> </tr> </tbody> </table>	Average width (ft)	# pools/mile	Channel Type A		0-15	33	15-20	3	Channel Type B		0-10	28	10-15	59	15-20	24	20-25	21	Channel Type C		0-10	6	10-15	19	15-20	24	20-25	22	75-99% of natural condition for given stream width, geology, and channel type	<75% of natural condition for given stream width, geology, and channel type
	Average width (ft)	# pools/mile																														
	Channel Type A																															
	0-15	33																														
15-20	3																															
Channel Type B																																
0-10	28																															
10-15	59																															
15-20	24																															
20-25	21																															
Channel Type C																																
0-10	6																															
10-15	19																															
15-20	24																															
20-25	22																															
	Large Pools	<p>>75% of pools have a minimum max. depth of the stream’s natural conditions based on geomorphology and stream width: Geology-Volcanic</p> <table border="1"> <thead> <tr> <th>Average width (ft)</th> <th>Max depth (ft)</th> </tr> </thead> <tbody> <tr> <td>0-10</td> <td>1.0</td> </tr> <tr> <td>>10</td> <td>1.3</td> </tr> </tbody> </table>	Average width (ft)	Max depth (ft)	0-10	1.0	>10	1.3	50-75% of pools have a minimum max depth of the stream’s natural conditions based on geomorphology and stream width.	<50% of pools have a minimum max depth of the stream’s natural conditions based on geomorphology and stream width.																						
Average width (ft)	Max depth (ft)																															
0-10	1.0																															
>10	1.3																															
	Streambank Stability	>80% of the stream bank is stable	50-80% of stream bank is stable	<50% of stream bank stable																												
Water Quality	Temperature	Mean maximum weekly temperature is always <68°F during summer months	Mean maximum weekly temperature within 68-75°F during summer months	Mean maximum weekly temperature >75°F during summer months																												
Life History Diversity and Isolation	Connectivity/Barriers	Subpopulation is connected (barrier-free) to other sub-populations in the watershed throughout the entire year.	Subpopulation has seasonal barriers due to low water levels or drying of the stream bed.	Subpopulation is completely isolated throughout the entire year.																												
Watershed Condition	Functional Condition	Riparian/wetland areas are functioning properly. Adequate vegetation and land form is present to dissipate energy associated with high water.	Riparian/wetland area is in functional condition but an existing soil, water, or vegetation attribute makes the area susceptible to degradation.	Riparian/wetland areas are non-functional and are not providing adequate vegetation and land form to dissipate stream energy associated with high stream flows.																												

For each stream reach, values for each indicator were compared to the thresholds for that indicator and given a score that ranged between +1.0 and -1.0, where +1.0 reflects conditions functioning properly for fish and -1.0 reflects conditions functioning at an unacceptable risk for fish. Scores between -1.0 and +1.0 reflect conditions at intermediate levels of functionality for fish.

Where indicators described different components of the same stream characteristic (e.g., bank cover and bank stability both describe streambanks), the NetWeaver model calculated the mean of the scores for those indicators to yield an overall score for that stream characteristic. Finally, the NetWeaver model calculated the mean of the stream characteristic scores to yield an overall NetWeaver ranking for each stream reach. The stream characteristic scores were weighted equally in calculating the mean as scientific literature and field data suggest the characteristics used in the model are all important in determining habitat functionality for special status fish.

The results of the analysis allow the identification of stream reaches not meeting desired conditions and needing restoration (Restoration Reaches) and those mostly meeting desired conditions and needing protection (Conservation Reaches). Although indicator data are aggregated for the overall NetWeaver ranking, the model output also shows the relative condition of each individual indicator.

HC ratings for special status fish were based on the NetWeaver analysis combined with an evaluation of restoration feasibility, the extent of the habitat, and relative fish abundance. Stream reaches were classified as either Conservation Reaches or Restoration Reaches; restoration priorities for Restoration Reaches, as well as any indicators in a degraded condition (i.e., NetWeaver score <0.0), were identified as well. The process for determining the HC rating for a stream reach is outlined below:

- **Step 1:** Assign an initial HC rating based on NetWeaver rankings
 - *Conservation Reaches:* +0.5 to +1.0
 - *Restoration Reaches:* -1.0 to +0.5
 - o *High Priority Restoration Reaches:* 0.0 to +0.5
 - o *Moderate Priority Restoration Reaches:* -0.5 to 0.0
 - o *Low Priority Restoration Reaches:* -1.0 to -0.5
- **Step 2:** For Restoration Reaches, increase or decrease restoration priority according to the following guidelines:
 - *Restoration feasibility:* Increase restoration priority where BLM can address the limiting indicator (e.g., replacing a culvert, modifying livestock grazing season of use) or decrease restoration priority where BLM cannot address the limiting indicator (e.g., removing diversions).
 - *Extent of habitat:* Increase restoration priority if stream reach is longer than 0.6 miles and is primarily comprised of public lands.
 - *Relative fish abundance:* Increase restoration priority if the reach has high abundance of bull trout or redband trout.

Conservation and Restoration Reaches for All Action Alternatives

As described above, HC ratings were used to describe priorities for restoration of special status fish habitat. Table D- 3 displays the conservation and restoration priorities for streams occupied by special status fish; for Restoration Reaches, the indicators in a degraded condition (i.e., NetWeaver score <0.0) are identified. These indicators can help focus restoration efforts toward those factors most in need of improvement with respect to habitat for special status fish.

Table D- 3. HC Ratings and Indicators in a Degraded Condition for Stream Reaches Containing Special Status Fish

Stream	Reach	Miles	Indicators in a Degraded Condition ^A
Streams Containing Bull Trout and Redband Trout			
Conservation Reaches			
Jack Creek	Reach 1	1.0	None
Jarbidge River, East Fork	Reach 3	1.5	None
	Reach 4	0.6	None
Jarbidge River, West Fork	Reach 1	0.7	None
	Reach 2	2.4	None
	Reach 3	3.6	None
Total		9.8	
Restoration Reaches – High Priority			
Buck Creek	Reach 1	2.5	None
Dave Creek	Reach 2	2.6	Habitat connectivity
Deer Creek (NV)	Reach 1	0.6	Spawning substrate
Jarbidge River, East Fork	Reach 1	1.9	None
Total		7.6	
Restoration Reaches – Moderate Priority			
Dave Creek	Reach 1	1.7	Spawning substrate
Total		1.7	
Restoration Reaches – Low Priority			
Jarbidge River	Reach 1	0.7	Juvenile rearing temps
	Reach 2	0.5	Juvenile rearing temps
	Reach 3	1.2	Juvenile rearing temps
	Reach 4	0.9	None
Jarbidge River, East Fork	Reach 2	1.2	Medium-large streams
Total		4.5	
Streams Containing Redband Trout but not Bull Trout			
Conservation Reaches			
Cedar Creek	Reach 1	0.2	None
	Reach 3	1.0	None
	Reach 4	1.2	None
	Reach 5	1.0	None
	Reach 6	2.1	None
Total		5.5	
Restoration Reaches – High Priority			
Deer Creek (ID)	Reach 3	0.6	Bank stability
	Reach 4	1.1	None
Flat Creek	Reach 2	1.1	None
House Creek, Lower	Reach 1	0.5	None
Three Creek, Lower	Reach 1	0.4	None
Total		3.7	
Restoration Reaches – Moderate Priority			
Bear Creek	Reach 1	0.3	Pool volume
	Reach 2	0.4	Pool volume
China Creek, Upper	Reach 1	0.1	Pool volume, quality
Deer Creek (ID)	Reach 1	0.7	Bank cover, stability
	Reach 2	0.2	Bank cover, stability
	Reach 5	0.8	Bank cover
Deadwood Creek	Reach 1	0.5	Pool volume
	Reach 2	0.6	Pool volume

Stream	Reach	Miles	Indicators in a Degraded Condition ^A
House Creek, Lower	Reach 2	0.5	Pool volume
	Reach 3	0.5	Pool volume
House Creek, Upper	Reach 1	0.2	Pool volume
	Reach 2	0.2	Pool volume, quality
	Reach 3	0.4	Pool volume
	Reach 4	0.3	Bank stability, substrate
Rocky Canyon Creek	Reach 1	0.8	Substrate
	Reach 2	0.3	Substrate, pool quality
	Reach 3	0.5	Pool volume
Total		7.3	
Restoration Reaches – Low Priority			
Cedar Creek	Reach 2	0.3	Bank stability
	Reach 7	1.2	Pool volume
Chimney Creek	Reach 1	0.1	Pool volume, quality
China Creek, Lower	Reach 1	0.3	Substrate
	Reach 2	0.9	Bank stability, substrate
	Reach 3	1.0	Bank stability, substrate
	Reach 4	0.4	Substrate, pool quality
Deadwood Creek, East Fork	Reach 1	0.1	Pool volume, quality
Deadwood Creek, West Fork	Reach 1	0.2	Pool volume, quality
Flat Creek	Reach 1	0.5	Substrate
	Reach 3	0.6	Pool quality
Pole Creek	Reach 1	0.7	Pool volume
	Reach 2	0.9	Bank cover, stability
Shack Creek	Reach 1	0.2	Pool volume
	Reach 2	0.6	Pool quality
Three Creek, Lower	Reach 2	0.3	Substrate
	Reach 3	0.2	Bank cover, stability
Three Creek, Middle	Reach 1	0.3	Bank stability
Three Creek, Upper	Reach 1	0.1	Bank cover, stability
Timber Canyon Creek	Reach 1	0.8	Bank stability
	Reach 2	1.1	Bank stability
Total		10.8	
^A An indicator was considered to be in a degraded state if its NetWeaver score was <0.0. These help identify focus areas for restoration activities.			

Riparian Habitat

PFC ratings were used to assess priority for riparian restoration. Riparian restoration priorities concentrate on reaches functioning-at-risk with no apparent trend (FAR-NA) or functioning-at-risk with a downward trend (FAR-DN). Once an area is rated as NF, the effort, cost, and time required for recovery is dramatically increased (Prichard, et al., 1998). Areas that are at PFC are usually not the highest priority for restoration because they are more resilient than the at-risk areas. Consequently, stream reaches rated as FAR-NA and FAR-DN were prioritized as Priority 1 for restoration, streams rated as functioning-at-risk with an upward trend (FAR-UP) and NF were prioritized as Priority 2, and streams rated as PFC were prioritized as Priority 3.

For the stream reaches with 2006 PFC and HC data, the PFC data were validated using the quantitative HC data for individual stream reaches for the RMP analysis. The PFC evaluation was used to assess riparian function at a watershed scale (general qualitative assessment), and the HC data were used to assess stream channel condition (i.e., hydrology, riparian vegetation, erosion, and deposition) at a site-specific scale (detailed quantitative assessment). The validation process used the HC data to answer

PFC questions (Prichard, et al., 1998) (PFC checklist questions 3, 8, 9, 11, 14, and 15) to ensure consistency between the HC and PFC determination of functional condition.

Management of stream reaches is prioritized based on instream and riparian habitat condition ratings, which are based on instream and riparian indicators; the relationship between special status fish habitat and riparian priorities are displayed in Table D- 4. Streams that have both HC and PFC ratings have two restoration priorities identified as well; where this occurs, the priority based on the HC rating takes precedence.

Table D- 4. Crosswalk between Priority Rankings for Special Status Fish Habitat Management and Riparian Area Management

HC Rating	PFC Rating
Conservation Reach	
High Priority Restoration Reach	Priority 1 (FAR-NA, FAR-DN)
Moderate Priority Restoration Reach	Priority 2 (FAR-UP, NF)
Low Priority Restoration Reach	Priority 3 (PFC)

The validated PFC ratings were used to prioritize riparian reaches for restoration or to be maintained in their current condition. The priorities for riparian restoration and maintenance are summarized in Table D- 5.

Table D- 5. Riparian PFC Data and Ratings and the Conservation and Restoration Priorities

Stream	Reach	Miles
Restoration Priority 1		
Antelope Springs	0.0 - 0.3	0.4
	1.4 - 2.7	1.3
Bear Creek	4.2 - 4.3	0.1
	4.3 - 4.6	0.3
	4.6 - 5.4	0.9
Bear Creek, East Fork	0.6 - 1.5	1.0
Bear Creek, Middle Fork	0.2 - 0.4	0.3
Browns Creek	1.4 - 3.1	1.7
Cedar Creek	15.2 - 15.7	0.5
	30.0 - 30.7	0.8
Cherry Creek	1.5 - 1.8	0.3
	5.1 - 5.2	0.1
	12.3 - 13.4	1.1
China Creek	1.4 - 1.8	0.6
	2.0 - 2.8	0.8
China Creek, East Fork	0.0 - 3.5	3.4
Clover Creek	0.7 - 3.4	2.7
	0.0 - 0.7	0.6
	3.4 - 7.8	4.4
	7.8 - 9.3	1.6
	11.0 - 12.3	1.3
	18.5 - 21.9	3.5
	21.9 - 22.5	0.6
	30.9 - 31.1	0.2
	33.0 - 33.6	0.6
40.2 - 41.8	1.6	
Columbet Creek	0.0 - 1.2	1.2
	1.2 - 1.4	0.2
	9.8 - 9.9	0.1
Cougar Creek	0.0 - 3.0	3.6

Stream	Reach	Miles
Deadwood Creek	1.8 - 2.7	0.9
	2.7 - 3.0	0.3
	16.8 - 17.8	1.1
Deep Creek	2.3 - 2.8	0.4
	2.8 - 3.2	0.4
Deer Creek (ID)	4.3 - 5.1	0.8
	5.7 - 6.3	0.7
	6.3 - 6.5	0.2
	6.5 - 7.7	1.2
Devil Creek	35.5 - 36.2	0.6
	34.7 - 35.5	0.8
	32.8 - 34.7	1.9
	28.7 - 32.8	0.4
	33.2 - 33.4	0.2
	33.4 - 34.0	0.6
	34.0 - 34.7	0.8
Hayes Canyon	1.0 - 2.4	1.4
	2.4 - 3.7	1.4
House Creek	0.0 - 0.3	0.3
Jarbidge River	29.4 - 30.1	0.7
	30.1 - 30.7	0.6
	31.1 - 32.1	1.0
	32.1 - 32.5	0.4
	32.5 - 33.2	0.7
	33.2 - 33.4	0.2
	33.4 - 37.5	4.1
	37.6 - 38.7	1.1
	38.7 - 39.8	1.1
Jarbidge River, East Fork	0.0 - 1.2	1.1
	1.2 - 2.2	1.2
	2.9 - 4.7	1.9
Little House Creek	4.2 - 5.6	1.5
Pole Creek	0.4 - 0.7	0.3
Ross Pasture Creek	0.0 - 2.1	2.1
Shack Creek	3.6 - 3.8	0.2
	3.8 - 4.2	0.4
Sheep Creek	0.1 - 0.3	0.2
Spring Creek	5.6 - 7.0	1.5
Three Creek	0.3 - 1.5	1.2
	4.7 - 5.8	1.1
	11.8 - 12.1	0.3
	12.1 - 12.3	0.3
Timber Canyon	2.0 - 2.3	0.4
	0.7 - 2.0	1.5
Tuana Gulch	5.9 - 6.9	1.0
Whiskey Slough	0.0 - 1.3	1.3
Yahoo Creek	3.3 - 3.4	0.1
Total		77.7
Restoration Priority 2		
Big Flat Creek	0.3 - 1.2	1.0
	12.6 - 12.8	0.2

Stream	Reach	Miles
Camas Slough	2.6 - 3.0	0.4
	3.0 - 4.8	1.6
	4.8 - 5.1	0.2
	5.1 - 5.4	0.5
Cedar Creek	16.7 - 17.3	0.6
	24.9 - 25.6	0.7
	25.6 - 26.1	0.5
	26.1 - 26.7	0.5
	28.2 - 28.4	0.2
	28.4 - 29.0	0.6
	29.0 - 30.0	0.6
Cherry Creek	9.3 - 10.1	0.9
	13.4 - 14.1	0.8
China Creek	0.0 - 0.2	0.2
	0.2 - 0.7	0.6
	0.7 - 1.4	0.7
	2.8 - 3.2	0.3
Clover Creek	12.3 - 13.5	1.0
	13.5 - 15.7	2.5
	17.4 - 18.3	1.1
	18.3 - 18.5	0.1
	23.0 - 23.8	0.9
	26.8 - 27.6	0.8
	27.6 - 29.2	1.5
	29.2 - 29.9	0.7
	29.9 - 30.2	0.3
	30.2 - 30.9	0.7
	31.1 - 32.8	1.7
	32.8 - 33.0	0.2
	35.5 - 36.4	0.9
	36.4 - 38.0	1.6
	38.0 - 40.2	2.2
	41.8 - 46.0	4.2
46.3 - 47.5	1.4	
52.0 - 52.2	0.3	
52.2 - 52.7	0.6	
52.7 - 53.5	0.7	
Columbet Creek	2.3 - 3.4	1.2
	3.4 - 3.7	0.3
	3.7 - 5.0	1.4
	9.0 - 9.3	0.3
Dave Creek, East Fork	0.4 - 1.9	1.5
Deadman Creek (NV)	0.0 - 0.8	0.8
Deadwood Creek	3.0 - 4.2	1.2
Deer Creek (ID)	3.2 - 4.3	1.0
House Creek	3.6 - 4.4	0.8
Little Spring Creek	2.5 - 2.8	0.3
	2.8 - 3.0	0.2
	3.4 - 4.0	0.7
Mud Flat Creek	2.5 - 2.8	0.3
	2.8 - 3.4	0.5
	3.4 - 3.5	0.2

Stream	Reach	Miles
Mud Flat Creek, East Fork	0.0 - 0.4	0.4
Pole Creek	0.7 - 1.3	0.7
	3.4 - 4.9	1.5
Ring Springs	0.9 - 1.5	0.9
	0.0 - 0.6	0.6
	0.6 - 0.9	0.2
Rocky Canyon	0.7 - 1.7	1.1
	1.7 - 2.0	0.6
Shack Creek, East Fork	0.0 - 0.2	0.2
Snake River	539.7 - 540.7	0.6
	563.4 - 567.7	1.7
	556.6 - 557.1	0.5
	563.4 - 567.7	0.3
	563.4 - 567.7	0.3
	563.4 - 567.7	0.9
Spring Creek	1.0 - 2.7	1.5
	2.7 - 3.8	1.2
	3.8 - 5.6	1.8
Three Creek	6.3 - 6.8	0.5
Tuana Gulch	2.5 - 3.5	1.0
	3.5 - 5.2	1.7
Total		63.4
Restoration Priority 3		
Big Flat Creek	7.7 - 8.6	0.9
	8.6 - 8.9	0.3
	12.0 - 12.6	0.7
	12.8 - 13.2	0.4
Browns Creek	3.1 - 4.2	1.1
Buck Creek	0.0 - 2.5	2.5
Cedar Creek	15.7 - 16.7	1.0
	17.3 - 18.8	2.0
	26.7 - 27.4	0.7
	27.4 - 27.9	0.6
	30.7 - 31.1	0.4
Cherry Creek	10.1 - 10.9	0.6
	10.9 - 12.3	1.3
	14.1 - 14.6	0.5
China Creek	4.5 - 4.7	0.2
	4.7 - 5.0	0.3
	5.0 - 5.2	0.4
China Creek, Middle Fork	1.8 - 2.0	0.7
Clover Creek	49.5 - 52.0	2.5
Columbet Creek	5.0 - 6.0	1.0
	8.3 - 9.0	0.7
Corral Creek	0.4 - 1.1	0.6
Crawfish Springs Creek	0.5 - 0.9	0.3
Dave Creek	0.0 - 2.2	2.3
	2.4 - 2.7	0.3
Deep Creek	0.0 - 2.3	2.4
	3.2 - 4.5	1.4
Deer Creek (NV)	0.7 - 1.6	0.8
Deer Creek (ID)	5.1 - 5.7	0.6

Stream	Reach	Miles
Dorsey Creek	14.2 - 14.7	0.4
Flat Creek	13.2 - 14.4	1.2
	15.7 - 16.6	0.9
House Creek	3.4 - 3.6	0.2
	16.8 - 17.5	0.7
	17.6 - 17.8	0.2
	17.8 - 18.1	0.3
	18.4 - 19.6	1.2
Jarbidge River	0.0 - 2.6	2.6
	2.6 - 9.6	5.0
	2.6 - 9.6	1.3
	9.6 - 13.0	3.3
	13.0 - 15.6	1.8
	15.6 - 21.7	6.2
	21.7 - 28.6	7.0
	28.6 - 29.1	0.5
	29.1 - 29.4	0.3
Jarbidge River, East Fork	4.9 - 8.7	3.7
Little House Creek	5.6 - 6.2	0.7
Meadow Springs Creek	0.6 - 1.0	0.4
Player Creek	1.9 - 3.4	1.5
	trib. 1 (0.3 miles)	0.3
	trib. 2 (0.2 miles)	0.2
Pole Creek	0.0 - 0.4	0.4
	1.3 - 1.8	0.5
	1.8 - 3.4	1.5
Snake River	551.7 - 554.5	1.5
	541.4 - 545.6	0.3
	533.6 - 535.5	1.8
	530.2 - 532.5	2.3
	558.8 - 561.6	0.3
	558.8 - 561.6	1.8
	571.1 - 577.9	0.1
	571.1 - 577.9	0.2
	571.1 - 577.9	0.4
	571.1 - 577.9	0.2
	571.1 - 577.9	0.2
571.1 - 577.9	0.4	
Taylor Canyon Creek	0.0 - 1.0	1.0
Three Creek	12.3 - 14.4	2.1
	14.4 - 15.3	1.0
Tuana Gulch	5.2 - 5.6	0.4
	5.6 - 5.9	0.3
Yahoo Creek	0.6 - 0.9	0.3
	0.9 - 1.1	0.2
	1.1 - 2.1	1.0
Total		85.6
No Restoration Priority ^A		
Bear Creek	5.6 - 5.9	0.1
	5.9 - 6.0	0.1
Cedar Creek	6.3 - 10.6	4.2
Cougar Creek	11.0 - 20.0	9.0

Stream	Reach	Miles
Cougar Creek, East Fork	0.0 - 0.4	0.4
	0.4 - 0.7	0.3
Crawfish Springs Creek	1.1 - 1.5	0.4
Dave Creek, East Fork	0.0 - 0.4	0.4
Mud Flat Creek	3.5 - 6.0	2.3
Mud Flat Creek, East Fork	0.4 - 2.2	1.9
Shack Creek	5.2 - 5.7	0.5
	4.2 - 4.9	0.7
Total		20.3

^A PFC assessments were completed on 20 miles of riparian area where their classification as riparian areas is unknown; therefore, a restoration priority could not be assigned for these reaches.

Management Direction⁴

Aquatic and Riparian Goals

The goals establish an expectation of the characteristics of healthy, functioning watersheds, riparian areas, and associated fish habitats. Because the quality of water and fish habitat is inseparably related to the integrity of upland and riparian areas within the watersheds, the goals are to strive towards or accomplish the following:

- **Achieving physical integrity of aquatic ecosystems** that may include stream channel integrity, channel processes, and the sediment regime (including timing, volume, and character of sediment input and transport) under which the riparian and aquatic ecosystems developed.
- **Providing an appropriate amount and distribution of source habitats for riparian- or wetland-dependent species** that may include a) riparian and aquatic habitats necessary to foster the unique genetic fish stocks that evolved within the specific geo-climatic region and b) habitat to support populations of well-distributed native and desired non-native plant, vertebrate, and invertebrate populations that contribute to the viability of riparian-dependent communities.
- **Restoring or maintaining water quality and hydrologic processes** that may include a) water quality sufficient to provide for stable and productive riparian and aquatic ecosystems and b) instream flows to support healthy riparian and aquatic habitats and to promote stable and effective stream channel function, including their ability to effectively route flood discharges.
- **Restoring or maintaining naturally functioning riparian vegetation communities** that may include a) natural timing and variability of groundwater in meadows and wetlands, b) diversity and productivity of native and desired non-native plant communities in riparian areas, and c) riparian vegetation of diversity and vigor adequate to:
 - Provide the amount and distribution of large woody debris characteristic of conditions under which aquatic systems developed;
 - Provide adequate summer and winter thermal regulation in the riparian and aquatic zones; and
 - Help achieve rates of surface erosion, bank erosion, and channel migration characteristic of those under which the communities developed.

Aquatic and Riparian Objectives

Management direction in the ARMS is intended to guide management toward some desired future condition comprised of goals and objectives. Objectives are based on indicators that are measurable and relate to the species of interest. Bull trout and redband trout population and habitat objectives that are appropriate for the watershed scale can be described in terms of the habitat condition indicators displayed in Table D- 1 and Table D- 2. The objective for streams containing bull trout or redband trout habitat is a rating of "Functioning Properly" for the indicators listed in the matrices, which reflect desired

⁴ This section addresses material for Component V, Management Direction – Adaptive Management, related to management direction in *Guidance for Developing Aquatic Conservation Strategies* (BLM, 2008).

aquatic, riparian, and watershed conditions that are adapted locally. It is recognized that optimum conditions may not always be achievable for every indicator in every watershed because of historic land uses, land ownership patterns (e.g., private and other non-BLM managed lands), and specific watershed characteristics. Table D- 6 describes habitat management objectives for stream reaches containing special status fish habitat relative to the NetWeaver Rankings that formed the basis for the HC ratings.

Table D- 6. Habitat Management Objectives for Stream Reaches with Special Status Fish Habitat

Stream Reach	Total Miles	%	Habitat Condition Objectives Relative to NetWeaver Rankings
Conservation Reaches	15.3	31%	Already >+0.5, maintain and not decline
High Priority Restoration Reaches	11.3	23%	Will achieve +0.5
Moderate Priority Restoration Reaches	6.9	14%	Moving toward +0.5
Low Priority Restoration Reaches	15.2	31%	Static and not declining
Total	48.6	100%	

In general, objectives for riparian areas are as follows: 1) for Priority 1 and 2 reaches, achieve or move toward achieving a rating of PFC in the life of the plan, and 2) for Priority 3 reaches, maintain existing PFC rating. The relative amount of Priority 1 and 2 stream reaches that would achieve PFC in the life of the plan varies by alternative (see the *Riparian Areas and Wetlands* section in Chapter 2).

Management Strategies

Four general types of management strategies that may be considered for achieving the aquatic and riparian objectives are described below.

Protection

This management strategy would conserve aquatic and riparian areas that are ecologically intact and fully functional. Human activities that significantly influence instream and riparian ecological functions are restricted. The management strategy strives to protect aquatic and riparian ecosystems currently in good condition so that naturally regenerative processes can continue to operate. Conservation designations that typically include wilderness and minimally developed watersheds would fall within this management strategy. High priority restoration projects do exist within portions of some Conservation Reaches. Also, some Restoration Reaches may have a stream segment or watershed area that is ecologically intact and functional, which would also warrant protection of aquatic and riparian ecosystems.

Passive Restoration

This management strategy emphasizes preventing further loss of aquatic and riparian ecosystem integrity. To the extent possible, human disturbances to altered aquatic and riparian ecosystems would be removed or minimized in order to allow natural processes to be the primary agents of recovery. This management strategy would allow the natural disturbance regime to dictate the speed of recovery in areas that have a high probability of returning to a fully functional state without human intervention. This management strategy applies to many of the low and moderate priority Restoration Reaches and Priority 2 and 3 riparian reaches. The rate of recovery may be several decades or more once human disturbances are removed or mitigated.

Active Restoration

This management strategy would focus on returning functionally impaired aquatic and riparian ecosystems to a state that would occur naturally at the site by actively managing certain aspects of habitat recovery. It uses a combination of elements of natural recovery along with management activities directed at accelerating development of self-sustaining, ecologically healthy riparian ecosystems. This management strategy applies to the high and some moderate priority Restoration Reaches and Priority 1 and 2 riparian reaches. Many watershed, riparian, and stream restoration projects fall into this category, including vegetation treatments, stream channel restoration, stream crossings removal or improvement, reducing road densities, and improving road condition. The rate of recovery may be one to two decades once human caused disturbances are removed or mitigated.

Rehabilitation

This management strategy would re-establish naturally self-sustaining riparian ecosystems to the extent possible, while acknowledging that irreversible changes, such as dams, permanent channel changes due to urbanization and streamside roads, stream channel incision, and floodplain development, permit only partial restoration of ecological functions. It would use a combination of passive and active management approaches where ecological self-sufficiency cannot occur.

Management for RCAs

Used in conjunction with adaptive management, the following management is designed to achieve aquatic and riparian management objectives (Table D- 7). This management is derived from the management direction contained in INFISH (USDA, 1995) and is consistent with existing conservation and recovery plans. This management applies to all RCAs and to project and activities in areas outside of RCAs that are identified through the National Environmental Policy Act (NEPA) analysis process as having the potential to degrade RCAs. Management to be applied to a specific project will be identified during project planning on a site- and project-specific basis.

Table D- 7. Management for Activities in or Affecting RCAs

Number	Management
Riparian Conservation Areas	
RCA-1	New activities in RCAs or activities outside RCAs that affect RCAs must be designed to enhance, restore, or maintain the physical and biological characteristics of the RCA by implementing the following: <ul style="list-style-type: none"> • Activities in or near RCAs that are intact and functioning in a desired condition, as measured by instream and riparian habitat condition indicators, must be designed to at least maintain that desired condition. • Activities in or near RCAs that are not at desired condition, as measured by instream and riparian habitat condition indicators, should include a restoration component as part of the project when such may be practical and appropriate for the scope of the project. • Activities in or near RCAs must not result in long-term degradation to aquatic conditions. Limited short-term adverse effects from activities in the RCA may be acceptable when outweighed by the long-term benefits to the RCA and aquatic resources. • New road construction, landings, timber harvest, or construction of recreation sites, range infrastructure, and other construction activities within RCAs will require a watershed analysis and/or site-specific analysis prior to implementation. The level of analysis will be commensurate with the scope, magnitude, and issues of the project and related aquatic resources and values.
RCA-2	Management activities and land uses in RCAs shall be implemented to attain proper functioning condition as an initial step to move habitat conditions of streams, riparian areas, and wetlands toward achieving aquatic and riparian management objectives.
RCA-3	New management activities within or affecting RCAs shall be conducted only if they are consistent with the management objectives of maintaining fully functional aquatic and riparian conditions and processes and improving conditions and processes that are not fully functional through either active or passive measures. Riparian management actions will avoid or minimize adverse effects on inland native fish, their habitats, and RCAs. Management actions will balance short-term risks to aquatic and other resources with long-term benefits as actions are considered to move toward a natural variability of conditions.
RCA-4	Identify and coordinate with tribes and Federal, State, and local governments to secure instream flows needed to maintain riparian resources, channel conditions, and aquatic habitat.
RCA-5	Trees may be felled in RCAs when they pose a safety risk. Keep felled trees on-site when needed to meet woody debris objectives.
RCA-6	Apply herbicides, pesticides, insecticides, and other toxicants and chemicals in a manner that does not impair water quality or prevent attainment of aquatic and riparian management objectives and avoids adverse effects on inland native fish and their habitat. When applying herbicides etc. in a RCA, a spill kit will be onsite as appropriate. Prohibit storing and mixing herbicides, pesticides,

Number	Management
	insecticides, etc. within RCAs unless there are no other practicable alternatives.
RCA-7	Prohibit storing fuels and other toxicants and refueling within RCAs unless there are no other practicable alternatives. Refueling sites and storage areas within an RCA will have an approved refueling and spill containment plan.
RCA-8	Locate water drafting sites to avoid adverse effects on inland native fish and instream flows and in a manner that does not retard or prevent attainment of aquatic and riparian management objectives.
Watershed and Habitat Restoration	
WR-1	Management activities and land uses in RCAs shall be implemented to promote achievement of aquatic and riparian management objectives.
WR-2	New management activities within or affecting RCAs shall be conducted only if they are consistent with the management objectives of maintaining fully functional aquatic and riparian conditions and processes and improving conditions and processes that are not fully functional through either active or passive measures. New watershed and habitat restoration projects will avoid or minimize adverse effects on inland native fish, their habitats, and RCAs. Management actions will balance short-term risks to aquatic and other resources with long-term benefits as actions are considered to move toward a natural variability of conditions.
WR-3	Design and implement watershed restoration projects in a manner that promotes the long-term ecological integrity of ecosystems, conserves the genetic integrity of inland native fish species, and contributes to attainment of aquatic and riparian management objectives.
WR-4	Cooperate with tribes; Federal, State, and local agencies; and private landowners to develop watershed-based coordinated resource management plans or other cooperative agreements to meet aquatic and riparian management objectives.
WR-5	Do not use planned restoration as a substitute for preventing habitat degradation. Use planned restoration only to mitigate existing problems, not to mitigate the effects of proposed activities. It is acknowledged that some proposed activities may have short-term adverse effects, but these activities shall not degrade or preclude trends to achieve aquatic and riparian management objectives in the long-term.
Fish and Wildlife Restoration	
FW-1	Management activities and land uses in RCAs shall be implemented to attain proper functioning condition as an initial step to move habitat conditions of streams, riparian areas, and wetlands toward achieving aquatic and riparian management objectives.
FW-2	New management activities within or affecting RCAs shall be conducted only if they are consistent with the management objectives of maintaining fully functional aquatic and riparian conditions and processes and improving conditions and processes that are not fully functional through either active or passive measures. New fisheries and restoration projects will avoid or minimize adverse effects on inland native fish, their habitats, and RCAs. Management actions will balance short-term risks to aquatic and other resources with long-term benefits as actions are considered to move toward a natural variability of conditions.
FW-3	Design, construct, and operate fish and wildlife interpretive and other user-enhancement facilities in a manner that does not prevent attainment of aquatic and riparian management objectives or adversely affect inland native fish. For existing fish and wildlife interpretive and other user-enhancement facilities inside RCAs, ensure the aquatic and riparian management objectives are met and adverse effects on inland native fish are avoided. Where aquatic and riparian management objectives cannot be met or adverse effects on inland native fish cannot be avoided, relocate or close these facilities.
FW-4	Cooperate with Federal and State wildlife management agencies to identify and reduce wild ungulate impacts that prevent attainment of aquatic and riparian management objectives or adversely affect inland native fish or their habitat.
FW-5	Cooperate with Federal and State fish management agencies to identify and reduce adverse effects on inland native fish associated with habitat manipulation, fish stocking, fish harvest, and illegal harvest.
Wildland Fire Ecology and Management	
FM-1	Fuels treatments and fire suppression strategies, practices, and actions in RCAs shall be designed to maintain desired aquatic and riparian conditions and minimize disturbances of riparian ground

Number	Management
	cover and vegetation. Minimum impact suppression tactics shall be used within RCAs unless safety to human life or property is an issue.
FM-2	Incident bases, camps, helibases, staging areas, helispots, and other centers for incident activities shall be located outside of RCAs. If the only suitable location for these activities is within the RCA, an exemption may be granted following a review and recommendation by a resource advisor. The advisor should prescribe the location, use conditions, and rehabilitation requirements, with avoidance of adverse effects to aquatic and riparian resources as a primary goal. To the extent practical, an interdisciplinary team, including a fisheries biologist, shall be used to predetermine incident base, dipping, and helibase locations in RCAs during pre-suppression planning.
FM-3	Avoid delivery of chemical retardant, foam, or additives to or discharge of gray water into surface waters. An exception is warranted where overriding immediate safety imperatives exist or, following a review and recommendation by a resource advisor, when the action agency determines a fire would cause more long-term damage to fish habitats than chemical delivery to surface waters.
FM-4	Management activities (e.g., fuels treatments) and land uses in RCAs shall be implemented to attain proper functioning condition for riparian areas as an initial step to move habitat conditions of streams, riparian areas, and wetlands toward achieving aquatic and riparian management objectives.
FM-5	New management activities (e.g., fuels treatments) within or affecting RCAs shall be conducted only if they are consistent with the management objectives of maintaining fully functional aquatic and riparian conditions and processes and improving conditions and processes that are not fully functional through either active or passive measures. Management actions will balance short-term risks to aquatic and other resources with long-term benefits as actions are considered to move toward a natural variability of conditions.
FM-6	Establish an interdisciplinary team to develop a rehabilitation plan to support achievement of aquatic and riparian management objectives and avoid adverse effects on inland native fish species whenever RCAs or uplands have experienced severe damage to soils and vegetation from fire.
Timber	
TM-1	Apply vegetation management practices, such as timber harvest, salvage logging, fuel wood cutting and fuels treatments, within RCAs where needed to acquire desired vegetation characteristics essential to achieving aquatic and riparian objectives. Vegetation treatments will be allowed only to maintain, restore, or enhance physical and biological characteristics of the RCA. Implemented treatments will, at a minimum, maintain instream and riparian conditions. Management actions will balance short-term risks to aquatic and other resources with long-term benefits as actions are considered to move toward a natural variability of conditions. Complete watershed analysis and/or site-specific analysis prior to conducting timber harvest or salvage logging in RCAs.
TM-2	New management activities within or affecting RCAs shall be conducted only if they are consistent with the management objectives of not precluding attainment of or maintaining functional aquatic and riparian conditions and processes and improving conditions and processes that are not fully functional through either active or passive measures.
TM-3	When management activities are conducted within the RCA or the sediment delivery influence area (if greater in extent than the RCA), surface disturbance shall be minimized, and sufficient ground cover shall be retained (e.g., through existing vegetation and/or by seeding, plantings, and erosion control measures) to limit soil movement into or within the RCA to allow attainment of aquatic and riparian management objectives. Buffer widths, vegetation cover, and/or natural topographic features should be sufficient to minimize risks for erosion/sediment reaching stream channels and other surface waters.
TM-4	Management activities and land uses in RCAs shall be implemented to maintain or support attainment of aquatic and riparian management objectives.
Livestock Grazing	
GM-1	Range project plans, allotment management plans, and annual plans of operation shall be developed, revised, and maintained where needed to achieve aquatic and riparian management objectives. These plans establish objectives and identify actions for managing vegetation resources to achieve aquatic and riparian management objectives. This may include grazing schedule, grazing system, season of use, class of livestock, stocking levels, forage products and utilization rates, and

Number	Management
	improvements needed to achieve aquatic and riparian management objectives. The results of monitoring riparian and streamside condition will be used to determine the need for adaptive management actions.
GM-2	New grazing management activities within or affecting RCAs shall be conducted only if they are consistent with the management objectives of maintaining fully functional aquatic and riparian conditions and processes and improving conditions and processes that are not fully functional through either active or passive measures.
GM-3	Existing land uses (e.g., trailing, bedding, watering, salting, loading, other handling efforts), facilities (e.g., livestock handling and management facilities), and actions within or affecting RCAs shall be modified, discontinued, or relocated if they are not maintaining fully functional aquatic and riparian conditions and processes or improving conditions and processes that are not fully functional through either active or passive measures.
GM-4	Develop and implement grazing practices in areas of known or suspected inland native fish spawning to avoid or restrict trampling of redds (may require fencing) and other direct and indirect effects that may result in adverse impacts on the species.
GM-5	<p>The following is a summary of the grazing management monitoring protocol for the riparian and aquatic strategy for the Jarbidge Field Office:</p> <ol style="list-style-type: none"> 1. All grazing allotments with inland native fish habitat will have an established designated monitoring area, with some allotments having more than one designated monitoring area as needed. A designated monitoring area is the location in riparian areas and along the streambanks of a livestock grazing unit where monitoring takes place. The designated monitoring area would be permanently marked (e.g., reference tags, rebar) and identified (e.g., mapped, GPS). The designated monitoring area should reflect typical livestock use where they enter and use vegetation in riparian areas immediately adjacent to the stream. 2. Within an allotment, emphasis for selection of designated monitoring areas would be on stream reaches with ESA-listed species, where spawning and/or early rearing occur, or non-fish bearing streams that may affect streams with ESA-listed species or mainstem rivers if riparian or streambank impacts are occurring from livestock use. 3. Monitoring requirements may include various levels or combinations of effectiveness and implementation monitoring. Examples of indicators that could be monitored include greenline vegetation composition, woody species regeneration, streambank stability, stream channel morphology (greenline-to-greenline width), residual vegetation measurement (e.g., stubble height), streambank alteration, compliance with season of use, and stocking rates. Effectiveness and implementation indicators to be monitored would be dependent on aquatic and riparian conditions and resource concerns. 4. The results of monitoring and grazing effects to inland native species and habitats attributed to BLM-managed lands would be evaluated for needed changes. If warranted, needed changes to grazing would be implemented to support achievement of aquatic and riparian management objectives. 5. Coordination would take place with BLM grazing permittees on actions that may affect existing grazing authorizations. As needed, coordination would also occur with other Federal and State agencies. 6. Monitoring will be conducted following methods in the most recent BLM Idaho State Office Technical Bulletin(s) or directive(s) (e.g., the Multiple Indicator Method (MIM)).
Recreation	
RM-1	Existing land uses, facilities (e.g., dispersed and developed recreation facilities and practices), and actions within or affecting RCAs shall be modified, discontinued, or relocated if they are not maintaining fully functional aquatic and riparian conditions and processes or improving conditions and processes that are not fully functional through either active or passive measures. Avoid or minimize adverse effects on inland native fish, their habitats, and RCAs.
RM-2	Developed recreation sites will have a plan for each site that addresses site vegetation management, riparian/streambank management, implementation and effectiveness monitoring, and operating plans. The plan will identify actions needed to avoid or minimize adverse effects on inland native fish, their habitats, and RCAs.

Number	Management
RM-3	Complete watershed analysis and/or site-specific analysis prior to construction of a new developed recreation site in an RCA.
RM-4	New management activities within or affecting RCAs should be conducted only if they are consistent with the management objectives of maintaining fully functional aquatic and riparian conditions and processes and improving conditions and processes that are not fully functional through either active or passive measures. New recreation site development and operation will avoid or minimize adverse effects on inland native fish, their habitats, and RCAs.
RM-5	When recreation management activities are conducted within the sediment delivery influence area, surface disturbance shall be minimized, and sufficient ground cover shall be retained to limit soil movement into the RCA to allow attainment of aquatic and riparian habitat objectives. Buffer widths, vegetation cover, and/or natural topographic features should be sufficient to minimize risks for erosion/sediment reaching stream channels and other surface waters.
RM-6	Management activities and land uses in RCAs shall be implemented to attain proper functioning condition as an initial step to move habitat conditions of streams and riparian areas toward achieving aquatic and riparian management objectives.
Transportation and Travel	
TT-1	Cooperate with tribes; Federal, State, and county agencies; and cost-share partners to achieve consistency in road design, operation, and maintenance necessary to reduce adverse effects and support achievement of aquatic and riparian management objectives in the long-term.
TT-2	For new or existing roads (e.g., roads authorized across BLM lands or BLM easements across other lands), support achieving aquatic and riparian management objectives and avoid adverse effects to inland native fish.
TT-2a	Complete a watershed or site-specific analysis before building new roads in RCAs. Site-specific analysis will reference to existing watershed analysis when available. The level of analysis should be commensurate with the scope and issues of the project and related aquatic resources.
TT-2b	Minimize new road locations in RCAs. Permanent new roads are not allowed unless long-term resource management and public resource needs can be identified through the development of a Comprehensive Transportation and Travel Management Plan (CTTMP), as in RF-2c below. Analysis should be specific to why alternate routes outside of RCAs are not practical and how road design features would minimize or avoid adverse effects to aquatic and riparian resources at site-specific, reach, and watershed scales.
TT-2c	Initiate development and implementation of a CTTMP for newly constructed, BLM-controlled roads. At a minimum, address the following items in the plan: <ul style="list-style-type: none"> • Road design criteria, elements, and standards that govern construction, reconstruction, and maintenance; • The long-term management needs for each road; • Road management objectives for each road; • Criteria that govern road operation, maintenance, and management; • Guidance for inspections and maintenance before, during, and after storms; • Traffic regulation during wet periods to minimize erosion and sediment delivery; • Monitoring plans for road stability, drainage, and erosion control; and • Mitigation plans for road failures.
TT-2d	Temporary roads within RCAs will be decommissioned a maximum of three years after their construction.
TT-2e	Avoid or minimize sediment delivery to streams from the road surface to allow attainment of aquatic and riparian management objectives as follows: <ul style="list-style-type: none"> • Outsloping the roadway surface is preferred, except in cases where outsloping would increase sediment delivery to streams or where outsloping is not feasible or unsafe; • Where practical or feasible, route road drainage away from potentially unstable fills and hillslopes; • Where practical or feasible, route road drainage away from delivery channels so it cannot reach streams. This may be accomplished with road drainage directed off roads prior to reaching streams and being filtered through adequate vegetation buffers; and

Number	Management
	<ul style="list-style-type: none"> When management activities are conducted within the sediment delivery influence area, surface disturbance shall be minimized, and sufficient ground cover shall be retained (e.g., through existing vegetation and/or by seeding, plantings, and erosion control measures) to limit soil movement into and within the RCA.
TT-2f	Avoid sidecasting road surface material that may reach streams and fish-bearing water bodies.
TT-3	<p>Avoid adverse effects on ESA-listed fish by implementing the following:</p> <ul style="list-style-type: none"> Relocating or reconstructing roads and drainage features that are not effective at controlling sediment delivery; Prioritizing reconstruction based on the current and potential habitat damage and the ecological value of the riparian resources affected; and Stabilizing, closing, or obliterating roads not needed for future management activities. Prioritize these actions based on the current and potential damage to inland native fish and the ecological value of riparian resources affected.
TT-4	<p>New, replacement, and reconstructed stream crossings (culverts, bridges, and other stream crossings) must be designed to:</p> <ul style="list-style-type: none"> Accommodate a 100-year flood, including associated bedload and debris; Maintain fish passage; Maintain channel integrity; and Accommodate mean bankfull channel widths.
Minerals	
MM-1	For those management activities conducted pursuant to valid existing rights that may pose risks to achievement of management objectives, existing authorities shall be used to mitigate and/or require, to the extent authorized, design features that would contribute to the maintenance of banks, shorelines, streambed configuration, water quality, amount and distribution of woody debris, thermal regulation, characteristic erosion rates, and amount and distribution of source habitats.
MM-2	Management activities and land uses in RCAs shall be implemented to attain proper functioning condition as an initial step to move habitat conditions of streams, riparian areas and wetlands toward achieving aquatic and riparian management objectives.
MM-3	When management activities are conducted within the sediment delivery influence area, surface disturbance shall be minimized, and sufficient ground cover shall be retained (e.g., through existing vegetation and/or by seeding, plantings, and erosion control measures) to limit soil movement into the RCA to allow attainment of aquatic and riparian management objectives. Buffer widths, vegetation cover, and/or natural topographic features should be sufficient to minimize risks for erosion/sediment reaching stream channels and other water bodies.
MM-4	New management activities (subject to existing mineral laws) within or affecting RCAs shall be designed to be consistent with the management objectives of maintaining fully functional aquatic/riparian conditions and processes and improving conditions and processes that are not fully functional through either active or passive measures. New mineral management projects and operation will avoid or minimize adverse effects on inland native fish, their habitats, and RCAs.
MM-5	Locate structures, support facilities, solid and sanitary waste facilities, and roads outside RCAs. Where there is no alternative to locating facilities or mine waste (e.g., waste rock, spent ore, tailings) in RCAs, locate and construct the facilities or manage mine waste in ways that avoid impacts on RCAs and streams and adverse effects on inland native fish, their habitats, and RCAs. Where there is no alternative to road construction, keep the number of roads to the minimum necessary for the approved mineral activity. Close, obliterate, and revegetate roads no longer required for mineral or land management activities.
MM-6	Permit sand and gravel mining and extraction within RCAs only if no alternatives exist, the action would not prevent the protection and recovery of aquatic and riparian habitats, and adverse effects on inland native fish would be avoided.
MM-7	Develop inspection, monitoring, and reporting requirements for mineral activities. Evaluate and apply the results of inspection and monitoring to modify mineral plans, leases, or permits as needed to eliminate impacts that prevent attainment of aquatic and riparian management objectives and avoid adverse effects on inland native fish, their habitats, and RCAs.

Number	Management
Land Tenure and Land Use Authorizations	
LR-1	New management activities (subject to existing laws) within or affecting RCAs shall be designed and implemented to be consistent with the management objectives of maintaining fully functional aquatic and riparian conditions and processes and improving conditions and processes that are not fully functional through either active or passive measures. New lands and realty projects will avoid or minimize adverse effects on inland native fish, their habitats, and RCAs.
LR-2	For those management activities conducted pursuant to valid existing rights that may pose risks to achievement of management objectives, existing authorities shall be used to mitigate and/or require, to the extent authorized, design features that would contribute to the maintenance of banks, shorelines, bottom configuration, water quality, amount and distribution of woody debris, thermal regulation, characteristic erosion rates, and amount and distribution of source habitats.
LR-3	When management activities are conducted within the sediment delivery influence area, surface disturbance shall be minimized, and sufficient ground cover shall be retained (e.g., through existing vegetation and/or by seeding, plantings, and erosion control measures) to limit soil movement into the RCA to allow attainment of aquatic and riparian management objectives. Buffer widths, vegetation cover, and/or natural topographic features should be sufficient to minimize risks for erosion/sediment reaching stream channels and other water bodies.
LR-4	During licensing or relicensing of hydroelectric projects, terms and conditions that achieve aquatic and riparian management objectives over the new license term shall be submitted to the Federal Energy Regulatory Commission, where appropriate.
LR-5	Use land acquisition, land exchanges, and conservation easements to support achievement of aquatic and riparian management objectives and facilitate restoration of inland native species and their habitat.
Note: These conservation measures are derived from those contained in the Inland Native Fish Strategy (INFISH) (USDA, 1995).	

Management for Aquatic Species

Management for Non-Special Status Aquatic Species

The following management applies to aquatic species other than those listed under ESA or designated as Sensitive species under BLM's policy for special status species. In the planning area, these include sculpins (Cottidae), suckers (Catostomidae), and minnows (Cyprinidae). These fish occur independent of special status fish in five streams in the planning area, including portions of Barbour Creek, Tuana Gulch, Big Flat Creek, Clover Creek, and Salmon Falls Creek. Clover Creek, which is identified as a stream containing only native non-game fish, is designated as a 303(d)-listed stream by the Idaho Department of Environmental Quality. Sediment and bacteria were identified as the factors limiting water quality. This aquatic strategy includes priorities for improving water quality in Clover Creek and other streams containing native non-game fish.

Indicators for riparian habitat condition and PFC ratings are used to determine if the desired riparian goals, objectives, and desired conditions are being met for native non-game fish. PFC addresses a variety of factors that are directly linked to water quality. Any improvement in riparian function (i.e., the PFC rating) would improve water quality and instream habitat condition for native non-game fish.

In order to protect water quality resources in streams containing native non-game fish, the *Idaho Stream Channel Alteration Rules* (Idaho Administrative Code, 37.03.07) would be applied to actions involving construction activities within the high water lines of streams in the planning area. These standards are intended to cover the ordinary type of stream channel alteration and to prescribe minimum conditions for approval of such construction.

For grazing management, these streams should be managed according to the management processes and strategies as described in *Grazing Management Processes and Strategies for Riparian-Wetland Areas* (Wyman, et al., 2006).

Management for Special Status Aquatic Species

BLM Manual 6840, Special Status Species Management, provides policy and guidance, consistent with appropriate laws, for the conservation of special status plants, fish, and wildlife and the ecosystems on which they depend. The special status aquatic species in the planning area are currently managed according to four special status aquatic species conservation or recovery plans as well as conservation requirements derived through ESA consultation with the US Fish and Wildlife Service (FWS).

Recovery plans are developed by FWS or NMFS and establish recovery objectives for a species, provide a list of tasks necessary to achieve those objectives, and recommend assignments to involve agencies to carry out these tasks. A primary function of recovery plans is to combine programs of all agencies involved in managing a species into a coordinated management effort. The BLM may adopt recovery plans. Even if a recovery plan is not officially adopted, BLM Manual 6840 directs the BLM to incorporate the objectives of the recovery plan into appropriate land use activity plans (BLM Manual 6840.04.E.5). These plans provide guidance for protecting special status aquatic species and their habitat to ensure their long-term survival and recovery. The conservation and recovery plans for special status aquatic species in the planning area are identified in Table D- 8; these plans will guide the protection and conservation of stronghold populations. For species for which there is an existing recovery plan, such as Snake River snails and Bruneau hot springsnail, or for which there is a draft recovery plan, such as Columbia River Basin bull trout, the conservation measures identified in those plans will also be incorporated in restoration and recovery planning efforts at the watershed or site-specific scale.

Table D- 8. Conservation and Recovery Plans for Special Status Aquatic Species in the Planning Area

Conservation/Recovery Plan	Date	Species Addressed	
		Common Name	Scientific Name
Snake River Aquatic Species Recovery Plan	1995	Idaho springsnail ^A	<i>Pyrgulopsis idahoensis</i>
		Utah valvata	<i>Valvata utahensis</i>
		Snake River physa snail	<i>Physa natricina</i>
		Bliss Rapids snail	<i>Taylorconcha serpenticola</i>
		California floater	<i>Anodonta californiensis</i>
		Columbia pebblesnail	<i>Fluminicola columbianus</i>
		Shoshone sculpin	<i>Cottus greeniei</i>
		Redband trout	<i>Oncorhynchus mykiss gairdeneri</i>
Snake River white sturgeon	<i>Acipenser transmontanus</i>		
Snake River White Sturgeon Conservation Plan	2003	Snake River white sturgeon	<i>Acipenser transmontanus</i>
Recovery Plan for the Jarbidge River Distinct Population of Bull Trout (Draft) ^B	2004	Columbia River Basin bull trout	<i>Salvelinus confluentus</i>
Recovery Plan for the Bruneau Hot Springsnail	2006	Bruneau hot springsnail	<i>Pyrgulopsis bruneauensis</i>

^A Idaho springsnail was removed from the Endangered Species list in September 2007.
^B The bull trout recovery plan has not been finalized by FWS.

Additional management for ESA-listed aquatic species include conservation requirements derived through ESA consultation with FWS; these requirements are intended to allow for activities to occur at levels that would not result in a decline in the ESA-listed species or their habitat. These conservation requirements are contained in Biological Opinions (BOs) as well as Biological Assessments (BAs) with letters of concurrence. Table D- 9 displays those consultation documents currently in effect; these may be superseded through future consultation with the FWS.

Table D- 9. FWS Biological Opinions and Letters of Concurrence for ESA-Listed Aquatic Species in the Planning Area

Document Name	Date	Species Addressed	Action(s) Addressed
Biological Opinion – Existing BLM Land Use Plans	March 10, 2008	Bliss Rapids snail Utah valvata snail Snake River physa snail Bruneau hot springsnail	1987 Jarbidge Resource Management Plan
Biological Opinion and Concurrence – Stream Crossing Structure Replacement and Removal Program	August 14, 2006	Bull trout	Stream crossing structure replacement and removal activities
Letter of Concurrence – Noxious and Invasive Weed Treatment Program for the Boise District and the Jarbidge Field Office of the Twin Falls District	September 21, 2005	Bull trout Bliss Rapids snail Utah valvata snail Snake River physa snail Bruneau hot springsnail	Noxious and invasive weed treatments
Biological Opinion – Biological Assessment of the BLM Boise District and the Jarbidge Field Office of the Twin Falls District, Ongoing Permitted Grazing Activities in 36 Allotments	August 15, 2005	Bliss Rapids snail Utah valvata snail Snake River physa snail	Livestock grazing on allotments in the Snake River Watershed
Biological Opinion – Ongoing Grazing Activities in the Bruneau Arm Allotment, the Hagerman Allotment, and Flat Iron Allotment, Owyhee County, Idaho	March 23, 2005	Bliss Rapids snail Utah valvata snail Snake River physa snail	Livestock grazing in the named allotments
Letter of Concurrence – Normal Fire Rehabilitation Plan for the Boise District and the Jarbidge Field Office of the Twin Falls District	February 9, 2005	Bull trout Bliss Rapids snail Utah valvata snail Snake River physa snail Bruneau hot springsnail	Normal Fire Rehabilitation Plan
Biological Opinion on BLM’s Ongoing Activities in the Jarbidge River Watershed in Owyhee County, Idaho, and Elko County, Nevada	November 17, 2004	Bull trout	Livestock grazing, pipelines, and fire suppression in the Jarbidge River Watershed
Letter of Concurrence – Allocation of Forage in the 71 Desert, Blackrock Pocket, Bruneau Hill, Crawfish, North Fork, and Winter Camp Allotments for the Jarbidge Field Office	November 12, 2004	Bull trout	Forage allocation in named allotments
Letter of Concurrence – Excess Forage Allocation and Grazing Permit Renewal for the Yahoo Allotment, Twin Falls County, Idaho	April 13, 2004	Bull trout Bliss Rapids snail Utah valvata snail Snake River physa snail Bruneau hot springsnail	Forage allocation and permit renewal in the Yahoo allotment

Multi-Scale Assessments and Ecosystem Analysis at the Watershed Scale⁵

Multi-Scale Assessments

Generally, no single assessment will adequately address the complex issues facing resource managers today. Fine-scale assessments provide necessary context for management and project planning, but they cannot adequately address broad patterns and processes, such as habitat conditions for wide-ranging species. Broad-scale assessments provide necessary context for policy formulation and for mid- and fine-scale assessment, but they cannot by themselves provide detailed information, such as site-specific habitat conditions. Together, multi-scale assessments provide a comprehensive basis for sustainable land management.

Multiple scales of review and assessment provide the context to implement broad-scale decisions within individual BLM District and Field Offices. As needed, multi-scale analysis may be used for future plan amendments or revisions and for subsequent project-level decisions. Analysis at the appropriate scale is generally recognized to provide the needed context for decision making. The four levels of review or assessment that may be used for multi-scale analysis are:

- Broad-scale (e.g., analysis at the basin scale, such as the Interior Columbia River Basin)
- Mid-scale (e.g., analysis at the subbasin scale, such as the Snake River subbasin)
- Fine-scale (e.g., analysis at the watershed scale, such as the Salmon Falls Creek Watershed)
- Site-scale (e.g., analysis at the stream reach or project scale, such as China Creek)

Management considerations for multi-scale analysis include the following:

- Plans are generally developed and analyzed at the scale of the land management unit, normally analogous to a subbasin (or group of subbasins) scale.
- Subsequent finer-scale analysis, such as to support restoration prioritization and monitoring strategy development, should include interagency coordination.
- Assessments should include evaluation of existing conditions, factors limiting aquatic species populations, resource risks, management needs, and restoration opportunities.
- Information developed at the finer scale should be considered in implementing aquatic conservation or restoration measures and used to make adjustments or modifications to appropriate management actions, as warranted.
- Multi-scale analysis provides a basis for integrating and prioritizing conservation measures for wide-ranging species.

Watershed Analysis

The purpose of an ecosystem analysis at the watershed scale is to develop and document an understanding of the ecological structures, functions, processes, and interactions occurring at the watershed scale by systematically characterizing the watershed's human, aquatic, riparian, and terrestrial features, conditions, processes, and interactions. This process is designed to describe past and current conditions and develop restoration and management recommendations. The ultimate goal is to provide guidance for management actions that would sustain or improve the health and productivity of natural resources.

Objectives of Watershed Analysis

The following are the objectives and benefits of a watershed analysis:

- **Provide sufficient watershed context for understanding and carrying out land use activities in a geomorphic context** – Watershed analysis is an important tool used to meet ecosystem management objectives at larger scales.

⁵ This section addresses material for Component III, Multi-Scale Analysis, in *Guidance for Developing Aquatic Conservation Strategies* (BLM, 2008).

- **Evaluate cumulative watershed effects** – Watershed analysis enhances the ability to estimate direct, indirect, and cumulative effects of management activities.
- **Define watershed restoration needs, goals, and objectives** – Watershed analysis provides guidance on the general type, location, and sequence of appropriate activities within a watershed.
- **Monitor the effectiveness of watershed protection measures** – Watershed analysis provides an iterative process for the adaptive management feedback loop.

Methodology for Watershed Analysis

The *Federal Guide for Watershed Analysis-Ecosystem Analysis at the Watershed Scale, Version 2.2* (Regional Interagency Executive Committee & Intergovernmental Advisory Committee, 1995) was used as a guide; the process outlined in this guide provides resource managers with the flexibility to focus watershed analysis as necessary to meet management objectives. This six-step process is issue-driven; it focuses on analysis topics, along with specific watershed problems and concerns. Management discretion applies to defining the number and scope of topics and concerns analyzed, illustrating that "...It should be emphasized that watershed analyses can be a very simple and straightforward process taking a few days or weeks to develop or a complicated process. The complexity is intertwined with the issues and questions being addressed" (BLM Instruction Memorandum No. OR-2007-071). This analysis is not a decision-making process but helps identify opportunities for future management actions, including planning, project development, and regulatory compliance. The six-step process may also be used to guide analysis at the reach scale, including modification of RCA widths. Below is a summary of each of the six steps taken to develop an ecosystem analysis at the watershed scale.

Step 1—Characterize the Watershed

The purpose of Step 1 is to identify the dominant physical, biological, and human processes or features of the watershed that affect ecosystem functions or conditions, including the relationship between these ecosystem elements and those occurring in the river basin and/or watersheds. When characterizing the watershed, team members identify the most important land allocations, plan objectives, and regulatory constraints that influence resource management in the watershed. At the reach scale, the RCA and stream are characterized, including aquatic and riparian habitats, channel type, valley type, and stream gradient.

Step 2—Identify Issues and Key Questions

The purpose of Step 2 is to focus the analysis on the key elements of the ecosystem that are most relevant to the management questions and objectives, human values, or resource conditions within the watershed. Key analysis questions are formulated from instream and riparian indicators used to measure or interpret key ecosystem elements. At the reach scale, the issue(s) are described, including which instream and riparian indicators are affected by the proposed or past management action(s).

Step 3—Describe Current Conditions

The purpose of Step 3 is to develop more detailed information relevant to the issues and key questions identified in Step 2. Step 3 is where the current range, distribution, and condition of the relevant ecosystem elements are documented. At the reach scale, this section describes the current condition of the RCA and may include a discussion of riparian function using PFC and quantitative stream and riparian condition assessments such as MIM (Burton, Smith, & Cowley, 2008).

Step 4—Describe Reference Conditions

Step 4 explains how ecological conditions have changed over time with respect to historic or reference conditions as a result of human influence and natural disturbances. At the reach scale, if an undisturbed reference reach similar in channel, valley, and vegetation type is available, current conditions are measured to establish reference conditions for future comparison. This section establishes objectives for the desired future condition.

Step 5—Synthesize and Interpret Information

The purpose of Step 5 is to compare existing and reference conditions of specific ecosystem elements and to explain significant differences, similarities, or trends and their causes. The capability of the system to achieve key management plan objectives is also evaluated.

Step 6—Identify Recommendations

The purpose of Step 6 is to bring the results of the previous steps to conclusion by addressing each of the issues and answering the key questions, focusing on management recommendations that are responsive to watershed or reach-scale processes identified in the analysis. Step 6 identifies management recommendations that address resource problems noted in this analysis in order to change the current watershed or reach conditions toward the desired future condition. Monitoring needs and data gaps are also identified and described.

Watershed Analysis for the Jarbidge Planning Area

BLM-managed lands in the planning area include large, contiguous blocks of public land interspersed with State lands, private lands, and two military withdrawal areas. Portions of the planning area are located in northern Nevada and are adjacent to land managed by the Humboldt-Toiyabe National Forest and other BLM FOs; these lands include the upper reaches of the Jarbidge River and its East Fork, the Bruneau River, and several headwater reaches of perennial streams in the Jarbidge Foothills. For analyses of these watersheds, the BLM Jarbidge FO will collaborate with the Forest Service and other BLM FOs to complete watershed analyses and subbasin assessments or updates, as appropriate. The level of site-specific or focused analysis will be commensurate with the scope, magnitude, and issues related to BLM activities or projects and related aquatic resources and values.

The BLM and Forest Service have completed one watershed analysis within the planning area; the Jarbidge Ranger District of the Humboldt-Toiyabe National Forest was the lead agency for the *Jarbidge Canyon Watershed Analysis* (McNeill, Frederick, & Whalen, 1997). This document provides guidance for cumulative effects analysis, prioritization for restoration and management actions, and direction and information for landscape and ecosystem management in the Jarbidge River Watershed.

Although no other watershed analyses have been completed in the planning area using the six-step process in the *Federal Guide for Watershed Analysis*, there have been several other multi-scale reviews that assessed aquatic resources in the planning area (Table D- 8). Through these broad-scale (FWS, 1995) and mid-scale (FWS, 1998, 2002; Idaho Power Company, 2003) analyses, habitat was characterized, issues affecting the species were identified, current and reference conditions were described, and data were used to identify management changes necessary to reduce threats to the ESA-listed and BLM Sensitive aquatic species in the planning area. The ARMS, which uses site-specific data to identify conservation and restoration priorities, provides the framework for a fine-scale assessment for the planning area. Future watershed analysis in the planning area will be completed as required by the intensity, scope, or scale of issues that drive the need for additional fine-scale assessments.

Monitoring and Adaptive Management⁶**Monitoring**

Monitoring provides a mechanism for observation and measurement to ensure that project design criteria and mitigation are being implemented and to determine if project and program goals and objectives are being achieved. The basics of plan-level monitoring should 1) determine if the plan, project, or activity is being implemented correctly and is achieving desired results; 2) provide a mechanism for accountability and oversight; 3) evaluate the effectiveness of recovery and restoration efforts; and 4) provide a feedback loop so that management direction may be evaluated and modified (i.e., adaptive management). Implementation monitoring is used to determine if management practices are implemented as identified in

⁶ This section addresses material for Component V, Management Direction – Adaptive Management, related to adaptive management and Component VI, Monitoring, Adaptive Management, and Oversight, in *Guidance for Developing Aquatic Conservation Strategies* (BLM, 2008).

an activity plan, Environmental Assessment (EA), Environmental Impact Statement (EIS), BA with a letter of concurrence, or BO. Effectiveness monitoring is used to determine if management practices, as designed and executed, are effective in meeting project goals and objectives as defined in an activity plan, EA, EIS, BA with a letter of concurrence, or BO.

The results of monitoring will be summarized and shared, as requested, with the tribes and Federal and State agencies. Management considerations for monitoring include the following:

- Monitoring should be focused on key questions that inform decision making and allow timely adjustments to management.
- Monitoring emphasis and intensity should be commensurate with the importance of the question being asked. For example, if adaptive management is being used, it is important to monitor the key parameters to the degree necessary to support the current course of action or to trigger an alternate approach.
- Plan-level monitoring should make use of and not duplicate broad-scale monitoring programs. To the extent practicable, monitoring done at the plan scale should be compatible with and complementary to broader- and finer-scale monitoring.
- Monitoring should be coordinated with and, where possible, consolidated with similar efforts of other agencies.
- Outcome-based management approaches rely on monitoring for their success. These approaches typically require a different level and type of monitoring than prescriptive approaches.
- Monitoring commitments in plans should be feasible and achievable.

The implementation and effectiveness monitoring plan for the planning area will include the use of databases and reporting mechanisms. Monitoring protocols will be in accordance with appropriate BLM Technical Bulletins or other acceptable monitoring methods that would address the bull trout and redband trout habitat condition indicators in Table D- 1 and Table D- 2.

Adaptive Management

The ARMS allows for adaptive management, a continuing process of planning, implementation, monitoring, and evaluation to adjust management strategies to meet goals and objectives of ecosystem-based management. It is a decision process that promotes decision making in the face of uncertainty as outcomes from management actions become better understood. The approach improves resource management by learning from prior management outcomes. The process of adaptive management uses the latest scientific information, site-specific information and monitoring data, and professional judgment to select the management strategy most likely to meet goals and objectives. By continually adjusting management strategies as needed, supported by monitoring or additional information, adaptive management will result in attainment of short- and long-term trends toward meeting objectives. Adaptive management provides the capability to respond quickly to monitoring data with consideration given to past season monitoring or pre-season conditions. It also allows changes needed to meet long-term objectives of the RMP including direction from ESA, the Clean Water Act, and Standards and Guidelines. The US Department of Interior guidance on using adaptive management can be found in Williams et al. (2007).

Adaptive management requires knowledge of the current conditions, potential or capability of riparian sites and streams, current management and effects of the management on the resources, and management changes that may be made to move the current condition toward the desired condition. Single indicators of conditions or trend are usually not adequate to make good decisions. Information on the condition and trend of the vegetation, streambanks, and aquatic resources and knowledge of current management practices can help establish cause-and-effect relationships that are important for making appropriate decisions. Such information allows refinement and development of more realistic, locally-derived project or activity design standards or criteria.

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**APPENDIX E:
BEST MANAGEMENT
PRACTICES**

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APPENDIX E: BEST MANAGEMENT PRACTICES

This appendix provides a general summary of Best Management Practices (BMPs) that, when applied with other management actions applicable to resources and resource uses described in Chapter 2, would aid in achieving goals and objectives. These are to be considered as tools available to reduce detrimental environmental effects. Additional practices may be added or included in this list as they are developed and found to reduce unwanted impacts from management actions. Likewise, actions included in this list that do not achieve the desired results may be altered to achieve the desired results or removed from consideration. These are examples of the types of practices compiled from many sources that could be applied alone or in combination as necessary to make progress towards or to achieve objectives.

While the overall vision embraces the use of these BMPs to reduce or minimize impacts, they are not to be considered a land use plan decision. These BMPs are dynamic and may be updated or modified without a plan amendment. BMPs used in site-specific situations could be incorporated into the proposed action or used as mitigation measures to reduce impacts and analyzed through the NEPA process.

The BMPs are identified by type of use or activity; however, these BMPs can be applied to a variety of situations. Even though these BMPs may be identified for specific situations or actions, it should not be inferred that these BMPs can only be applied to or are the best ones for those specific situations.

Vegetation Treatments

- The economic effects of alternative fuels management practices would be considered. Local involvement and economic benefits from fuels reduction projects would be promoted.
- Collaborate with local partners to assess Wildland Urban Interface (WUI) areas and to develop or update County Wildfire Protection Plans.
- Fire project planners should coordinate with the archaeologist to incorporate, as necessary, best cultural protection practices in treatments using prescribed fire. Examples of cultural protection practices to be considered may include but are not limited to:
 - Reducing fuels manually on vulnerable sites or features.
 - Disposing of debris away from cultural features.
 - Using low-intensity backing fire in areas near historic features.
 - Saturating ground or grass adjacent to vulnerable structures with water, foam, or gel before burning.
 - Pre-burning site(s) at lower intensity than planned for the surrounding areas.
 - Limiting fire intensity and duration over vulnerable sites.
 - Using a fast-moving, higher intensity fire over lithic scatters, where rock materials are vulnerable to longer-duration heating.
 - Creating fire breaks near or around sites.
 - Wrapping structures in fire-proof materials or using retardant or foam to protect structures.
 - Covering rock art or wrapping carved trees or other such features in fire retardant fabric.
 - Reducing fuels and smoke near rock art.
 - Covering fuels near rock art with foam, water, or retardant, avoiding the rock art.
- Hazardous materials and abandoned mine sites identified in any specific fuels management or vegetation treatment area should be avoided.
- The use of hazardous substances (e.g., gasoline in riparian zones, explosives) for prescribed fire control should be avoided whenever practical.
- Treatments should be designed to minimize impacts to the character of the managed recreation setting and to the recreation experiences and benefits desired by the recreation participant. In areas where the setting character or the desired benefit outcomes are not defined, treatments would be designed to minimize impacts to the recreational resource or users.
- Treatments occurring in visual resource Management (VRM) Class I and II areas should consider visual qualities to preserve the landscape character. Wherever possible, landscape modifications would replicate the natural line, form, color, and texture found in the surrounding area. Treatments that result in long-term disruption of natural visual qualities (e.g., drill seeding that establishes

vegetation rows) should not be used unless the visual impacts can be hidden through treatment design.

Noxious Weeds and Invasive Plants

- Incorporate noxious weed and invasive plant prevention into all project designs; including but not limited to: Emergency Stabilization and Burned Area Rehabilitation (ES&BAR), fuels, range infrastructure, wildlife, fisheries, botany, soil, watershed, cultural resource, paleontology, recreation, and stream restoration projects.
- Encourage noxious weed and invasive plant awareness and education in employee development, training plans, and orientation for field, fire, and administrative positions.
- Promptly treat recreation sites or other high use areas when invasive species are found.

Wildland Fire Suppression

- In the event a wildland fire escapes initial attack, a resource advisor should be assigned to ensure that resource management concerns are adequately addressed and that necessary mitigation occurs.
- If one of the following is being threatened or has the potential to be threatened, the authorized officer should be notified and a resource advisor should be dispatched:
 - Public health and safety,
 - WUI,
 - Sage-grouse habitat, or
 - Areas of Critical Environmental Concern (ACECs), Wilderness Study Areas (WSAs), or National Historic Trails (NHTs).
- Through the authorized officer or resource advisor, an archaeologist should be notified to provide technical expertise, identify cultural resources that may be encountered, and identify best cultural protection practices to be used during suppression activities.
- Prior to wildland fire season, potential areas of conflict between archaeological resources and wildland fire suppression activities should be identified.
- Use the minimum control line width necessary for containing fires; following containment, additional control lines should be avoided.
- Existing roads should be used for dozer lines before new dozer lines are constructed.
- Use of natural firebreaks and existing roads and trails to contain a wildland fire would be encouraged within special designations (e.g., WSAs, ACECs, and NHTs).
- Equipment used during extended attack should be cleaned before arriving on site and prior to demobilization to minimize the spread of noxious weeds and invasive plants. Wash stations should be set up in base camps and staging areas when practical.
- Staging areas and base camps for extended attack fires should not be placed in special designations, noxious weed patches, or riparian areas to the extent practical.
- Establishment of control lines, base camps, and support facilities in known special status species habitat should be avoided unless life and property are threatened.
- Within WSAs, wildland fire management activities would follow BLM Manual H-8550-1, *Interim Policy for Lands under Wilderness Review*. The use of earth-moving equipment within these areas requires approval of the authorized officer.
- The resource values, hazards present, and management prescriptions within specific areas should be evaluated when applying guidelines to ACECs.

Livestock Grazing

General

- Ensure noxious weed and invasive plant prevention and control are considered in the management of all grazing allotments.
- Implement grazing practices that allow for periodic rest through the growing season.

- Use utilization level as an indicator for the continuation or modification of annual grazing plans.
- Manage water availability to alter distribution of livestock to maintain plant vigor and habitat for wildlife and special status plant species.
- Consider kind and breed of livestock to improve both the distribution pattern and forage preference.
- Encourage the use of animal husbandry practices, such as early weaning of calves or culling of problem cattle, to encourage dispersal of cattle out of riparian and other sensitive areas.

Upland Areas

- Periodically treat crested wheatgrass seedings to prevent development of wolf plants (i.e., large, robust plants with a great deal of coarse material that makes the plants unpalatable).
- Manage livestock grazing to reduce disturbance to special status birds in native plant communities during nesting (Appendix H, Table H- 3). For example, resting some pastures during nesting, active herding of livestock between pastures.
- In sage-grouse nesting habitat, manage livestock grazing to ensure a minimum of 5 to 6 inches of residual herbaceous cover is available during nesting in pastures in native shrub communities (Connelly, Knick, Schroeder, & Stiver, 2004). Residual herbaceous cover in conjunction with spring plant growth should ensure adequate nesting cover the following spring. Growth of herbaceous plants during the April through May nesting season would likely result in an additional 1.6 to 2.4 inches of cover at the nest site (Hausleitner, Reese, & Apa, 2005).
- Closely monitor aspen stands, mountain shrub communities, and riparian areas to ensure these areas important for mule deer fawning (Mule Deer Working Group, 2004) and elk calving retain adequate cover for mule deer fawns and elk calves. Limit livestock utilization to less than 25% of current annual growth of aspen and key shrub (e.g., chokecherry and serviceberry) twigs less than 5 feet. Maintain cover of the herbaceous understory of aspen stands, mountain shrub communities, and riparian areas at 90% of site potential. Schedule livestock use to reduce or eliminate impacts to mule deer fawning and wintering habitat (Mule Deer Working Group, 2004).
- In pronghorn fawning areas, time livestock use to minimize the overlap with fawning (Appendix H, Table H- 4). In pastures grazed prior to fawning in pronghorn fawning areas, maintain adequate herbaceous cover to provide hiding cover for pronghorn fawns. To provide suitable security cover, manage pastures that contain pronghorn fawning habitat to ensure a minimum of 12 to 16 inches of herbaceous cover is available from mid May to mid June (Autenrieth, 1976; Yoakum, 2004b).
- Place salt and other supplements in annual grasslands or non-native perennial grassland sites. If specific pastures contain only native habitats, place salt and supplements in areas that are already disturbed including, but not limited to adjacent gravel pits, dirt roads or jeep trails, or water troughs located in the uplands (Braun, 2006).
- In pastures with non-native plant communities, place salt and other supplements at least 0.25 miles from native plant communities. If space limits this practice, place supplements to minimize livestock congregation in native plant communities.
- Place livestock waters or supplements more than 1 mile away from agricultural land, where possible, to provide adjacent to agricultural land relatively large blocks of suitable nesting and wintering habitat for pheasants, as well as nesting habitat for other taller grass dependent species such as northern harriers, short-eared owls, and several songbirds.

Riparian Areas

- Use off-site water developments in upland areas to reduce livestock concentrations in riparian areas.
- Treat upland areas to enhance forage production and palatability for wildlife and livestock to attract animals away from riparian areas.
- Place salt, molasses, and other supplements in the uplands at least 0.25 miles away from riparian areas.
- Use barriers (e.g., trees, brush, rocks, and fences) along streambanks to stabilize and discourage livestock access to sensitive or unstable areas.

- Use localized hardened crossings to limit surface disturbance and reduce erosion at streamside livestock watering and crossing areas as long as fish migration through the watering areas is not impeded.
- Use frequent riding and herding to control livestock distribution and use in areas with identified resource concerns such as in riparian areas, wet meadows, or stream crossings.
- Use gap fencing in conjunction with gullies, cliffs, and other natural barriers to limit livestock trailing and bedding in riparian areas; bed livestock in the uplands where possible.
- When water gaps are necessary, locate water gaps in rocky areas (natural or manmade) to minimize trampling damage to streambanks and streambeds. Use narrow water gaps to discourage livestock from loafing at the water source.
- Manage livestock grazing in riparian areas to minimize damage to woody and herbaceous species and provide cover and forage to big game (Mule Deer Working Group, 2004) and a variety of birds and other wildlife.
- Limit grazing intensity, frequency, or alter season of use to encourage riparian plant vigor, regrowth, and energy storage and minimize compaction of riparian soils.
- Adjust the timing of livestock grazing to minimize damage to streambanks and wet meadows in spring, when these areas are most vulnerable to trampling and soil compaction.
- Ensure utilization levels provide for sufficient herbaceous and woody vegetation during periods of high flow to protect streambanks, dissipate energy, and trap sediments.
- When moving livestock into a pasture, move them in at a location that is far away from riparian areas to help regulate the timing, duration, and amount of riparian use in large pastures that contain adequate stock water (Gillen, Krueger, & Miller, 1985).

Range Infrastructure

Fence Construction and Location

- Remove unnecessary fences from BLM-managed lands, including former livestock holding pastures, unused enclosures, and fences that no longer meet the needs for which they were constructed.
- Emphasize reducing fence densities, and consider implementing livestock control methods such as herding, turning off waters, and placement of salt or supplements as alternative management practices prior to constructing new fences (Autenrieth, et al., 2006; Yoakum, 2004a). Evaluate pasture fences for retention or removal and in coordination with the permit holder, the Idaho Department of Fish and Game (IDFG), and the Nevada Division of Wildlife (NDOW), as appropriate.
- When reconfiguring pastures within an allotment and when the allotment size allows, larger pasture sizes (greater than 3,000 acres) are preferred to smaller pasture sizes to meet big game objectives.
- Modify fences that cross big game migration routes (e.g., Davison clips, let-down fence, or other techniques) to ensure that pronghorn and mule deer movements are not blocked if snow accumulation exceeds 12 inches (Autenrieth, et al., 2006; Sheldon, Lindzey, & Rudd, 2006; Yoakum, 2004a).
- To reduce impacts to pronghorn, install new fences only as a last resort when other efforts, including turning off waters, moving salt, or herding, have been documented to have failed. When new fences are constructed, the minimum pasture size should be at least 3,000 acres. Enclosures fences should be at least 10 acres to accommodate big game use (Gross & Knight, 2000). If it is necessary to restrict big game to protect resource values, including rare plant habitat, such enclosures should be of adequate height (at least 8 feet) to prevent big game access.
- For new fences and existing fences where wildlife mortality has been documented, place markers on the wires between fence posts or use other proven methods to improve the visibility of the fence and reduce wildlife mortality.

Water Developments

- Turn off and drain troughs and open tanks without functioning wildlife escape ramps until the escape ramps are repaired or replaced; ensure troughs and open tanks have functioning wildlife escape ramps prior to livestock entering the pasture. Deep (greater than 3 feet), open storage tanks should

not be reinforced with an earthen berm to prevent big game entering and becoming trapped in the tank. Consideration can be given to enclose deep tanks to preclude big game mortality. Floating boards and similar devices are unstable and should not be used (Idaho Sage-grouse Advisory Committee, 2006).

- Anchor troughs without wires, poles, and other obstructions directly over the trough surface to reduce injuries and make the troughs more accessible to bats (Tuttle, Chambers, & Theimer, 2006).
- Fence ponds or reservoirs for wildlife to exclude livestock and provide an alternate watering source for livestock within the pasture. The enclosure should be of adequate size, greater than 15 acres, to encourage big game use and maximize potential waterfowl and shorebird production. To the extent needed, control noxious weeds and invasive species around ponds with herbicide, and plant the area to a mix of desirable grasses, forbs, and shrubs.
- Evaluate ponds and reservoirs as habitat for amphibians. Where habitat is occupied by amphibians, take measures to maintain or improve habitat quality, including planting aquatic cover, providing basking areas, reducing trampling at critical times of the year, and providing water from spring through fall (Appendix H, Table H- 3) (CSFTT, 2003).
- Explore alternative strategies to divert water that have no detrimental impact on the spring source or riparian habitat (e.g., locating collection devices far enough below the spring source that it has no detrimental impact on the spring source or surrounding riparian vegetation (CSFTT, 2003), leaving adequate water at the spring source to maintain or enhance the existing condition).
- Modify developed springs and restore associated riparian vegetation by diverting water back to the natural stream channel and constructing wildlife-compatible livestock enclosure fences around springs and associated riparian vegetation (CSFTT, 2003). To maintain wetlands and riparian vegetation in the natural stream channel, use demand regulators (e.g., flow restrictors, shut off valves, float valves) on troughs to return water to the spring when the trough is full (CSFTT, 2003).
- Ensure wetlands are maintained when adding troughs or extending pipelines drawing water from springs.

