APPENDIX O - FINAL BIOLOGICAL ASSESSMENT AND U.S. FISH AND WILDLIFE SERVICE CONCURRENCE LETTER

BIOLOGICAL ASSESSMENT
for
Fire, Fuels, and Related Vegetation Management Direction Final Plan Amendment and EIS

United States Department of the Interior,
Idaho Bureau of Land Management

Upper Snake and Pocatello Field Offices, Idaho Falls District
and
Burley and Shoshone Field Offices, Twin Falls District

Eastern & South Central Idaho

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TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

INTRODUCTION

The purpose of this biological assessment (BA) is to review the proposed Fire, Fuels, and Related Vegetation Management Direction Final Plan Amendment and EIS for the Upper Snake, Pocatello, Burley and Shoshone Field Offices (Figure 1) in the Idaho Falls and Twin Falls Districts of the Bureau of Land Management (BLM) in sufficient detail to determine to what extent the proposed action may affect any of the threatened, endangered, proposed, or sensitive species listed below. This biological assessment is prepared in accordance with legal requirements set forth under Section 7 of the Endangered Species Act (16 U.S.C. 1536 (c)), and follows the standards established in the Bureau of Land Management (BLM), National Environmental Policy Act (NEPA) guidelines, and ESA consultation guidance (USFWS 1998).

Figure 1. FMDA Planning Area includes the Burley, Pocatello, Shoshone and Upper Snake Field Offices.

1.0 FEDERALLY LISTED SPECIES

Section 7 of the ESA requires federal agencies to ensure that any activities they authorize, fund, or carry out, do not jeopardize the continued existence of any species federally listed as threatened or endangered (T&E), or destroy or adversely modify occupied or designated critical habitat. This BA identifies threatened, endangered, proposed, and candidate species that occur or have the potential to occur in the planning area and evaluates potential project-related impacts on those species and occupied or designated critical habitat.

The species considered in this document are shown in Table 1. This species list was compiled from an update supplied by the USFWS, numbers 1-4-05-SP-481 (Upper Snake), 1-4-05-SP-490 (Pocatello), 1-4-05-SP-713 (Burley) and 1-4-05-SP-718 (Shoshone). Note: Although lynx may

show up on individual field office T&E lists, no lynx habitat or lynx analysis units occur within the planning area.

TABLE 1. SPECIAL STATUS SPECIES OF THE DISTRICT

Species	Class	Type	Field Office[1]
Aquatic Species			
Bull Trout (*Salvelinus confluentus*)	F – Threatened	Fish	US
Idaho springsnail (Pyrgulopsis idahoensis)	F – Endangered	Invertebrate	SH
Banbury Springs limpet (*Lanx* spp.)	F – Endangered	Invertebrate	SH
Snake River Physa snail (*Physa natricina*)	F – Endangered	Invertebrate	SH, BU
Bliss Rapids snail (Taylorconcha serpenticola)	F – Threatened	Invertebrate	SH, BU
Utah valvata snail (*Valvata utahensis*)	F – Endangered	Invertebrate	SH, BU, PO, US
Columbia spotted frog (*Rana luteiventris*) - Great Basin population	F – Candidate	Amphibian	SH, BU
Mammals			
Gray Wolf (*Canis lupus*)	F – Experimental/ Non-Essential	Mammal	US, SH, PO
Grizzly Bear (*Ursus arctos*)	F – Threatened	Mammal	US
Bald Eagle (*Haliaetus leucocephalus*)	F – Threatened	Bird	US, SH, BU, PO
Yellow-billed Cuckoo (*Coccyzus americanus*)	F – Candidate	Bird	US
Plants			
Ute ladies' tresses (*Spiranthes diluvialis*)	F – Threatened	Plant	US

[1] Field Office Abbreviations: BU = Burley, US = Upper Snake River , PO = Pocatello, SH = Shoshone

2.0 CONSULTATION TO DATE

A query of existing databases pertaining to the presence of federally-listed species within field offices was conducted. This included an on-line query of the USFWS and Idaho Department of Fish and Game (IDFG) listings and related information available via the Internet. In addition, USFWS, BLM, and IDFG biologists were contacted and interviewed regarding agency knowledge of listed species that could occur within the District. The USFWS has participated

throughout the planning process as a participating agency and has provided input on species of concern, project purpose and need, and project alternatives.