Transportation and Travel

- In coordination with IDFG, NDOW, and local highway districts, evaluate primitive roads and trails and consider seasonal restrictions. Primitive roads in sage-grouse nesting and big game winter habitat would have the highest priority for seasonal closures during sensitive periods (Mule Deer Working Group 2004, (Braun, 2006; Idaho Sage-grouse Advisory Committee, 2006).
- Through the transportation and travel management planning process, address important wildlife habitat values including key sage-grouse breeding habitat (Braun, 2006; Idaho Sage-grouse Advisory Committee, 2006) and big game parturition and winter habitats (Mule Deer Working Group, 2004) through actions such as closing or rerouting roads and seasonal restrictions.
- To the extent practical, schedule road realignments and other major construction to occur between June 21 and November 30 in big game winter habitat and sage-grouse habitat.
- Spray along roadsides to minimize sources of noxious weed and invasive plant seed that could be transported to other areas.
- Ensure road blading and roadside herbicide applications are coordinated chronologically to minimize herbicide use and increase effectiveness.
- Use spot grading whenever possible to reduce route braiding.

Land Use Authorizations

Communication Towers and Overhead Transmission Lines

- Construct new powerlines next to existing roads to the extent possible.
- Remove wires from abandoned overhead power or telephone lines; cut off poles near ground level and remove them.
- Design towers to prevent raptors from using them as perches.

- Design towers and adjacent structures with the smallest footprint possible; however, a larger footprint for self-supporting towers is preferable to guy-supported towers with a smaller footprint.
- Install daytime visual markers on guyed towers or other proven methods to prevent collisions by birds.
- Downshield security lighting for on-the-ground facilities to minimize attraction to birds and bats.
- Incorporate noxious weed and invasive plant species prevention provisions in all special use permits, road use permits, and easements.
- Additional BMPs for wind energy development can be found in Appendix N.

Minerals

Leasable Minerals

- Ensure noxious weed and invasive plant prevention and control are considered in mining, oil and gas operations, and reclamation.

Salable Minerals

- Avoid locating new salable mineral developments in big game or sage-grouse winter or breeding habitat. Locate new salable mineral developments in annual or non-native grass communities rather than in native plant communities.
- For gravel pits in big game or sage-grouse winter or breeding habitat, schedule blasting, crushing, screening and other operations from mid June through November.
- Issue decorative rock permits in big game or sage-grouse winter or breeding habitat so rock gathering occurs between mid June and November. Monitoring of the pit areas in big game or sage-grouse habitat should include the monitoring of pioneered routes to other areas that have rock. Post pioneered routes as closed.
- Minimize the spread of noxious weed and invasive plant species caused by moving infested gravel and fill material (e.g., close the pit, aggressively treat infested areas).

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**APPENDIX F:
DROUGHT MANAGEMENT
GUIDELINES**

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APPENDIX F: DROUGHT MANAGEMENT GUIDELINES

Drought is defined by the Society of Range Management as a period of time when the precipitation is less than 75% of normal (Holecheck, Pieper, & Herbel, 1998). However, the beginning and end of a drought are difficult to recognize because drought is a gradual phenomenon. Normal precipitation is based on the median of 30 years or more of precipitation (Thurrow & Taylor Jr., 1999; Wilhite & Glantz, 1985). Droughts are not uncommon in the West and, based on tree ring data, can occur for intervals between five to more than fifty years (Gray, Jackson, & Betancourt, 2004) and cover fairly large areas (Graumlich, 1987; Gray, Betancourt, Fastie, & Jackson, 2003). Drought management can be implemented in the short-term (one year) and/or long-term (two or more years).

Drought effects are variable and sometimes a gradual phenomenon. Making an accurate prediction of either its onset or end is a difficult task (Wilhite & Glantz, 1985). The April-May-June precipitation period is most important for determining vegetation production and making annual adjustments to stocking rates (Comstock & Ehleringer, 1992; Sharp, Sanders, & Rimbey, 1990); however, the October-through-March precipitation period is important for maintenance of vegetation communities through soil moisture recharge and initiation of plant growth in the early spring (Comstock & Ehleringer, 1992). Drought can also occur at a range of spatial scales, from local areas to an entire region; guidelines would be applied at the scale at which drought is occurring. Average annual precipitation varies substantially from between the northern and southern portions of the planning area (see the *Air and Atmospheric Values: Climate and Meteorology* section in Chapter 3); as a result, the amounts of precipitation that reflect drought would depend on the average for a specific location within the planning area. Therefore, applying the following guidelines must be done on a case-by-case basis according to the applicability to an area, vegetation type, and soil characteristics.

Development of drought conditions may be difficult to predict the first year of a drought, making it difficult to determine if adjustments to stocking rates either before or after turnout are necessary. During drought, implement the following tools as appropriate to provide for retention of litter for watershed protection and wildlife habitat.

- If precipitation between October and January is less than 75% of normal, send a letter to affected permittees to coordinate with them for potential changes to their operations if drought conditions persist.
- If drought continues through the April-May-June precipitation period, implement the following as appropriate. The specific measures to be implemented would depend on the length and severity of the drought, the area under drought, as well as vegetation and soil characteristics.
 - Monitor utilization closely and remove livestock from pastures or the allotment if allowable use criteria will be exceeded early.
 - Adjust stocking rate using April-May-June precipitation to match current forage production available for livestock (Heitschmidt, Klement, & Haferkamp, 2005) to ensure adequate residual ground cover for watershed protection and wildlife habitat.
 - Adjust timing and duration of grazing to reduce utilization of key native grasses and riparian vegetation.
 - Adjust timing and duration of grazing to reduce the opportunity for upland and riparian plants to be grazed repeatedly during the growing season⁷.
 - Modify annual grazing schedule to graze pastures scheduled for rest following the growing season to shorten grazing periods and facilitate resource protection on the allotment as a whole.
 - During droughts longer than 1 year, if pastures managed as native are grazed during the growing season, defer grazing until after the end of the growing season the following year.
 - During the growing season, shift use to pastures managed as non-native to defer grazing of native pastures until after the growing season.

⁷ The growing season is defined as the portion of the year during which temperature and moisture typically enable plant growth (Vallentine, 2001); for key species in the planning area, this period typically falls between April 1 and July 15.

- Consistent with water rights, consider authorizing water hauling to reduce impacts to riparian areas and wetlands.
- Encourage permittees to closely manage livestock watering systems (e.g., turn off troughs when not needed by livestock) to facilitate conservation of water within streams and springs.
- As the length and severity of the drought increase, livestock grazing management would be more constrained to reduce impacts to soil, water, upland and riparian vegetation, and fish and wildlife habitat; incorporate the measures outlined above as appropriate.
- To facilitate perennial plant recovery following drought, some of the measures outlined above may continue to be implemented as necessary. Pre-drought grazing levels should not be implemented too rapidly following a return to normal precipitation levels as drought-stressed plants require time to regain vigor to resist normal grazing pressure (Vallentine, 2001).

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**APPENDIX G:
CONSERVATION PLANS,
STRATEGIES, AND
AGREEMENTS**

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APPENDIX G: CONSERVATION PLANS, STRATEGIES, AND AGREEMENTS

The following comprise the conservation plans, strategies, and agreements in place for species in the planning area. This list will be updated as new plans, strategies, and agreements are adopted and existing plans, strategies, and agreements become obsolete, expire, or are replaced.

Conservation Agreements (CAs)

- **Conservation Agreement between BLM Idaho State Office and the US Fish and Wildlife Service Snake River Fish and Wildlife Office. August 2009** – The purpose of the CA is to provide for the conservation of slickspot peppergrass related to existing Idaho BLM land use plans (LUP) and a subset of ongoing actions.
- **Conservation Agreement for Bureau of Land Management – Idaho State Office, US Fish and Wildlife Service – Snake River Basin and Spokane Field Offices: Idaho Bureau of Land Management Existing Land Use Plans Consultation. Signed by Idaho BLM State Director. December 2005** – This CA is intended to promote the conservation of Listed, Proposed, and Candidate species that have not previously undergone LUP-level consultation under the Endangered Species Act.
- **Candidate Conservation Agreement for Slickspot Peppergrass (*Lepidium papilliferum*). 2003. Governor’s Office of Species Conservation, et al. 158 pp.** – The purpose of this Candidate Conservation Agreement (CCA) is to expedite implementation of conservation measures for slickspot peppergrass in Idaho. Threats that warrant listing should be significantly reduced, mitigated, or eliminated through implementation of this CCA, and additional measures to enhance slickspot peppergrass occurrences and habitat are provided for.

Memoranda of Understanding (MOUs)

- **Interagency Memorandum of Understanding to Implement the Interior Columbia Basin Strategy. November 2002** – This MOU directs all Bureau of Land Management (BLM) offices to implement the Interior Columbia Basin Strategy to ensure an ecosystem-based process is used in resource management plan (RMP) revisions within the Columbia River Basin.
- **Memorandum of Understanding to Support and Implement to the Extent Practicable and Where Appropriate the Intent and Actions Contained in the 2006 Conservation Plan for the Greater Sage-grouse in Idaho. July 2006** – This MOU was signed by Idaho Department of Fish and Game, Idaho Department of Lands, Idaho State Department of Agriculture, Office of Species Conservation, Idaho BLM, United States Forest Service Region 4, Animal and Plant Health Inspection Service-Wildlife Service, and Natural Resource Conservation Service to support and implement the sage-grouse conservation plan.

Memoranda of Agreement

- **Memorandum of Agreement for Endangered Species Act Section 7 Programmatic Consultation and Coordination among Bureau of Land Management, Forest Service, National Marine Fisheries Service, and US Fish and Wildlife Service. August 30, 2000** – This agreement outlines consultation procedures for the BLM and other federal agencies.

Conservation Strategies

- **Interior Columbia Basin Strategy. 2002. A Strategy for Applying the Knowledge gained by the Interior Columbia Basin Ecosystem Management Project to the Revision of Forest and Resource Management Plans and Project Implementation. Included as Attachment 1 in Bureau of Land Management IB No. ID-2003-062. 11 pp.** – The strategy provides management direction for terrestrial and aquatic ecosystems and directs the BLM to use multi-scale analysis in resource management planning. It also identified emphasis areas for preparing an Aquatic Conservation Strategy as a component of the RMP.
- **Idaho Comprehensive Wildlife Conservation Strategy. 2005. Prepared by Idaho Department of Fish and Game** – This strategy identifies Species of Greatest Conservation Need as well as strategic direction for conservation and management of these species.
- **National Sage-Grouse Habitat Conservation Strategy. 2004. Prepared by the Bureau of Land Management. 25 pp.** – This strategy sets goals and objectives, assembles guidance and resource materials, and provides comprehensive management direction for the BLM's contributions to the on-going multi-state greater sage-grouse conservation effort.

Recovery Plans

- **Snake River Aquatic Species Recovery Plan. 1995. US Fish and Wildlife Service, Snake River Basin Office, Ecological Services, Boise, Idaho. 92 pp.** – The recovery plan includes short-term and long-term objectives to protect known live colonies of Federally listed snails, as well as redband trout, Snake River white sturgeon, and Shoshone sculpin, by eliminating or reducing known threats to these species and their habitat.
- **Recovery Plan for the Bruneau Hot Springsnail (*Pyrgulopsis bruneauensis*). 2002. US Fish and Wildlife Service, Region 1, Portland, Oregon. 52 pp.** – The primary objective of the recovery plan is to recover the species to a point where listing is no longer warranted by implementing groundwater management activities and monitoring species recovery.
- **Draft Recovery Plan for the Jarbidge River Distinct Population Segment of Bull Trout (*Salvelinus confluentus*). 2007. US Fish and Wildlife Service, Portland, Oregon.** – The primary objective of the plan is to reduce threats to bull trout and their habitat and to increase population numbers to habitat potential.

Conservation Plans

- **Snake River White Sturgeon Conservation Plan. 2003. Prepared by Idaho Power Company. 324 pp.** – This plan outlines what Idaho Power will do to maintain white sturgeon (*Acipenser transmontanus*) populations in the Snake River including population assessments, population trend monitoring, habitat alteration due to flow regulation, water quality monitoring, and more. BLM has no obligations under this plan, but would support actions that reduce impacts to the Snake River from BLM land.
- **Conservation Plan for the Greater Sage-grouse in Idaho. 2006. Prepared by the Idaho Sage-grouse Advisory Committee** – This plan provides guidelines for management and conservation of habitat for sage-grouse.
- **North American Mule Deer Conservation Plan. 2004. Prepared by Mule Deer Working Group of the Western Association of Fish and Wildlife Agencies. 17 pp.** – This plan provides general guidelines for managing habitat for mule deer in North America.

Management Plans

- **Mule Deer Management Plan. 2008. Prepared by Idaho Department of Fish and Game. 73 pp. –**
This plan provides general guidelines for management of habitat for mule deer.

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**APPENDIX H:
IMPORTANT SEASONAL
PERIODS AND HABITAT
REQUIREMENTS FOR
SELECTED PLANT, FISH,
AND WILDLIFE SPECIES**

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APPENDIX H: IMPORTANT SEASONAL PERIODS AND HABITAT REQUIREMENTS FOR SELECTED PLANT, FISH, AND WILDLIFE SPECIES

Plants

In general, critical time periods for special status plants are during the flowering period (Table H- 1). Exceptions are earth lichen and slickspot peppergrass, which have habitats that are sensitive to disturbance while soils are saturated (January through May), and cowpie and matted buckwheat, which are sensitive to disturbance year-round.

Table H- 1. Flowering Periods for Special Status Plants in the Planning Area

Common Name	Scientific Name	Flowering Period
Annual/Biennial Forbs		
Alkali cleomella	<i>Cleomella plocasperma</i>	May through September
Desert pincushion	<i>Chaenactis stevioides</i>	April through June
Least phacelia	<i>Phacelia minutissima</i>	July through August
Rigid threadbush	<i>Nemacladus rigidus</i>	May through June
Slickspot peppergrass	<i>Lepidium papilliferum</i>	April through July
Spreading gilia	<i>Ipomopsis polycladon</i> [syn. <i>Gilia polycladon</i>]	April through June
White eatonella	<i>Eatonella nivea</i>	April through July
White-margined wax plant	<i>Glyptopleura marginata</i>	May through June
Perennial Forbs		
American wood sage	<i>Teucrium canadense</i> var. <i>occidentale</i>	April through August
Broadleaf fleabane	<i>Erigeron latus</i>	June through July
Bruneau River phlox	<i>Linanthus glabrum</i> [syn. <i>Leptodactylon glabrum</i>]	April through July
Calcareous buckwheat	<i>Eriogonum ochrocephalum</i> var. <i>calcareum</i>	July through September
Chatterbox orchid	<i>Epipactis gigantea</i>	April through early August
Cusick's primrose	<i>Primula cusickiana</i> var. <i>cusickiana</i>	March through May
Davis peppergrass	<i>Lepidium davisii</i>	May through July
Four-wing milkvetch	<i>Astragalus tetrapterus</i>	April through early July
Greeley's wavewing	<i>Cymopterus acaulis</i> var. <i>greeleyorum</i>	March through April
Janish penstemon	<i>Penstemon janishiae</i>	April through mid-June
Lewis buckwheat	<i>Eriogonum lewisii</i>	July through October
Matted cowpie buckwheat	<i>Eriogonum shockleyi</i> [syn. <i>Eriogonum shockleyi</i> var. <i>shockleyi</i>]	May through June
Newberry's milkvetch	<i>Astragalus newberryi</i> var. <i>castoreus</i>	April through early July
Owyhee milkvetch	<i>Astragalus yoder williamsii</i>	June through July
Packard's cowpie buckwheat	<i>Eriogonum shockleyi</i> [syn. <i>Eriogonum shockleyi</i> var. <i>packardiae</i>]	May through July
Spine-noded milkvetch	<i>Peteria thompsoniae</i>	Late April through June
Two-headed onion	<i>Allium anceps</i>	Early April through June
Non-Vascular Plants		
Earth lichen	<i>Catapyrenium congestum</i>	September through November
Woven-spore lichen	<i>Texosporium sancti-jacobi</i>	September through November

Fish and Aquatic Invertebrates

Table H- 2 includes the majority of identified important seasonal periods for special status fish and aquatic invertebrates in the planning area, as well as the habitats in which they occur in the planning area. These periods may vary annually due to environmental variables.

Table H- 2. Important Seasonal Periods and Habitats for Special Status Fish and Aquatic Invertebrates in the Planning Area

Species	Important Seasonal Periods	Approximate Dates	Habitats
Fish			
Bull trout	Spawning	August through November	Occupies habitats varying from small headwater streams to 3 rd and 4 th order streams. Prefer streams where water temperatures do not exceed 59°F. Prefer stream substrates with loose, clean gravel, numerous large pools (>3.3 ft deep), stable and undercut streambanks and abundant large wood debris (FWS, 2004).
	Incubation	November through May	
Redband trout ^A	Spawning	May through June	Occupies habitats with large pools (1-1.3 ft deep) that span half the width of the stream and adjacent to the thalweg (deepest part of the stream), stable streambanks (>80%), and water temperatures from 50-68°F (Muhlfeld, 2002). Prefers stream substrates with low fines (Muhlfeld, 2002).
	Incubation	June through August	
Snake River white sturgeon ^A	Spawning	March through June	Occurs in isolated populations in the Snake River but require free-flowing cold water environments for successful spawning. Often found in turbulent pools with high velocity. White sturgeon prefer deep pool habitat with a fine-bottom substrate. Spawning occurs in waters >3 m deep and over a cobble-sized substrate (64-256 mm) (Idaho Power Company, 2003).
	Incubation	March through mid July	
Shoshone sculpin ^A	Spawning	March through August	Endemic to cold-water springs in the Snake River in the Hagerman Valley. Prefer spawning habitats with non-embedded cobbles or boulders, water temperatures less than 63°F, and surface velocity <40 cm/second. Normally are associated with cover such as rocks, cobble, gravel or vegetation. Juveniles can be found on sand or mud substrates with submerged vegetation (FWS, 1995).
	Incubation	March through September	
Aquatic Invertebrates			
Bliss Rapids snail	Reproduction	October through February	Occurs in stable cobbles and boulders in flowing waters of unimpounded reaches of the Snake River and in a few spring habitats in the Hagerman Valley. Also found in spring influenced areas or along the edges of rapids that flank the shoreline. Can be locally abundant, especially on smooth rock surfaces with red algae (FWS, 1995).
Bruneau hot springsnail	Reproduction	Year-round	Only found in warm water springs and seeps along a 5 mile reach of the lower Bruneau River and its tributary Hot Creek. Occupies flowing geothermal springs and seeps with temperatures ranging from 60°F to 98°F (24°C to 35°C). Found on exposed rock, gravel, sand, mud, and algae substrates (FWS, 2002).
California floater ^A	Reproduction	Dates unknown	Found in well-oxygenated mud to fine gravel beds. Often is found immediately above or below rapids in mud-sand substrates with good water quality. Life history requirements have not been thoroughly investigated (FWS, 1995).

Species	Important Seasonal Periods	Approximate Dates	Habitats
Columbia pebblesnail ^A	Reproduction	Dates unknown	Found in flowing waters with gravel- to boulder-sized substrate at the edges or downstream of rapids and whitewater areas. Avoids areas with swift current and spring systems. Life history requirements have not been thoroughly investigated (FWS, 1995).
Short-face lanx ^A	Reproduction	Dates unknown	Found in areas with steady to strong current on the under surfaces of large rocks in the Snake River. Can also be found in large springs in rapids and boulder bars below rapids. Requires water with high amounts of oxygen (FWS, 1995).
Snake River physa snail	Reproduction	Dates unknown	Prefers the underside of gravel- to boulder-sized rock in swift currents and deep waters at the margins of rapids. Also found on boulders in the deepest part of the river. Prefers cold, clean, well-oxygenated, flowing water with low turbidity. Much of the habitat for this species may be in deep water beyond the range of routine sampling. Life history requirements have not been thoroughly investigated (FWS, 1995).
Utah valvata snail	Reproduction	Dates unknown	Found in mud, silt, and fine sand substrates in shallow shore-line water and in pools adjacent to rapids or flowing waters associated with large spring complexes and submerged vegetation. Avoids areas with heavy current or rapids. Also uses deep pools near rapids. Requires cold, clean, well-oxygenated water with low turbidity (FWS, 1995).

^A Egg incubation periods and emergence dates are estimates. Rates vary according to local water temperatures.

Wildlife

Table H- 3 and Table H- 4 include the majority of identified important seasonal periods for special status wildlife and selected general wildlife in the planning area, as well as the habitats in which they occur in the planning area. These periods may vary annually due to environmental variables like temperature, precipitation, and habitat condition.

Table H- 3. Important Seasonal Periods and Habitats for Special Status Wildlife in the Planning Area

Species	Important Seasonal Periods	Approximate Dates	Habitats
Invertebrates (terrestrial)			
Bruneau Dunes tiger beetle	Breeding	March through mid June	Sparsely vegetated, lower elevation dunelands. Adults burrow into sand dunes. Larval habitat is sparsely vegetated areas between dunes. Known only from the Bruneau Dunes State Park and Indian Cove areas. Larval burrows are vulnerable to collapse (Bauer, 1991) year round.
	Larval	Year-round	
Amphibians			
Columbia spotted frog	Breeding	Mid April through July	Higher elevation wetlands associated with rivers, creeks, springs, and marshes with slack water areas (e.g., beaver ponds, oxbows) for reproduction and ponds and springs for hibernation (Howard & Munger, 2003).
	Winter	October through March	

Species	Important Seasonal Periods	Approximate Dates	Habitats
Northern leopard frog	Breeding	April through July	Wetlands associated with rivers, creeks, springs, and marshes with slack water areas (e.g., beaver ponds, oxbows) for reproduction and ponds and springs for hibernation (Nussbaum, Brodie, & Storm, 1983).
	Winter	October through March	
Western toad	Breeding	April through July	Wetlands associated with rivers, creeks, and springs with slack water areas for reproduction. Adults use small mammal burrows in uplands for hibernation (Nussbaum, et al., 1983).
	Winter	October through March	
Woodhouse toad	Breeding	April through July	Creeks, springs, and marshes with slack water areas (e.g., beaver ponds, oxbows) for reproduction and hibernation (Nussbaum, et al., 1983).
	Winter	October through March	
Reptiles			
Great Basin black-collared lizard	Breeding	Dates unknown locally	Generally lower elevation areas with rock outcrops and/or boulder piles and sparse herbaceous vegetation (Groves, Butterfield, Lippincott, Csuti, & Scott, 1997).
Longnose snake	Breeding	Dates unknown locally	Generally lower elevation areas with sandy soil for burrowing. Uses rodent burrows for reproduction and hibernation (Groves, et al., 1997).
Western groundsnake	Breeding	Dates unknown locally	Generally lower elevation areas with sandy soil for burrowing. Readily uses rodent burrows for reproduction and hibernation (Groves, et al., 1997).
Birds			
American white pelican	Breeding/ Nesting	Mid April through June	Forages primarily along Snake River and reservoirs. Usually nests on sparsely vegetated islands or mud/gravel bars.
Bald eagle	Winter	Mid November through February	Found foraging primarily along the Snake River Canyon during winter. Limited habitat for nesting in the planning area.
	Breeding	Mid May through August	
Black-throated sparrow	Breeding/ Nesting	Mid April through mid July	Sagebrush steppe habitats.
Brewer's sparrow	Breeding/ Nesting	Mid April through mid July	Sagebrush steppe habitats.
Calliope hummingbird	Breeding/ Nesting	May through mid August	Aspen stands and riparian zones with taller willows and adequate perennial native forbs.
	Migration	Mid August through September	
Columbian sharp-tailed grouse	Display/ Breeding	Mid March through June	Display, breeding, and nesting in mountain shrub, sagebrush steppe to grasslands.
	Nesting	May through mid July	
	Winter	November through mid March	Aspen and mountain shrub habitats are critical when snow is deep.
Ferruginous hawk	Breeding	March through July	Sagebrush steppe and grasslands. Nests in isolated trees (junipers) or in juniper stringers, or on the ground on bluffs or rock outcrops.

Species	Important Seasonal Periods	Approximate Dates	Habitats
Greater sage-grouse	Display/ Breeding	Mid February through mid May	Sagebrush steppe habitats (Connelly, Schroeder, Sands, & Braun, 2000; Idaho Sage-grouse Advisory Committee, 2006).
	Nesting/Early Brood Rearing	Mid March through mid June	Sagebrush steppe habitats (Connelly, et al., 2000; Idaho Sage-grouse Advisory Committee, 2006).
	Winter	January through mid March	Windswept ridges when snow is deep in lowland areas (Connelly, et al., 2000).
Lewis woodpecker	Breeding/ Nesting	May through mid July	Stands of mature aspen with larger diameter (>10 inches in diameter at breast height) trees.
Loggerhead shrike	Breeding/ Nesting	Mid April through mid July	Sagebrush steppe areas with tall sagebrush and black greasewood habitats
Mountain quail	Breeding	May through mid July	Riparian zones and mountain shrub to forested areas.
	Winter	Mid November through April	Typically winter in riparian zones and mountain shrub habitats.
Northern goshawk	Breeding/ Nesting	March through July	Stands of mature aspen with larger diameter (>10 inches in diameter at breast height) trees.
Peregrine falcon	Breeding/ Nesting	March through July	Canyonlands usually with perennial water source in bottom. Forages in canyon and adjacent uplands.
Prairie falcon	Breeding/ Nesting	March through July	Canyonlands usually with perennial water source in bottom. Forages in canyon and adjacent uplands.
Sage sparrow	Breeding/ Nesting	Mid April through mid July	Sagebrush steppe habitats.
Sage thrasher	Breeding/ Nesting	Mid March through July	Sagebrush steppe habitats.
Trumpeter swan	Winter	Mid November through April	Winters along Snake River. Not known to nest locally.
Willow flycatcher	Breeding/ Nesting	Mid May through mid July	Riparian zones dominated by willows.
White-faced ibis	Breeding/ Nesting	Mid April through June	Bulrush- and/or cattail-dominated wetlands.
Yellow-billed cuckoo	Breeding	Mid May through August	Observed rarely on islands in the Snake River with overstory trees and dense shrub understory.
Mammals			
California bighorn sheep	Breeding	Mid October through December	Canyonlands with perennial water and adjacent upland plateaus. Prefer areas with little competition from other ungulates.
	Winter	December through March	
	Lambing	Mid April through June	
Fringed myotis	Winter	November through March	Canyons and pinyon/juniper forests. Forages in canyons or well away from canyons in the uplands.
Kit fox	Denning	Dates unknown locally	Sagebrush steppe

Species	Important Seasonal Periods	Approximate Dates	Habitats
Pallid bat	Breeding	October through December	Canyonlands and talus with perennial water (Hermanson & O'Shea, 1983).
	Rearing	May through August	
Piute [Great Basin] ground squirrel	Spring through early summer	Mid March through June	Sagebrush steppe and in meadows, usually with deeper soils.
Pygmy rabbit	Year-round	Year-round	Sagebrush steppe usually with deeper soils also in salt desert shrub, mountain shrub habitats.
Spotted bat	Winter	Dates unknown locally	Canyonlands with perennial water. Forages in canyon or well away from canyon in the uplands.
Townsend big-eared bat	Winter	November through March	Canyonlands with perennial water. Uses caves, lava tubes, mine adits for communal roosts (maternity and winter). Forages in canyons or well away from canyons in the uplands.
Wyoming ground squirrel	Spring through early summer	Mid March through June	Sagebrush steppe and in meadows, usually with deeper soils.

Table H- 4. Important Seasonal Periods for General Wildlife in the Planning Area

Species or Group of Species	Important Seasonal Periods	Approximate Dates
Pronghorn	Breeding	Mid September through mid October
	Winter	December through March
	Fawning	Mid May through June
Mule Deer	Breeding	Mid October through December
	Winter	December through March
	Fawning	May through June
Elk	Breeding	September through October
	Winter	December through March
	Calving	May through June
Upland game birds	Breeding/Nesting	March through June
	Winter	December through February
Neo-tropical migratory birds	Breeding/Nesting	Mid April through mid July
	Spring migration	March through mid May
	Fall migration	August through October
Raptors	Pair formation/Nesting	Mid February through mid June
	Fledging young	Mid June through mid July
Amphibians	Breeding	April through June
	Hibernation	Mid October through mid April

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**APPENDIX I:
CULTURAL RESOURCE
USE CATEGORIES**

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APPENDIX I: CULTURAL RESOURCE USE CATEGORIES

All cultural properties in the planning area, whether already recorded or projected to occur, are allocated to one or more of the uses described below. Allocations apply to individual properties and to classes of similar properties. The purpose of these allocations is to provide up-front management guidance to aid the authorized officer in responding to conflicts between specific cultural resources and land uses and to enable the authorized officer to analyze needs and develop appropriate mitigation and treatment options during the compliance process for proposed actions. Managing cultural properties according to use categories does not relieve the Bureau of Land Management (BLM) of its obligations to consult with the tribes, the State Historic Preservation Officer (SHPO), or the Advisory Council on Historic Preservation (ACHP) regarding the specific treatment of historic properties, or the potential effects of land use proposals on cultural resources.

Allocations may be revised when site conditions change or new information becomes available. Changes that may warrant revision of a site's use allocation include:

- Destruction of a site's primary use values due to natural or human caused disturbance.
- When ethnographic, historical, or archaeological research reveals important but previously unrecognized values that may be damaged or destroyed under the current allocation or that may more effectively meet resource management plan (RMP) goals and objectives if used in another way.
- When a site's primary values are legitimately expended or its use potential is fully realized.
- Following consultation with the tribes, SHPO, or ACHP, as appropriate for the resource and use category being revised.

Traditional Use

The Traditional Use category applies to any cultural resource in the planning area known to be perceived by the Shoshone-Paiute Tribes or the Shoshone-Bannock Tribes as important in maintaining their cultural identity, heritage, or well-being. Cultural properties assigned to this category are managed in ways that recognize the importance ascribed to them and seek to accommodate their continuing traditional use.

Management Direction

1. Avoidance is the preferred treatment.
2. If impacts are unavoidable, data recovery and/or other measures will be implemented after appropriate consultation and before implementation of a proposed activity.
3. Sites in this category are available for use by members of the Shoshone-Paiute Tribes and the Shoshone-Bannock Tribes for traditional uses. Access to these sites will be accommodated to the extent practicable.
4. Ethnographic studies may be initiated when funding is available to identify these types of properties and to ensure that they receive the appropriate level of management.

The following property types in the planning area are allocated to Traditional Use:

- Historic/Ethnographic Tribal Sites
- Ceremonial Locations
- Burial Sites⁸
- Sacred Sites
- Natural Resource Collection Sites
- Native American Trails

⁸ Native American burials on public lands would normally be subject to the Native American Graves Protection and Repatriation Act of 1990 (NAGPRA).

Conservation for Future Use

The Conservation for Future Use category is reserved for any cultural property in the planning area that is unusual because of scarcity or has a research potential that surpasses the current state of the art, singular historic importance, cultural importance, architectural interest, or comparable reasons. These properties are not currently available for consideration as the subject of scientific or historical study that would result in its physical alteration.

Management Direction

1. Avoidance is the preferred mitigation measure. Discretionary activities will usually be denied within the boundaries of these resources if such activities are likely to result in adverse effects to the cultural property.
2. If impacts are unavoidable, data recovery or other measures may be allowed after going through the required consultation processes. Avoidance should be possible in most cases.
3. Sites in this category have the highest priority for protection and preservation and will generally not be available for other uses, including research and interpretation.
4. A resource listed in the Conservation for Future Use category may be placed in another use management category if: (a) BLM identifies the specific criteria underlying this classification (e.g., outstanding research potential), (b) the specific reasons for prohibitions or limitations are identified, and (c) BLM identifies or accepts methodological, technological, or other criteria that, if met or implemented, justify alterations to the integrity of the resource and placement in another use category.
5. Protective actions may be taken to ensure preservation of those qualities providing the basis for classification. These actions, such as fencing, installation of erosion control structures, road closures, etc., must not impinge on the values and integrity of the site. Sites in this category are generally the highest priority for monitoring of potential threats.

The following property types in the planning area are allocated to Conservation for Future Use:

- Cemeteries and Grave Sites

Scientific Use

The Scientific Use category applies to any cultural property in the planning area available for consideration as the subject of scientific or historical study at the present time, using currently available research techniques. Study includes methods that would result in the property's physical alteration or destruction. This category applies almost entirely to prehistoric and historic archaeological properties, where the method of use is generally archaeological excavation, controlled surface collection, and/or controlled recordation (data recovery). Recommendations to allocate individual properties to this use must be based on documentation of the kinds of data the property is thought to contain and the data's importance for pursuing specified research topics. Properties in this category need not be conserved in the face of a research or data recovery (mitigation) proposal that would make adequate and appropriate use of the property's research importance.

Management Direction

1. Data recovery rather than avoidance is the preferred option; although sites should be preserved until research potential is realized. Data recovery should be accomplished prior to impacts from conflicting uses or natural or human-caused deterioration and may be undertaken to mitigate impacts that have already occurred.
2. Resources in this category are available for testing and excavation by qualified researchers operating under valid permits with acceptable research designs. Resources in this category may be discharged from use or assigned to a category other than Conservation for Future Use once the resource has no further scientific use.

The following property types in the planning area are allocated to Scientific Use:

- Fur Trade Camps

- Cabins/Line Shacks, including Ruins
- Abandoned Homesteads, including Ruins
- Historic Cairns
- Trash Dumps – Community
- Irrigation Project Construction Camps
- Moonshine Distilleries
- Prehistoric Archaeological Sites that are not identified through consultation as traditional cultural properties or sacred sites

Public Use

This category may be applied to any cultural property in the planning area found to be appropriate for use as an interpretive exhibit in place or for related educational and recreational uses by members of the general public. This category may also be applied to historic features (e.g., roads, dams) that are still in use.

Management Direction

1. Interpretation through the development of on-site facilities and/or published materials made available to the public is the preferred treatment. Interpretation will be based on appropriate archaeological, historic, or ethnographic research and will reflect consultation with the Shoshone-Paiute Tribes and the Shoshone-Bannock Tribes when Native American information is included.
2. These sites are available for educational and recreational use by the general public. Testing, data recovery, historic research, oral histories, ethnographic research, and other treatments may be necessary to gather sufficient information for suitable educational and interpretive uses and to prevent damage from proposed recreational or educational uses.
3. Interpretive facility designs will be consistent with the area's visual resource management (VRM) class and compatible with the physical setting of the interpreted site.
4. Fences, erosion control devices, vehicle barriers, parking areas, and other protective structures may be constructed to prevent or limit site damage.

The following property types in the planning area are allocated to Public Use:

- Crippen Grade
- Non-CCC Reservoirs – Still in Use
- Portions of Historic Roads and Trails that are Improved for Modern Use

Experimental Use

This category may be applied to a cultural property in the planning area determined to be well-suited for controlled experimental study, conducted by BLM or others concerned with the techniques of managing cultural properties, which would result in the property's alteration, possibly including loss of integrity and destruction of physical elements. Committing cultural properties or the data they contain to loss must be justified in terms of specific information that would be gained and how it would aid in the management of other cultural properties. Experimental study should aim toward understanding the kinds and rates of natural or human-caused deterioration, testing the effectiveness of protection measures, or developing new research or interpretation methods and similar kinds of practical management information. It would not be applied to cultural properties with traditional cultural importance, research potential, or public use potential.

Management Direction

1. These sites are reserved for studies concerning the effects of erosion, fire, land treatments, or other site formational processes on cultural resources. The preferred treatment for sites placed in an Experimental Use category will be avoidance unless the proposed impacts are related to the study being conducted.

2. If impacts unrelated to the study are unavoidable, then the site may be placed in the Discharged from Management category, or may undergo data recovery or other treatment depending on eligibility for the National Register of Historic Places (NRHP) or other factors and after appropriate consultation.
3. If BLM determines the useful experimental life of the site is exhausted, then it can be placed into the Discharged from Management or other appropriate category.

Individual sites within the following property types in the planning area may be allocated to Experimental Use as needed:

- Temporary Camps – Livestock Industry
- Trash Dumps – Unassociated Household Refuse

Discharged from Management

This category is assigned to cultural properties in the planning area that have no remaining identifiable use. These are most often prehistoric and historic properties, such as small surface scatters of artifacts or debris, whose limited research potential is effectively exhausted during documentation. More complex archaeological properties that have had their salient information collected and preserved through mitigation or research may be discharged from management, as should cultural properties destroyed by any natural or human activity. Properties discharged from management remain in the inventory, but are removed from further management attention and do not constrain other land uses. Particular classes of unrecorded cultural resources may be named and described in advance as dischargeable upon documentation, but specific cultural properties must be inspected in the field and recorded before they may be discharged from management.

Management Direction

1. Preservation is not required.
2. Tribal consultation is required before any site of cultural or religious significance to the tribes is placed in this category.
3. SHPO consultation is required before any property previously determined as eligible for the NRHP or unevaluated property is placed in this category.

The following property types in the planning area are Discharged from Management:

- General Transportation Routes (e.g., ranching, recreation, farming)
- Temporary Camps – Livestock Industry
- Generic Range Developments (e.g., fences, corrals, water tanks).
- Trash Dumps – Unassociated Household Refuse
- Non-CCC Reservoirs – Breached
- Military – Aircraft Debris
- Military – Expended Ordnance
- Isolated Historic Artifacts
- Small, Non-Diagnostic Lithic Scatters
- Modern Period (post 1960) Sites, Facilities, and Features

Traditional/Scientific Use

This category is assigned to cultural properties in the planning area important because of their links to traditional values, but also important for the archaeological information they contain.

Management Direction

1. Access for traditional use will be accommodated to the extent and manner practicable.
2. Non-destructive recordation, photography, mapping, and analysis, as well as actions needed to protect artifacts and sites threatened by theft or physical destruction, including research and stabilization related to criminal violations of the Archaeological Resources Protection Act, will be allowed.

3. Research that does not conflict with traditional use may be allowed after consultation with the tribes, SHPO, and ACHP, as appropriate.
4. Public dissemination of research results will take into account the confidentiality and privacy concerns of the tribes.
5. Cultural resource data recovery, using standard archaeological methods, may be allowed, after appropriate consultation, if impacts to sites are unavoidable and non-destructive conservation measures are not adequate or feasible, and when necessary to determine a site's eligibility for the NRHP or mitigate adverse effects to NRHP-eligible or -listed properties.

The following property types in the planning area are allocated to Traditional/Scientific Use:

- Prehistoric Rock Art Sites (petroglyphs and pictographs)
- Prehistoric Cave and Rock Shelters
- Prehistoric Open Habitation Sites
- Prehistoric Lithic Scatters
- Tool Stone Quarries
- Prehistoric Rock Features (e.g., hunting blinds, rock circles, linear rock alignments, and cairns)
- Isolated Prehistoric Artifacts

Public/Scientific Use

This category is assigned to cultural properties in the planning area that are most valuable for public use, but that may require scientific data collection to enhance their interpretive potential.

Management Direction

1. Sites assigned to this category will be available for educational and recreational use by the general public. Interpretive and educational actions, including but not limited to on-site interpretation, signage, or publications, are the preferred management actions.
2. Data recovery or other treatments deemed necessary to provide sufficient information for suitable educational and interpretive uses, or to treat damage from recreational uses, may be authorized providing they do not diminish the public use potential of the site.
3. Data recovery and stabilization actions related to criminal violations of ARPA will be allowed.
4. To the extent practical, data recovery and other treatment actions will involve volunteers.

The following property types in the planning area are allocated to Public/Scientific Use:

- Oregon Trail Campsites
- Pilgrim Stage Station
- Historic School Sites
- Historic Inscriptions
- Civilian Conservation Corps (CCC) Dams, Roads, and Related Sites – Still in Use
- CCC Dams, Roads, and Related Sites – No Longer Used

Conservation/Public Use

This category includes cultural resources in the planning area that are suitable for long-term preservation, but also possess high public use values.

Management Direction

1. Sites in this category will be managed to avoid degradation from competing land uses and from natural processes.
2. Sites may be used for interpretation or other public purposes and for data recovery and other treatments if these uses do not conflict with conservation of the property.

The following property types in the planning area are allocated to Conservation/Public Use:

- Oregon Trail (Main Route and South Alternate)

- Kelton Freight Road
- Toana Freight Road
- Wilkins Rock Fence

Summary of Cultural Resource Use Allocations

Table I- 1 summarizes the cultural resource use categories to which properties of cultural and religious importance and prehistoric and historic sites would be allocated under the action alternatives.

Table I- 1. Properties of Cultural and Religious Importance

Property Type	Use Category
Properties of Cultural and Religious Importance	
Historic/Ethnographic Tribal Sites	Traditional
Ceremonial Locations	Traditional
Burial Sites	Traditional
Sacred Sites	Traditional
Natural Resource Collection Sites	Traditional
Native American Trails	Traditional
Prehistoric Sites	
Petroglyphs	Traditional/Scientific
Pictographs	Traditional/Scientific
Caves and Rock Shelters	Traditional/Scientific
Open Habitation Sites	Traditional/Scientific
Lithic Scatters with potential for subsurface deposits, diagnostic artifacts, surface patterning of cultural debris, or evidence of cultural features	Traditional/Scientific
Lithic Scatters with no or little potential for subsurface deposits, and no diagnostic artifacts, surface artifact patterning, or evidence of cultural features	Traditional/Scientific or Discharged from Management
Tool Stone Quarry	Traditional/Scientific
Hunting Blinds	Traditional/Scientific
Rock Circles	Traditional/Scientific
Linear Rock Alignments	Traditional/Scientific
Cairns	Traditional/Scientific
Isolated Prehistoric Artifacts	Traditional/Scientific or Discharged from Management
Archaeological sites that are not identified through consultation as traditional cultural properties or sacred sites	Scientific
Historic Sites	
Fur Trade Camps	Scientific
Oregon Trail (Main Route)	Conservation/Public
Oregon Trail (South Alternate)	Conservation/Public
Oregon Trail Campsites	Public/Scientific
Kelton Freight Road (NRHP-eligible segments)	Conservation/Public
Pilgrim Stage Station	Public/Scientific
Toana Freight Road (NRHP-listed contributing segments)	Conservation/Public
Crippen Grade	Public
General Transportation Routes (Ranching, Recreation, Farming, etc.)	Discharged from Management
Portions of Historic Roads and Trails that are Improved for Modern Use	Public
Cabins/Line Shacks, including Ruins	Scientific
Temporary Camps – Livestock Industry	Experimental or Discharged from Management
Historic School Sites	Public/Scientific
Abandoned Homesteads, including Ruins	Scientific
Cemeteries and Grave Sites	Conservation

Property Type	Use Category
Cairns	Scientific
Wilkins Rock Fence	Conservation/Public
Generic Range Developments (Fences, Corrals, Water Tanks, etc.)	Discharged from Management
Trash Dumps – Community	Scientific
Trash Dumps – Unassociated Household Refuse	Experimental or Discharged from Management
Historic Inscriptions	Public/Scientific
Irrigation Project Construction Camps	Scientific
CCC Dams, Roads, and Related Sites – Still in Use	Public/Scientific
CCC Dams, Roads, and Related Sites – No Longer Used	Public/Scientific
Non-CCC Reservoirs – Still in Use	Public
Non-CCC Reservoirs – Breached	Discharged from Management
Moonshine Distilleries	Scientific
Military – Aircraft Debris	Discharged from Management
Military – Expended Ordnance	Discharged from Management
Isolated Historic Artifacts	Discharged from Management
Modern Period (post 1960) Sites, Facilities, and Features	Discharged from Management

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**APPENDIX J:
ALLOTMENT SELECTIVE
MANAGEMENT
CATEGORIES UNDER THE
NO ACTION ALTERNATIVE**

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APPENDIX J: ALLOTMENT SELECTIVE MANAGEMENT CATEGORIES UNDER THE NO ACTION ALTERNATIVE

Table J- 1 displays the selective management categories for planning area allotments under the No Action Alternative. The “M” allotments generally would be managed to maintain satisfactory resource conditions; “I” allotments generally would be managed to improve resource conditions; and “C” allotments would receive custodial management to prevent resource deterioration. Under the action alternatives, adjustments to an allotment’s Selective Management Category would be made during the grazing permit renewal process following the Record of Decision for the Resource Management Plan.

Table J- 1. Selective Management Categories for Allotments under the No Action Alternative

Current Allotments ^A	Allotment Number	Management Category
Antelope Butte North	1087	I
Antelope Springs	1096	I
Bear Creek Idaho	1026	M
Black Mesa	1080	I
Blackrock Pocket	1102	M
Blue Butte	277	I
Bracket Bench AMP	1008	M
Brown’s Gulch	1053	I
Bruneau Hill	1057	I
Buck Flat AMP	1122	M
Camas Slough	1095	M
Canyon View (Echo Jewett)	1058	I
Cedar Butte 10	1007	M
Cedar Butte Devil Cree	1002	I
Cedar Butte Eastside	1001	I
Cedar Canyon Field	1013	M
Cedar Creek	1131	I
Cedar Creek Canyon	1023	M
Cedar Crossing seed	1022	I
Cheatgrass	1069	I
China Creek	1025	I
Clover Crossing	1136	I
Conover	1126	I
Coonskin AMP	1123	M
Crawfish	1118	I
Deadwood Pocket	1067	I
Devil Creek/Balanced Rock	1133	I
Diamond A Bruneau Canyon	1100	M
Diamond A Taylor Pocket	1077	I
Diamond A Unit	1021	I
Dove Spring	1146	I
E&W Deadwood Trap	1020	M
East Juniper Draw	1132	I
East Roseworth Point	1061	I
Echo 4	296	I
Echo 5	282	I
Echo Clover	341	I
Echo Hammett	342	I
Echo Luby	283	I
Flat Top	1059	I

Current Allotments^A	Allotment Number	Management Category
Grassy Hills	1029	M
Grassy Hills AMP	1121	I
Grassy Windmill	1134	M
Grindstone	1062	I
Guerry Patrick	1094	I
Hagerman Group	1150	I
Hallelujah	343	I
Horse Butte AMP	1120	I
House Creek	1042	M
Inside Desert	353	I
Juniper Butte	1119	I
Juniper Draw	1138	I
Juniper Ranch	1031	I
Kinyon	1046	I
Kubic	1147	I
Little Grassy Deadwood	1017	M
Little House Creek FFR	1093	C
Little Three Island	1074	I
Lower Salmon Falls	1141	I
Lower Saylor Creek	1055	I
Magic Water	1056	I
Noh Field	1140	I
North Balanced Rock	1139	I
North Fork Field	1088	M
Notch Butte	1144	I
Pigtail Butte	1125	I
Player Butte	1047	M
Player Canyon	1027	M
Poison Butte	1050	I
River Bridge	1072	I
Roseworth Point	1014	I
Roseworth Tract FFR	1009	C
Saylor Creek/North Three Island	1078	I
Seventy One Desert	1099	I
Sheep Trail Allot.	1063	N/A
Signal Butte	1092	M
South Crow's Nest	1135	M
South Deadwood	1086	I
South Roseworth	1151	I
Thompson	1079	I
Thousand Springs	1142	I
Three Cr. #8	1070	I
Three Cr. #8 PVT AL	1066	I
Three Cr. #8b	1075	M
Three Cr. Blossom Prv	1071	M
Three Cr/Devil Cr	1076	I
Three Island	1073	I
Turner Cedar Butte	1000	M
Twin Butte	1145	I
West Saylor Creek	1137	I
Wilkins Island	1084	M
Winter Camp	1064	I

Current Allotments^A	Allotment Number	Management Category
Yahoo	1143	I
^A Some allotment names and boundaries have changed since the 1987 RMP was adopted; names reflect those currently in use.		

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**APPENDIX K:
IDAHO STANDARDS FOR
RANGELAND HEALTH
AND GUIDELINES FOR
LIVESTOCK GRAZING
MANAGEMENT**

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APPENDIX K: IDAHO STANDARDS FOR RANGELAND HEALTH AND GUIDELINES FOR LIVESTOCK GRAZING MANAGEMENT

The Idaho Standards for Rangeland Health (BLM, 1997) are used as BLM's rangeland management goals. Rangelands should meet the Standards for Rangeland Health or be making significant progress toward meeting the standards to provide for proper nutrient cycling, hydrologic cycling, and energy flow. Appropriate to soil type, climate, and landform, indicators are a list of typical physical and biological factors and processes that can be measured or observed (e.g., photographic monitoring). They can be used in combination to provide information necessary to determine the health and condition of the rangelands. The eight Standards for Rangeland Health, and their indicators, are listed below.

Standard 1 – Watersheds

Watersheds provide for the proper infiltration, retention, and release of water appropriate to soil type, vegetation, climate, and landform to provide for proper nutrient cycling, hydrologic cycling, and energy flow. Indicators may include, but are not limited to, the following:

- The amount and distribution of ground cover, including litter, for identified ecological site(s) or soil-plant associations are appropriate for site stability.
- Evidence of accelerated erosion in the form of rills and/or gullies, erosional pedestals, flow patterns, physical soil crusts/surface sealing, and compaction layers below the soil surface is minimal for soil type and landform.

Standard 2 – Riparian Areas and Wetlands

Riparian-wetland areas are in properly functioning condition appropriate to soil type, climate, geology, and landform to provide for proper nutrient cycling, hydrologic cycling, and energy flow. Indicators may include, but are not limited to, the following:

- The riparian/wetland vegetation is controlling erosion, stabilizing streambanks, shading water areas to reduce water temperature, stabilizing shorelines, filtering sediment, aiding in floodplain development, dissipating energy, delaying flood water, and increasing recharge of groundwater appropriate to site potential.
- Riparian/wetland vegetation with deep strong binding roots is sufficient to stabilize streambanks and shorelines. Invader and shallow rooted species are a minor component of the floodplain.
- Age class and structural diversity of riparian/wetland vegetation is appropriate for the site.
- Noxious weeds are not increasing.

Standard 3 – Stream Channel/Floodplain

Stream channels and floodplains are properly functioning relative to the geomorphology (e.g., gradient, size, shape, roughness, confinement, and sinuosity) and climate to provide for proper nutrient cycling, hydrologic cycling, and energy flow. Indicators may include, but are not limited to, the following:

- Stream channels and floodplains dissipate energy of high water flows and transport sediment. Soils support appropriate riparian-wetland species, allowing water movement, sediment filtration, and water storage. Stream channels are not entrenching.
- Stream width/depth ratio, gradient, sinuosity, and pool, riffle and run frequency are appropriate for the valley bottom type, geology, hydrology, and soils.
- Streams have access to their floodplains and sediment deposition is evident.
- There is little evidence of excessive soil compaction on the floodplain due to human activities.
- Streambanks are within an appropriate range of stability according to site potential.
- Noxious weeds are not increasing.

Standard 4 – Native Plant Communities

Healthy, productive, and diverse native animal habitat and populations of native plants are maintained or promoted as appropriate to soil type, climate, and landform to provide for proper nutrient cycling, hydrologic cycling, and energy flow. Indicators may include, but are not limited to, the following:

- Native plant communities (flora and microbiotic crusts) are maintained or improved to ensure the proper functioning of ecological processes and continued productivity and diversity of native plant species.
- The diversity of native species is maintained.
- Plant vigor (total plant production, seed and seedstalk production, cover, etc.) is adequate to enable reproduction and recruitment of plants when favorable climatic events occur.
- Noxious weeds are not increasing.
- Adequate litter and standing dead plant material are present for site protection and for decomposition to replenish soil nutrients relative to site potential.

Standard 5 – Seedings

Rangelands seeded with mixtures, including predominately non-native plants, are functioning to maintain life form diversity, production, native animal habitat, nutrient cycling, energy flow, and the hydrologic cycle. Indicators may include, but are not limited to, the following:

- In established seedings, the diversity of perennial species is not diminishing over time.
- Plant production, seed production, and cover are adequate to enable recruitment when favorable climatic events occur.
- Noxious weeds are not increasing.
- Adequate litter and standing dead plant material are present for site protection and for decomposition to replenish soil nutrients relative to site potential.

Standard 6 – Exotic Plant Communities, other than Seedings

Exotic plant communities, other than seedings, will meet minimum requirements of soil stability and maintenance of existing native and seeded plants. These communities will be rehabilitated to perennial communities when feasible cost effective methods are developed. Indicators may include, but are not limited to, the following:

- Noxious weeds are not increasing.
- The number of perennial species is not diminishing over time.
- Plant vigor (production, seed and seedstalk production, cover, etc.) of remnant native or seeded (introduced) plants is maintained to enable reproduction and recruitment when favorable climatic or other environmental events occur.
- Adequate litter and standing dead plant material is present for site protection and for decomposition to replenish soil nutrients relative to site potential.

Standard 7 – Water Quality

Surface and ground water on public lands comply with the Idaho Water Quality Standards. Indicators may include, but are not limited to, the following:

- Physical, chemical, and biologic parameters described in the Idaho Water Quality Standards.

Standard 8 – Threatened and Endangered Plants and Animals

Habitats are suitable to maintain viable populations of Threatened and Endangered, Sensitive, and other special status species. Indicators may include, but are not limited to, the following:

- Parameters described in the Idaho Water Quality Standards.
- Riparian/wetland vegetation with deep, strong, binding roots is sufficient to stabilize streambanks and shorelines. Invader and shallow rooted species are a minor component of the floodplain.

- Age class and structural diversity of riparian/wetland vegetation are appropriate for the site.
- Native plant communities (flora and microbiotic crusts) are maintained or improved to ensure the proper functioning of ecological processes and continued productivity and diversity of native plant species.
- The diversity of native species is maintained.
- The amount and distribution of ground cover, including litter, for identified ecological site(s) or soil-plant associations are appropriate for site stability.
- Noxious weeds are not increasing.

Works Cited

BLM. (1997). *Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management*. Boise, ID: USDI, Bureau of Land Management, Idaho State Office.

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**APPENDIX L:
LIVESTOCK GRAZING
PERMIT RENEWAL
PROCESS FOR THE
JARBIDGE PLANNING
AREA**

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APPENDIX L: LIVESTOCK GRAZING PERMIT RENEWAL PROCESS FOR THE JARBIDGE PLANNING AREA

Background

All grazing permits within the Jarbidge Field Office (FO) are scheduled for renewal after the revised Jarbidge Resource Management Plan (RMP) is completed. In accordance with paragraph 18 of the 2005 Stipulated Settlement Agreement (SSA) in the case of *Western Watershed Project v. Bennett et al. (Case No. CV-04-181-S-BLW) (D. Idaho)* (Appendix A), renewal of livestock grazing permits in the Jarbidge FO will be completed by the end of the third full grazing year following signing of the Record of Decision (ROD) for the revised Jarbidge RMP.

*"The parties agree that, after BLM completes the final Jarbidge RMP and EIS, it will then conduct site-specific NEPA reviews and issue new ten-year grazing permit decisions for all Jarbidge allotments, which will be tiered to the revised RMP and EIS. This process of **issuing new site-specific reviews and grazing decisions is expected to take three years following completion of the RMP and EIS.**"⁹*

Based on this statement, Jarbidge FO has established a strategy and timeline for renewing grazing permits by the end of the third full grazing year after the ROD for the RMP is signed.

Strategy

The permit renewal process will follow Bureau of Land Management (BLM) policy outlined in IM-ID-2009-040 or subsequent policy. Prior to signing of the ROD, the interdisciplinary team (ID Team) will review existing data and identify issues and data needed to complete the permit renewal process. New data would be collected using existing protocols. Data used for the rangeland health assessment process could include, but are not limited to, upland vegetation cover and production, riparian condition, water quality, soil condition, and special status species population and habitat condition.

Allotments will be grouped based on resource issues identified through data review and rangeland health field assessments; the grouping will also be consistent with the priorities and management direction contained in the approved RMP and consider current management concerns. For example, all allotments containing watersheds occupied by bull trout could be grouped to better address management needs for that species and streamline ESA consultation.

The appropriate NEPA process (i.e., environmental assessment, environmental impact statement) would be determined later.

Timeline

The following reflects BLM's estimate of a general timeline for completing all necessary components of the permit renewal process within the three-year timeframe. The timeline presented here may be modified as the specific details for the permit renewal process are determined.

Tasks to complete prior to signing of the ROD:

- Evaluate existing data and identify data gaps.
- Perform rangeland health field assessments for allotments with sufficient data for completion of assessment document.
- Begin data collection on allotments without sufficient data for completion of assessment document.

Tasks to complete within one year after signing of the ROD:

- Complete remaining data collection and rangeland health field assessments.
- Complete assessment documents for allotments where data collection is complete.

⁹ Emphasis added.

- Initiate NEPA process.
- Issue permit renewals for any allotments with completed assessment and NEPA documentation.

Tasks to complete within two years after signing of the ROD:

- Complete assessment documents for rangeland health field assessments completed in previous year.
- Continue NEPA process.
- Issue permit renewals for any allotments with completed assessment and NEPA documentation.

Tasks to complete by the end of the third full grazing year after signing of the ROD:

- Complete NEPA process.
- Issue permit renewals for remaining allotments.

**APPENDIX M:
RECREATION
MANAGEMENT AREAS**

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APPENDIX M: RECREATION MANAGEMENT AREAS

Recreation Setting Characters

Recreation settings are the collective, distinguishing attributes of landscapes that influence and sometimes determine what kinds of recreation opportunities are produced. Recreation setting characteristics are objectively defined along a continuum ranging from primitive to urban landscapes, expressed in terms of the nature of the component parts of its physical, social, and administrative attributes; recreation setting characteristics are described for both the existing and desired condition of a landscape.

The physical setting addresses the land and facilities and describes the character of the natural landscape; remoteness, naturalness, and facilities are all components of the physical setting. The continuum of setting characters for physical setting is displayed in Table M- 1.

Table M- 1. Physical Settings

		Remoteness	Naturalness	Facilities
Primitive	Pristine	More than 10 miles from any road.	Undisturbed natural landscape.	None.
	Transition	More than 3 miles from any road.		
Back Country		More than ½ mile from any kind of road, but not as distant as 3 miles, and no road is in sight.	Naturally-appearing landscape having modifications not readily noticeable.	Naturally-appearing landscape having modifications not readily noticeable.
Middle Country		On or near four-wheel drive roads, but at least ½ mile from all improved roads, though they may be in sight.	Naturally-appearing landscape except for obvious primitive roads.	Naturally-appearing landscape except for obvious primitive roads.
Front Country		On or near improved country roads, but at least ½ mile from all highways.	Landscape partially modified by roads, utility lines, etc., but none overpower natural landscape features.	Landscape partially modified by roads, utility lines, etc., but none overpower natural landscape features.
Rural		On or near primary highways, but still within a rural area.	Natural landscape substantially modified by agriculture or industrial development.	Natural landscape substantially modified by agriculture or industrial development.
Urban		On or near primary highways, municipal streets, and roads within towns or cities.	Urbanized developments dominate landscape.	Urbanized developments dominate landscape.

The social setting addresses visitor use and users and describes the character of recreation and tourism use; the number of contacts with other groups, group size, and evidence of use are all components of the social setting. The continuum of setting characters for social setting is displayed in Table M- 2.

The administrative setting addresses recreation administration and services and describes how public land managers, county commissioners and municipal governments, and local businesses care for the area and serve visitors and local residents. The amount and type of mechanized use, visitor services, and management controls are all components of the administrative setting. The continuum of setting characters for administrative setting is displayed in Table M- 3.

Table M- 2. Social Settings

		Contacts with Other Groups	Group Size	Evidence of Use
Primitive	Pristine	Fewer than 3 encounters/day at camp sites and fewer than 6 encounters/day on travel routes.	Fewer than or equal to 3 people per group.	Only footprints observed. No noise or litter.
	Transition			
Back Country		3-6 encounters/day off travel routes (e.g., campsites) and 7-15 encounters/day on travel routes.	4-6 people per group.	Footprints and bicycle tracks observed. Noise and litter infrequent. Slight vegetation trampling at campsites and popular areas. Fire rings seen.
Middle Country		7-14 encounters/day off travel routes (e.g., staging areas) and 15-29 encounters/day en route.	7-12 people per group.	Vehicle tracks observed. Occasional noise and litter. Vegetation and soils becoming worn at campsites and at high-use areas.
Front Country		15-29 encounters/day off travel routes (e.g., campgrounds) and 30 or more encounters/day en route.	13-25 people per group.	Vehicle tracks common. Some noise and litter. Vegetation and soils commonly worn at campsites, along travel routes and at popular areas.
Rural		People seem to be generally everywhere.	26-50 people per group.	Frequent noise and litter. Large but localized areas with vegetation damage and soil compaction.
Urban		Busy place with other people constantly in view route.	More than 50 people per group.	Unavoidable noise, music and litter. Widespread vegetation damage and soil compaction.

Table M- 3. Administrative Settings

		Mechanized Use	Visitor Services	Management Controls
Primitive	Pristine	None whatsoever.	None is available on-site.	No visitor controls apparent. No use limits. Enforcement presence very rare.
	Transition			
Back Country		Mountain bikes and perhaps other mechanized use, but all is non-motorized.	Basic maps, but area personnel seldom available to provide on-site assistance.	Signs at key access points on basic user ethics. May have back country use restrictions. Enforcement presence rare.
Middle Country		Four-wheel drives, all-terrain vehicles, dirt bikes, or snowmobiles in addition to non-motorized, mechanized use.	Area brochures and maps, plus area personnel occasional present to provide on-site assistance.	Occasional regulatory signing. Motorized and mechanized use restrictions. Random enforcement presence.
Front Country		Two-wheel drive vehicles predominant, but also four-wheel drives and non-motorized, mechanized use.	Information materials describe recreation areas and activities. Area personnel are periodically available.	Rules clearly posted with some seasonal or day-of-week use restrictions. Periodic enforcement presence.
Rural		Ordinary highway auto and truck traffic is characteristic.	Information described to the left, plus experience and benefit descriptions. Area personnel do on-site education.	Regulations prominent. Total use limited by permit, reservation, etc. Routine enforcement presence.
Urban		Wide variety of street vehicles and highway traffic is ever-present.	Information described to the left, plus regularly scheduled on-site outdoor skills demonstrations and clinics.	Continuous enforcement to redistribute use and reduce user conflicts, hazards, and resource damage.

Special Recreation Management Areas (SRMAs)

Special Recreation Management Areas (SRMAs) are areas that require a recreation investment where more intensive recreation management is needed and where recreation is a principal management objective. These areas often have high levels of recreation activity, contain valuable natural resources, or require recreational settings that need special management (e.g., an area with high scenic value). Below are management strategies for SRMAs that would be designated under one or more of the action alternatives. The existing and prescribed setting characters for the physical, social, and administrative settings as described in Table M- 1, Table M- 2, and Table M- 3 are identified for each SRMA.

Balanced Rock SRMA

The Balanced Rock SRMA would be designated in Alternatives I and III. Table M- 4 displays the management strategy for this SRMA.

Table M- 4. Balanced Rock SRMA Management Strategy

Primary Market Strategy	Market
Community	Local Residents and Visitors
Niche	
Appreciation of an area important to the local community.	

Recreation Management Objective		
Through the life of the plan, manage the Balanced Rock SRMA to provide opportunities for visitors to engage in activities in an area of importance to the local communities so they realize a “moderate” level of the targeted experience and benefit outcomes.		
Targeted Outcomes		
Primary Activities	Experiences	Benefits
Hiking Viewing wildlife/natural scenery Non-motorized boating	Enjoying natural scenery and wildlife Escaping everyday responsibilities Enjoying solitude Being with friends and family	<p>Personal:</p> <ul style="list-style-type: none"> Nature/aesthetic appreciation Improved mental wellbeing Opportunity to view wildlife close-up <p>Community/Social:</p> <ul style="list-style-type: none"> Improved image of the area and its recreational opportunities Improved perceived quality of life Family bonding/better family life <p>Environmental:</p> <ul style="list-style-type: none"> Creates sense of “ownership” and stewardship of the area Provides natural habitat and open space <p>Economic:</p> <ul style="list-style-type: none"> Increased desirability of a place to live and work
Setting Character	Existing Setting	Prescribed Setting
Physical		
Remoteness	Front Country	Front Country
Naturalness	Front/Middle Country	Front/Middle Country
Facilities	Back Country	Middle Country
Social		
Contacts	Back Country	Middle Country
Group Size	Primitive	Back Country
Evidence of Use	Middle Country	Middle Country
Administrative		
Mechanized Use	Primitive	Back Country
Visitor Services	Back Country	Middle Country
Management Controls	Back Country	Middle Country
Implementation Strategy/Action		
Administrative	Encourage and develop cooperative partnerships with volunteer groups, State, County, and local agencies to facilitate management and additional development of the area.	
Management	Focus on developing a hiking trail to enhance existing facilities. Improvements will be preceded by formal site plans and will adhere to guidelines developed for the area. Manage as visual resource management (VRM) Class III.	
Marketing	Directional signing, interpretation, brochure. Support active volunteer programs and develop new partnerships (e.g., National Public Lands Day and National Trails Day events and volunteer projects for local groups).	
Monitoring	Routine monitoring of area and facilities; periodic visitor contact and monitoring to assess achievement of management objectives.	

Bruneau-Jarbidge SRMA

The Bruneau-Jarbidge SRMA would be designated in all action alternatives. Table M- 5 displays the management strategy for this SRMA.

Table M- 5. Bruneau-Jarbidge SRMA Management Strategy

Primary Market Strategy	Market	
Undeveloped	National and Regional Visitors and Local Residents	
Niche		
Class IV whitewater boating, hiking, and primitive camping in a primitive, back country setting.		
Recreation Management Objective		
Through the life of the plan, manage the Bruneau-Jarbidge SRMA to provide opportunities for visitors to engage in whitewater rafting/kayaking, hiking, and primitive camping so they realize a “moderate” level of the targeted experience and benefit outcomes.		
Targeted Outcomes		
Primary Activities	Experiences	Benefits
Whitewater boating Fishing Hunting Viewing wildlife and natural scenery Primitive camping	Enjoying risk-taking adventure Improving outdoor-related skills in the natural environment Enjoying scenery and the natural setting Enjoying solitude and escaping from crowds of people	Personal: <ul style="list-style-type: none"> Improved outdoor recreation skills Nature/aesthetic appreciation Greater sense of adventure Identification with a special place Community/Social: <ul style="list-style-type: none"> Improved image of land management agencies Improved image of the area and its recreational opportunities Environmental: <ul style="list-style-type: none"> Increased awareness and protection of natural landscapes Greater protection of fish, wildlife, and plant habitat from development and use impacts Economic: <ul style="list-style-type: none"> Increased attractiveness of Idaho as a place to relocate and live Increased local/regional tourism revenue
Setting Character	Existing Setting	Prescribed Setting
Physical		
Remoteness	Back Country	Back Country
Naturalness	Primitive	Primitive
Facilities	Back Country	Back Country
Social		
Contacts	Primitive	Primitive
Group Size	Back Country	Back Country
Evidence of Use	Primitive/Back Country	Primitive/Back Country
Administrative		
Mechanized Use	Primitive	Primitive
Visitor Services	Back Country	Primitive/Back Country
Management Controls	Primitive/Back Country	Back Country

Implementation Strategy/Action	
Administrative	Maintain the backcountry character and primarily undisturbed natural landscape to allow visitors to enjoy opportunities for solitude. Encourage and develop cooperative relations with volunteer groups, outfitter and guides, and other agencies to facilitate management.
Management	Provide a very low level of facilities and a management presence sufficient to protect resource values. Management as VRM Class I is driven by overlying Wilderness Study Areas and eligible/suitable Wild and Scenic River segments with a scenic ORV.
Marketing	Word of mouth, Owyhee & Bruneau River Systems Boating Guide, interpretive and educational signing, directional signing.
Monitoring	Visitor number collections will continue to include registration forms; periodic visitor surveys to assess achievement of management objectives.

Canyonlands SRMA

The Canyonlands SRMA would be designated in Alternatives I and IV (the Preferred Alternative). Table M- 6 displays the management strategy for this SRMA.

Table M- 6. Canyonlands SRMA Management Strategy

Primary Market Strategy	Market	
Undeveloped	Visitors and Local Residents	
Niche		
A natural setting necessary to provide quality non-motorized hunting and other recreation experiences		
Recreation Management Objective		
Through the life of the plan, manage the Canyonlands SRMA to provide opportunities for visitors to engage in non-motorized recreation experiences including hunting, hiking, and equestrian so they realize a “moderate” level of the targeted experience and benefit outcomes.		
Targeted Outcomes		
Primary Activities	Experiences	Benefits
Hunting	Enjoying risk-taking adventure	<p>Personal:</p> <ul style="list-style-type: none"> Improved outdoor recreation skills Nature/aesthetic appreciation Greater sense of adventure Identification with a special place <p>Community/Social:</p> <ul style="list-style-type: none"> Improved image of the area and its recreational opportunities Improved skills for outdoor enjoyment with family and friends <p>Environmental:</p> <ul style="list-style-type: none"> Increased awareness and protection of natural landscapes Provides natural habitat and open space Protection of wildlife and fish habitat <p>Economic:</p> <ul style="list-style-type: none"> Increased desirability of a place to live and work
Viewing wildlife and natural scenery	Enjoying solitude	
Hiking	Testing and improving outdoor skills	
Equestrian	Engaging in preferred activities with family and friends	
Fishing	Enjoying scenery and the natural setting	

Setting Character	Existing	Prescribed
Physical		
Remoteness	Back Country	Back Country
Naturalness	Back Country	Back Country
Facilities	Back Country	Back Country
Social		
Contacts	Primitive	Primitive
Group Size	Primitive	Back Country
Evidence of Use	Primitive/Back Country	Primitive/Back Country
Administrative		
Mechanized Use	Middle Country	Middle Country
Visitor Services	Primitive	Back Country
Management Controls	Primitive	Back Country
Implementation Strategy/Action		
Administrative	Maintain the backcountry character and primarily undisturbed natural landscape to allow visitors to enjoy opportunities for solitude.	
Management	Primarily manage for backcountry recreation opportunities, including non-motorized hunting and whitewater boating. Maintain and protect natural and cultural resource values. Any improvements will be preceded by site/area plans. Manage as VRM Class I (Wilderness Study Areas; WSAs), VRM Class II (non-WSA lands with wilderness characteristics), and VRM Class III (rest of SRMA).	
Marketing	Word of mouth, Owyhee & Bruneau River Systems Boating Guide, interpretive and educational signing, directional signing.	
Monitoring	Visitor number collections will continue to include registration forms for whitewater boating; periodic visitor surveys to assess achievement of management objectives.	

Deadman/Yahoo SRMA

The Deadman/Yahoo SRMA would be designated in Alternatives I, III, and IV (the Preferred Alternative). This SRMA would be comprised of either three or four Recreation Management Zones (RMZs). The SRMA would include the Deadman, Rosevear Gulch, and Yahoo RMZs in Alternatives III and IV; Alternative I would include the Pasadena RMZ as well. Table M- 7, Table M- 8, Table M- 9, and Table M- 10 display the management strategies for the Deadman, Pasadena, Rosevear Gulch, and Yahoo RMZs, respectively.

Deadman RMZ

Table M- 7. Deadman RMZ Management Strategy

Primary Market Strategy	Market
Community and Destination	Visitors and Local Residents
Niche	
Off-road ATV and motorcycle riding in sand washes within proximity to major transportation systems and available during the winter season	
Recreation Management Objective	
Through the life of the plan, manage the Deadman RMZ to provide opportunities for visitors to engage in off-road ATV and motorcycle riding so they realize a “moderate” level of the targeted experience and benefit outcomes.	

Targeted Outcomes		
Primary Activities	Experiences	Benefits
ATV riding Motorcycle riding	Exhilaration and excitement Testing and improving riding skills Being with friends and family Enjoying preferred activities in an appropriate setting	<p>Personal:</p> <ul style="list-style-type: none"> • Positive change in mood and emotion • Social bonding/cohesion/cooperation • Improved skills for outdoor enjoyment <p>Community/Social:</p> <ul style="list-style-type: none"> • Improved image of the area and its recreational opportunities • Creates a positive image of OHV motorized activities <p>Environmental:</p> <ul style="list-style-type: none"> • Creates a sense of “ownership” and stewardship of the area • Increased awareness and protection of landscapes <p>Economic:</p> <ul style="list-style-type: none"> • Retains recreation spending in the local area • Increased attractiveness of southern Idaho as a place to live
Setting Character	Existing	Prescribed
Physical		
Remoteness	Front Country	Front Country
Naturalness	Front Country	Front Country
Facilities	Back Country	Front Country
Social		
Contacts	Middle Country	Middle/Front Country
Group Size	Back Country	Middle Country
Evidence of Use	Middle Country	Front Country
Administrative		
Mechanized Use	Middle Country	Middle/Front Country
Visitor Services	Back Country	Front Country
Management Controls	Back Country	Front Country
Implementation Strategy/Action		
Administrative	Encourage and pursue cooperative partnerships with user groups, land owners, and Idaho State Department of Parks and Recreation (IDPR) to facilitate responsible recreational use of the area.	
Management	Improvements geared toward facilitating parking and sanitation for users. Designated Open/Play areas and trail system. Pursue partnerships with user groups and IDPR for a formal site/layout/facility plan. Manage as VRM Class III.	
Marketing	Word-of mouth, directional signing, brochure.	
Monitoring	Routine monitoring of area and facilities; periodic visitor contact and monitoring to assess achievement of management of management objectives.	

Pasadena RMZ

Table M- 8. Pasadena RMZ Management Strategy

Primary Market Strategy	Market	
Community and Destination	Visitors and Local Residents	
Niche		
Off-road ATV and motorcycle riding		
Recreation Management Objective		
Through the life of the plan, manage the Pasadena RMZ to provide a venue for off-road ATV and motorcycle riding. Focus on experiences and benefits indicated below.		
Targeted Outcomes		
Primary Activities	Experiences	Benefits
ATV riding Motorcycle riding	Exhilaration and excitement Testing and improving riding skills Being with friends and family Enjoying preferred activities in an appropriate setting	<p>Personal:</p> <ul style="list-style-type: none"> • Positive change in mood and emotion • Social bonding/cohesion/cooperation • Improved skills for outdoor enjoyment <p>Community/Social:</p> <ul style="list-style-type: none"> • Improved image of the area and its recreational opportunities • Creates a positive image of OHV motorized activities <p>Environmental:</p> <ul style="list-style-type: none"> • Creates a sense of “ownership” and stewardship of the area • Increased awareness and protection of landscapes <p>Economic:</p> <ul style="list-style-type: none"> • Retains recreation spending in the local area • Increased attractiveness of southern Idaho as a place to live
Setting Character	Existing	Prescribed
Physical		
Remoteness	Rural Country	Rural Country
Naturalness	Front Country	Front Country
Facilities	Back Country	Front Country
Social		
Contacts	Middle Country	Middle/Front Country
Group Size	Back Country	Middle Country
Evidence of Use	Middle Country	Front Country
Administrative		
Mechanized Use	Middle Country	Middle/Front Country
Visitor Services	Back Country	Front Country
Management Controls	Back Country	Front Country

Implementation Strategy/Action	
Administrative	Encourage and pursue cooperative partnerships with user groups, land owners, and Idaho State Department of Parks and Recreation (IDPR) to facilitate responsible recreational use of the area. Designated Open/Play areas and trail system.
Management	Improvements geared toward facilitating parking, sanitation for users, and developing an OHV training area. Pursue partnerships with user groups and IDPR for a formal site/layout/facility plan.
Marketing	Word-of mouth. Directional signing and develop brochure for the area.
Monitoring	Routine monitoring of area and facilities, periodic visitor contact and monitoring to assess achievement of management of management objectives.

Rosevear Gulch RMZ

Table M- 9. Rosevear Gulch RMZ Management Strategy

Primary Market Strategy	Market	
Community	Visitors and Local Residents	
Niche		
Easily accessed designated trail system for ATVs and motorcycles available for use during the winter.		
Recreation Management Objective		
Through the life of the plan, manage the Rosevear Gulch RMZ to provide opportunities for visitors to engage in motorized trail riding opportunities on a series of designated routes so they realize a “moderate” level of the targeted experience and benefit outcomes.		
Targeted Outcomes		
Primary Activities	Experiences	Benefits
ATV riding Motorcycle riding 4X4 driving Wild horse viewing	Enjoying preferred activities in an appropriate setting Testing and improving riding skills Engaging in preferred activities with family and friends	Personal: <ul style="list-style-type: none"> Positive change in mood and emotion Identification with a special place Community/Social: <ul style="list-style-type: none"> Greater community involvement in recreation and other land use decisions Improved image of the area and its recreational opportunities Environmental: <ul style="list-style-type: none"> Creates a sense of “ownership” and stewardship of the area Greater retention of distinctive natural landscapes Economic: <ul style="list-style-type: none"> Retains recreation spending in the local area Increased attractiveness of southern Idaho as a place to live
Setting Character	Existing	Prescribed
Physical		
Remoteness	Front Country	Front Country
Naturalness	Front Country	Front Country
Facilities	Primitive	Middle Country

Social		
Contacts	Back Country	Middle/Front Country
Group Size	Back Country	Back/Middle Country
Evidence of Use	Middle Country	Front Country
Administrative		
Mechanized Use	Middle Country	Middle/Front Country
Visitor Services	Back Country	Middle Country
Management Controls	Primitive	Front Country
Implementation Strategy/Action		
Administrative	Encourage and pursue cooperative partnerships with user groups and state/county agencies to facilitate responsible recreational use of the area.	
Management	Improvements geared toward facilitating access and accommodating users. Develop designated trail system. Project plan will be developed and will adhere to guidelines developed for the area. Manage as VRM Class III.	
Marketing	Word-of mouth, directional signing, brochure, map.	
Monitoring	Routine monitoring of area; periodic visitor contact to assess achievement of management objectives. OHV a primary focus of monitoring.	

Yahoo RMZ

Table M- 10. Yahoo RMZ Management Strategy

Primary Market Strategy		Market	
Community		Visitors and Local Residents	
Niche			
Off-road ATV and motorcycle riding in sand washes within proximity to major transportation systems and available during the winter season.			
Through the life of the plan, manage the Yahoo RMZ to provide opportunities for visitors to engage in off-road ATV and motorcycle riding so they realize a “moderate” level of the targeted experience and benefit outcomes.			
Targeted Outcomes			
Primary Activities		Experiences	
Benefits			
ATV riding	Exhilaration and excitement	<p>Personal:</p> <ul style="list-style-type: none"> • Positive change in mood and emotion • Social bonding/cohesion/cooperation • Improve skills for outdoor enjoyment <p>Community/Social:</p> <ul style="list-style-type: none"> • Improved image of the area and its recreational opportunities • Creates a positive image of OHV motorized activities <p>Environmental:</p> <ul style="list-style-type: none"> • Creates a sense of “ownership” and stewardship of the area • Increased awareness and protection of landscapes <p>Economic:</p> <ul style="list-style-type: none"> • Retains recreation spending in the local area • Increased attractiveness of southern Idaho as a place to live 	
Motorcycle riding	Testing and improving riding skills		
	Being with friends and family		
	Enjoying preferred activities in an appropriate setting		
	Risk taking		

Setting Character	Existing	Prescribed
Physical		
Remoteness	Front Country	Front Country
Naturalness	Front Country	Front Country
Facilities	Back Country	Front Country
Social		
Contacts	Middle Country	Middle/Front Country
Group Size	Middle Country	Middle Country
Evidence of Use	Middle Country	Front Country
Administrative		
Mechanized Use	Front Country	Front Country
Visitor Services	Back Country	Front Country
Management Controls	Middle Country	Front Country
Implementation Strategy/Action		
Administrative	Encourage and pursue cooperative partnerships with user groups, land owners, and Idaho State Department of Parks and Recreation (IDPR) to facilitate responsible recreational use of the area.	
Management	Improvements geared toward facilitating parking, sanitation, and reducing sediment into Yahoo Creek. Designated Open/Play areas and trail system. Pursue partnerships with user groups and IDPR for a formal site plan. Manage as VRM Class III.	
Marketing	Word-of mouth, directional signing, brochure.	
Monitoring	Routine monitoring of area and facilities; periodic visitor contact and monitoring to assess achievement of management of management objectives.	

Jarbidge Foothills SRMA

The Jarbidge Foothills SRMA would be designated in Alternative I. Table M- 11 displays the management strategy for this SRMA.

Table M- 11. Jarbidge Foothills SRMA Management Strategy

Primary Market Strategy	Market
Undeveloped	Visitors and Local Residents
Niche	
A natural setting necessary to provide quality non-motorized and other recreation experiences.	
Recreation Management Objectives	
Through the life of the plan, manage the Jarbidge Foothills SRMA to provide opportunities for visitors to engage in non-motorized recreation experiences including hunting, hiking, and equestrian so they realize a “moderate” level of the targeted experience and benefit outcomes.	

Targeted Outcomes		
Primary Activities	Experiences	Benefits
Hunting Viewing wildlife and natural scenery Hiking Equestrian Mountain biking	Enjoying natural scenery and wildlife Enjoying solitude Testing and improving riding skills Engaging in preferred activities with family and friends	Personal: <ul style="list-style-type: none"> Nature/aesthetic appreciation Identification with a place Improved mental well being Community/Social: <ul style="list-style-type: none"> Improved image of the area and its recreational opportunities Improved skills for outdoor enjoyment with family and friends Environmental: <ul style="list-style-type: none"> Provides natural habitat and open spaces Protection of wildlife and fish habitat Economic: <ul style="list-style-type: none"> Increased desirability of a place to live and work
Setting Character	Existing	Prescribed
Physical		
Remoteness	Middle Country	Middle Country
Naturalness	Middle Country	Middle Country
Facilities	Back Country	Back Country
Social		
Contacts	Primitive	Back Country
Group Size	Primitive	Back Country
Evidence of Use	Middle Country	Middle Country
Administrative		
Mechanized Use	Middle Country	Middle Country
Visitor Services	Primitive	Back Country
Management Controls	Back Country	Middle Country
Implementation Strategy/Action		
Administrative	Focus on non-motorized recreation experiences. Encourage and develop cooperative relationships with land owners, volunteer groups, and state agencies to facilitate responsible recreational use of the area. Motorized routes would be designated to maximize wildlife habitat core size.	
Management	Primarily manage for backcountry recreation opportunities, including non-motorized hunting. Maintain and protect natural and cultural resource values. Any improvements will be preceded by site/area plans. Manage as VRM Class II.	
Marketing	Directional and informational signing.	
Monitoring	Periodic visitor contact and monitoring to assess achievement of management objectives.	

Jarbidge Forks SRMA

The Jarbidge Forks SRMA would be designated in all action alternatives. Table M- 12 displays the management strategy for this SRMA.

Table M- 12. Jarbidge Forks SRMA Management Strategy

Primary Market Strategy	Market	
Community	Visitors and Local Residents	
Niche		
Fishing and camping in a remote area with few contacts with other people		
Resource Management Objective		
Through the life of the plan, manage the Jarbidge Forks SRMA to provide opportunities for visitors to engage in fishing and camping so they achieve a “moderate” level of the targeted experiences and benefits outcomes.		
Targeted Outcomes		
Primary Activities	Experiences	Benefits
Rafting Fishing Camping Picnicking Viewing wildlife and natural scenery	Engaging in preferred activities with family and friends Relaxing physically Enjoying natural scenery and wildlife Enjoying leisure activities	<p>Personal:</p> <ul style="list-style-type: none"> • Nature/aesthetic appreciation • Positive change in mood and emotion • Social bonding/cohesion/cooperation • Identification with a special place <p>Community/Social:</p> <ul style="list-style-type: none"> • Improved image of the area and its recreational opportunities • Improved image of land management agencies • Family/friends bonding <p>Environmental:</p> <ul style="list-style-type: none"> • Better preservation of riparian environment • Creates sense of “ownership” and stewardship of the area <p>Economic:</p> <ul style="list-style-type: none"> • Retain recreation spending in local area • Increased desirability of a place to live and work
Setting Character	Existing	Prescribed
Physical		
Remoteness	Front Country	Front Country
Naturalness	Middle Country	Middle Country
Facilities	Front Country	Front Country
Social		
Contacts	Back Country	Back Country
Group Size	Back Country	Back Country
Evidence of Use	Middle Country	Middle Country
Administrative		
Mechanized Use	Front Country	Front Country
Visitor Services	Middle Country	Front Country
Management Controls	Middle Country	Middle Country

Implementation Strategy/Action	
Administrative	Focus on access, whitewater boat launch, parking, resource protection, and sanitation. Seek cooperative relationships with local groups and other agencies to facilitate management.
Management	Maintain or upgrade existing facilities. Occasional visitor contact and law enforcement. Manage Jarbidge River portion as VRM Class I (eligible Wild and Scenic River segments with a scenic ORV); manage the East Fork of the Jarbidge River portion as VRM Class II.
Marketing	Word of mouth, brochures, and interpretative and directional signing.
Monitoring	Routine monitoring of physical facilities; visitor number collections will continue to include whitewater boating registration forms; periodic visitor surveys to assess achievement of management objectives.

Little Pilgrim SRMA

The Little Pilgrim SRMA would be designated in Alternatives I, II, and III. Table M- 13 displays the management strategy for this SRMA.

Table M- 13. Little Pilgrim SRMA Management Strategy

Primary Market Strategy	Market	
Community	Visitors and Local Residents	
Niche		
Vehicle-accessible sturgeon fishing		
Resource Management Objective		
Through the life of the plan, manage the Little Pilgrim SRMA to provide opportunities for visitors to engage in sturgeon fishing so they realize a “moderate” level of the targeted experiences and benefit outcomes.		
Targeted Outcomes		
Primary Activities	Experiences	Benefits
Fishing Bird hunting	Enjoying activities in a natural setting Enjoying natural scenery and wildlife Engaging in preferred activities with family and friends Testing and improving outdoor skills	<p>Personal:</p> <ul style="list-style-type: none"> • Nature/aesthetic appreciation • Positive change in mood and emotion • Social bonding/cohesion/cooperation • Identification with a special place <p>Community/Social:</p> <ul style="list-style-type: none"> • Lifestyle improvement or maintenance • Family and friends bonding • Improved image of the area and its recreational opportunities <p>Environmental:</p> <ul style="list-style-type: none"> • Protection of wildlife and fish habitat • Provides natural habitat and open space <p>Economic:</p> <ul style="list-style-type: none"> • Retain recreation spending in local area • Increased desirability of a place to live and work

Setting Character	Existing	Prescribed
Physical		
Remoteness	Middle Country	Middle Country
Naturalness	Back Country	Middle Country
Facilities	Back Country	Middle Country
Social		
Contacts	Primitive	Back Country
Group Size	Back Country	Back Country
Evidence of Use	Middle Country	Middle Country
Administrative		
Mechanized Use	Middle Country	Front Country
Visitor Services	Back Country	Middle Country
Management Controls	Back Country	Middle Country
Implementation Strategy/Action		
Administrative	Focus on public access, parking, resource protection, and sanitation. Encourage and develop cooperative relationships with land owners and other entities to facilitate responsible recreational use of the area.	
Management	Develop facilities for parking, camping, and sanitation. Improvements will be preceded by a formal site plan and will adhere to guidelines developed for the area. Manage areas outside Oregon Trail protective corridor (VRM Class II) as VRM Class III.	
Marketing	Word of mouth, brochure.	
Monitoring	Routine monitoring of physical facilities; periodic visitor contact to assess achievement of management objectives.	

Salmon Falls Reservoir SRMA

The Salmon Falls Reservoir SRMA would be designated in Alternatives I, II, III, and IV (the Preferred Alternative). This SRMA would be comprised of three RMZs: Antelope Bay, Cedar Creek, and Lud’s Point. Table M- 14, Table M- 15, and Table M- 16 display the management strategies for the Antelope Bay, Cedar Creek, and Lud’s Point RMZs, respectively.

Antelope Bay RMZ

Table M- 14. Antelope Bay RMZ Management Strategy

Primary Market Strategy	Market
Community	Visitors and Local Residents
Niche	
Fishing, camping, and boating on a reservoir with consistent water levels and within proximity to major transportation routes.	
Resource Management Objective	
Through the life of the plan, manage the Antelope Bay RMZ to provide opportunities for visitors to engage in fishing, camping, and boating so they realize a “moderate” level of the targeted experience and benefit outcomes.	

Targeted Outcomes		
Primary Activities	Experiences	Benefits
Fishing Camping Water sports Hunting Boat launching and take out Equestrian Hiking ATV riding Motorcycle riding	Enjoying having easy access to natural landscapes Engaging in preferred activities with family and friends Enjoying activities in a natural setting Relaxing physically Feeling good about how natural resources and facilities are being managed	<p>Personal:</p> <ul style="list-style-type: none"> • Positive change in mood and emotion • Identification with a special place • Nature/aesthetic appreciation <p>Community/Social:</p> <ul style="list-style-type: none"> • Improved image of the area and its recreational opportunities • Improved image of land management agencies • Family and friends bonding/ better family life <p>Environmental:</p> <ul style="list-style-type: none"> • Greater protection of fish, wildlife, and plant habitat from public use impact • Creates sense of “ownership” and stewardship of the area <p>Economic:</p> <ul style="list-style-type: none"> • Contribution to Recreation and Tourism sector of the local economy • Retain recreation spending in local area
Setting Character	Existing	Prescribed
Physical		
Remoteness	Front Country	Front Country
Naturalness	Middle Country	Middle/Front Country
Facilities	Primitive	Front/Rural Country
Social		
Contacts	Back Country	Middle/Front Country
Group Size	Back Country	Middle Country
Evidence of Use	Middle Country	Middle/Front Country
Administrative		
Mechanized Use	Middle Country	Front Country
Visitor Services	Back Country	Front Country
Management Controls	Primitive	Front Country
Implementation Strategy/Action		
Administrative	Focus on access, boat launch, parking, resource protection, sanitation. Develop cooperative relationships with volunteer groups, State and county agencies to facilitate responsible planning and use of the area.	
Management	Develop facilities to provide for access, visitor parking, boat launching and take out, and sanitation. Develop multiple-use designated trail system. Facility development will be preceded by project planning and will adhere to guidelines developed for the area. Manage as VRM Class II (Alternative I and IV) or VRM Class III (Alternative II and III).	
Marketing	Directional signing, interpretative signing, brochures, word of mouth.	
Monitoring	Provide information and a regular management presence to allow the visitors to enjoy the area while protecting its natural resources.	

Cedar Creek RMZ

Table M- 15. Cedar Creek RMZ Management Strategy

Primary Market Strategy	Market	
Community	Local Residents	
Niche		
Easily accessed fishing and camping on a stocked reservoir		
Resource Management Objective		
Through the life of the plan, manage the Cedar Creek RMZ to provide opportunities for visitors to engage in fishing and camping so they realize a “moderate” level of the targeted experience and benefit outcomes.		
Targeted Outcomes		
Primary Activities	Experiences	Benefits
Fishing Camping Boat launching and take out	Being with friends and family Engaging in preferred activities Relaxing physically Enjoying activities in a natural setting	Personal: <ul style="list-style-type: none"> • Positive change in mood and emotion • Nature/aesthetic appreciation Community/Social: <ul style="list-style-type: none"> • Improved image of the area and its recreational opportunities • Family and friends bonding Environmental: <ul style="list-style-type: none"> • Creates sense of “ownership” and stewardship of the area Economic: <ul style="list-style-type: none"> • Retain recreation spending in local area • Increased desirability of a place to live and work
Setting Character	Existing	Prescribed
Physical		
Remoteness	Front Country	Front Country
Naturalness	Front Country	Front Country
Facilities	Front Country	Front Country
Social		
Contacts	Back Country	Back Country
Group Size	Middle Country	Back/Middle Country
Evidence of Use	Front Country	Front Country
Administrative		
Mechanized Use	Front Country	Front Country
Visitor Services	Back Country	Middle Country
Management Controls	Back Country	Middle Country

Implementation Strategy/Action	
Administrative	Focus on access, boat launch facilities, parking, resource protection, sanitation. Develop cooperative relationships with land owners and Twin Falls County Parks and Waterways.
Management	Develop and upgrade existing facilities to provide for access, visitor parking, and sanitation. Facility development will be preceded by project planning and will adhere to guidelines developed for the area. Manage as VRM Class II (Alternative I) or VRM Class III (Alternative II, III, and IV).
Marketing	Directional signing, brochure, word of mouth.
Monitoring	Routine monitoring of physical facilities; periodic visitor contact to assess achievement of management objectives. Provide information and a regular management presence to allow the visitors to enjoy the area while protecting its natural resources.

Lud’s Point RMZ

Table M- 16. Lud’s Point RMZ Management Strategy

Primary Market Strategy	Market	
Community	Visitors and Local Residents	
Niche		
Fishing, primitive camping, and hunting activities for individuals seeking seclusion and little contact with other users		
Resource Management Objective		
Through the life of the plan, manage the Lud’s Point RMZ to provide opportunities for visitors to engage in fishing, primitive camping, and hunting so they realize a “moderate” level of the targeted experience and benefit outcomes.		
Targeted Outcomes		
Primary Activities	Experiences	Benefits
Fishing Primitive, boat-in camping Hunting Viewing wildlife and natural scenery	Engaging in preferred activities with friends and family Testing and improving outdoor skills Enjoying natural scenery and wildlife Enjoying activities in a natural setting	<p>Personal:</p> <ul style="list-style-type: none"> • Nature/aesthetic appreciation • Positive change in mood and emotion • Identification with a special place <p>Community/Social:</p> <ul style="list-style-type: none"> • Improved image of the area and its recreational opportunities • Improved image of land management agencies • Family and friends bonding <p>Environmental:</p> <ul style="list-style-type: none"> • Greater protection of fish, wildlife, and plant habitat from public use • Creates sense of “ownership” and stewardship of the area <p>Economic:</p> <ul style="list-style-type: none"> • Retain recreation spending in local area • Increased desirability of a place to live and work

Setting Character	Existing	Prescribed
Physical		
Remoteness	Back Country	Middle Country
Naturalness	Back Country	Middle Country
Facilities	Primitive	Middle Country
Social		
Contacts	Primitive	Back Country
Group Size	Primitive	Back Country
Evidence of Use	Back Country	Middle Country
Administrative		
Mechanized Use	Middle Country	Middle Country
Visitor Services	Primitive	Middle Country
Management Controls	Primitive	Middle Country
Implementation Strategy/Action		
Administrative	Focus on public access, resource protection, and sanitation. Encourage and develop cooperative relationships with user groups and State and county agencies to facilitate responsible recreational use of the area.	
Management	Occasional visitor contact and law enforcement. Improvements will be preceded by project planning and will adhere to guidelines developed for the area. Manage as VRM Class II (Alternative I and IV) or VRM Class III (Alternative II and III).	
Marketing	Directional and interpretative signing, brochure, word of mouth.	
Monitoring	Routine monitoring of facilities; periodic visitor contact to assess achievements of management objectives.	

Yahoo SRMA

The Yahoo SRMA would be designated in Alternative V. Table M- 17 displays the management strategy for this SRMA.

Table M- 17. Yahoo SRMA Management Strategy

Primary Market Strategy	Market
Community	Visitors and Local Residents
Niche	
Off-road ATV and motorcycle riding in sand washes within proximity to major transportation system and available during the winter season.	
Resource Management Objective	
Through the life of the plan, manage the Yahoo SRMA to provide opportunities for visitors to engage in off-road ATV and motorcycle riding so they realize a “moderate” level of the targeted experience and benefit outcomes.	

Targeted Outcomes		
Primary Activities	Experiences	Benefits
ATV Riding Motorcycle Riding	Exhilaration and excitement Testing and improving outdoor skills Being with friends and family Enjoying preferred activities in an appropriate setting Risk taking	<p>Personal:</p> <ul style="list-style-type: none"> • Positive change in mood and emotion • Social bonding/cohesion/cooperation • Improve outdoor skills <p>Community/Social:</p> <ul style="list-style-type: none"> • Improved image of the area and its recreational opportunities • Creates a positive image of OHV motorized activities <p>Environmental:</p> <ul style="list-style-type: none"> • Creates sense of “ownership” and stewardship of the area • Increased awareness and protection of landscapes <p>Economic:</p> <ul style="list-style-type: none"> • Retain recreation spending in local area • Increased attractiveness of southern Idaho as a place to live
Setting Character	Existing	Prescribed
Physical		
Remoteness	Front Country	Front Country
Naturalness	Front Country	Front Country
Facilities	Back Country	Front Country
Social		
Contacts	Middle Country	Middle/Front Country
Group Size	Middle Country	Middle Country
Evidence of Use	Middle Country	Front Country
Administrative		
Mechanized Use	Front Country	Front Country
Visitor Services	Back Country	Front Country
Management Controls	Middle Country	Front Country
Implementation Strategy/Action		
Administrative	Encourage and pursue cooperative partnerships with user groups, land owners, and Idaho State Department of Parks and Recreation (IDPR) to facilitate responsible recreational use of the area.	
Management	Improvements geared toward facilitating parking, sanitation, and reducing sediment into Yahoo Creek. Designated Open/Play areas and trail system. Pursue partnerships with user groups and IDPR for a formal site plan. Manage as VRM Class III.	
Marketing	Word-of mouth, directional signing, brochure.	
Monitoring	Routine monitoring of area and facilities; periodic visitor contact and monitoring to assess achievement of management of management objectives.	

Extensive Recreation Management Area (ERMA)

Those areas not identified in the planning area as SRMAs are identified as an Extensive Recreation Management Area (ERMA). The ERMA would receive only custodial management of visitor health and

safety, user conflict, and resource protection issues, with no activity-level planning. Jarbidge ERMA objectives are:

- **Visitor Health and Safety** - Ensure that participants in dispersed recreational activities have a low potential for serious accidents due to human-created conditions and minimal exposure to hazardous health conditions.
- **Use and User Conflicts** – Mitigate conflicts with other uses through visitor outreach efforts. Direct administration of conflicts may be implemented by way of recreation use restrictions, realignments, signage, and closures.
- **Resource Protection** – Create an increased awareness and understanding and a sense of stewardship in recreational activity participants so their conduct safeguards natural resource values.

Implementation actions for the ERMA include:

- Managing the ERMA to provide a variety of recreational opportunities including primitive, back country, middle country, and front country. Provide outdoor settings ranging from areas with a high-to-moderate opportunity for solitude and closeness to nature to areas where visitors have a higher interaction with other users.
- Limiting recreational access, season of use, and numbers of users, if needed, to protect other resources.
- Implementing site-specific facility development on a case-by-case basis, based on needs for resource protection, user demand, and visitor health and safety.
- Providing signs, brochures, and maps to facilitate the use and enjoyment of the ERMA and to protect visitor health, safety, and resources.
- Managing BLM lands adjacent to other Federal and State lands to complement the recreational experience on the adjoining lands.
- Monitoring recreational activities and implementing adaptive management where there are conflicts with other uses (e.g., grazing, WSA management) and private lands.

**APPENDIX N:
BLM WIND ENERGY
DEVELOPMENT
PROGRAM POLICIES AND
BEST MANAGEMENT
PRACTICES**

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APPENDIX N: BLM WIND ENERGY DEVELOPMENT PROGRAM POLICIES AND BEST MANAGEMENT PRACTICES

The Bureau of Land Management's (BLM's) wind energy development program policies and best management practices (BMPs) can be found on pages A-8 through A-26 in Attachment A of the 2005 *Record of Decision for Implementation of a Wind Energy Development Program and Associated Land Use Plan Amendments* (BLM, 2005c) and are reprinted below.

The BLM's Wind Energy Development Program established a number of policies and BMPs, provided below, regarding the development of wind energy resources on BLM-managed lands. The policies and BMPs are applicable to all wind energy development projects on BLM-managed lands. The policies address the administration of wind energy development activities, and the BMPs identify required mitigation measures that would need to be incorporated into project-specific Plans of Development (PODs) and right-of-way (ROW) authorization stipulations. Additional mitigation measures will be applied to individual projects, in the form of stipulations in the ROW authorization as appropriate, to address site-specific and species-specific issues.

These policies and BMPs were formulated through preparation of the *Final PEIS on Wind Energy Development on BLM-Administered Lands in the Western United States* (BLM, 2005a). The preliminary environmental impact statement (PEIS) included detailed, comprehensive analysis of the potential impacts of wind energy development and relevant mitigation measures; reviews of existing, relevant mitigation guidance; and reviews of comments received during scoping and public review of the Draft PEIS.

Policies

- The BLM will not issue ROW authorizations for wind energy development on lands on which wind energy development is incompatible with specific resource values. Lands that will be excluded from wind energy site monitoring and testing and development include designated areas that are part of the National Landscape Conservation System (NLCS) (e.g., Wilderness Areas, Wilderness Study Areas, National Monuments, NCAs, Wild and Scenic Rivers, and National Historic and Scenic Trails), and Areas of Critical Environmental Concern (ACECs). Additional areas of land may be excluded from wind energy development on the basis of findings of resource impacts that cannot be mitigated and/or conflict with existing and planned multiple-use activities or land use plans.
- To the extent possible, wind energy projects shall be developed in a manner that will not prevent other land uses, including minerals extraction, livestock grazing, recreational use, and other ROW uses.
- Entities seeking to develop a wind energy project on BLM-administered lands shall consult with appropriate Federal, State, and local agencies regarding specific projects as early in the planning process as appropriate to ensure that all potential construction, operation, and decommissioning issues and concerns are identified and adequately addressed.
- The BLM will initiate government-to-government consultation with Indian Tribal governments whose interests might be directly and substantially affected by activities on BLM-managed lands as early in the planning process as appropriate to ensure that construction, operation, and decommissioning issues and concerns are identified and adequately addressed.
- Entities seeking to develop a wind energy project on BLM-administered lands, in conjunction with BLM Washington Office (WO) and FO staff, shall consult with the US Department of Defense (DoD) regarding the location of wind power projects and turbine siting as early in the planning process as appropriate. This consultation shall occur concurrently at both the installation/field level and the Pentagon/BLM WO level. An interagency protocol agreement is being developed to establish a consultation process and to identify the scope of issues for consultation. Lands withdrawn for military

purposes are under the administrative jurisdiction of the DoD or a military service and are not available for issuance of wind energy authorizations by the BLM.

- The BLM will consult with the FWS as required by Section 7 of the Endangered Species Act of 1973 (ESA). The specific consultation requirements will be determined on a project-by-project basis.
- The BLM will consult with the SHPO as required by Section 106 of the National Historic Preservation Act of 1966 (NHPA). The specific consultation requirements will be determined on a project-by-project basis. If programmatic Section 106 consultations have been conducted and are adequate to cover a proposed project, additional consultation may not be needed.
- The level of environmental analysis to be required under NEPA for individual wind power projects will be determined at the FO level. For many projects, it may be determined that a tiered environmental assessment (EA) is appropriate in lieu of an EIS. To the extent that the PEIS addresses anticipated issues and concerns associated with an individual project, including potential cumulative impacts, the BLM will tier off of the decisions embedded in the PEIS and limit the scope of additional project-specific NEPA analyses. The site-specific NEPA analyses will include analyses of project site configuration and micrositing considerations, monitoring program requirements, and appropriate mitigation measures. In particular, the mitigation measures discussed in Chapter 5 of the PEIS may be consulted in determining site-specific requirements. Public involvement will be incorporated into all wind energy development projects to ensure that all concerns and issues are identified and adequately addressed. In general, the scope of the NEPA analyses will be limited to the proposed action on BLM-managed public lands; however, if access to proposed development on adjacent non-BLM-managed lands is entirely dependent on obtaining ROW access across BLM-managed public lands and there are no alternatives to that access, the NEPA analysis for the proposed ROW may need to assess the environmental effects from that proposed development. The BLM's analyses of ROW access projects may tier off of the PEIS to the extent that the proposed project falls within the scope of the PEIS analyses.
- Site-specific environmental analyses will tier from the PEIS and identify and assess any cumulative impacts that are beyond the scope of the cumulative impacts addressed in the PEIS.
- The Categorical Exclusion (CX) applicable to the issuance of short-term ROWs or land use authorizations may be applicable to some site monitoring and testing activities. The relevant CX, established for the BLM in the DOI Departmental Manual 516, Chapter 11, Sec. 11.5, E(19) (USDI, 2004), encompasses "issuance of short-term (3 years or less) rights-of-way or land use authorizations for such uses as storage sites, apiary sites, and construction sites where the proposal includes rehabilitation to restore the land to its natural or original condition."
- BLM will require financial bonds for all wind energy development projects on BLM-administered public lands to ensure compliance with the terms and conditions of the rights-of-way authorization and the requirements of applicable regulatory requirements, including reclamation costs. The amount of the required bond will be determined during the rights-of-way authorization process on the basis of site-specific and project-specific factors. BLM may also require financial bonds for site monitoring and testing authorizations.
- Entities seeking to develop a wind energy project on BLM-administered public lands shall develop a project-specific Plan of Development (POD) that incorporates all BMPs and, as appropriate, the requirements of other existing and relevant BLM mitigation guidance, including the BLM's interim off-site mitigation guidance (BLM, 2005b). Additional mitigation measures will be incorporated into the POD and into the ROW authorization as project stipulations, as needed, to address site-specific and species-specific issues. The POD will include a site plan showing the locations of turbines, roads, power lines, other infrastructure, and other areas of short- and long-term disturbance.
- BLM will incorporate management goals and objectives specific to habitat conservation for species of concern (e.g., sage-grouse), as appropriate, into the POD for proposed wind energy projects.
- BLM will consider the visual resource values of the public lands involved in proposed wind energy development projects, consistent with BLM VRM policies and guidance. BLM will work with the ROW applicant to incorporate visual design considerations into the planning and design of the project to minimize potential visual impacts of the proposal and to meet the VRM objectives of the area.
- Operators of wind power facilities on BLM-administered public lands shall consult with BLM and other appropriate Federal, State, and local agencies regarding any planned upgrades or changes to the

wind facility design or operation. Proposed changes of this nature may require additional environmental analysis and/or revision of the POD.

- The BLM's Wind Energy Development Program will incorporate adaptive management strategies to ensure that potential adverse impacts of wind energy development are avoided (if possible), minimized, or mitigated to acceptable levels. The programmatic policies and BMPs will be updated and revised as new data regarding the impacts of wind power projects become available. At the project level, operators will be required to develop monitoring programs to evaluate the environmental conditions at the site through all phases of development, to establish metrics against which monitoring observations can be measured, to identify potential mitigation measures, and to establish protocols for incorporating monitoring observations and additional mitigation measures into standard operating procedures and project-specific stipulations.

Best Management Practices (BMPs)

The BMPs will be adopted as required elements of project-specific PODs and/or as ROW authorization stipulations. They are categorized by development activity: site monitoring and testing, development of the POD, construction, operation, and decommissioning. The BMPs for development of the POD identify required elements of the POD needed to address potential impacts associated with subsequent phases of development.

Site Monitoring and Testing

- The area disturbed by installation of meteorological towers (i.e., footprint) shall be kept to a minimum.
- Existing roads shall be used to the maximum extent feasible. If new roads are necessary, they shall be designed and constructed to the appropriate standard.
- Meteorological towers shall not be located in sensitive habitats or in areas where ecological resources known to be sensitive to human activities (e.g., prairie grouse) are present. Installation of towers shall be scheduled to avoid disruption of wildlife reproductive activities or other important behaviors.
- Meteorological towers installed for site monitoring and testing shall be inspected periodically for structural integrity.

Plan of Development Preparation

General

- BLM and operators shall contact appropriate agencies, property owners, and other stakeholders early in the planning process to identify potentially sensitive land uses and issues, rules that govern wind energy development locally, and land use concerns specific to the region.
- Available information describing the environmental and sociocultural conditions in the vicinity of the proposed project shall be collected and reviewed as needed to predict potential impacts of the project.
- The Federal Aviation Administration (FAA)-required notice of proposed construction shall be made as early as possible to identify any air safety measures that would be required.
- To plan for efficient use of the land, necessary infrastructure requirements shall be consolidated wherever possible, and current transmission and market access shall be evaluated carefully.
- The project shall be planned to utilize existing roads and utility corridors to the maximum extent feasible, and to minimize the number and length/size of new roads, lay-down areas, and borrow areas.
- A monitoring program shall be developed to ensure that environmental conditions are monitored during the construction, operation, and decommissioning phases. The monitoring program requirements, including adaptive management strategies, shall be established at the project level to ensure that potential adverse impacts of wind energy development are mitigated. The monitoring program shall identify the monitoring requirements for each environmental resource present at the site, establish metrics against which monitoring observations can be measured, identify potential

mitigation measures, and establish protocols for incorporating monitoring observations and additional mitigation measures into standard operating procedures and BMPs.

- “Good housekeeping” procedures shall be developed to ensure that during operation the site will be kept clean of debris, garbage, fugitive trash or waste, and graffiti; to prohibit scrap heaps and dumps; and to minimize storage yards.

Wildlife and Other Ecological Resources

- Operators shall review existing information on species and habitats in the vicinity of the project area to identify potential concerns.
- Operators shall conduct surveys for Federal and/or State-protected species and other species of concern (including special status plant and animal species) within the project area and design the project to avoid (if possible), minimize, or mitigate impacts to these resources.
- Operators shall identify important, sensitive, or unique habitats in the vicinity of the project and design the project to avoid (if possible), minimize, or mitigate impacts to these habitats (e.g., locate the turbines, roads, and ancillary facilities in the least environmentally sensitive areas; i.e., away from riparian habitats, streams, wetlands, drainages, or critical wildlife habitats).
- The BLM will prohibit the disturbance of any population of Federally listed plant species.
- Operators shall evaluate avian and bat use of the project area and design the project to minimize or mitigate the potential for bird and bat strikes (e.g., development shall not occur in riparian habitats and wetlands). Scientifically rigorous avian and bat use surveys shall be conducted; the amount and extent of ecological baseline data required shall be determined on a project basis.
- Turbines shall be configured to avoid landscape features known to attract raptors, if site studies show that placing turbines there would pose a significant risk to raptors.
- Operators shall determine the presence of bat colonies and avoid placing turbines near known bat hibernation, breeding, and maternity/nursery colonies; in known migration corridors; or in known flight paths between colonies and feeding areas.
- Operators shall determine the presence of active raptor nests (i.e., raptor nests used during the breeding season). Measures to reduce raptor use at a project site (e.g., minimize road cuts, maintain either no vegetation or nonattractive plant species around the turbines) shall be considered.
- A habitat restoration plan shall be developed to avoid (if possible), minimize, or mitigate negative impacts on vulnerable wildlife while maintaining or enhancing habitat values for other species. The plan shall identify revegetation, soil stabilization, and erosion reduction measures that shall be implemented to ensure that all temporary use areas are restored. The plan shall require that restoration occur as soon as possible after completion of activities to reduce the amount of habitat converted at any one time and to speed up the recovery to natural habitats.
- Procedures shall be developed to mitigate potential impacts to special status species. Such measures could include avoidance, relocation of project facilities or lay-down areas, and/or relocation of biota.
- Facilities shall be designed to discourage their use as perching or nesting substrates by birds. For example, power lines and poles shall be configured to minimize raptor electrocutions and discourage raptor and raven nesting and perching.

Visual Resources

- The public shall be involved and informed about the visual site design elements of the proposed wind energy facilities. Possible approaches include conducting public forums for disseminating information, offering organized tours of operating wind developments, and using computer simulation and visualization techniques in public presentations.
- Turbine arrays and turbine design shall be integrated with the surrounding landscape. Design elements to be addressed include visual uniformity, use of tubular towers, proportion and color of turbines, nonreflective paints, and prohibition of commercial messages on turbines.
- Other site design elements shall be integrated with the surrounding landscape. Elements to address include minimizing the profile of the ancillary structures, burial of cables, prohibition of commercial

symbols, and lighting. Regarding lighting, efforts shall be made to minimize the need for and amount of lighting on ancillary structures.

Roads

- An access road siting and management plan shall be prepared incorporating existing BLM standards regarding road design, construction, and maintenance such as those described in the BLM 9113 Manual (BLM, 1985) and the *Surface Operating Standards for Oil and Gas Exploration and Development* (i.e., the Gold Book)(USDI and USDA, 2007).

Ground Transportation

- A transportation plan shall be developed, particularly for the transport of turbine components, main assembly cranes, and other large pieces of equipment. The plan shall consider specific object sizes, weights, origin, destination, and unique handling requirements and shall evaluate alternative transportation approaches. In addition, the process to be used to comply with unique state requirements and to obtain all necessary permits shall be clearly identified.
- A traffic management plan shall be prepared for the site access roads to ensure that no hazards would result from the increased truck traffic and that traffic flow would not be adversely impacted. This plan shall incorporate measures such as informational signs, flaggers when equipment may result in blocked throughways, and traffic cones to identify any necessary changes in temporary lane configuration.

Noise

- Proponents of a wind energy development project shall take measurements to assess the existing background noise levels at a given site and compare them with the anticipated noise levels associated with the proposed project.

Noxious Weeds and Pesticides

- Operators shall develop a plan for control of noxious weeds and invasive species, which could occur as a result of new surface disturbance activities at the site. The plan shall address monitoring, education of personnel on weed identification, the manner in which weeds spread, and methods for treating infestations. The use of certified weed-free mulching shall be required. If trucks and construction equipment are arriving from locations with known invasive vegetation problems, a controlled inspection and cleaning area shall be established to visually inspect construction equipment arriving at the project area and to remove and collect seeds that may be adhering to tires and other equipment surfaces.
- If pesticides are used on the site, an integrated pest management plan shall be developed to ensure that applications would be conducted within the framework of BLM and DOI policies and entail only the use of EPA-registered pesticides. Pesticide use shall be limited to nonpersistent, immobile pesticides and shall only be applied in accordance with label and application permit directions and stipulations for terrestrial and aquatic applications.

Cultural and Historic Resources

- BLM will consult with Indian Tribal governments early in the planning process to identify issues regarding the proposed wind energy development, including issues related to the presence of cultural properties, access rights, disruption to traditional cultural practices, and impacts to visual resources important to the tribe(s).
- The presence of archaeological sites and historic properties in the area of potential effect shall be determined on the basis of a records search of recorded sites and properties in the area and/or, depending on the extent and reliability of existing information, an archaeological survey. Archaeological sites and historic properties present in the area of potential effect shall be reviewed to

determine whether they meet the criteria of eligibility for listing on the *National Register of Historic Places* (NRHP).

- When any ROW application includes remnants of a NHT, is located within the viewshed of an NHT's designated centerline, or includes or is within the viewshed of a trail eligible for listing on the NRHP, the operator shall evaluate the potential visual impacts to the trail associated with the proposed project and identify appropriate mitigation measures for inclusion as stipulations in the POD.
- If cultural resources are present at the site, or if areas with a high potential to contain cultural material have been identified, a cultural resources management plan (CRMP) shall be developed. This plan shall address mitigation activities to be taken for cultural resources found at the site. Avoidance of the area is always the preferred mitigation option. Other mitigation options include archaeological survey and excavation (as warranted) and monitoring. If an area exhibits a high potential, but no artifacts were observed during an archaeological survey, monitoring by a qualified archaeologist could be required during all excavation and earthmoving in the high-potential area. A report shall be prepared documenting these activities. The CRMP also shall (1) establish a monitoring program, (2) identify measures to prevent potential looting/vandalism or erosion impacts, and (3) address the education of workers and the public to make them aware of the consequences of unauthorized collection of artifacts and destruction of property on public land.

Paleontological Resources

- Operators shall determine whether paleontological resources exist in a project area on the basis of the sedimentary context of the area, a records search for past paleontological finds in the area, and/or, depending on the extent of existing information, a paleontological survey.
- If paleontological resources are present at the site, or if areas with a high potential to contain paleontological material have been identified, a paleontological resources management plan shall be developed. This plan shall include a mitigation plan for collection of the fossils; mitigation could include avoidance, removal of fossils, or monitoring. If an area exhibits a high potential but no fossils were observed during survey, monitoring by a qualified paleontologist could be required during all excavation and earthmoving in the sensitive area. A report shall be prepared documenting these activities. The paleontological resources management plan also shall (1) establish a monitoring program, (2) identify measures to prevent potential looting/vandalism or erosion impacts, and (3) address the education of workers and the public to make them aware of the consequences of unauthorized collection of fossils on public land.

Hazardous Materials and Waste Management

- Operators shall develop a hazardous materials management plan addressing storage, use, transportation, and disposal of each hazardous material anticipated to be used at the site. The plan shall identify all hazardous materials that would be used, stored, or transported at the site. It shall establish inspection procedures, storage requirements, storage quantity limits, inventory control, nonhazardous product substitutes, and disposition of excess materials. The plan shall also identify requirements for notices to federal and local emergency response authorities and include emergency response plans.
- Operators shall develop a waste management plan identifying the waste streams that are expected to be generated at the site and addressing hazardous waste determination procedures, waste storage locations, waste-specific management and disposal requirements, inspection procedures, and waste minimization procedures. This plan shall address all solid and liquid wastes that may be generated at the site.
- Operators shall develop a spill prevention and response plan identifying where hazardous materials and wastes are stored on site, spill prevention measures to be implemented, training requirements, appropriate spill response actions for each material or waste, the locations of spill response kits on site, a procedure for ensuring that the spill response kits are adequately stocked at all times, and procedures for making timely notifications to authorities.

Storm Water

- Operators shall develop a storm water management plan for the site to ensure compliance with applicable regulations and prevent off-site migration of contaminated storm water or increased soil erosion.

Human Health and Safety

- A safety assessment shall be conducted to describe potential safety issues and the means that would be taken to mitigate them, including issues such as site access, construction, safe work practices, security, heavy equipment transportation, traffic management, emergency procedures, and fire control.
- A health and safety program shall be developed to protect both workers and the general public during construction, operation, and decommissioning of a wind energy project. Regarding occupational health and safety, the program shall identify all applicable federal and state occupational safety standards; establish safe work practices for each task (e.g., requirements for personal protective equipment and safety harnesses; Occupational Safety and Health Administration [OSHA] standard practices for safe use of explosives and blasting agents; and measures for reducing occupational electric and magnetic fields [EMF] exposures); establish fire safety evacuation procedures; and define safety performance standards (e.g., electrical system standards and lightning protection standards). The program shall include a training program to identify hazard training requirements for workers for each task and establish procedures for providing required training to all workers. Documentation of training and a mechanism for reporting serious accidents to appropriate agencies shall be established.
- Regarding public health and safety, the health and safety program shall establish a safety zone or setback for wind turbine generators from residences and occupied buildings, roads, ROWs, and other public access areas that is sufficient to prevent accidents resulting from the operation of wind turbine generators. It shall identify requirements for temporary fencing around staging areas, storage yards, and excavations during construction or decommissioning activities. It shall also identify measures to be taken during the operation phase to limit public access to hazardous facilities (e.g., permanent fencing would be installed only around electrical substations, and turbine tower access doors would be locked).
- Operators shall consult with local planning authorities regarding increased traffic during the construction phase, including an assessment of the number of vehicles per day, their size, and type. Specific issues of concern (e.g., location of school bus routes and stops) shall be identified and addressed in the traffic management plan.
- If operation of the wind turbines is expected to cause significant adverse impacts to nearby residences and occupied buildings from shadow flicker, low-frequency sound, or EMF, site-specific recommendations for addressing these concerns shall be incorporated into the project design (e.g., establishing a sufficient setback from turbines).
- The project shall be planned to minimize electromagnetic interference (EMI) (e.g., impacts to radar, microwave, television, and radio transmissions) and comply with Federal Communications Commission [FCC] regulations. Signal strength studies shall be conducted when proposed locations have the potential to impact transmissions. Potential interference with public safety communication systems (e.g., radio traffic related to emergency activities) shall be avoided.
- The project shall be planned to comply with FAA regulations, including lighting regulations, and to avoid potential safety issues associated with proximity to airports, military bases or training areas, or landing strips.
- Operators shall develop a fire management strategy to implement measures to minimize the potential for a human-caused fire.

Construction

General

- All control and mitigation measures established for the project in the POD and the resource-specific management plans that are part of the POD shall be maintained and implemented throughout the construction phase, as appropriate.
- The area disturbed by construction and operation of a wind energy development project (i.e., footprint) shall be kept to a minimum.
- The number and size/length of roads, temporary fences, lay-down areas, and borrow areas shall be minimized.
- Topsoil from all excavations and construction activities shall be salvaged and reapplied during reclamation.
- All areas of disturbed soil shall be reclaimed using weed-free native grasses, forbs, and shrubs. Reclamation activities shall be undertaken as early as possible on disturbed areas.
- All electrical collector lines shall be buried in a manner that minimizes additional surface disturbance (e.g., along roads or other paths of surface disturbance). Overhead lines may be used in cases where burial of lines would result in further habitat disturbance.
- Operators shall identify unstable slopes and local factors that can induce slope instability (such as groundwater conditions, precipitation, earthquake activities, slope angles, and the dip angles of geologic strata). Operators also shall avoid creating excessive slopes during excavation and blasting operations. Special construction techniques shall be used where applicable in areas of steep slopes, erodible soil, and stream channel crossings.
- Erosion controls that comply with Federal, State, and county standards shall be applied. Practices such as jute netting, silt fences, and check dams shall be applied near disturbed areas.

Wildlife

- Guy wires on permanent meteorological towers shall be avoided, however, may be necessary on temporary meteorological towers installed during site monitoring and testing.
- In accordance with the habitat restoration plan, restoration shall be undertaken as soon as possible after completion of construction activities to reduce the amount of habitat converted at any one time and to speed up the recovery to natural habitats.
- All construction employees shall be instructed to avoid harassment and disturbance of wildlife, especially during reproductive (e.g., courtship and nesting) seasons. In addition, pets shall not be permitted on site during construction.

Visual Resources

- Operators shall reduce visual impacts during construction by minimizing areas of surface disturbance, controlling erosion, using dust suppression techniques, and restoring exposed soils as closely as possible to their original contour and vegetation.

Roads

- Existing roads shall be used, but only if in safe and environmentally sound locations. If new roads are necessary, they shall be designed and constructed to the appropriate standard and be no higher than necessary to accommodate their intended functions (e.g., traffic volume and weight of vehicles). Excessive grades on roads, road embankments, ditches, and drainages shall be avoided, especially in areas with erodible soils. Special construction techniques shall be used, where applicable. Abandoned roads and roads that are no longer needed shall be recontoured and revegetated.
- Access roads and on-site roads shall be surfaced with aggregate materials, wherever appropriate.
- Access roads shall be located to follow natural contours and minimize side hill cuts.
- Roads shall be located away from drainage bottoms and avoid wetlands, if practicable.
- Roads shall be designed so that changes to surface water runoff are avoided and erosion is not initiated.

- Access roads shall be located to minimize stream crossings. All structures crossing streams shall be located and constructed so that they do not decrease channel stability or increase water velocity. Operators shall obtain all applicable Federal and State permits.
- Existing drainage systems shall not be altered, especially in sensitive areas such as erodible soils or steep slopes. Potential soil erosion shall be controlled at culvert outlets with appropriate structures. Catch basins, roadway ditches, and culverts shall be cleaned and maintained regularly.

Ground Transportation

- Project personnel and contractors shall be instructed and required to adhere to speed limits commensurate with road types, traffic volumes, vehicle types, and site-specific conditions, to ensure safe and efficient traffic flow and to reduce wildlife collisions and disturbance and airborne dust.
- Traffic shall be restricted to the roads developed for the project. Use of other unimproved roads shall be restricted to emergency situations.
- Signs shall be placed along construction roads to identify speed limits, travel restrictions, and other standard traffic control information. To minimize impacts on local commuters, consideration shall be given to limiting construction vehicles traveling on public roadways during the morning and late afternoon commute time.

Air Emissions

- Dust abatement techniques shall be used on unpaved, unvegetated surfaces to minimize airborne dust.
- Speed limits (e.g., 25 mph [40 km/h]) shall be posted and enforced to reduce airborne fugitive dust.
- Construction materials and stockpiled soils shall be covered if they are a source of fugitive dust.
- Dust abatement techniques shall be used before and during surface clearing, excavation, or blasting activities.

Excavation and Blasting Activities

- Operators shall gain a clear understanding of the local hydrogeology. Areas of groundwater discharge and recharge and their potential relationships with surface water bodies shall be identified.
- Operators shall avoid creating hydrologic conduits between two aquifers during foundation excavation and other activities.
- Foundations and trenches shall be backfilled with originally excavated material as much as possible. Excess excavation materials shall be disposed of only in approved areas or, if suitable, stockpiled for use in reclamation activities.
- Borrow material shall be obtained only from authorized and permitted sites. Existing sites shall be used in preference to new sites.
- Explosives shall be used only within specified times and at specified distances from sensitive wildlife or streams and lakes, as established by the BLM or other federal and state agencies.

Noise

- Noisy construction activities (including blasting) shall be limited to the least noise-sensitive times of day (i.e., daytime only between 7 a.m. and 10 p.m.) and weekdays.
- All equipment shall have sound-control devices no less effective than those provided on the original equipment. All construction equipment used shall be adequately muffled and maintained.
- All stationary construction equipment (i.e., compressors and generators) shall be located as far as practicable from nearby residences.
- If blasting or other noisy activities are required during the construction period, nearby residents shall be notified in advance.

Cultural and Paleontological Resources

- Unexpected discovery of cultural or paleontological resources during construction shall be brought to the attention of the responsible BLM authorized officer immediately. Work shall be halted in the vicinity of the find to avoid further disturbance to the resources while they are being evaluated and appropriate mitigation measures are being developed.

Hazardous Materials and Waste Management

- Secondary containment shall be provided for all on-site hazardous materials and waste storage, including fuel. In particular, fuel storage (for construction vehicles and equipment) shall be a temporary activity occurring only for as long as is needed to support construction activities.
- Wastes shall be properly containerized and removed periodically for disposal at appropriate off-site permitted disposal facilities.
- In the event of an accidental release to the environment, the operator shall document the event, including a root cause analysis, appropriate corrective actions taken, and a characterization of the resulting environmental or health and safety impacts. Documentation of the event shall be provided to the BLM authorized officer and other federal and state agencies, as required.
- Any wastewater generated in association with temporary, portable sanitary facilities shall be periodically removed by a licensed hauler and introduced into an existing municipal sewage treatment facility. Temporary, portable sanitary facilities provided for construction crews shall be adequate to support expected on-site personnel and shall be removed at completion of construction activities.

Public Health and Safety

- Temporary fencing shall be installed around staging areas, storage yards, and excavations during construction to limit public access.

Operations

General

- All control and mitigation measures established for the project in the POD and the resource-specific management plans that are part of the POD shall be maintained and implemented throughout the operational phase, as appropriate. These control and mitigation measures shall be reviewed and revised, as needed, to address changing conditions or requirements at the site, throughout the operational phase. This adaptive management approach would help ensure that impacts from operations are kept to a minimum.
- Inoperative turbines shall be repaired, replaced, or removed in a timely manner. Requirements to do so shall be incorporated into the due diligence provisions of the rights-of-way authorization. Operators will be required to demonstrate due diligence in the repair, replacement, or removal of turbines; failure to do so could result in termination of the ROW authorization.

Wildlife

- Employees, contractors, and site visitors shall be instructed to avoid harassment and disturbance of wildlife, especially during reproductive (e.g., courtship and nesting) seasons. In addition, any pets shall be controlled to avoid harassment and disturbance of wildlife.
- Observations of potential wildlife problems, including wildlife mortality, shall be reported to the BLM authorized officer immediately.

Ground Transportation

- Ongoing ground transportation planning shall be conducted to evaluate road use, minimize traffic volume, and ensure that roads are maintained adequately to minimize associated impacts.

Monitoring Program

- Site monitoring protocols defined in the POD shall be implemented. These will incorporate monitoring program observations and additional mitigation measures into standard operating procedures and BMPs to minimize future environmental impacts.
- Results of monitoring program efforts shall be provided to the BLM authorized officer.

Public Health and Safety

- Permanent fencing shall be installed and maintained around electrical substations, and turbine tower access doors shall be locked to limit public access.
- In the event an installed wind energy development project results in electromagnetic interference, the operator shall work with the owner of the impacted communications system to resolve the problem. Additional warning information may also need to be conveyed to aircraft with onboard radar systems so that echoes from wind turbines can be quickly recognized.

Decommissioning

General

- Prior to the termination of the rights-of-way authorization, a decommissioning plan shall be developed and approved by the BLM. The decommissioning plan shall include a site reclamation plan and monitoring program.
- All management plans, BMPs, and stipulations developed for the construction phase shall be applied to similar activities during the decommissioning phase.
- All turbines and ancillary structures shall be removed from the site.
- Topsoil from all decommissioning activities shall be salvaged and reapplied during final reclamation.
- All areas of disturbed soil shall be reclaimed using weed-free native shrubs, grasses, and forbs.
- The vegetation cover, composition, and diversity shall be restored to values commensurate with the ecological setting.

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**APPENDIX O:
LANDS AVAILABLE FOR
DISPOSAL UNDER THE
FEDERAL LAND
TRANSACTION
FACILITATION ACT BY
ALTERNATIVE**

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APPENDIX O: LANDS AVAILABLE FOR DISPOSAL UNDER THE FEDERAL LAND TRANSACTION FACILITATION ACT BY ALTERNATIVE

This appendix identifies lands available for disposal under the Federal Land Transaction Facilitation Act of 2000 (FLTFA), as per BLM Handbook H-1601-1, *Land Use Planning*. FLTFA amended the Federal Land Policy and Management Act of 1976 (FLPMA) to allow retention by BLM of receipts received for sale of land or interests in land under Section 20 of FLPMA or conveyance of mineral interest under Section 209(b) of FLPMA provided a land use plan was completed prior to July 25, 2000. FLTFA currently does not apply to lands identified for disposal after July 25, 2000.

In the No Action Alternative, all lands identified for disposal in the 1987 Jarbidge RMP would continue to be available for disposal under FLTFA. In Alternatives I through IV, lands identified for disposal in the 1987 RMP and allocated to Land Tenure Zone 3 in each alternative would continue to be available for disposal under FLTFA in that alternative; these lands are displayed by alternative in Table O- 1. In Alternative V, no lands are allocated to Land Tenure Zone 3; therefore, no lands would be available for disposal under FLTFA.

Table O- 1. Lands Available for Disposal under FLTFA by Alternative

Public Land Survey System Legal Description	Number of Acres
Alternatives I and III	
T12S, R13E, Section 22, SWSW	40
T12S, R13E, Section 27, NWNW	40
Total	80
Alternative II	
T05S, R10E, Section 33, SENE	39
T06S, R10E, Section 11, NWNW	40
T08S, R13E, Section 33, SWNE	40
T09S, R13E, Section 04, NENW	54
T09S, R13E, Section 09, NWSE	6
T09S, R13E, Section 09, SENW	40
T09S, R13E, Section 09, SENW	40
T12S, R13E, Section 22, SWSW	40
T12S, R13E, Section 27, NWNW	40
Total	339
Alternative IV (the Preferred Alternative)	
T05S, R10E, Section 33, SENE	39
Total	39

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**APPENDIX P:
MONITORING
IMPLEMENTATION AND
EFFECTIVENESS OF RMP
DECISIONS**

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APPENDIX P: MONITORING IMPLEMENTATION AND EFFECTIVENESS OF RMP DECISIONS

The regulations in 43 CFR 1610.4-9 require that land use plans establish intervals and standards for monitoring, based on the sensitivity of the resource decisions. Land use plan monitoring is the process of tracking the implementation of land use plan decisions (implementation monitoring) and collecting data/information necessary to evaluate the effectiveness of land use plan decisions (effectiveness monitoring). This section describes the process to be used for monitoring the implementation and effectiveness of resource management plan (RMP) decisions; other monitoring BLM conducts for other purposes are not described in this section. The monitoring activities described in this section are not RMP decisions themselves; rather, they are activities intended to assist BLM monitor implementation and effectiveness of RMP decisions.

Implementation Monitoring

Implementation monitoring is the process of tracking and documenting the implementation, or the progress toward implementation, of RMP decisions. Instruction Memorandum 2008-041, *Guidance for Establishing Implementation Priorities for Land Use Plans*, contains the current BLM policy for implementation monitoring. This policy directs offices to identify land use plan implementation priorities within four months of signing the Record of Decision using the “Establishing Resource Management Plan Implementation Priorities” approach developed by the BLM. This approach provides a systematic method for planning for and achieving the desired outcomes for land use plans based on anticipated funding and for generating opportunities for ongoing collaboration with the public. This process will be used to monitor implementation of the revised Jarbidge RMP unless directed otherwise by new guidance in the future.

“Establishing Resource Management Plan Implementation Priorities” is a four-step process. The first two steps are achieved through a workshop conducted by trained implementation facilitators in which the field office outlines its workload for implementing the plan decisions and establishes priorities based on anticipated budget and personnel. During the workshop phase, spreadsheets are created that are used to monitor the implementation of the plan over time; these spreadsheets are updated annually. In steps three and four, the field office integrates specific tasks in the spreadsheets with required funding and creates a communication strategy to describe the action and funding priorities.

Effectiveness Monitoring

Effectiveness monitoring is the process of collecting data and information as the plan is being implemented in order to determine whether or not desired outcomes, expressed as goals and objectives in the RMP, are being met or whether progress is being made toward meeting them. This information is used during the land use plan evaluation process, which typically occurs every five years following the Record of Decision.

The effectiveness of the revised Jarbidge RMP in meeting its desired outcomes will be assessed by collecting on a periodic basis data and information relevant to specific objectives in the plan. To obtain data in a cost-effective manner; existing and ongoing monitoring activities will be used to the extent the data collected are pertinent to a plan objective. In most cases, effectiveness monitoring will be an annual effort, with a portion of the planning area being monitored each year in order to have sufficient monitoring data to use for each land use plan evaluation.

The remainder of this section briefly outlines a monitoring strategy to evaluate whether desired outcomes are being achieved, including data to be collected and the methods and timeframes for collecting that data (Table P- 1). The strategy will be refined following the Record of Decision to be most relevant to the desired outcomes contained in the approved plan as well as the budget and personnel constraints existing at that time. The strategy is subject to change if BLM later determines different data, methods, or timeframes would provide more useful information for assessing the effectiveness of RMP decisions; the strategy may also be modified as necessary to be consistent with changes in law, regulation, or policy.

The nature of some of the goals and objectives do not lend themselves to effectiveness monitoring. Monitoring of the management direction contained in the following sections of Chapter 2 would be limited to implementation monitoring:

- *Land Use Authorizations*
- *Land Tenure*
- *Minerals*
- *Social and Economic Conditions*
- *Hazardous Materials*
- *Interpretation, Outreach, and Environmental Education*

Table P- 1. Monitoring Strategy for Assessing Effectiveness of RMP Decisions

Section	Strategy for Determining whether RMP Objectives are being Met
Tribal Rights and Interests	Every five years, assemble and assess monitoring data for natural and cultural resources listed below.
Air and Atmospheric Values	Every five years, assemble and assess monitoring data collected by the Idaho Department of Environmental Quality (DEQ) in or near the planning area.
Geologic Features	Monitor visitor impacts to unique geologic formations in conjunction with recreation, cultural resource, WSA, and WSR monitoring listed below.
Soil Resources	Evaluate soil conditions in allotments at ten-year intervals prior to grazing permit renewal for compliance with the Idaho Standards for Rangeland Health. Use methods described in Technical Reference (TR) 1734-6, <i>Interpreting Indicators of Rangeland Health</i> .
Water Resources	Coordinate with DEQ and the Idaho Department of Water Resources to monitor 303(d)-listed or other priority streams as resource conditions warrant.
Upland Vegetation	Annually update the planning area vegetation map with new data resulting from fire or vegetation treatments; evaluate burned areas two years following fire. Annually evaluate 10% of the planning area to document vegetation changes due to natural succession.
Riparian Areas and Wetlands	Annually evaluate 20% of stream reaches with riparian vegetation and 10% of areas with wetland vegetation. Use methods described in TR 1737-15, <i>A User Guide to Assessing Proper Functioning Condition and the Supporting Science for Lotic Areas</i> , and TR 1737-16, <i>A User Guide to Assessing Proper Functioning Condition and the Supporting Science for Lentic Areas</i> . As available, use Multiple Indicator Monitoring as described in Idaho Technical Bulletin 2007-01 to support Proper Functioning Condition (PFC) assessments on perennial streams.
Fish	Use riparian area monitoring described above to determine changes to habitat quantity and quality for native non-game fish. Annually monitor aquatic habitat condition in conjunction with riparian PFC monitoring.
Wildlife	Use monitoring and assessments for riparian and wetland areas, upland vegetation, and Idaho Standards for Rangeland Health to determine changes to habitat quantity and quality for wildlife.
Special Status Species	Use monitoring and assessments for riparian and wetland areas, upland vegetation, and Idaho Standards for Rangeland Health to determine changes to habitat quantity and quality for special status species. Monitor Type 1 and priority special status species according to current protocols, conservation agreements, and Endangered Species Act (ESA) consultation requirements. Annually monitor aquatic habitat condition in conjunction with riparian PFC monitoring.
Noxious Weeds and Invasive Plants	Evaluate vegetation conditions relative to presence of noxious weeds and invasive plants in allotments at ten-year intervals prior to grazing permit renewal for compliance with Idaho Standards for Rangeland Health. Use methods described in TR 1734-6, <i>Interpreting Indicators of Rangeland Health</i> . Monitor areas treated in previous years to evaluate treatment effectiveness; prioritize areas monitored based on resource issues.
Wildland Fire Ecology and Management	Every five years, evaluate wildland fire size, the number of human-caused fires, and the number of acres burned within and outside the wildland-urban interface. Update

Section	Strategy for Determining whether RMP Objectives are being Met
	Fire Regime Condition Class analysis when 20% of the planning area has been disturbed by wildland fire or treated by fuels projects or at least every 5 years. Every five years, evaluate acres of fuels treatments and fire size in Critical Suppression Areas to determine fuels treatment effectiveness.
Wild Horses	Conduct annual wild horse counts to monitor population trends.
Paleontological Resources	Annually evaluate condition of five vertebrate fossil localities or scientifically important invertebrate or plant fossil localities based on level of threat; determine if localities are stable or deteriorating. Monitoring would be recorded through written and photographic documentation.
Cultural Resources	Annually evaluate the condition of 30 sites based on type of site and level of threat; determine if sites are stable or deteriorating. Monitoring would focus on National Register eligible and listed properties and Native American traditional cultural properties. Monitoring would be recorded through written and photographic documentation.
Visual Resources	Annually evaluate 20% of Key Observation Points for comparison with visual resource inventory (VRI) classes, with priority on areas managed as visual resource management (VRM) Classes I, II, and III; determine whether VRI classes have changed beyond thresholds as follows: <ul style="list-style-type: none"> • VRM Class I or II: VRI class would not change • VRM Class III: VRI class would not change more than one class • VRM Class IV: VRI class can change one or more classes
Non-Wilderness Study Area (WSA) Lands with Wilderness Characteristics	Every five years following completion of the Comprehensive Transportation and Travel Management Plan (CTTMP), evaluate existing non-WSA lands with wilderness characteristics.
Livestock Grazing	Evaluate soil and vegetation conditions in allotments at ten-year intervals prior to grazing permit renewal for compliance with Idaho Standards for Rangeland Health. Use methods described in TR 1734-6, <i>Interpreting Indicators of Rangeland Health</i> . Use Multiple Indicator Monitoring as described in Idaho Technical Bulletin 2007-01 to evaluate livestock use on riparian areas that are not at PFC. Monitor livestock use according to allotment-specific grazing use indicators and criteria. Update geospatial data for range infrastructure as changes occur. Annually monitor 20% of reference areas to evaluate fence and vegetation condition; use methods appropriate to reference area resources (e.g., riparian, upland vegetation, special status species).
Recreation	Annually monitor visitor use in Special Recreation Management Areas including type of use, group size, and facility and setting condition; monitor Extensive Recreation Management Area to evaluate user health and safety, user conflicts, and resource protection.
Transportation and Travel Management	Following completion of the CTTMP, annually monitor compliance with route designations.
Areas of Critical Environmental Concern (ACECs)	Every five years, evaluate condition of relevant and important values within designated ACECs using monitoring data described above for natural and cultural resources.
National Historic Trails (NHTs)	Annually monitor condition and historic and recreational settings of the Oregon NHT. Monitoring would be recorded through written and photographic documentation. Incorporate soil, vegetation, visual resource, and other pertinent resource monitoring data as appropriate.
Wild and Scenic Rivers (WSRs)	Annually monitor eligible, suitable, and designated WSR segments for free-flowing character and presence of qualifying outstandingly remarkable values (ORVs). Use monitoring associated with qualifying ORVs (e.g. vegetation, special status species) as described above.
WSAs	Monitor WSAs monthly in accordance with BLM Handbook H-8550-1, <i>Interim Management Policy for Lands under Wilderness Review</i> .
Note: Where specific protocols, technical references, manuals, and handbooks are noted, updated versions would be used as they become available	

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**APPENDIX Q:
VEGETATION IN THE
PLANNING AREA AS OF
FALL 2007**

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APPENDIX Q: VEGETATION IN THE PLANNING AREA AS OF FALL 2007

Table Q- 1 displays the vegetation composition of the planning area by vegetation community and vegetation sub-group (VSG) following the 2007 wildland fire season. Vegetation composition is presented by Vegetation Management Area (VMA) as well as for the planning area as a whole.

Table Q- 1. Post-Fire Vegetation in the Planning Area by VMA, VSG, and Vegetation Community

VSG	% of VMA	Vegetation Communities	Acres	% of VMA
VMA A: Wyoming Sagebrush/Indian Ricegrass ^A				
Annual	33%	Annual	64,657	29%
		Rabbitbrush/annual	427	<1%
		Wyoming big sagebrush/annual	8,490	4%
Non-Native Perennial	43%	Crested wheatgrass	95,465	43%
		Rabbitbrush/crested wheatgrass	882	<1%
Non-Native Understory	2%	Wyoming big sagebrush/crested wheatgrass	5,018	2%
Native Grassland	11%	Bluegrass	23,218	10%
		Needlegrass	1,386	1%
		Semi-wet meadow	42	<1%
Native Shrubland	8%	Basin big sagebrush	62	<1%
		Deciduous mountain brush	13	<1%
		Evergreen mountain brush	76	<1%
		Wyoming big sagebrush/bluebunch wheatgrass	379	<1%
		Wyoming big sagebrush/bluegrass	15,613	7%
		Wyoming big sagebrush/Indian ricegrass	38	<1%
Unvegetated	1%	Barren	1,211	1%
		Breaks	1,181	1%
		Recent burn	294	<1%
No Data	1%	No data	2,218	1%
Total for VMA A			221,618	
VMA B: Wyoming Sagebrush/Thurbers Needlegrass				
Annual	4%	Annual	24,840	4%
		Rabbitbrush/annual	452	<1%
		Wyoming big sagebrush/annual	2,389	<1%
Non-Native Perennial	22%	Crested wheatgrass	133,562	21%
		Fourwing saltbush/crested wheatgrass	2,656	<1%
		Rabbitbrush/crested wheatgrass	1,550	<1%
Non-Native Understory	4%	Wyoming big sagebrush/crested wheatgrass	25,398	4%
Native Grassland	10%	Bluebunch wheatgrass	7,176	1%
		Bluegrass	53,791	9%
		Needlegrass	1,834	<1%
		Thurbers needlegrass	185	<1%
Native Shrubland	26%	Basin big sagebrush	175	<1%
		Deciduous mountain brush	269	<1%
		Evergreen mountain brush	381	<1%
		Juniper	311	<1%
		Low sagebrush/bluegrass	58	<1%

VSG	% of VMA	Vegetation Communities	Acres	% of VMA
		Low sagebrush/Idaho fescue	223	<1%
		Rabbitbrush/bluebunch wheatgrass	70	<1%
		Rabbitbrush/bluegrass	2,712	<1%
		Shadscale	3,113	<1%
		Wyoming big sagebrush/bluebunch wheatgrass	2,520	<1%
		Wyoming big sagebrush/bluegrass	131,752	21%
		Wyoming big sagebrush/Thurbers needlegrass	22,081	4%
Unvegetated	34%	Agricultural land	60	<1%
		Barren	393	<1%
		Breaks	15,660	2%
		Recent burn	195,406	31%
No Data	<1%	No data	672	<1%
Total for VMA B			629,689	
VMA C: Wyoming Sagebrush/Bluebunch Wheatgrass				
Annual	<1%	Annual	643	<1%
Non-Native Perennial	11%	Crested wheatgrass	30,313	10%
		Intermediate wheatgrass	859	<1%
		Rabbitbrush/crested wheatgrass	2,096	1%
		Rabbitbrush/intermediate wheatgrass	1,157	<1%
Non-Native Understory	7%	Wyoming big sagebrush/crested wheatgrass	22,118	7%
		Wyoming big sagebrush/intermediate wheatgrass	1,075	<1%
Native Grassland	2%	Bluebunch wheatgrass	5,790	2%
		Bluegrass	365	<1%
		Semi-wet meadow	15	<1%
Native Shrubland	28%	Aspen	23	<1%
		Basin big sagebrush	40	<1%
		Black sagebrush/bluebunch wheatgrass	65	<1%
		Black sagebrush/bluegrass	3,371	1%
		Deciduous mountain brush	39	<1%
		Juniper	192	<1%
		Low sagebrush/bluegrass	644	<1%
		Low sagebrush/Idaho fescue	2,039	1%
		Mountain big sagebrush/bluebunch wheatgrass-Idaho fescue	176	<1%
		Rabbitbrush/bluebunch wheatgrass	1,678	1%
		Rabbitbrush/bluegrass	8,984	3%
		Rabbitbrush/Idaho fescue	69	<1%
		Wyoming big sagebrush/bluebunch wheatgrass	14,308	5%
		Wyoming big sagebrush/bluegrass	54,907	18%
		Wyoming big sagebrush/Idaho fescue	32	<1%
Wyoming big sagebrush/thickspike wheatgrass	163	<1%		
Wyoming big sagebrush/Thurbers needlegrass	1,446	<1%		
Unvegetated	51%	Barren	83	<1%
		Breaks	5,176	2%
		Recent burn	155,380	50%
No Data	<1%	No data	71	<1%
Total for VMA C			313,317	
VMA D: Idaho Fescue (High Elevation)				
Annual	1%	Annual	574	<1%
		Wyoming big sagebrush/annual	814	<1%
Non-Native Perennial	2%	Crested wheatgrass	1,792	1%
		Intermediate wheatgrass	1,607	1%

VSG	% of VMA	Vegetation Communities	Acres	% of VMA
		Rabbitbrush/intermediate wheatgrass	3	<1%
Non-Native Understory	6%	Black sagebrush/crested wheatgrass	7,339	4%
		Low sagebrush/crested wheatgrass	431	<1%
		Wyoming big sagebrush/crested wheatgrass	4,575	2%
Native Grassland	3%	Bluebunch wheatgrass	3,543	2%
		Bluegrass	1,671	1%
		Needlegrass	2	<1%
		Semi-wet meadow	171	<1%
Native Shrubland	48%	Aspen	2,492	1%
		Basin big sagebrush	122	<1%
		Black sagebrush/bluebunch wheatgrass	1,514	1%
		Black sagebrush/bluegrass	12,684	6%
		Deciduous mountain brush	1,213	1%
		Evergreen mountain brush	5,508	3%
		Juniper	4	<1%
		Low sagebrush/bluebunch-Idaho fescue	2,097	1%
		Low sagebrush/bluegrass	496	<1%
		Low sagebrush/Idaho fescue	34,492	17%
		Low sagebrush/squirreltail	164	<1%
		Mountain big sagebrush/bluebunch wheatgrass-Idaho fescue	16,312	8%
		Mountain big sagebrush/Idaho fescue	7,013	3%
		Mountain mahogany	2,278	1%
		Rabbitbrush/bluebunch wheatgrass	38	<1%
		Rabbitbrush/bluegrass	276	<1%
		Rabbitbrush/Idaho fescue	354	<1%
		Wyoming big sagebrush/bluebunch wheatgrass	4,876	2%
Wyoming big sagebrush/bluegrass	6,022	3%		
Wyoming big sagebrush/Idaho fescue	1,689	1%		
Wyoming big sagebrush/Thurbers needlegrass	24	<1%		
Unvegetated	41%	Barren	20	<1%
		Breaks	9,930	5%
		Recent burn	76,516	37%
No Data	<1%	No data	227	<1%
Total for VMA D			208,883	
Planning Area				
Annual	8%	Annual	90,714	7%
		Rabbitbrush/annual	879	<1%
		Wyoming big sagebrush/annual	11,693	1%
Non-Native Perennial	20%	Crested wheatgrass	261,132	19%
		Fourwing saltbush/crested wheatgrass	2,656	<1%
		Intermediate wheatgrass	2,466	<1%
		Rabbitbrush/crested wheatgrass	4,528	<1%
		Rabbitbrush/intermediate wheatgrass	1,160	<1%
Non-Native Understory	5%	Black sagebrush/crested wheatgrass	7,339	1%
		Low sagebrush/crested wheatgrass	431	<1%
		Wyoming big sagebrush/crested wheatgrass	57,109	4%
		Wyoming big sagebrush/intermediate wheatgrass	1,075	<1%
Native Grassland	7%	Bluebunch wheatgrass	16,509	1%
		Bluegrass	79,045	6%
		Needlegrass	3,222	<1%
		Semi-wet meadow	228	<1%

VSG	% of VMA	Vegetation Communities	Acres	% of VMA
		Thurbers needlegrass	185	<1%
Native Shrubland	27%	Aspen	2,515	<1%
		Basin big sagebrush	399	<1%
		Black sagebrush/bluebunch wheatgrass	1,579	<1%
		Black sagebrush/bluegrass	16,055	1%
		Deciduous mountain brush	1,534	<1%
		Evergreen mountain brush	5,965	<1%
		Juniper	507	<1%
		Low sagebrush/bluebunch-Idaho fescue	2,097	<1%
		Low sagebrush/bluegrass	1,198	<1%
		Low sagebrush/Idaho fescue	36,754	3%
		Low sagebrush/squirreltail	164	<1%
		Mountain big sagebrush/bluebunch wheatgrass-Idaho fescue	16,488	1%
		Mountain big sagebrush/Idaho fescue	7,013	1%
		Mountain mahogany	2,278	<1%
		Rabbitbrush/bluebunch wheatgrass	1,786	<1%
		Rabbitbrush/bluegrass	11,972	1%
		Rabbitbrush/Idaho fescue	423	<1%
		Shadscale	3,113	<1%
		Wyoming big sagebrush/bluebunch wheatgrass	22,083	2%
		Wyoming big sagebrush/bluegrass	208,294	15%
Wyoming big sagebrush/Idaho fescue	1,721	<1%		
Wyoming big sagebrush/Indian ricegrass	38	<1%		
Wyoming big sagebrush/thickspike wheatgrass	163	<1%		
Wyoming big sagebrush/Thurbers needlegrass	24,499	2%		
Unvegetated	34%	Agricultural land	60	<1%
		Barren	1,707	<1%
		Breaks	31,947	2%
		Recent burn	427,596	31%
No Data	<1%	No data	3,188	<1%
Total for Planning Area			1,373,507	
<p>Bold text indicates dominant vegetation communities for each VMA. ^A VMA names generally reflect the potential natural vegetation communities within that VMA, not the existing communities.</p>				

**APPENDIX R:
RECENT BURN
PROJECTED VEGETATION
MAPPING PROTOCOL**

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APPENDIX R: RECENT BURN PROJECTED VEGETATION MAPPING PROTOCOL

Introduction

After the 2007 fire season, the Jarbidge Existing Vegetation Map had over 500,000 acres of vegetation mapped as Recent Burn, which are depicted in the Unvegetated Vegetation Sub-Group (VSG; see Appendix Q and Map 9). These areas were re-mapped at the community level during the 2009 field season; however, these data were not available to be used for the impact analysis in the Draft Resource Management Plan/Environmental Impact Statement (RMP/EIS). Since these Recent Burn areas are ephemeral and will have changed significantly when the Jarbidge RMP is implemented, a Vegetation Interdisciplinary Team (Veg ID Team) used Geographic Information System (GIS) technology, best available data, and professional judgment to project what the vegetation in the Recent Burn areas would most likely be in 2017. The projected vegetation is not existing vegetation and will not be used as a substitute for existing vegetation except for the purpose of analyzing and comparing impacts in the Draft RMP/EIS. The updated information collected during the 2009 field season will be incorporated into the Proposed RMP/Final EIS. The Veg ID Team included the following Jarbidge staff:

- Sheri Hagwood, Botanist
- Jim Klott, Wildlife Biologist
- Bonnie Ross, GIS Specialist
- Danelle Nance, Natural Resource Specialist

The methodology and draft results of this projected vegetation project were presented to the Jarbidge RMP Interdisciplinary Team on December 3, 2007. Questions were asked and answered, but no substantive comments were received on the methodology, data used, or draft results, and no changes were made to the methodology.

Data

Best available data used by the Veg ID Team included the spatial data in Table R- 1, listed using the most recent file name.

Table R- 1. GIS Data Layers Used for Recent Burn Projected Vegetation Mapping

GIS Data Layer	Description
ESI_point	Vegetation cover data at ESI points within or adjacent to the fire or Recent Burn
jar20060418	Past Existing Vegetation mapped in 2006.
JFOVeg_Existing.shp	Existing Vegetation prior to the 2007 wildfire season
JFOVeg_Potential.shp	Potential natural vegetation communities from the SSURGO data for Elmore, Owyhee, Twin Falls, and Elko Counties
proposed_ER_seeding	Emergency Rehabilitation proposed seedings areas
proposed_ES_seeding	Emergency Stabilization proposed seedings areas
Rehab_point	Vegetation cover data at fire rehabilitation points within or adjacent to the fire or Recent Burn
veg_mortality.shp	Vegetation Mortality, based upon field verification and aerial images
Veg_point	Vegetation cover data at biological soil crust (BC) points within or adjacent to the fire or Recent Burn
Wildfires	Queried for the 2007 wildfires in the Jarbidge FO

Methods

In November 2007, the Veg ID Team began data analysis of the Recent Burn areas by creating an ArcMap project with the data layers described in the *Data* section. The GIS Specialist merged, intersected, unioned, and clipped data as needed to assist the Veg ID Team. The Murphy Complex Fires were addressed first, since these areas had the most associated data. The proposed_ES_seeding and

proposed_ER_seeding layers were looked at, then the unburned islands, followed by the vegetation mortality layer for the 2007 wildfires and the 2006 Recent Burn polygons in the Existing Vegetation layer. A new layer was created, 10_Year_edits.shp, to spatially display the projected vegetation for data analysis. Assumptions established by the Veg ID Team for each set of data prior to use are discussed in each of the following sections.

2007 Wildfires

Proposed Seedings

The proposed_ES_seeding and proposed_ER_seeding polygons were incorporated into the 10_Year_edits.shp. Seeding treatments were primarily within high severity burn areas. Assumptions associated with the seedings data analysis included:

- All seeding treatments will be completed.
- All graminoid species seeded will establish successfully or will be reseeded with dominance of seeded species reached by 2017.
- Although sagebrush, bitterbrush, and mountain mahogany seedings are expected to establish, the required cover threshold will not be reached by 2017. Vegetation mapping protocol requires 10% or greater shrub cover for shrublands and 25% cover of tree species for woodlands.

The Veg ID Team determined the dominant grass species from each seed mix to be bluebunch wheatgrass (*Pseudoroegneria spicata*). All drill and harrow seed treatment polygons associated with the Murphy ES&BAR plans were labeled Bluebunch wheatgrass (105¹⁰).

Vegetation Mortality

Unburned

The Veg ID Team assumed that all mapped unburned islands were vegetated as mapped in the JFOVeg_Existing.shp. All unburned islands 20 acres or greater in size were selected from the veg_mortality layer. Unburned islands less than 20 acres were not selected from the veg_mortality layer in order to meet vegetation mapping criteria regarding the minimum mapping unit. The selected unburned islands in the veg_mortality layer were then intersected with the existing vegetation layer and merged into the 10_Year_edits.shp. All unburned islands greater than 20 acres in size then had the same vegetation attributes as before the fire. Areas mapped as Recent Burn (155) prior to the 2007 fires are addressed separately (see *Recent Burn (2006)* below).

Low Severity

The Veg ID Team made several assumptions for the low severity burn areas in order to project what the vegetation would be in 2017:

- All grasslands, Breaks (134), Barren (103), Rabbitbrush, Semi-wet Meadow (118), and Aspen (158), Juniper (160), and Mountain mahogany (159) woodland vegetation communities that burned at low severity would recover to their pre-burn vegetative state by 2017.
- Sagebrush areas were assumed to become grasslands dominated by the pre-burn dominant grass species. This is based on 100% mortality of sagebrush within the low severity areas, and while sagebrush may reseed itself or be re-seeded, it will not reach 10% or greater cover by 2017. Fire rehabilitation data from five to ten year old burns in the Jarbidge FO showed less than 10% shrub cover on the majority of the burns.
- Rabbitbrush would survive a low severity burn and would be expected to increase following the burn. Therefore, all pre-burn vegetation communities with significant rabbitbrush cover (greater than 10%) were projected to be rabbitbrush-dominated communities by 2017.
- Evergreen mountain brush (114) communities dominated by ceanothus (*Ceanothus velutinus*), a fire-adapted species, would fully recover post-fire.
- All 2007 wildfires outside of the Murphy Complex Fires were assumed to be low severity and were projected to become grasslands based on the pre-burn dominant grass species.

¹⁰ Vegetation community coding

Low severity vegetation mortality areas were selected from the veg_mortality layer and intersected with the JFOVeg_Existing.shp. This allowed the Veg ID Team to use the vegetation data from before the burn to assist in projecting what the vegetation would be in 2017. Other data layers used were the ESI_point, Rehab_point, and Veg_point cover data to refine and support the JFOVeg_Existing.shp data. Also, the potential vegetation by plant community layer was used to analyze the Evergreen (114) and Deciduous (117) mountain brush communities, which had limited information on what overstory and understory species were present in specific areas. Field-verified Evergreen and Deciduous mountain brush polygons with comments on actual vegetation composition, as well as the potential natural vegetation from the JFOVeg_Potential.shp, were used to project the condition of these polygons by 2017 if no ESI or BC data were available. Projected vegetation for these areas was incorporated into the 10_Year_edits.shp.

Moderate Severity

The Veg ID Team made several assumptions for the moderate severity burn areas in order to project what the vegetation would be in 2017:

- Juniper (160) and Mountain Mahogany (159) woodlands that were moderately burned are not expected to attain the 25% shrub cover necessary for woodlands within 10 years, but were mapped to the dominant grass, typically bluebunch wheatgrass. Aspen woodlands (158) would recover without issue.
- Sagebrush areas were assumed to become grasslands dominated by the pre-burn dominant grass species, as with the low severity burn areas.
- Rabbitbrush would survive a moderate severity burn and would be expected to increase following the burn and spread to previously sagebrush-dominated areas in close proximity. Therefore, all vegetation communities with significant pre-burn rabbitbrush cover (greater than 10%) were projected to be rabbitbrush-dominated communities by 2017.
- Wyoming sagebrush/bluegrass (123) and Wyoming sagebrush/Thurber's needlegrass (125) sites are expected to regenerate as Bluegrass (106) communities.
- Bluebunch wheatgrass dominated sites previous to the Murphy Complex were assumed to return as Bluebunch wheatgrass (105) communities, assuming optimum conditions for regrowth would occur.
- Annual (101) communities will remain the same.
- Evergreen mountain brush (114) communities dominated by ceanothus would recover fully post-fire in moderate severity burns.
- Certain canyons have a high potential for annual invasion, as witnessed by previous fires.
- Shadscale is removed in moderate severity fires and is not expected to regenerate. Burned shadscale (73) communities were projected to become grasslands dominated by the dominant pre-burn grass.

Moderate severity burn areas were selected from the veg_mortality layer and intersected with the JFOVeg_Existing.shp. This allowed the Veg ID Team to use the vegetation data from before the burn to assist in projecting what the vegetation would be by 2017. Other data layers used were the ESI_point, Rehab_point, and Veg_point cover data to refine and support the JFOVeg_Existing.shp data. As with the low severity areas, the potential vegetation by plant community layer was used to analyze the Evergreen and Deciduous mountain brush sites. Field-verified Evergreen and Deciduous mountain brush polygons with comments on actual vegetation composition, as well as the potential natural vegetation from the JFOVeg_Potential.shp, were used to project the condition of these polygons by 2017 if no ESI or BC data were available. Projected vegetation for these areas was incorporated into the 10_Year_edits.shp.

High Severity

The Veg ID Team made several assumptions for the high severity burn areas in order to project what the vegetation would be in 2017:

- The majority of these areas will be treated within five years to a native seed treatment and are covered under the *Proposed Seeding* section.
- If a high severity burn site is not proposed for ES or BAR seeding, it was projected to be at an early seral stage in 2017, either as an Annual (101) or a Bluegrass (106) community. An exception would be if, prior to the fire, a site had bluebunch wheatgrass present at greater than 30% cover and annual

cover less than 5%. These sites were projected to become Bluebunch wheatgrass (105) grassland assuming that, with no additional disturbance from seeding and pre-burn high species cover, Bluebunch wheatgrass would recover and dominate the site by 2017.

- Aspen (158) and Semi-wet meadow (118) are assumed to have no issues with regeneration following a high severity burn.

The majority of high burn severity areas was included for treatment through the ES and ER plans and is covered under the *Proposed Seeding* section above. In untreated areas, ESI_point and Veg_point data was used to determine vegetation cover pre-burn. Projected vegetation for these areas was incorporated into the 10_Year_edits.shp.

Recent Burn (2006)

Limited data were available for the areas mapped as Recent Burn in 2006. Assumptions made with the Recent Burn (155) polygons from the JFOVeg_Existing.shp regarding the projected vegetation were:

- The Sailor Cap Fire burned with low to moderate severity. Sagebrush would have 100% mortality and would not re-establish to 10% or greater cover by 2017. Also, the dominant pre-burn grass would survive the burn and would dominate the vegetation community.
- The jar20060418 layer showed pre-burn areas mapped with Thurbers needlegrass as the dominant grass in the Sailor Cap Fire. These were projected to become Bluegrass (106) sites, since Thurbers is not a fire-tolerant species and these communities had burned twice within one year.
- The Crested wheatgrass (107) community at the north end where the Sailor Cap and Murphy Fires intersected would remain crested wheatgrass, since it was a very light back-burn and the community had been field verified pre-burn.
- Sagebrush areas were assumed to become grasslands dominated by the pre-burn dominant grass species. This is based on 100% mortality of sagebrush within the low severity areas, and while sagebrush may reseed itself or be re-seeded, it will not reach 10% or greater cover by 2017. Fire rehabilitation data from 5-10 year old burns in the Jarbidge showed less than 10% shrub cover on the majority of the burns.
- Crested wheatgrass (124) and Annual (101) communities remained the same.
- Wyoming big sagebrush/Crested wheatgrass (124) became Crested wheatgrass (107) and Wyoming big sagebrush/Thurbers needlegrass (125) communities regressed to Bluegrass sites (106).

Projected vegetation in the Recent Burn (155) polygons from the JFOVeg_Existing.shp was incorporated into the 10_Year_edits.shp and analyzed. The Grassy Hills 2006 fire was interpreted to become a Bluebunch wheatgrass (105) community, due to known light burn severity and previous field-verified site composition by Veg ID Team members. The 2006 Sailor Cap fire was determined to be mostly bluegrass, based upon data from the ESI_point layer, which included points read in 2006 before the fire, and data from the Rehab_point layer, which included 2007 Fire Rehabilitation plots established after the Sailor Cap Fire. Within the 2006 Saylor Cap fire, a large polygon of bluegrass was split to become Crested Wheatgrass (107) in the northern portion and Bluegrass (106) to the south, based upon 2006 ESI points. Surrounding vegetation type was used to infer what the smaller fires would transition to where no data were available. Projected vegetation for these areas was incorporated into the 10_Year_edits.shp.

Breaks

Vegetation communities mapped as Breaks (134) were addressed over the entire 10_Year_edits.shp. Most of these areas were assumed to be at a high risk for cheatgrass invasion, given the difficult terrain, available sources, and historical infestation of these types of areas following fires.

Summary

The GIS Specialist reviewed the final 10_Year_edits.shp for consistency with GIS mapping protocols. Slivers, or small polygons created through joining of several data layers, were absorbed into an adjacent polygon of greater than 20 acres in size. Unburned islands less than 20 acres were also absorbed into the surrounding projected polygon. The 10_Year_edits.shp and the JFOVeg_Existing.shp were analyzed

to reflect the attributes of the projected vegetation replacing the Recent Burn polygons in the JFOVeg_Existing.shp.