3.0 CURRENT MANAGEMENT DIRECTION (NO ACTION)

The Burley, Upper Snake, Pocatello, and Shoshone BLM Field Offices, administer almost 5.4 million acres of public lands in south-central and eastern Idaho. The four field offices manage numerous parcels of public lands that range in size from less than 40 acres to more than 100,000 acres.

At present, many of the vegetation types within the planning area have altered fire regimes that are not within their historical range of variability. Large and/or severe fires in these vegetation types can threaten human life and property as well as the resiliency, integrity, and long-term sustainability of ecosystem components and processes. Fires are occurring more frequently and are burning more severely in some vegetation types. The invasion of sagebrush steppe by annual grasses such as cheatgrass (*Bromus tectorum*) and medusahead rye (*Taeniatherum caput-medusae*) has substantially increased fine fuel loads in these communities, making them more susceptible to large, frequent and severe fires. In other plant communities, fires are occurring less frequently than they did historically, causing undesirable changes in plant species composition and structure and an accumulation of hazardous fuels. Juniper species, for example, are expanding their range at the expense of sagebrush steppe due to a lack of periodic fire. Dry conifer plant communities are slowly replacing aspen and some mountain shrub communities.

Prehistoric and ecological evidence demonstrate that wildland fire was an integral part of the planning area before modern fire suppression was applied. Numerous plant species and communities in the planning area have responses that enable them to resist, tolerate or take advantage of fire. Since about 1996, wildland fires have occurred in the planning area at an accelerated rate. The majority of these increases are due to fine fuel loads associated with cheatgrass invasion into sagebrush steppe habitat. Altered fire regimes (i.e. changes in fire frequency, severity, and size) adversely affect public and firefighter safety as well as wildlife habitat, cultural resources, air/visual quality, and grazing.

The planning area has experienced decreases in fire frequency and attendant increases in fire severity in its Aspen, Dry Conifer, and Mountain Shrub vegetation types. These vegetation types require more frequent disturbance to decrease fuel loads, facilitate aspen and forb regeneration, and decrease fire intensity. In light of an increase in severe wildland fires nationwide in 2000, the Federal Wildland Fire Management Policy (USDI and USDA 1995) was revised in 2001 (USDI et al. 2001). Currently, all federal land-management agencies are implementing, or preparing to implement, the updated Federal Wildland Fire Management Policy and its resulting National Fire Plan that serves as the means by which the Policy is applied.

The principal goal for implementing fire management direction as mandated by the Federal Wildland Fire Management Policy is to return fire to its historical range of variability in all cover types through management directed to the attainment and maintenance of the landscape-level fire risk index, Fire Regime Condition Class (FRCC 1.) Vegetation in a condition of FRCC 1 would correspond to its historical range of conditions and would be less susceptible to unnaturally severe fires; see Table 2 below for definitions of FRCC 1-3.

TABLE 2. FIRE REGIME CONDITION CLASS[2] (FRCC) DESCRIPTIONS

FRCC	Departure from Natural (Historical) Fire Regime	Description
FRCC 1	Minimal or none (0 to 33% departure)	Vegetation composition, structure, and fuels are similar to those of the historical regime and do no pre-dispose the system to risk of loss of key ecosystem components. Wildland fires are characteristic of the historical fire regime behavior, severity, and patterns. Disturbance agents, native species habitats, and hydrologic functions are within the historical range of variability. Smoke production potential is low in volume.
FRCC 2	Moderate (33 to 66% departure)	Vegetation composition, structure, and fuels have moderate departure form the historical regime and predispose the system to risk of loss of key ecosystem components. Wildland fires are moderately uncharacteristic compared to the historical fire regime behaviors, severity, and patterns. Disturbance agents, native species habitats, and hydrologic functions are outside the historical range of variability. Smoke production potential has increased moderately in volume and duration.
FRCC 3	High (>66% departure)	Vegetation composition, structure, and fuels have high departure from the historical regime and predispose the system to high risk of loss of key ecosystem components. Wildland fires are highly uncharacteristic compared to the historical fire regime behaviors, severity, and patterns. Disturbance agents, native species habitats, and hydrologic functions are substantially outside the historical range of variability. Smoke production potential has increased with risks of high volume production of long duration.

[2] Hann 2001

Existing fire management in the planning area is consistent with the 12 current LUPs' direction, regulation, and policy. It emphasizes wildland fire suppression and minimizes Wildland Fire Use (WFU). Therefore, continued management under would focus on reactive stabilization and rehabilitation treatments following wildland fire (approximately 52 percent of footprint-acres in this alternative), as opposed to proactive restoration treatments (approximately 48 percent of footprint-acres in this alternative).