After completion of this exercise, it was decided that the projected vegetation would be more useful for analysis purposes if a five-year timeline was used, rather than the initial ten-year projection. The Veg ID Team felt that the projection for five years would generally be the same as the projection for ten years. The major assumptions that all seeding treatments will be completed and the required cover threshold of 10% for shrubs will not be met at ten years are still valid at five years from burn. Assumptions that may not be accurate at five years include:

- Rabbitbrush having 10% cover within ten years may not be true within five years.
- All graminoid species seeded will establish successfully or will be reseeded with dominance of seeded species reached by 2017. However, graminoid species seedings that were not successful and needed re-treatment may not have obtained dominance at the end of five years, or by 2012.
- Juniper and Mountain mahogany woodlands may not reach the minimum 25% woody cover within five years.

The projected vegetation layer was renamed the JFO Veg_fiveyr_Projections.shp and is the final product for this exercise. The vegetation composition resulting from this exercise, referred to as the 2012 projected vegetation composition, is depicted in Map 10 and is used as the baseline for comparison and analysis throughout the RMP.

This exercise was completed for analysis purposes only for the Jarbidge Draft RMP/EIS. Map 10, based on the JFOVeg_fiveyr_Projections.shp, is representative of what the Veg ID Team expects the Recent Burn vegetation to be by 2012. This projected vegetation mapping exercise is based upon the most recent studies, field observations, available data, and professional judgment. This layer should not be used as an existing vegetation map at any point in time. Recent Burn polygons in the Existing Vegetation map (post-2007 fires; Map 9), including the Murphy Complex, were field mapped during the 2009 field season, two years after burning, following the vegetation mapping protocol. The updated vegetation information will be incorporated into the Proposed RMP/Final EIS.

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**APPENDIX S:
FIRE REGIME CONDITION
CLASS**

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APPENDIX S: FIRE REGIME CONDITION CLASS

This appendix displays the detailed results of the Fire Regime Condition Class (FRCC) analysis conducted for baseline vegetation conditions in the planning area. The FRCC analysis was conducted at the Vegetation Management Area (VMA) scale, the same scale at which decisions for upland vegetation management were made. An FRCC rating was determined for each Potential Natural Vegetation Group (PNVG) within a VMA. Because FRCC is a landscape-scale analysis, the results should not be interpreted to indicate the condition of each acre within a PNVG as the FRCC rating applies to an entire PNVG. Table S- 1, Table S- 2, Table S- 3, and Table S- 4 display the results of the FRCC analysis for VMAs A, B, C, and D, respectively. The *Wildland Fire Ecology and Management* section of Chapter 3 describes the FRCC analysis process in more detail.

Table S- 1. FRCC in VMA A

Succession Class	Baseline Conditions in the Planning Area		Reference Conditions (%)	S-Class Similarity (%)	Condition Class
	Acres	%			
Basin Big Sagebrush (R2SBBB)					
A	319	53	15	15	
B	34	6	70	6	
C	28	5	15	5	
U	213	36	0	0	
Total	594	100	100	26	3
Mountain Shrubland with tree (R2MSHBwt)					
A	0	0	5	0	
B	0	0	20	0	
C	18	24	65	24	
D	57	76	10	10	
U	0	0	0	0	
Total	75	100	100	34	2
Salt Desert Shrub (R2DSH)					
A	0	0	30	0	
B	0	0	10	0	
C	0	0	55	0	
D	0	0	5	0	
U	1,641	100	0	0	
Total	1,641	100	100	0	3
Wyoming Sagebrush Steppe (R2BWYse)					
A	24,353	11	20	11	
B	8,209	4	50	4	
C	8,825	4	30	4	
U	172,417	81	0	0	
Total	213,804	100	100	19	3
Not Classified					
NR	5,503				

Table S- 2. FRCC in VMA B

Succession Class	Baseline Conditions in the Planning Area		Reference Conditions (%)	S-Class Similarity (%)	Condition Class
	Acres	%			
Basin Big Sagebrush (R2SBBB)					
A	4	2	15	2	
B	42	22	70	22	
C	133	70	15	15	
U	11	6	0	0	
Total	190	100	100	39	2
Black and Low Sagebrush (R2SBDW)					
A	0	0	10	0	
B	75	27	70	27	
C	206	73	20	20	
U	0	0	0	0	
Total	281	100	100	47	2
Mountain Shrubland with tree (R2MSHBwt)					
A	0	0	5	0	
B	138	38	20	20	
C	6	2	65	2	
D	221	60	10	10	
U	0	0	0	0	
Total	365	100	100	32	3
Salt Desert Shrub (R2DSH)					
A	0	0	30	0	
B	687	19	10	10	
C	2,418	65	55	55	
D	0	0	5	0	
U	602	16	0	0	
Total	3,707	100	100	65	2
Wyoming Sagebrush Steppe (R2BWYse)					
A	194,047	32	20	20	
B	44,797	7	50	7	
C	119,097	20	30	20	
U	245,118	41	0	0	
Total	603,059	100	100	47	2
Not Classified					
NR	22,806				

Table S- 3. FRCC in VMA C

Succession Class	Baseline Conditions in the Planning Area		Reference Conditions (%)	S-Class Similarity (%)	Condition Class
	Acres	%			
Basin Big Sagebrush (R2SBBB)					
A	9,285	98	15	15	
B	0	0	70	0	
C	40	1	15	1	
U	45	1	0	0	
Total	9,370	100	100	16	3
Black and Low Sagebrush (R2SBDW)					
A	3,684	37	10	10	
B	246	2	70	2	
C	5,853	58	20	20	
U	298	3	0	0	
Total	10,081	100	100	32	3
Mountain Big Sagebrush (R2SBMT)					
A	117	14	20	14	
B	0	0	45	0	
C	152	19	35	19	
U	543	67	0	0	
Total	812	100	100	33	2
Mountain Shrubland with tree (R2MSHBwt)					
A	8	100	5	5	
B	0	0	20	0	
C	0	0	65	0	
D	0	0	10	0	
U	0	0	0	0	
Total	8	100	100	5	3
Stable Aspen (R2ASPN)					
A	0	0	10	0	
B	0	0	70	0	
C	23	100	20	20	
U	0	0	0	0	
Total	23	100	100	20	3
Wyoming Sagebrush Steppe (R2BWYse)					
A	118,490	42	20	20	
B	40,958	14	50	14	
C	41,190	14	30	14	
U	84,459	30	0	0	
Total	285,097	100	100	48	2
Not Classified					
NR	7,914				

Table S- 4. FRCC in VMA D

Succession Class	Baseline Conditions in the Planning Area		Reference Conditions (%)	S-Class Similarity (%)	Condition Class
	Acres	%			
Basin Big Sagebrush (R2SBBB)					
A	18,040	99	15	15	
B	1	0	70	0	
C	121	1	15	1	
U			0		
Total	18,162	100	100	16	3
Black and Low Sagebrush (R2SBDW)					
A	39,033	39	10	10	
B	4,129	4	70	4	
C	47,438	47	20	20	
U	10,587	10	0	0	
Total	101,187	100	100	34	2
Curleaf Mountain Mahogany (R2SBMT)					
A	640	22	5	5	
B	89	3	15	3	
C	2,152	75	10	10	
D	0	0	40	0	
E	0	0	30	0	
U	0	0	0	0	
Total	2,881	100	100	18	3
Mountain Big Sagebrush (R2SBMT)					
A	5,841	17	20	17	
B	4,225	12	45	12	
C	19,089	54	35	35	
U	6,126	17	0	0	
Total	35,281	100	100	64	2
Mountain Shrubland with tree (R2MSHBwt)					
A	601	10	5	5	
B	605	10	20	10	
C	219	4	65	4	
D	4,502	76	10	10	
U	0	0	0	0	
Total	5,927	100	100	29	3
Stable Aspen (R2ASPN)					
A	482	16	10	10	
B	242	8	70	8	
C	2,231	76	20	20	
U	0		0		
Total	2,955	100	100	38	2
Wyoming Sagebrush Steppe (R2BWYse)					
A	7,204	26	20	20	
B	3,815	14	50	14	
C	12,116	43	30	30	
U	4,825	17	0	0	
Total	27,960	100	100	64	2
Not Classified					
NR	14,530				

**APPENDIX T:
CURRENT GRAZING
PREFERENCE**

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APPENDIX T: CURRENT GRAZING PREFERENCE

Table T- 1 displays the current grazing preference for allotments in the planning area, as well as the allotments under the 2003 Williams Stipulated Settlement Agreement (SSA), under the 2005 Winmill SSA (Appendix A), or that have non-renewable grazing permits under Department of the Interior (DOI) appropriations acts. Animal Unit Months (AUMs) are displayed for the 2007 grazing year.

Table T- 1. Current Grazing Preference and Stipulated Settlement Agreement Status by Allotment

Allotment Name	Allotment Number	AUMs Authorized for 2007 Grazing Year	2003 Williams SSA	2005 Winmill SSA	Non-Renewable Grazing Permits Under DOI Appropriation Acts
Antelope Butte North	1087	741			X
Antelope Springs	1096	6,046		X	
Bear Creek Idaho	1026	160			
Black Mesa	1080	1,005			
Blackrock Pocket	1102	1,890		X	
Blue Butte	277	1,306			X
Bracket Bench AMP	1008	2,386		X	
Brown's Gulch ^A	1053	863		X	
Bruneau Hill	1057	3,915		X	
Buck Flat AMP	1122	1,716			
Camas Slough	1095	180		X	
Canyon View (Echo Jewett)	1058	1,082		X	
Cedar Butte 10	1007	891			X
Cedar Butte Devil Creek	1002	2,288		X	
Cedar Butte Eastside	1001	372			X
Cedar Canyon Field	1013	15			
Cedar Creek	1131	4,221		X	
Cedar Creek Canyon	1023	320			
Cedar Crossing seed	1022	740			
Cheatgrass	1069	300			
China Creek	1025	714			
Clover Crossing	1136	6,500		X	
Conover	1126	4,205			
Coonskin AMP	1123	4,783		X	
Crawfish	1118	650		X	
Deadwood Pocket	1067	310			
Devil Creek Balanced Rock	1133	3,659			
Diamond A Bruneau Canyon	1100	100			
Diamond A Taylor Pocket	1077	1,218			
Diamond A Unit	1021	8,546			
Dove Spring	1146	1,347			X
E&W Deadwood Trap	1020	999			
East Juniper Draw	1132	2,000		X	
East Roseworth Point	1061	291			
Echo 4	296	3,732		X	
Echo 5	282	13,712		X	
Echo Clover	341	1,492		X	
Echo Hammett	342	815			

Allotment Name	Allotment Number	AUMs Authorized for 2007 Grazing Year	2003 Williams SSA	2005 Winmill SSA	Non-Renewable Grazing Permits Under DOI Appropriation Acts
Echo Luby	283	400			
Flat Top	1059	5,869		X	
Grassy Hills	1029	658		X	
Grassy Hills AMP	1121	2,279			
Grassy Windmill	1134	420			
Grindstone	1062	683			X
Guerry Patrick	1094	885			
Hagerman Group	1150	2,527			X
Hallelujah	343	1,885		X	
Horse Butte AMP	1120	1,519			
House Creek	1042	667			
Inside Desert	353	17,958	X		
Juniper Butte	1119	2,300		X	
Juniper Draw	1138	686			X
Juniper Ranch	1031	2,590			X
Kinyon	1046	881			X
Kubic	1147	4,299		X	
Little Grassy Deadwood	1017	1,167			
Little House Creek FFR	1093	112			
Little Three Island	1074	150			X
Lower Salmon Falls	1141	127			
Lower Saylor Creek	1055	899			
Magic Water	1056	16			
Noh Field	1140	1,000		X	
North Balanced Rock	1139	50			
North Fork Field	1088	570		X	
Notch Butte	1144	3,163			X
Pigtail Butte	1125	5,146		X	
Player Butte	1047	136			
Player Canyon	1027	280			
Poison Butte	1050	9,930	X		
River Bridge	1072	33			
Roseworth Point	1014	1,573			
Roseworth Tract FFR	1009	56			
Saylor Creek/North Three Island	1078	2,040			X
Seventy One Desert	1099	3,000		X	
Sheep Trail Allot.	1063	53			
Signal Butte	1092	1,198			X
South Crow's Nest	1135	790			X
South Deadwood	1086	299			
South Roseworth	1151	35			
Thompson	1079	1,868			X
Thousand Springs	1142	283			
Three Cr. #8	1070	798		X	
Three Cr. #8 PVT AL	1066	439			
Three Cr. #8b	1075	527			
Three Cr. Blossom Prv	1071	529			
Three Cr/Devil Cr	1076	3,107			

Allotment Name	Allotment Number	AUMs Authorized for 2007 Grazing Year	2003 Williams SSA	2005 Winmill SSA	Non-Renewable Grazing Permits Under DOI Appropriation Acts
Three Island	1073	472			X
Turner Cedar Butte	1000	745			
Twin Butte	1145	5,615			X
West Saylor Creek	1137	6,340			
Wilkins Island	1084	773			
Winter Camp	1064	515		X	
Yahoo	1143	2,952		X	
Total		188,802	27,888	84,732	27,320
^A Does not include the portions of the Brown's Gulch allotment in the Four Rivers Field Office.					

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**APPENDIX U:
REASONABLY
FORESEEABLE
DEVELOPMENT
SCENARIO FOR OIL AND
GAS DEVELOPMENT**

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APPENDIX U: REASONABLY FORESEEABLE DEVELOPMENT SCENARIO FOR OIL AND GAS DEVELOPMENT

REASONABLY FORESEEABLE DEVELOPMENT SCENARIO

FOR

OIL AND GAS DEVELOPMENT

IN THE

JARBIDGE FIELD OFFICE

Prepared by: Karen Porter, BLM Idaho State Office Geologist

Prepared by: signed copy on file Date: 6/25/2009

Reviewed by: Steven W. Moore, BLM Idaho State Office Geologist

Reviewed by: signed copy on file Date: 6/25/2009

SUMMARY

Based on the geology of the Jarbidge Field Office (i.e., the planning area), the lack of historical drilling activity, the lack of any historic or currently producing oil/gas wells/fields in south central Idaho and the surrounding area, and the lack of infrastructure to support oil and/or gas development, the potential for discovery and development of hydrocarbons in the planning area has been determined to be low.

It is anticipated that very little to no oil and gas activity, aside from leasing and perhaps approving a few geophysical surveys, would occur during the life of the land use plan. However, in order to comply with the Supplemental Program Guidance for Fluid Minerals (BLM Manual Section 1624-2), this report describes the potential surface impacts associated with a minimal level of activity that could occur. Therefore, it is assumed that making the BLM-administered public lands in the planning area available for oil and gas leasing could result in the drilling of one to two exploratory wells during the next 20 years, for a total surface disturbance of up to 30 acres (5 acres/drill pad + 10 acres/access road = 15 acres/drill site x 2 drill sites = 30 acres). It is assumed that one of the wells drilled would be capable of commercial production. Based on this assumption, a five-well field would be developed, disturbing an additional 60 acres. It is anticipated that two or three geophysical exploration programs would occur and that they would likely be conducted along existing roads or trails or by overland travel, thereby causing minor impacts to surface resources. These activities are likely to occur either in the northwest corner of the planning area or in the Cedar reservoir/China Mountain area.

INTRODUCTION

This report, describing a Reasonably Foreseeable Development Scenario (RFDS), accompanies the Oil and Gas Potential Report (BLM, 2009) prepared for the planning area. This report describes the anticipated level of oil and gas exploration and development activity associated with oil and gas leasing. These projections are necessary for assessing the anticipated impacts of oil and gas related activity in the Environmental Impact Statement for the Jarbidge Resource Management Plan (RMP); for determining which lands within the field office area will be available for oil and gas leasing; and for determining what stipulations may be necessary to attach to leases in order to protect the surface resources. These anticipated impacts are for the BLM-administered public lands described above during the next 20 years (2009-2029).

DESCRIPTION OF GEOLOGY

The geology of the planning area is described in detail in the Oil and Gas Potential Report prepared for the area (BLM, 2009). The planning area lies within the Snake River Plain physiographic province, which is entirely covered by Cenozoic volcanic and Quaternary sedimentary deposits. The planning area is dominated by the Owyhee Plateau, a broad volcanic upland considered to be a continuation of the eastern Snake River Plain. However, in the northern portion of the planning area, sediments of the Glens Ferry Formation, which originated from Plio- Pleistocene Lakes Bruneau and Idaho, are found. These could theoretically contain

hydrocarbons, although none have been found. There are no known outcrops or exposures of pre-Tertiary rocks in the planning area, and there is no direct or indirect evidence to indicate what types of rocks underlay the thick veneer of volcanics that cover the majority of the planning area.

PAST AND PRESENT OIL AND GAS LEASING ACTIVITY

A total of 251 leases have been issued at one time or another in the planning area (4.3% of the state total). Currently there are no active oil and gas leases in the area. Until recently, no parcels had been nominated for leasing in the planning area under the 1987 leasing process. In 2008, approximately 58,000 acres were nominated by a single entity. These parcels are situated in the Cedar Creek/ China Mountain area (T 14-16 S, R 13-14 E), in the southeast corner of the planning area. Leasing is being deferred on these parcels pending completion of the RMP/EIS.

PAST AND PRESENT OIL AND GAS EXPLORATION ACTIVITY

Three wells were drilled in 1950 for the purpose of exploring for oil and gas in the planning area - all located in the extreme northwest corner. No showings of gas or oil were encountered at any interval in any of the three wells. This is the only exploration activity that has occurred in the planning area.

PAST AND PRESENT OIL AND GAS DEVELOPMENT ACTIVITY

To date, there has never been any oil or gas production in Idaho, despite the drilling of approximately 150 wells in the state (Breckenridge et. al., 2006).

OIL AND GAS OCCURRENCE POTENTIAL

The majority of the planning area has a low potential for oil and gas occurrence throughout, as described in detail in the Oil and Gas Potential Report (BLM, 2009). No Paleozoic or Mesozoic marine sedimentary rocks, which could provide possible hydrocarbon source rocks consistent with USGS's hypothetical Pre-Miocene or Older Tertiary Plays (Peterson, 1995), are exposed in the planning area, nor is there any evidence that such rocks exist at depth. The nearest exposures of Paleozoic sedimentary rocks are found 14 miles east of the planning area boundary, and those rocks are not known to contain hydrocarbons. Thick sequences of volcanic rocks in the planning area could conceivably conceal areas of favorable Paleozoic and Mesozoic rocks, but this cannot be determined, or even inferred, without adequate subsurface data. It is equally possible that plutonic rocks related to the Idaho batholith exist at depth and that the Paleozoic and Mesozoic rocks may have been eroded, faulted, or even displaced by plutonic activity. Therefore it is concluded that the oil and gas occurrence potential for the majority of the planning area is low, with a Level of Certainty A¹¹.

¹¹ Level A: Available information is insufficient to infer level of potential; however, minimal potential cannot be ruled out.

Along the northern edge of the planning area, however, the sedimentary rocks of the Glens Ferry Formation, some of which may contain organic matter, could possibly be a source for hydrocarbons consistent with USGS's Miocene or Pliocene Lacustrine Plays. Although it is not likely, it is possible that basalt, which is vesicular and therefore somewhat porous, could be a reservoir rock where it is intercalated with the sediments. If a clay or shale layer were found to overlay the basalt, it could act as a seal to prevent the hydrocarbons from migrating to the surface, although no such formation is known to exist in the area. Also, no trapping structure is known to exist. Direct evidence of oil and gas presence in this area is lacking, as three oil and gas exploratory wells drilled in the Glens Ferry Formation in the planning area found no "shows" of oil or gas (Youngquist & Kiilsgaard, 1951). While the potential for a discovery of petroleum resources in this area is slightly higher than the potential in the rest of the planning area, the potential is still considered to be low, with a Level of Certainty C¹².

OIL AND GAS DEVELOPMENT POTENTIAL

Oil or natural gas production would occur in the planning area only if a significant oil or gas discovery is made. A significant discovery could be a 4,000-foot deep reservoir capable of producing a total of more than one million barrels of oil or a billion cubic feet of natural gas, or it could be a 15,000-foot reservoir capable of producing 500 to 700 million barrels of oil equivalent.

Currently very little oil and gas infrastructure exists, making the costs associated with developing and producing a field higher than in areas of known production. The Williams' Northwest natural gas pipeline runs through southern Idaho, parallel to Interstate 84 in the planning area. It is a common carrier, so it is required to accept gas input from various sources as long as quality standards can be met. In 2006, there was space available in the system, at least seasonally (Larsen, 2006). There are no other existing crude oil lines or refineries in southern Idaho. One small (8 inch) pipeline operated by Chevron Corp. transmits refined liquid petroleum products from the Salt Lake City, Utah, area into southern Idaho (Pocatello, ID), where the line roughly parallels the Williams pipeline to the west (Marconi, 2006). Since this line is for refined liquid products, it would not be available for wellhead oil or gas condensate products.

Electric transmission lines are present across some of the planning area. These lines provide power to local residents and communities, but could possibly be used to bring electrical power needed for hydrocarbon processing facilities if such facilities were ever to be developed in southern Idaho. Large power needs may require supplemental or new lines to be constructed.

Most of the planning area does not currently have roads that would support oil/gas exploratory or development drilling needs. While the planning area is relatively flat, many areas are extremely rocky and rugged, and road construction could be costly. Paved roads and improved gravel roads suitable for truck transportation of oil or liquefied gas products are limited in number and distribution. The only railroad line that could be used for liquid hydrocarbon product transportation is located just north of the planning area, roughly paralleling Interstate 84.

¹² Level C: Available information provides direct evidence to indicate the level of potential.

The lack of infrastructure to support oil and gas exploration and especially development or processing on or near the planning area would make these activities more expensive than in areas where the necessary infrastructure already exists.

Limited reserve gas discoveries, such as marsh gas, are also unlikely to be developed in the foreseeable future in the planning area. Gas pipelines are necessary to move gas products. Small gas discoveries would not contain reserves sufficient to justify the investment in small diameter, high pressure lines that could, in turn, be connected to a larger, existing line.

The overall probability of discovering and developing a producing oil and/or gas field in the planning area is considered to be low. This rating is based on the following factors:

- 1) There has been a total lack of oil/gas industry interest in south central Idaho as demonstrated by the lack of leasing activity in the area during the past 15 years.
- 2) No oil/gas seismic geophysical surveys have been conducted in southeast Idaho in the past 15 years on BLM-administered lands in the area.
- 3) Exploratory drilling has been very sparse for such a large area, with no wells drilled since 1950, further indicating industry's lack of confidence in the area.
- 4) No wells capable of economic production have ever been drilled in the entire state, let alone the planning area.
- 5) There are no demonstrated oil or gas reserves in the planning area or adjacent areas.
- 6) There is a general lack of infrastructure to support field development in southern Idaho.

REASONABLY FORESEEABLE DEVELOPMENT BASELINE SCENARIO ASSUMPTIONS AND DISCUSSION

The following assumptions for oil/gas leasing, exploration, and development in the planning area during the next 20 years are based on the oil/gas development potential described above, the regional geology, the historical drilling activity for southeast Idaho and surrounding area, topography, the existing access situation, and the requirements of the Supplemental Program Guidance for Fluid Minerals:

- It is likely that 10 to 20 leases may be offered over the next 20 years, likely in the Glens Ferry and/or the Cedar Creek/ China Mountain areas.
- Two or three geophysical exploration programs would be conducted to help identify potential exploration drilling targets.
- One or two exploration wells would be drilled on leases in the planning area. The wells would likely be 10,000-14,000 feet deep and would require the construction of a drill pad approximately five acres in size (approx. 500 by 500 feet). Each of the proposed drilling sites would be analyzed through the NEPA process, separate from the leasing analysis. Wildcat wells that discover only limited reserves of oil and/or gas are not likely to be economically viable because of the lack of existing infrastructure and would be plugged and abandoned. It is predicted that none of the exploratory wells would encounter hydrocarbons in sufficient quantity to justify production expenses and would be plugged and abandoned immediately.
- Access to the drill pads may require up to two miles of construction/reconstruction. Access roads would require a 20-foot wide graveled running surface, with an average

disturbance width of 40 feet (4.85 acres/mile). Disturbance from two miles of road would equal about 10 acres.

- Pad and access road construction would likely take one month; drilling operations and well testing would typically take from 1 to 4 months to complete; and reclamation would be completed within one year from when drilling is completed (assuming all wells are non-productive).
- It is likely that about 5,000 to 15,000 gallons of water would be required per day, depending on down-hole conditions. Depending on the well locations, water sources in the planning area could be sought and applied for. Some wells make water, and disposal could become an issue if the water is saline.

ANTICIPATED SURFACE DISTURBANCE DUE TO OIL AND GAS ACTIVITY

The following phases of oil and gas exploration/development are typical in searching for and developing an oil and gas resource:

1. Geophysical Exploration
2. Drilling
3. Field Development and Production
4. Plugging and Abandonment

The assumptions and scenarios that follow are based on historical drilling activity in the planning area, as well as the oil and gas potential for the area.

Phase One: Geophysical Exploration

Geophysical techniques are often implemented to identify subsurface geologic structures. The BLM reviews and approves geophysical operations on a case by case basis, and a lease is not necessary for such work. Gravity, magnetics, and seismic reflection are the most common techniques used. Both gravity and magnetic surveys cause very little disturbance as the instruments used are small and easily transportable in light vehicles or OHVs. These surveys can cover large areas and take only weeks to conduct. It is preferable to use existing roads, yet some overland travel is sometimes necessary. In addition, both gravity and magnetic surveys can be completed from aircraft, virtually eliminating surface disturbance.

Seismic reflection surveys are the most commonly used geophysical tool. They require a seismic energy source and an array of receptors. Shock waves are created either through the use of small explosive charges or by vibrating or thumping the ground. Explosive charges are the preferred method and are used when access, road conditions, or population centers are not an issue. Two to six-inch diameter shot holes are drilled by a truck-mounted drill rig to depths between 25 and 200 feet, where explosive charges between 5 and 50 pounds are detonated. Reflected seismic waves are recorded by a series of surface equipment along a 3- to 5-mile line. In situations where explosives are not used, the ground surface is mechanically vibrated using truck-mounted equipment. Both operations generally utilize a crew of 10 to 15 people with five to seven vehicles. Seismic surveys may be supported by aircraft.

Based on the occurrence potential of the planning area, it is anticipated that two or three

geophysical exploration programs would be conducted to aid in identifying potential exploration drilling targets during the life of the plan. It is likely that ATVs or other rubber-tired rigs would be utilized for access, and no construction of roads would be required. Impacts from such exploration would be temporary (several weeks in duration) but somewhat intensive (i.e., 2 to 3 vehicles/personnel in the area), such that seasonal restrictions may be necessary to avoid conflicts with some sensitive wildlife.

Phase Two: Drilling

Exploration wells are drilled in order to test geologic targets. On Federal mineral estate, an oil and gas lease must be obtained, and an application for permit to drill must be submitted and then approved by the field office. Site specific stipulations can be attached to the approved drilling permit.

Temporary roads would likely be needed to transport and maintain the heavy equipment. Either existing roads would be improved or new roads would be constructed to accommodate the traffic. Typically, roads are constructed with a 20-foot wide graveled running surface with adjacent ditches and berms, for a total disturbance width of about 40 feet.

Exploration holes range in depth from a few thousand feet to many thousands of feet, but are typically about ten thousand feet deep. Drilling to such depths requires large drill rigs and ancillary equipment. A drill pad three to five acres in size would be constructed, and may require cut and fill of the site to obtain a level pad. Topsoil would be removed and stored on site for reclamation. In addition to the drill rig, the pad may house a reserve pit, a mud sump, tool shed, drill pipe, fuel tanks, water tanks, generators, pumps, equipment storage, and temporary office quarters.

Well drilling requires water. As much water as possible is recycled on site, yet about 5,000 to 15,000 gallons of water may be needed each day depending on well conditions. Initially, water would need to be provided by some source, either wells or trucked in, to meet demands. Many oil or gas wells encounter water at depth when drilling for oil and/or gas, as it may be part of the oil and gas reservoir, and can be utilized when production is ongoing. Any water rights required would likely need to be filed in the name of the BLM.

At the conclusion of well testing, if paying quantities of oil and gas are not discovered, the operator is required to plug the well according to Federal and State standards. Cement plugs are placed above and below water-bearing units with drilling mud placed in the space between plugs. When abandonment is complete, the site is reclaimed, which includes pad and road recontouring, topsoil replacement, and seeding with approved mixtures. Erosion control measures would be incorporated into the reclamation design as needed.

The drilling site could be active for approximately one year, from the start of drill pad and access road construction; through drilling and well testing; to completion of plugging the hole and reclamation.

It is anticipated that one or two exploration wells would be drilled on leases in the planning area. The wells would likely be 10,000-14,000 feet deep and would require the construction of a drill

pad approximately five acres in size (approx. 500 by 500 feet). Based on the road density in the planning area, access to the drill pads may require up to two miles of road construction or improvement. Surface disturbance from construction of up to two miles of road would equal about 10 acres. Total surface disturbance expected from drilling two wells would be up to 30 acres. Each of the proposed drilling sites would be analyzed through the NEPA process, separate from the leasing analysis.

Wildcat wells that discover only limited reserves of oil and/or gas are not likely to be economically viable because of the lack of existing infrastructure, and would be plugged and abandoned. It is predicted that none of the exploratory wells would encounter hydrocarbons in sufficient quantity to justify production expenses and would be plugged and abandoned immediately.

Phase Three: Field Development and Production

If a producible quantity of oil or gas is discovered, additional development wells would be drilled to confirm the discovery, establish the limits of the field, and drain the field. Depending on the field characteristics, well spacing may be from 40 to several hundred acres per well.

The speed at which a field is developed is dependent on the anticipated productivity. It may take from one to three years to fully develop an oil or gas field. Large fields with several operators may be unitized to reduce surface impacts. In addition, directional drilling may allow for drilling more than one well per pad.

During field development, the road system is greatly expanded. Temporary roads are usually improved to accommodate more traffic and increased duration of use. Improvements may include crowning, capping, and implementing additional erosion controls. New roads would also be constructed. Depending on well location and topography, a main access road is built with smaller secondary roads running to each pad. In addition to roads, other facilities may also be installed including power lines, tank farms, pipelines, oil/water separators, and injection wells. The production phase of an oil or gas field begins soon after discovery, and may coincide with development. Temporary facilities are often used initially, but as the extent of the field is determined, permanent facilities would be installed.

Where oil and gas flow to the surface naturally, control valves and collection pipes are attached to the well head. Otherwise pumps are installed. Oil is typically produced along with water and gas. Separation facilities are constructed on site to remove water, carbon dioxide, and hydrogen sulfide. The oil and natural gas are then separated. Water, usually saline, is disposed of either through surface discharge, evaporation ponds or re-injection into the producing formation.

If gas is present in economic quantities and a pipeline is located within close proximity, a network of pipelines would likely be constructed to collect and transport the gas. If not, gas would likely be re-injected into the reservoir. Oil would be collected in a similar manner and stored in tanks in a central location. Well operators would likely have service operations (e.g., cementing, logging, bits, testing, etc.) provided by established oil field service companies in Wyoming or Utah.

The producing life span of an oil or gas field varies depending on field characteristics. A field may produce for a few years to many decades. Commodity price, recovery technique, and the political environment also affect the life of a field. Abandonment of wells may begin as soon as they are depleted or wells may be rested for a period of time and put back into production.

For the purposes of this report, it is assumed that one of the exploration wells would potentially encounter hydrocarbons in sufficient quantities to warrant field development. Based on this discovery, a five-well field would be developed. Disturbance for additional roads, pads, pipelines, and storage tanks may total over 60 acres. Depending on the size of the field, oil would either be trucked or piped to a refinery.

Phase Four: Abandonment

If paying quantities of oil and gas are not discovered, or at the end of the producing life span of a producing well or field, the operator is required to plug the well according to Federal and State standards and reclaim the disturbed areas. To plug a well, cement plugs are placed above and below water-bearing units with drilling mud placed in the space between plugs. When well abandonment is complete, equipment and surface facilities are removed, and the site is reclaimed. In a producing field, underground pipelines are often plugged and left in place in order to avoid re-disturbing these areas. Site reclamation includes pad and road obliteration and recontouring, topsoil replacement, and seeding with approved mixtures. Erosion control measures would be incorporated into the reclamation design as needed.

CONCLUSION

The probability of full field development and production occurring in the Jarbidge Field Office over the life of the plan is low. The existence or size of oil and natural gas reserves potentially found in the planning area is highly uncertain. Total surface disturbance associated with the anticipated oil/gas-related activity in the planning area as a result of making the lands available for lease equal about 90 acres during the next 20 years. This figure is based on drilling two exploration wells, one of which it is assumed will be productive. Disturbance is based on a drill pad (about 5 acres) + access road (about 10 acres) = 15 acres per drill site, x 2 wells = 30 acres for exploration drilling. If this activity does indeed occur, it is likely that well testing would not be favorable for production and the sites would be immediately reclaimed. Pad and access road construction, drilling and well testing, and reclamation would take an estimated 4-6 months, depending on well depth and drilling conditions encountered. Assuming that oil or gas resources are discovered at one of these wells, an additional 60 acres would be disturbed in that vicinity by the drilling of five additional wells, spaced at one well per 40 to 160 acres, depending on reservoir characteristics. This disturbance would not be reclaimed until the resource is depleted, which could take 1 to 10 years. It is anticipated that two to three geophysical survey programs would be completed during the life of the plan. This disturbance would be temporary, on the order of weeks, and would result in minor to negligible surface impacts.

This RFDS meets the requirements of BLM's Manual Section 1624-2 in describing potential surface impacts that could occur as a result of oil and gas leasing activity in the Jarbidge Field Office.

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**APPENDIX V:
REASONABLY
FOREESEEABLE
DEVELOPMENT
SCENARIO FOR
GEOTHERMAL
DEVELOPMENT**

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APPENDIX V: REASONABLY FORESEEABLE DEVELOPMENT SCENARIO FOR GEOTHERMAL DEVELOPMENT

REASONABLY FORESEEABLE DEVELOPMENT SCENARIO
FOR
GEOTHERMAL DEVELOPMENT
IN THE
JARBIDGE FIELD OFFICE

Prepared by: Karen Porter, BLM Idaho State Office Geologist

Prepared by: signed copy on file Date: 11/6/2009

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SUMMARY

Based on the geology of the Jarbidge Field Office (i.e., the planning area), the presence of numerous hot springs and wells in several locations and a Known Geothermal Resource Area (KGRA), and a review of the available data collected and technical reports written on the area, it has been determined that the lands within the planning area have some level of potential for the discovery and/or development of a geothermal resource for both indirect use (i.e., commercial generation of electricity) and direct use (i.e., use of the resource for other purposes). The lands east of the Bruneau River and west of the Saylor Creek Air Force Range are determined to have high geothermal potential, based on the determination of high heat flow and the inclusion of most of those lands in the Bruneau KGRA. Lands situated north of the numerous faults that trend northwest from roughly the Balanced Rock area to the Bruneau KGRA have been determined to have medium potential, while lands situated south of these faults have been determined to have low potential, based on currently available information. These conclusions are described in more detail in the Geothermal Potential Report prepared for the area (BLM, 2009).

Based on the geothermal potential for the planning area, it is reasonable to assume that a 20-MW power plant would be developed over the 20-year life of the plan. This development would disturb between approximately 185 and 230 acres cumulatively, including the construction of drill pads to support the drilling of 20 temperature-gradient wells and 10 production and injection wells, road construction, power plant development, and pipeline and transmission line construction. Much of this disturbance would be reclaimed after each phase of development, such that once the power plant is operational, the actual disturbance would be considerably less than the cumulative total. Surface disturbances for direct use are expected to be much less than those anticipated for indirect use.

INTRODUCTION

This report, describing a Reasonably Foreseeable Development Scenario (RFDS), accompanies the Geothermal Potential Report (BLM, 2009) prepared for the planning area. The RFDS describes the anticipated level of exploration and development activity associated with geothermal leasing. These projections are necessary for assessing the anticipated impacts of geothermal development-related activity in the Environmental Impact Statement (EIS) for the Jarbidge Resource Management Plan (RMP); for determining which lands within the planning area will be available for geothermal leasing; and for determining what stipulations may be necessary to attach to leases in order to protect surface resources. These anticipated impacts are for the BLM-administered public lands described above during the next 20 years (2009-2029).

DESCRIPTION OF GEOLOGY

The geology of the planning area is described in detail in the Geothermal Potential Report prepared for the area (BLM, 2009). The planning area lies within the Snake River Plain physiographic province and is entirely covered by Cenozoic volcanic deposits, with Quaternary lake deposits found overlying the volcanics in the northwest corner of the planning area. The

planning area is dominated by the Owyhee Plateau, a broad volcanic upland considered to be a continuation of the eastern Snake River Plain. These volcanic rocks, consisting of multiple sheets of welded ash-flow tuff, rhyolite, and finally basalt, were erupted from the Bruneau-Jarbidge eruptive center starting 11 million years ago (Bonnichsen, 1982). The silicic rocks (ash-flows and rhyolites) of this sequence are loosely termed the Idavada Volcanics. The Idavada volcanic sequence is considered the most important aquifer in the area and has the known capacity to act as a reservoir for thermal water (Chapman & Ralston, 1970 and Young & Whitehead, 1975). The sequence is 3,000 feet thick or more and is exposed or underlies all of the planning area.

In the northern portion of the planning area, a series of northwest-trending en echelon normal faults, down dropped to the north, propagate across the Bruneau Desert from roughly the Balanced Rock area (also known as the Blue Gulch area) to the Bruneau Hot Springs area (Malde et al, 1963 and Jenks et al, 1998). High heat flow values are found in springs and wells drilled for agricultural and domestic uses in these two areas, although no exploration drilling for geothermal testing has been performed (Blackwell, 1975 and Brott et al., 1976).

PAST AND PRESENT GEOTHERMAL ACTIVITY

BLM records indicate that there has never been a geothermal lease issued in the planning area. There is a KGRA, the Bruneau KGRA, located in the extreme northwest corner of the planning area (T 7 S, R 6 E, sections 14, 15, 21, 22, 23, 26, 27, and 28; 5,120 acres). The KGRA was established in 1975 due to overlapping nominations of those lands for geothermal leasing and an analysis of the available geothermal indicia at the time. A lease sale was held after the establishment of the KGRA, but records indicate the offered parcel(s) did not receive any bids. While there are no deep (over 5,000 feet) wells drilled for geothermal resources, there are numerous water wells drilled on private lands with temperatures between 20 and 50°C in the planning area (Smith et al., 1980). Most of these are concentrated in the Bruneau area; however there are 15 to 20 wells on private lands in the Blue Gulch area, located northwest of Balanced Rock (T 9-10 S, R 12-13 E), with temperatures between 25 and 35°C. There is also a cluster of warm wells (approximately 25°C) in the Glenns Ferry area. Most of the wells in the planning area are used for agricultural (irrigation) purposes; however, a few utilize the heat source for direct uses such as heating a greenhouse and aquaculture. Most of the wells are less than 1,000 feet deep.

REASONABLY FORESEEABLE DEVELOPMENT SCENARIO GENERAL ASSUMPTIONS

The general assumptions and descriptions of the phases of development that follow are based on the geothermal potential in the Jarbidge Field Office. This Reasonably Foreseeable Development Scenario (RFDS) was adapted from the Final Programmatic Environmental Impact Statement (PEIS) for Geothermal Leasing in the Western US, released in October 2008 (BLM & USFS, 2008), and applied to the local conditions and mineral potential of the planning area. The RFDS primarily describes the development of the resource for the commercial generation of electricity,

termed “indirect use”; however, geothermal resources also can be utilized directly. Direct uses are briefly described at the end of this RFDS.

Based on the geothermal potential for the planning area, it is reasonable to assume that a total of 20 MW of power would be developed over the life of the plan. The most likely location for this development is in or near the Bruneau KGRA, determined to have high potential for geothermal resources, but there is a possibility that the area designated as having moderate potential may encounter exploration activities and possible development as well.

During the life of the plan, it is assumed that exploration activities would include geophysical exploration and drilling of up to 20 temperature gradient wells. Existing roads would be used for access as much as possible; however, given the scarcity of roads in the area, it is assumed that up to 1 mile of temporary access road may be required per well on average. This disturbance would be reclaimed and the holes plugged immediately after data and samples are collected.

Once an area is determined to have potential for commercial geothermal development, large-diameter production wells would be drilled, for further flow testing and for possible future use in production. Assuming the eventual development of a 20-MW resource, approximately 10 large-diameter wells would be drilled: half of these would be production wells, and half would be used as injection wells. These wells would likely be concentrated within a 9 to 16 square-mile area. Construction of well pads would be required. The average well pad is approximately 3.5 acres in size. After drilling is completed, the well pad would be reclaimed by blending the well pad material into the surrounding landscape and re-seeding with an approved seed mix.

Additional disturbance would be anticipated if a site is developed. This would include construction of a power plant, which would disturb approximately 10 additional acres for a 20-MW plant. Pipelines, needed to convey the geothermal fluid from the producing well to the plant and from the plant back to injection wells, would be placed approximately 2 feet above the ground. It is assumed that approximately 1 mile of pipeline would be required per well. Transmission lines are also needed, to carry the electricity from the plant to the power grid (140 kV or greater). The proposed Gateway West transmission line is within 2 to 5 miles of the Bruneau KGRA. It is assumed that between 0.25 miles and 10 miles of line would be required.

Table 1 provides the estimated acreage of land disturbance that would be anticipated for exploration and development of a geothermal resource, over the life of the RMP. The actual area of disturbance varies depending upon site conditions and the size of power plant being constructed. Acreages are not provided for the Reclamation and Abandonment phase since this phase involves the return of previously disturbed lands to their existing conditions. Much of the land would be reclaimed after each phase of the initial exploration, drilling, and construction. For example, once wells are drilled, the well pad would be reduced to a minimum size and the pad reclaimed. Therefore, the actual amount of land occupied during the utilization phase would be less than the total cumulative acreage. A typical development generally requires several leases or the use of private or other adjacent lands. The details of each phase of development are described in the section following the table.

Table 1. Surface Disturbance Anticipated for Geothermal Resource Development during the Life of the Jarbidge RMP (assuming a 20-MW Power Plant)

Development Phase	Disturbance Estimate
Exploration	
Geologic mapping	negligible
Soil surveys	30 square feet ^A
Gravity and magnetic surveys	negligible
Seismic surveys	negligible
Resistivity surveys	negligible
Shallow temperature measurements	negligible
Road/access construction for temperature gradient wells	80 acres
Temperature gradient well pads	5 acres ^B
Total Exploration Disturbance	85 acres
Drilling and Utilization	
Drill pads	35 acres ^C
Road improvement/construction	20 acres ^D
Power plant	10 acres ^E
Pipelines	30 acres ^F
Transmission lines	5-50 acres ^G
Well workovers, repairs and maintenance	negligible ^H
Total Development and Utilization Disturbance	100-145 acres
Total Cumulative Distance	Approximately 185-230 acres
^A Calculated assuming 10 soil gas samples, at a disturbance of less than three square feet each. ^B Calculated assuming an area of disturbance of up to 0.25 acre per well and 20 wells. ^C Calculated assuming a 20-MW power plant requires about 10 well pads, at 3.5 acres (approx. 400' x 400') each, to support 5 production wells and 5 injection wells. Does not assume multiple wells located on a single well pad. ^D Assumes 0.5 miles of road per well (10 wells). Estimates 30-foot wide surface disturbance for an 18-20 foot road surface, including cut and fill slopes and ditches. ^E Based on average of 5 acres of disturbance per 10-MW power plant. ^F Pipelines from well to plant assumed to be 1 mile on average, for a total of 10 miles of pipeline in length, with a 25-foot-wide disturbance corridor. ^G Transmission lines assumed to be 1 to 10 miles long, 40-foot-wide construction corridor. ^H Disturbance would be limited to previously disturbed areas around the well(s).	

TYPICAL PHASES IN GEOTHERMAL DEVELOPMENT

This RFDS for geothermal resource use describes four sequential phases: (1) exploration, (2) drilling, (3) field development and utilization, and (4) reclamation, plugging, and abandonment. The success or failure of each phase affects the implementation of subsequent phases and, therefore, subsequent environmental impacts. The general assumptions and descriptions of the geothermal development are intended to be used in support of the Jarbidge RMP revision, to analyze future environmental impacts that may result from the issuance of Federal geothermal leases, and to identify areas that may require additional stipulations to the standard lease form to protect other resources, if those lands are nominated for leasing in the future. These anticipated impacts are for the BLM-administered public lands described above during the next 20 years (2009-2029). The EIS written in association with the RMP revision analyzes the leasing decision; however, additional site-specific NEPA analysis will be conducted for each phase of geothermal resource development activity. Additional Conditions of Approval may be developed and attached to these permitted activities.

Phase One: Geothermal Resource Exploration

Before geothermal resources are developed, a geothermal resource developer explores for evidence of geothermal resources on leased or unleased land. Exploration activities may involve some ground disturbance but does not include the direct testing of geothermal resources or the production or utilization of geothermal resources. Exploration operations include, but are not limited to, conducting geophysical and/or geochemical surveys, and drilling temperature gradient wells. A geothermal lease is not required to conduct exploration activities; however, an exploration permit is required from BLM (see 43 CFR 3250 for regulations pertaining to geothermal exploration operations).

Usually, the first, on-the-ground step in exploration is to conduct geophysical prospecting or surveying. This exploration method consists of collecting and interpreting electrical, gravitational, magnetic, thermal, and/or seismic data to identify underground structures favorable for the occurrence of a geothermal resource. Geophysical surveying is a relatively inexpensive method of indirectly exploring the sub-surface of a relatively large area for a mineral resource, and results in relatively minor disturbance to surface resources. Once the data are compiled, geologists and geophysicists examine the data and make inferences about where the higher temperature anomalies may occur and whether other geologic conditions, such as porosity and faulting, are present. These conditions can indicate the location of potential underground geothermal reservoirs capable of supporting commercial uses.

Resistivity surveys involve laying out long cables (up to 1,000 feet or more) on the land surface, or setting up equipment repeatedly in small areas (a few tens of square feet at the most for each measuring site). Minor, temporary disturbances are associated with each site for the burial of sensors.

While not widely used for geothermal surveys, seismic surveys have the greatest impact on the local environment. These surveys typically involve setting up an array of geophones and creating a pulse or series of pulses of seismic energy. The pulse is created either by detonating a small charge below the ground surface (requires drilling a narrow “shot hole”, usually by hand) or by a vibroseis truck that is driven through the survey area. Data is transmitted from the geophones to a central location. The geophones may be installed on the ground’s surface, in small excavations made specifically for burying the geophones, and/or in existing wells. These surveys are typically undertaken over the course of a few days. No road building is required for this type of activity.

Geochemical surveying, such as collecting and analyzing water samples from hot springs, can also be used to determine the subsurface characteristics of a particular area. In some cases, gas collectors may be installed to measure soil gases. These collectors have partially buried sensors and may disturb small areas of less than three square feet.

Access requirements for geophysical and geochemical surveying can generally be met by the use of existing roads or trails, cross-country travel using all-terrain vehicles, or by foot. While very little surface disturbance is associated with these surveys, the survey crew, usually consisting of two to four personnel, may be walking or moving through a fairly large area for several days.

The second step of the exploration phase is to drill temperature gradient wells. A gradient well can provide additional information to determine a more precise location of higher-than-normal temperature gradients; however, the geothermal resource is not directly accessed or utilized. Temperature gradient wells can be drilled using a truck-mounted rig, and range from 200 feet to over 4,000 feet deep. Figure 1 is a photograph of a typical drill rig used to drill a temperature gradient well. The number of gradient wells drilled also varies, depending on the geometry of the system being investigated and the anticipated size of the geothermal reservoir. Geologists examine either rock fragments or long cores of rock that are brought up from the bottom of the well as it is being drilled. Water samples are taken from any groundwater encountered during drilling. Temperatures are measured at various depths. Both well temperatures and the results of rock sample analyses are used to determine if additional drilling is worthwhile to identify the presence and characteristics of an underground geothermal reservoir. After collecting the desired samples and data, the wells are plugged and abandoned in accordance with State and Federal requirements.

Figure 1. Typical Drill Rig for Drilling Temperature Gradient Wells



Most temperature gradient wells are drilled with a small rotary rig (often truck-mounted), similar to that used for drilling water wells, or a diamond-coring rig, similar to that used for geologic sampling in mineral exploration and civic works projects. The mast of the drill rig is approximately 60 feet tall. Support equipment is needed, including water trucks, tanks for mixing and holding drilling fluids, personnel and supply transport vehicles, and sometimes a backhoe for earthmoving activities needed to prepare the drilling site. During exploration, a driller is not permitted to produce any fluids out of, or inject any fluids into the well; therefore, the site may also host a sump or tanker truck. Additionally, a diesel generator may also be used at the site to power equipment. A temperature gradient drilling operation can be run by about three on-site personnel and others traveling to the site periodically with materials and supplies.

Temperature-gradient well drilling requires road access. Whenever possible, a driller would access the temperature gradient well site using existing roads. When existing roads are not available, temporary access roads may need to be constructed for the truck-mounted rig to reach the site, possibly disturbing 1 acre (for 0.25 miles of 30-foot wide road) to 6 acres (1.5 miles). Given the road density in the planning area, it is assumed that an average of 1 mile (4 acres) of temporary access road would be required per temperature gradient well.

Drilling a temperature-gradient well generally does not require construction of a well pad or earth-moving equipment unless the site is steeply sloping. Preparing the site for drilling may include leveling the surface and clearing away vegetation. The well site itself involves excavation of a small cellar (typically less than 3 feet square and less than 3 feet deep) to allow the conductor casing to be set beneath the rig. It is assumed that 0.25 acres of disturbance would occur per drill site. Drilling takes from several days to several weeks per hole. Several temperature gradient wells are usually drilled to determine both the areal extent of the temperature anomaly and where the highest temperature gradient occurs. It is assumed that 20 wells would be drilled over the life of the plan.

Temperature gradient wells are not intended to directly contact the geothermal reservoir, and therefore produce no geothermal fluids. In areas of known artesian pressures, any drilling expected to penetrate the groundwater table would be required to include blow-out prevention equipment. In cases where a temperature gradient well does penetrate a geothermal zone, any release of geothermal fluids at the surface is likely to be minimal due to the small well diameters and the use of blow-out prevention equipment.

Drilling fluids may include drilling mud (bentonite clay, activated montmorillonite clay and crystalline silica-quartz), drilling mud additives (caustic soda, sodium bicarbonate, or anionic polyacrylamide liquid polymer), cement (Portland cement and calcium chloride), fuel (diesel), lubricants (usually petroleum-based) and coolants. The specific fluids and additives depend on a variety of factors, including the geologic formations being penetrated and the depth of the well. Releases of drilling muds are not permitted. Sump and tanker trucks are required to capture all fluids. The risk of spills of other fluids is similar to that of any other project involving the use of vehicles and motorized equipment.

All surface disturbances would be reclaimed to the satisfaction of BLM. Once drilling is completed, the temperature gradient well would be plugged and abandoned in accordance with BLM and State requirements. Site reclamation includes removing all surface equipment and structures; re-grading the site to blend into the surrounding landscape and prevent erosion; and replanting vegetation with a seed mix approved by BLM, to facilitate natural restoration of the site.

Phase Two: Drilling Operations

Once exploration has indicated a viable prospect and necessary leases have been secured, the drilling of large-diameter wells can proceed, in accordance with 43 CFR 3260 regulations. Unlike temperature gradient wells, these wells tap the geothermal resource and are capable of being fitted for production; however, they are initially used to test the reservoir for commercial development. Multiple wells may be drilled per lease. Each well requires an approved

Geothermal Drilling Permit. A Drilling Plan and an Operations Plan are also required (one Plan can be submitted for multiple wells). NEPA analysis is conducted to determine whether the drilling locations are appropriate and whether Conditions of Approval, attached to the Drilling Permit, are required in addition to the lease stipulations. A bond is required. Drilling operations include drilling large-diameter production wells, flow testing of the wells, producing geothermal fluids for chemical evaluation, and injecting fluids back into the geothermal reservoir. This would also involve the construction of sumps or pits on the well pad, to hold excess geothermal fluids. It could involve development of minor infrastructure to conduct such operations.

Access roads capable of supporting large drill rigs would be required. It is assumed that 0.5 miles of new road would be constructed per well on average (total of 5 miles). Depending on the type and use-intensity of the road, the areas of surface disturbance is about 30-foot wide for an 18-20 foot wide road surface, including cut and fill slopes and ditches.

Construction of a well pad is required for drilling a production well. The size of the well pad is dependent upon site conditions and on the number of wells per pad, but they are typically about 3.5 acres (400 x 400 feet) for one well. The well pad needs to be of sufficient size to safely accommodate drilling activities and various temporary support facilities such as generators, mud tanks, cement tanks, trailers for the drillers and mud loggers, housing trailers, and storage sheds. Each well pad would be fenced around the perimeter to prevent access by unauthorized persons, wildlife, or livestock during the duration of the drilling operation. If the drilling site is not located on level ground, minor cut and fill may be required. Gravel may be required to stabilize roads and pads and provide for drainage.

After a well pad has been constructed and support facilities have been assembled, production wells would be drilled using a geothermal (or oil and gas) drill rig (Figure 2). Production-size wells can be over 2 miles (10,560 feet) deep. The wells narrow (telescope) in diameter from 30 inches at the surface to 12 inches at the bottom of the well. In order to drill these deep holes, a large drilling rig would be erected. The top of the drill rig derrick could be as much as 155 feet above the ground surface, and the rig floor could be at least 25 feet above the ground surface. These rigs are typically equipped with diesel engines, fuel and drilling mud storage tanks, mud pumps, and other ancillary equipment. Blow-out prevention equipment would be utilized while drilling to prevent uncontrolled flow at the surface if a pressurized thermal pocket is encountered.

Getting the rig and ancillary equipment to the site may require 15 to 20 trips by full-sized tractor-trailers, with a similar amount for de-mobilizing the rig. There would be 10 to 40 daily trips for commuting and hauling in equipment. Drilling operations would likely occur 24 hours a day and seven days a week. It takes approximately one month to drill one well. A drilling operation generally has from 10 to 15 people on site at all times, with more people coming and going periodically with equipment and supplies.

Geothermal fluid production and associated waste production (drill cuttings and waste drilling mud) is likely to occur for short periods, as wells are tested to determine reservoir characteristics. Excess geothermal fluids are either re-injected into a previously drilled well, if available, or are stored in temporary pits or sumps, generally lined with a synthetic liner (permeability less than

10^{-7} cm/sec) or an impermeable clay liner. The water in the pit is left to evaporate and any sludge is removed and properly disposed of. The rate of fluid production from a geothermal reservoir is unknown until the development testing phase is completed.

Figure 2. Typical Drill Rig for Drilling Production Wells



During the initial stages of testing, one well is likely to be tested at a time. If testing is successful and the well and reservoir are sufficient for development, wellheads, valves, and control equipment would be installed on top of the well casing so that the wells can be utilized for production. The size of the well pad would be reduced to the minimum necessary for production, and the area reclaimed. If a production well is unsuccessful, it may be used for injection of fluids from other wells. If not necessary for either production or injection, the well would be plugged and abandoned in accordance with State and Federal requirements, and the site would be reclaimed by recontouring the well pad and seeding with an approved seed mix. Those roads that are no longer needed would be reclaimed.

Phase Three: Field Development and Utilization

Utilization of the geothermal resource is the final phase of development, if a viable reservoir is determined and a power purchase agreement can be secured. Utilization requires the applicant to secure a site license and construction permit from BLM, in accordance with regulations at 43 CFR 3270. An EIS may be required for the construction of a power plant on Federal lands.

It is likely that the existing production wells would be used, although additional drilling to expand and develop the well field may be required. The number of wells is dependent upon the geothermal reservoir characteristics and the planned power generation capacity. For example, a 50-MW (net) power plant could require up to 25 production wells and 10 injection wells. Based on the geothermal potential in the planning area, it is assumed that a 20-MW power plant would be developed, with 5 production wells and 5 injection wells. The utilization phase could last

from 10 to 50 years and involves the operation and maintenance of the geothermal field(s) and generation and sale of electricity.

Additional infrastructure would be needed for commercial operations, including construction of a power plant, installation of production and injection pipelines, and installation of transmission lines. It is assumed that no new access roads would be required, beyond the roads constructed for the production well drilling.

Geothermal resources can be classified as low temperature (less than 90°C, or 194°F), moderate temperature (90 to 150°C, or 194 to 302°F), and high temperature (greater than 150°C, or 302°F). While at one time only the highest temperature resources were used for generating electrical power, emerging technologies and demand for alternative energy sources are proving that moderate and even lower temperature resources can be used for electrical generation.

Moderate to high temperature reservoirs, with adequate flow rates and fracture systems, are currently suitable for the commercial production of electricity. While there are several types of power plants that harness geothermal resources, the most likely type of plant used for moderate temperature resources is a binary-cycle plant. These modular plants use the geothermal resource that has been pumped to the surface to heat a secondary “working fluid” such as isobutene or isopentane that has a lower boiling point than water. As the working fluid boils, it expands and turns a steam turbine, producing electricity. The geothermal fluid and the working fluid never come in contact with each other, nor are they exposed to the environment (closed loop system). The geothermal fluid is re-injected back into the geothermal zone via injection wells, while the working fluid is cooled, condensed, and recycled.

Binary plants are by far the most common type of power plant used today, as they can operate with lower water temperature (74 to 182° C, or 165 to 360°F) than flash or steam plants, produce few air emissions, are quiet, and result in a low impact to the environment once constructed. They can be constructed off-site (e.g., Ormat’s plants are manufactured in Israel), transported to a site, and erected fairly easily, and they can be expanded as a well field is developed. In this sense, they are modular units. Generally, the final permanent surface disturbance required for all related production wells, the power plant, and surface facilities is about 1 acre per Megawatt of power produced.

A 50-MW plant would utilize a site area of up to 20 to 25 acres to accommodate all the needed equipment, including the power plant itself, space for pipelines geothermal fluids and reinjection, space for moving and storing equipment, and buildings needed for various purposes (power plant control, fire control, maintenance shop, etc.). The power plant itself would occupy an estimated 25% of this area for a water-cooled plant, or about 50% for an air-cooled plant. Where topography permits, the power plant could be situated to be less visible from nearby roads, trails, scenic vistas, or scenic highways. The site of the plant requires reasonable air circulation to allow for efficient operation of the plant’s condensers. A smaller, 20-MW plant would typically require approximately 5 to 10 acres for the entire complex. Figure 3 shows what a recently constructed 10-MW power plant looks like.

Figure 3. 10-MW Power Plant at US Geothermal Inc's Raft River Site (from US Geothermal Website)

A pipeline system would be needed to connect each of the production wells and injection wells to the power plant. Pipelines are usually 24 to 36 inches in diameter and are typically constructed on supports above the ground surface, resulting in little if any surface impact to the surrounding area once construction is complete and the corridor has been revegetated. The pipelines typically have a few feet of clearance underneath them, allowing small animals to easily cross their path. Every 100 to 200 feet or so, the pipeline may have an expansion loop, or U-shaped bends, to allow for expansion due to heating and cooling. Pipelines transporting hot fluids to the plant are wrapped in insulation, whereas injection pipelines are generally not. Where feasible, the pipeline may parallel the access roads and existing roads to the power plant. The pipelines are typically painted to blend in with the surrounding environment. For the planning area, it is assumed that the pipeline to each well would be approximately 1 mile long on average, with a corridor width of about 25 feet. Once the pipeline is constructed, these corridors would be reclaimed.

Transmission lines would be required to carry power from the plant to the electric grid. It is assumed that in the planning area, these lines would be from 1 to 10 miles in length, with a corridor width of approximately 40 feet. Wooden poles would most likely support them, and about 5 acres could be disturbed per mile of transmission line.

The number of people required for routine operation of a power plant is typically three per shift; however, additional personnel may be on site during the day for maintenance and management of the facility and monitoring fluids and power production. Activities associated with operation and maintenance of the facility and energy production would not generally involve additional ground-disturbing activities.

Using data from other areas of geothermal development, it appears that production of geothermal fluids can be expected to vary widely from 1 to 6 million gallons per well, per day. Assuming 5

million gallons per day per well as an average production figure, a geothermal field with 5 producing wells would produce 25 million gallons of fluid per day. Geothermal fluids produced are re-injected back into the geothermal reservoir via injection wells. Binary power plants utilize a closed loop system; therefore, well production and injection wells operate with no fluid loss.

The routinely used chemicals for a binary geothermal plant include the hydrocarbon working fluid (such as iso-butane or n-pentane) and the lubricating oil used in the downhole pumps. While downhole scaling may be a problem for flash or steam plants, it does not occur in binary plants because they are liquid dominated systems. Therefore, there is no need for scale-inhibiting chemicals or any other chemicals with a binary plant.

Phase Four: Reclamation and Abandonment

This phase involves abandoning the well after production ceases and reclaiming all disturbed areas in conformance with BLM and State standards. Abandonment includes plugging and capping the wells and reclaiming the well site. Reclamation also includes removing the power plant and all surface equipment and structures, regrading the site and access roads to predisturbance contours, and replanting native or appropriate vegetation to facilitate natural restoration.

RFDS FOR DIRECT USE

Low temperature geothermal resources are increasingly being used for a wide variety of applications across the Western US, including in the planning area and nearby. These direct uses include:

- Agricultural uses, such as controlling environmental conditions for growing crops, flowers, or trees;
- Aquacultural uses, such as controlling environmental conditions for raising fish or other animals;
- Direct heating and cooling systems for buildings;
- Public safety uses, such as eliminating ice and snow on public sidewalks;
- Public health uses through food processing, such as dehydration, washing, and processing; and
- Recreational uses, such as hot tubs, steam baths, and mud baths.

Use of the geothermal resource for these activities on Federal lands requires a direct use geothermal lease, in accordance with regulations at 43 CFR 3205.

Surface disturbances for direct use are generally much less than for indirect use since direct uses are more likely to be located near existing communities with less of a need for new access roads. Also, since direct use applications utilize the geothermal energy on-site, there is no need for the construction of electrical equipment and transmission lines, except for bringing in electricity from the existing grid to the facility being constructed. Surface disturbances can still be expected for well pad development, site access, and construction of the facility utilizing the resource, although in some cases the facility may already exist and may simply be shifting its heat source to geothermal.

TYPICAL PHASES IN DIRECT USE GEOTHERMAL DEVELOPMENT

Phase One: Exploration

Existing direct use applications are largely co-located with, and draw directly from, existing surface geothermal manifestations such as hot springs, eliminating the need for most exploration activities. Exploration activities in the past have often been limited to water temperature and chemistry analysis.

Looking to the future, it is likely that most direct use applications will not be able to draw from existing surface manifestations as they have in the past. Surface manifestations such as naturally occurring hot springs have become increasingly sought after with increases in population in the Western US, increased recreational use, and more stringent regulations preserving such resources for their recreational, cultural, or scenic value. In such cases where surface manifestations are not nearby or are not being utilized directly, exploration activities similar to those described above for indirect use would also apply for direct use.

Phase Two: Drilling

In applications where a surface manifestation is used directly, the resource development phase involves installing piping into that manifestation to withdraw the hot water. For applications requiring the drilling of a well, drilling activities would be similar to those described above under Phase Two for indirect use, although the well would not be as deep, likely only one well would be drilled, and the volume of fluid would not be as great as for indirect use.

Phase Three: Utilization

The utilization phase typically lasts for several decades or longer. Activities associated with the production phase are generally limited to maintenance and repair activities of all components of the collection, distribution and injection/use/disposal system.

As described above for indirect use, the drilling of production wells may be necessary. Drilling activities would be similar to that discussed above in the drilling phase, although it is likely that only one production well and one injection well would be required. Some applications may inject the post-use geothermal fluids back into the ground, in which case an injection well would be drilled and connected via piping to the application. In other applications where the spent geothermal fluids are discharged to a surface water body or used for some other purpose, then discharge piping, collection systems or distribution systems may need to be constructed. For such systems where the waters are not reinjected into the geothermal reservoir but are rather discharged or otherwise used, treatment systems may need to be installed to reduce levels of any naturally occurring but toxic chemicals present within the geothermal waters, such as mercury, arsenic, and boron, to meet applicable health or environmental standards. Operation and maintenance of existing facilities and production of geothermal energy also takes place during the production phase. Activities associated with operation and maintenance and energy production would involve managing waste generated by daily activities, managing geothermal water, landscaping, and maneuvering construction and maintenance equipment and vehicles associated with these activities.

Phase Four: Reclamation and Abandonment

As described above for indirect use, this phase involves abandoning the well after production ceases and reclaiming all disturbed areas in conformance with BLM and State standards. Abandonment includes plugging, capping, and reclaiming the wells. Reclamation includes removing all surface equipment and structures, regrading the site to blend into the surrounding landscape, and replanting native or appropriate vegetation.

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**APPENDIX W:
EVALUATION OF
NOMINATED AREAS OF
CRITICAL
ENVIRONMENTAL
CONCERN**

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APPENDIX W: EVALUATION OF NOMINATED AREAS OF CRITICAL ENVIRONMENTAL CONCERN

An Area of Critical Environmental Concern (ACEC) is defined in the Federal Land Policy and Management Act of 1976 (FLPMA) as an area “within the public lands where special management attention is required (when such areas are developed or used or where no development is required) to protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources or other natural systems or processes, or to protect life and safety from natural hazards.” Nine areas were nominated for ACEC designation in the planning area through scoping, through individual or group nominations, and from Bureau of Land Management (BLM) staff recommendations; five of these areas had more than one boundary nominated. The nominated areas include:

- Bruneau-Jarbidge ACEC, including the existing ACEC, extensions to the existing ACEC, and reductions to the existing ACEC
- Inside Desert ACEC, including a large and small version of the ACEC
- Jarbidge Foothills ACEC, including a large and small version of the ACEC
- Lower Bruneau Canyon ACEC
- Middle Snake ACEC
- Sagebrush Sea ACEC
- Salmon Falls Creek ACEC, including the existing ACEC and an extension to the existing ACEC
- Sand Dunes ACEC
- Sand Point ACEC, including the existing ACEC and an extension to the existing ACEC

This appendix contains a detailed description of each nominated ACEC or boundary modification and the BLM staff evaluation of its relevance and importance and need for special management. The evaluation was based on guidance provided by 43 CFR 1610.7-2 and BLM Manual 1613, *Areas of Critical Environmental Concern*, which state that potential ACECs to be analyzed in resource management plan (RMP) alternatives must meet specified criteria for relevance and importance.

Relevance is based on the presence of a significant

- Historic, cultural, or scenic value, including, but not limited to, rare or sensitive archaeological resources and religious or cultural resources important to Native American tribes;
- Fish or wildlife resource, including, but not limited to, habitat for Endangered, Threatened, or BLM Sensitive fish or wildlife species, or habitat essential for maintaining species diversity;
- A natural process or system, including, but not limited to, Endangered, Threatened, or BLM Sensitive plant species; rare, endemic, or relic plants or terrestrial, aquatic, or riparian plant communities; or rare geologic features; or
- Natural hazard, including, but not limited to, areas of avalanche, dangerous flooding, landslides, unstable soils, or seismic activity.

In the evaluation for relevance, a “yes” answer indicates the area contains the value, resource, process, system, or hazard, while a “no” answer indicates the area does not.

Upon meeting the relevance criteria, a nominated site must then have substantial significance and values that meet one or more of the following importance criteria:

- Has more than locally significant qualities that give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource;
- Has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change;
- Has been recognized as warranting protection in order to satisfy national priority concerns or to carry out the mandates of FLPMA;
- Has qualities that warrant highlighting in order to satisfy public or management concerns about safety and public welfare; or
- Poses a significant threat to human life and safety or to property.

In the evaluation for importance, a “yes” answer indicates that the value, resource, system, process, or hazard has substantial significance and values and meets one or more of the importance factors listed above. A “no” answer indicates the area contains the value, resource, system, process, or hazard, but it is not substantially significant and does not meet the importance factors listed above. “N/A” indicates that the value, resource, system, process, or hazard is not found within the area.

Based on these requirements, the nominated extension to the existing Salmon Falls Creek ACEC was dropped from further consideration because while it met the criteria for relevance, it did not meet the importance criteria. In addition, the nominated Sand Dunes ACEC was dropped from further consideration because it did not meet criteria for relevance or importance. The remaining nominated ACECs and their nominated boundary modifications met the criteria for relevance and importance and have been included in the alternatives analyzed in this document as proposed ACECs.

Jarbidge Field Office

**RELEVANCE AND IMPORTANCE EVALUATION
FOR
NOMINATED AREAS OF CRITICAL ENVIRONMENTAL CONCERN**

Approved by:

signed copy on file
Rick Vander Voet
Jarbidge Field Office Manager

Date

Concurrence by:

signed copy on file
Bill Baker
Twin Falls District Manager

Date

Bruneau-Jarbidge ACEC

The Bruneau-Jarbidge ACEC is an existing ACEC. The existing ACEC was renominated; two alternate boundaries for the ACEC were nominated as well. The area encompassed by the existing boundary is presented first, followed by the area encompassed by the nominated extensions to the existing boundary. Finally, the area encompassed by the nominated reduced boundary is discussed.

Existing ACEC

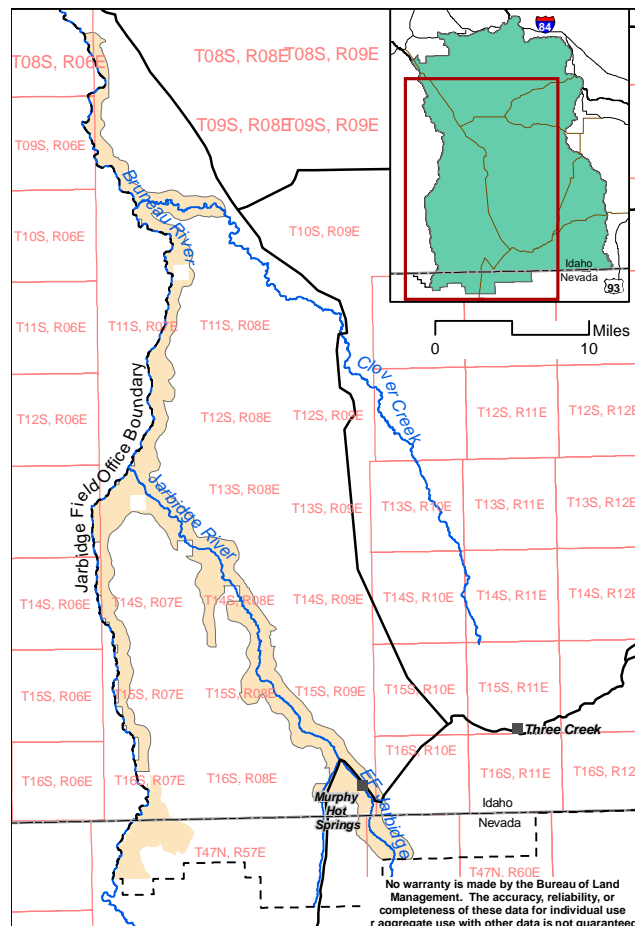
Nominated ACEC: Bruneau-Jarbidge ACEC (existing ACEC boundary)

Nominated by: The existing ACEC was renominated by BLM in accordance with BLM Manual 1613, *Areas of Critical Environmental Concern*, Section .21A.1.

The existing ACEC was renominated by Western Watersheds Project (WWP).

Location: The ACEC encompasses 85,000 acres of BLM-managed land. The ACEC is located along the Bruneau River from near Crowbar Gulch upstream to the Jarbidge Field Office (FO) boundary, along the Jarbidge River from the Bruneau River confluence to the Buck Creek confluence, and along the East Fork of the Jarbidge River from the Jarbidge River confluence to the FO boundary. Portions of Clover, Deep, Cougar, Dorsey, Columbet, and Dave Creeks are also within the ACEC. The ACEC includes the canyons as well as portions of the adjacent uplands.

The ACEC is contained within the nominated Sagebrush Sea ACEC.



Relevance: Does the area contain a significant historic, cultural or scenic value; fish or wildlife resource; natural process or system; or natural hazard?	Yes or No
Historic Value	
The only known significant historic resources within the nominated ACEC are on private lands within the Bruneau and Jarbidge Canyons.	No
Cultural Value	
Regionally significant cultural resources are present within the ACEC. Native American use of the area extends back thousands of years. While the canyonlands provided food, shelter, and water, the adjacent uplands also served as travel corridors between winter villages along the Snake and lower Bruneau Rivers and summer camps in the Jarbidge and Owyhee Uplands. The area retains traditional cultural importance for the tribes. Many sites are also important for their archaeological value.	Yes
Scenic Value	
The canyon complex has exceptional rugged-desert scenery and natural qualities. The canyons include both basalt and rhyolite forms of volcanic material. The canyons plunge from 300 to over 900 feet from the adjacent upland plateaus to the rivers below. Rhyolite columns and spires are present through much of the Jarbidge Canyon. The lower portion of the Bruneau River contains basalt canyons. Arch Canyon contains a unique, large, natural arch composed of rhyolite spanning Cougar Creek.	Yes
Fish or Wildlife Resource	
<u>California bighorn sheep:</u> The ACEC contains over 100 miles of canyonland habitat for California bighorn sheep (bighorn sheep), a Type 3 BLM Sensitive species, nearly all the bighorn sheep habitat within the planning area. The bighorn sheep population within the ACEC is estimated to be approximately 200 sheep. The Foundation for North American Wild Sheep and the Idaho Department of Fish and Game (IDFG) were instrumental in re-introducing bighorn sheep into the Bruneau and Jarbidge Canyons in the 1980s and early 1990s. The canyonlands provide secure lambing habitat. The rivers in the canyon bottoms, as well as occasional seeps from canyon walls, provide water. Bighorn sheep forage is available in both the canyons and adjacent uplands. The vast majority of bighorn sheep observations are within the canyon and on the upland plateau up to about 1 mile from the canyon rim. Bighorn sheep typically avoid human disturbance and can be socially displaced in the short term from otherwise suitable habitat when livestock are present (Bissonette & Steinkamp, 1996).	Yes
<u>Big game:</u> The ACEC contains 82,000 acres of big game winter range and supports a substantial amount of wintering big game. About half of the wintering mule deer in the planning area use portions of the ACEC as winter range. Wintering mule deer and elk include both resident and migratory herds.	Yes
<u>Bull trout:</u> The 1987 RMP did not address bull trout, which are listed as Threatened under the Endangered Species Act of 1973 (ESA) and are a Type 1 BLM Sensitive species; likely, the species was not known to be present within the existing ACEC boundary. However, the ACEC does contain about 2 miles of spawning and rearing habitat and over 9 miles of migratory habitat for resident and migratory (fluvial) bull trout in the Jarbidge River and its East Fork and Dave Creek. The Jarbidge River Distinct Population Segment is the southern-most surviving population of bull trout in North America (FWS, 2004), occurring in a portion of southern Idaho and northern Nevada, and is isolated from other bull trout populations by numerous dams. Bull trout in this area are unique in their arid environmental setting.	Yes
<u>Redband trout:</u> The ACEC contains habitat for redband trout in four stream reaches, the Bruneau River, the Jarbidge River and its East Fork, and Dave Creek.	Yes
<u>Other fish and wildlife:</u> The Bruneau and Jarbidge Canyons contain habitat for a variety of other BLM Sensitive species, including peregrine falcon (Type 3), prairie falcon (Type 4), spotted bat (Type 3), and Townsend's big-eared bat (Type 3 and NV). The upland plateaus adjacent to the canyons contain habitat for Brewer's sparrow (Type 3 and NV), greater sage-grouse (Type 2), sage sparrow (Type 3), and other sagebrush-obligate species. The 2007 Murphy Complex Fires burned a substantial amount of the upland habitat on the Diamond A east of Jarbidge Forks to the confluence of Poison Creek in the ACEC.	Yes
The Jarbidge River contains a natural diversity of native fish species. Compared to other rivers in the region, the proportion of native to non-native species is unusually high, as there are few, if any, non-native species present. This is a rather unique characteristic for the fish populations in the Jarbidge River Watershed.	

Natural System or Process	
<u>Bruneau River phlox</u> : Five of the six Idaho populations of Bruneau River phlox, a Type 3 BLM Sensitive species, occur within the Bruneau and Jarbidge Canyons within the ACEC; two additional populations can be found in Nevada.	Yes
<u>Other special status plants</u> : The ACEC contains plant species classified as BLM Sensitive or Watch species, including Cusick’s primrose (Type 5) and Simpson’s hedgehog cactus (Type 4). The population of Cusick’s primrose within nominated ACEC is in Nevada. While this species is found elsewhere in Idaho and Oregon; it is the only population of Cusick’s primrose in the planning area and the only population of this species in Nevada.	Yes
<u>Upland vegetation</u> : The ACEC contains two plant communities that are generally isolated because of topography and are ungrazed: the curl-leaf mountain mahogany woodland community and the mountain big sagebrush/bluebunch wheatgrass community.	Yes
<u>Riparian systems</u> : Over 90 miles of Bruneau and Jarbidge Rivers are free flowing in the ACEC. The riparian systems in the ACEC are also unique in that they are typically dominated by Rocky Mountain juniper with interspersed quaking aspen and a few pockets of cottonwood.	Yes
Natural Hazard	
No known significant hazards.	No
Importance: Does the value, resource, system, process, or hazard meet one or more of the following importance factors:	
<ol style="list-style-type: none"> 1. has more than locally significant qualities that give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource; 2. has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change; 3. has been recognized as warranting protection to satisfy national priority concerns or to carry out the mandates of FLPMA; 4. has qualities that warrant highlighting to satisfy public or management concerns about safety and public welfare; or 5. poses a significant threat to human life and safety or to property? 	Yes, No, or N/A
Historic Value	
N/A	N/A
Cultural Value	
(Factors met: 1, 2) Regionally significant cultural resources are present within the nominated ACEC.	Yes
Scenic Value	
(Factors met: 1) Scenic values are outstanding and have been recommended suitable for Wild and Scenic River (WSR) designation. The area contains numerous access locations for public viewing. Areas such as Arch Canyon, the Jarbidge River, and the Bruneau River attract visitors from across the West. The Bruneau and Jarbidge Rivers provide nationally known whitewater recreation experiences.	Yes
Fish or Wildlife Resource	
<u>California bighorn sheep</u> : (Factors met: 1, 2, 3) Bighorn sheep, a Type 3 BLM Sensitive species, are scattered in small herds across parts of Oregon, Idaho, Nevada, and British Columbia. In Idaho, bighorn sheep populations in South Hills and Jim Sage Mountains are smaller than in the Bruneau/Jarbidge River area. The population in the Owyhee River is larger than the Bruneau/Jarbidge River population. Bighorn sheep typically respond negatively to increased human activities by avoiding portions of their habitat containing greater disturbance. Research in southern Idaho indicates that livestock can alter bighorn sheep habitat use and displace bighorn sheep from their habitat (Bissonette & Steinkamp, 1996), which can increase the risk of inbreeding and disease, as well as degradation of the higher-use portions of their habitat (Krausman & Bowyer, 2003). Bighorn sheep in Idaho are recovering from a population crash due to disease in the late 1990s. This population of bighorn sheep is of more than local importance, evidenced in part by the fact that bighorn sheep tags for hunts in this area are in high demand and attract applicants from across the United States.	Yes

<u>Big game:</u> The ACEC is important to wintering big game from parts of Nevada and Idaho including mule deer, pronghorn, and elk. Mule deer and pronghorn are featured big game species in Idaho. Mule deer and elk are featured species in Nevada. However, the winter range within the ACEC is primarily of local importance.	No
<u>Bull trout:</u> (Factors met: 1, 2, 3) The Jarbidge River in southwest Idaho and northern Nevada is a tributary to the Snake River and contains the southernmost existing population of bull trout in North America (FWS, 2004). Bull trout are the only fish within the planning area listed as Threatened under the ESA and are a Type 1 BLM Sensitive species. Genetic analysis of bull trout in the Columbia River Basin indicates Jarbidge River bull trout have a shared evolutionary history with populations in the upper Columbia River and Snake River but are genetically separated. For over 100 years, Jarbidge River bull trout have been geographically isolated from other populations in the Snake River by more than 150 miles of unsuitable habitat and several impassable hydroelectric dams on the Snake River and at least one irrigation diversion on the lower Bruneau River. Bull trout in the Jarbidge River are considered significant because they occupy a unique and unusual ecological setting and their loss would result in a substantial modification of the species' range. The bull trout in the Jarbidge River are unique in that a portion of their habitat is in an area categorized as semi-arid desert. The ACEC has both spawning and migratory habitat for bull trout. Dave Creek (included within the boundary) contains a portion of the spawning and rearing area for bull trout within the East Fork of the Jarbidge River.	Yes
<u>Redband trout:</u> (Factors met: 1, 2) Redband trout are a Type 2 BLM Sensitive species present in four stream reaches within the ACEC. These redband trout are adapted to both the colder streams that are critical for bull trout and the warmer, low elevation streams such as the lower Jarbidge River and Bruneau River. These populations of redband trout are also unique in that the occupied streams within the ACEC lack migration barriers that prevent redband from moving between streams, unlike most of the other redband trout streams within the planning area.	Yes
<u>Other fish and wildlife:</u> The other fish and wildlife present within the ACEC are found elsewhere in and outside the planning area; the populations within the ACEC are primarily of local importance.	No
Natural System or Process	
<u>Bruneau River phlox:</u> (Factors met: 1, 2, 3) Bruneau River phlox is a Type 3 BLM Sensitive species endemic to the area. All six Idaho populations are present in the Bruneau and Jarbidge Canyons; five of these are within the existing ACEC. Two additional populations can be found in Nevada. Bruneau River phlox has a total estimated population of 500 plants. The Idaho populations are relatively stable. The only threats are damming the Bruneau and Jarbidge Rivers and annual weed invasion.	Yes
<u>Other special status plants:</u> Other special status and uncommon plants occur in the area, but are not of more than local significance.	No
<u>Upland vegetation:</u> The isolated curl-leaf mountain mahogany woodland and mountain big sagebrush/bluebunch wheatgrass communities are present in other portions of the planning area. These sites are largely ungrazed livestock.	No
<u>Riparian systems:</u> (Factors met: 1, 2) The Bruneau and Jarbidge Rivers are unique; they are two of the longest free-flowing streams in southern Idaho. The majority of other desert rivers, including the Snake and Owyhee Rivers and Salmon Falls Creek, contain dams. The Jarbidge River system is critical for bull trout that migrate between suitable streams between the East Fork of the Jarbidge River and the Jarbidge River and potentially overwinter in the lower Jarbidge River. Riparian zones on BLM-managed portions of lower Dave Creek, as well as the Jarbidge River and its East Fork and portions of the Bruneau River (from about 0.5 miles downstream of Indian Hot Springs almost to the Bruneau Valley) are ungrazed due to limited access.	Yes
Natural Hazard	
N/A	N/A

The ACEC meets the relevance and importance criteria to be considered as a potential ACEC. The rationale for proposing the existing Bruneau-Jarbidge ACEC for designation (under Alternative I) as an ACEC is as follows:

The ACEC meets relevance and importance criteria for cultural and scenic values, fish and wildlife resources (bighorn sheep, bull trout, and redband trout), and natural systems or processes (special status plants and riparian systems).

Existing and potential threats to the relevant and important values of the ACEC include cross-country motorized vehicle use and other surface-disturbing activities, wildland fire and subsequent alteration of habitat, and to a lesser extent livestock grazing and recreation. Aside from direct impacts from these threats, many of these indirectly affect the introduction and spread of noxious weeds and invasive plants, which are detrimental to the scenic values and the fish and wildlife resources within the ACEC.

Cross-country motorized vehicle use presents a threat to the cultural and scenic values within the ACEC. This type of use also threatens bighorn sheep habitat by creating corridors for the spread of invasive plants, which degrades their habitat. Other surface-disturbing activities, such as mineral exploration and development¹³ and right-of-way (ROW) development, are also a threat to cultural and scenic values and bighorn sheep; bighorn sheep typically avoid human disturbance. Any activities in the uplands or riparian zones that increase sediment to the stream can negatively affect bull trout and redband trout.

Wildland fire is a threat to several of the relevant and important values within the ACEC. Wildland fires that burn the riparian zone can reduce the amount of large wood and streambank shade and increase sediment to the stream, affecting bull trout, which require cold clean water with low amounts of sediment in stream gravels for spawning and rearing. Components of wildland fire suppression (e.g., the use of retardant, constructing control lines) can also be detrimental to fish and aquatic wildlife. Cheatgrass frequently increases and may dominate in the canyon lands following wildland fires, affecting habitat for bighorn sheep as well as Bruneau River phlox and Cusick's primrose.

Livestock grazing is a threat primarily to bighorn sheep. Bighorn sheep can be displaced by livestock. Livestock water sources as well as salting and supplement sites located in the ACEC have contributed to the spread of invasive plants.

Recreational use within the canyon is a threat primarily to the cultural values within the ACEC. Cultural resource sites within the river corridors are susceptible to inadvertent damage from legitimate boating parties as well as intentional destruction.

Portions of the ACEC are included in two Wilderness Study Areas (WSAs): the Bruneau River-Sheep Creek WSA and the Jarbidge River WSA. These areas would also be managed according to the *Interim Management Policy for Lands under Wilderness Review* (IMP). However, if the WSAs were to be released to multiple-use management by Congress, the IMP would no longer apply.

River segments within the ACEC that have been recommended suitable for designation as WSRs include the Bruneau River from Blackrock Pocket to Hot Creek and the Jarbidge River from the Jarbidge Forks to the Bruneau River confluence. Outstandingly remarkable values (ORVs) for these segments include cultural, fish, geological, recreational, scenic, vegetation, and wildlife values. The ACEC also contains portions of river segments inventoried as eligible for inclusion in the National Wild and Scenic River System (NWSRS; ORVs included in parentheses): Jarbidge River south of the Jarbidge Forks (scenic, fish), the East Fork of the Jarbidge River (fish), Cougar Point Creek (scenic), and Dave Creek (fish). Interim management of these segments requires that they be managed to maintain or enhance their ORVs. However, the WSR corridor only extends 0.25 miles above the high water mark on each side of the river, which does not provide any protection for these values in the higher elevations of the canyon or the adjacent upland plateaus.

If the nominated ACEC meets the relevance and importance criteria, list the relevant and important value(s) that need special management attention and describe the management prescriptions necessary to protect those values.

¹³ There are currently seven active mining claims within the ACEC boundary, all at Indian Hot Springs for Bruneau jasper.

The cultural and scenic values, the fish and wildlife resources, and natural systems or processes (special status plants and riparian systems) of the ACEC would be protected through the following allocations and management actions:¹⁴

- All actions within the portions of the ACEC that are also within WSAs must be consistent with the IMP and with allocations and management actions made for WSAs.
- Areas within the ACEC with concentrated recreational and livestock grazing use would be a high priority for noxious weeds and invasive plants treatment with integrated weed management techniques for control, containment, and where possible, eradication. Use of domestic sheep or goats to reduce noxious weeds would not be allowed within the ACEC to eliminate potential contact with bighorn sheep.
- The ACEC would be a Critical Suppression Area.
- Minimum Impact Suppression Tactics (MIST) would be used to suppress wildland fires within the ACEC. Fire lines would be rehabilitated to help stabilize soils.
- Manage the portion of the Jarbidge ROW corridor within the ACEC as visual resource management (VRM) Class III; manage the remainder of the ACEC as VRM Class I.
- Adjust livestock grazing so livestock seasons of use would not overlap bighorn breeding and winter periods in those pastures that contain bighorn habitat (see Appendix H).
- Placing salt or other supplements within the ACEC would be prohibited to reduce livestock use of bighorn habitat.
- Monitor recreational use within the ACEC. If this use reaches levels that impair the relevant and important values of the ACEC, implement protective measures appropriate to the type of recreational activity. Protective measures may include, but not be limited to, implementing a permit system for the Bruneau and Jarbidge Rivers in coordination with the Bruneau FO, requiring the use of certified weed-free forage and straw, and designating camping areas outside the ACEC.
- Consider special recreation permits (SRPs) within the ACEC on a case-by-case basis with mitigation for negative impacts to relevant and important values.
- Motorized vehicle use within the ACEC would be limited to designated routes. To avoid disturbing bighorn sheep during wintering and lambing periods or to protect other relevant and important values, seasonal closures of specific designated routes may be considered during the Comprehensive Transportation and Travel Management Plan (CTTMP).
- Continue to maintain the low level of human disturbance in bighorn habitat by not constructing new roads or substantially improving other routes in the ACEC. Some designated routes within the ACEC, including the road to Indian Hot Springs, could have spot surface treatments to reduce resource damage due to road braiding and to improve public safety.
- The ACEC would be a ROW avoidance area; new ROWs would be restricted to ROW corridors and locations of existing ROWs.
- Lands within the ACEC would be in Land Tenure Zone 1; where practical, acquire private and/or State inholdings. The ACEC designation and management would apply to lands acquired within the ACEC boundary.
- The ACEC would be closed to mineral leasing.
- The ACEC would be closed to salable mineral development.
- Recommend lands within the ACEC for withdrawal from mining laws for locatable exploration and development.

Extensions to the Existing ACEC

Nominated ACEC: Extensions to the existing Bruneau-Jarbidge ACEC

Nominated by: The extensions to the existing Bruneau-Jarbidge ACEC were nominated by BLM in accordance with BLM Manual 1613, *Areas of Critical Environmental Concern*, Section 21A.2.b., to include additional habitat for bull trout and cultural resource

¹⁴ Under the No Action Alternative, the ACEC would be managed as described in the *Areas of Critical Environmental Concern* section of Chapter 2.

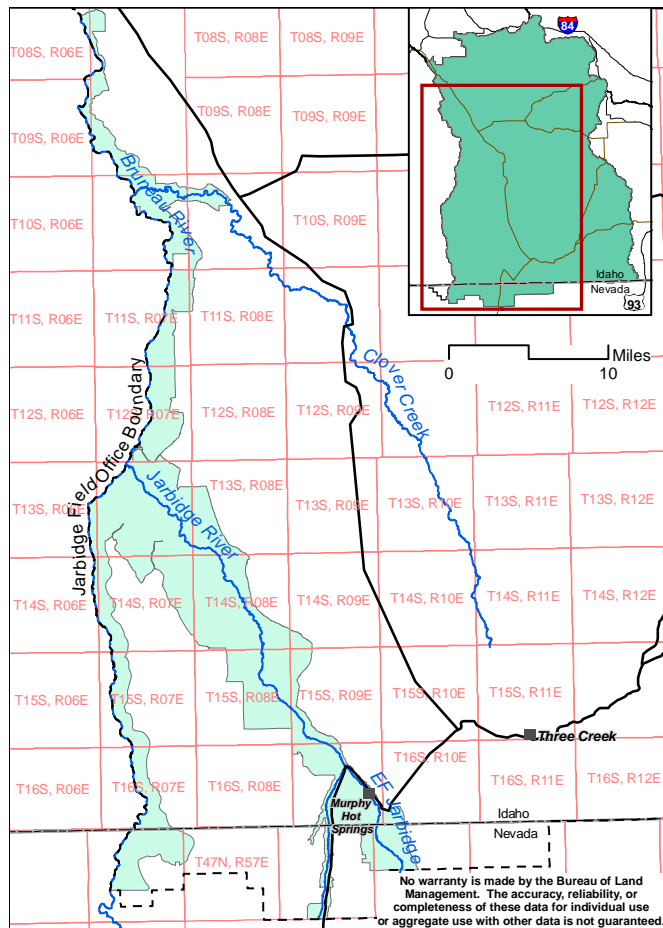
sites; the Idaho Conservation Data Center (CDC) suggested BLM consider including habitat for Davis peppergrass within the existing ACEC as well.

WWP requested that “future expansion of these areas [current ACECs] be considered,” although no specific boundary for expanding the existing ACECs was identified.

Location:

The nominated extensions would encompass about 38,000 acres of BLM-managed land; if added to the existing ACEC, the new ACEC would total 123,000 acres of BLM-managed land. The nominated extensions include the remainder of the Jarbidge River and Bruneau River-Sheep Creek WSAs not already within the existing ACEC, as well as bull trout habitat along the Jarbidge River above the confluence with the East Fork, Dave Creek, Jack Creek, and Buck Creek. The eastern boundary of the existing ACEC south of Three Creek Highway was also modified to follow a road.

The nominated extensions are contained within the nominated Sagebrush Sea ACEC.



The analysis documented below assessed whether the extensions contributed to relevant and important values of the existing ACEC or contained new relevant and important values. The analysis focused only on the values within the nominated extensions; for information on the values within the existing ACEC, see the description in the *Existing ACEC* section.

Relevance: Does the area contain a significant historic, cultural or scenic value; fish or wildlife resource; natural process or system; or natural hazard?	Yes or No
Historic Value	
The nominated extensions to the existing ACEC contain several historic sites associated with early 20 th century mining, including a short segment of the Crippen Grade (an old freight road to the town of Jarbidge) and the ruins of several log cabins.	Yes
Cultural Value	
Several additional archaeological sites would be included by the nominated ACEC extensions.	Yes
Scenic Value	
In addition to the scenic values for the existing Bruneau-Jarbidge ACEC, the Jarbidge River south of the Jarbidge Forks contains numerous rhyolite columns, spires, and a few window rocks that are visible from the Jarbidge Road. Aspen are present on some of the hillsides and draws. The majority of the Jarbidge River riparian zone contains a mix of juniper, willows, dogwood, with some cottonwood and limber pine.	Yes
Fish or Wildlife Resource	
<u>California bighorn sheep</u> : The nominated extensions to the existing ACEC would add the remaining bighorn sheep habitat in the planning area, about 7 additional miles of canyons, to the ACEC.	Yes
<u>Big game</u> : The big game values within the nominated extensions to the existing ACEC are the same as those documented for the existing boundary of the Bruneau-Jarbidge ACEC; however, an additional 28,000 acres of big game winter range are within the nominated extensions to the existing ACEC.	Yes
<u>Bull trout</u> : The 1987 RMP did not address bull trout; likely, the species was not known to be present within the existing ACEC boundary. Bull trout were listed as a Threatened species in 1998 by FWS. The nominated extensions to the existing ACEC would cover the remaining BLM-managed portion of Dave Creek as well as migratory bull trout habitat on the Jarbidge River above the confluence with the East Fork and all of the BLM-managed portions of Jack Creek. These areas total approximately 8 miles of streams for bull trout.	Yes
<u>Redband trout</u> : The nominated extensions to the existing ACEC would add occupied redband trout habitat to the existing ACEC, including habitat in the Jarbidge River above the confluence with the East Fork, Dave Creek, and Deer Creek (NV).	Yes
<u>Other fish and wildlife</u> : The other fish and wildlife values within the nominated extensions to the existing ACEC are the same as those documented for the existing boundary of the Bruneau-Jarbidge ACEC. In addition, the nominated extensions to the existing ACEC would include the majority of the playas within the planning area. Playas are important to migrating waterfowl and shorebirds during the spring. Playas are also important breeding habitat for Great Basin spadefoot toad; however, playas within the nominated extensions are not the only breeding habitat for spadefoot toads within the planning area. In some parts of the planning area, fairy shrimp also occupy playas (Rudeen, 2006), although the playas within the nominated extensions to the existing ACEC have not been inventoried. Playas function as seasonal water sources for a number of wildlife species.	Yes
Natural System or Process	
<u>Bruneau River phlox</u> : The nominated extensions to the existing ACEC include no additional populations of Bruneau River phlox.	No
<u>Davis peppergrass</u> : Davis peppergrass, a Type 3 and NV BLM Sensitive species, is present in playas within the nominated extensions; the population of Davis peppergrass is declining range wide. Davis peppergrass is a fleshy, perennial native mustard (forb) adapted to grow in seasonally flooded areas. The species is restricted to a narrow suite of environmental conditions, occurring in playas on volcanic plains where the regional vegetation is dominated by big sagebrush and, to a lesser extent, shadscale. Playas are naturally flat-bottomed basins where water from the adjacent uplands transports silt, clay, and minerals. Playas supporting Davis peppergrass have a hard clay bottom and are inundated with water during springs with average or above average precipitation. Playas typically dry out in the summer, becoming hard. Davis peppergrass plants show distinct differences in leaf size, shape, and plant phenology between playas. This suggests the species disperses poorly, probably not beyond individual playas, and there is minimal pollination between neighboring playas.	Yes
<u>Other special status plants</u> : The nominated extensions to the existing ACEC include no additional occupied habitat for any of the other special status plant species that occur in the existing ACEC.	No

<u>Upland vegetation</u> : The upland vegetation values within the nominated extensions to the existing ACEC are the same as those documented for the existing boundary of the Bruneau-Jarbidge ACEC.	Yes
<u>Riparian system</u> : The riparian values within the nominated extensions to the existing ACEC are the same as those documented for the existing boundary of the Bruneau-Jarbidge ACEC; the Jarbidge River above the confluence with the East Fork, as well as Dave, Jack, and Deer Creeks, which are unrestricted and free-flowing on BLM-managed lands, would be included in the nominated extensions.	Yes
Natural Hazard	
No known significant hazards.	No
Importance: Does the value, resource, system, process, or hazard meet one or more of the following importance factors:	
<ol style="list-style-type: none"> 1. has more than locally significant qualities that give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource; 2. has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change; 3. has been recognized as warranting protection to satisfy national priority concerns or to carry out the mandates of FLPMA; 4. has qualities that warrant highlighting to satisfy public or management concerns about safety and public welfare; or 5. poses a significant threat to human life and safety or to property? 	Yes, No, or N/A
Historic Value	
The historic values of the nominated extensions to the existing ACEC are similar to those in the surrounding area. More important, regionally significant historic resources are located outside the nominated extensions on private and Forest Service lands.	No
Cultural Value	
(Factors met: 1, 2) Numerous regionally significant archaeological sites are located within the nominated extensions to the existing ACEC. Many sites associated with playas suggest a unique adaptation to the arid uplands, which involved transplanting stream-adapted shellfish to seasonal lakes to augment food supplies.	Yes
Scenic Value	
(Factors met: 1) Scenic values within the nominated extensions are outstanding and have been recommended suitable for WSR designation. The nominated extensions along the Jarbidge River are viewed by hundreds of people traveling to Jarbidge, NV, during the late spring into late fall.	Yes
Fish or Wildlife Resource	
<u>California bighorn sheep</u> : Although a few bighorn sheep have been occasionally reported in the Jarbidge Canyon south of the Jarbidge Forks, bighorn sheep do not routinely occupy the area. The main road to Jarbidge, Nevada, lies in the bottom of the canyon. Other main access roads include the roads to the Diamond A, Buck Creek Canyon and Deer Creek Grade. The extension of the ACEC would have a limited benefit for bighorn sheep.	Yes
<u>Big game</u> : The importance of the big game values within the nominated extensions to the existing ACEC is the same as that documented for the existing boundary of the Bruneau-Jarbidge ACEC.	No
<u>Bull trout</u> : (Factors met: 1, 2, 3) The importance of the bull trout values within the nominated extensions to the existing ACEC is the same as that documented for the existing boundary of the Bruneau-Jarbidge ACEC; however, the remaining occupied bull trout habitat within the planning area would be included. The nominated extensions would cover more bull trout habitat in Dave Creek, which is crucial spawning, rearing, foraging, migratory, and overwintering habitat for bull trout within the Jarbidge River system (FWS, 2004). Jack Creek is one of the spawning streams in the Jarbidge River Watershed. In 1998, BLM, the Forest Service, and Elko County cooperatively replaced a culvert on lower Jack Creek with a bridge to remove a bull trout barrier to a spawning stream. The Nevada Department of Wildlife (NDOW) has subsequently confirmed bull trout spawning in Jack Creek.	Yes

<u>Redband trout:</u> (Factors met: 1, 2) The importance of the redband trout values within the nominated extensions to the existing ACEC is the same as that documented for the existing boundary of the Bruneau-Jarbidge ACEC; however, more of the occupied redband trout habitat within the Jarbidge River Watershed would be included.	Yes
<u>Other fish and wildlife:</u> The importance of the other fish and wildlife values within the nominated extensions to the existing ACEC is the same as that documented for the existing boundary of the Bruneau-Jarbidge ACEC. In addition, the wildlife values of the playas within the nominated extensions are not of more than local importance. Spadefoot toads breed in a number of other playas in the planning area; the playas within the nominated extensions are not of more than local importance as breeding habitat. Fairy shrimp are present in a number of playas in southern Idaho. Fairy shrimp known to be present in the planning area are not unique (Rudeen, 2006). Although a number of wildlife species use the playas as a source of drinking water at some times of the year, playas only temporarily alter the distribution of wildlife. Playas are used by shorebirds and waterfowl during spring migration. During fall migration the playas are usually dry.	No
Natural System or Process	
<u>Bruneau River phlox:</u> N/A	N/A
<u>Davis peppergrass:</u> (Factors met: 1, 2, 3) Davis peppergrass, a Type 3 and NV BLM Sensitive species, is limited in its distribution to portions of southeastern Oregon, south-central Idaho, and north-central Nevada, with the majority of known populations occurring in Idaho. There are fewer than 300 populations in six distinct clusters or distribution centers. The Bruneau-Jarbidge populations are a population stronghold. The Mountain Home populations show downward trend due to poor ecological condition of the sagebrush steppe ecosystem. The remaining populations are currently stable. Threats to Davis peppergrass include habitat alteration in and surrounding playas and invasion of exotic annuals.	Yes
<u>Other special status plants:</u> N/A	N/A
<u>Upland vegetation:</u> The importance of the upland vegetation values within the nominated extensions to the existing ACEC is the same as that documented for the existing boundary of the Bruneau-Jarbidge ACEC.	No
<u>Riparian systems:</u> (Factors met: 1, 2) Approximately 10 additional miles of riparian zone are included in the nominated extensions. This includes about 8 miles of bull trout habitat. Both Buck Creek and the Jarbidge River south of the Jarbidge Forks have roads in close proximity to the stream.	Yes
Natural Hazard	
N/A	N/A

The nominated ACEC meets the relevance and importance criteria to be considered as a potential ACEC. The rationale for proposing the existing Bruneau-Jarbidge ACEC be expanded to include the nominated extensions (under Alternative IV, the Preferred Alternative) is as follows:

The nominated extensions to the existing ACEC meets relevance and importance criteria for cultural and scenic values, fish resources (bull trout and redband trout), and natural systems or processes (special status plants and riparian systems).

Existing and potential threats to the relevant and important values of the nominated extensions to the existing ACEC include cross-country motorized vehicle use and other surface-disturbing activities, wildland fire and subsequent alteration of habitat, and to a lesser extent livestock grazing and recreation. Aside from direct impacts from these threats, many of these indirectly affect the introduction and spread of noxious weeds and invasive plants. Many of these threats are similar to those described for the existing Bruneau-Jarbidge ACEC.

Threats resulting from cross-country motorized vehicle use and other surface-disturbing activities in the nominated extensions are similar to those described for the existing ACEC.

In addition to the wildland fire threat described for the existing ACEC, wildland fire also presents a threat to Davis peppergrass. Wildland fire, including soil erosion and deposition following wildland fire, can negatively affect habitat for Davis peppergrass (Moseley, 1996). Davis peppergrass can also be impacted by the constructions of fire lines that damage plants directly or increase sediment in occupied playas.

In addition to the livestock grazing threat described for the existing ACEC, livestock grazing also presents a threat to Davis peppergrass. Livestock trailing and trampling in occupied playas while they are wet damages the perennial plants (Moseley, 1996). Stock ponds dug in playas may alter their hydrology and contribute to the spread of invasive species. Livestock congregating in or near playas also impacts cultural resources associated with playas.

Threats resulting from recreation in the nominated extensions are similar to those described for the existing ACEC.

The majority of the nominated extensions to the existing ACEC are also within the Bruneau River-Sheep Creek and Jarbidge River WSAs; these areas would also be managed according to the IMP. However, if the WSAs were to be released to multiple-use management by Congress, the IMP would no longer apply.

The nominated extensions to the existing ACEC would include additional portions of river segments inventoried as eligible for inclusion in the NWSRS (ORVs included in parentheses): Jarbidge River south of the Jarbidge Forks (scenic, fish) and Dave Creek (fish). Interim management of these segments requires that they be managed to maintain or enhance their ORVs. However, the WSR corridor only extends 0.25 miles above the high water mark on each side of the river, which does not provide any protection for these values in the higher elevations of the canyon or the adjacent upland plateaus.

If the nominated ACEC meets the relevance and importance criteria, list the relevant and important value(s) that need special management attention and describe the management prescriptions necessary to protect those values.

The cultural and scenic values, the fish and wildlife resources, and natural systems or processes (special status plants and riparian systems) of the ACEC would be protected through the allocations and management actions described for the existing Bruneau-Jarbidge ACEC; additional management actions for Davis peppergrass, bull trout, and cultural resources would include:¹⁵

- Restore playas occupied by Davis peppergrass to improve natural hydrologic function and habitat on a case by case basis. Restoration activities may include filling pit reservoirs, stabilizing erosion areas, and planting native species with similar pollinators.
- Monitor juniper encroachment into the riparian area, and consider juniper treatments to improve bull trout habitat.
- Special stipulations would apply for noxious weed and invasive species treatments in Davis peppergrass habitat.
- Adjust livestock seasons of use or stocking rates on a pasture-specific basis to minimize conflicts with bull trout spawning (late August through early November) and Davis peppergrass during flowering and when playas are most likely to contain water (December to June).
- Range infrastructure would be evaluated on a case-by-case basis for retention, modification, or removal. New infrastructure would be allowed to the extent that it protects bull trout habitat, cultural resources, or botanical values.
- Lands within the ACEC would be in Land Tenure Zone 1; where practical, acquire private and/or State inholdings. The ACEC designation and management would apply to lands acquired within the ACEC boundary.

Reduced Boundary

Nominated ACEC: Bruneau-Jarbidge ACEC (reduced boundary)

Nominated by: C.E. Brackett Cattle Co., Brackett Livestock, Inc, Brackett Ranches Limited Partnership, Bert and Paula Brackett, Chet and Kim Brackett, Jake Brackett, Gus and Kimberly Brackett, Ira and Kim Brackett, and Chuck B. Jones (Simplot

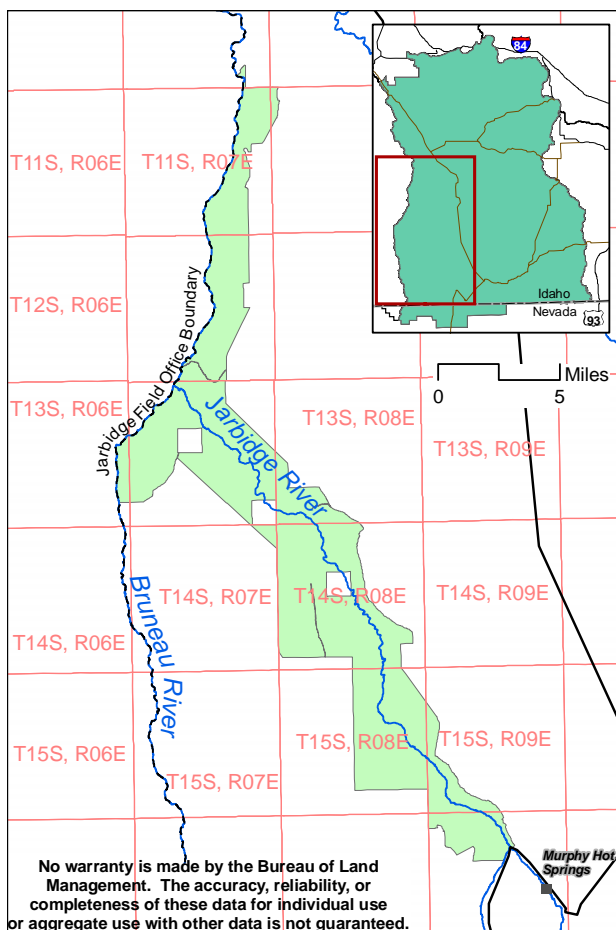
¹⁵ Under the No Action Alternative, the existing ACEC boundary would be retained, and the ACEC would be managed as described in the *Areas of Critical Environmental Concern* section of Chapter 2.

Livestock Co.) nominated a portion of the existing Bruneau-Jarbidge ACEC to continue to be designated as an ACEC.

Location: The nominated ACEC would encompass 57,000 acres of BLM-managed land. The majority of the nominated ACEC lies within the Bruneau and Jarbidge Canyons; some of the adjacent uplands are included within the boundary as well.

Portions of the existing ACEC that would not be included within this boundary include areas south of the Jarbidge River WSA on the Bruneau River, Jarbidge River, and East Fork of the Jarbidge River, as well as areas north of Sheepshead Draw.

The ACEC is contained within the nominated Sagebrush Sea ACEC.



The analysis documented below focused on differences between the nominated reduced boundary and the existing boundary of the Bruneau-Jarbidge ACEC (see the *Existing ACEC* section).

Relevance: Does the area contain a significant historic, cultural or scenic value; fish or wildlife resource; natural process or system; or natural hazard?	Yes or No
Historic Value	
The historic values within the nominated reduced boundary of the ACEC are the same as those documented for the existing boundary of the Bruneau-Jarbidge ACEC.	No
Cultural Value	
The cultural values within the nominated reduced boundary of the ACEC are the same as those documented for the existing boundary of the Bruneau-Jarbidge ACEC.	Yes

Scenic Value	
The scenic values within the nominated reduced boundary of the ACEC are the same as those documented for the existing boundary of the Bruneau-Jarbidge ACEC.	Yes
Fish or Wildlife Resource	
<u>California bighorn sheep</u> : The nominated ACEC contains approximately 45 miles of canyonland habitat for a population of bighorn sheep, a Type 3 BLM Sensitive species. The bighorn sheep values within the nominated reduced boundary of the ACEC are the same as those documented for the existing boundary of the Bruneau-Jarbidge ACEC; however, the nominated ACEC would contain roughly 2/3 of the occupied bighorn sheep habitat, the majority of the area where bighorn sheep are commonly observed. Roughly 16 miles of canyons and adjacent plateaus with occupied bighorn sheep habitat from Blackrock Pocket in the Bruneau Canyon northward would no longer be within the ACEC. Additional bighorn habitat that is used less frequently south of the Jarbidge Forks and along the Bruneau River from the Deep Creek area to Blackrock Pocket and north of Sheepshead Draw would also no longer be within the ACEC.	Yes
<u>Big game</u> : The big game values within the nominated reduced boundary of the ACEC are the same as those documented for the existing boundary of the Bruneau-Jarbidge ACEC; however, 28,000 acres of big game winter range would no longer be in the ACEC if the boundary were reduced.	Yes
<u>Bull trout</u> : The nominated reduced boundary of the ACEC would contain only the bull trout habitat within the Jarbidge River below the confluence with the East Fork; however, the extent to which bull trout occupy or utilize that reach is not known. The known occupied bull trout habitat would no longer be within the nominated ACEC.	No
<u>Redband trout</u> : The nominated reduced boundary of the ACEC would contain occupied redband trout habitat in the Bruneau River and the Jarbidge River below the confluence with the East Fork. However, occupied redband trout habitat within the East Fork of the Jarbidge River and Dave Creek would no longer be within the nominated ACEC.	Yes
<u>Other fish and wildlife</u> : The other fish and wildlife values within the nominated reduced boundary of the ACEC are the same as those documented for the existing boundary of the Bruneau-Jarbidge ACEC.	Yes
Natural System or Process	
<u>Bruneau River phlox</u> : The Bruneau River phlox values within the nominated reduced boundary of the ACEC are the same as those documented for the existing boundary of the Bruneau-Jarbidge ACEC; however, one population would no longer be in the ACEC if the boundary were reduced.	Yes
<u>Other special status plants</u> : The other special status plant values within the nominated reduced boundary of the ACEC are the same as those documented for the existing boundary of the Bruneau-Jarbidge ACEC, except the nominated ACEC would no longer contain Cusick's primrose.	Yes
<u>Upland vegetation</u> : The nominated ACEC would no longer contain the curl-leaf mountain mahogany woodland community or the mountain big sagebrush/bluebunch wheatgrass community.	No
<u>Riparian system</u> : The nominated ACEC would contain fewer than 45 miles of free-flowing reaches of the Bruneau and Jarbidge Rivers and would no longer contain riparian systems dominated by Rocky Mountain juniper.	Yes
Natural Hazard	
No known significant hazards.	No

<p>Importance: Does the value, resource, system, process, or hazard meet one or more of the following importance factors:</p> <ol style="list-style-type: none"> 1. has more than locally significant qualities that give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource; 2. has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change; 3. has been recognized as warranting protection to satisfy national priority concerns or to carry out the mandates of FLPMA; 4. has qualities that warrant highlighting to satisfy public or management concerns about safety and public welfare; or 5. poses a significant threat to human life and safety or to property? 	Yes, No, or N/A
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Historic Value	
N/A	N/A
Cultural Value	
(Factors met: 1, 2) The importance of the cultural values within the nominated reduced boundary of the ACEC is the same as that documented for the existing boundary of the Bruneau-Jarbidge ACEC.	Yes
Scenic Value	
(Factors met: 1) The importance of the scenic values within the nominated reduced boundary of the ACEC is the same as that documented for the existing boundary of the Bruneau-Jarbidge ACEC.	Yes
Fish or Wildlife Resource	
<u>California bighorn sheep</u> : (Factors met: 1, 2, 3) The importance of the bighorn sheep values within the nominated reduced boundary of the ACEC is the same as that documented for the existing boundary of the Bruneau-Jarbidge ACEC; however, the boundary of the nominated ACEC would leave more than 1/3 of the occupied bighorn habitat outside the ACEC.	Yes
<u>Big game</u> : The importance of the big game values within the nominated reduced boundary of the ACEC is the same as that documented for the existing boundary of the Bruneau-Jarbidge ACEC.	No
<u>Bull trout</u> : N/A	N/A
<u>Redband trout</u> : (Factors 1, 2) Only the redband trout habitat in the Jarbidge River below the confluence with the East Fork and portions of the Bruneau River would be included in the nominated ACEC. These reaches lack migration barriers that would prevent redband trout from moving between streams. Summer water temperatures in both reaches approach the threshold of redband survival.	Yes
<u>Other fish and wildlife</u> : The importance of the other fish and wildlife values within the nominated reduced boundary of the ACEC is the same as that documented for the existing boundary of the Bruneau-Jarbidge ACEC.	No
Natural System or Process	
<u>Bruneau River phlox</u> : (Factors met: 1, 2, 3) The importance of the Bruneau River phlox values within the nominated reduced boundary of the ACEC is the same as that documented for the existing boundary of the Bruneau-Jarbidge ACEC; however, the boundary of the nominated ACEC would leave out one of the five populations present in the existing ACEC.	Yes
<u>Other special status plants</u> : The importance of the other special status plant values within the nominated reduced boundary of the ACEC is the same as that documented for the existing boundary of the Bruneau-Jarbidge ACEC.	No
<u>Upland vegetation</u> : N/A	N/A
<u>Riparian Systems</u> : (Factors met: 1, 2) The importance of the riparian system values within the nominated reduced boundary of the ACEC is the same as that documented for the existing boundary of the Bruneau-Jarbidge ACEC, except less than half of the canyonlands would be protected under this nominated ACEC.	Yes
Natural Hazard	
N/A	N/A

The nominated ACEC meets the relevance and importance criteria to be considered as a potential ACEC. The rationale for proposing the nominated Bruneau-Jarbidge ACEC (reduced boundary) for designation (under Alternative III) as an ACEC is as follows:

The ACEC meets relevance and importance criteria for cultural and scenic values, fish and wildlife resources (bighorn sheep and redband trout), and natural systems or processes (special status plants and riparian systems).

Existing and potential threats to the relevant and important values of the nominated ACEC include cross-country motorized vehicle use and other surface-disturbing activities, wildland fire and subsequent alteration of habitat, and to a lesser extent livestock grazing and recreation. Aside from direct impacts from these threats, many of these indirectly affect the introduction and spread of noxious weeds and invasive plants, which are detrimental to the scenic values and the fish and wildlife resources within the nominated ACEC. Threats resulting from these activities in the nominated ACEC are similar to those described for the existing Bruneau-Jarbidge ACEC.

The majority of the nominated ACEC is also within the Bruneau River-Sheep Creek and Jarbidge River WSAs; these areas would also be managed according to the IMP. However, if the WSAs were to be released to multiple-use management by Congress, the IMP would no longer apply.

The segments of the Bruneau and Jarbidge Rivers within the nominated ACEC have been recommended suitable for designation as WSRs. ORVs for these segments include cultural, fish, geological, recreational, scenic, vegetation, and wildlife values. Interim management of these segments requires that they be managed to maintain or enhance their ORVs. However, the Wild and Scenic corridor only extends 0.25 miles above the high water mark on each side of the river, which does not provide any protection for these values in the higher elevations of the canyon or the adjacent upland plateaus.

If the nominated ACEC meets the relevance and importance criteria, list the relevant and important value(s) that need special management attention and describe the management prescriptions necessary to protect those values.

The cultural and scenic values, fish and wildlife resources (bighorn sheep and redband trout), and natural systems or processes (special status plants and riparian systems) of the ACEC would be protected through the following allocations and management actions¹⁶:

- All actions within the portions of the ACEC that are also within WSAs must be consistent with the IMP and with allocations and management actions made for WSAs.
- The ACEC would be a high priority for noxious weeds and invasive species treatment with integrated weed management techniques for control, containment, and where possible, eradication. Use of domestic sheep or goats to reduce noxious weeds would not be allowed within the ACEC to eliminate potential contact with bighorn.
- The ACEC would be a Critical Suppression Area.
- Manage the ACEC as VRM Class I
- Placing salt or other supplements within the ACEC would be prohibited to reduce livestock use of bighorn habitat and protect winter range.
- Monitor recreational use within the ACEC. If this use reaches levels that impair the relevant and important values of the ACEC, implement protective measures appropriate to the type of recreational activity. Protective measures may include, but not be limited to, implementing a permit system for the Bruneau and Jarbidge Rivers in coordination with the Bruneau FO, requiring the use of certified weed-free forage and straw, and designating camping areas outside the ACEC.
- SRPs within the ACEC would be considered on a case-by-case basis with mitigation for negative impacts to relevant and important values.
- Motorized vehicle use within the ACEC would be limited to designated routes. To avoid disturbing bighorn sheep during wintering and lambing periods or to protect other relevant and important values, seasonal closures of specific designated routes may be considered during the CTTMP.
- Some designated routes within and adjoining the ACEC, including the road to Indian Hot Springs, could be improved to reduce resource damage due to road braiding, improve public safety, and facilitate visitor traffic.
- The ACEC would be a ROW avoidance area; no overhead authorizations would be allowed.
- Lands within the ACEC would be in Land Tenure Zone 1; where practical, acquire private inholdings. The ACEC designation and management would apply to lands acquired within the ACEC boundary.
- The ACEC would be closed to mineral leasing.
- The ACEC would be closed to salable mineral development.
- Recommend lands within the ACEC for withdrawal from mining laws for locatable exploration and development.

¹⁶ Under the No Action Alternative, the existing ACEC boundary would be retained, and the ACEC would be managed as described in the *Areas of Critical Environmental Concern* section of Chapter 2.

Inside Desert ACEC

Two boundaries were nominated for the Inside Desert ACEC. The area encompassed by the larger boundary is presented first, followed by the area encompassed by the smaller boundary.

Large Boundary

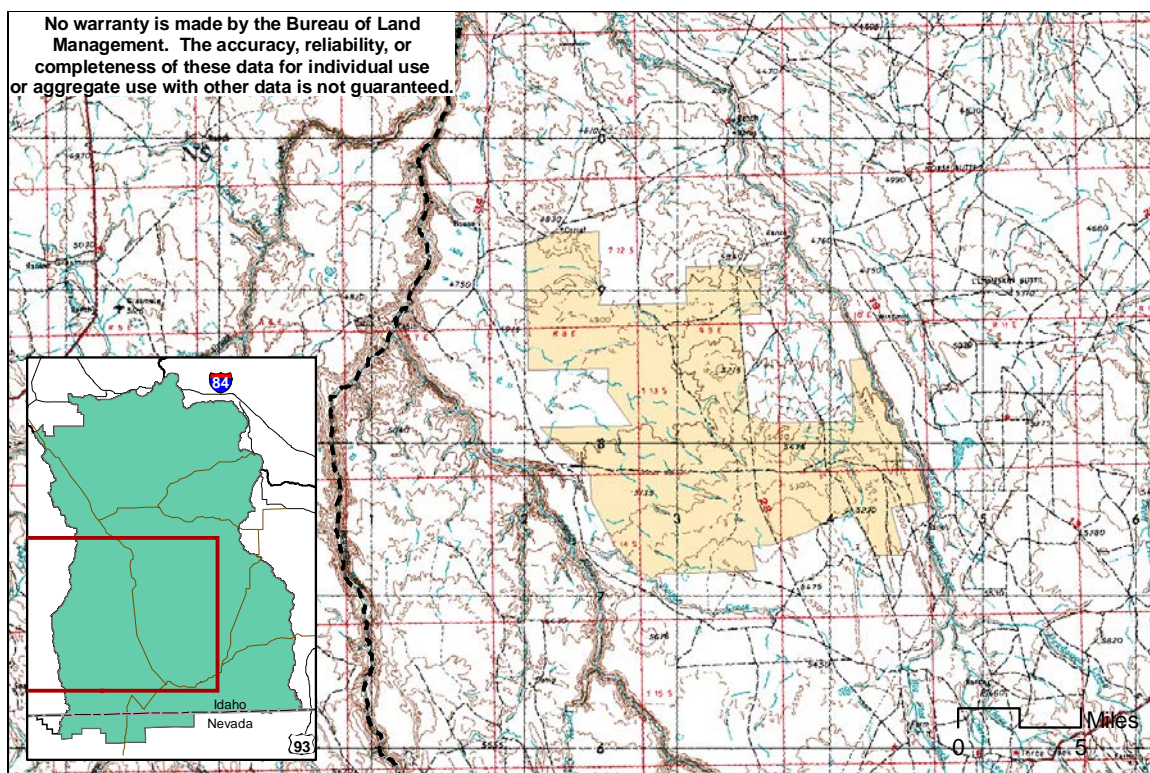
Nominated ACEC: Inside Desert ACEC (large)

Nominated by: The Inside Desert ACEC was nominated by BLM in accordance with BLM Manual 1613, *Areas of Critical Environmental Concern*, Section .21A.2.b.; the Idaho CDC suggested BLM consider special management for slickspot peppergrass.

An ACEC for the slickspot peppergrass metapopulation within the Jarbidge FO was nominated by WWP, although no specific boundary was identified. The large boundary of the nominated Inside Desert ACEC encompasses the vast majority of the slickspot peppergrass metapopulation within the planning area.

Location: The nominated ACEC would encompass 73,000 acres of BLM-managed land. The nominated ACEC would be located between Clover Creek and the Jarbidge River and from Clover Butte south to approximately Poison Butte. The nominated ACEC would be adjacent to the Juniper Butte Range. The nominated ACEC boundary encompasses 99% of the acres supporting slickspot peppergrass populations on BLM-managed lands in the Jarbidge FO; the boundary was drawn along existing pasture fences to make the nominated ACEC manageable.

The nominated ACEC is contained within the nominated Sagebrush Sea ACEC.



Relevance: Does the area contain a significant historic, cultural or scenic value; fish or wildlife resource; natural process or system; or natural hazard?	Yes or No
Historic Value	
Historic resources within the nominated ACEC are primarily related to the early livestock industry and include sheep camps, cairns, and fences. No significant historic sites are known within the area.	No
Cultural Value	
The area is characterized by a low to moderate density of archaeological sites including sites that are of traditional cultural importance to the tribes and some that have important scientific value.	Yes
Scenic Value	
The Jarbidge Mountains are visible to the south and provide some scenic value. Scenic values are not outstanding.	No
Fish or Wildlife Resource	
The area contains habitat for a several special status species, including Brewer's sparrow (Type 3 and NV), ferruginous hawk (Type 3), greater sage-grouse (Type 2), loggerhead shrike (Type 3 and NV), sage sparrow (Type 3), kit fox (Type 4), and pygmy rabbit (Type 2). The area contains habitat for antelope and mule deer. Wildland fires have reduced and fragmented the habitat to a large degree. The majority of the areas burned in the 1980s and 1990s were seeded to crested wheatgrass as part of fire rehabilitation. No fish habitat or riparian zones are present within the nominated ACEC.	Yes
Natural System or Process	
<u>Slickspot peppergrass</u> : Slickspot peppergrass is a rare, annual or biennial forb endemic to sagebrush steppe in southwestern Idaho (Moseley, 1994). Slickspot peppergrass is a Type 1 BLM Sensitive species that is Proposed for listing as Endangered under the Endangered Species Act (ESA). The nominated ACEC contains high quality habitat for slickspot peppergrass, which is characterized by intact sagebrush steppe, low abundance of non-native species, and low levels of human-caused disturbances (Colket, 2006; FWS, 2003; Moseley, 1994).	Yes
<u>Other special status plants</u> : Earth lichen is a Type 4 BLM Sensitive plant that also occurs in slickspots in the nominated ACEC.	Yes
Natural Hazard	
No known hazards.	No
Importance: Does the value, resource, system, process, or hazard meet one or more of the following importance factors:	
<ol style="list-style-type: none"> 1. has more than locally significant qualities that give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource; 2. has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change; 3. has been recognized as warranting protection to satisfy national priority concerns or to carry out the mandates of FLPMA; 4. has qualities that warrant highlighting to satisfy public or management concerns about safety and public welfare; or 5. poses a significant threat to human life and safety or to property? 	Yes, No, or N/A
Historic Value	
N/A	N/A
Cultural Value	
Although important, the cultural resources here are generally dispersed and similar to those of the surrounding area in terms of age and function.	No
Scenic Value	
N/A	N/A
Fish or Wildlife Resource	
The presence of kit fox is of local importance. Kit fox are considered uncommon in Idaho; southern Idaho is at the northern extent of its range. Habitat conversion and fragmentation have reduced the value of the area for sage-grouse, pygmy rabbit, loggerhead shrike, Brewer's sparrow, and sage sparrow.	No

Natural System or Process	
<p><u>Slickspot peppergrass:</u> (Factors met: 2, 3) Slickspot peppergrass is a Type 1 BLM Sensitive species that is Proposed for listing as Endangered under the ESA. The population of slickspot peppergrass in the nominated ACEC is the most genetically diverse of the known slickspot peppergrass populations. The nominated ACEC contains 99% of the acres supporting slickspot peppergrass populations on BLM-managed lands in the planning area.</p> <p>Slickspot peppergrass is one of the few flowering plant species with two life cycle types: annual and biennial. Slickspot peppergrass is highly specific to slickspots that developed on remnant Pleistocene surfaces (Fisher, Eslick, & Seyfried, 1996). Slickspots, also known as mini-playas or natric sites, are small soil inclusions with a silt loam surface crust, a restrictive hardpan, and a subsurface clay layer (argillic horizon) (Fisher, et al., 1996; Lewis & White, 1964; Sandoval, Fosberg, & Lewis, 1959). Soils in slickspots tend to be more alkaline or saline than the adjacent uplands. Slickspots can range in size from a square foot to interlinked complexes over 900 square feet. Slickspots are associated with shrub interspaces in sagebrush steppe and are visually distinct, due to their high reflectance and sparsely vegetated surface (Fisher, et al., 1996).</p> <p>Physical disturbance of slickspots when they are wet can disrupt underlying soil structure essential for slickspot peppergrass recruitment (Meyer, Quinney, & Weaver, 2006). Disturbances include livestock hoof prints, drill seeding, fire-fighting activities (e.g., fire lines), and cross-country motorized vehicle tracks (Meyer, Quinney, & Weaver, 2005; Meyer, et al., 2006). Repeated and severe penetrating disturbances, especially during saturated soil conditions during the spring, may be precursors to slickspot invasion by non-native species (e.g., bur buttercup, clasping-leaf pepperweed), further reducing slickspot integrity (FWS, 2003). Degradation of slickspot peppergrass habitat has been attributed to large, uncharacteristic wildland fires; conversion of sagebrush steppe to non-native annual grasslands; historic over-grazing by livestock; and historic rangeland rehabilitation practices (e.g., drill seeding) (Colket, 2005; FWS, 2003; Lesica & DeLuca, 1996; Moseley, 1994; Noss, LaRoe, & Scott, 1995; Peters & Bunting, 1994; Whisenant, 1990). Habitat loss and degradation, fragmentation, and population isolation may correspondingly result in the loss of genetic fitness (Moseley, 1994; Reed & Frankham, 2003). Many slickspot peppergrass element occurrences (EOs) occur in fragmented sagebrush steppe or non-native annual grasslands and are highly susceptible to reduced genetic diversity and gene flow (I. Robertson, 2004; I. C. Robertson & Klemash, 2003). An EO is a specific geographic location where “a species or natural community is, or was, present” (NatureServe, 2002).</p>	<p>Yes</p>
<p><u>Other special status plants:</u> Earth lichen is a Type 4 BLM Sensitive plant species. Earth lichen in the nominated ACEC is not more than locally important.</p>	<p>No</p>
Natural Hazard	
<p>N/A</p>	<p>N/A</p>

The nominated ACEC meets the relevance and importance criteria to be considered as a potential ACEC. The rationale for proposing the nominated Inside Desert ACEC for designation as an ACEC (under Alternative IV-A) is as follows:

The nominated ACEC meets relevance and importance criteria for natural systems or processes (slickspot peppergrass).

Threats to the slickspot peppergrass within the nominated ACEC include wildland fire, noxious weeds and invasive plants, and livestock grazing. Any other activities that result in surface disturbance are also a potential threat to slickspot peppergrass.

Wildland fires are a threat to slickspot peppergrass, through the effects of the fire itself as well as the effects of wildland fire suppression activities. Wildland fires and subsequent rehabilitation also has altered habitat in the majority of slickspot peppergrass habitat in the planning area. Drill seeding following fires from the 1980s through the 1990s converted large portions of slickspot habitat to non-native perennial communities. Soil erosion and deposition following wildland fires as well as the construction of fire lines in slickspot habitat are also threats to slickspot peppergrass.

Noxious weeds and invasive plants are also a threat to habitat for slickspot peppergrass within the ACEC.

Livestock grazing also can be a threat to slickspot peppergrass within the nominated ACEC. Livestock grazing in slickspot peppergrass habitat can result in trampling of slickspots and plants when the soils are moist. In some instances, range infrastructure can present a threat to slickspot peppergrass through increased trampling around water sources and trailing along fences; these actions can also result in the spread of invasive plants, further impacting the species. In other cases, properly located fences could help protect concentrations of slickspots from the impacts of livestock grazing.

If the nominated ACEC meets the relevance and importance criteria, list the relevant and important value(s) that need special management attention and describe the management prescriptions necessary to protect those values.

The natural systems or processes (slickspot peppergrass) of the ACEC would be protected through the following allocations and management actions:

- Restore slickspot peppergrass habitat by planting native shrubs, grasses, and forbs to improve ecological function and increase pollinators.
- Seed only native species, with emphasis on plants with similar pollinators.
- Where practical, vegetation treatments, including drill seeding, would avoid concentrations of slickspots.
- The ACEC would be a high priority for noxious weeds and invasive species treatment with integrated weed management techniques for control, containment, and where possible, eradication.
- The ACEC would be a Critical Suppression Area.
- Staging areas for fire suppression and rehabilitation activities would be located outside the ACEC.
- Manage the ACEC as VRM Class III.
- The ACEC would not be available for livestock grazing.
- Remove troughs, fences, or other infrastructure within the ACEC.
- Camping would not be allowed within the ACEC.
- Lands within the ACEC would be in Land Tenure Zone 1; where practical, acquire private and/or State inholdings. The ACEC designation and management would apply to lands acquired within the ACEC boundary.
- The ACEC would be closed to mineral leasing.
- The ACEC would be closed to salable mineral development.

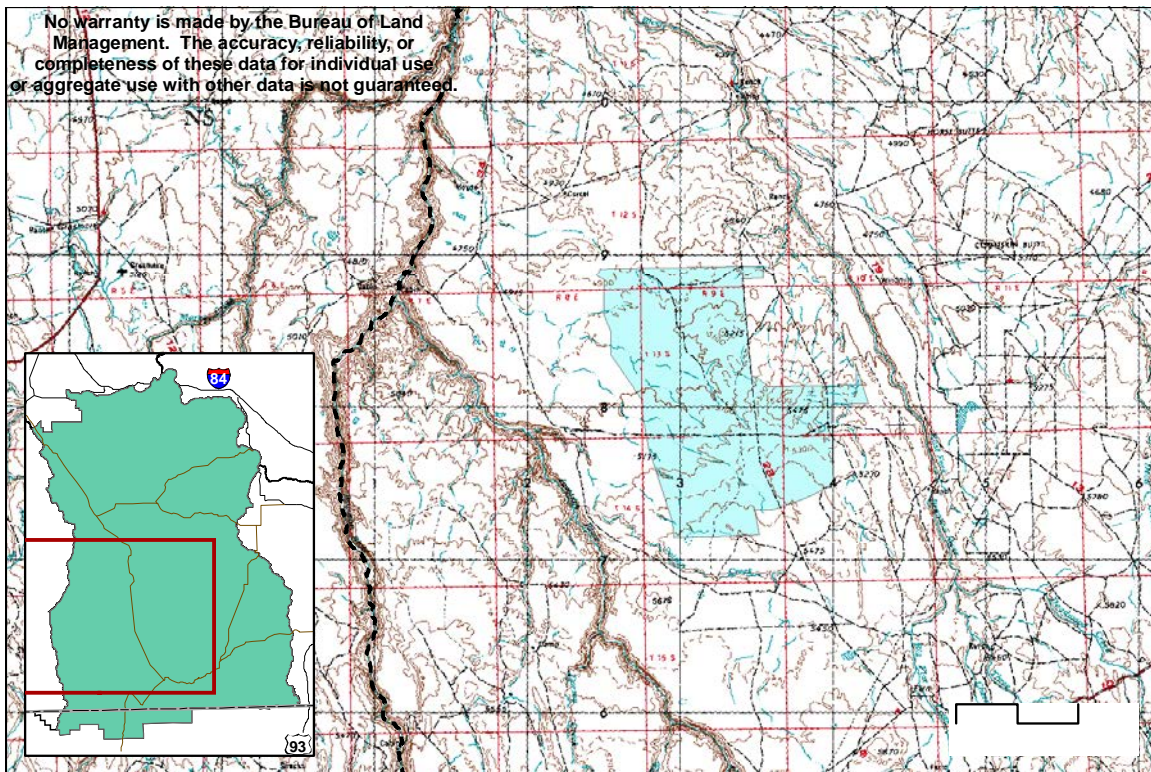
Small Boundary

Nominated ACEC: Inside Desert ACEC (small)

Nominated by: The Inside Desert ACEC was nominated by BLM in accordance with BLM Manual 1613, Areas of Critical Environmental Concern, Section .21A.2.b.; the Idaho CDC suggested BLM consider special management for slickspot peppergrass.

Location: The nominated ACEC would encompass 41,000 acres of BLM-managed land. The nominated ACEC would be located from Clover Butte south to approximately Middle Butte in several pastures near the Juniper Butte Range. The nominated ACEC boundary encompasses 68% of the acres supporting slickspot peppergrass on BLM-managed lands within the Jarbidge FO.

The nominated ACEC is contained within the nominated Sagebrush Sea ACEC.



The analysis documented below focused on differences between the small boundary and the large boundary of the nominated Inside Desert ACEC (see the *Large Boundary* section).

Relevance: Does the area contain a significant historic, cultural or scenic value; fish or wildlife resource; natural process or system; or natural hazard?	Yes or No
Historic Value	
The historic values within the small boundary of the nominated ACEC are the same as those documented for the large boundary of the nominated Inside Desert ACEC.	No
Cultural Value	
The cultural values within the small boundary of the nominated ACEC are the same as those documented for the large boundary of the nominated Inside Desert ACEC.	Yes
Scenic Value	
The scenic values within the small boundary of the nominated ACEC are the same as those documented for the large boundary of the nominated Inside Desert ACEC.	No
Fish or Wildlife Resource	
The fish and wildlife values within the small boundary of the nominated ACEC are the same as those documented for the large boundary of the nominated Inside Desert ACEC.	Yes
Natural System or Process	
<u>Slickspot peppergrass</u> : The slickspot peppergrass values within the small boundary of the nominated ACEC are the same as those documented for the large boundary of the nominated Inside Desert ACEC; however, the small boundary would encompass only 68% of the acres supporting slickspot peppergrass in the planning area.	Yes
<u>Other special status plants</u> : The other special status plant values within the small boundary of the nominated ACEC are the same as those documented for the large boundary of the nominated Inside Desert ACEC.	Yes
Natural Hazard	
The natural hazards within the small boundary of the nominated ACEC are the same as those documented for the large boundary of the nominated Inside Desert ACEC.	No

<p>Importance: Does the value, resource, system, process, or hazard meet one or more of the following importance factors:</p> <ol style="list-style-type: none"> 1. has more than locally significant qualities that give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource; 2. has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change; 3. has been recognized as warranting protection to satisfy national priority concerns or to carry out the mandates of FLPMA; 4. has qualities that warrant highlighting to satisfy public or management concerns about safety and public welfare; or 5. poses a significant threat to human life and safety or to property? 	Yes, No, or N/A
Historic Value	
N/A	N/A
Cultural Value	
The importance of the cultural values within the small boundary of the nominated ACEC is the same as that documented for the large boundary of the nominated Inside Desert ACEC.	No
Scenic Value	
N/A	N/A
Fish or Wildlife Resource	
The importance of the fish and wildlife values within the small boundary of the nominated ACEC is the same as that documented for the large boundary of the nominated Inside Desert ACEC.	No
Natural System or Process	
Slickspot peppergrass: (Factors met: 2, 3) The importance of the slickspot peppergrass values within the small boundary of the nominated ACEC is the same as that documented for the large boundary of the nominated Inside Desert ACEC. The nominated ACEC contains 68% of the acres supporting slickspot peppergrass in the planning area.	Yes
Other special status plants: The importance of the other special status plant values within the small boundary of the nominated ACEC is the same as that documented for the large boundary of the nominated Inside Desert ACEC.	No
Natural Hazard	
N/A	N/A

The nominated ACEC meets the relevance and importance criteria to be considered as a potential ACEC. The rationale for proposing the nominated Inside Desert ACEC for designation (under Alternative IV-B, the Preferred Alternative) as an ACEC is as follows:

The nominated ACEC meets relevance and importance criteria for natural systems or processes (slickspot peppergrass).

Existing and potential threats to the slickspot peppergrass within the nominated ACEC include wildland fire, noxious weeds and invasive plants, and livestock grazing. Any other activities that result in surface disturbance are also a potential threat to slickspot peppergrass. These threats are similar to those described for the large boundary of the nominated Inside Desert ACEC.

If the nominated ACEC meets the relevance and importance criteria, list the relevant and important value(s) that need special management attention and describe the management prescriptions necessary to protect those values.

The natural systems or processes (slickspot peppergrass) of the ACEC would be protected through the same allocations and management actions as described for the large boundary of the Inside Desert ACEC

Jarbidge Foothills ACEC

Two boundaries were nominated for the Jarbidge Foothills ACEC. The area encompassed by the larger boundary is presented first, followed by the area encompassed by the smaller boundary.

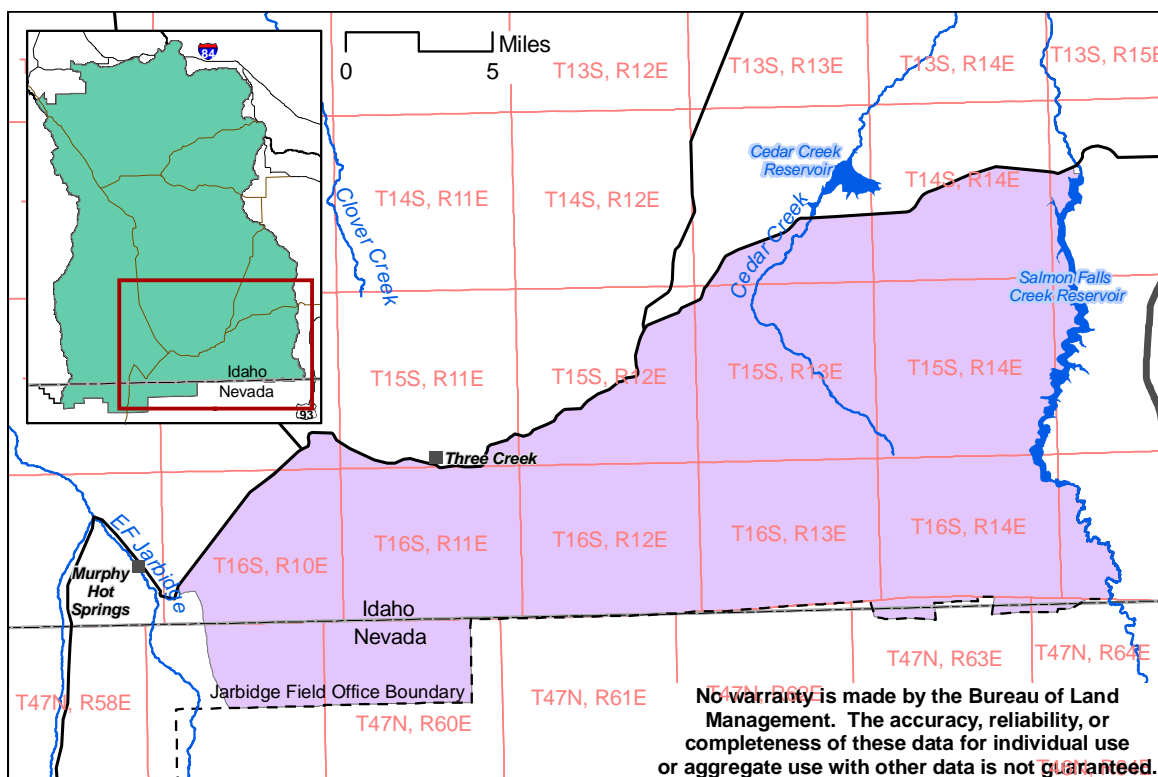
Large Boundary

Nominated ACEC: Jarbidge Foothills ACEC (large)

Nominated by: The Jarbidge Foothills ACEC was nominated by BLM in accordance with BLM Manual 1613, Areas of Critical Environmental Concern, Section .21A.2.b.; the Idaho CDC suggested BLM consider special management for the concentration of special status species in the area.

Location: The nominated ACEC would encompass 136,000 acres of BLM-managed land. The nominated ACEC would be located in the southern 1/3 of the planning area. The boundary would run from the canyon of the East Fork of the Jarbidge River to Salmon Falls Creek and from Three Creek Highway to the southern boundary of the Jarbidge FO.

The nominated ACEC is contained within the nominated Sagebrush Sea ACEC.



Relevance: Does the area contain a significant historic, cultural or scenic value; fish or wildlife resource; natural process or system; or natural hazard?	Yes or No
Historic Value	
The Toana Freight Road, a freight and stage route that serviced Idaho mining communities between 1870 and 1883, runs through the eastern portion of the nominated ACEC. Based on its importance in the early settlement and development of Idaho Territory, the Toana Freight Road was recently listed on the National Register of Historic Places.	Yes
Cultural Value	
The Jarbidge Foothills area was used extensively by Native Americans for thousands of years. For the tribes, many of the sites created by this use serve as important links to ancestral lifeways and play a critical role in maintaining traditional tribal culture. In addition, many of the sites contain important archaeological information concerning human adaptation to the semi-arid environment of southern Idaho over time.	Yes
Scenic Value	
The area contains a variety of scenic landscapes including deep, rugged canyons; uplifted cliffs; and a variety of plant communities. The area has a few large springs along Cedar Creek producing large volumes of water at their source.	Yes
Fish or Wildlife Resource	
<u>Redband trout</u> : The area contains 13 of the 24 streams occupied by redband trout, a Type 2 BLM Sensitive species, within the planning area.	Yes
<u>Columbia spotted frog (spotted frog)</u> : The nominated ACEC would contain all known occupied habitat for spotted frog (a Candidate and Type 1 and NV BLM Sensitive species) within the planning area.	Yes
<u>Greater sage-grouse (sage-grouse)</u> : Browns Bench/Monument Springs is a regionally important stronghold area for sage-grouse, a Type 2 BLM Sensitive species. Sage-grouse from this area connect sage-grouse in the Shoshone Basin to the east with sage-grouse in northern Nevada and further west in Idaho. Sage-grouse habitat in this area has remained relatively intact and has generally not been fragmented by wildland fire. The changes in elevation and plant communities provide quality late-brood habitat for sage-grouse. Both resident and migratory sage-grouse are present in the area. The large boundary of the nominated ACEC would contain 90,000 acres of key sage-grouse habitat. At least 14 active sage-grouse leks, associated satellite leks, and sage-grouse nesting habitat are present within the large boundary of the nominated ACEC.	Yes
<u>Big game</u> : The nominated ACEC has winter and summer habitat for a resident population of mule deer, pronghorn, and elk. These numbers are naturally augmented by mule deer, pronghorn, and elk that move to the area in the winter from Nevada. About 1/3 of the mule deer present in the planning area winter in the nominated ACEC area.	Yes
<u>Other wildlife</u> : The nominated ACEC contains the majority of occupied Columbian sharp-tailed grouse (sharp-tailed grouse) winter and nesting habitat. Sharp-tailed grouse are a Type 3 BLM Sensitive species and were re-introduced into the area by IDFG as part of a multi-state effort (Idaho, Nevada, Oregon, and Washington). Transplant efforts have been successful and to date have helped to prevent listing of this grouse subspecies. The area contains some occupied habitat for pygmy rabbit (Type 2) and historic habitat for mountain quail (Type 3). At higher elevations, the area contains limited aspen habitat for Lewis woodpecker (Type 3), northern goshawk (Type 3 and NV), Virginia warbler, and willow flycatcher (Type 3). Ferruginous hawk (Type 3) nesting has been documented in some scattered junipers in lower elevations. Prairie falcons (Type 4) and other raptors are known to nest in a number of canyons including Cedar, Flat, House, Pole, and Salmon Falls Creeks, as well as the cliffs associated with Browns Bench. Waterfowl nest in the oxbows associated with the low gradient portion of Salmon Falls Creek, and beaver ponds are present in some of the perennial streams. Because of the diversity of habitats, a variety of nesting birds are present, including the following: <ul style="list-style-type: none"> riparian zones – spotted sandpiper, yellow-breasted chat, yellow warbler, and willow flycatcher (Type 3); 	Yes

<ul style="list-style-type: none"> • aspen – house wren, mountain bluebird, mountain chickadee, red-breasted nuthatch, red-naped sapsucker, tree swallow, and yellow-rumped warbler; • mountain shrub – Brewer’s sparrow (Type 3 and NV), chipping sparrow, and green-tailed towhee; • mountain mahogany – orange-crowned warbler, spotted towhee, and Virginia warbler; • mountain big sagebrush – Brewer’s sparrow (Type 3 and NV), sage-grouse (Type 2), sage sparrow (Type 3), and vesper sparrow; • Wyoming big sagebrush – Brewer’s sparrow (Type 3 and NV), loggerhead shrike (Type 3 and NV), sage-grouse (Type 2), sage sparrow (Type 3), and vesper sparrow; and • cliffs – golden eagle and white-throated swift. 	
Natural System or Process	
<u>Special status plants:</u> A few areas within the nominated ACEC contain plant species classified as BLM Sensitive species, including broadleaf fleabane (Type NV), four-wing milkvetch (Type 3), Newberry’s milkvetch (Type 4), Simpson’s hedgehog cactus (Type 4), and two-headed onion (Type 3).	Yes
<u>Upland vegetation:</u> Some of the late seral range sites in the planning area occur within the nominated ACEC. Plant communities in the nominated ACEC include aspen woodlands, mountain mahogany woodlands, high elevation low sagebrush, black sagebrush, mountain shrub, mountain big sagebrush, riparian zones, and salt desert shrub.	Yes
<u>Riparian systems:</u> Numerous streams within the nominated ACEC have irrigation diversions; however, a number of other streams are free flowing through the nominated ACEC.	Yes
Natural Hazard	
No significant natural hazards identified.	No
Importance: Does the value, resource, system, process, or hazard meet one or more of the following importance factors:	
<ol style="list-style-type: none"> 1. has more than locally significant qualities that give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource; 2. has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change; 3. has been recognized as warranting protection to satisfy national priority concerns or to carry out the mandates of FLPMA; 4. has qualities that warrant highlighting to satisfy public or management concerns about safety and public welfare; or 5. poses a significant threat to human life and safety or to property? 	Yes, No, or N/A
Historic Value	
The Toana Freight Road on Browns Bench is the most significant historic resource within the nominated ACEC, but only a small portion of the historic road is included in the area under consideration.	No
Cultural Value	
(Factors met: 1) Regionally significant cultural resources are located throughout the nominated ACEC area. The physical integrity and cultural values attached to many of these sites are threatened by increasing levels of use and development.	Yes
Scenic Value	
Scenic values are not of more than local significance.	No
Fish or Wildlife Resource	
<u>Redband trout:</u> (Factors met: 1, 2) Redband trout are Type 2 BLM Sensitive species occurring in the perennial streams in the Jarbidge Foothills. Portions of 13 of 24 streams occupied by redband trout in the planning area are present in the nominated ACEC. Redband trout in the Jarbidge Foothills exist in isolated populations or “strongholds” that are unable to migrate to adjacent suitable habitats when threatened by low streamflow conditions or other environmental disturbance such as wildland fire. Several of the streams within the nominated ACEC [Deadwood, Deer (ID), Cedar, Flat, Deadman] lack or have limited connectivity with other streams. Due to the lack of connectivity between the redband trout occupied streams, these fish are vulnerable to population declines. Recent studies of redband trout populations in drainages similar to those found in the Jarbidge Foothills suggest that redband trout are declining in their lower elevation habitats (Zoellick, Allen, & Flatter, 2005). This indicates the	Yes

importance of retaining or restoring connectivity between redband trout populations in desert basins such as those that occur in the Jarbidge Foothills.	
<u>Columbia spotted frog:</u> (Factors met: 2, 3) Spotted frog populations are part of a larger, but fragmented, population of spotted frogs in northern Nevada. The Great Basin population of spotted frog is of national significance. Great Basin Columbia spotted frog populations continue to decline in portions of Nevada. The species was originally categorized as a Candidate-9, but has been elevated to Candidate-3 by the Fish and Wildlife Service (FWS). Spotted frogs are presently found only on less than 1,000 acres in two areas of Shack and Rocky Canyon Creeks. Potentially suitable habitat occurs in several other drainages (House, China, Cedar, and Flat Creeks) within the nominated ACEC.	Yes
<u>Greater sage-grouse:</u> (Factors met: 1, 2, 3) Sage-grouse are declining range wide. Declines in sage-grouse numbers in southern Idaho and northern Nevada are linked to habitat alteration and fragmentation due to the conversion of sagebrush steppe habitat to agricultural and suburban development, as well as several large wildland fires and subsequent conversion to non-native grassland. Sage-grouse in this area are of regional importance. The nominated ACEC contains important wintering and breeding habitat and maintains the connectivity between sage-grouse populations in Nevada and the Shoshone Basin. Radio-collared sage-grouse movements from leks in the Browns Bench area have been documented moving in excess of 10 miles. Radio-collared sage-grouse in the Shoshone Basin have been documented to winter in the Browns Bench/Monument Springs/China Mountain areas. Both resident and migratory sage-grouse are present. The higher elevations support a large number of wintering sage-grouse as well as provide important late season sage-grouse brood habitat.	Yes
<u>Big game:</u> The nominated ACEC area provides fawning and calving areas for resident mule deer, pronghorn, and elk, although not of more than local significance. The majority of pronghorn and elk wintering in the area are from Nevada. The nominated ACEC contains most of big game winter range within the planning area.	No
<u>Other wildlife:</u> Mountain shrub and aspen habitats provide sharp-tailed grouse winter habitat. Sharp-tailed grouse (Type 3) in the area provide connectivity to a population of sharp-tailed grouse in the Shoshone Basin. At least one sharp-tailed grouse lek has been documented within the nominated ACEC, and sharp-tailed grouse are known to nest immediately adjacent to the nominated ACEC. At this time, sharp-tailed grouse population in the area is not more than locally significant. Mountain quail (Type 3) were historically present within the nominated ACEC. IDFG and BLM records suggest that mountain quail have likely been extirpated from the area. Historical records indicate that mountain quail were occasionally harvested in the 1960s and 1970s from this general area. There have been no mountain quail documented within the nominated ACEC in the last 20 years. Ferruginous hawk (Type 3), Lewis woodpecker (Type 3), northern goshawk (Type 3 and NV), Virginia warbler, and pygmy rabbit (Type 2) numbers within the nominated ACEC are low, and habitat is generally limited for these species. They are not of more than local importance. Although the vegetation communities support a high diversity of birds, these are not of more than local interest. Other areas with similar diversity include the City of Rocks, Rock Creek Canyon, and the South Hills to the east of the planning area.	No
Natural System or Process	
<u>Special status plants:</u> Special status plants occur in the area, but are not of more than local significance.	No
<u>Upland vegetation:</u> (Factors met: 2) The nominated ACEC contains one of the last large, contiguous blocks of high-quality sagebrush steppe habitat in the planning area. Although there are other blocks of similar size and quality within the region, the habitat within the nominated ACEC is important for maintaining connectivity between other regional blocks of habitat. The area has a moderate amount of a natural variety of habitats in close proximity including several types of riparian zones, low sagebrush communities, black sagebrush communities, mountain big sagebrush, mountain shrub, mountain mahogany savannah, and aspen. Depending on slope, soils can be quite erosive. Numerous roads, jeep trails, and fences cross the nominated ACEC. The 2007 Murphy Complex Fires burned 18,000 acres of the nominated ACEC. However, the nominated ACEC is unique within the planning area in that 78% of the nominated ACEC area has not burned within the last 20 years (107,000 acres).	Yes

<u>Riparian systems</u> : The riparian systems in the area have altered streamflows and are not more than locally significant.	No
Natural Hazard	
N/A	N/A

The nominated ACEC meets the relevance and importance criteria to be considered as a potential ACEC. The rationale for proposing the nominated Jarbidge Foothills ACEC for designation (under Alternative IV-A) as an ACEC is as follows:

The nominated ACEC meets relevance and importance criteria for cultural values, fish and wildlife resources (redband trout, Columbia spotted frog, and sage-grouse), and natural systems or processes (upland vegetation).

Existing and potential threats to the relevant and important values within the nominated ACEC include wildland fire, alterations of riparian systems, and surface-disturbing activities. These threats all contribute to the alteration and fragmentation of upland and riparian habitats.

Wildland fire is the primary threat to the relevant and important values within the nominated ACEC. Since the 1970s, wildland fires have reduced the amount of sagebrush habitat present in the planning area by roughly two-thirds. Throughout the West as well as locally, habitat conversion and fragmentation in part due to wildland fire have contributed to declining sage-grouse numbers and the loss of leks. Within the nominated ACEC, over 17,000 acres of sage-grouse habitat burned in the 2007 Murphy Complex Fires, reducing the value of sage-grouse habitat in some areas, and previous wildland fires have affected several thousand additional acres. However, the majority of the nominated ACEC has not burned in the last 20 years; large wildland fires within these areas may reduce habitat quality for sage-grouse as well as contribute to fragmentation of a relatively contiguous area of intact sagebrush steppe.

Alterations of riparian systems primarily are a threat to redband trout and spotted frog. Dams and diversions of streams to irrigate private land have resulted in the dewatering of portions of some streams, contributing to the fragmentation of redband trout habitat. This has reduced ability of redband trout to move between streams. Threats to spotted frog include loss of habitat due to down cutting of streams, lowered water table, habitat fragmentation, and sediment from roads on steep gradients.

Several uses are potential threats to the relevant and important values within the nominated ACEC. Generally, surface-disturbing activities that remove vegetation or create corridors for the introduction and spread of noxious weeds and invasive species would negatively affect the relevant and important values; these disturbances include livestock grazing infrastructure and transportation and travel routes. The physical integrity and the cultural values attached to many archaeological sites are threatened by increasing levels of use and development as well, particularly increasing levels of cross-country motorized vehicle use.

River segments within the nominated ACEC that have been inventoried as eligible for inclusion in the NWSRS include Rocky Canyon Creek and Salmon Falls Creek south of Salmon Falls Reservoir. ORVs for Rocky Canyon Creek include wildlife values, while ORVs for the Salmon Falls Creek segment include recreational values. Interim management of these segments requires that they be managed to maintain or enhance their ORVs. However, the WSR corridor only extends 0.25 miles above the high water mark on each side of the river, which does not provide any protection for these values outside this corridor.

If the nominated ACEC meets the relevance and importance criteria, list the relevant and important value(s) that need special management attention and describe the management prescriptions necessary to protect those values.

The cultural values, fish and wildlife resources (redband trout, spotted frog, and sage-grouse), and natural systems or processes (upland vegetation) of the ACEC would be protected through the following allocations and management actions:

- Improving, expanding, connecting, and restoring native plant communities would be a high priority within the ACEC.

- Restore mountain shrub habitat for sage-grouse.
- Restore habitat for spotted frogs in Rocky Canyon, Timber Canyon, Shack, and Bear Creeks.
- Restore redband trout habitat and reduce habitat fragmentation in redband trout occupied watersheds.
- The ACEC would be a high priority for noxious weeds and invasive species treatment with integrated weed management techniques for control, containment, and where possible, eradication.
- The ACEC would be a Critical Suppression Area.
- Manage the majority of the ACEC as VRM Class III, where not otherwise designated as VRM Class I or II (see the *Visual Resources* section of Chapter 2).
- Livestock seasons of use or stocking rates would be adjusted within the ACEC to minimize conflicts with redband trout, sage-grouse wintering, breeding, and nesting periods (see Appendix H); and restoration projects.
- Monitor recreational use within the ACEC. If this use reaches levels that impair the relevant and important values of the ACEC, implement protective measures appropriate to the type of recreational activity. Protective measures may include but not be limited to designating camping areas within the ACEC; requiring the use of certified weed-free forage and straw; and installing protective barriers to protect relevant and important values.
- Routes would be designated through the CTTMP to increase core habitat size for sage-grouse.
- BLM-managed lands within the ACEC can be exchanged for non-BLM-managed lands, consistent with the *Land Tenure* section of Chapter 2; where practical, acquire private and/or State inholdings. The ACEC designation and management would apply to lands acquired within the ACEC boundary.
- The ACEC would be available for salable mineral development; where practical, use existing mineral pits and minimize new salable mineral developments within ACEC. Seasonal closures that restrict use or activities at the pits during important seasonal periods for fish and wildlife may be included when existing salable mineral permits are reauthorized and in new permits.

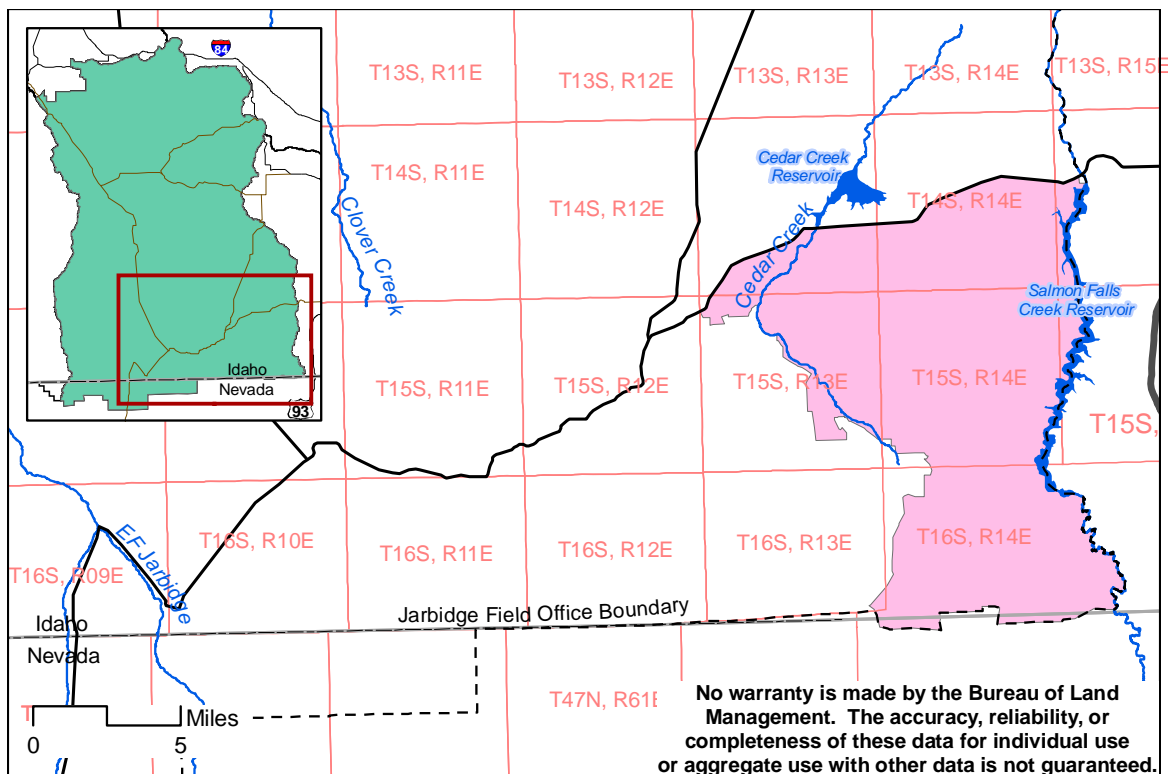
Small Boundary

Nominated ACEC: Jarbidge Foothills ACEC (small)

Nominated by: The Jarbidge Foothills ACEC was nominated by BLM in accordance with BLM Manual 1613, Areas of Critical Environmental Concern, Section .21A.2.b.; the Idaho CDC suggested BLM consider special management for the concentration of special status species in the area.

Location: The nominated ACEC would encompass 66,000 acres of BLM-managed land. The nominated ACEC would be located in the southeast corner of the planning area. The boundary would run from Salmon Falls Creek west to the House Creek Allotment, and from Three Creek Highway south to the southern boundary of Jarbidge FO. This boundary for the Jarbidge Foothills ACEC would focus management on a block of primarily BLM-managed lands and would reduce the amount of private land that would be in the ACEC boundary.

The nominated ACEC is contained within the nominated Sagebrush Sea ACEC.



The analysis documented below focused on differences between the small boundary and the large boundary of the nominated Jarbidge Foothills ACEC (see the *Large Boundary* section).