Vegetation treatments would continue to be conducted on a small scale and emphasize benefits to specific resources (e.g., livestock forage or wildlife habitat). The current LUPs detail activities in these areas although they generally lack specific guidance for WFU, restoration actions, hazardous fuels reduction, and Wildland Urban Interface protection. The activities detailed in current LUPs are being undertaken in response to new regulations, policy and national direction. These types of activities are compatible with other existing LUP program goals/objectives, and the existing LUPs do not preclude these activities.

There are no areas designated as suitable for WFU under current management. Some of the existing LUPs do, however, allow the use of limited fire suppression, which in some LUPs meets the definition of WFU. Current LUPs in which use of limited suppression meets the definition of WFU are the Cassia, Monument, Medicine Lodge, and Pocatello RMPs and the Twin Falls, Big Desert, and Little Lost Birch Creek MFPs. (For more specific information, refer to the appropriate plan.)

The planning area is not currently planning any area-wide WFU or limited suppression programs because of lack of current inventory information and also because WFU is not currently a high priority. The planning area's current high priorities are rehabilitation and restoration. WFU may be considered in the future subject to further planning and NEPA analysis.

Over a 10-year period, up to approximately 250,200 footprint-acres would be treated under current management.

3.1 ASSUMPTIONS

Annual treatment levels would remain the same as those observed between 1995 through 2000.

3.2 GOALS/OBJECTIVES AND MANAGEMENT ACTIONS

Emphasize protection from and rehabilitation after wildland fire within the Wildland Urban Interface.

Management Actions:

- Use suppression to safely manage and suppress wildland fires.
- Use mechanical, chemical, and seeding treatments for rehabilitation following wildland fire.
- In cooperation with state, county, and local governments and fire departments, develop mitigation plans and implement plan actions, including fuels reduction projects, rural fire department assistance, and public education.
- Reduce fine fuels and invasive exotic plants and create perennial cover types so that wildland fire occurs less frequently and at a smaller scale on the landscape than it currently does.
- Adopt the appropriate management response in Low-elevation Shrub: suppression of all wildland fire starts to protect existing sagebrush cover types.
- Following wildland fire, use chemical, mechanical, and seeding treatments with appropriate plant materials to attempt to stabilize sites and prevent dominance of invasive annual vegetation and noxious weeds. The use of native plant materials would be emphasized.
- Prescribed fire (RxFire) may be used to prepare areas for subsequent chemical, mechanical, and/or seeding treatments.
- Conduct fire and non-fire vegetation treatments in Mid-elevation Shrub, Juniper, Dry Conifer, Aspen/Conifer, and Mountain Shrub.

- Use mechanical, chemical, seeding, or RxFire treatments to meet resource management objectives.
- Remove encroaching or mature juniper using chemical, mechanical, and RxFire treatments to re-establish, maintain, or enhance Mid-elevation Shrub cover types.

3.3 PRIORITIZATION CRITERIA

When multiple wildland fire ignitions occur, suppression priorities are:

- Protect the Wildland Urban Interface and communities-at-risk where public and fire-fighter health and safety are a concern.
- Minimize risks to life and property.
- Minimize risks to resources.

Generally, the highest suppression priorities would be in Low- and Mid-elevation Shrub cover types unless life and/or property are at risk. On an annual basis, FMPs would re-visit priorities for resources. Priorities for establishing fire and non-fire vegetation treatments are:

- In areas dominated by cheatgrass or other annual species, conduct wildland fire rehabilitation or proactive restoration.
- Accomplish resource-related objectives.

3.4 WILDLAND FIRE USE (WFU) AREAS

No acres in the planning area would be identified as being suitable for WFU for resource benefit, due to social, economic, political, or resource constraints.

3.5 TREATMENT LEVELS

To continue current management, 250,200 footprint-acres would be treated over a 10-year period.

4.0 DESCRIPTION OF THE PROPOSED PLAN AMENDMENT

The Proposed Plan Amendment (Alternative E) is designed to improve the ecological health of the sagebrush steppe ecosystem and all of its obligate wildlife species and address the goals of the Cohesive Strategy and the 10-years Comprehensive Strategy for the forested vegetation types; see Figure 3-1 in FMDA FEIS:

- Improve fire prevention and suppression.
- Reduce hazardous fuels.
- Restore fire-adapted ecosystems.
- Promote community assistance.

Treatment levels, treatment locations, and priorities were developed with these goals in mind.