Relevance: Does the area contain a significant historic, cultural or scenic value; fish or wildlife resource; natural process or system; or natural hazard?	Yes or No
Historic Value	
The historic value within the small boundary of the nominated ACEC is the same as that documented for the large boundary of the nominated Jarbidge Foothills ACEC.	Yes
Cultural Value	
The cultural values within the small boundary of the nominated ACEC are the same as those documented for the large boundary of the nominated Jarbidge Foothills ACEC.	Yes
Scenic Value	
The scenic values within the small boundary of the nominated ACEC are the same as those documented for the large boundary of the nominated Jarbidge Foothills ACEC.	Yes
Fish or Wildlife Resource	
Redband trout: Redband trout, a Type 2 BLM Sensitive species, are found in Cedar Creek, Salmon Falls Creek, and portions of China Creek in the nominated ACEC.	Yes
Columbia spotted frog: Spotted frogs, a Candidate and Type 1 BLM Sensitive species, do not occur within the small boundary of the nominated Jarbidge Foothills ACEC.	No
Greater sage-grouse: The sage-grouse values within the small boundary of the nominated ACEC are the same as those documented for the large boundary of the nominated Jarbidge Foothills ACEC. However, the small boundary of the nominated ACEC would only contain 47,000 acres of key sage-grouse habitat. At least 10 active sage-grouse leks, associated satellite leks, and sage-grouse nesting habitat are present within the small boundary of the nominated ACEC.	Yes
Big game: The big game values within the small boundary of the nominated ACEC are the same as those documented for the large boundary of the nominated Jarbidge Foothills ACEC; however, the small boundary of the nominated ACEC would only contain a small portion of winter and summer big game habitat.	Yes

<u>Other wildlife</u> : The other wildlife values within the small boundary of the nominated ACEC are the same as those documented for the large boundary of the nominated Jarbidge Foothills ACEC; however, the small boundary of the nominated ACEC would contain a smaller portion of habitat for these species. In addition, ferruginous hawk and spotted sandpiper have not been observed within the small boundary of the nominated ACEC.	Yes
Natural System or Process	
<u>Special status plants</u> : The special status plants within the small boundary of the nominated ACEC are the same as those documented for the large boundary of the nominated Jarbidge Foothills ACEC.	Yes
<u>Upland vegetation</u> : The upland vegetation values within the small boundary of the nominated ACEC are the same as those documented for the large boundary of the nominated Jarbidge Foothills ACEC.	Yes
<u>Riparian systems</u> : The riparian values within the small boundary of the nominated ACEC are the same as those documented for the large boundary of the nominated Jarbidge Foothills ACEC.	Yes
Natural Hazard	
The natural hazards within the small boundary of the nominated ACEC are the same as those documented for the large boundary of the nominated Jarbidge Foothills ACEC.	No
Importance: Does the value, resource, system, process, or hazard meet one or more of the following importance factors:	
<ol style="list-style-type: none"> 1. has more than locally significant qualities that give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource; 2. has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change; 3. has been recognized as warranting protection to satisfy national priority concerns or to carry out the mandates of FLPMA; 4. has qualities that warrant highlighting to satisfy public or management concerns about safety and public welfare; or 5. poses a significant threat to human life and safety or to property? 	Yes, No, or N/A
Historic Value	
The importance of the historic value within the small boundary of the nominated ACEC is the same as that documented for the large boundary of the nominated Jarbidge Foothills ACEC.	No
Cultural Value	
(Factors met: 1) The importance of the cultural values within the small boundary of the nominated ACEC is the same as that documented for the large boundary of the nominated Jarbidge Foothills ACEC.	Yes
Scenic Value	
The importance of the scenic values within the small boundary of the nominated ACEC is the same as that documented for the large boundary of the nominated Jarbidge Foothills ACEC.	No
Fish or Wildlife Resource	
<u>Redband trout</u> : Redband trout only occur in three creeks within the small boundary of the nominated ACEC. Redband trout are present in 21 additional streams, several of which allow for movement between streams [Bruneau River, East Fork of the Jarbidge River, Jarbidge River above the confluence with the East Fork, as well as Deer (NV), Jack, Buck, and Dave Creeks]. Redband trout in Cedar Creek are limited to roughly a 7-mile reach with poor connectivity to other redband trout bearing streams. Redband trout in China Creek are potentially linked to other tributary streams above Salmon Falls Creek Dam (Shoshone, North Fork, Bear, and Shack Creeks). Warm water temperature may limit fish movements during the summer.	No
<u>Columbia spotted frog</u> : N/A	N/A
<u>Greater sage-grouse</u> : (Factors met: 1, 2, 3) The importance of the sage-grouse values within the small boundary of the nominated ACEC is the same as that documented for the large boundary of the nominated Jarbidge Foothills ACEC. However, the nominated ACEC supports the best key sage-grouse habitat in the planning area particularly considering the impacts of the 2007 Murphy Complex Fires.	Yes
<u>Big game</u> : The importance of the big game values within the small boundary of the nominated ACEC is the same as that documented for the large boundary of the nominated Jarbidge Foothills ACEC.	No

<u>Other wildlife:</u> The importance of the other wildlife within the small boundary of the nominated ACEC is the same as that documented for the large boundary of the nominated Jarbidge Foothills ACEC.	No
Natural System or Process	
<u>Special status plants:</u> The importance of the special status plants within the small boundary of the nominated ACEC is the same as that documented for the large boundary of the nominated Jarbidge Foothills ACEC.	No
<u>Upland vegetation:</u> (Factors met: 2) The importance of the upland vegetation values within the small boundary of the nominated ACEC is the same as that documented for the large boundary of the nominated Jarbidge Foothills ACEC. However, some of the other large blocks of high-quality sagebrush steppe habitat outside small boundary of the nominated ACEC contain substantially greater amounts of private land. The 2007 Murphy Complex Fires burned 2,000 acres of the nominated ACEC. However, the nominated ACEC is unique within the planning area in that 76% of the nominated ACEC has not burned within the last 20 years (58,000 acres).	Yes
<u>Riparian systems:</u> The importance of the riparian values within the small boundary of the nominated ACEC is the same as those documented for the large boundary of the nominated Jarbidge Foothills ACEC.	No
Natural Hazard	
N/A	N/A

The nominated ACEC meets the relevance and importance criteria to be considered as a potential ACEC. The rationale for proposing the nominated Jarbidge Foothills ACEC for designation (under Alternative IV-B, the Preferred Alternative) as an ACEC is as follows:

The nominated ACEC meets relevance and importance criteria for cultural values, wildlife resources (sage-grouse), and natural systems or processes (upland vegetation).

Existing and potential threats to the relevant and important values within the nominated ACEC include wildland fire and surface-disturbing activities. These threats contribute to the alteration and fragmentation of upland habitats and are similar to those described for the large boundary of the nominated Jarbidge Foothills ACEC.

Wildland fire is the primary threat to the relevant and important values within the nominated ACEC; this threat is similar to that described for the large boundary of the nominated Jarbidge Foothills ACEC. Within the small boundary of the nominated ACEC, over 4,000 acres of sage-grouse habitat burned in the 2007 Murphy Complex Fires.

Several uses are potential threats to the relevant and important values within the nominated ACEC; these threats are similar to those described for the large boundary of the nominated Jarbidge Foothills ACEC.

Within the nominated ACEC, Salmon Falls Creek south of Salmon Falls Reservoir has been inventoried as eligible for inclusion in the NWSRS for a recreational ORV. Interim management of this segment requires that it be managed to maintain or enhance their ORVs. However, the WSR corridor only extends 0.25 miles above the high water mark on each side of the river, which does not provide any protection for this value outside this corridor.

If the nominated ACEC meets the relevance and importance criteria, list the relevant and important value(s) that need special management attention and describe the management prescriptions necessary to protect those values.

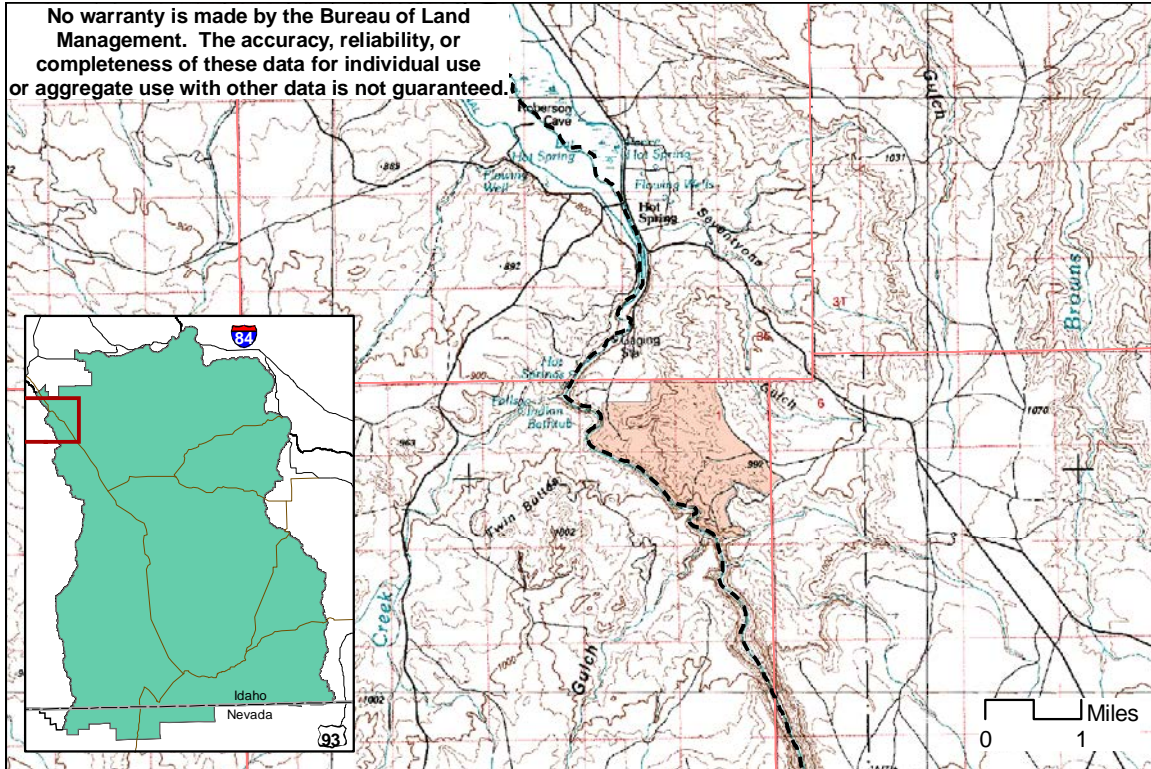
The cultural values, wildlife resources (sage-grouse), and natural systems or processes (upland vegetation) of the ACEC would be protected through the same allocations and management actions as described for the large boundary of the Jarbidge Foothills ACEC, except the management prescribed for redband trout and spotted frogs would not apply.

Lower Bruneau Canyon ACEC

Nominated ACEC: Lower Bruneau Canyon ACEC

Nominated by: The Lower Bruneau Canyon ACEC was nominated by BLM in accordance with BLM Manual 1613, Areas of Critical Environmental Concern, Section .21A.2.b.

Location: The nominated ACEC would encompass 1,000 acres of BLM-managed land. The nominated ACEC would be located along the lower Bruneau River within the northernmost portion of the Bruneau River-Sheep Creek WSA.



Relevance: Does the area contain a significant historic, cultural or scenic value; fish or wildlife resource; natural process or system; or natural hazard?	Yes or No
Historic Values	
No historic resources are known.	No
Cultural Values	
No significant cultural resources are known.	No
Scenic Values	
No outstanding scenic resources. The view of the Bruneau River and Canyon from within the ACEC is impressive, but not of more than local interest.	No
Fish or Wildlife Resource	
Bruneau Hot springsnail: The Bruneau hot springsnail was listed as an Endangered species in 1998 (FWS, 1998) and is a Type 1 BLM Sensitive species. Geothermally influenced seeps and springs in the Bruneau River and one of its tributaries (Hot Creek, outside of the planning area) are the only locations where this species occurs in the world. In 1992, the geothermal springs along the Bruneau River above and below the confluence of Hot Creek, were surveyed for the presence of Bruneau hot springsnail (Mladenka, 1992). During this survey, snails were identified in 53 geothermal springs and seeps along the east side of the Bruneau River and 65 springs on the west side. The nominated ACEC would protect the geothermal springs on the east side of the Bruneau River, which is the entire suitable habitat in the	Yes

planning area. Approximately one-third of the global population of these snails exists within the nominated ACEC.	
Other wildlife: A number of other special status wildlife are present within the nominated ACEC, including Great Basin black-collared lizard (Type 3), long-nose snake (Type 3), western groundsnake (Type 3), ferruginous hawk (Type 3), prairie falcon (Type 4), spotted bat (Type 3), and Townsend’s big-eared bat (Type 3 and NV). A few mule deer and pronghorn use the area as winter range.	Yes
Natural System or Process	
Special status plants: Numerous BLM Sensitive plant species occur in the area including Packard’s cowpie buckwheat (Type 3) and spine-node milkvetch (Type 4) – both perennials, and rigid threadbush (Type 4), spreading gilia (Type 3), and white-margin waxplant (Type 4) – all annuals. One of six Idaho populations of Bruneau river phlox (Type 3 and NV) occurs in the canyon itself; two additional populations can be found in Nevada.	Yes
Thermal springs and seeps: Thermal springs and seeps are present within the nominated ACEC, supporting the Bruneau hot springsnail. Since the early 1990s, the water flows at the thermal springs and seeps have declined, reducing habitat for this Endangered species.	Yes
Natural Hazard	
No significant natural hazards are present.	No
Importance: Does the value, resource, system, process, or hazard meet one or more of the following importance factors:	
<ol style="list-style-type: none"> 1. has more than locally significant qualities that give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource; 2. has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change; 3. has been recognized as warranting protection to satisfy national priority concerns or to carry out the mandates of FLPMA; 4. has qualities that warrant highlighting to satisfy public or management concerns about safety and public welfare; or 5. poses a significant threat to human life and safety or to property? 	Yes, No, or N/A
Historic Values	
N/A	N/A
Cultural Values	
N/A	N/A
Scenic Values	
N/A	N/A
Fish or Wildlife Resource	
<p>Bruneau Hot springsnail: (Factors met: 1, 2, 3) Bruneau hot springsnail is endemic to this reach of the Bruneau River and is listed as Endangered under ESA and is found only in thermal springs. The entire global population occurs in the geothermal seeps and springs along a five-mile reach of the lower Bruneau River and a portion of Hot Creek (outside of the planning area). The proposed ACEC would cover the east side of the Bruneau River along the five-mile section where the species occurs. Range-wide surveys indicate a 27% decline in the total number of geothermal springs from 211 in 1991 to 155 in 1998. During this same time period, the number of springs occupied by the snail went from 131 to 89. Data are not available for the number of geothermal springs or the number occupied by the snail from 1999 to present. The snail is very small (0.22 inches) and is unable to move between spring sources if conditions within a spring become unsuitable. Groundwater pumping to irrigate farmland has dried up a number of springs that previously had this species, and reduced the flows and habitat at several other springs (FWS, 2002).</p> <p>In addition to changes in the thermal springs, invasion by reed canary grass and hydrilla is impacting the habitat of the listed snail. Bruneau Hot springsnail are also vulnerable to introduced predators such as the non-native guppies and a species of tilapia that now occurs in a few of the small geothermal springs along the Bruneau River and Hot Creek (FWS, 2002).</p>	Yes

<p><u>Other wildlife:</u> The Bruneau Canyon in this reach supports a number of special status wildlife, including Great Basin black-collared lizard (Type 3), long-nose snake (Type 3), western groundsnake (Type 3), ferruginous hawk (Type 3), prairie falcon (Type 4), and spotted bat (Type 3), Townsend's big-eared bat (Type 3 and NV). Long-nose snake, western groundsnake, and Great Basin black-collared lizards are at the northern extent of their range in southwestern Idaho, and the Bruneau Canyon is near the eastern extent of their range in Idaho. Although these species are at the edge of their range, it is not known if they are of more than local significance. Expansion of invasive non-native annuals is a threat to these species.</p>	No
Natural System or Process	
<p><u>Special status plants:</u> (Factors met: 1, 2) The amount of spine-node milkvetch (Type 4) is unique within Idaho. The Idaho population is isolated from other populations in Utah, northern Arizona, and southern Nevada. The Idaho population in the Bruneau Valley has the highest density of spine-node milkvetch in the United States.</p> <p>Bruneau River phlox is a Type 3 and NV BLM Sensitive plant endemic to the area. All six Idaho populations of this species are present in the Bruneau and Jarbidge Canyons in Idaho; one of these is found within the nominated ACEC. Two additional populations can be found in Nevada. Bruneau River phlox has a total estimated population of 500 plants. The Idaho populations are relatively stable. The only threats are damming the river and annual weed invasion.</p> <p>Rigid thread bush (Type 4) is often found within the lower Bruneau Canyon as well as other special status plants such as Packard's cowpie buckwheat (Type 3), spreading gilia (Type 3), and white-margin waxplant (Type 4). This high concentration of special status plants is unique; this assemblage of species does not occur elsewhere in Idaho.</p>	Yes
<p><u>Thermal springs and seeps:</u> (Factors met: 1, 2) The geothermal springs along the Bruneau River and in Hot Creek are the only habitats where the Bruneau Hot springsnail can be found in the world. This species has evolved to occupy these unique spring habitats and is sensitive to actions that affect the surface flows from the springs, the temperature of the spring, or the substrates within the springs. The snail is very small (0.22 inches) and is unable to move between spring sources if conditions within a spring become unsuitable. Land management actions that affect the springs, even if only temporarily, could result in a direct loss of a population of snails within a spring or series of springs. The spring sources that would be protected by the proposed ACEC are essential to the persistence of the Bruneau Hot springsnail in the long-term.</p>	Yes
Natural Hazard	
N/A	N/A

The nominated ACEC meets the relevance and importance criteria to be considered as a potential ACEC. The rationale for proposing the nominated Lower Bruneau Canyon ACEC for designation [under Alternatives I, IV (the Preferred Alternative), and V] as an ACEC is as follows:

The nominated ACEC meets relevance and importance criteria for fish resources (Bruneau Hot springsnail) and natural processes or systems (special status plants).

Existing and potential threats to the relevant and important values within the nominated ACEC include noxious weeds and invasive plants, mineral exploration and development, cross-country motorized vehicle use, and livestock grazing.

Noxious weeds and invasive plants are affecting both the special status plants as well as the Bruneau hot springsnail within the nominated ACEC. A quarter of the nominated ACEC has been burned, contributing to the expansion of cheatgrass and posing a long-term threat to native annuals in large part due to competition. The continued expansion of reed canary grass and now the noxious weed hydrilla is impairing habitat for the Bruneau hot springsnail. Both of these invasive plants reduce the amount of open water and inhibit the growth of diatoms and other periphyton on which the snails feed.

Mineral exploration and development is a potential threat to the relevant and important values within the nominated ACEC. Salable mineral development has the potential to threaten the special status plant

assemblage through removal of habitat for these species. Of greater concern for the Bruneau hot springsnail would be exploration and development for geothermal energy, as the continuing decline in the aquifer is the primary concern for the continued existence of the Bruneau hot springsnail.

Cross-country motorized vehicle use is a threat to the special status plants within the nominated ACEC. Based upon field visits to the area within the nominated ACEC in 2006, cross-country motorized vehicle use is degrading habitat in areas with special status plants. In addition to direct damage to plants and their habitat, this activity increases soil erosion and the spread of non-native invasive plants.

Livestock grazing is a threat to the special status plants within the nominated ACEC. Livestock grazing and its associated infrastructure may directly damage special status plants and their habitat and can also contribute to the introduction and spread of noxious weeds and invasive plants.

The nominated ACEC is included in the Bruneau River-Sheep Creek WSA. The area within the nominated ACEC would also be managed according to the IMP. However, if the WSA were to be released to multiple-use management by Congress, the IMP would no longer apply.

The segment of the Bruneau River within the nominated ACEC has been recommended suitable for designation as a WSR. ORVs for this segment include cultural, fish, geological, recreational, scenic, vegetation, and wildlife values. Interim management of this segment requires that it be managed to maintain or enhance its ORVs. However, the WSR corridor only extends 0.25 miles above the high water mark on each side of the river, which does not provide any protection for these values in the higher elevations of the canyon or the adjacent upland plateaus.

If the nominated ACEC meets the relevance and importance criteria, list the relevant and important value(s) that need special management attention and describe the management prescriptions necessary to protect those values.

The fish resources (Bruneau hot springsnail) and natural processes or systems (special status plants) of the ACEC would be protected through the following allocations and management actions:

Under Alternatives I, IV (the Preferred Alternative), and V:

- All actions within the ACEC must be consistent with the IMP and with allocations and management actions made for WSAs, unless the WSA is released by Congress.
- Restore native upland and riparian plant communities within the ACEC to improve habitat for special status species.
- The ACEC would be a high priority for noxious weeds and invasive species treatment with integrated weed management techniques for control, containment, and where possible, eradication.
- The ACEC would be a Critical Suppression Area.
- The ACEC's VRM Class would follow WSA guidelines. In the event the WSA is released, manage the ACEC as VRM Class III.
- Lands within the ACEC would be in Land Tenure Zone 1.
- The ACEC would be closed to mineral leasing.
- The ACEC would be closed to salable mineral development.

Under Alternative I and IV (the Preferred Alternative) only, specific to livestock grazing management:

- The ACEC would be available for livestock grazing and new infrastructure as long as they are compatible with recovery of the area, including protecting seed production of special status plants and reducing impacts to their pollinators.

Under Alternative V only, specific to livestock grazing management:

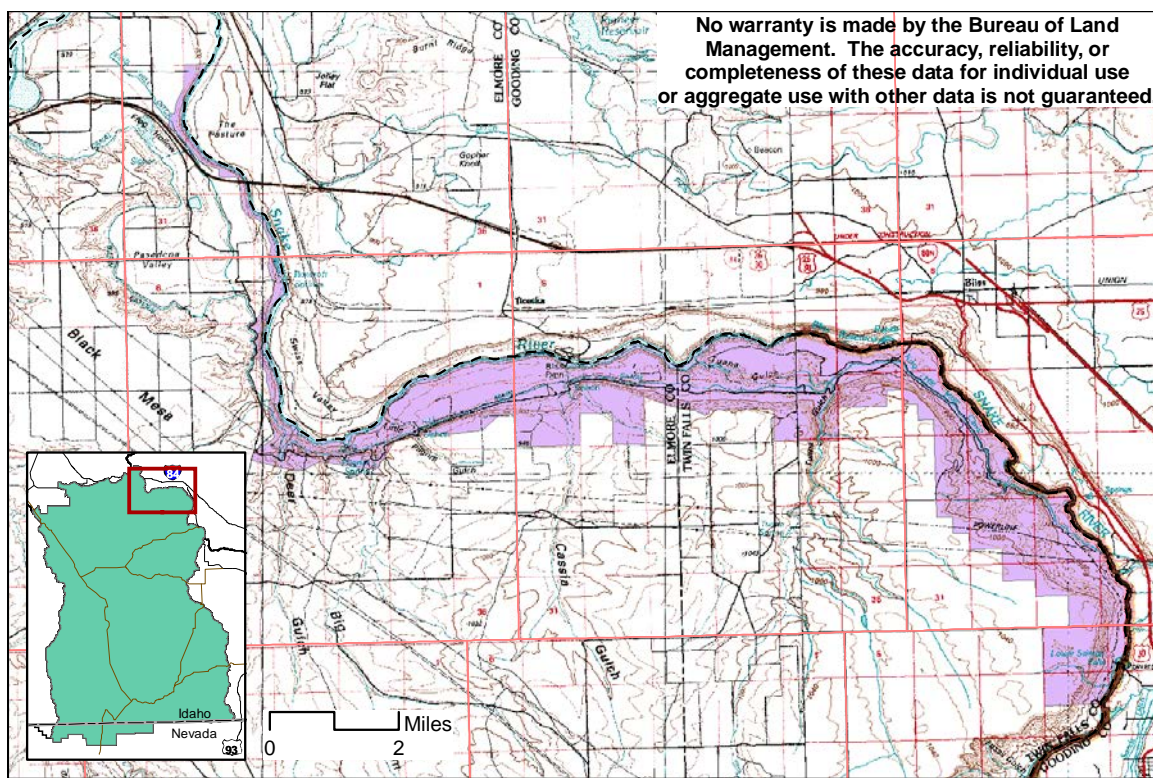
- The ACEC would not be available for livestock grazing.

Middle Snake ACEC

Nominated ACEC: Middle Snake ACEC

Nominated by: The Middle Snake ACEC was nominated by BLM in accordance with BLM Manual 1613, Areas of Critical Environmental Concern, Section .21A.2.b.; the Idaho CDC suggested BLM consider special management for the special status plants in the area.

Location: The nominated ACEC would encompass 7,000 acres of BLM-managed lands; these lands are separated in several areas by blocks of private land. The nominated ACEC would be located from an area southeast of King Hill to the Hagerman Fossil Beds National Monument. The nominated ACEC would extend from the Jarbidge FO boundary in the Snake River to the canyon rim or to existing fences on the adjacent uplands.



Relevance: Does the area contain a significant historic, cultural or scenic value; fish or wildlife resource; natural process or system; or natural hazard?	Yes or No
Historic Value Although historic sites are present, none possess national or regional significance.	No
Cultural Value Several archaeological sites that may be eligible for the National Register of Historic Places are located within the nominated ACEC. In addition to their scientific value, these sites are of traditional cultural importance to the tribes.	Yes
Scenic Value The breaks from the upland plateau down to the floodplain offer some topographic relief of scenic value; scenic values can be seen from a major transportation route (Interstate 84). A section of the area between Lower Salmon Dam and Bliss Bridge contains several large freshwater springs. Rapids in the somewhat confined canyon increase the scenic quality in areas.	Yes

Fish or Wildlife Resource		
<p>Snake River snails: A portion of the global population of the Snake River physa (Endangered, Type 1 BLM Sensitive) and the majority of the global population of the Bliss Rapids snail (Threatened, Type 1) reside in the Snake River within the nominated ACEC. Both snails are primarily in the eastern portion of the nominated ACEC. Other special status mollusks found in the Snake River within the nominated ACEC include the California floater (Type 3), Columbia pebblesnail (Type 3), and short-face lanx (Type 2). This reach of the Snake River also contains a portion of the occupied habitat of the Utah valvata snail (Type 1), which is currently listed as Endangered but is being reviewed by the US Fish and Wildlife Service for possible delisting.</p>	Yes	
<p>Shoshone sculpin: Shoshone sculpin are a Type 2 BLM Sensitive species found in approximately two dozen springs or streams in the Hagerman Valley area of southern Idaho and are found nowhere else in the world (Griffith & Daley, 1984). These small native fish have narrow habitat requirements and are essentially restricted to the clear, cold (16°C year round), well-oxygenated water of freshwater springs.</p>	Yes	
<p>White sturgeon: About 22 miles of the Snake River flow through the nominated ACEC; however, only the portions downstream from the Bliss Dam are free-flowing (Bliss Dam lies roughly at the midpoint). White sturgeon, a Type 2 BLM Sensitive species, are present in this free-flowing reach of the Snake River. While the habitat is not the best within range for white sturgeon, this segment contains the best habitat in the upper Snake River. Because of the free-flowing nature of this reach, sturgeon are able to reproduce naturally and do not require hatchery supplementation to sustain the population; this is the upper-most reach of the Snake River with a self-sustaining population of sturgeon.</p>	Yes	
<p>Other wildlife: Tens of thousands of waterfowl winter in this portion of the Snake River including mallard, widgeon, ring-neck duck, scaup, American coot, and Canada geese. These waterfowl are typically more concentrated along river reaches with slower moving water. Islands in the Snake River are occasionally used by white pelicans. Scattered areas along this reach of the Snake River provide habitat for wintering bald eagles, which were delisted in 2007.</p> <p>The uplands within the nominated ACEC provide nesting habitat for burrowing owl, long-billed curlew, golden eagle, and prairie falcon (Type 4 BLM Sensitive). Cliffs within the nominated ACEC provide habitat for a variety of bat species, including several that are special status species [spotted bat (Type 3) and Townsend’s big-eared bat (Type 3 and NV)]. Western toads, a Type 3 BLM Sensitive species, are present in several areas within the nominated ACEC boundary.</p>	Yes	
Natural System or Process		
<p>Special status plants: Several BLM Sensitive plant species occur within the nominated ACEC, including calcareous buckwheat (Type 3), Greeley’s wave-wing (Type 3), Janish penstemon (Type 3), matted cowpie buckwheat (Type 3), and Snake River milkvetch (Type 4). A few other plant species (e.g., desert dandelion and Torrey’s blazingstar) formerly on the Idaho BLM Sensitive List are also present in the nominated ACEC.</p>	Yes	
Natural Hazard		
<p>Several scars have been left by old landslides. The most recent large landslide was in 1993 on the north bank of the Snake River near Bliss, across the river from the nominated ACEC. That land slide temporarily blocked the Snake River.</p>	Yes	
<p>Importance: Does the value, resource, system, process, or hazard meet one or more of the following importance factors:</p> <ol style="list-style-type: none"> 1. has more than locally significant qualities that give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource; 2. has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change; 3. has been recognized as warranting protection to satisfy national priority concerns or to carry out the mandates of FLPMA; 4. has qualities that warrant highlighting to satisfy public or management concerns about safety and public welfare; or 5. poses a significant threat to human life and safety or to property? 		Yes, No, or N/A

Historic Value	
N/A	N/A
Cultural Value	
The cultural resources within the nominated ACEC are significant but generally not rare or unique for the region.	No
Scenic Value	
The scenic values are not unique or of more than local significance. Scenic values are mixed and are not outstanding.	No
Fish or Wildlife Resource	
<u>Snake River snails:</u> (Factors 1, 2) The nominated ACEC contains a portion of the global population of Snake River physa snail (Endangered, Type 1) and the majority of the global population of Bliss Rapids snail (Threatened, Type 1). This reach of the Snake River was identified in the Snake River Aquatic Species Recovery Plan as the recovery area for these species (FWS, 1995). A number of other special status mollusks are found in the Snake River in this area including California floater (Type 3), Columbia pebblesnail (Type 3), and short-face lanx (Type 2). According to information in the Idaho Comprehensive Wildlife Conservation Strategy (IDFG, 2005), the majority of the known Idaho distribution for these species is within the reach of the Snake River between Hagerman downstream to King Hill.	Yes
<u>Shoshone sculpin:</u> (Factors 1, 2) Most of the known locations of Shoshone sculpin (Type 2) are outside of the nominated ACEC and the planning area, but there is one spring on the south side of the Snake River within the nominated ACEC, just upstream of Bliss Bridge, where a moderate-sized population was discovered (Griffith & Daley, 1984). The spring source where Shoshone sculpin have been found is the only habitat that is suitable to support this native fish in the planning area.	Yes
<u>White sturgeon:</u> (Factors 1, 2) The nominated ACEC covers the majority of spawning habitat for white sturgeon (Type 2) within the planning area. Because of the free-flowing nature of this reach, sturgeon are able to reproduce naturally and do not require hatchery supplementation to sustain the population; this is the upper-most reach of Snake River with a self-sustaining population of sturgeon.	Yes
<u>Other wildlife:</u> Although bats, nesting golden eagles, and prairie falcons (Type 4) are present, these wildlife values are not of more than local importance. The only western toad breeding habitat known in the planning area is within the nominated ACEC; however, western toads (Type 3) are generally widespread and are more abundant in other locations in Idaho.	No
Natural System or Process	
<u>Special status plants:</u> (Factors met: 1, 2) The Snake River breaks in this area contain a mixture of soils. Slopes exceed 20% in over 30% of the nominated ACEC, and the wind erosion hazards for the soils are generally rated as severe to very severe; water erosion hazards are generally rated medium. The mix of old lake bed sediments and volcanic soils provides habitat to a number of uncommon plants including several presently categorized as special status species: calcareous buckwheat (Type 3), Greeley's wavewing (Type 3), Janish penstemon (Type 3), matted cowpie buckwheat (Type 3), and Snake River milkvetch (Type 4). Torrey's blazingstar and several other formerly BLM Sensitive plant species are present.	Yes
Natural Hazard	
Landslides or slumps do not occur frequently and are not a significant threat to humans.	No

The nominated ACEC meets the relevance and importance criteria to be considered as a potential ACEC. The rationale for proposing the nominated Middle Snake ACEC for designation (under Alternatives I and V) as an ACEC is as follows:

The nominated ACEC meets relevance and importance criteria for its fish resources (special status snails, Shoshone sculpin, white sturgeon) and natural systems or processes (special status plants).

Existing and potential threats to the relevant and important values of the nominated ACEC include noxious weeds and invasive plants, wildland fires, mineral exploration and development, cross-country motorized vehicle use and other recreational uses, and livestock grazing.

Noxious weeds and invasive plants threaten the habitat for the special status plants and animals within the nominated ACEC. Many of the upland areas have been invaded by non-native annual species.

Noxious weeds (e.g., Russian knapweed, puncture vine, Scotch thistle, Canada thistle, and bull thistle) are present and increasing in the nominated ACEC. Purple loosestrife, Russian olive, and tamarisk are present and scattered along the Snake River riparian zone. The threat of noxious weeds and invasive plants is directly related to the other threats to the nominated ACEC, as they all contribute to the introduction and spread of these species.

Wildland fire threatens the relevant and important values of the nominated ACEC through the fire itself as well as activities associated with wildland fire suppression. Wildland fires have negatively impacted some of the habitat for Janish penstemon, Greeley's wave-wing, and ochre-flowered buckwheat. Cow-pie buckwheat is known to be intolerant of fire. Following wildland fires, cheatgrass usually dominates the burned areas, reduces or prohibits the recovery of these Sensitive plant species, and promotes future wildland fires. The lack of vegetation following fire, as well as disturbance areas created by wildland fire suppression activities, can lead to increased sedimentation into the Snake River, negatively affecting habitat for special status species that reside there.

Mineral exploration and development has the potential to threaten the relevant and important values within the nominated ACEC. Within the nominated ACEC, there is one active mining claim and an active gravel pit located adjacent to an area containing Janish penstemon. Habitat adjacent to the gravel pit could be affected by expansion of the pit or failure of the side of the pit, as well as by the spread of noxious weeds and invasive species associated with activity at the pit. Activities associated with mineral exploration and development can also increase sedimentation into the Snake River, negatively affecting the special status fish and aquatic invertebrates and their habitat.

Cross-country motorized vehicle use and other recreational uses threaten the relevant and important values of the nominated ACEC. Cross-country motorized vehicle use throughout the nominated ACEC has impacted habitat for some of the BLM Sensitive species. Several areas along the Snake River within the nominated ACEC also receive a high amount of use by fishermen. Fishermen have created new routes to access additional locations and to avoid areas where the main access has been powdered or rutted. Water erosion further increases the depth of the ruts created by motorized vehicles; these disturbance areas are typically invaded by cheatgrass. Erosion due to cross-country motorized vehicle use can also increase sedimentation into the Snake River, negatively affecting the special status fish and aquatic invertebrates and their habitat. Cross-country motorized vehicle use and unattended campfires increase the chance of wildland fire; both of these activities occur within the nominated ACEC.

Livestock grazing also presents a threat to the relevant and important values of the nominated ACEC. Trailing of livestock in areas rated as severe for soil erosion is a concern affecting Sensitive plant species habitat as well as riparian and aquatic resources. Disturbance areas where livestock have concentrated have increased soil erosion and promoted the spread of invasive plants and noxious weeds.

Two segments of the Snake River within the ACEC have been inventoried as eligible for inclusion in the NWSRS. ORVs for the Hagerman Reach include fish, geological, historical, recreational, and wildlife values; ORVs for the King Hill Reach include fish, geological, recreational, and wildlife values. Interim management of these segments requires that they be managed to maintain or enhance their ORVs. However, the WSR corridor only extends 0.25 miles above the high water mark on each side of the river, which does not provide any protection for these values outside this corridor.

If the nominated ACEC meets the relevance and importance criteria, list the relevant and important value(s) that need special management attention and describe the management prescriptions necessary to protect those values.

The fish resources (Snake River snails, Shoshone sculpin, and white sturgeon) and natural systems or processes (special status plants) of the ACEC would be protected through the following allocations and management actions:

Under Alternatives I and V:

- Restore habitat for special status plants within the ACEC. Maintain existing high-quality special status plant habitat.

- Where habitat is suitable, transplant or seed special status plants within the ACEC.
- The ACEC would be a high priority for noxious weeds and invasive species treatment with integrated weed management techniques for control, containment, and where possible eradication. Special conditions would apply in habitat occupied by special status plant species.
- The ACEC would be a Critical Suppression Area.
- Mitigate the effects of surface-disturbing activities in the ACEC, such as recreation and transportation.
- Implement use restrictions within the Middle Snake ACEC in areas with slopes greater than 20%, or in areas where soils are categorized greater than moderate for either wind or water erosion.
- Manage the ACEC as VRM Class III.
- Livestock trailing through the ACEC would be allowed in the designated trailing corridor, but livestock would not be allowed to remain in the ACEC overnight.
- Monitor recreational use within the ACEC. If this use reaches levels that impair the relevant and important values of the ACEC, implement protective measures appropriate to the type of recreational activity. Protective measures may include, but not be limited to, improving access routes to recreational sites along the Snake River, installing barriers to protect relevant and important values, and implementing measures to address water quality and public health concerns.
- BLM-managed lands within the ACEC can be exchanged for non-BLM-managed lands, consistent with the *Land Tenure* section of Chapter 2, in order to obtain lands with relevant and important values or to improve management; where practical, acquire private and State inholdings. The ACEC designation and management would apply to lands acquired within the ACEC boundary.
- The ACEC would be closed to mineral leasing.
- Recommend lands within the ACEC for withdrawal from mining laws for locatable exploration and development.

Under Alternative I only, specific to livestock grazing management and salable mineral development:

- The Asquena pasture within the ACEC would be available for livestock grazing; the remainder of the ACEC would not be available for livestock grazing.
- The ACEC would be closed to new salable mineral development and expansion of existing developments.

Under Alternative V only, specific to livestock grazing management and salable mineral development:

- The ACEC would not be available for livestock grazing.
- The ACEC would be closed to salable mineral development.

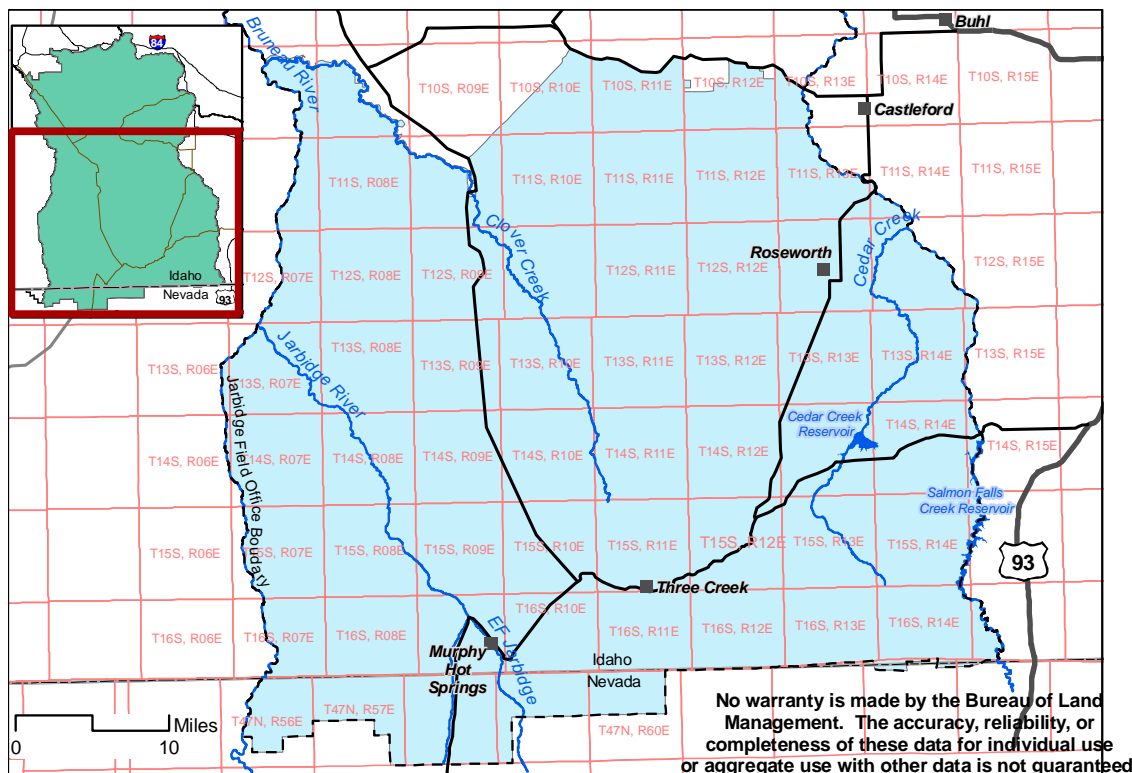
Sagebrush Sea ACEC

Nominated ACEC: Sagebrush Sea ACEC

Nominated by: The Sagebrush Sea ACEC was nominated by WWP.

Location: The Sagebrush Sea ACEC would encompass 958,000 acres of BLM-managed land. The nominated ACEC would occupy roughly the southern 2/3 of the planning area. It would extend from the Bruneau River on the west to Salmon Falls Creek on the east. Its southern boundary would follow the southern boundary of the Jarbidge FO. The northern boundary would follow the road that runs from Balanced Rock to Crows Nest to Clover Crossing, then follow Clover Creek along its east and north canyon rims to Clover Creek’s confluence with the Bruneau River.

The nominated ACEC contains areas within two existing ACECs (Salmon Falls Creek and Bruneau-Jarbidge), as well as other nominated ACECs (both nominated modifications to the existing Bruneau-Jarbidge ACEC, the nominated extension to the existing Salmon Falls Creek ACEC, and both boundaries for the Inside Desert ACEC and the Jarbidge Forks ACEC). The analysis below notes whether the relevant and important values within the nominated Sagebrush Sea ACEC are also within another existing or nominated ACEC.



Relevance: Does the area contain a significant historic, cultural or scenic value; fish or wildlife resource; natural process or system; or natural hazard?	Yes or No
Historic Value	
Historic resources within the nominated ACEC are primarily related to the early livestock industry and include sheep camps, cairns, rock corrals, rock fences, and the remnants of failed homesteads. The Toana Freight Road, a freight and stage route that serviced Idaho mining communities between 1870 and 1883, runs through the eastern portion of the nominated ACEC. Based on its importance in the early settlement and development of Idaho Territory, the Toana Freight Road was recently listed on the National Register of Historic Places.	Yes
Cultural Value	
Due to its size, the area contains numerous archaeological sites. Site density varies by terrain and proximity to critical resources. Many sites have traditional cultural relevance to the tribes and are also important for their scientific value. The nominated Sagebrush Sea ACEC encompasses both boundaries of the nominated Jarbidge Foothills ACEC as well as the existing and two nominated boundaries of the Bruneau-Jarbidge ACEC, all of which have cultural values that meet relevance and importance criteria.	Yes
Scenic Value	
The area contains a variety of scenic landscapes including deep, rugged canyons, uplifted cliffs, several streams with riparian zones, and a variety of plant communities. The nominated Sagebrush Sea ACEC encompasses the existing and two nominated boundaries of the Bruneau-Jarbidge ACEC, all of which have scenic values that meet relevance and importance criteria.	Yes
Fish or Wildlife Resource	
<u>Bull trout:</u> The area contains all known occupied habitat for bull trout (Threatened, Type 1) within the planning area for both resident and migratory (fluvial) bull trout. The Jarbidge River Distinct Population Segment is the southern-most surviving population of bull trout in North America (FWS, 2004), occurring in a portion of southern Idaho and northern Nevada, and is isolated from other bull trout populations by numerous dams. Within the planning area, this population segment is found in the Jarbidge River and its East Fork and Dave and Jack Creeks. Bull trout in this area are unique in their arid environmental setting. The nominated Sagebrush Sea ACEC encompasses the existing and nominated expanded boundaries of the Bruneau-Jarbidge ACEC, both of which have bull trout values that meet relevance and importance criteria.	Yes
<u>Redband trout:</u> The area contains all 24 streams occupied by redband trout (Type 2 BLM Sensitive) within the planning area, including the perennial streams in the Jarbidge Foothills and most of the perennial streams in the Jarbidge River and Salmon Falls Creek Watersheds. The nominated Sagebrush Sea ACEC encompasses the large boundary of the nominated Jarbidge Foothills ACEC, the existing and two nominated boundaries of the Bruneau-Jarbidge ACEC, and the existing Salmon Falls Creek ACEC, all of which have redband trout values that meet relevance and importance criteria.	Yes
<u>Columbia spotted frog:</u> The area contains all known occupied habitat for spotted frog (a Candidate and Type 1 and NV BLM Sensitive species) within the planning area. The nominated Sagebrush Sea ACEC encompasses the large boundary of the nominated Jarbidge Foothills ACEC, which has spotted frog values that meet relevance and importance criteria.	Yes
<u>Greater sage-grouse:</u> The nominated ACEC would contain the vast majority of the active sage-grouse leks and their winter and nesting habitat. The nominated ACEC would contain 252,000 acres of key sage-grouse habitat, nearly 90% of the key sage-grouse habitat within the planning area. There are currently 39 active sage-grouse leks, associated satellite leks, and sage-grouse nesting habitat present within the nominated ACEC. Sage-grouse are a Type 2 BLM Sensitive species; both resident and migratory sage-grouse are present in the area. The nominated Sagebrush Sea ACEC encompasses both boundaries of the nominated Jarbidge Foothills ACEC, both of which have sage-grouse values that meet relevance and importance criteria.	Yes

<p><u>California bighorn sheep:</u> The nominated ACEC would encompass all habitat used by bighorn sheep, a Type 3 BLM Sensitive species; bighorn sheep are concentrated in the Bruneau and Jarbidge Canyons. The bighorn sheep population within the ACEC is estimated to be approximately 200 sheep. The Foundation for North American Wild Sheep and the IDFG were instrumental in re-introducing bighorn into the Bruneau and Jarbidge Canyons in the 1980s and early 1990s. The canyonlands provide secure lambing habitat. The rivers in the canyon bottoms, as well as occasional seeps from canyon walls, provide water. Bighorn sheep forage is available in both the canyons and adjacent uplands. The vast majority of bighorn sheep observations are within the canyon and on the upland plateau up to about 1 mile from the canyon rim. Bighorn sheep typically avoid human disturbance and can be socially displaced in the short term from otherwise suitable habitat when livestock are present (Bissonette & Steinkamp, 1996).</p> <p>The nominated Sagebrush Sea ACEC encompasses the existing and two nominated boundaries of the Bruneau-Jarbidge ACEC, all of which have bighorn sheep values that meet relevance and importance criteria.</p>	<p>Yes</p>
<p><u>Other special status wildlife:</u> The nominated ACEC would contain the vast majority of nesting habitat for Brewer’s sparrow (Type 3 and NV), sharp-tailed grouse (Type 3), ferruginous hawk (Type 3), Lewis woodpecker (Type 3), loggerhead shrike (Type 3 and NV), mountain quail (Type 3), northern goshawk (Type 3 and NV), prairie falcon (Type 4), sage sparrow (Type 3), and willow flycatcher (Type 3). Kit fox, a Type 4 BLM Sensitive species, have been sighted in a portion of the nominated ACEC (Rudeen, 2006). The majority of the habitat for spotted bat (Type 3), Townsend’s big-eared bat (Type 3 and NV), and other bat species occurs in various river canyons within the nominated ACEC. The extent of Piute (Great Basin) ground squirrel (Type 3) distribution in the area is unknown. The nominated area contains all recently documented pygmy rabbit habitat (Type 2).</p>	<p>Yes</p>
<p><u>Other fish and wildlife:</u> The area would encompass 629,000 acres of elk, mule deer, and pronghorn winter range, over 95% of the big game winter range within the planning area, as well as the important transitional, fawning, calving, and summer range for big game. Some of the elk, mule deer, and pronghorn are part of migratory herds that winter in Idaho and move back to Nevada in the late spring through fall.</p> <p>The Jarbidge River contains a natural diversity of native fish species. Compared to other rivers in the region, the proportion of native to non-native species is unusually high, as there are few, if any, non-native species present. This is a rather unique characteristic for the fish populations in the Jarbidge River Watershed. However, stocked rainbow trout are present in Salmon Falls Creek, Cedar Creek, and an unnamed tributary, and brook trout, a non-native fish, have been found in Flat and Cedar Creeks.</p>	<p>Yes</p>
<p>Natural System or Process</p>	
<p><u>Slickspot peppergrass:</u> The nominated ACEC would cover all known occupied habitat for slickspot peppergrass in the planning area. Slickspot peppergrass is a rare, annual or biennial forb endemic to sagebrush steppe in southwestern Idaho (Moseley, 1994). Slickspot peppergrass is a Type 1 BLM Sensitive species that has been Proposed for listing as Endangered under the ESA. The nominated ACEC contains high quality slickspot peppergrass habitat, which is characterized by intact sagebrush steppe, low abundance of non-native species, and low levels of human-caused disturbances (Colket, 2006; FWS, 2003; Moseley, 1994).</p> <p>The nominated Sagebrush Sea ACEC encompasses both boundaries of the nominated Inside Desert ACEC, all of which have slickspot peppergrass values that meet relevance and importance criteria.</p>	<p>Yes</p>
<p><u>Davis peppergrass:</u> The nominated ACEC would cover all known occupied habitat Davis peppergrass in the planning area. Davis peppergrass, a Type 3 BLM Sensitive species, is present in playas within the nominated ACEC; the population of Davis peppergrass is declining range wide. Davis peppergrass is a fleshy, perennial native mustard (forb) adapted to grow in seasonally flooded areas. The species is restricted to a narrow suite of environmental conditions, occurring in playas on volcanic plains where the regional vegetation is dominated by big sagebrush and, to a lesser extent, shadscale. Playas are naturally flat-bottomed basins where water from the adjacent uplands transports silt, clay, and minerals. Playas supporting Davis peppergrass have a hard clay bottom and are inundated with water during springs with average or above average precipitation; some water may also collect during summer thunderstorms. Playas typically dry out in the summer, becoming hard. Davis peppergrass plants show distinct</p>	

<p>differences in leaf size, shape, and plant phenology between playas. This suggests the species disperses poorly, probably not beyond individual playas, and there is minimal pollination between neighboring playas (Moseley, 1996).</p> <p>The nominated Sagebrush Sea ACEC encompasses the extensions to the existing Bruneau-Jarbidge ACEC, which has Davis peppergrass values that meet relevance and importance criteria.</p>	
<p>Bruneau River phlox: Five of the six Idaho populations of Bruneau River phlox, a Type 3 BLM Sensitive species, occur within the nominated ACEC. Bruneau River phlox is found in both the Bruneau and Jarbidge Canyons. Two additional populations can be found in Nevada.</p> <p>The nominated Sagebrush Sea ACEC encompasses the existing and two nominated boundaries of the Bruneau-Jarbidge ACEC, all of which have Bruneau River phlox values that meet relevance and importance criteria; the nominated Lower Bruneau Canyon ACEC also has Bruneau River phlox values that meet relevance and importance criteria.</p>	Yes
<p>Other special status plants: A few areas within the nominated ACEC contain other plant species classified as BLM Sensitive or Watch species including broadleaf fleabane (Type NV), Cusick's primrose (Type 5), earth lichen (Type 4), four-wing milkvetch (Type 3), Newberry's milkvetch (Type 4), Simpson's hedgehog cactus (Type 4), and two-headed onion (Type 3). The population of Cusick's primrose within nominated ACEC is in Nevada. While this species is found elsewhere in Idaho and Oregon; it is the only population of Cusick's primrose in the planning area and the only population of this species in Nevada.</p>	Yes
<p>Upland vegetation: The Unvegetated Vegetation Sub-Group (VSG) covers 44% of the nominated ACEC (421,000 acres); the vast majority of this is classified as Recent Burn due to the 2007 Murphy Complex Fires (391,000 acres). The Native Shrub VSG comprises 33% of the vegetation within the nominated ACEC (318,000 acres). A variety of plant communities within the Native Shrub VSG are represented within the nominated ACEC, including communities dominated by various combinations of native shrubs and grasses, as well as limited amounts of woodland and mountain brush communities (13,000 acres). Only 3% of the vegetation within the nominated ACEC is classified within the Native Grass VSG (29,000 acres). The Non-Native Perennial VSG comprises 12% of the vegetation within the nominated ACEC (117,000 acres), the majority of which is within the crested wheatgrass community (108,000 acres). The Non-Native Understory VSG comprises another 6% of the vegetation within the nominated ACEC (55,000 acres); this VSG is dominated by the Wyoming big sagebrush/crested wheatgrass community (46,000 acres). Vegetation communities within the Annual VSG are present on nearly 2% of the nominated ACEC (18,000 acres).</p> <p>The nominated Sagebrush Sea ACEC encompasses both boundaries of the nominated Jarbidge Foothills ACEC and the existing Salmon Falls Creek ACEC, all of which have upland vegetation values that meet relevance and importance criteria.</p>	Yes
<p>Riparian systems: The Bruneau and Jarbidge Rivers have not been dammed, allowing natural processes to operate in that watershed. However, there are dams on Cedar and Salmon Falls Creeks and smaller irrigation diversions on a majority of the smaller creeks within the nominated ACEC that can be a barrier to fish movements; these diversions can also lead to dewatering of these streams.</p> <p>The nominated Sagebrush Sea ACEC encompasses the existing and two nominated boundaries of the Bruneau-Jarbidge ACEC, all of which have riparian values that meet relevance and importance criteria.</p>	Yes
Natural Hazard	
No significant natural hazards.	No

<p>Importance: Does the value, resource, system, process, or hazard meet one or more of the following importance factors:</p> <ol style="list-style-type: none"> 1. has more than locally significant qualities that give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource; 2. has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change; 3. has been recognized as warranting protection to satisfy national priority concerns or to carry out the mandates of FLPMA; 4. has qualities that warrant highlighting to satisfy public or management concerns about safety and public welfare; or 5. poses a significant threat to human life and safety or to property? 	<p>Yes, No, or N/A</p>
<p>Historic Value</p>	
<p>Most of the historic resources in the nominated ACEC are similar to resources in the surrounding areas. Their significance is primarily local. An exception is the regionally significant Toana Freight Road, which occupies only a very small portion of the entire area.</p>	<p>No</p>
<p>Cultural Value</p>	
<p>(Factors met: 1, 2) Numerous regionally significant archaeological sites are present but their distribution is not uniform. In general, the canyonland and foothill areas of the Sagebrush Sea are most sensitive. The nominated Sagebrush Sea ACEC encompasses both boundaries of the nominated Jarbidge Foothills ACEC as well as the existing and two nominated boundaries of the Bruneau-Jarbidge ACEC, all of which have cultural values that meet relevance and importance criteria.</p>	<p>Yes</p>
<p>Scenic Value</p>	
<p>Other than the canyons, the scenic values are not more than of local significance. Although scenic values are unique in some areas (Bruneau, Jarbidge, and Salmon Falls Creek Canyons), in the majority of the area, scenic values are not regionally unique or significant. The nominated Sagebrush Sea ACEC encompasses the existing and two nominated boundaries of the Bruneau-Jarbidge ACEC, all of which have scenic values that meet relevance and importance criteria.</p>	<p>No</p>
<p>Fish or Wildlife Resource</p>	
<p><u>Bull trout:</u> (Factors met: 1, 2, 3) The Jarbidge River contains the southernmost population of bull trout in North America (FWS, 2004). Bull trout are the only fish within the planning area listed as Threatened under the ESA and are a Type 1 BLM Sensitive species. Genetic analysis of bull trout in the Columbia River Basin indicates Jarbidge River bull trout have a shared evolutionary history with populations in the upper Columbia River and Snake River but are genetically separated. For over 100 years, Jarbidge River bull trout have been geographically isolated from other populations in the Snake River by more than 150 miles of unsuitable habitat and several impassable hydroelectric dams on the Snake River and lower Bruneau River. Bull trout in the Jarbidge River are considered significant because they occupy a unique and unusual ecological setting and their loss would result in a substantial modification of the species' range. The bull trout in the Jarbidge River are unique in that a portion of their habitat is in an area categorized as semi-arid desert. The nominated ACEC has both spawning and migratory habitat for bull trout. Dave Creek is believed to be a crucial spawning area for bull trout within the watershed of the East Fork of the Jarbidge River.</p> <p>Bull trout also meet relevance and importance criteria in the existing and expanded boundaries of the Bruneau-Jarbidge ACEC, both of which are encompassed by the nominated Sagebrush Sea ACEC.</p>	<p>Yes</p>
<p><u>Redband trout:</u> (Factors met: 1, 2) Redband trout are Type 2 BLM Sensitive species occurring in the perennial streams in the Jarbidge Foothills and in most of the perennial streams in the Jarbidge River and Salmon Falls Creek Watersheds; the nominated ACEC contains all occupied redband trout habitat within the planning area. Redband trout in the Jarbidge Foothills exist in isolated populations or "strongholds" that are unable to migrate to adjacent suitable habitats when threatened by low streamflow conditions or other environmental disturbance such as wildfire. Due to the lack of connectivity between the redband trout occupied streams, these fish are vulnerable to population declines. Recent studies of redband trout populations in drainages similar to those found in the Jarbidge Foothills suggest that redband trout are declining in their lower elevation habitats (Zoellick, et al., 2005). This indicates the importance of retaining or restoring connectivity between redband trout populations in desert basins such as those that</p>	<p>Yes</p>

<p>occur in the Jarbidge Foothills. Redband trout in the Jarbidge River Watershed are less isolated than those in the Jarbidge Foothills and can freely migrate between suitable stream habitats throughout the Jarbidge and Bruneau River Watersheds.</p> <p>Redband trout also meet relevance and importance criteria in the existing and two nominated boundaries of the Bruneau-Jarbidge ACEC, the large boundary of the nominated Jarbidge Foothills ACEC, and the existing Salmon Falls Creek ACEC, all of which are encompassed by the nominated Sagebrush Sea ACEC.</p>	
<p><u>Columbia spotted frog:</u> (Factors met: 2, 3) Spotted frog populations are part of a larger, but fragmented, population of spotted frogs in northern Nevada. The Great Basin population of spotted frog is of national significance. Great Basin Columbia spotted frog populations continue to decline in portions of Nevada. The species was originally categorized as Candidate-9, but has been elevated to Candidate-3 by the FWS. Spotted frogs are presently found only on less than 1,000 acres in Shack and Rocky Canyon Creeks. Potentially suitable habitat occurs in several other drainages (House, China, Cedar, and Flat Creeks) within the nominated ACEC.</p> <p>Spotted frogs also meet relevance and importance criteria in the large boundary of the nominated Jarbidge Foothills ACEC, which is encompassed by the nominated Sagebrush Sea ACEC.</p>	Yes
<p><u>Greater sage-grouse:</u> (Factors met: 1, 2, 3) Sage-grouse (Type 2) are present in much of the area in sagebrush with suitable habitat, and the nominated ACEC contains over 90% of the active sage-grouse leks within the planning area. Locally, sage-grouse are a mix of resident and migratory forms. Although there is some information on the movements of sage-grouse in the western portion of the area, sage-grouse movements and habitat use in the southeastern part (Browns Bench) of the area are better documented. Sage-grouse in this area have been documented to move over 10 miles into northern Nevada and 15 miles east to the Shoshone Basin. Radio-collared sage-grouse in the Shoshone Basin have been documented to winter in the Browns Bench/Monument Springs/China Mountain areas. Sage-grouse in this area provide connectivity to sage-grouse regionally. The Browns Bench/China Mountain area is presently a stronghold or key area for sage-grouse. Over 60% of vegetation within the nominated ACEC has been altered, mostly through wildland fire and fire rehabilitation projects; aside from areas classified as Recent Burn, most of altered vegetation is within the Non-Native Perennial VSG. Forty-five percent of the nominated ACEC, including at least 60 sage-grouse leks, burned in the Murphy Complex Fires in 2007 (430,000 acres¹⁷), further fragmenting habitat and impacting habitat used by sage-grouse and other sagebrush associated wildlife.</p> <p>Sage-grouse also meet relevance and importance criteria in both boundaries of the nominated Jarbidge Foothills ACEC, both of which are encompassed by the nominated Sagebrush Sea ACEC.</p>	Yes
<p><u>California bighorn sheep:</u> (Factors met: 1, 2) Bighorn sheep, a Type 3 BLM Sensitive species, are concentrated in the Bruneau and Jarbidge Canyons. Bighorn sheep are scattered in small herds across parts of Oregon, Idaho, Nevada, and British Columbia. In Idaho, bighorn sheep populations in the South Hills and Jim Sage Mountains are smaller than in the Bruneau/Jarbidge River area. The population in the Owyhee River is larger than the Bruneau/Jarbidge River population. Bighorn sheep in Idaho are recovering from a population crash in the late 1990s. Human disturbance and disease continue to suppress bighorn sheep nationwide (Krausman & Bowyer, 2003; Lawson & Johnson, 1982). This population of bighorn sheep is of more than local importance, evidenced in part by the fact that bighorn sheep tags for hunts in this area are in high demand and attract applicants from across the United States. Bighorn sheep habitat in the Bruneau and Jarbidge Canyons accounts for less than 10% of the nominated ACEC. The majority of the nominated ACEC is not generally suitable for bighorn sheep.</p> <p>Bighorn sheep also meet relevance and importance criteria in the existing and two nominated boundaries of the Bruneau-Jarbidge ACEC, all of which are encompassed by the nominated Sagebrush Sea ACEC.</p>	Yes

¹⁷ This acreage is larger than the acreage within the Murphy Complex Fire perimeter that is mapped as Recent Burn in the post 2007 fire vegetation map; the vegetation map delineates unburned islands, while the fire history map is based on fire perimeters.

<p><u>Other special status wildlife:</u> Generally, the other special status wildlife within the nominated ACEC are not of more than local importance. Mountain shrub and aspen habitats provide Columbian sharp-tailed grouse winter habitat. Columbian sharp-tailed grouse (Type 3) in the area provide connectivity to sharp-tailed grouse to a population in the Shoshone Basin. The Columbian sharp-tailed grouse population in the nominated ACEC is small and is currently not of more than local importance.</p> <p>Mountain quail (Type 3) were historically present within the nominated ACEC. IDFG and BLM records suggest that mountain quail have likely been extirpated from the majority of the area. Historical records indicate that mountain quail were occasionally harvested in the 1960s and 1970s from this general area. The last mountain quail documented within the nominated ACEC was in the Jarbidge Canyon in 2001.</p> <p>Habitat within the planning area is very limited for Lewis woodpecker (Type 3), northern goshawk (Type 3 and NV), and willow flycatcher (Type 3). The limited nesting habitat makes these species of only local importance.</p> <p>Prairie falcons (Type 4), spotted bat (Type 3), and Townsend’s big-eared bat (Type 3 and NV) are associated with major canyons but forage well into the uplands. Canyonlands, which are used by these species for day roosts, are found only in a small portion of the nominated ACEC.</p> <p>Nesting habitat for Brewer’s sparrow (Type 3 and NV), loggerhead shrike (Type 3 and NV), ferruginous hawk (Type 3), and sage sparrow (Type 3) is fairly widespread over the area. Songbirds are associated with sagebrush habitats locally and nest wherever suitable habitat is present. The majority of active ferruginous hawk nests within the planning area are found within the nominated ACEC. These species are of primarily local significance regarding connectivity and genetics.</p> <p>Kit fox (Type 4) in the area have been documented west of Clover Creek, in a small portion of the nominated ACEC (Rudeen, 2006). Kit fox are at the northern part of their range in southern Idaho. It is not known if kit fox are present east of Clover Creek or the size of their population.</p> <p>The nominated ACEC covers more than the presently occupied habitat for pygmy rabbit (Type 2) within the planning area. Habitat fragmentation, primarily due to wildland fire, has contributed to the isolation of pygmy rabbit and Piute ground squirrels (Type 3) locally.</p>	<p>No</p>
<p><u>Other fish and wildlife:</u> The big game winter range values are not unique or of more than local importance. While there is high quality big game habitat in a portion of the nominated ACEC (e.g., Jarbidge Foothills, Diamond A, and the Jarbidge and Clover Creek Canyons), the high quality habitat is present on less than 20% of the area following the 2007 Murphy Complex Fires. High quality big game habitat is present south into Nevada and west of the Bruneau Canyon.</p> <p>In addition, the assemblage of fish within the nominated ACEC is not unique or of more than local importance. Stocked and non-native fish are present in several major drainages.</p>	<p>No</p>
<p>Natural System or Process</p>	
<p><u>Slickspot peppergrass:</u> (Factors met: 1, 2) Slickspot peppergrass is of more than local importance; however, this species is found in only a small portion (<10%) of the area. Slickspot peppergrass is a Type 1 BLM Sensitive species that has been Proposed for listing as Endangered under the ESA. The nominated ACEC encompasses the known occupied slickspot peppergrass habitat within the planning area and the largest contiguous habitat within the range of the species. The Jarbidge population of slickspot peppergrass is the most genetically diverse of the known slickspot peppergrass populations.</p> <p>Slickspot peppergrass is one of the few flowering plant species with two life cycle types: annual and biennial. Slickspot peppergrass is highly specific to slickspots that developed on remnant Pleistocene surfaces (Fisher, et al., 1996). Slickspots, also known as mini-playas or natric sites, are small soil inclusions with a silt loam surface crust, a restrictive hardpan, and a subsurface clay layer (argillic horizon) (Fisher, et al., 1996; Lewis & White, 1964; Sandoval, et al., 1959). Soils in slickspots tend to be more alkaline or saline than the adjacent uplands. Slickspots can range in size from a square foot to interlinked complexes over 900 square feet. Slickspots are associated with shrub interspaces in sagebrush steppe and are visually distinct, due to their high reflectance and sparsely vegetated surface (Fisher, et</p>	<p>Yes</p>

<p>al., 1996).</p> <p>Physical disturbance of slickspots when they are wet can disrupt underlying soil structure essential for slickspot peppergrass recruitment (Meyer, et al., 2006). Disturbances include livestock hoof prints, drill seeding, fire-fighting activities (e.g., fire lines), and cross-country motorized vehicle tracks (Meyer, et al., 2005, 2006). Repeated and severe penetrating disturbances, especially during saturated soil conditions during the spring, may be precursors to slickspot invasion by non-native species (e.g., bur buttercup, clasping-leaf pepperweed), further reducing slickspot integrity (FWS, 2003). Degradation of slickspot peppergrass habitat has been attributed to large, uncharacteristic wildland fires; conversion of sagebrush steppe to non-native annual grasslands; historic livestock grazing levels; and historic fire rehabilitation practices (e.g., drill seeding) (Colket, 2005; FWS, 2003; Lesica & DeLuca, 1996; Moseley, 1994; Noss, et al., 1995; Peters & Bunting, 1994; Whisenant, 1990). Habitat loss and degradation, fragmentation, and population isolation may correspondingly result in the loss of genetic fitness (Moseley, 1994; Reed & Frankham, 2003). Many slickspot peppergrass EOs occur in fragmented sagebrush steppe or non-native annual grasslands and are highly susceptible to reduced genetic diversity and gene flow (I. Robertson, 2004; I. C. Robertson & Klemash, 2003). An EO is a specific geographic location where “a species or natural community is, or was, present” (NatureServe, 2002).</p> <p>Slickspot peppergrass also meets relevance and importance criteria in both boundaries of the nominated Inside Desert ACEC, both of which are encompassed by the nominated Sagebrush Sea ACEC.</p>	
<p><u>Davis peppergrass:</u> (Factors met: 1, 2) Davis peppergrass is of more than local importance; however, this species is found in only a small portion (<10%) of the area. Davis peppergrass, a Type 3 BLM Sensitive species, is limited in its distribution to portions of southeastern Oregon, south-central Idaho, and north central Nevada, with the majority of known populations occurring in Idaho. There are fewer than 300 populations in six distinct clusters or distribution centers. The Bruneau-Jarbidge populations are a population stronghold, whereas the Mountain Home populations (outside the planning area) show downward trend due to poor ecological condition of the sagebrush steppe ecosystem. The remaining populations outside the planning area in Idaho, Oregon, and Nevada are currently stable.</p> <p>Davis peppergrass also meets relevance and importance criteria in the expanded boundaries of the Bruneau-Jarbidge ACEC, which is encompassed by the nominated Sagebrush Sea ACEC.</p>	Yes
<p><u>Bruneau River phlox:</u> (Factors met: 1, 2) Bruneau River phlox is of more than local importance; however, this species is found in only a small portion (<10%) of the area. Bruneau River phlox is a Type 3 and NV BLM Sensitive species endemic to the area. All six Idaho populations are present in the Bruneau and Jarbidge Canyons; five of these are within the nominated ACEC. Two additional populations can be found in Nevada. Bruneau River phlox has a total estimated population of 500 plants. The Idaho populations are relatively stable. The only threats are damming the Bruneau or Jarbidge Rivers and annual weed invasion.</p> <p>Bruneau River phlox also meets relevance and importance criteria in the existing and two nominated boundaries of the Bruneau-Jarbidge ACEC and the nominated Lower Bruneau Canyon ACEC; the existing and two nominated boundaries of the Bruneau-Jarbidge ACEC are encompassed by the nominated Sagebrush Sea ACEC.</p>	Yes
<p><u>Other special status plants:</u> Other special status plants occur in the area, but are not of more than local importance.</p>	No
<p><u>Upland vegetation:</u> The area nominated would encompass large blocks habitat for multiple species of concern. Portions of the nominated ACEC contain examples of late seral and potential natural community for a number of range sites. However, the majority of the native plant communities have been highly fragmented by wildland fire and previous non-native perennial seeding projects. There are other better examples of intact sagebrush steppe communities outside of the planning area. Native plant communities within the nominated ACEC as well as outside the planning area face similar threats.</p> <p>The nominated Sagebrush Sea ACEC encompasses both boundaries of the nominated Jarbidge Foothills ACEC and the existing Salmon Falls Creek ACEC, all of which have upland vegetation values that do meet relevance and importance criteria.</p>	No

<p><u>Riparian systems</u>: Most of the streams within the planning area have been substantially altered through diversions on non-BLM-managed land and are not of more than local importance.</p> <p>The nominated Sagebrush Sea ACEC encompasses the existing and two nominated boundaries of the Bruneau-Jarbidge ACEC, all of which have riparian values that do meet relevance and importance criteria.</p>	No
Natural Hazard	
N/A	N/A

The nominated ACEC meets the relevance and importance criteria to be considered as a potential ACEC. The rationale for proposing the nominated Sagebrush Sea ACEC for designation (under Alternative V) as an ACEC is as follows:

The nominated ACEC meets relevance and importance criteria for cultural values, fish and wildlife resources (bull trout, redband trout, spotted frog, sage-grouse, bighorn sheep), and natural systems or processes (special status plants).

Existing and potential threats to the relevant and important values within the nominated ACEC include wildland fire, noxious weeds and invasive plants, diversion of streams, and a variety of uses, including livestock grazing and energy development. These threats may contribute to the alteration and fragmentation of upland and riparian habitats.

Wildland fires are a threat to the relevant and important values in the ACEC, through the effects of the fire itself as well as the effects of wildland fire suppression activities. Since the 1970s, wildland fires have reduced the amount of sagebrush habitat present in the planning area by roughly two-thirds. Throughout the West as well as locally, habitat conversion and fragmentation in part due to wildland fire have contributed to declining sage-grouse numbers and the loss of leks. Wildland fires and subsequent rehabilitation also has altered habitat in the majority of slickspot peppergrass habitat in the planning area. Drill seeding following fires from the 1980s through the 1990s converted large portions of slickspot habitat to non-native perennial communities. Soil erosion and deposition following wildland fires as well as the construction of fire lines in slickspot habitat are also threats to slickspot peppergrass. Davis peppergrass is similarly affected by wildland fire.

Noxious weeds and invasive plants are also a threat to the relevant and important values within the ACEC. These species have affected upland habitat for sage-grouse, bighorn sheep, slickspot peppergrass, Davis peppergrass, and Bruneau River phlox, as well as riparian habitats for bull trout, redband trout, and spotted frog.

Alterations of riparian systems primarily are a threat to bull trout, redband trout, and spotted frog. Wildland fires that burn the riparian zone can reduce the amount of large wood and streambank shade and increase sediment to the stream, affecting bull trout, which require cold clean water with low amounts of sediment in stream gravels for spawning and rearing. Dams and diversions of streams to irrigate private land have resulted in the dewatering of portions of some streams, contributing to the fragmentation of redband trout habitat. This has reduced the ability of redband trout to move between streams. Threats to spotted frog include loss of habitat due to down cutting of streams, lowered water table, habitat fragmentation, and sediment from roads on steep gradients.

Several uses are potential threats to the relevant and important values within the nominated ACEC. Generally, surface-disturbing activities that remove vegetation or create corridors for the introduction and spread of noxious weeds and invasive species would negatively affect the relevant and important values. The physical integrity and the cultural values attached to many archaeological sites are threatened by increasing levels of use and development as well, particularly increasing levels of cross-country motorized vehicle use. ROW development, including wind energy, has the potential to affect upland and riparian habitats as well as cultural resources due to increased human activity and habitat fragmentation and loss.

Livestock grazing also can negatively affect upland and riparian habitats. Livestock grazing in slickspot peppergrass habitat can result in trampling of slickspots and plants when the soils are moist. In some

instances, range infrastructure can present a threat to slickspot peppergrass through increased trampling around water sources and trailing along fences; these actions can also result in the spread of invasive plants, further impacting the species. In other cases, properly located fences could help protect concentrations of slickspots from the impacts of livestock grazing. Livestock grazing also presents a threat to Davis peppergrass. Livestock trailing/trampling in occupied playas results in seed being buried too deep for germination and growth and damages the perennial plants. Stock ponds dug in playas may alter the hydrology and contribute to the invasion of invasive species. Livestock congregating in or near playas also impacts cultural resources associated with playas.

Portions of the nominated ACEC are included in three WSAs: the Bruneau River-Sheep Creek, the Jarbidge River, and the Lower Salmon Falls Creek WSAs. These areas would also be managed according to the IMP. However, if the WSAs were to be released to multiple-use management by Congress, the IMP would no longer apply.

River segments within the nominated ACEC that have been recommended suitable for designation as WSRs include the Bruneau River from Blackrock Pocket to Hot Creek and the Jarbidge River from the Jarbidge Forks to the Bruneau River confluence. ORVs for these segments include cultural, fish, geological, recreational, scenic, vegetation, and wildlife values. The ACEC also contains portions of river segments inventoried as eligible for inclusion in the NWSRS (ORVs included in parentheses): Jarbidge River south of the Jarbidge Forks (scenic, fish), the East Fork of the Jarbidge River (fish), Cougar Point Creek (scenic), Dave Creek (fish), Rocky Canyon Creek (wildlife), Salmon Falls Creek south of Salmon Falls Reservoir (recreation), and Salmon Falls Creek from Salmon Falls Creek Dam to Balanced Rock (geological, recreational, scenic). Interim management of these segments requires that they be managed to maintain or enhance their ORVs. However, the WSR corridor only extends 0.25 miles above the high water mark on each side of the river, which does not provide any protection for these values outside this corridor.

If the nominated ACEC meets the relevance and importance criteria, list the relevant and important value(s) that need special management attention and describe the management prescriptions necessary to protect those values.

The cultural values, fish and wildlife resources (bull trout, redband trout, spotted frog, sage-grouse, bighorn sheep), and natural systems or processes (special status plants) of the ACEC would be protected through the following allocations and management actions:

- All actions within the portions of the ACEC that are also within WSAs must be consistent with the IMP and with allocations and management actions made for WSAs.
- Improving, expanding, connecting, and restoring native plant communities through active and passive treatments for fuels, noxious weeds, invasive species, and non-native perennial plant communities would be a high priority within the ACEC.
- Implement management actions that improve riparian condition and reduce habitat fragmentation in redband trout occupied streams.
- Within 1 mile of bighorn habitat, use of domestic sheep or goats to reduce noxious weeds would not be allowed to eliminate potential contact of domestic sheep/goats with bighorn.
- Treatments would include only native plants. Special stipulations would apply for treatments in occupied slickspot and Davis peppergrass habitats, such as establishing buffer areas and not allowing aerial spraying in occupied habitat.
- Restore playas occupied by Davis peppergrass to improve natural hydrologic function and habitat on a case by case basis. Restoration activities may include filling pit reservoirs, stabilizing erosion areas, and planting native species with similar pollinators.
- BLM management activities and authorized uses would result in no net loss of native vegetation; this restriction would not apply to fire suppression activities.
- Manage the majority of the ACEC as VRM Class III, where not otherwise designated VRM Class I or II (see the *Visual Resources* section of Chapter 2).
- The ACEC would be a Critical Suppression Area.
- Livestock grazing would be at a reduced level of use.

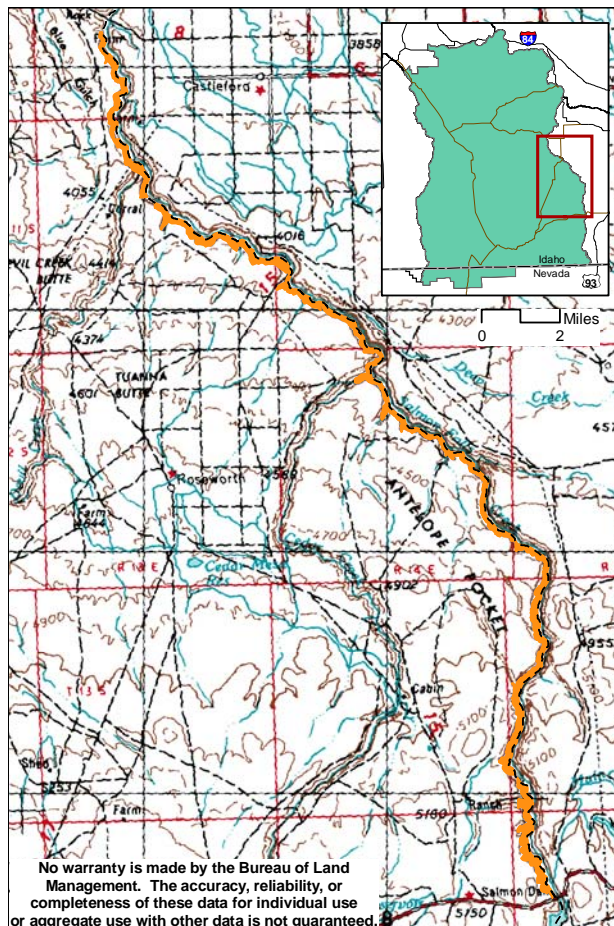
- Livestock seasons of use or stocking rates would be adjusted within the ACEC on a pasture-specific basis to minimize conflicts with bighorn lambing and sage-grouse breeding and nesting periods (see Appendix H) and the active growing period of native grasses.
- Reduce livestock infrastructure and associated routes to amounts appropriate to ACEC objectives and the levels of livestock grazing within the ACEC. Livestock water troughs, corrals or other related livestock facilities in reference areas within the ACEC would be removed. Pipelines would remain in the ground to minimize disturbance.
- Monitor recreational use within the ACEC. If this use reaches levels that impair the relevant and important values of the ACEC, implement protective measures appropriate to the type of recreational activity. Protective measures may include but not be limited to designating camping areas within the ACEC; requiring the use of certified weed-free forage and straw; and installing protective barriers to protect relevant and important values.
- Routes would be designated through the CTTMP to increase core habitat size for sage-grouse.
- The ACEC would be a ROW avoidance area; new ROWs would be restricted to ROW corridors and locations of existing ROWs.
- Lands within the ACEC would be in Land Tenure Zone 1. Where practical, acquire private and State inholdings. The ACEC designation and management would apply to lands acquired within the ACEC boundary.
- The ACEC would be available for salable mineral development; where practical, use existing mineral pits and minimize new salable mineral developments within the ACEC. Seasonal closures that restrict use or activities at the pits during important seasonal periods for fish and wildlife may be included when existing salable mineral permits are reauthorized and in new permits.

Salmon Falls Creek ACEC

Salmon Falls Creek ACEC is an existing ACEC. The existing ACEC was re-nominated; one alternate boundary for the ACEC was nominated as well. The area encompassed by the existing boundary is presented first, followed by the area encompassed by the nominated extensions to the existing boundary.

Existing ACEC

- Nominated ACEC: Salmon Falls Creek ACEC (existing ACEC boundary)
- Nominated by: The existing ACEC was re-nominated by BLM in accordance with BLM Manual 1613, *Areas of Critical Environmental Concern*, Section .21A.1.
- The existing ACEC was also re-nominated by WWP.
- Location: This ACEC encompasses 3,000 acres of BLM-managed land. The ACEC is located along Salmon Falls Creek from the Jarbidge FO boundary to the west canyon rim, extending from the Balanced Rock Crossing Park south to the private land by Salmon Falls Creek Dam.
- The ACEC is contained within the nominated Sagebrush Sea ACEC.



Note: this ACEC designation continues to the east canyon rim of Salmon Falls Creek in the Burley FO; however, this portion of the ACEC is not within the current planning area. As a result, the designation and management of the Burley FO portion of the ACEC will not be addressed in the Jarbidge RMP.

Relevance: Does the area contain a significant historic, cultural or scenic value; fish or wildlife resource; natural process or system; or natural hazard?	Yes or No
Historic Value	
No significant historic values are associated with the ACEC.	No
Cultural Value	
Several archaeological sites that may be eligible for the National Register of Historic Places are located within the ACEC. In addition to their scientific value, these sites are of traditional cultural importance to the tribes.	Yes
Scenic Value	
The canyon has impressive scenery. In some areas, basalt lava flows are separated by layers of sediment. Other areas of the canyon are dominated by rhyolite columns and spires. A few springs on the lower portion of canyon walls provide a contrast with the dominant upland vegetation.	Yes
Fish or Wildlife Resource	
<u>Redband trout</u> : Salmon Falls Creek supports a population of redband trout, a Type 2 BLM Sensitive species.	Yes
<u>Other wildlife</u> : The canyon supports a variety of special status species, including prairie falcon (Type 4), spotted bat (Type 3), and Townsend’s big-eared bat (Type 3 and NV). Other wildlife values associated with the ACEC include habitat for a variety of canyon-nesting species, including canyon wren, cliff swallow, rock wren, violet-green swallow, and white-throated swift. Waterfowl nest in the lower-gradient reaches. Raptors found in the canyon include American kestrel, golden eagle, great horned owl, long-eared owl, red-tailed hawk, and western screech owl. Mule deer reside in the canyon and on the plateau adjacent to the canyon rim.	Yes
Natural System or Process	
<u>Upland vegetation</u> : The canyon has upland plant communities at or near the Potential Natural Community, including Wyoming big sagebrush/bluebunch wheatgrass sites and some late seral riparian zones. The entire area has been ungrazed since the 1987 Jarbidge RMP was completed; the area south of the confluence with Cedar Creek also received no livestock grazing prior to 1987 due to natural barriers (e.g., boulder fields, cliffs, talus slopes). The upland plant communities have been relatively undisturbed overall.	Yes
<u>Riparian system</u> : Natural streamflow processes have been disrupted by dams on Cedar Creek and Salmon Falls Creek on non-BLM-managed lands.	
Natural Hazard	
No significant natural hazards identified	No
Importance: Does the value, resource, system, process, or hazard meet one or more of the following importance factors:	
<ol style="list-style-type: none"> 1. has more than locally significant qualities that give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource; 2. has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change; 3. has been recognized as warranting protection to satisfy national priority concerns or to carry out the mandates of FLPMA; 4. has qualities that warrant highlighting to satisfy public or management concerns about safety and public welfare; or 5. poses a significant threat to human life and safety or to property? 	Yes, No, or N/A
Historic Value	
N/A	N/A
Cultural Value	
The cultural resources within the ACEC are significant but generally not rare or unique for the region.	No

Scenic Value	
(Factors met: 1, 2) The ACEC contains the easternmost deep canyon in Idaho, making it more than locally significant, relatively unique for the south-central portion of the state, and irreplaceable. The scenic values of Salmon Falls Creek ACEC are strongly influenced by the geology of the area and the high quality of the native vegetation communities.	Yes
Fish or Wildlife Resource	
<u>Redband trout:</u> (Factor met: 2): The redband trout population within the ACEC is especially fragile, given that it is an isolated population in poor habitat. The flow alteration within the canyon has resulted in a high degree of sedimentation (see the discussion for <i>Riparian system</i> below).	Yes
<u>Other wildlife:</u> Other wildlife values are not more than locally significant. Big game wintering in the area is primarily of local interest, and canyons and adjacent upland plateaus throughout the planning area are used by wintering wildlife. Several special status species are present; however, due to the relatively small size of the area and the wide distribution of those species, the populations within the ACEC are not of more than local interest. The other wildlife that use the canyon as habitat are found in other larger canyon systems within the planning area and region.	No
Natural System or Process:	
<u>Upland vegetation:</u> (Factor met: 2) The upland vegetation communities within the canyon are unique because they are relatively undisturbed and have been relatively unaffected by humans. The lands have not been grazed by livestock, and over 95% of the ACEC has not burned in the last 20 years. There are no travel routes within the canyon, and recreational use of the area is low. There are few areas within southern Idaho, especially that are close to human population centers, where human uses are not the primary forces influencing the vegetation community.	Yes
<u>Riparian system:</u> The riparian system is not more than locally significant or unique. Flow alteration has generally eliminated flushing flows, enhancing the collection of sediment in portions of the canyon. The lack of flushing flows has reduced the quality of the aquatic habitat for redband trout. Invasive species including reed and reed canarygrass are expanding, adversely impacting native riparian vegetation.	No
Natural Hazard	
N/A	N/A

The ACEC meets the relevance and the importance criteria to continue to be considered as an ACEC. The rationale for proposing the Salmon Falls Creek ACEC for continued designation (under Alternatives I and III) as an ACEC is as follows:

The nominated ACEC meets relevance and importance criteria for scenic values, fish resources (redband trout), and natural systems or processes (upland vegetation).

Existing and potential threats to the relevant and important values within the ACEC include wildland fire, expansion of noxious weeds and invasive plants, mineral exploration and development, livestock grazing, and utility corridors.

Wildland fire is a threat to both the scenic values and the native vegetation communities within the ACEC. In the last 20 years, only 100 acres within the ACEC have burned. Wildland fire that negatively impacts the native upland vegetation also impairs the scenic quality, particularly if the burned area becomes dominated by cheatgrass.

Noxious weeds and invasive plants have impacted the quality of the redband trout habitat, as well as the upland vegetation communities and the scenic values. Noxious weeds and invasive species known to be present include reed, reed canary grass, Russian olive, Canada thistle, bull thistle, and cheatgrass.

Activities related to mineral exploration and development have the potential to threaten the scenic quality of the area as well as the native vegetation communities; roads associated with these activities may increase sedimentation in redband trout habitat as well. There are currently two active mining claims within the ACEC. Gold mining activity on BLM-managed land immediately south of Lily Grade in the 1990s caused damage to the area by promoting the invasion of cheatgrass.

Livestock grazing has the potential to threaten the scenic values and native vegetation communities within the ACEC as well. The ACEC was closed to livestock grazing in the 1987 Jarbidge RMP. However, prior to 1987, the portion of the ACEC north of Cedar Creek was grazed, which contributed to the introduction and spread of invasive plants.

Utility corridors threaten the scenic values of the ACEC. Currently, there are few utility lines that cross the ACEC north of the WSA; additional lines would impair the scenic values of the canyon.

The ACEC from Lily Grade to about 1 mile north of Salmon Falls Creek Dam is within the Lower Salmon Falls Creek WSA; these areas would also be managed according to the IMP. However, if the WSA were to be released to multiple-use management by Congress, the IMP would no longer apply.

The segment of Salmon Falls Creek within the ACEC has been inventoried as eligible for inclusion in the NWSRS. ORVs for this segment include scenic, recreational, and geological values. Interim management of this segment requires that it be managed to maintain or enhance its ORVs. However, the WSR corridor only extends 0.25 miles above the high water mark on each side of the river, which does not provide any protection for these values outside the Wild and Scenic corridor.

If the nominated ACEC meets the relevance and importance criteria, list the relevant and important value(s) that need special management attention and describe the management prescriptions necessary to protect those values.

The scenic values, fish resources (redband trout), and natural processes or systems (upland vegetation) of the ACEC would be protected through the following allocations and management actions:¹⁸

- All actions within the portion of the ACEC that is also a WSA must be consistent with the IMP and with allocations and management actions made for WSAs.
- Restore vegetation within the riparian area to benefit redband trout habitat (e.g., increasing shade in the riparian zone).
- Native species would be used for any vegetation treatments within the ACEC, including for Emergency Stabilization and Burned Area Rehabilitation.
- The ACEC would be a high priority for noxious weeds and invasive species treatment with integrated weed management techniques for control, containment, and where possible eradication.
- The ACEC would be a Critical Suppression Area.
- MIST would be used to suppress wildland fires within the ACEC.
- Manage the portion of the Jarbidge ROW corridor within the ACEC as VRM Class III; manage the remainder of the ACEC as VRM Class I.
- The ACEC would remain closed to livestock grazing.
- Monitor recreational use within the ACEC. If this use reaches levels that impair the relevant and important values of the ACEC, implement protective measures appropriate to the type of recreational activity.
- The ACEC north and south of Lily Grade crossing would remain closed to motorized vehicle use.
- The ACEC would remain a ROW avoidance area; new ROWs would be restricted to the Jarbidge ROW corridor and locations of existing ROWs.
- Lands within the ACEC would be in Land Tenure Zone 1.
- The ACEC would be closed to mineral leasing.
- The ACEC would remain closed to salable mineral development.
- Recommend lands within the ACEC for withdrawal from mining laws for locatable exploration and development.

¹⁸ Under the No Action Alternative, the ACEC would be managed as described in the *Areas of Critical Environmental Concern* section of Chapter 2.

Extension to the Existing ACEC

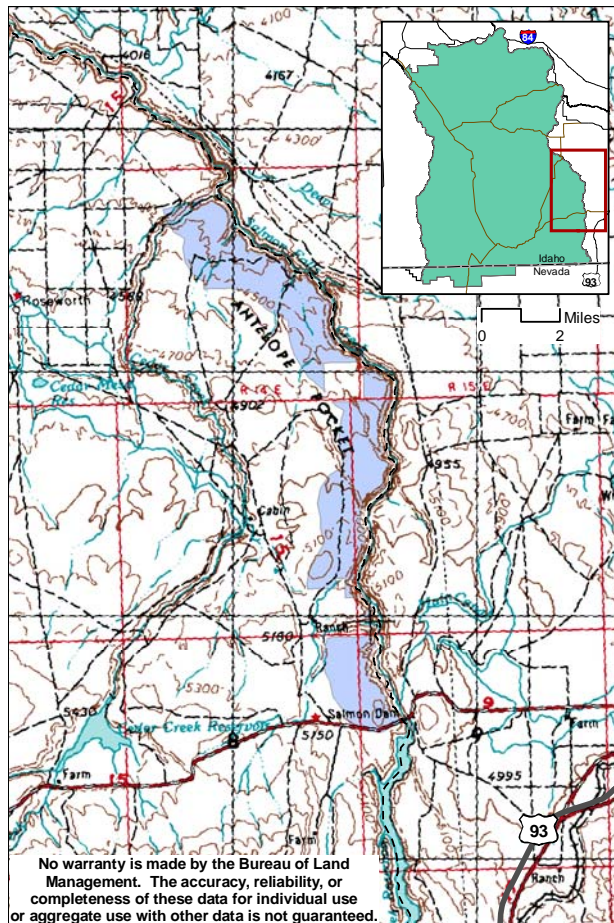
Nominated ACEC: Extensions to the existing Salmon Falls Creek ACEC

Nominated by: An area 1 mile west of the west rim of Salmon Falls Creek Canyon between Salmon Falls Creek Dam and the Cedar Creek confluence was nominated by BLM to be included in the existing Salmon Falls Creek ACEC; IDFG suggested BLM consider special management for mule deer wintering in the area.

WWP requested that "future expansion of these areas [current ACECs] be considered," although no specific boundary for expanding the existing ACECs was identified.

Location: The nominated extension would encompass 10,000 acres of BLM-managed land. The nominated extension would be located along Salmon Falls Creek from the Cedar Creek confluence to the private land by Salmon Falls Creek Dam and would extend from the west canyon rim to one mile to the west.

The nominated extension is contained within the nominated Sagebrush Sea ACEC.



The analysis documented below assessed whether the extension contributed to relevant and important values of the existing ACEC or contained new relevant and important values. The analysis focused only on the values within the nominated extension; for information on the values within the existing ACEC, see the *Existing ACEC* section.

Relevance: Does the area contain a significant historic, cultural or scenic value; fish or wildlife resource; natural process or system; or natural hazard?	Yes or No
Historic	
The upland extension includes segments of the regionally significant Toana Freight Road.	Yes
Cultural	
Several archaeological sites that may be eligible for the National Register of Historic Places are located within the nominated extension to the existing ACEC. In addition to their scientific value, these sites are of traditional cultural importance to the tribes.	Yes
Scenic	
The upland extension offers little in terms of scenery.	No
Fish or Wildlife Resource	
The upland plateau provides year-round habitat for sage-grouse (Type 2 BLM Sensitive). At least one sage-grouse lek is within the nominated extension to the existing ACEC. The area is important winter range for both mule deer and pronghorn. Mule deer from the southern portion of the planning area are funneled to the area by Cedar Creek and Salmon Falls Creek Canyons.	Yes
Natural System or Process	
The upland plateau supports a mix of native shrub and non-native perennial communities and is grazed by livestock. Water pipelines and accompanying roads are present. Water pipelines have increased livestock distribution in much of the plateau area.	No
Natural Hazard	
No significant natural hazards identified	No
Importance: Does the value, resource, system, process, or hazard meet one or more of the following importance factors:	
<ol style="list-style-type: none"> 1. has more than locally significant qualities that give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource; 2. has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change; 3. has been recognized as warranting protection to satisfy national priority concerns or to carry out the mandates of FLPMA; 4. has qualities that warrant highlighting to satisfy public or management concerns about safety and public welfare; or 5. poses a significant threat to human life and safety or to property? 	Yes, No, or N/A
Historic Value	
Only a small segment of the Toana Freight Road falls within the nominated extension to the existing ACEC.	No
Cultural Value	
The cultural resources within the nominated extension to the existing ACEC are significant but generally not rare or unique for the region.	No
Scenic Value	
N/A	N/A
Fish or Wildlife Resource	
The wildlife values are not more than locally significant. Big game wintering in the area are primarily of local interest.	No
Natural System or Process	
N/A	N/A
Natural Hazard	
N/A	N/A

The nominated extension to the existing ACEC meets the relevance, but not the importance criteria, and will not be considered as a potential extension to the existing ACEC. The BLM's rationale for not proposing the nominated extension to the Salmon Falls Creek ACEC for designation as part of the Salmon Falls Creek ACEC is as follows:

Although the nominated extension contains big game winter range, some key sage-grouse habitat, and some historic and cultural values, these values are not more than of local importance. Salmon Falls Creek Canyon itself contains the majority of the resource values that are of more than local importance.

List the management prescription(s) necessary to maintain and protect each relevant and important value.

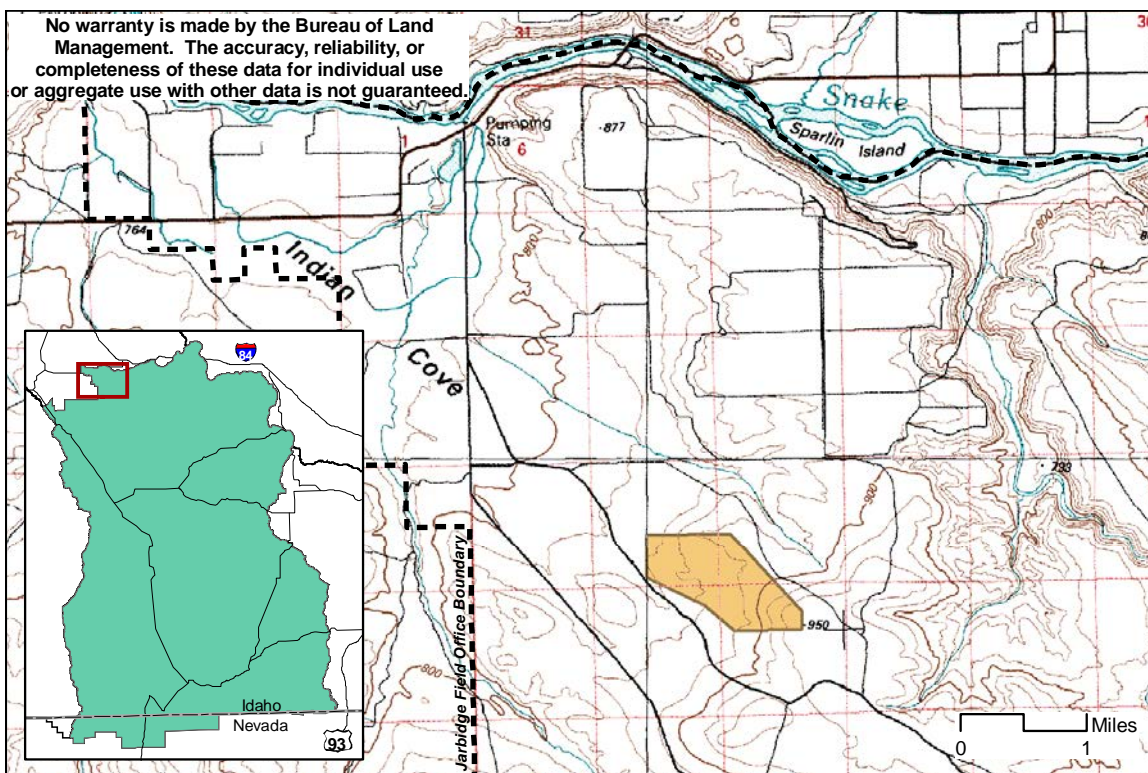
Not applicable, since the nominated area does not meet relevance and importance criteria for potential designation.

Sand Dunes ACEC

Nominated ACEC: Sand Dunes ACEC

Nominated by: The Sand Dunes ACEC was nominated by WWP.

Location: The Sand Dunes ACEC would encompass 400 acres of BLM-managed land. The nominated ACEC would encompass the historic Bruneau Dunes tiger beetle habitat within the planning area, located near the Browns Creek Drainage approximately 7 miles from the Bruneau Dunes State Park.



Relevance: Does the area contain a significant historic, cultural or scenic value; fish or wildlife resource; natural process or system; or natural hazard?	Yes or No
Historic	
No historic values identified	No
Cultural	
No cultural values identified	No
Scenic	
No scenic values identified	No

Fish or Wildlife Resource	
<p>The nominated ACEC contains a small, isolated duneland habitat that was occupied by Bruneau Dunes tiger beetles (Type 2 BLM Sensitive) (C. W. Baker, Munger, McCauley, Olson, & Stevens, 1994). Tiger beetles were last documented in the nominated ACEC in 1998 (Charles W. Baker & Munger, 2000). Idaho CDC has not found larval burrows or adults in the nominated ACEC since that date (B. Bosworth, pers. comm., 2009); thus, as of this review, the tiger beetle population in the planning area appears to have been extirpated. Monitoring conducted in the 1990s indicated this species was declining since the early 1990s (Charles W. Baker & Munger, 2000).</p> <p>A permanent water trough was installed about 0.3 miles from tiger beetle habitat in an area where water was previously hauled for seasonally grazing sheep and cattle. Trailing by cattle increased in larval habitat as a result of the more permanent water source. Bauer reported that livestock trampling collapsed burrows and increased larval tiger beetle mortality (1991). In addition, the tiger beetle habitat within the nominated ACEC has been invaded by cheatgrass and Russian thistle (Charles W. Baker & Munger, 2000) and planted with crested wheatgrass, reducing habitat for tiger beetle larvae. Even with restoration of the vegetation, beetles would not likely reappear on their own, but would have to be transplanted.</p> <p>The nominated ACEC is approximately 7 miles east of Bruneau Dunes State Park, which contains the entire global distribution for this narrow endemic.</p>	No
Natural System or Process	
The sand dunes have been stabilized with crested wheatgrass. The area is now more blowing sand than a significant dune feature.	No
Natural Hazard	
No significant natural hazards identified	No

<p>Importance: Does the value, resource, system, process, or hazard meet one or more of the following importance factors:</p> <ol style="list-style-type: none"> has more than locally significant qualities that give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource; has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change; has been recognized as warranting protection to satisfy national priority concerns or to carry out the mandates of FLPMA; has qualities that warrant highlighting to satisfy public or management concerns about safety and public welfare; or poses a significant threat to human life and safety or to property? 	Yes, No, or N/A
Historic Value	
N/A	N/A
Cultural Value	
N/A	N/A
Scenic Value	
N/A	N/A
Fish or Wildlife Resource	
N/A	N/A
Natural System or Process	
N/A	N/A
Natural Hazard	
N/A	N/A

The nominated ACEC does not meet the relevance or importance criteria and will not be considered as a potential ACEC. The BLM's rationale for not proposing the nominated Sand Dunes ACEC for designation is as follows:

Although the nominated ACEC contains the area historically occupied by Bruneau Dunes tiger beetle, no evidence of this species (i.e., adults, larvae, or burrows) has been found within the last several years. The criteria for relevance requires the area contain a significant wildlife resource; at this time, there is no evidence this area still contains this species.

List the management prescription(s) necessary to maintain and protect each relevant and important value.

Not applicable, since the nominated area does not meet relevance and importance criteria for potential designation.

Sand Point ACEC

Sand Point ACEC is an existing ACEC. The existing ACEC was re-nominated with a nominated extension on land acquired adjacent to the existing ACEC. The analysis documented below considers both the existing ACEC and the nominated extension.

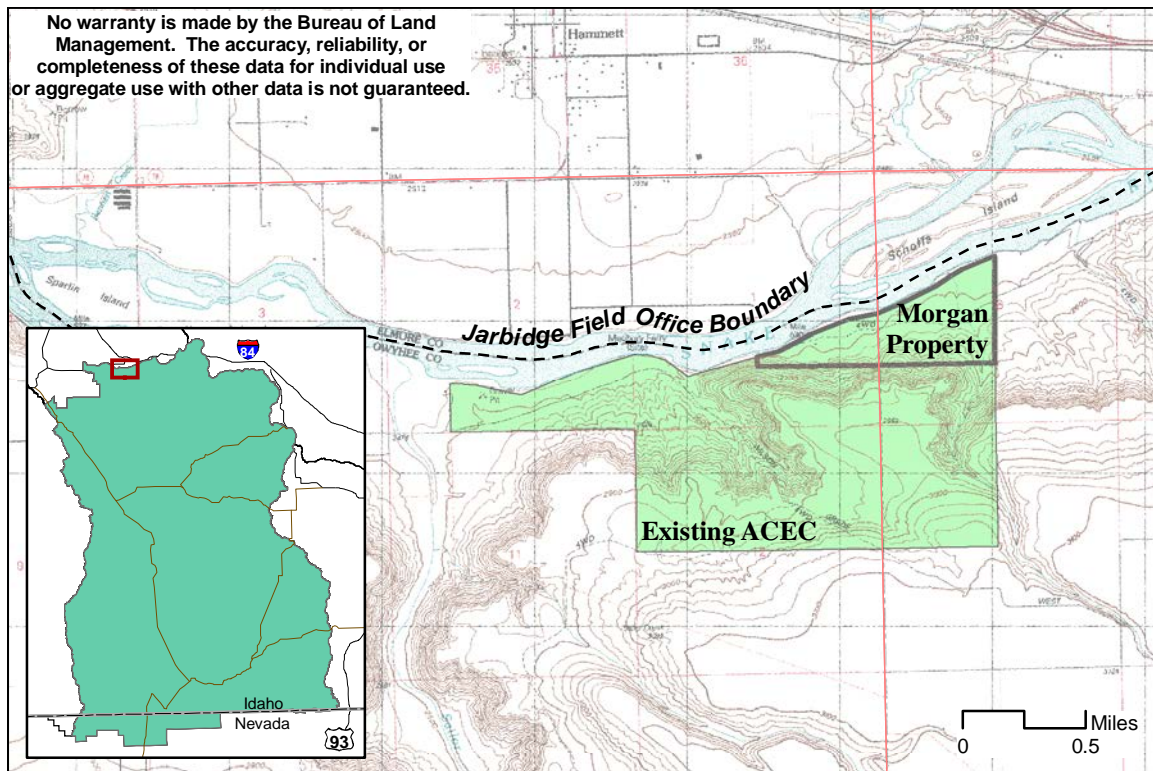
Nominated ACEC: Sand Point ACEC (existing ACEC plus the Morgan property extension)

Nominated by: The existing ACEC was re-nominated by BLM in accordance with BLM Manual 1613, *Areas of Critical Environmental Concern*, Section .21A.1.; BLM also nominated the Morgan property to be added to the existing ACEC. The Morgan property was acquired by BLM using Land and Water Conservation Fund funds in 2002; this property is adjacent to the existing ACEC. This land was acquired because the relevant and important values in the existing ACEC extended onto this property and the previous landowner wanted these values preserved.

The existing ACEC was also re-nominated by WWP. WWP also requested that “future expansion of these areas [current ACECs] be considered,” although no specific boundary for expanding the existing ACECs was identified.

Location: This ACEC would encompass 950 acres of BLM-managed lands; 800 acres are in the existing ACEC; 150 acres are in the Morgan property extension.

The ACEC is located south of the Snake River near Hammett, Idaho. The ACEC extends from the high water mark along the Snake River about 0.25 to 0.75 miles south into the upland plateau.



Relevance: Does the area contain a significant historic, cultural or scenic value; fish or wildlife resource; natural process or system; or natural hazard?	Yes or No
Historic Value	
The existing ACEC contains 1.3 miles of Oregon National Historic Trail (NHT) ruts and the south bank landing for the Medbury Ferry. The Morgan property extension would add 1 mile of Oregon NHT and the historic Morgan cabin to the ACEC.	Yes
Cultural Value	
Several large prehistoric archaeological sites are located within the existing ACEC and the Morgan property extension.	Yes
Scenic Value	
The breaks from the upland plateau down to the floodplain offer some topographic relief that has scenic value. Scenic values are not outstanding. Russian olive and other non-native plants have invaded the riparian zone. As a result of a wildland fire in the early 1980s, substantial portions of the uplands are now dominated by non-native annuals and perennial grasses.	No
Fish or Wildlife Resource	
The existing ACEC contains 1.3 miles of Snake River riparian zone; the Morgan property extension would add 1.1 miles of Snake River riparian zone. The riparian zone has a few trees used as perches for wintering bald eagles, which were officially delisted in 2007; bald eagles are still considered a Type 2 BLM Sensitive species. Terrestrial plant communities within the existing ACEC and the Morgan property extension support nesting habitat for both long-billed curlew and burrowing owls. Several thousand waterfowl are known to winter all along the Snake River, including within the existing ACEC and the Morgan property extension.	Yes
Natural System or Process	
<u>Paleontologic and geologic resources:</u> The Sand Point area, including the existing ACEC and the Morgan property extension, contains one of the largest concentrations of Blancan age (3 million years old) freshwater snail and clam fossils in the United States. The scientific importance of the Sand Point fossils and their geologic context has been recognized since their original discovery in 1902. Fish and mammal fossils are also present. The Sand Point fluvial deposits are composed of brownish gray, thick bedded sands with minor amounts of interbedded silt and clay. The Morgan property extension would add two known paleontological sites to the existing ACEC.	Yes
<u>Special status plants:</u> Two BLM Sensitive plant species occur in the existing ACEC: Janish penstemon (Type 3) and Snake River milkvetch (Type 4).	Yes
Natural Hazard	
No significant natural hazards are in the area.	No
Importance: Does the value, resource, system, process, or hazard meet one or more of the following importance factors:	
<ol style="list-style-type: none"> 1. has more than locally significant qualities that give it special worth, consequence, meaning, distinctiveness, or cause for concern, especially compared to any similar resource; 2. has qualities or circumstances that make it fragile, sensitive, rare, irreplaceable, exemplary, unique, endangered, threatened, or vulnerable to adverse change; 3. has been recognized as warranting protection to satisfy national priority concerns or to carry out the mandates of FLPMA; 4. has qualities that warrant highlighting to satisfy public or management concerns about safety and public welfare; or 5. poses a significant threat to human life and safety or to property? 	Yes, No, or N/A
Historic Value	
(Factors met: 1, 2, 3) The area contains a 2.3-mile section of the Oregon NHT. This site represents a unique opportunity to protect culturally and historically significant sites that have been damaged or destroyed in other areas through development and agricultural use.	Yes

Cultural Value	
(Factors met: 1, 2, 3) The existing ACEC and the Morgan property extension contain archaeological sites in a riverside setting that meet National Register eligibility criteria. Their importance is enhanced because most similar sites in the region are in private ownership and have been altered by agricultural development.	Yes
Scenic Value	
N/A	N/A
Fish or Wildlife Resource	
For wildlife resources, the area identified is small in relation to the Snake River. The existing ACEC and the Morgan property extension represents only a small fraction of range-wide habitat for bald eagles and supports limited numbers of nesting long-billed curlew or burrowing owls. Sand Point represents less than 1% of the winter habitat used by wintering waterfowl along the Snake River. The wildlife resources within the existing ACEC and the Morgan property extension are not of more than local importance.	No
Natural System or Process	
<p><u>Paleontologic and geologic resources:</u> (Factors met: 1, 2) The vertebrate and invertebrate fossil deposits at Sand Point have been the subject of scientific study since the early 20th century and have demonstrated their continent-wide importance to the study of late Cenozoic biostratigraphy, paleoclimatology, and paleoecology. Although the mollusk fossils are most abundant and important, the fish fossils are also important in that they represent the most advanced and last occurrence of a diversity of minnows, suckers, sculpin, catfish, and sunfish never again seen in western North America (Smith, Swiryzduk, Kimmel, & Wilkinson, 1982). Sand Point is the type locality for a species of microtine rodent first reported in 1959. Other mammalian fossils include muskrat, pocket gopher, rabbits, voles, horse and proboscidiens (elephant-like mammals). The assemblage of fossils within the existing ACEC and the Morgan property extension is significant due to its topographic and stratigraphic location relative to other major Idaho fossil localities of Blancan age; the extensive molluscan fauna far exceeds in abundance that found at any of the other Idaho Blancan localities. While the vertebrate fossils within the ACEC are protected by regulation, regulations do not automatically protect invertebrate fossils; special management is required to protect invertebrate fossils.</p> <p>The Sand Point fluvial depositional environment has the smallest exposed extent within the Glens Ferry Formation region. It lies between the Hagerman locality to the east and the Chalk Flat and Grandview localities to the west in elevation and time. This geologic formation is important for understanding the paleogeography of this part of western North America during the late Cenozoic Era. The geologic formations within Sand Point are of more than regional significance because of their use in determining the drainage of this portion of western North America prior to the Snake River routing north through Hells Canyon.</p>	Yes
<u>Special status plants:</u> Other areas within the planning area contain both more occupied habitat and larger concentrations of special status plant species. The special status plant resources within the existing ACEC are not of more than local importance.	No
Natural Hazard	
N/A	N/A

The nominated ACEC (existing ACEC and the Morgan property extension) meets the relevance and importance criteria to be considered as a potential ACEC. The rationale for proposing the nominated Sand Point ACEC for designation [under Alternatives I, III, IV (the Preferred Alternative), and V] as an ACEC is as follows:

The nominated ACEC (existing ACEC and the Morgan property extension) meets relevance and importance criteria for historic values, cultural values, and natural systems or processes (paleontologic and geologic values).

Several activities pose threats to the ACEC's relevant and important values, including mineral exploration and development, run-off from agricultural irrigation, wildland fire suppression activities, cross-country motorized vehicle use, and livestock grazing. These activities, as well as other surface-disturbing activities, all have the potential to cause direct damage to the relevant and important values, as well as cause indirect impacts by accelerating erosion.

Activities related to mineral exploration and development have the potential to impact all of the relevant and important values within the ACEC. Although there are currently no mining claims within the ACEC (existing or the Morgan property extension), there have been several mining claims in the past. Placer mining within the ACEC boundary in the 1980s caused substantial damage to the cultural resources. This area has also been under mineral lease in the past.

Agricultural run-off primarily impacts the paleontologic and geologic resources within the ACEC. Concentrations of fossils are present in several sites within the area where old lake sediments are exposed. The sediment layers are classified by the Natural Resources Conservation Service as severe for wind erosion potential and medium for water erosion potential.

The primary threat related to wildland fire suppression activities is construction of control lines using bulldozers. In addition, because the primary access to the area currently is on the Oregon NHT itself, travel by fire suppression vehicles could cause substantial damage to the Oregon NHT.

The existing ACEC is currently limited to designated routes; however, routes were never designated within the existing ACEC. The primary access to the existing ACEC and the Morgan property extension goes through private property and has restricted access; as a result, there is currently little motorized activity within either area. If public access to the ACEC were restored, cross-country motorized use would likely occur.

Livestock grazing impacts the relevant and important values within the ACEC as well, although the effect is more limited. The majority of the existing ACEC (630 acres) are part of a riparian pasture created in 1997 that is grazed every three years; the remaining 180 acres in the existing ACEC are grazed every year. The proposed 150-acre Morgan property extension is not part of an allotment. Livestock trailing and congregating in areas with relevant and important values as well as the placement of range infrastructure, salt, and other supplements are the primary threats related to grazing.

The segment of the Snake River adjacent the ACEC has been inventoried as eligible for inclusion in the NWSRS. ORVs for this segment include recreational, fish, historical, and cultural values. Interim management of this segment requires that it be managed to maintain or enhance its ORVs. However, the WSR corridor only extends 0.25 miles above the high water mark on each side of the river, which does not provide any protection for these values present outside the WSR corridor.

The Oregon NHT is another overlapping designation. The Oregon NHT is managed to preserve and protect the historic, scenic, and recreational values of the trail. The Oregon NHT protective corridor extends 0.25 miles on either side of the trail or the visual corridor, whichever is less. Within this corridor, only the trail-related historic values of the ACEC would be protected; outside this corridor, none of the relevant and important values would be protected through the NHT designation.

If the nominated ACEC meets the relevance and importance criteria, list the relevant and important value(s) that need special management attention and describe the management prescriptions necessary to protect those values.

The historic and cultural values and the paleontologic and geologic resources of the ACEC would be protected through the following allocations and management actions:¹⁹

Under Alternatives I, III, IV (the Preferred Alternative), and V:

- Manage paleontological resources within the ACEC in accordance with the 1988 Sand Point Natural History Management Plan. Modify the existing plan to encompass the Morgan property extension and to be in conformance with the revised RMP.
- The ACEC would be closed to fossil collecting except under permit for scientific research.
- Limit BLM management activities and authorized and allowed uses that may contribute to wind or water erosion in the ACEC.

¹⁹ Under the No Action Alternative, the existing ACEC boundary would be retained, and the ACEC would be managed as described in the *Areas of Critical Environmental Concern* section of Chapter 2.

- Work cooperatively with adjacent land owners to reduce or eliminate run-off from the agricultural fields that erode soils within the ACEC.
- No surface-disturbing activities would be allowed in the ACEC unless they are directly related to research on the ACEC's cultural, paleontologic, or geological resources or they can be mitigated.
- Minimum Impact Suppression Tactics would be used to suppress wildland fires within the ACEC to protect the paleontological resources. The authorized officer may allow the use of bull dozers to construct control lines within the ACEC on a case-by-case basis. However, dozer lines would be rehabilitated to minimize erosion.
- Manage the ACEC as VRM Class III, except within the Oregon NHT protective corridor, which would be managed as VRM Class II.
- Motorized vehicle use within the ACEC would be limited to designated routes.
- Consider upgrading the Wilson Grade Road if there is increased need for access for fire suppression activities or research.
- Structures directly related to the preservation or interpretation of the site may be allowed (e.g., kiosks, protective barriers).
- The ACEC would be a ROW exclusion area.
- Lands within the ACEC would be in Land Tenure Zone 1.
- The ACEC would be closed to mineral leasing.
- The ACEC would be closed to salable mineral development.
- Recommend lands within the ACEC for withdrawal from mining laws for locatable exploration and development.

Under Alternatives I, III, and IV (the Preferred Alternative) only, specific to livestock grazing management:

- The ACEC would be available for livestock grazing.
- New range infrastructure may be considered if it does not impair the relevant and important values of the ACEC. Any infrastructure would be located so that it does not increase or encourage livestock trailing across fossil-bearing areas, cultural resource sites, or Oregon NHT ruts.
- Salt or other livestock supplements would not be placed within 0.25 miles of fossil-bearing areas or cultural resource sites. Locations off limits to salt or other livestock supplements would be made known to the livestock permittees.

Under Alternative V only, specific to livestock grazing management:

- The ACEC would not be available for livestock grazing.

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**APPENDIX X:
WILD AND SCENIC RIVER
ELIGIBILITY
DETERMINATION**

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APPENDIX X: WILD AND SCENIC RIVER ELIGIBILITY DETERMINATION

The 2009 report documenting the Jarbidge Field Office's Wild and Scenic River eligibility determinations for rivers and streams within and bordering the planning area is inserted into this document in its original format.

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Wild and Scenic River Eligibility Determination

July 2009



It is the mission of the Bureau of Land Management to sustain the health, diversity, and productivity of the public lands for the use and enjoyment of present and future generations.

Jarbidge Field Office

***WILD AND SCENIC RIVER
ELIGIBILITY DETERMINATION***

Approved by:

Rick Vander Voet
Rick Vander Voet
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7/10/09
Date

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CHAPTER I: INTRODUCTION

Congress enacted the Wild and Scenic Rivers Act (WSRA; 16 USC 1271-1287) on October 2, 1968, to address the need for a national system of river protection. As an outgrowth of a national conservation agenda in the 1950s and 1960s, the WSRA responded to the dams, diversions, and water resource development projects that occurred on America's rivers between the 1930s and 1960s. The WSRA stipulates selected rivers should be preserved in a free-flowing condition and be protected for the benefit and enjoyment of present and future generations. Since 1968, the WSRA has been amended many times, primarily to designate additional rivers and to authorize the study of other rivers for possible inclusion.

Section 5 (d) (1) of the WSRA directs Federal land management agencies to consider potential Wild and Scenic Rivers in their land and water planning processes, stating, "In all planning for the use and development of water and related land resources, consideration shall be given by all Federal agencies involved to potential national wild, scenic and recreational river areas." To fulfill this requirement, the United States Department of the Interior (USDI), Bureau of Land Management (BLM) inventories and analyzes river and stream segments that might be eligible for inclusion in the National Wild and Scenic Rivers System (NWSRS) whenever it undertakes a land use planning effort such as a resource management plan (RMP).

The BLM, Twin Falls District, Jarbidge Field Office (FO) is preparing an RMP and Environmental Impact Statement (EIS), which will provide a single, comprehensive land use plan to guide future management of public land administered by the Jarbidge FO. This report is a record of the Wild and Scenic Rivers inventory conducted concurrently with the Jarbidge RMP.

This report documents the BLM's examination of Jarbidge FO rivers as they relate to eligibility and classification criteria in the WSRA. Chapter II describes the Wild and Scenic River inventory process. Chapter III describes the Wild and Scenic River inventory criteria. Chapter IV describes how the inventory process and criteria were applied to the Jarbidge FO. Chapter V describes each of the potentially eligible river segments in more detail.

CHAPTER II: THE WILD AND SCENIC RIVERS INVENTORY PROCESS

Background

The WSRA seeks to protect and enhance a river's natural and cultural values and to provide for public use consistent with its free-flowing character, water quality, and outstandingly remarkable values. Designation affords certain legal protection from development. For instance, new dams cannot be constructed, and Federally assisted water resource development projects that might negatively affect the designated river values are not permitted. Where non-Federal lands are involved, the managing Federal agency works with local governments and private landowners to develop protective measures.

Consideration of whether a river should be designated as a wild, scenic, or recreational river can be broken into two phases:

- 1. Eligibility Determination** – Federal agencies conduct an evaluation of river features to determine which rivers qualify to be added to the NWSRS, and
- 2. Suitability Determination** – Most commonly, Federal agencies conduct a review and then recommend to Congress which rivers should be protected. Only Congress or the Secretary of the Interior can designate a river as wild, scenic, or recreational.

This document provides the reader with the results of the 2007 Wild and Scenic River Inventory for the Jarbidge FO. The suitability determination phase will be conducted after the Record of Decision is signed for the Jarbidge RMP/EIS.

Through Section 5 (d) (1), the BLM is required to assess rivers under its management jurisdiction and determine eligibility for these rivers by applying standardized criteria through a documented evaluation process. Congress established two screening criteria for a river segment to be eligible for inclusion in the NWSRS: it must be 1) free-flowing and 2) possess one or more outstandingly remarkable scenic, recreational, geological, fish and wildlife, historical, cultural, or other values including ecological values. Chapter III contains a description of these values as they are defined for the Jarbidge FO.

Inventory of eligible rivers

Eligible rivers must be free-flowing

In order for a river to become eligible for further study, it must be free flowing. The WSRA Section 16 (b) defines free flowing as “existing or flowing in a natural condition without impoundment, diversion, straightening, riprapping, or other modifications in the waterway. The existence of low dams, diversion works, or other minor structures at the time any river is proposed for inclusion in the national wild and scenic river system shall not automatically bar its consideration for inclusion.” The intent of Congress and Federal regulations implies rivers must be generally free-flowing but not necessarily completely without human modification. Free-flowing rivers can lie between impoundments or dams and may be intermittent.

Eligible rivers must possess an outstandingly remarkable value

In order for a river to become eligible for further study as a possible wild, scenic, or recreational river, it must have one or more outstandingly remarkable resource values on BLM lands. The outstandingly remarkable values fall into categories defined in Section 1 (b) of the WSRA as “scenic, recreational, geologic, fish, wildlife, historic, cultural, or other similar values.” “Other similar values” include, but are not limited to, hydrologic, ecological/biological diversity, paleontological, botanical, and scientific study opportunities.

Minimum size and flow

The size of a river is not a criterion of eligibility. Rivers are defined in Section 16 (a) of the WSRA as “a flowing body of water or estuary or section, portion, or tributary thereof, including rivers, streams, creeks, runs, kills, rills, and small lakes.” Rivers considered eligible need not have outstanding white water or be navigable. Smaller rivers may be equally important as large rivers depending on the context within different ecosystems. Similarly, the length of a river segment is also not a criterion of eligibility as long as a specific outstandingly remarkable value can be protected if the segment is designated.

Tentative classification as wild, scenic, or recreational

River segments found to be eligible are assigned a tentative classification as wild, scenic, or recreational based on the development of shoreline, watercourse, and access as they exist at the time of the inventory. Different segments of the same river can have different classifications. Section 2(b) of the WSRA specifies three classification categories for eligible rivers.

- 1. Wild River Areas:** Wild river areas are those rivers or sections of rivers free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted.
- 2. Scenic River Areas:** Scenic river areas are those rivers or sections of rivers free of impoundments, with shorelines or watersheds still largely primitive or shorelines largely undeveloped, but accessible in places by roads. “Scenic” does not necessarily mean the river corridor has to have scenery as an outstandingly remarkable value.
- 3. Recreational River Areas:** Recreational river areas are those rivers or sections of rivers that are readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past. “Recreational” does not imply that the river will be managed or prioritized for recreational use or development.

Final classifications are made by Congress or the Secretary of the Interior at the time a segment is designated for inclusion in the NWSRS.

Suitability determinations

The second and final phase of agency review is suitability. During the suitability phase, the agency evaluates the river and considers several factors to determine if the river, in its context, should be recommended to Congress for addition to the NWSRS. Current and future uses of the surrounding land and water, as well as what values would be preserved, lost, or diminished if the

river were designated, are considered. Public and local governmental interest in designating the river is assessed. Fiscal concerns of acquiring any appropriate land are identified.

Protective management

Eligible rivers and their corridors on Federal lands are provided interim protection until the suitability phase is complete. Rivers recommended as suitable are protected as potential additions to the NWSRS until Congress or the Secretary of the Interior determines whether the suitable river will be included in the NWSRS. Rivers deemed nonsuitable revert to land management as described in the most recent RMP. The characteristics of eligible and suitable segments are managed as described below:

- 1. Free-flowing values:** The free-flowing characteristics of eligible river segments cannot be modified to allow stream impoundments, diversions, channelization, or riprapping to the extent authorized under law.
- 2. River-related values:** Each segment is managed to protect outstandingly remarkable values, subject to valid existing rights. To the extent practicable, such values are enhanced.
- 3. Classification impacts:** Management and development of the eligible river and its corridor cannot be modified, subject to valid existing rights, to the degree that its eligibility or classification would be affected.

CHAPTER III: CRITERIA FOR EVALUATING ELIGIBILITY

The following considerations and criteria were developed to guide evaluations for potential eligibility of rivers in the Jarbidge FO and for recommendation as a wild, scenic, or recreational river. These were approved and agreed upon by an Interdisciplinary (ID) Team specialists in wildlife, fisheries, upland and riparian vegetation, recreation, rangeland management, and archaeology (Appendix 1).

In developing the inventory criteria and processes described in this document, the ID Team relied on the documents listed below. All direction contained in this document is consistent with direction in BLM Manual 8351. The other documents were used as a source for information and guidance.

- BLM Manual 8351, Wild and Scenic Rivers—Policy and Program Direction for Identification, Evaluation, and Management (12/22/1993)
- USDI-US Department of Agriculture (USDA) Guidelines for Eligibility, Classification, and Management of River Areas (09/07/1982)
- The Wild and Scenic River Study Process, Interagency Wild and Scenic Rivers Coordinating Council (12/1999)
- A Compendium of Questions and Answers Relating to Wild and Scenic Rivers, Interagency Wild and Scenic Rivers Coordinating Council (06/2006)

Wild and Scenic River inventory process

The steps used for this inventory for WSR eligibility include the following:

- Determine which rivers and river segments to include in the evaluation;
- Assess rivers and river segments for free-flowing status;
- Assess rivers and river segments for the presence of outstandingly remarkable values; and
- Determine tentative classification of rivers as wild, scenic, or recreational.

Criteria for inclusion in the inventory and for segmenting rivers

The following sources were used to identify potentially eligible rivers (Appendix 2):

- Perennial and intermittent rivers and streams included on Jarbidge FO GIS layers;
- River segments identified in public scoping for the Jarbidge RMP;
- All rivers included in the Nationwide Rivers Inventory (USDI National Park Service 2004) or the State of Idaho Comprehensive Water Plan;
- Any river studied but determined to be ineligible in the Bruneau Wild and Scenic River Study Report of August 1976;
- The USDA Forest Service, Humboldt-Toiyabe National Forest (HTNF) Wild and Scenic Rivers Eligibility Report (HTNF 2005), which describes eligibility studies on streams that flow from HTNF onto the Jarbidge FO; and
- Boundary rivers not previously deemed eligible during evaluation efforts in adjacent BLM field offices.

A river's inclusion on any of these source lists does not represent an official determination of eligibility, and a river's absence from these source lists does not indicate its ineligibility.

Ephemeral waterways, which contain water only in response to local precipitation events, were not inventoried for eligibility; however, intermittent streams, which contain a predictable seasonal flow of water, were included in the inventory.

Rivers or river segments previously deemed eligible or suitable were not re-evaluated (Table 1; Figure 1). All current eligible or suitable segments retain any previously determined status. Portions of the suitable segments of the Bruneau and Jarbidge Rivers are named for addition to the NWSRS in the Owyhee Initiative Implementation Act which was included in the Omnibus Public Land Management Act of 2009 (S. 22).

BLM limited the eligibility study to the lands it administers, per BLM Manual 8351, Wild and Scenic Rivers—Policy and Program Direction for Identification, Evaluation, and Management, which states, “In cases where a particular river segment is predominantly non-Federal in ownership and contains interspersed BLM administered lands, the BLM shall evaluate only its segment as to eligibility and defer to the State or to the private landowners’ discretion as to their determination of eligibility” (BLM 1993).

Rivers included in the inventory were segmented where substantial changes in eligibility or tentative classification might occur, such as the presence of impoundments or dams, noticeable changes in types or amounts of development, and obvious changes in physiographic character or land status.

Free-flowing criteria

In determining whether a river is free-flowing, the WSRA states “...the existences, however, of low dams, diversions works, and other minor structures...shall not automatically bar its consideration...” The ID Team established the following minimum criteria to ensure rivers having borderline “minor” modifications would be considered: the flow within the segment must be substantially unaltered as a result of human activity to the extent that riparian vegetation is maintained by stream flows.

General considerations for evaluating outstandingly remarkable values

Section 1 (b) of the WSRA describes the rivers to be protected as possessing outstandingly remarkable values. Outstandingly remarkable values do not have a clear definition in the Act, yet they are crucial components of eligible rivers. Outstandingly remarkable values identified in the WSRA include scenic, recreational, geological, fish and wildlife, historical, cultural, or other values including attributes such as river-related paleontologic deposits or unique botanical resources.

Three sideboards were used to consider whether an outstandingly remarkable value could be applied to a river. First, the value must be river-related; a value should be directly associated with the river or the river corridor, typically considered to be ¼ mile from the ordinary high water mark on each side of the river. The values need to contribute substantially to the functioning of the river ecosystem or to its public value, or owe its existence to the river.

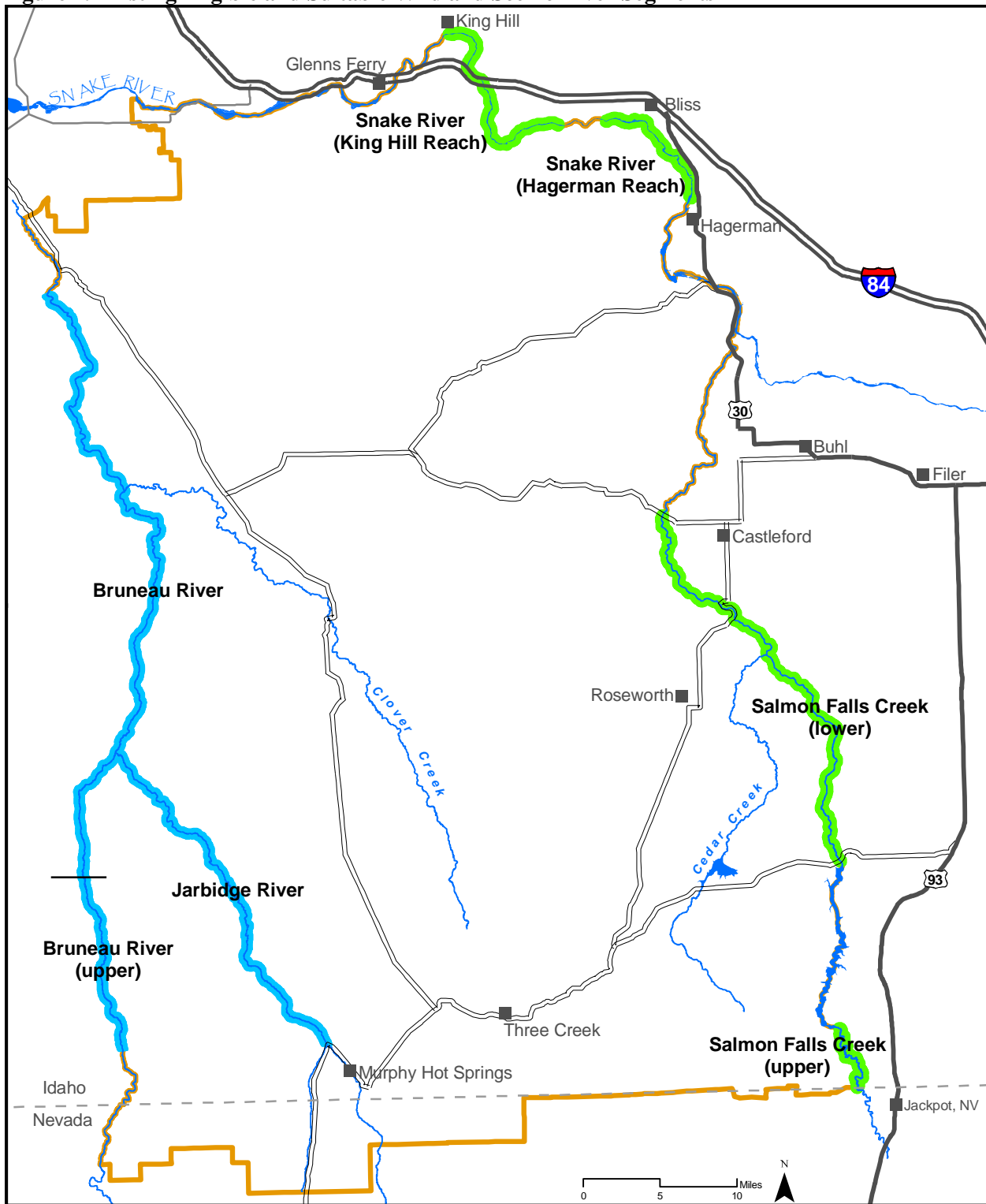
The second sidebar is that the values considered should be at least regionally important to be deemed outstandingly remarkable. The region of comparison the ID Team used depended on the value being evaluated; regions of comparison for each value are noted below in Table 1.

The third and final sidebar is that within the regions of comparison, the features or outstandingly remarkable values being considered need to be rare, unique, or exemplary examples of the occurrence of that feature or value.

Table 1. Existing Eligible and Suitable River Segments

River	Segment Description	Length (miles)	Outstandingly Remarkable Values	Tentative Classification	Current Status
Salmon Falls Creek, upper ^A	Nevada border to Salmon Falls Creek Reservoir	9	Recreational	Recreational	Eligible
Salmon Falls Creek, lower ^A	Salmon Falls Dam to Balanced Rock Park	30	Scenic, Recreational, Geological	Scenic	Eligible
Snake River, Hagerman Reach ^B	Lower Salmon Falls Dam to Bliss Dam Reservoir	8	Recreational, Geological, Fish, Wildlife, Historical	Recreational	Eligible
Snake River, King Hill Reach ^B	Bliss Dam to the King Hill Bridge	13	Recreational, Geological, Fish, Wildlife	Recreational	Eligible
Bruneau River, upper ^C	Blackrock Crossing to 11 miles downstream	11	Scenic, Recreational, Geological, Fish, Wildlife, Cultural, Vegetation	Scenic	Suitable
Bruneau River ^C	11 miles downstream from Blackrock Crossing to Hot Creek	60	Scenic, Recreational, Geological, Fish, Wildlife, Cultural, Vegetation	Wild	Suitable
Jarbidge River ^C	East Fork, Jarbidge River confluence to Bruneau River confluence	29	Scenic, Recreational, Geological, Fish, Wildlife, Cultural, Vegetation	Wild	Suitable
Total		160			
^A Evaluation conducted by the Burley District Office in 1992 and finalized in 2009. ^B Evaluation conducted by the Shoshone District Office as part of the Draft Bennett Hills RMP in 1991. ^C Evaluation and study conducted in the Bruneau WSR Study in 1976; ORVs for Bruneau and Jarbidge River segments were inferred from the narrative in the Bruneau WSR Study Report.					

Figure 1. Existing Eligible and Suitable Wild and Scenic River Segments



Existing Suitable Segments Existing Eligible Segments

No warranty is made by the Bureau of Land Management. The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.

Map Date: June 2009

Criteria for each potential outstandingly remarkable value

Outstandingly Remarkable Scenic Value

Definition

The landscape elements of landform, vegetation, water, color, and related factors must result in notable or exemplary visual features or attractions within the geographic region. The rating area must be scenic quality “A” as defined in the BLM Visual Resource Inventory Handbook, H-8410-1; the handbook may also be used to assess visual quality and to evaluate the extent of development upon scenic values. Additional factors may be considered, such as seasonal variations in vegetation, scale of cultural modifications, and the length of time negative intrusions are viewed. Scenery and visual attractions may be highly diverse over the majority of the river or river segment and not common to other rivers in the geographic region.

Region of comparison

The region of comparison for scenic values for the Jarbidge FO includes the northern Great Basin, the Snake River Plain, and the Owyhee River watershed.

Criteria for evaluating scenic value

Diversity of View: Consider the presence of high relief; severe surface variation; rich color combinations including high variety and vivid colors; pleasing contrasts in soil, rock, vegetation, and water; views that greatly enhance visual quality; or still or cascading water that is dominant in the landscape. River corridors with the greatest diversity and variety of views in both foreground and background are of higher value. Consider places that people go to see things, which can range from the micro views at pools or waterfalls to the grander views and vistas from along a trail or river.

Special Features: Consider outstanding natural, historical, or cultural features and landforms with unusual or outstanding topographic features such as gorges, high relief, rock outcrops, canyons, falls, rapids, springs, hot springs, color, and vegetation. River corridors with high relief and focal points that are visually striking, particularly memorable, or rare in the region are of higher value.

Seasonal Variations: Consider diversity of vegetation types in interesting patterns, textures, color, and contrast. River corridors with the greatest seasonal variation and diversity are of higher value.

Cultural Modifications: Consider human modifications and features within the corridor and watershed. View sheds that are free from aesthetically undesirable sights and influences are generally of higher value. Human features that exist may in some cases add to visual appeal.

Outstandingly Remarkable Recreational Value

Definition

Recreational opportunities are, or have the potential to be, unusual enough to attract visitors to the geographic region. Recreational opportunities may be rare or unique within the region. Visitors are willing to travel long distances to use the river resources for recreational purposes. River-related opportunities could include, but are not limited to, sightseeing, wildlife observation, camping, photography, hiking, fishing, hunting, and boating. Interpretive

opportunities may be exceptional and attract, or have the potential to attract, visitors from outside the geographic region. The river may provide or have the potential to provide settings for national or regional commercial usage or competitive events.

Region of comparison

The region of comparison for recreational values for the Jarbidge FO includes the Snake River Plain south to Interstate 80 in northern Nevada, where there are similar types of water-based recreational activities as within the Jarbidge FO.

Criteria for evaluating recreational value

Diversity of Use: Consider the number and variety of recreation uses occurring within the corridor. Rivers that provide for the largest number and diversity of recreation uses are of higher value.

Experience Quality: Consider the comparative number or percent of similar experiences available in the region. Rivers that provide the most unique opportunities are of higher value for fishing, wildlife viewing, and hunting. Highly scenic, pristine rivers and corridors are of higher value as compared to other areas that are visually monotonous, heavily developed, malodorous, or noisy.

Access: Consider the availability of private and public access points, ease of use, and attendant facilities such as parking, boat ramps, and trails. On some rivers, poor access can be advantageous to limit crowding.

Level of Use: A little-used river should not by itself indicate a lower value, and an intensively used river may indicate a diminished value due to overcrowding. However, rivers or corridors highly used by anglers, hunters, and wildlife viewers are usually of higher value.

Associated Opportunities: Consider the extent of opportunities for hiking, photography, fishing, picnicking, swimming, wildlife viewing, and other similar experiences. Rivers with the greatest opportunity for associated recreation are of higher value.

Attraction: Consider the ability to attract visitors from outside the geographic region. Rivers that attract a variety of users with their primary intent to use the river for recreation experiences as well as rivers that provide a setting for national or regional competitive events are of higher value.

Sites and Facilities: Consider the extent of or potential for appropriate facility development. Rivers with the greatest number of existing or potential recreation facilities may be of higher value depending upon the type of recreation opportunity provided.

Length of Season: Consider the amount of time the river corridor is used or available for recreation purposes. Rivers with the longest season of use may be of higher value depending upon the type of recreation opportunity provided.

Outstandingly Remarkable Geological Value

Definition

The river or river corridor contains one or more examples of a geologic feature, process, or phenomenon that are rare, unusual, or unique within the region. The feature(s) may be in an unusually active stage of development, represent a “textbook” example, and/or represent a unique or rare combination of geologic features or landforms (e.g., erosional, volcanic, glacial).

Region of comparison

The region of comparison for geological values for the Jarbidge FO includes the northern Great Basin, the Snake River Plain, and the Owyhee River watershed.

Criteria for evaluating geological value

Feature Abundance: Consider landforms and geologic setting with unusual or outstanding geologic features (e.g., gorges, arches, badlands, oxbows, caves, relic shoreline, unusual drainage patterns and stream channels, bogs, waterfalls, deep canyons, hot springs, unique rock formations and outcrops). River corridors with an abundance of unusual, unique, and distinctive geologic features to the region are of higher value.

Diversity of Features: Consider the number and variety of special geologic features and the value of these features to the region. Consider the unique or rare combination of geologic features or landforms (e.g., erosional, volcanic, glacial). River corridors with the greatest diversity of geologic features are of higher value.

Educational/Scientific: Geologic features clearly and graphically reveal an interesting or unique educational or scientific story of the earth’s history. River corridors that represent “textbook” examples of a common feature or are the best example of a feature in the region are of higher value.

Outstandingly Remarkable Fish Value

Definition

Fish values may be judged on the relative merits of fish populations, habitat, or a combination of these river-related conditions.

Populations: The river is a nationally or regionally important producer of indigenous, resident, and/or anadromous fish species. Of particular significance may be the presence of wild or unique stocks and/or populations of Federal- or State-listed (or Candidate) Threatened, Endangered, or sensitive species. Diversity of species is an important consideration and could, in itself, lead to a determination of “outstandingly remarkable.”

Habitat: The river provides exceptionally high quality habitat for fish species indigenous to the region of comparison. Of particular significance is habitat for wild stocks and/or Federal- or State-listed (or Candidate) Threatened, Endangered, or sensitive species. Diversity of habitats is an important consideration and could, in itself, lead to a determination of “outstandingly remarkable.”

Region of comparison

The region of comparison for fish values for the Jarbidge FO includes the Columbia River Basin, which corresponds to the range of special status aquatic species present in the FO.

Criteria for evaluating fish value

Habitat Quality: Consider the presence, extent, and carrying capacity of spawning area, rearing areas, and adult habitat, as well as habitat for wild stocks and special status species. Areas with the greatest amount and best quality habitat, especially for wild stock and special status species, are of higher value.

Diversity of Species: Consider the number and variety of species present and the value of these species. Areas with the greatest diversity of species, including wild stocks and special status species, are of higher value.

Value of Species: Rivers that are of special interest, are highly used by anglers, or offer an unusual recreation experience for the region are of higher value.

Abundance of Fish: Rivers with more fish and/or rivers that have been documented historically for sizeable runs are of higher value.

Natural Reproduction: Rivers with extensive self-sustaining natural reproduction are of higher value than those supported mostly by stocking.

Size and Vigor of Fish: Rivers that produce large, vigorous fish are of higher value.

Outstandingly Remarkable Wildlife Value

Definition

Wildlife values may be judged on the relative merits of terrestrial or aquatic populations, habitat, or a combination of these conditions.

Populations: The river or river corridor contains nationally or regionally important populations of indigenous or resident wildlife species dependent on the river environment. Of particular significance are species considered to be unique, and/or populations of Federal- or State-listed (or Candidate) Threatened, Endangered, or sensitive species. Diversity of species is an important consideration and could, in itself, lead to a determination of “outstandingly remarkable.”

Habitat: The river or river corridor provides exceptionally high quality habitat for wildlife of national or regional significance, or may provide unique habitat or a critical link in habitat conditions for Federal- or State-listed (or Candidate) Threatened, Endangered, or sensitive species. Diversity of habitats is an important consideration and could, in itself, lead to a determination of “outstandingly remarkable.” Contiguous habitat conditions are such that the biological needs of the species are met.

Region of comparison

The region of comparison for wildlife value for the Jarbidge FO includes the Snake River Plain south to Interstate 80 in northern Nevada, which includes similar habitats as occur within the FO, but excludes pinyon-juniper communities characteristic of areas further to the south.

Criteria for evaluating wildlife value

Habitat Quality: Consider the presence, extent, and carrying capacity of a variety of wildlife habitats, including winter range, summer range, transition zones, travel corridors, and calving areas. Consider unique habitats or critical links in habitat for special status species. Areas with the greatest and best habitat, contiguous habitat, and habitat for special status species are of higher value.

Diversity of Species: Consider the number and variety of species present and the value of these species. Rivers with the greatest diversity of species, including special status species, are of higher value.

Abundance of Species: Rivers with the greatest number of wildlife within the river corridor are of higher value.

Outstandingly Remarkable Historical Value

Definition

The river or river corridor contains a river-related site or feature associated with a significant event, an important person, or a cultural activity of the past that was rare or unusual in the region. Many such sites are listed on the National Register of Historic Places. Historic sites or features are at least 50 years old in most cases.

Region of comparison

The region of comparison for historical value for the Jarbidge FO includes southern Idaho and northern Nevada.

Criteria for evaluating historical value

Significance: Consider segments that contain a site or feature associated with a historically significant event, person, or activity of the past (e.g., major trails, mining history, early explorers). River-related rare, unique, or unusual sites or features within the region are of higher value.

Site Integrity: Consider the presence of exceptional examples of architecture from a significant period in history; sites that are unmodified and retain their original character; and features that are exceptional examples within the region. River corridors that contain exceptional sites in exceptional condition are of higher value.

Education/Interpretation: Consider sites that have regional or national importance for interpreting significant historic events or people; sites that early and graphically reveal an interesting or unique history of the region; and sites that have the ability to attract visitors from outside the region. River corridors that represent “textbook” examples of a historic

event or provide the best example of a historical culture or river-related event in the region are of higher value.

Listing/Eligibility: Consider corridors that contain sites or features that are currently listed in, or are eligible for, the National Register of Historic Places, or designated as a National Historic Landmark. Rivers with such features, particularly if in abundance, are of higher value.

Number of Historic Themes or Periods: River corridors that represent more than one historic theme or culture, may have been used concurrently by more than one historic cultural group, or have been used for rare or sacred purposes are of higher value.

Outstandingly Remarkable Cultural Values

Definition

The river or river corridor contains a river-related site where there is evidence of current or historic occupation or use by Native Americans with unique or rare characteristics or exceptional human-interest value. Sites may be nationally or regionally important for interpreting prehistory, be rare, represent an area where a culture or cultural period was first identified and described, have been or are being used concurrently by two or more cultural groups, or have been or are being used by cultural groups for sacred purposes. Many such sites are listed on the National Register of Historic Places.

Region of comparison

The region of comparison for cultural values for the Jarbidge FO includes the southern Columbian Plateau and the northern Great Basin.

Criteria for evaluating cultural value

Significance: Consider evidence of significant occupation and use by Native Americans (e.g., hunting sites, ceremonial areas, fishing areas). Consider sites that have significant human interest value, are rare, or represent an area where a culture was first identified. Rivers with cultural significance to Native Americans are of higher value. Rivers that have substantial existing cultural use or that have been traditionally used as a Native American fishery are also of higher value. Rare, unique, or unusual sites or features within the region are of higher value.

Current Uses: River corridors containing sites or features that are significant to Native American populations today are of higher value.

Number of Cultures: River corridors that represent more than one cultural period, may have been used concurrently by more than one cultural group, or have been used for rare or sacred purposes are of higher value.

Site Integrity: Consider the presence of exceptional examples of Native American features from a significant period in history; sites that are unmodified and retain their original character; features that are in excellent condition and provide an exceptional example within

the region. River corridors that contain exceptional sites in exceptional condition are of higher value.

Education/Interpretation: Consider sites that have regional or national importance for interpreting significant events, sites, or people; sites that clearly and graphically reveal an interesting or unique history of the region; and sites that have the ability to attract visitors from outside the region. River corridors that represent “textbook” examples of a Native American or other culture or provide the best example of a culture or river-related event in the region are of higher value.

Listing/Eligibility: Consider corridors that contain sites or features that are currently listed in, or are eligible for, the National Register of Historic Places, or designated as a National Historic Landmark. Rivers with such features, particularly if in abundance, are of higher value.

Outstandingly Remarkable Vegetation/Ecological Values

Definition

Vegetation and ecological values may be judged on the relative merits of either populations or communities, or a combination of these conditions. The river or river corridor contains nationally or regionally important populations of indigenous plant species. Of importance are species considered to be unique or populations of Federal- or State-listed (or Candidate) Threatened, Endangered, or sensitive species. Diversity and number of species are also important. The river or river corridor may contain nationally or regionally important plant communities. Communities may be exceptionally high quality, unusual, or critical communities.

Region of comparison

The region of comparison for vegetative and ecological values for the Jarbidge FO includes the northern Great Basin and southern Snake River Plain.

Criteria for evaluating vegetative/ecological value

Species Diversity: Consider the presence, extent, and diversity of plant communities; ecological values that are critical to protection of biological diversity; and critical habitat for species conservation (e.g., refugia). River corridors with the greatest diversity and importance to species conservation are of higher value.

Ecological Function: Rivers with rare or unique corridors that are critical and essential for species migration and genetic interaction are of higher value.

Rare Communities: Rivers with rare, sensitive, Threatened, or Endangered species and communities are of higher value.

Educational/Scientific: Consider vegetative and ecological values and features that clearly and graphically reveal an interesting or unique educational or scientific story of vegetative or ecological form and function. River corridors that represent “textbook” examples of plant and animal associations or ecological values and features in the region are of higher value.

Criteria for tentative classification of eligible segments

Eligible segments are assigned a tentative classification of wild, scenic, or recreational, based on the following criteria:

Wild river

- Free of impoundments.
- Essentially primitive. Little or no evidence of human activity.
- The presence of a few inconspicuous structures, particularly those of historic or cultural value is acceptable.
- A limited amount of domestic livestock grazing or hay production is acceptable.
- Generally inaccessible except by trail.
- No roads, railroads, or other provision for vehicular traffic within the river area. A few inconspicuous existing roads leading to the boundary of the river area are acceptable.
- Meets or exceeds Federal water quality criteria or Federally approved State water quality standards for aesthetics, propagation of fish and wildlife normally adapted to the habitat of the river, and primary contact recreation (swimming), except where water quality standards are exceeded by natural conditions.

Scenic river

- Free of impoundment.
- Largely primitive and undeveloped. No substantial evidence of human activity.
- The presence of grazing, hay production, or row crops is acceptable.
- Accessible in places by road.
- Roads may occasionally reach or bridge the river. The existence of short stretches of conspicuous or longer stretches of inconspicuous and well-screened roads or railroads paralleling the river area may be permitted.
- Meets, exceeds, or is capable of being restored to meet Federal water quality criteria or Federally-approved State water quality standards for aesthetics, for propagation of fish and wildlife normally adapted to the habitat of the river, and for primary contact recreation (swimming), except where water quality standards are exceeded by natural conditions.

Recreational river

- Some existing impoundment or diversion; or, may have undergone some impoundment or diversion in the past.
- The existence of low dams, diversions, or other modifications of the waterway is acceptable, provided the waterway remains free-flowing and generally natural and river-like in appearance.
- Some development present; or, substantial evidence of human activity.
- The presence of extensive residential development and a few commercial structures is acceptable.
- Lands may have been developed for the full range of agricultural and forestry uses.
- Readily accessible by road or railroad.
- The existence of parallel roads or railroads on one or both banks as well as bridge crossings and other river access points is acceptable.

- Meets, exceeds, or is capable of being restored to meet Federal water quality criteria or Federally-approved State water quality standards for aesthetics, for propagation of fish and wildlife normally adapted to the habitat of the river, and for primary contact recreation (swimming), except where water quality standards are exceeded by natural conditions.

Conclusion

The ID Team used the considerations and criteria described above to conduct the Wild and Scenic River Inventory for the Jarbidge FO. The following chapters describe the results of that inventory and describe the free-flowing rivers and streams recognized to have at least one outstandingly remarkable value that exhibits a rare, unique, or exemplary example of those features within the region of comparison.

CHAPTER IV: EVALUATING ELIGIBILITY ON JARBIDGE FO RIVERS

BLM determined rivers eligible for inclusion into the NWSRS through a process of elimination. If a river segment was not free flowing or did not potentially possess at least one outstandingly remarkable value, it was not evaluated further.

In the fall of 2006, the ID Team compiled an initial list of rivers that would be assessed for their free-flowing status and for the presence or absence of outstandingly remarkable values. These river segments included both perennial and intermittent rivers and streams, but not ephemeral waterways, as described in Chapter III. This initial step resulted in a list of 42 rivers or segments for further consideration (Appendix 2).

An in-depth review of these 42 segments on November 29 and 30, 2006, focused on free-flowing criteria and outstandingly remarkable values. The ID Team conducted this review using their knowledge of the area, informed professional judgment, and available data and information on the river, river segment, environment, and the potential outstandingly remarkable values. Only rivers that met the free-flowing criteria were assessed for the presence of outstandingly remarkable values. As a result of that review, seven rivers were determined not to be free-flowing, and 24 additional rivers were determined not to possess outstandingly remarkable values (Appendix 3). The eligibility inventory and the remaining 11 rivers and river segments were described in the March 2007 Jarbidge RMP newsletter, which was distributed to the Jarbidge RMP mailing list and posted on the RMP website.

The potential outstandingly remarkable values on the remaining 11 rivers and river segments were examined once again by the ID Team on April 6, 2007; four rivers and river segments were found to not possess an outstandingly remarkable value when evaluated in the larger regional context (Appendix 3). The Idaho Department of Water Resources (IDWR) was briefed on the eligibility inventory process and preliminary results in June 2007, in accordance with MOU ID-273¹. Cougar Point Creek² and the Jarbidge River were evaluated for their scenic quality as per the BLM Visual Resource Inventory Handbook, H-8410-1, on November 2, 2007; both were rated as scenic quality “A.”

As a result of this inventory and review process, seven rivers and river segments were identified as eligible for further study (Figure 2; Table 2; Appendix 3); IDWR was briefed on these segments during the fall of 2008. Because the Three Island Reach of the Snake River forms the boundary between the Jarbidge and Four Rivers FOs, the Four Rivers FO was consulted throughout the evaluation process, reviewed the evaluation of the segment, and concurred with the ID Team’s findings. The proposed boundary for each of the eligible segments is ¼ mile from the ordinary high water mark on each side of the river or stream, averaging no more than 320 acres per river mile. Following eligibility determination, each segment was evaluated for its

¹ Memorandum of Understanding between the Governor, State of Idaho and Regional Foresters, Northern and Intermountain Regions Forest Service and State Director, Idaho Bureau of Land Management regarding river planning efforts and Wild and Scenic River studies of Idaho’s rivers, dated February 14, 1991.

² Cougar Point Creek is an unnamed tributary of the Jarbidge River, East Fork; Cougar Point is the adjacent named landmark feature.

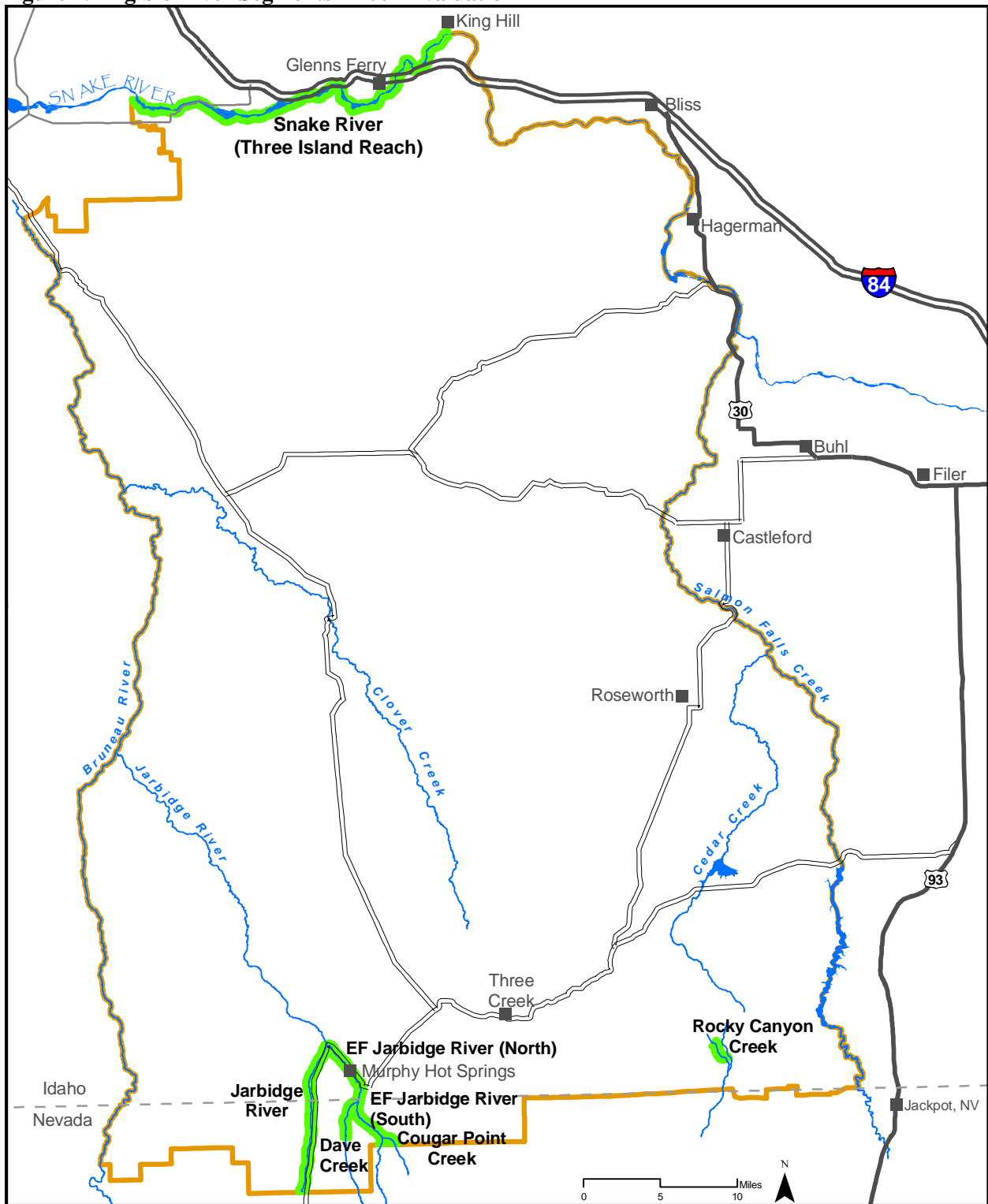
tentative classification (Table 2). Chapter V provides a basic description and a map showing the location of each segment.


Until suitability determinations are reached, BLM will manage the values associated with the eligible river segments in a way that will not adversely affect the values contributing to the free flow, outstandingly remarkable values, and tentative classification. This management is in place until a river segment is determined suitable or unsuitable during the suitability study phase.

Table 2. Eligible River Segments – 2007 Evaluation

River	Segment Description	Length (miles)	Outstandingly Remarkable Values	Tentative Classification
Cougar Point Creek	Jarbidge FO boundary to East Fork, Jarbidge River confluence	1.0	Scenic	Wild
Dave Creek	Private boundary to East Fork, Jarbidge River confluence	2.7	Fish	Wild
Jarbidge River	Jarbidge FO boundary to East Fork, Jarbidge River confluence	10.2	Fish, Scenic	Recreational
East Fork Jarbidge River, north	Downstream private boundary of Murphy Hot Springs to Jarbidge River confluence	2.2	Fish	Recreational
East Fork Jarbidge River, south	Jarbidge FO boundary to upstream private boundary of Murphy Hot Springs	7.4	Fish	Wild
Rocky Canyon Creek	Headwaters to North Fork, Salmon Falls Creek confluence	1.5	Wildlife	Wild
Snake River, Three Island Reach	King Hill Bridge to Hwy 51 Bridge	25.0	Recreational, Fish, Historical, Cultural	Recreational
Total		50.0		

Figure 2. Eligible River Segments – 2007 Evaluation



 Eligible River Segments - 2007 Evaluation

No warranty is made by the Bureau of Land Management. The accuracy, reliability, or completeness of these data for individual use or aggregate use with other data is not guaranteed.

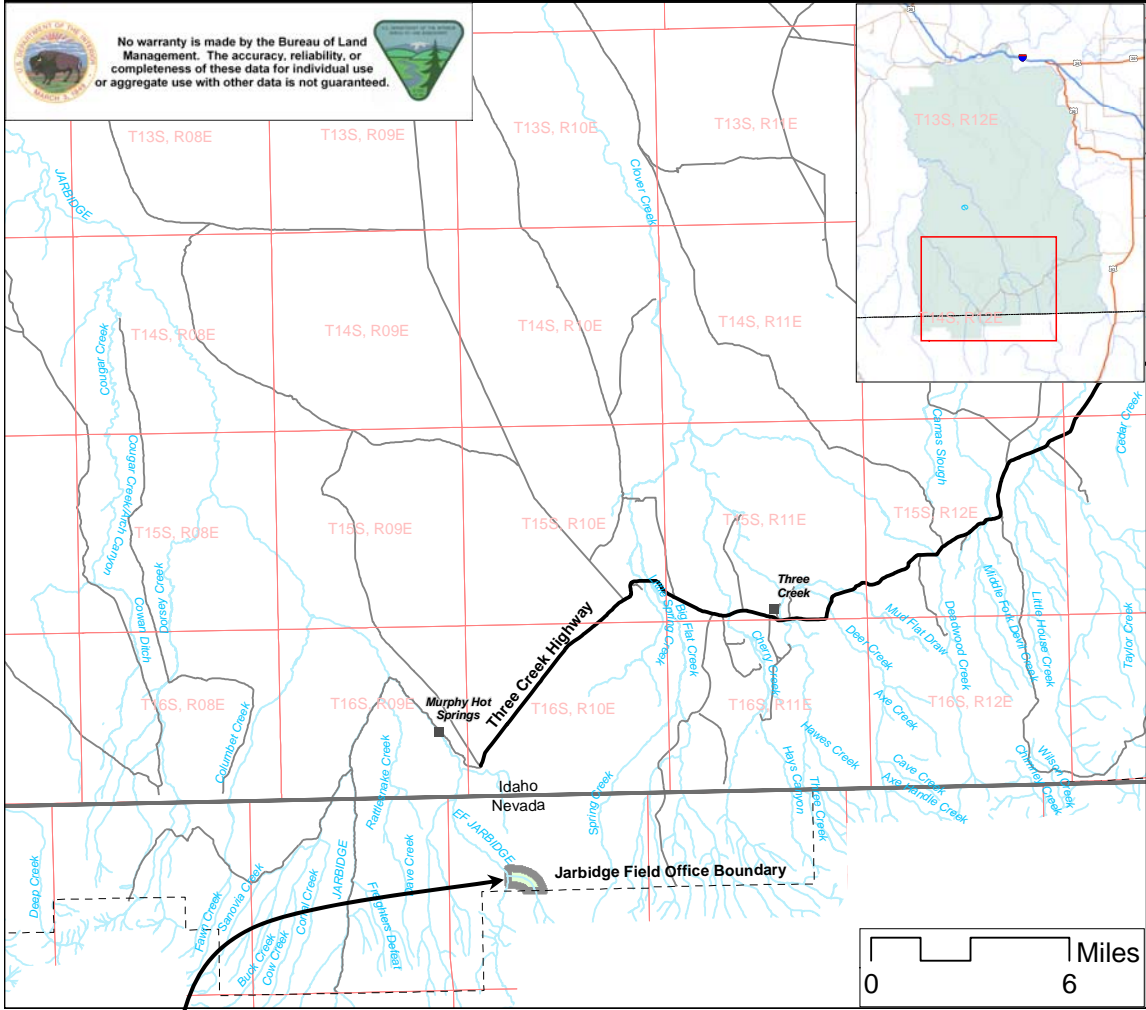
Map Date: June 2009

CHAPTER V: DESCRIPTION OF ELIGIBLE RIVER SEGMENTS

This chapter provides a description and map of each of the seven river segments identified during the Jarbidge FO Wild and Scenic River Eligibility Determination, with a focus on values identified by the ID Team as outstandingly remarkable, as well as the segment's tentative classification as wild, scenic, or recreational. The river segments are presented in alphabetical order.