In that the desired future conditions of vegetation types, as analyzed in Alternatives B, C and D, have more natural fire regimes (i.e., more fire in forested types, less fire in shrubland types), the Proposed Plan Amendment emphasizes the conservation and restoration of sagebrush steppe while replicating historical disturbance and succession patterns in forested vegetation types by use of fire, mechanical and chemical treatments, and adopting the goals and priorities set in the Cohesive Strategy.

Vegetation treatments would focus on the Annual Grass, Aspen/Conifer, Dry Conifer, Low- and Mid-elevation Shrub, Mountain Shrub, Perennial Grass and Wet/Cold Conifer cover types, as well as sagebrush steppe invaded by juniper. Mechanical, chemical, and seeding treatments would be emphasized. In sagebrush steppe restoration habitats, RxFire would be used primarily to prepare areas for seeding and to create mosaics for the improvement or enhancement of sagebrush steppe habitats. Restoration priorities would be identified to enlarge and reconnect sagebrush steppe habitat. In forested vegetation types, RxFire would be used to return fire in forested types that historically had more fire disturbance than at present.

Under the Proposed Plan Amendment, wildland fire suppression efforts would emphasize protection of sagebrush steppe and forested habitats. About 600,000 acres are considered suitable for wildland fire use (WFU) under this alternative. These areas were designated by field office personnel where it was determined that WFU would benefit resources and help attain management goals in Aspen/Conifer, Dry Conifer, Juniper, Mountain Shrub and Wet/Cold Conifer vegetation cover types.

This alternative was designed in response to comments received on the November 5, 2004 FMDA DEIS. The Proposed Plan Amendment recognizes that: 1. The sagebrush steppe ecosystem and its associated wildlife species, including sage grouse, are at risk from increased wildland fire and other disturbances. 2. Fuels accumulations in the Aspen/Conifer, Dry Conifer and Wet/Cold Conifer place these forested vegetation types at risk from wildland fire. The emphasis of the Proposed Plan Amendment is to maintain existing, high-quality sagebrush steppe habitat, to increase the quantity of resilient sagebrush steppe and to reduce the risk of stand-replacing fires in forested vegetation types by means of post-wildland fire rehabilitation and proactive restoration. Restoration would be emphasized (approximately 90 percent of footprint-acres), and rehabilitation would be conducted as needed (approximately 10 percent of footprint-acres).

In general, WFU would not be used where there are important wildlife habitats, past rehabilitation treatments, small tracts of BLM-administered lands, or public health and safety concerns. The Proposed Plan Amendment would increase RxFire in Aspen/Conifer, Dry Conifer and decrease the occurrence of wildland fires in the Low- and Mid-elevation Shrub, Perennial Grass, Annual Grass, and Mountain Shrub using aggressive, proactive restoration and post-fire rehabilitation of areas dominated by exotic annual grasses.

Over a 10-year period, under this alternative, up to approximately 1,538,052 footprint-acres would be treated (approximately six times the acreage in Alternative A). It is assumed that the Proposed Plan Amendment would not be limited by existing operations capabilities and resources.

4.1 ASSUMPTIONS

Managing fuels and fire across the sagebrush steppe landscape would provide habitat for a variety of sagebrush-obligate wildlife species as well as other resource benefits. Progress made towards Desired Future Condition (DFC) would result in improved habitat for sagebrush steppe obligate species.

Treatment levels would be maintained at the same rate as the historical fire rotation for the three forested vegetation types, mountain shrub, juniper, and dry conifer (i.e., the acreage treated over 10 years corresponding to the burned acreage expected over 10 years under historical conditions).

After 10 to 15 years of treatment, wildland fires would burn less frequently and would burn smaller acreages than they currently do in Low-elevation Shrub, Perennial Grass, and Annual Grass cover types. This shift would be due to:

- More proactive restoration in areas dominated by exotic annual species.
- More emergency stabilization and rehabilitation (ESR) treatments following wildland fire in areas invaded and/or dominated by exotic annual species.
- Strategic placements of restoration treatments to protect Low-elevation Shrub vegetation types.

4.2 GOALS/OBJECTIVES AND MANAGEMENT ACTIONS

1) Make progress toward DFC in the Low-elevation Shrub, Perennial Grass, Annual Grass, Mid-elevation Shrub, Mountain Shrub, and Juniper vegetation types.