Cougar Point Creek

River Name	Cougar Point Creek
Segment Description	Jarbidge FO boundary to Jarbidge River, East Fork confluence
Total Stream Length	1.0 mile
Free Flowing?	Yes
Tentative Classification	Wild; there are few or no human developments occurring along this segment. Access is very limited and typically only by trail.
Outstandingly Remarkable Values	
Scenic	<p>Criteria met: diversity of view, special features.</p> <p>Cougar Point Creek originates in a boulder field near Cougar Point, where its water can be heard flowing beneath the boulders for approximately 300 feet before it emerges to the surface. Cougar Point Creek then traverses rolling uplands to drop over 1,000 feet to its confluence with the East Fork of the Jarbidge River a mile downstream. The diversity of view in both the foreground and background is generated from this steep creek gradient. From the river corridor, one can see 1000 feet down into the canyon of the East Fork of the Jarbidge River, as well as the Jarbidge Mountains over 4000 feet above. Foreground scenery is comprised of the boulder field, lichens, and dense vegetation in the creek corridor, with a mixture of mountain mahogany and aspen stands.</p> <p>Cougar Point Creek rates as scenic quality "A" as described in the BLM Visual Resource Inventory Handbook, H-8410-1.</p>
Recreational	N/A
Geological	N/A
Fish	N/A
Wildlife	N/A
Historical	N/A
Cultural	N/A
Vegetation/Ecological	N/A
Comments	
<ul style="list-style-type: none"> • Not evaluated previously • Evaluation requested as part of general scoping comments by Idaho Conservation League and Western Watersheds Project 	



Cougar Point Creek



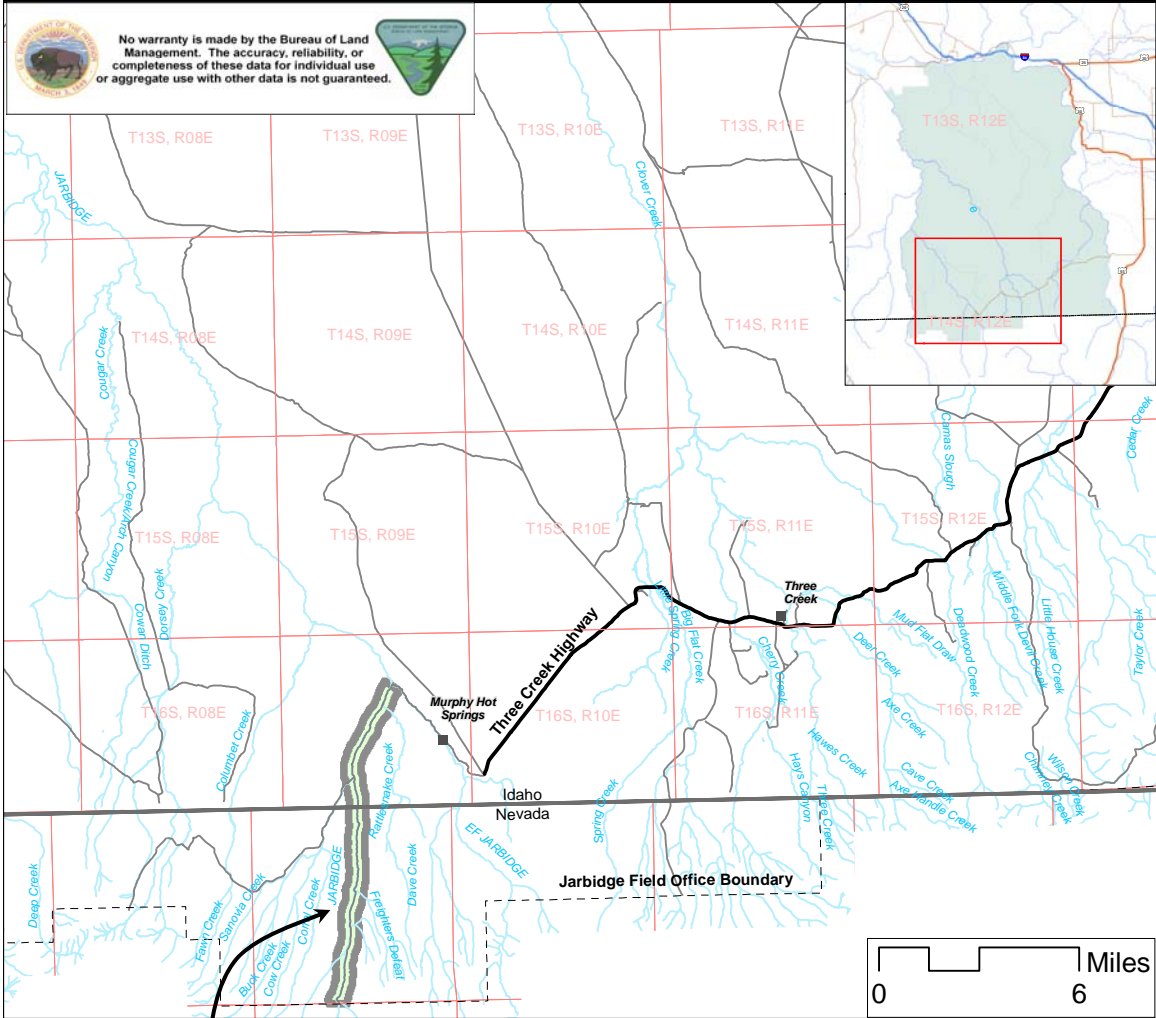
Dave Creek

River Name	Dave Creek
Segment Description	Private boundary to Jarbidge River, East Fork confluence
Total Stream Length	2.7 miles
Free Flowing?	Yes
Tentative Classification	Wild; there are few or no human developments occurring along this segment. Access is very limited and typically only by trail.
Outstandingly Remarkable Values	
Scenic	N/A
Recreational	N/A
Geological	N/A
Fish	<p>Criteria met: habitat quality, value of species, abundance of fish, natural reproduction.</p> <p>Dave Creek, a tributary to the Jarbidge River, is crucial spawning, rearing, foraging, migratory, and overwintering habitat for bull trout within the Jarbidge River system (USFWS 2004). Dave Creek also contains the highest population of bull trout in the Jarbidge watershed, including both resident and migratory (fluvial) fish. These bull trout are the only species of fish within the planning area that are Federally listed as Threatened under the Endangered Species Act of 1973.</p> <p>The Jarbidge River system contains the southernmost existing population of bull trout in North America. Genetic analysis of bull trout in the Columbia River Basin indicates Jarbidge River system bull trout have a shared evolutionarily history with populations in the upper Columbia River and Snake River but are genetically distinct. For over 100 years, Jarbidge River system bull trout have been geographically isolated from other populations in the Snake River by more than 150 miles of marginally suitable habitat and several impassable hydroelectric dams on the Snake River and diversion dams on the lower Bruneau River.</p> <p>Bull trout in the Jarbidge River system are considered significant because they occupy a unique and unusual ecological setting and their loss would result in a substantial modification of the specie’s range. The bull trout in the Jarbidge River are unique in that a portion of their habitat is in an area categorized as semi-arid desert. The Rocky Mountain juniper-dominated riparian zone interspersed with aspen on BLM portions of the Jarbidge River, which grades into aspen and limber pine on Forest Service land, is unique to the area. The majority of the other occupied bull trout stream habitat is in other coniferous forest types (i.e., Douglas fir, Engelmann spruce, and others).</p>
Wildlife	N/A
Historical	N/A
Cultural	N/A
Vegetation/Ecological	N/A
Comments	
<ul style="list-style-type: none"> • Not evaluated previously • Evaluation requested as part of general scoping comments by Idaho Conservation League; evaluation of Dave Creek was specifically requested in scoping comments by Western Watersheds Project 	

Jarbidge River

River Name	Jarbidge River
Segment Description	Jarbidge FO boundary to Jarbidge River, East Fork confluence
Total Stream Length	10.2 miles
Free Flowing?	Yes
Tentative Classification	Recreational; improved gravel road with regular motorized traffic borders the entire segment. A steel bridge is present at the Buck Creek confluence; a wooden bridge is present at the Rattlesnake Creek confluence.
Outstandingly Remarkable Values	
Scenic	<p>Criteria met: diversity of view, special features, cultural modifications.</p> <p>This river segment is visually striking and particularly memorable. The foreground and background vary in texture, color, contrast, and depth. The diversity of colors results from the variety of trees, shrubs, and lichens within view. The high degree of relief and significant changes in geology within a short distance lend to the segment’s scenic quality. Special features include hoodoos, window rocks, and little arches. The road adjacent to this segment provides an opportunity for the public to view scenery similar to that found further downstream, as well as unique characteristics of this segment. Besides the road, other cultural modifications are minimal and do not detract from the scenic value of the segment.</p> <p>The Jarbidge River rates as scenic quality “A” as described in the BLM Visual Resource Inventory Handbook, H-8410-1.</p>
Recreational	N/A
Geological	N/A
Fish	<p>Criteria met: habitat quality, diversity of species, value of species, natural reproduction.</p> <p>The Jarbidge River is an isolated watershed and contains a natural diversity of native fish species. Compared to other rivers in the region, the proportion of native to non-native species is unusually high, as there few, if any, non-native species present.</p> <p>The Jarbidge River system contains the southernmost existing population of bull trout in North America (USFWS 2004). Bull trout are the only species of fish within the planning area that are Federally listed as Threatened under the Endangered Species Act of 1973; the Jarbidge River contains one of six populations of bull trout identified for recovery. Genetic analysis of bull trout in the Columbia River Basin indicates Jarbidge River bull trout have a shared evolutionarily history with populations in the upper Columbia River and Snake River but are genetically distinct. For over 100 years, Jarbidge River bull trout have been geographically isolated from other populations in the Snake River by more than 150 miles (240 km) of marginally suitable habitat and several impassable hydroelectric dams on the Snake River and diversion dams on the lower Bruneau River.</p>

	<p>Bull trout in the Jarbidge River are considered significant because they occupy a unique and unusual ecological setting and their loss would result in a substantial modification of the species' range. The bull trout in the Jarbidge River are unique in that a portion of their habitat is in an area categorized as semi-arid desert. The Rocky Mountain juniper dominated riparian zone interspersed aspen on BLM portions of the Jarbidge River grades into aspen and limber pine on Forest Service land is unique to the area. The majority of the other occupied bull trout stream habitat is in other coniferous forest types (i.e. Douglas fir, Engelmann spruce, and others). The segment has spawning, over-wintering, and migratory habitat for bull trout. This reach is a key migration corridor between other bull trout bearing streams, and its deeper pools provide important over-wintering habitat.</p>
Wildlife	N/A
Historical	N/A
Cultural	N/A
Vegetation/Ecological	N/A
Comments	
<ul style="list-style-type: none"> • Previously evaluated in the 1976 Bruneau Wild and Scenic River Study and deemed ineligible due to the lack of recreational values • The Jarbidge River downstream from the confluence with the Jarbidge River, East Fork was recommended as suitable, with a tentative classification as wild, in the 1976 Bruneau Wild and Scenic River Study • The Humboldt-Toiyabe National Forest inventoried the upstream portions of this river as eligible • Evaluation requested as part of general scoping comments by Idaho Conservation League; evaluation of Jarbidge River was specifically requested in scoping comments by Western Watersheds Project 	



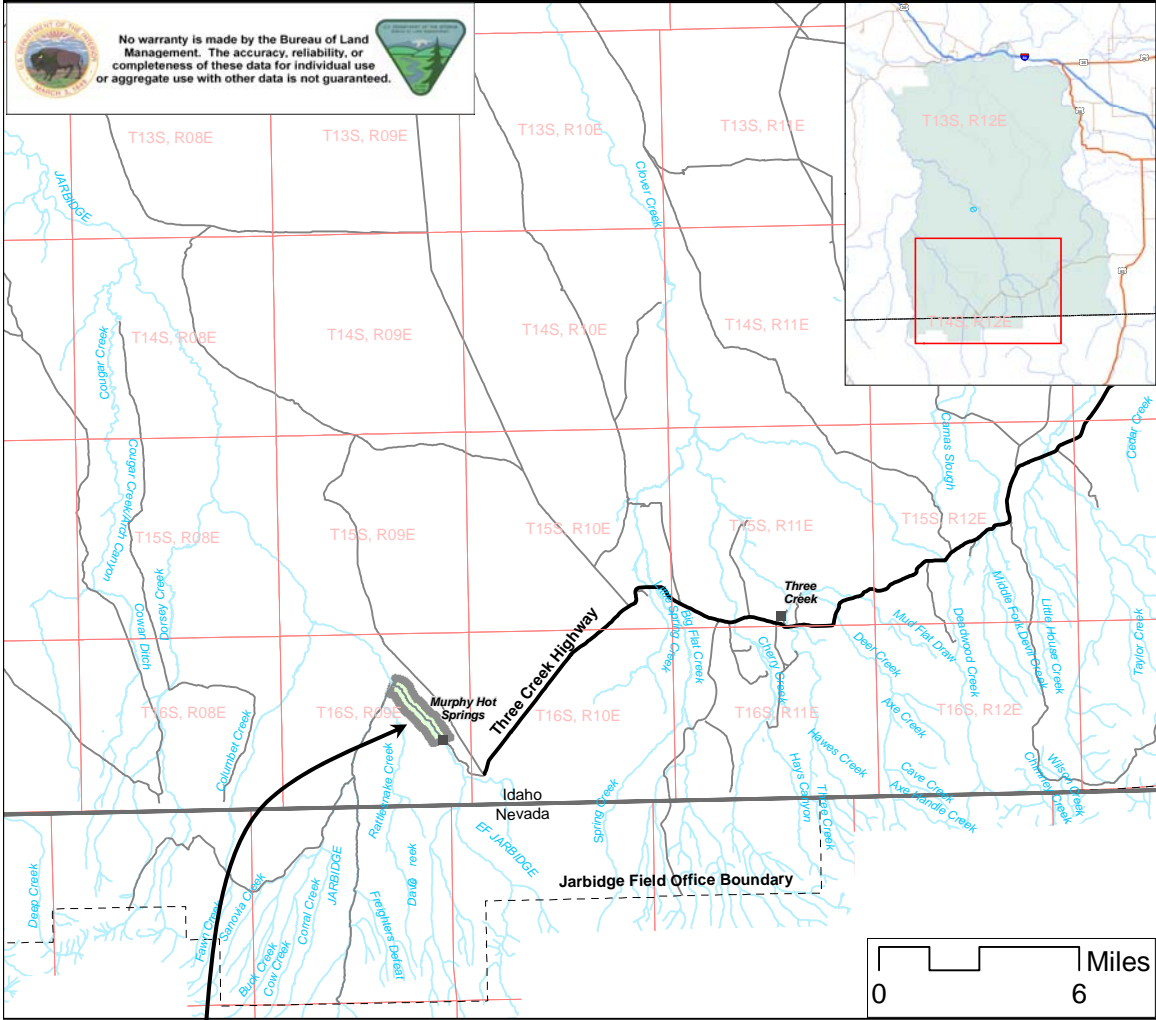
Jarbidge River



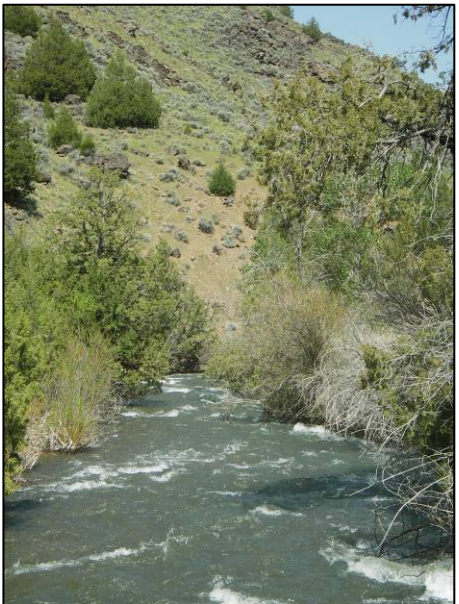
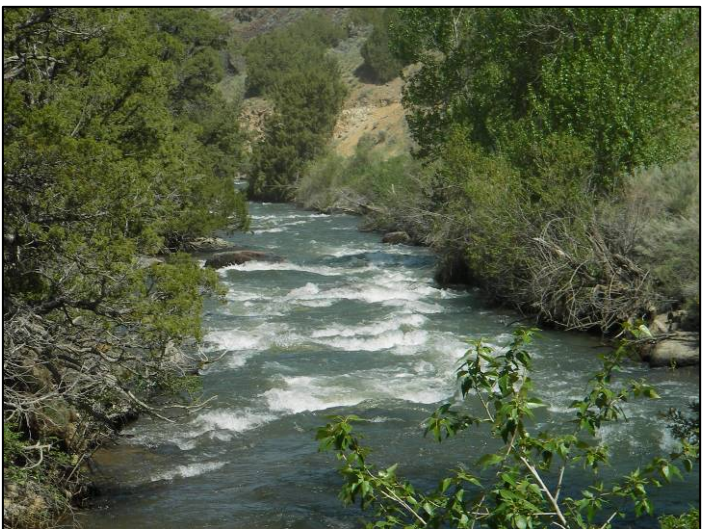
Jarbidge River, East Fork, north of Murphy Hot Springs

River Name	Jarbidge River, East Fork, north
Segment Description	Downstream private boundary of Murphy Hot Springs to Jarbidge River confluence
Total Stream Length	2.2 miles
Free Flowing?	Yes
Tentative Classification	Recreational; human development is present and obvious, as many Murphy Hot Springs residences exist at the upstream end of this segment. Improved gravel road with regular motorized traffic borders the entire segment. Developed campsites are present along the segment.
Outstandingly Remarkable Values	
Scenic	N/A
Recreational	N/A
Geological	N/A
Fish	<p>Criteria met: habitat quality, diversity of species, value of species, natural reproduction.</p> <p>The Jarbidge River, East Fork is an isolated watershed and contains a natural diversity of native fish species. Compared to other rivers in the region, the proportion of native to non-native species is unusually high, as there few, if any, non-native species present. Native fish populations in the Jarbidge River, East Fork are largely intact, and habitats between drainages are still connected.</p> <p>The Jarbidge River system contains the southernmost existing population of bull trout in North America (USFWS 2004). Bull trout are the only species of fish within the planning area that are Federally listed as Threatened under the Endangered Species Act of 1973; the Jarbidge River contains one of six populations of bull trout identified for recovery. Genetic analysis of bull trout in the Columbia River Basin indicates Jarbidge River bull trout have a shared evolutionary history with populations in the upper Columbia River and Snake River but are genetically distinct. For over 100 years, Jarbidge River bull trout have been geographically isolated from other populations in the Snake River by more than 150 miles (240 km) of marginally suitable habitat and several impassable hydroelectric dams on the Snake River and diversion dams on the lower Bruneau River.</p> <p>Bull trout in the Jarbidge River are considered significant because they occupy a unique and unusual ecological setting and their loss would result in a substantial modification of the species' range. The bull trout in the Jarbidge River are unique in that a portion of their habitat is in an area categorized as semi-arid desert. The Rocky Mountain juniper dominated riparian zone interspersed aspen on BLM portions of the Jarbidge River grades into aspen and limber pine on Forest Service land is unique to the area. The majority of the other occupied bull trout stream habitat is in other coniferous forest types (i.e. Douglas fir, Engelmann spruce, and others). The segment has spawning, over-wintering, and migratory habitat for bull trout. This reach provides a migration corridor between other bull</p>

	trout bearing streams, and its deeper pools provide important over-wintering habitat.
Wildlife	N/A
Historical	N/A
Cultural	N/A
Vegetation/Ecological	N/A
Comments	
<ul style="list-style-type: none"> • Previously evaluated in the 1976 Bruneau Wild and Scenic River Study and deemed ineligible due to the lack of recreational values • The Jarbidge River downstream from the confluence with the Jarbidge River, East Fork was recommended as suitable, with a tentative classification as wild, in the 1976 Bruneau Wild and Scenic River Study • Evaluation requested as part of general scoping comments by Idaho Conservation League; evaluation of Jarbidge River, East Fork was specifically requested in scoping comments by Western Watersheds Project 	



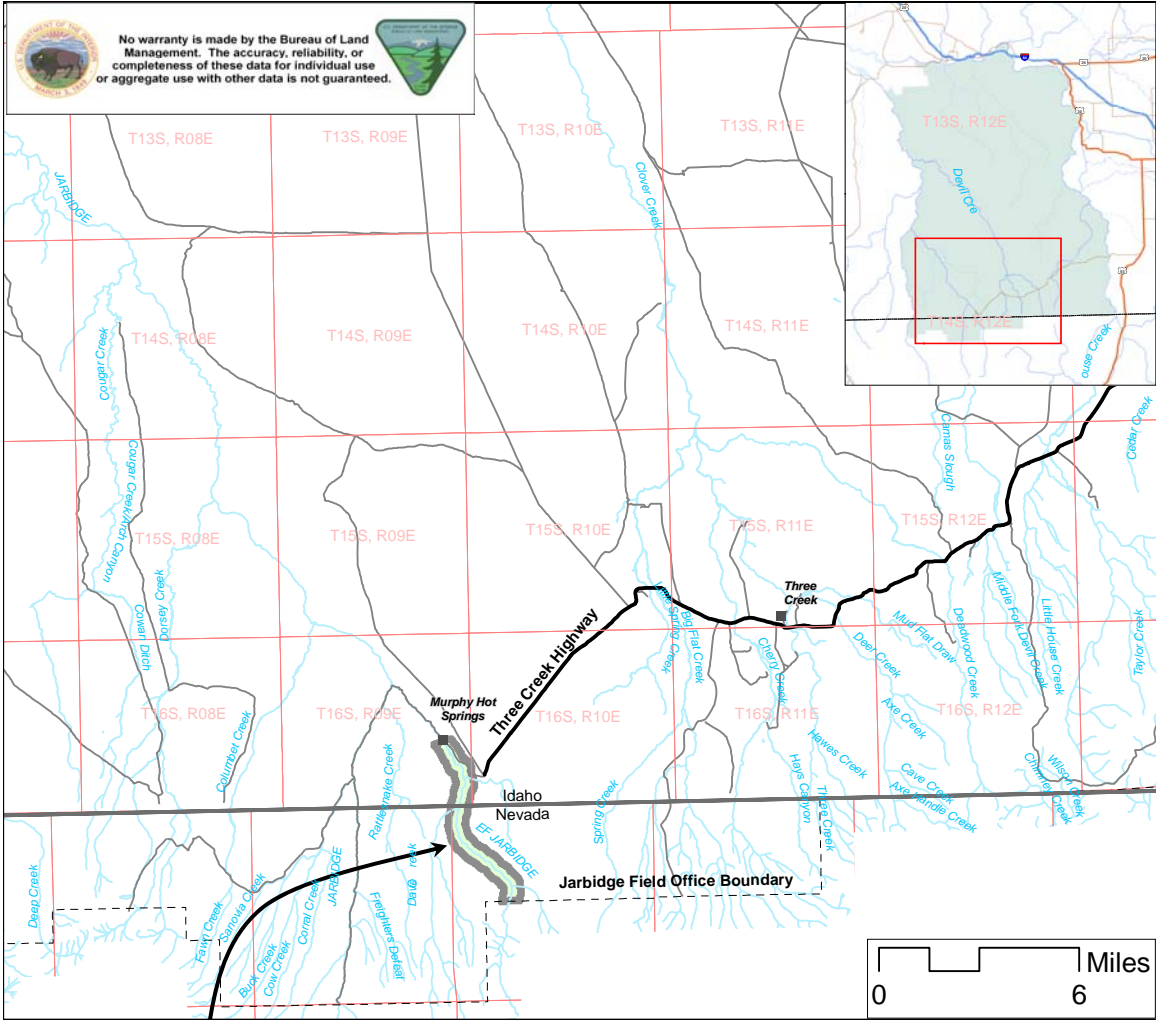
Jarbidge River, East Fork, north of Murphy Hot Springs



Jarbidge River, East Fork, south of Murphy Hot Springs

River Name	Jarbidge River, East Fork, south
Segment Description	Jarbidge FO boundary to the upstream private boundary of Murphy Hot Springs
Total Stream Length	7.4 miles
Free Flowing?	Yes
Tentative Classification	Wild; there are few or no human developments occurring along this segment. Access is very limited and typically only by trail.
Outstandingly Remarkable Values	
Scenic	N/A
Recreational	N/A
Geological	N/A
Fish	<p>Criteria met: habitat quality, diversity of species, value of species, natural reproduction.</p> <p>The Jarbidge River, East Fork is an isolated watershed and contains a natural diversity of native fish species. Compared to other rivers in the region, the proportion of native to non-native species is unusually high, as there few, if any, non-native species present. Native fish populations in the Jarbidge River, East Fork are largely intact, and habitats between drainages are still connected.</p> <p>The Jarbidge River system contains the southernmost existing population of bull trout in North America (USFWS 2004). Bull trout are the only species of fish within the planning area that are Federally listed as Threatened under the Endangered Species Act of 1973; the Jarbidge River contains one of six populations of bull trout identified for recovery. Genetic analysis of bull trout in the Columbia River Basin indicates Jarbidge River bull trout have a shared evolutionarily history with populations in the upper Columbia River and Snake River but are genetically distinct. For over 100 years, Jarbidge River bull trout have been geographically isolated from other populations in the Snake River by more than 150 miles (240 km) of marginally suitable habitat and several impassable hydroelectric dams on the Snake River and diversion dams on the lower Bruneau River.</p> <p>Bull trout in the Jarbidge River are considered significant because they occupy a unique and unusual ecological setting and their loss would result in a substantial modification of the species' range. The bull trout in the Jarbidge River are unique in that a portion of their habitat is in an area categorized as semi-arid desert. The Rocky Mountain juniper dominated riparian zone interspersed aspen on BLM portions of the Jarbidge River grades into aspen and limber pine on Forest Service land is unique to the area. The majority of the other occupied bull trout stream habitat is in other coniferous forest types (i.e. Douglas fir, Engelmann spruce, and others). The segment has spawning, over-wintering, and migratory habitat for bull trout. This reach provides a migration corridor between other bull trout bearing streams, and its deeper pools provide important over-wintering habitat.</p>

Wildlife	N/A
Historical	N/A
Cultural	N/A
Vegetation/Ecological	N/A
Comments	
<ul style="list-style-type: none"> • Previously evaluated in the 1976 Bruneau Wild and Scenic River Study and deemed ineligible due to the lack of recreational values • The Humboldt-Toiyabe National Forest did not inventory the upstream portions of this river segment • Evaluation requested as part of general scoping comments by Idaho Conservation League; evaluation of Jarbidge River, East Fork was specifically requested in scoping comments by Western Watersheds Project 	

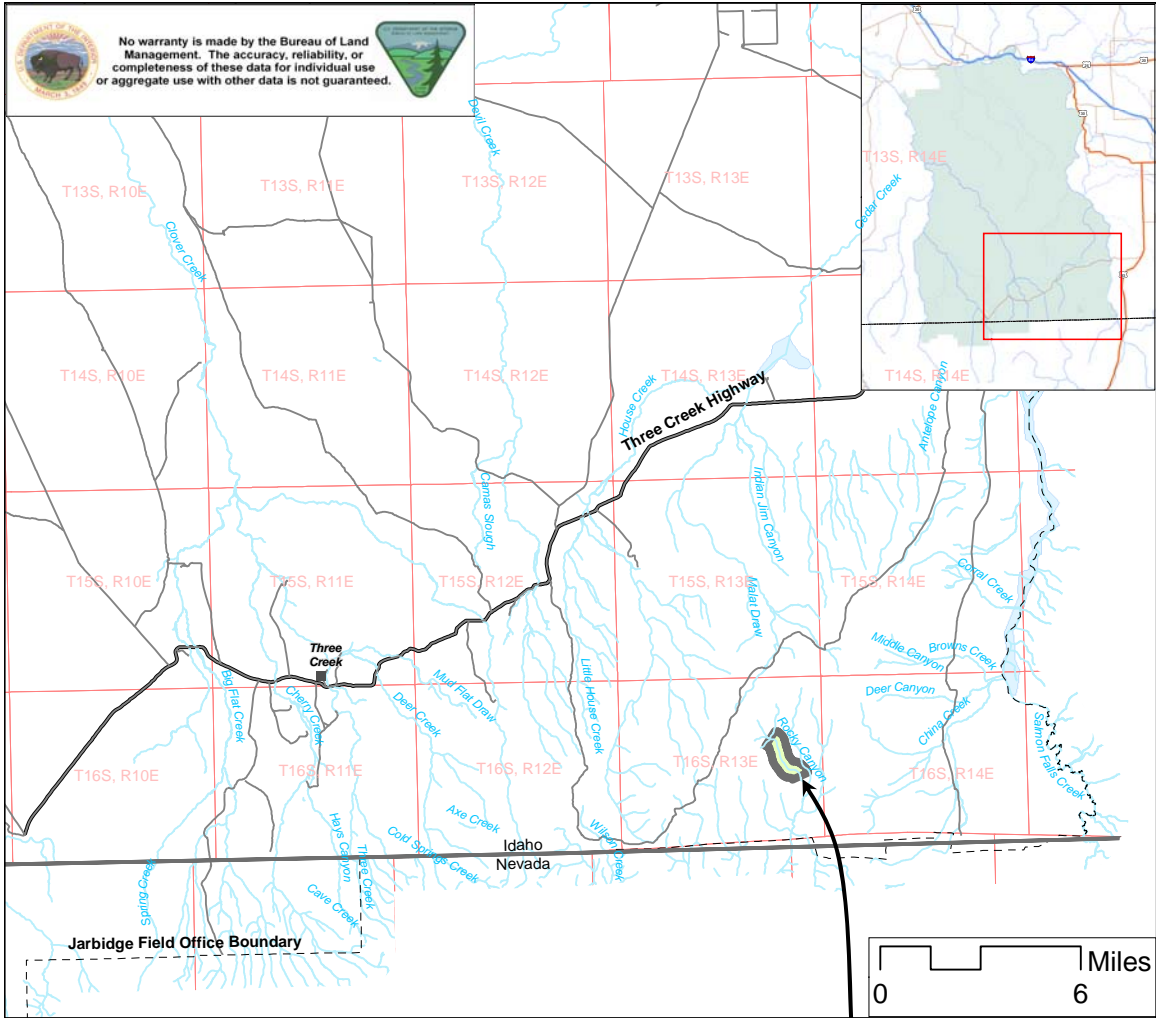


Jarbidge River, East Fork, south of Murphy Hot Springs



Rocky Canyon Creek

River Name	Rocky Canyon Creek
Segment Description	Headwaters to North Fork, Salmon Falls Creek confluence
Total Stream Length	1.5 miles
Free Flowing?	Yes
Tentative Classification	Wild; there are few or no human developments occurring along this segment. Access is very limited and typically only by trail.
Outstandingly Remarkable Values	
Scenic	N/A
Recreational	N/A
Geological	N/A
Fish	N/A
Wildlife	<p>Criteria met: habitat quality</p> <p>Rocky Canyon Creek supports a portion of the Great Basin population of the Columbia spotted frog, which is a Candidate species. The Great Basin population of Columbia Spotted Frogs was determined to warrant listing under the Endangered Species Act, but other species have priority at this time. Because habitat for spotted frogs throughout the region is highly fragmented and discontinuous, loss of any of the existing populations would contribute to the need for listing as a threatened or endangered species.</p> <p>Rocky Canyon Creek represents the easternmost extent of the Owyhee Subpopulation within the Great Basin population (Engle 1998). Columbia spotted frogs have been documented in seven tributaries in the North Fork Salmon Falls Creek watershed (Columbia Spotted Frog Technical Team 2003). Rocky Canyon appears to be a stronghold for spotted frogs in this watershed; the spotted frog population in this segment is a source population within this watershed, dispersing young frogs to tributaries downstream. The loss of this population could result in spotted frogs being extirpated from the North Fork Salmon Falls Creek watershed.</p> <p>Rocky Canyon Creek represents the only occupied habitat for Columbia spotted frogs in the Jarbidge FO, based on 2004-2005 monitoring. This segment contains perennial springs, active, stable beaver ponds, and beaked sedge communities providing high quality breeding, rearing, and overwintering habitat. In addition to being regionally significant spotted frog habitat, this segment contains a large assemblage of sensitive birds, including calliope hummingbird, Lewis woodpecker, as well as habitat for mountain quail and Columbian sharp-tailed grouse.</p>
Historical	N/A
Cultural	N/A
Vegetation/Ecological	N/A
Comments	
<ul style="list-style-type: none"> • Not evaluated previously • Evaluation requested as part of general scoping comments by Idaho Conservation League and Western Watersheds Project 	



Rocky Canyon Creek



Snake River, Three Island Reach

River Name	Snake River, Three Island Reach
Segment Description	King Hill Bridge to Highway 51 Bridge
Total Stream Length (Miles)	25.0
Free Flowing?	Yes
Tentative Classification	Recreational; human development is present and obvious. This segment can be accessed at multiple locations and is sometimes bordered by roads or railroads.
Outstandingly Remarkable Values	
Scenic	N/A
Recreational	<p>Criteria met: experience quality, access, level of use, attraction, length of season.</p> <p>This segment of the Snake River is a regionally popular fishing, hunting, and sightseeing area. Some form of recreational activity occurs year-round; four-season use is uncommon within the geographic region. There are numerous public access points providing for launching of motorized and non-motorized boats, nature study, bird watching, wildlife and scenery viewing, waterfowl hunting, and bank fishing opportunities.</p> <p>Catch-and-release fishing of sturgeon is an unusual recreation experience for the region, and visitors come from outside the geographic region for this recreational experience. Catching 4- to 7-foot long fish is common, and larger fish are not unusual.</p> <p>This segment also offers a variety of hunting opportunities for water fowl and upland game birds.</p>
Geological	N/A
Fish	<p>Criteria met: habitat quality, value of species, abundance of species, natural reproduction, size of fish</p> <p>White sturgeon are a BLM Sensitive species. This is the largest fish species in the Columbia River system. Because of the free-flowing nature of this reach, sturgeon are able to reproduce naturally and do not require hatchery supplementation to sustain the population. In fact, this is the upper-most reach of Snake River with a self-sustaining population. While sturgeon habitat in this segment is not the best within its range, this segment contains the best sturgeon habitat upstream of the Hells Canyon Dam Complex.</p>
Wildlife	N/A
Historical	<p>Criteria: significance, education/interpretation, listing/eligibility</p> <p>The primary historical significance of this segment of the Snake River is its relationship to the Oregon Trail, which is designated as a National Historic Trail. A portion of the Oregon Trail directed emigrants across the river at Three Island Crossing, which is located within this reach. A re-enactment of this crossing occurs annually, providing a significant opportunity for education and interpretation. This segment hosts the only</p>

	crossing re-enactment on the Snake River.
Cultural	<p>Criteria: significance, listing/eligibility</p> <p>This segment contains large riverside camps and important Native American fishing sites, primarily for salmon and steelhead. Several sites within this segment are eligible for listing on the National Register. These cultural sites are rare and significant in that they are in Federal ownership. Most of the cultural sites along the Snake River are on private land.</p>
Vegetation/Ecological	N/A
Comments	
<ul style="list-style-type: none"> • Not evaluated previously • Evaluation requested as part of general scoping comments by Idaho Conservation League • This reach is adjacent to the Three Island Crossing State Park in Glens Ferry, Idaho, and borders the Snake River Birds of Prey National Conservation Area 	

Appendix 1. Jarbidge FO Wild and Scenic Rivers Evaluation Interdisciplinary Team

Name	Title
<i>BLM Staff</i>	
Aimee Betts	Supervisory Natural Resource Specialist
Richard Bupp	Recreation Technician
Kate Forster	Fisheries Biologist
Sheri Hagwood	Botanist
Amanda Hoffman	Writer/Editor
Jim Klott	Wildlife Biologist
Arnie Pike	Supervisory Rangeland Management Specialist
Bonnie Ross	GIS Specialist
Jeff Ross	Archaeologist
Max Yingst	Outdoor Recreation Planner
<i>Cooperating Agency Representatives</i>	
Mike McDonald	Wildlife Biologist (Idaho Department of Fish and Game)
Kevin Wright	Rangeland Management Specialist (Idaho State Department of Agriculture)

Appendix 2. Rivers in the Jarbidge FO Evaluated for Eligibility

The following rivers within the Jarbidge FO were included in the evaluation for Wild and Scenic River eligibility. Where no specific reach is denoted, the entire river, from headwaters to confluence, was assessed where it crossed public land within the Jarbidge FO.

River segments were identified through several sources, which are listed for each river in the table below. All perennial and intermittent rivers and streams included on Jarbidge FO GIS layers were included in the inventory. The Nationwide Rivers Inventory (USDI National Park Service 2004) and the State of Idaho Comprehensive Water Plan are also sources of rivers to evaluate; however, the only rivers included on these source lists have already been recommended as suitable. In addition, evaluation of several rivers was requested during public scoping for the Jarbidge RMP. Rivers that were studied during previous evaluation efforts or are adjacent to eligible segments on adjoining lands were also studied.

River	Source for Consideration						
	GIS	WWP	ICL	Bruneau	Bennett	Burley	HTNF
Bear Creek	X	X	X				
Big Flat Creek	X	X	X				
Bruneau River, above Black Rock Crossing	X	X	X	X			
Bruneau River, below Hot Creek	X	X	X	X			
Bruneau River, East Fork (Clover Creek)	X	X	X				
Buck Creek	X	X	X				
Cedar Creek Reservoir	X		X				
Cedar Creek, above reservoir	X	X	X				
Cedar Creek, below reservoir	X		X				
Cherry Creek	X	X	X				
China Creek	X	X	X				
Columbet Creek	X	X	X				
Cougar Creek	X	X	X				
Cougar Point Creek	X	X	X				
Dave Creek	X	X	X				
Deadman Creek (ID)	X		X				
Deadman Creek (NV)	X	X	X				
Deadwood Creek	X	X	X				
Deep Creek	X	X	X				
Deer Creek (ID)	X	X	X				
Deer Creek (NV)	X	X	X				
Devil Creek	X		X				
Dorsey Creek	X	X	X				
House Creek	X	X	X				
Jarbidge River	X	X	X	X			X
Jarbidge River, East Fork, north of Murphy Hot Springs	X	X	X	X			
Jarbidge River, East Fork, south of Murphy Hot Springs	X	X	X	X			
Player Creek	X	X	X				
Poison Creek	X	X	X				

River	Source for Consideration						
	GIS	WWP	ICL	Bruneau	Bennett	Burley	HTNF
Pole Creek	X	X	X				
Rocky Canyon Creek	X	X	X				
Sailor Creek	X		X				
Salmon Falls Creek Reservoir	X		X			X	
Salmon Falls Creek, below Balanced Rock	X	X	X			X	
Salmon Falls Creek, North Fork	X	X	X				
Shack Creek	X	X	X				
Snake River, Three Island Reach	X		X				
Snake River, Bliss Dam Reservoir	X		X		X		
Snake River, Upper and Lower Salmon Falls Projects	X		X		X		
Spring Creek	X	X	X				
Taylor Creek	X	X	X				
Three Creek	X	X	X				
<p>GIS: Jarbidge FO GIS stream layer WWP: requested in scoping by Western Watersheds Project ICL: requested in scoping by Idaho Conservation League Bruneau: previously evaluated in Bruneau Wild and Scenic River Study Report (1976) Bennett: previously evaluated in Draft Bennett Hills RMP (1991) Burley: previously evaluated by the Burley District (1992) HTNF: adjacent to eligible segment identified in Humboldt-Toiyabe National Forest Eligibility Report (2005)</p>							

Appendix 3. Jarbidge FO Wild and Scenic River Evaluation Worksheet

Where no specific reach is denoted, the entire river, from headwaters to confluence, was assessed where it crossed public land.

River	Free flowing?	Outstandingly Remarkable Values?	Eligible?	Tentative Classification
<i>Rivers eliminated following November 2006 review</i>				
Bruneau River, below Hot Creek	No	not evaluated further	No	N/A
Cedar Creek Reservoir	No	not evaluated further	No	N/A
Deadman Creek (ID)	No	not evaluated further	No	N/A
Salmon Falls Creek, below Balanced Rock	No	not evaluated further	No	N/A
Salmon Falls Creek Reservoir	No	not evaluated further	No	N/A
Snake River, Bliss Dam Reservoir	No	not evaluated further	No	N/A
Snake River, Upper and Lower Salmon Falls Projects	No	not evaluated further	No	N/A
Bear Creek	Yes	None	No	N/A
Big Flat Creek	Yes	None	No	N/A
Bruneau River, above Black Rock Crossing	Yes	None	No	N/A
Bruneau River, East Fork (Clover Creek)	Yes	None	No	N/A
Buck Creek	Yes	None	No	N/A
Cedar Creek, above reservoir	Yes	None	No	N/A
Cedar Creek, below reservoir	Yes	None	No	N/A
Cherry Creek	Yes	None	No	N/A
China Creek	Yes	None	No	N/A
Columbet Creek	Yes	None	No	N/A
Cougar Creek	Yes	None	No	N/A
Deadman Creek (NV)	Yes	None	No	N/A
Deadwood Creek	Yes	None	No	N/A
Deep Creek	Yes	None	No	N/A
Deer Creek (ID)	Yes	None	No	N/A
Deer Creek (NV)	Yes	None	No	N/A
Devil Creek	Yes	None	No	N/A
House Creek	Yes	None	No	N/A
Poison Creek	Yes	None	No	N/A
Pole Creek	Yes	None	No	N/A
Sailor Creek	Yes	None	No	N/A
Spring Creek	Yes	None	No	N/A
Taylor Creek	Yes	None	No	N/A
Three Creek	Yes	None	No	N/A
<i>Rivers eliminated following April 2007 review</i>				
Dorsey Creek	Yes	None	No	N/A
Player Creek	Yes	None	No	N/A
Salmon Falls Creek, North Fork	Yes	None	No	N/A

River	Free flowing?	Outstandingly Remarkable Values?	Eligible?	Tentative Classification
(Timber Canyon)				
Shack Creek	Yes	None	No	N/A
<i>Rivers remaining following April 2007 review</i>				
Cougar Point Creek	Yes	Scenery	Yes	Wild
Dave Creek	Yes	Fish	Yes	Wild
Jarbidge River	Yes	Scenery, Fish	Yes	Recreational
Jarbidge River, East Fork, north of Murphy Hot Springs	Yes	Fish	Yes	Recreational
Jarbidge River, East Fork, south of Murphy Hot Springs	Yes	Fish	Yes	Wild
Rocky Canyon Creek	Yes	Wildlife	Yes	Wild
Snake River, Three Island Reach	Yes	Recreation, Fish, Historic Resources, Cultural Resources	Yes	Recreational

GLOSSARY

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GLOSSARY

ACQUIRED LANDS. Acquired lands, as distinguished from public lands, are those lands in Federal ownership that have been obtained by the Government by purchase, condemnation, or gift, or by exchange for such purchased, condemned or donated lands, or for timber on such lands.

ACTIVITY PLAN. A document that describes management objectives, actions, and projects to implement decisions of the RMP or other planning documents. Usually prepared for one or more resources in a specific area.

ACTIVE USE. The portion of the grazing preference available for livestock use under a permit or lease based on livestock carrying capacity and resource conditions in a grazing allotment.

ADAPTIVE MANAGEMENT. A continuous process for adjusting management strategies when evaluation of monitoring data demonstrates goals and objectives are not being met or as new information becomes available.

AGGREGATED. Taken as a total.

AIR INVERSIONS. A reversal in the normal temperature layers of the atmosphere. A layer of warm air settles on top of a layer of cold air, and the cold air becomes trapped underneath the warm air, usually associated with local conditions and isolated areas.

AIR QUALITY CLASSIFICATION. Classifications established under the Prevention of Significant Deterioration portion of the Clean Air Act, which limits the amount of air pollution considered significant within an area.

Class I. Areas where almost any change in air quality would be significant.

Class II. Areas where the deterioration normally accompanying moderate well-controlled growth would be insignificant.

Class III. Areas where industrial deterioration would generally be insignificant.

AIRSHED. A relatively large atmospherical area where the air quality and environment are influenced by similar topographical, physical, and climatic changes.

ALLOTMENT. An area allocated for livestock use by one or more qualified grazing permittees including prescribed numbers and kinds of livestock under one plan of management.

AMBIENT AIR QUALITY. The state of the atmosphere at ground level as defined by the range of measured and/or predicted ambient concentrations of all significant pollutants for all averaging periods of interest.

ANADROMOUS. Moving from the sea to freshwater for reproduction.

ANIMAL UNIT. One mature cow or its equivalent. The equivalent animal units for other ungulate species are: 10.5 for pronghorn; 7.6, deer; 2.1, elk; 1.2, moose; 0.9, wild horses; and 5.2, sheep.

ANIMAL UNIT MONTH (AUM). The amount of forage required to sustain one mature cow or the equivalent (e.g., five sheep or five goats), based on an average daily forage consumption of 26 pounds of dry matter per day.

ANNUAL VEGETATION. Plants that complete their life cycles and die in 1 year or less.

APPROPRIATE MANAGEMENT LEVEL (AML). The level of use by wild horses which results in a thriving natural ecological balance and avoids a deterioration of the range.

APPROPRIATE MANAGEMENT RESPONSE (AMR). The response to a wildland fire based on an evaluation of risks to firefighter and public safety, the circumstances under which the fire occurs, including weather and fuel conditions, natural and cultural resource management objectives, protection priorities, and values to be protected. The evaluation must also include an analysis of the context of the specific fire within the overall local, geographic area, or national wildland fire situation.

AQUATIC. Living or growing in or on the water.

AQUIFER. A saturated, permeable sediment or rock that can transmit significant quantities of water under hydraulic gradients.

ARCHAEOLOGICAL SITE. A geographic location containing structures, artifacts, material remains, and/or other evidence of past human activity.

AREA OF CRITICAL ENVIRONMENTAL CONCERN (ACEC). An area of public lands where special management attention is required to protect and prevent irreparable damage to important historic, cultural, or scenic values; fish and wildlife resources; or other natural systems or processes; or to protect humans from natural hazards.

ASPECT. The direction a given side or surface is facing.

ATMOSPHERIC DEPOSITION. The transfer of substances from the air to the surface of the earth, either in wet form (e.g., rain, fog, snow, dew, frost, hail) or in dry form (e.g., gases, aerosols, particles).

ATTAINMENT AREA. A geographic area in which the concentration of one or more criteria pollutants is routinely better than the National Ambient Air Quality Standards.

AUTHORIZATIONS. Written approval from the BLM Authorized Officer to use public lands for a specific purpose while meeting all required laws and regulations.

AVOID. To the extent possible, do not implement the action indicated. If the action needs to take place, then add stipulations or take additional steps to minimize impacts. Avoidance is the preferred management approach in the identified habitats for species conservation.

AVOIDANCE AREA. Areas with sensitive resource values where rights-of-way and Section 302 permits, leases, and easements for large-scale utility developments would be strongly discouraged. Authorizations made in avoidance areas would have to be compatible with the purpose for which the area was designated and not be otherwise feasible on lands outside the avoidance area.

BANKFULL. The level at which water rises past the bank and enters the floodplain.

BENEFICIAL USE. Any of the various uses that may be made of water, including, but not limited to, domestic use, industrial use, agricultural irrigation, navigation, recreation, wildlife habitat, and aesthetics. A beneficial use is identified based upon actual use, the ability of water to support a non-existing use either now or in the future, and its likelihood of being used in a given manner.

BEST MANAGEMENT PRACTICES (BMPs). Practices based on current scientific information and technology that, when applied during implementation of management actions, ensure that negative impacts are minimized. BMPs are applied based on site-specific evaluation and represent the most effective and practical means to achieve management goals for a given site.

BIG GAME. Those species of large mammals normally managed as a sport hunting resource; includes elk, mule deer, pronghorn, and bighorn sheep.

BIOLOGICAL OPINION. A document prepared by US Fish and Wildlife Service stating their opinion as to whether or not a Federal action will likely jeopardize the continued existence or adversely modify the habitat of a listed Threatened or Endangered species.

BOLT STAGE. A plant's rapid growth period.

BROOD REARING. Caring for young birds hatched at one time.

BROWSE. Branches and stems of woody plants used as food by wildlife.

BRUSH CONTROL. A method to reduce brush cover or eliminate unwanted brush through the use of prescribed fire, chemicals, mechanical methods, or biological means to achieve a desired plant community.

BUTTE. A detached low mountain or high mound rising abruptly from the general level of the surrounding plain; applied to peculiar elevations in the Rocky Mountain Region.

CAIRNS. A pile of stones used as markers for various purposes.

CANDIDATE SPECIES. Species not protected under the Endangered Species Act but under consideration by the US Fish and Wildlife Service for inclusion on the list of Federally Threatened or Endangered species.

CHEATGRASS (*Bromus tectorum* L, DOWNY BROME). An exotic annual grass, native to Eurasia and the Mediterranean, which can dominate disturbed ground in shrub steppe ecosystems of the western United States and Canada.

CLIMATE. The average prevailing weather conditions, including but not limited to precipitation and temperature, of a place over time.

COMMUNITY. An assemblage of plant and animal populations in a common spatial arrangement.

COMMUNITIES AT RISK (CAR). Wildland interface communities within the vicinity of Federal lands at high risk from wildfire. These communities were published in a Federal Register Notice list (66 FR 751) compiled from information provided by Tribes and States and prepared for publication by the Secretaries of Agriculture and Interior.

COMPETITION. The general struggle for existence in which living organisms compete for a limited supply of the necessities of life. Competition can exist between species, and even between individuals of a species, for food, shelter, space, nest sites, birthing sites, mates, access to water, and many other habitat and life cycle requirements.

CONSULTATION, COORDINATION, AND COOPERATION. A process prescribed by the Public Rangelands Improvement Act of involving the permittee(s), lessee(s), federally recognized Native American tribes, and interested publics in the development of management programs on public lands. The process also includes trust responsibilities to federally recognized Native American tribes.

CUBIC FEET PER SECOND (CFS). As a rate of stream flow, a cubic foot of water passing a referenced section in 1 second of time. One cfs flowing for 24 hours will yield 1.983 acre-feet of water.

CULTIVAR. A race or variety of a plant that has been created or selected intentionally and maintained through cultivation.

CULTURAL RESOURCE. The fragile and nonrenewable remains of human activity that are found in historic districts, sites, buildings, and artifacts and that are important in past and present human events.

CULTURAL RESOURCE INVENTORY. An inventory to assess the potential presence of cultural resources. There are three classes of surveys:

Class I. An existing data survey. This is an inventory of a study area that provides a narrative overview of cultural resources by using existing information and compiling existing cultural resources site record data to develop a baseline for the BLM's site record system.

Class II. A sampling field inventory designed to locate, from surface and exposed profile indications, all cultural resource sites within a portion of an area so that an estimate can be made of the cultural resources for the entire area.

Class III. An intensive field inventory designed to locate, from surface and exposed profile indications, all cultural resource sites in an area. Upon its completion, no further cultural resources inventory work is normally needed.

CYANOBACTERIA. Bacteria that obtain their energy through photosynthesis (i.e. fixation of atmospheric carbon to form energy-rich molecules such as sugars or starches). Some cyanobacteria also fix atmospheric nitrogen into forms that are usable by plants. Also known as blue-green algae.

DIGITIZE. To convert data to digital form for use in a computer.

DISTURBANCE. Any management activity that has the potential to accelerate erosion or mass movement. Also, any other activity that may tend to disrupt the normal movement or habits of a particular wildlife or plant species.

DIVERSITY. The relative abundance of wildlife species, plant species, communities, habitats, or habitat features per unit of area.

EASEMENT. A right or privilege one may have on another's land.

ECOLOGICAL CONDITION. The present state of vegetation on a site compared to the natural potential of vegetation on the site.

ECOLOGICAL SITE. Land with a specific potential natural community and specific physical characteristics, differing from other kinds of land in its ability to produce vegetation and in its response to management.

ECOLOGICAL SITE INVENTORY (ESI). A type of rangeland inventory where current species composition on a given site is compared to the composition that should be there if the site were at climax or highest ecological condition.

ECOSYSTEM. A functioning system comprised of a community of animals, plants, and bacteria and its interrelated physical and chemical environment.

EFFECTS (IMPACTS). The biological, physical, social, or economic consequences resulting from a proposed action. Effects may be adverse (detrimental) or beneficial, and direct, indirect, or cumulative.

Direct effects. Effects caused by the action and occur at the same time and place.

Indirect effects. Effects are caused by the action, but occur at a later time or further removed in distance.

Cumulative effects. Incremental effects of the proposed action when added to other past, present, or reasonably foreseeable future actions, regardless of what agency (Federal or non-Federal) or person undertakes the actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time.

ELIGIBLE RIVER SEGMENT. A section of a river that qualifies for inclusion into the National Wild and Scenic River System through determination that it is free-flowing and, with its adjacent land area, possesses at least one river-related value considered to be outstandingly remarkable.

EMERGENCY STABILIZATION AND BURNED AREA REHABILITATION (ES&BAR). Actions are taken immediately following a wildland fire incident and are completed within one year. They are intended to 1) stabilize and prevent unacceptable degradation to natural and cultural resources, 2) minimize the threats

to life or property resulting from the effects of a fire, and 3) repair/replace/construct physical improvements necessary to prevent degradation of land or resources.

ENDANGERED SPECIES. Any animal or plant species in danger of extinction throughout all of a significant portion of its range. These species are listed by the US Fish and Wildlife Service under provisions of the Endangered Species Act.

ENERGY FLOW. The process through which energy from sunlight enters and is used by living systems.

ENVIRONMENTAL ASSESSMENT (EA). A concise public document that a Federal agency prepares under the National Environmental Policy Act to provide sufficient evidence and analysis to determine whether a proposed agency action would require preparation of an Environmental Impact Statement or a Finding of No Significant Impact.

ENVIRONMENTAL IMPACT STATEMENT (EIS). A detailed public document that complies with NEPA law and regulation. An EIS describes a major Federal action that significantly affects the quality of the human environment, provides alternatives to the proposed action, and analyzes the effects of the proposed action.

EROSION. The wearing away of land surface either by natural weathering processes (including water, wind, or ice) or human or animal activities.

EXCLOSURE. An area fenced to exclude grazing animals, usually for study purposes.

EXISTING ROUTES. The roads, trails, or ways that are used by motorized vehicles (jeeps, all-terrain vehicles, motorized dirt bikes, etc.), mechanized use (e.g., mountain bikes, game carts), pedestrians (hikers), and/or equestrians (horseback riders) and are, to the best of BLM's knowledge, in existence at a specified time (e.g., the time of RMP/EIS publication).

FIELD OFFICE (FO). A geographic portion of a BLM District that is the smallest administrative subdivision in the BLM.

FIRE INTENSITY. The energy output from a fire often expressed as reaction intensity, fireline intensity, temperature, heating duration, or radiant energy.

FIRE REGIME. Description of the patterns of fire occurrences, frequency, size, severity, and sometimes vegetation and fire effects in a given area or ecosystem.

FIRE REGIME CONDITION CLASS (FRCC). A classification of a vegetation community's variance or departure from historic fire conditions. Fire Condition Classes can be: 1) Fire Condition Class 1, representing low departure from historic fire regime; 2) Fire Condition Class 2, representing moderate departure from historic fire regime; or 3) Fire Condition Class 3, representing high departure from historic fire regime.

FIRE SEVERITY. A qualitative assessment of the heat pulse directed toward the ground during a fire often measured by organic matter loss, both above ground and below ground.

FIRE SUPPRESSION. All work and activities associated with fire extinguishing operations, beginning with the discovery of the fire and continuing until the fire is completely extinguished.

FIXATION. The conversion of atmospheric nitrogen to biologically usable nitrates.

FLUVIAL. Pertaining to stream or rivers or produced by stream action. Also, migrating between main rivers and tributaries.

FORAGE. Vegetation of all forms available and of a type used for animal consumption.

FORB. Any herbaceous plant that is not a grass or grass like.

FOSSILIFEROUS. Containing or bearing fossils.

FRAGMENTATION. Landscape transformation that includes the breaking of large habitat into smaller pieces through 1) the conversion of fairly continuous tracts of a vegetation type to other vegetation types such that only scattered or isolated fragments of the original type remain, or 2) human-created structures or barriers that partition fairly continuous habitats into smaller habitats¹. The level of transformation necessary to achieve fragmentation varies by species.

FUNCTIONAL-AT RISK. Riparian/wetland areas are classified as functional at-risk when they are in functional condition but an existing soil, water, or vegetation attribute makes them susceptible to degradation.

GAME FISH. Any species of fish for which populations are managed by regulations.

GEOGRAPHIC INFORMATION SYSTEM (GIS). A collection of computer hardware, software, and geographic data for capturing, managing, analyzing, and displaying all forms of geographically referenced information .

GRADIENT. The slope of a stream channel.

GRAZING MANAGEMENT PRACTICES. Techniques used to manage livestock, including season of use, duration (amount of the time grazing occurs), intensity of use, numbers of livestock, kind of livestock, and distribution (e.g., salting, herding, and water development).

GRAZING PERMIT. Under Section 3 of the Taylor Grazing Act, a document authorizing the use of the public lands within grazing districts for the purpose of grazing livestock.

GRAZING SYSTEM. Scheduled grazing use and non-use of an allotment to reach identified goals or objectives by improving the quality and quantity of vegetation.

GREENLINE. The first perennial vegetation that forms a linear grouping of plant community types on or near the water's edge. This vegetation most often occurs at or slightly below the water's edge at the bankfull stage and is found only along streams with defined channels.

GULLIES. Deep, narrow channels or miniature valleys cut by concentrated runoff events through which water commonly flows only during and immediately after heavy rains or during the melting of snow.

HABITAT. An area with the combination of resources (e.g., food, cover, water) and environmental conditions (e.g., temperature, precipitation, presence or absence of predators and competitors) that promotes use by individuals of a given species or population and allows those individuals to survive and reproduce².

HAZARDOUS MATERIAL. A substance, pollutant, or contaminant that, due to its quantity, concentration, or physical or chemical characteristics, poses a potential hazard to human health and safety or to the environment if released into the workplace or the environment.

HEDGING. Consumption of browse to the extent that the shrub growth form is modified by appearing clipped.

HISTORIC FIRE REGIME. Description of the patterns of fire occurrences, frequency, size, severity, and sometimes vegetation and fire effects in a given area or ecosystem. A fire regime is a generalization

¹ Definition modified from Franklin, A. B., Noon, B. R., & George, T. L. (2002). What is Habitat Fragmentation? *Studies in Avian Biology*(25), 20-29.

² Definition modified from Franklin, et al. (2002).

based on fire histories at individual sites. Fire regimes can often be described as cycles because some parts of the histories usually get repeated, and the repetitions can be counted and measured.

HOME RANGE. The area in which an animal travels in the scope of natural activities.

HYBRIDIZATION. Any crossing of individuals of different genetic compositions, typically different species, that result in hybrid off-spring.

HYDROLOGIC UNIT CODE (HUC). A way of identifying all of the drainage basins in the United States in a nested arrangement from largest (Regions) to smallest (Cataloging Units). A drainage basin is an area or region of land that catches precipitation falling within that area, and funnels it to a particular creek, stream, river, and so on, until the water drains into an ocean.

HYDROLOGY. The science of dealing with the study of water on the surface of the land, in the soil and underlying rocks, and in the atmosphere.

IMPACT. The effect, influence, alteration, or imprint caused by an action (see EFFECT).

IMPERILED. Put into danger.

INDICATOR. Components or attributes of a rangeland ecosystem that can be observed and/or measured that provides evidence of the function, productivity, health and/or condition of the ecosystem.

INDICATOR SPECIES. A species whose presence, absence, or relative well-being in a given environment is indicative of the health of its ecosystem as a whole.

INHOLDING. A non-Federal parcel of land that is completely surrounded by Federal land.

INTER-BEDEDED. Geological strata that are positioned between, or alternated with, other layers of dissimilar character.

INTERMITTENT. A stream or segment of stream that flows only at certain times of the year when it receives water from springs or from some surface source, such as melting snow in mountainous areas.

INTERSEEDING. Seeding into established vegetation.

INVASIVE SPECIES. A non-native species whose introduction does or is likely to cause economic or environmental harm or harm to human health.

INVERTEBRATE. An animal lacking a backbone or spinal column.

KEY SAGE-GROUSE HABITAT. Areas of generally intact sagebrush that provide sage-grouse habitat during some portion of the year.

KIOSKS. A stall set up in a public place where one can obtain information (e.g., tourist information).

LAND TREATMENT. Modifying physical soil and/or plant conditions with treatments such as reseeding, brush control (chemical and mechanical), pitting, furrowing, water spreading, and ripping or sub-soiling.

LANDSCAPE. A large land area composed of interacting ecosystems that are repeated due to factors such as geology, soils, climate, and human impacts.

LEASEABLE MINERAL. A mineral such as oil shale, oil and gas, phosphate, potash, sodium, geothermal resources, and all other minerals that may be developed under the Mineral Leasing Act of 1920, as amended.

LEK. An assembly area where birds, especially sage-grouse, carry on display and courtship behavior.

LITHIC SCATTER. A type of archaeological site marked by a distribution of stone artifacts. The scatter may include formed tools such as projectile points, knives, or scrapers, or it may contain only chipping debris from tool-making activities.

LOCATABLE MINERALS. Minerals or materials subject to claim and development under the Mining Law of 1872, as amended. Generally includes metallic minerals such as gold and silver, and other materials not subject to lease or sale (some bentonites, limestone, talc, some zeolites, etc.). Whether or not a particular mineral deposit is locatable depends on such factors as quality, quantity, mineability, demand, and marketability.

MECHANICAL TREATMENT. Use of mechanical equipment for seeding, brush management, and other management practices.

METEOROLOGICAL CONDITIONS. Short-term atmospheric phenomena and variations that may occur in respect to air stability, wind speed, wind direction, temperature, etc. as affected by local weather conditions.

MICROBIOTIC CRUST. Community of non-vascular primary producers that occur as a “crust” on the surface of soils and made up of a mixture of algae, lichens, mosses, and cyanobacteria (bluegreen algae).

MINERAL ENTRY. Claiming public lands under the Mining Law of 1872 for the purpose of exploiting minerals. May also refer to mineral exploration and development under the mineral leasing laws and the Mineral Sale Act of July 31, 1947, as amended.

MINERAL MATERIALS. Common varieties of sand, building stone, gravel, clay, moss rock, etc., obtainable under the Minerals Act of July 31, 1947, as amended.

MINIMIZE. To reduce to the smallest possible amount, extent, size, or degree as is feasible from a technical or management standpoint.

MITIGATION. Measures taken to avoid, compensate for, rectify, or reduce the potential negative impacts of an action.

MONITORING. The systematic gathering of data to determine whether progress is being made in achieving land use objectives or goals.

MOTORIZED VEHICLES. Vehicle powered by an engine, usually internal combustion.

MULTIPLE-USE. The management of the public lands and their various resource values so they are utilized in the combination that will best meet the present and future needs of the American people; making the most judicious use of the land for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to conform to changing needs and conditions; the use of some land for less than all of the resources; a combination of balanced and diverse resource uses that takes into account the long term needs of future generations for renewable and nonrenewable resources with consideration being given to the relative values of the resources and not necessarily to the combination of uses that will give the greatest economic return or the greatest unit output.

NATIONAL AMBIENT AIR QUALITY STANDARDS (NAAQS). The allowable concentrations of air pollutants in the ambient (public outdoor) air specified in 40 CFR 50. NAAQS are based on the air quality criteria and divided into primary standards (allowing an adequate margin of safety to protect the public health) and secondary standards (allowing an adequate margin of safety to protect the public welfare).

NATIONAL REGISTER OF HISTORIC PLACES. The official list, established by the National Historic Preservation Act, of the Nation’s cultural resources worthy of preservation. The NRHP lists archaeological, historic, architectural, and traditional cultural properties (districts, sites, buildings,

structures, and objects) nominated for their local, state, or national significance by Federal and State agencies and approved by the National Register Staff.

NATIONAL WILD AND SCENIC RIVERS SYSTEM. Established by the Wild and Scenic Rivers Act of 1968 to protect rivers and their immediate environments that have outstanding scenic, recreation, geologic, fish and wildlife, historic, cultural, and other similar values and are preserved in free-flowing conditions. The system provides for the designation of three river classifications based primarily on the amount of shoreline development and access: recreational, scenic, and wild.

NATIVE SPECIES. Plants or animals indigenous to the area.

NATIVE VEGETATION COMMUNITY. A plant community that is populated by plants or cultivars of plants that are indigenous to the northern Great Basin.

NATURAL RECRUITMENT. Populations able to reproduce naturally.

NATURALNESS. Lands and resources exhibit a high degree of naturalness when affected primarily by the forces of nature, with the imprint of human activity is substantially unnoticeable.

NON-ATTAINMENT AREA. A geographic area within which the concentration of one or more criteria pollutants routinely exceed National Ambient Air Quality Standards.

NON-GAME SPECIES. Species managed as “protected” by state wildlife agencies with no authorized seasons for hunting or trapping. Common non-game species include the majority of birds, small mammals, bats, reptiles, and amphibians.

NON-NATIVE SPECIES. An animal or plant species that is not a part of an area's original fauna or flora.

NON-NATIVE VEGETATION COMMUNITY. A plant community that is populated by plants that are not indigenous to the northern Great Basin. Non-native vegetation communities found in the planning area are primarily occupied by plants that are not indigenous to the North American continent.

NOTICE OF INTENT (NOI). A notice in the Federal Register of intent to prepare an Environmental Impact Statement on a proposed action.

NOXIOUS WEED. Plant species designated “noxious” by law. According to Idaho Statute, a noxious weed is defined as any plant having the potential to cause injury to public health, crops, livestock, land, or other property and is designated as noxious by the director (Idaho Statute 22-2402).

NUTRIENT CYCLING. The circuit or movement of organic or inorganic ions or molecules within the soil profile in the form of solids, liquids, and gases that are absorbed by plants and returned to the soil by decomposition to repeat the process.

OFF-HIGHWAY VEHICLE (OHV). Any motorized vehicle capable of or designated for, travel on or immediately over land, water, or other natural terrain, excluding 1) any nonamphibious registered motorboat; 2) any military, fire, emergency or law enforcement vehicle when being used for emergency purposes; 3) any vehicle whose use is expressly authorized by the authorized officer, or otherwise officially approved; 4) vehicle in official use; and 5) any combat or combat support vehicle when used in times of national defense emergencies.

OVERSTORY. That portion of a plant community consisting of the taller plants on the site; the forest or woodland canopy.

OXBOWS. Cut-off loops of a stream channel that retain water through subsurface flow.

OZONE. One of the six criteria pollutants for which the EPA established National Ambient Air Quality Standards.

PALATABLE. The degree to which a particular plant species or part is favored by an animal for consumption.

PALEONTOLOGICAL RESOURCES. The physical remains or other physical evidence of plants and animals preserved in soils and sedimentary rock formations. Paleontological resources are important for correlating and dating rock strata and for understanding past environments, environmental change, and the evolution of life.

PARTICULATE MATTER (PM). Any small particles suspended in the air including dust, dirt, soot, smoke, and liquid droplets.

PM_{2.5}. Particles less than 2.5 micrometers.

PM₁₀. Particles of 10 micrometers or less.

PASSENGER VEHICLE. Two-wheel-drive, low-clearance vehicles.

PATENT. A grant made to an individual or group conveying fee simple title to selected public lands.

PERENNIAL VEGETATION. Plants that have life cycle of 3 or more years.

PERMITTED USE. 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 animal unit months (AUMs).

PERMITTEE. A person or organization legally permitted to graze a specific number and class of livestock on designated areas of public land during specified seasons each year.

PLANNING AREA. The geographical area for which land use and resource management plans are developed and maintained. The planning area for this RMP is about 1.4 million acres of BLM land administered by the Jarbidge Field Office.

PLANNING ISSUES. Concerns, conflicts, and problems with the existing management of public lands. Frequently, issues are based on how land uses affect resources. Some issues are concerned with how land uses can affect other land uses, or how the protection of resources affects land uses in a specific geographic area.

PLAYA. A nearly level area at the bottom of an undrained desert basin, sometimes temporarily covered with water.

PLOW AND SEED. A method of vegetation manipulation in which the land is plowed using a disc plow or other like equipment to uproot the existing vegetation to reduce competition for the seeded plant species.

POLLUTANTS. Any substance introduced into the environment that negatively affects the usefulness of a resource or the health of humans, animals, or ecosystems.

POTENTIAL NATURAL COMMUNITIES (PNC). The stable biotic community that would become established on an ecological site if all successional stages were completed without human interference under present environmental conditions.

PREFERENCE. The total number of animal unit months of livestock use on public lands apportioned and attached to base property owned or controlled by a permittee. Some of the total grazing preference may have been suspended in past administrative actions. That portion of the grazing preference that is not suspended is the active grazing preference.

PRESCRIBED FIRE. Any fire ignited by management action to meet specific objectives.

PREVAILING WINDS. Winds from the customary, predominant, or usual direction.

PRIMITIVE AND UNCONFINED RECREATION. Recreation that occurs when the sights, sounds, and evidence of other people are rare or infrequent, where visitors can be isolated, alone, or secluded from others, where the use of the area is through non-motorized, non-mechanical means, and where no or minimal developed recreation facilities are encountered.

PRODUCTION. The quantity of biomass produced by the current year's growth in terms of pounds per acre.

PROPER FUNCTIONING CONDITION. Riparian areas and wetlands function properly when adequate vegetation, landform, or large woody debris is present to dissipate stream energy associated with high water flows. The functioning condition of these areas is influenced by geomorphic features, soil, water and vegetation.

PUBLIC LAND. Any land or interest in land owned by the United States and administered by the Secretary of the Interior through the Bureau of Land Management, without regard to how the United States acquired ownership, except for land located on the Outer Continental Shelf and land held for the benefit of Native Americans, Aleuts, and Eskimos.

RANGE INFRASTRUCTURE. Any activity or program on or relating to rangelands that is designed to improve forage production, change vegetation composition, control patterns of use, provide water, stabilize soil and water conditions, and enhance habitat for livestock, wildlife, and wild horses and burros. Range infrastructure includes land treatments (e.g., chaining, seeding, burning, etc.), water developments, fences, and trails.

RANGELAND. Land on which the potential natural vegetation is predominantly grasses, grass-like plants, forbs, or shrubs suitable for grazing or browsing. It includes natural grasslands, savannas, many wetlands, some deserts, tundra, and areas that support certain forb and shrub communities.

RANGELAND HEALTH. The degree to which the integrity of the soil and ecological processes of rangeland ecosystems is maintained.

RAPTOR. Bird of prey with sharp talons and strongly curved beaks (e.g., hawks, owls, vultures, eagles).

REACH. A section of stream between two specified points.

RECLAMATION. The reconstruction of disturbed ecosystems by returning the land to a condition approximate or equal to that which existed prior to disturbance, or to a stable and productive condition compatible with the land use plan. The immediate goal of reclamation is to stabilize disturbed areas and protect both disturbed and adjacent undisturbed areas from unnecessary degradation.

RECREATION AND PUBLIC PURPOSES ACT OF 1954. Authorizes the Secretary of the Interior, under specific conditions, to sell or lease public domain lands to States and local governments for recreation and other public purposes and to qualified nonprofit organizations for public and quasi-public purposes, including recreation, education, and health.

RECRUITMENT. Young that survive to reproductive age and are considered mature.

REFUGIA. Geographic locations where a species or a population has persisted during changed or adverse conditions such as glaciation or other catastrophic event.

REHABILITATION. Efforts undertaken within three years of containment of a wildland fire to repair or improve fire-damaged lands unlikely to recover naturally to management approved conditions, or to repair or replace minor facilities damaged by fire.

RESEEDING. Planting seed into an area previously seeded when a seeding treatment was unsatisfactory. The seedbed preparation could be done through prescribed fire, brush control, or mechanical or chemical treatments.

RESERVE COMMON ALLOTMENTS. A separate BLM administered grazing unit (allotment or pasture), that is reserved for non-renewable grazing use by permittees or lessees participating in land restoration or recovery efforts that preclude use of all or part of the permitted use assigned to their base property. A series of eligible permittees or lessees would be authorized use temporarily in the Reserve Common Allotment for one to several years depending on the management needs of the permittee's normally permitted allotment. Reserve Common Allotments are open to grazing even though a long-term permit is not issued to one permittee/lessee; they do not include areas that have been closed to grazing or are not available for non-renewable grazing use.

RESOURCE ADVISORY COUNCIL (RAC). An advisory council appointed by the Secretary of the Interior and consisting of representatives of major public land interest groups (commodity industries, recreation, environmental, and local area interests) in a state or smaller area. RACs advise BLM, focusing on a full array of multiple use public land issues. RACs also help develop standards for rangeland health and guidelines for livestock grazing.

RESOURCE MANAGEMENT PLAN (RMP). A land use plan as described by the Federal Land Policy and Management Act to guide resource management and use allocation on public lands and resources administered by the BLM.

REST. Nongrazing for a specified period of time, generally a full growing season up to one full year.

RESTORATION. The process of assisting the recovery of an ecosystem that has been degraded, damaged, or destroyed. A restored plant community would be similar to the potential native community in structure and species composition to the greatest practicable extent. It is expected that, once restored, the community would be sustainable and resilient to normal periodic stress.

RIGHT-OF-WAY (ROW). A permit or an easement that authorizes the use of public land for certain specified purposes, commonly for pipelines, roads, telephone lines, electric lines, and reservoirs. It also refers to the land covered by such an easement or permit.

RILLS. Small, eroded ditches usually only a few inches deep.

RIPARIAN. Situated on or pertaining to the bank of a river, stream, or other body of water. Normally describes plants of all types that grow rooted in the water table or sub-irrigation zone of streams, ponds, and springs.

RIPARIAN HABITAT. An area of land directly influenced by permanent (surface or subsurface) water and has visible vegetation or physical characteristics reflective of permanent water influence.

ROAD. A linear route declared a road by the owner, managed for use by low-clearance vehicles having four or more wheels, and maintained for regular and continuous use.

ROADLESS. Refers to the absence of roads that have been constructed and maintained by mechanical means to ensure regular and continuous use.

ROUTES. A road-like feature created by vehicles having two, three, four, or more wheels, but not declared a road by the owner and that receives no maintenance to guarantee regular and continuous use.

RUTTING. The result on routes and trails that occurs when the ground is too soft to support the weight of a vehicle and rider. This usually occurs when the ground is wet and soft. Ruts collect rainwater and runoff, keeping the trail wet. Ruts channel water, leading to trail erosion.

SACRED SITE. Any specific, discrete, narrowly delineated location on Federal land that is identified by a Native American Tribe, or Native American individual determined to be appropriately authoritative representative of a Native American religion, as sacred by virtue of its established religious significance to, or ceremonial use by, a Native American religion.

SAGEBRUSH STEPPE. A semi-arid plant community that is characterized by a predominance of big sagebrush and other sagebrush species, plus grasses and forbs.

SALABLE MINERALS. Common varieties of minerals and building materials such as sand, stone, gravel, pumice, pumicite, cinders, and clay.

SALMONID. A fish belonging to the family Salmonidae, which includes salmon and trout; salmonids in the planning area include bull trout and redband trout.

SCOPING PROCESS. An early and open public participation process for determining the scope of issues to be addressed and for identifying the significant issues related to a proposed action.

SEEDING. A vegetation treatment that includes the application of grass, forb, or shrub seed, either aerially or from the ground.

SEEP (SPRING). A saturated zone at or near the ground surface where voids in the rock or soil are filled with water at greater than atmospheric pressure. Seep or spring sites are typically characterized by riparian vegetation and soil formed in the presence of water. Water may or may not be discharging from these sites, depending on the underlying geology, water source, season, or long term climatic trends. A seep is a small spring.

SENSITIVE SPECIES. Includes Endangered, Threatened, Proposed, and Candidate species as well as species designated by the BLM State Director that 1) could become endangered in or extirpated from the State, 2) are undergoing significant downward trends, 3) have typically small or widely dispersed populations, or 4) are inhabiting specialized or unique habitats.

SERIAL STAGES. Ecological communities that succeed one another in the biotic development of an area.

SHRUB. A woody plant distinguished from a tree by short stature (less than 20 feet tall) and the presence of multiple stems.

SOLITUDE. A wilderness characteristic as identified in the Wilderness Act. The state of being alone or remote from habitations; isolation. A lonely or secluded place. Factors contributing to opportunities for solitude may include size, natural screening, topographic relief, vistas, physiographic variety, and the ability of the user to find a secluded spot.

SPECIAL RECREATION MANAGEMENT AREA (SRMA). BLM administrative units established to direct recreation program priorities, including the allocation of funding and personnel, to those public lands where a commitment has been made to provide specific recreation activity and experience opportunities on a sustained yield basis. These areas usually require a high level of recreation investment and/or management.

SPECIAL RECREATION PERMITS (SRPs). Authorizations that allow for recreational uses of public lands and related waters. Issued as a means to control visitor use, protect recreational and natural resources, and provide for the health and safety of visitors. Commercial Special Recreation Permits also are issued as a mechanism to provide a fair return for the commercial use of public lands.

SPECIAL STATUS SPECIES. All Endangered, Threatened, Proposed, and Candidate species designated by FWS and other BLM Sensitive species designated by the State Director.

STANDARDS AND GUIDELINES. Provide the resource measures and guidance needed to ensure healthy, functional rangeland. The Standards for Rangeland Health are to be used as the BLM's management goals for the betterment of the environment, protection of cultural resources, and sustained productivity of the range.

Standards. A description of a minimally functioning condition for soil, water quality, and biological components of rangelands.

Guidelines. Direct the selection of grazing management practices, and, where appropriate, livestock management facilities to promote progress toward or maintenance of the Standards. Grazing management practices are livestock management techniques that can be incorporated into grazing permits.

STATIC. Showing little or no change.

STOCKING LEVEL. The current level of livestock grazing use on a unit of land, usually expressed as acres of land per AUM grazed.

SUBSTRATES. Mineral or organic material such as silt, sand, gravel, cobble, boulder, or woody debris that forms a stream or lake bed.

SUCCESSIONAL CLASS. A standardized type classification based on vegetation and fuel composition, structure, process, and pattern. Classes are grouped into those characteristic of the natural or historical conditions and those uncharacteristic of these conditions.

SUITABLE RIVER. A river segment found, through administrative study by an appropriate agency, to be suitable for designation as a component of the National Wild and Scenic Rivers system, specified in Section 4(a) of the Wild and Scenic Rivers Act.

SUPPLEMENTAL VALUES. Resources associated with wilderness that contributes to the quality of wilderness areas.

SUSTAINABLE. The yield of a natural resource that can be produced continually at a given intensity of management.

TALUS. Loose rock debris at the base of a cliff or rock outcrop.

TARGETED GRAZING. Livestock grazing use outside of an authorized permit for the purpose of reducing potential fire fuels, noxious weeds and invasive plants, and other non-desirable vegetation..

TAXONOMY. The practice of classifying plants and animals according to their presumed natural relationships.

TERRESTRIAL. Living or growing in or on the land.

THREATENED SPECIES. Any species or significant population of that species likely to become Endangered within the foreseeable future throughout all or a significant portion of its range. Usually includes only those species that have been recognized and listed as Threatened by Federal and State governments, but may include species categorized as rare, very rare, or depleted

TOPOGRAPHY. The relief features or surface configuration of a landscape or particular area in respect to elevational changes over distance.

TRADITIONAL CULTURAL PROPERTIES. A cultural property that is eligible for inclusion in the National Register of Historic Places because of its association with a living community's cultural practices or beliefs rooted in that community's history and important in maintaining the community's continuing cultural identity.

TRADITIONAL USE. The utilization of natural resources in a similar fashion over a considerable period of time.

TRAIL. A linear route managed for human-powered, stock, or OHV forms of transportation or for historical or heritage values. Trails are not generally managed for use by four-wheel drive or high-clearance vehicles.

TREATY. A formal agreement between the United States and one or more Native American tribes. Typically, these arrangements ceded lands to the United States, reserving certain rights, privileges, and/or lands to the Native American signatories.

TREATY RIGHTS. Rights of land use retained by Native American tribes through treaty with the United States; such rights commonly include, but may not be limited to, hunting, fishing and gathering.

TRESPASS. Any unauthorized use of public land.

TRUST RESPONSIBILITY. The trust responsibility of the United States, executed through the Secretary of the Interior, to uphold obligations of the Federal Government to Federally recognized Native American tribes. Court decisions have interpreted this responsibility to extend to all Federal agencies. This obligation requires a reasonable and good faith effort to identify, consider, and carry out programs in a manner sensitive to Native American.

TURBIDITY. Muddiness created by stirring up sediment or having foreign particles suspended.

UNDERSTORY. Herbaceous plant components, including grasses and forbs, that grow beneath the overstory in stand of woody shrubs; or the herbaceous and woody shrubs growing beneath the overstory in a stand of trees.

UNGULATE. A hoofed mammal.

UPLAND. The portion of land located away from riparian and floodplain areas.

UTILIZATION. The portion of forage that has been consumed (or destroyed) by livestock, wild horses, wildlife, and insects during a specified period. The term is also used to refer to a pattern of such use (43 CFR 4100.0-5).

UTILITY CORRIDOR. Tract of land varying in width forming passageway through which various commodities such as oil, gas, and electricity are transported.

VEGETATION TREATMENT. Changing the characteristics of an established vegetation type for the purpose of improving rangeland forage or wildlife habitat resources. Treatments are designed for specific areas and differ according to the area's suitability and potential. The most common land treatment methods alter the vegetation by chaining, spraying with pesticides, burning, and plowing, followed by seeding with well-adapted desirable plant species.

VEGETATION TYPE. A plant community with immediately distinguishable characteristics based upon and named after the apparent dominant plant species.

VERTEBRATE. An animal having a backbone or spinal column.

VISUAL RESOURCES. The visible physical features on a landscape, (topography, water, vegetation, animals, structures, and other features) that comprise the scenery of the area.

VISUAL RESOURCE MANAGEMENT (VRM). The inventory and planning actions taken to identify visual resource values and to establish objectives for managing those values, and the management actions taken to achieve the visual resource management objectives.

VISUAL RESOURCE MANAGEMENT CLASSES. VRM classes identify the degree of acceptable visual change within a characteristic landscape. A classification is assigned to public lands based on the guidelines established for scenic quality, visual sensitivity, and visibility.

Class I. Provides primarily for natural ecological changes only. It is applied to wilderness areas, some natural areas, and similar situations where management activities are to be restricted.

Class II. Changes in the basic elements caused by a management activity may be evident in the characteristic landscape, but the changes should remain subordinate to the visual strength of the existing character.

Class III. Contrasts to the basic elements caused by management activity may be evident and begin to attract attention in the landscape, but the changes should remain subordinate in the existing landscape.

Class IV. Contrasts may attract attention and be a dominant feature in the landscape in terms of scale, but the change should repeat the basic element of the characteristic landscape.

Class V. Applies to areas where the characteristic landscape has been so disturbed that rehabilitation is needed. Generally considered an interim short-term classification until rehabilitation or enhancement is completed.

VEGETATION SUB-GROUP (VSG). An aggregation of vegetation communities based on dominant vegetation, community structure, and management objectives. The following VSGs are used in the Draft Jarbidge RMP/EIS: Native Shrubland, Native Grassland, Non-Native Understory, Non-Native Perennial, Annual, and Unvegetated.

WATERSHED. An area that collects and discharges runoff to a given point. It is often used synonymously with drainage basin or catchment.

WILDERNESS. An area formally designated by Congress as a part of the National Wilderness Preservation System.

WILDERNESS CHARACTERISTICS. Features of the land associated with the concept of wilderness that may be considered in land use planning when BLM determines those characteristics are reasonably present, of sufficient value (condition, uniqueness, relevance, importance) and need (trend, risk), and are practical to manage.

WILDERNESS STUDY AREA (WSA). An area designated by a Federal agency as having wilderness characteristics, thus making it worthy of consideration by Congress for wilderness designation. While Congress considers whether to designate a WSA as a permanent wilderness, the Federal agency managing the WSA does so in a manner as to prevent impairment of the area's suitability for wilderness designation.

WILDFIRE. An unwanted wildland fire, regardless of ignition source, which is unplanned, has escaped control, or does not meet management objectives and therefore requires a suppression response.

WILDLAND FIRE. Any fire on the landscape, including a prescribed fire or wildfire.

WILDLAND FIRE. Unplanned human caused or lightning caused fires.

WILDLAND FIRE USE (WFU). A pre-planned vegetation treatment that involves taking advantage of a naturally-ignited wildland fire in an area where fire would benefit resources. WFU would be conducted in specific areas needing treatment after a site-specific plan and NEPA analysis are completed and only if predetermined prescriptive parameters (e.g., weather/fire behavior) can be met. Until this planning and NEPA analysis are accomplished, wildland fires would be suppressed using an appropriate management response.

WILDLAND-URBAN INTERFACE (WUI). The line, area or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels.

WIND ENERGY DEVELOPMENT. All facilities necessary to the construction and generation of wind energy including, but not limited to, wind turbines, roads, transmission lines, and batch plants.

WIND FARM. A group of wind turbines.

WINTER RANGE. An Idaho Department of Fish and Game definition that applies to elk and mule deer. That part of the overall range where 90% of the individuals are located during the average five winters out of ten from the first heavy snowfall to spring green-up, or during a site-specific period of winter.

WITHDRAWAL. Removal or “withholding” of public lands from operation of some or all of the public land laws (settlement, sale, mining, and or mineral leasing). An action that restricts the use or disposal of public lands, segregating the land from the operation of some or all of the public land and/or mineral laws and holding it for a specific public purpose. Withdrawals may also be used to transfer jurisdiction of management to other Federal agencies.

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PM₁₀. 2-279, 3-2, 4-27 – 4-31, 4-36

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