Management Actions

- Use chemical, mechanical, seeding, and RxFire treatments as appropriate to achieve DFC.
- In Perennial Grass, Annual Grass, and juniper-invaded cover types, restore the sagebrush steppe with an aggressive sagebrush seeding effort, utilizing the appropriate sagebrush subspecies for the treatment area.

2) Maintain, protect, and expand sagebrush steppe habitats.

Management Actions

- Suppress[1] wildland fires in the sagebrush steppe ecosystem (Figure 3-3 in FMDA FEIS), except where WFU would benefit habitat.
- WFU may be allowed in the sagebrush steppe ecosystem for the benefit of the habitat only after site-specific project level coordination with IDFG.

[1] Note: Suppress/Suppression as used in this document refers to the following actions employed in fighting wildfires: Firelines put-in by dozers or by hand (handlines), backfires, fire retardant applied by aircraft, foam, surfactants, adjuvants applied by vehicle to smother fire or to protect dwellings, structures and/or archaeological sites, water applied from helicopters, pumper trucks and/or backpack pumps, and mop-up.

- Conduct vegetation treatments in areas that pose a wildland fire risk to important wildlife habitat.
- Treat areas within the sagebrush steppe ecosystem that have low resiliency (i.e., areas characterized by low species diversity, undesirable composition, and dead or decadent sagebrush).
- Following WFU and RxFire treatments, use chemical, mechanical, and seeding treatments with appropriate plant materials to attempt to stabilize sites and prevent dominance of invasive, annual vegetation and noxious weeds. The use of native plant materials would be emphasized.

3) Treat vegetative communities to expand healthy wildlife habitats. Improve and maintain degraded and key vegetative communities.

Management Actions

- Use appropriate management response to wildland fire in all important sagebrush steppe ecosystems needing restoration and supporting wildlife habitats.
- WFU may be allowed in all important sagebrush steppe ecosystems needing restoration and supporting important wildlife habitats for the benefit of the habitat only after site-specific project level coordination with IDFG.
- Conduct vegetation treatments in important sagebrush steppe ecosystems needing restoration and supporting important wildlife habitats to reduce risk of wildland fire and reconnect-key sagebrush steppe vegetative communities.
- Treat areas of important sagebrush steppe ecosystems and supporting important wildlife habitats that have low resiliency characterized by low species diversity.

4) Make progress towards DFC in the Dry Conifer and Aspen/Conifer vegetation types by increasing WFU and RxFire to create a fire regime within the historical range of variability.

Management Actions

- Use mechanical and chemical treatments to prepare areas in FRCC 2 and FRCC 3 for RxFire and WFU.
- Where prescriptive parameters, resource conditions, and vegetation conditions allow, utilize WFU or RxFire to increase the annual average number of wildland fire treated acres to an average similar to historical conditions. Site-specific NEPA analysis would be completed prior to implementation.
- Following WFU and RxFire treatments use chemical, mechanical, and seeding treatments with appropriate plant materials to attempt to stabilize sites and prevent dominance of invasive, annual vegetation and noxious weeds. The use of native plant materials would be emphasized.

5) In the Wet/Cold Conifer vegetation type and/or areas in FRCC 1, maintain vegetation conditions using mechanical, chemical, RxFire, or WFU treatments, such that wildland fire regimes are within the historical range of variability (i.e., maintain the current fire regime in these vegetation types).

Management Action

- Use treatments, as appropriate, to maintain landscapes in FRCC 1.

4.3 PRIORITIZATION CRITERIA

When multiple wildland fire ignitions occur, suppression priorities are influenced by numerous factors. However, to the extent possible, the following criteria will be considered:

Protect the Wildland Urban Interface and communities-at-risk where public and fire-fighter health and safety are a concern.

- Minimize risks to habitats occupied by threatened, endangered and candidate species.
- Minimize risks to resources where changes in fuel accumulation and fire occurrence have occurred (i.e., FRCC 2 and FRCC 3 areas).

To the extent possible, the following criteria would be considered for establishing vegetation treatments:

1. Landscape-scale projects designed to reduce the combined risk to human life/property and resources (e.g., where Wildland Urban Interface and ecosystems at risk coincide).
2. Sagebrush Steppe (Low-Elevation Shrub, Mid-Elevation Shrub and Mountain Shrub)

Projects will be designed through interagency planning performed at the landscape level, in conjunction with active community participation and development of stakeholder partnerships in the planning and monitoring processes.

4.4 WILDLAND FIRE USE (WFU) AREAS

Approximately 600,000 acres across the planning area would be identified as suitable for WFU for resource benefit, and approximately 4,800,000 acres would be identified as not appropriate due to social, economic, political, and resource constraints. The locations of areas that are not appropriate for WFU are shown in Figure 2-3 in the FMDA FEIS. In order to achieve the sage-grouse habitat objectives of this alternative, there may be localized areas of sage-grouse habitat (Figure 3-3 in the FMDA FEIS) within the area identified as not appropriate for WFU where prescribed fire is planned that may also be suitable for small-scale WFU if a natural ignition meets the prescribed fire parameters. These areas will be identified on a case-by-case, site-specific basis and are estimated to be less than 1 percent of the overall prescribed fire acres planned. Appendix D in the FMDA FEIS identifies the specific WFU suitable/not appropriate acres by field office.

4.5 TREATMENT LEVELS

To implement the Proposed Plan Amendment, 1,538,052 footprint-acres would be treated over a 10-year period.

5.0 CONSERVATION/MINIMIZATION MEASURES

Wildland fire suppression restrictions (Section 5.1) and restoration/fuels reduction treatment restrictions (Section 5.2) would be implemented under all alternatives and would be specified in each of the 12 LUP amendments. Restrictions would be applied to suppression activities with the intent of protecting sensitive resources.

Suppression restrictions would be further defined within each area's LUP. Restoration treatment restrictions would be applied to proactive fuels reduction activities with the intent of protecting sensitive resources. All restrictions are intended to prevent significant impacts to natural and human resources. They are organized according to the resource discipline they protect and are considered in the analysis of all alternatives.

5.1 WILDLAND FIRE SUPPRESSION RESTRICTIONS

The following suppression restrictions will be applied to all suppression actions occurring throughout the planning area, consistent with NFP policy and LUP direction.

Threatened, Endangered (T&E) and Candidate Species

The following restrictions apply to T&E and Candidate species occupied habitat and designated critical habitat.

1. Firefighter and public safety are the first priorities in response to fire suppression. At no time will the activities described in this BA compromise firefighter and public safety.
2. The BLM will coordinate annually with the USFWS to update species status in the planning area.
3. Field Managers will ensure resource staff initiates emergency consultation with the USFWS whenever suppression activities may impact listed species habitat; more specifically, during emergency suppression actions to protect life and property.
4. Control lines, base camps, support facilities and other suppression related facilities should not be established within:
    - ½ mile of known bald eagle or yellow-billed cuckoo nests (February 1-July 31)
    - 1 mile of occupied gray wolf den sites (April 15 - June 30)
    - 300 feet of occupied Ute ladies'-tresses habitat
    - 300 feet of all water bodies and springs occupied by T & E and Candidate species
    - Secure habitat within designated grizzly bear management unit (BMU).
5. Follow Minimum Impact Suppression Techniques (MIST) guidelines in occupied T&E and Candidate species habitat where appropriate (Appendix T *in*: Interagency Standards for Fire and Aviation Operations, 2005). MIST guidelines direct suppression techniques,

procedures, tools, and equipment that least impact the environment. Water and wetlining (using water to soak/saturate fuels) are the preferred fireline construction tactic.

6. Field Managers will assign a Resource Advisor or other designated representative as per the current Red Book guidance.
   - BLM will notify USFWS when appropriate; to discuss T&E species mitigation within the suppression area to assure conservation practices are being followed to avoid adverse effects.
   - When Incident Management Teams (IMT) are required, the Resource Advisor will brief the IC about conservation measures needed to avoid adverse effects.
7. Where grizzly bears may reasonably occur:
   - The BLM Resource Advisor will brief all fire crews on general operating procedures including proper bear safety, sanitation, and food storage.
   - Incident Commanders, Fire Management Officers, and Scouts should be equipped with and trained to use bear deterrent spray.
   - Garbage should be disposed of in bear-proof containers, when possible, and removed from camps daily, preferably in the evening.
8. No water-dipping by helicopters will occur within 1/2 mile of any occupied bald eagle nest.
9. Fuel storage, fuel trucks, and refueling activities will not occur within 300 feet of live waters containing T&E and Candidate species. The current District Hazardous Material plan will be followed to ensure T&E and Candidate species and habitat will not be adversely affected in the event of a spill.
10. Dozer blading should not occur within 300 feet of perennial streams or their tributaries occupied by T&E and Candidate species.
11. Drafting equipment for pumps will be properly screened to prevent entrapment of T&E fish species. Maximum screen mesh size shall be 3/32 inch diameter.
12. Any sump created by blocking flow in any occupied T&E habitat will be performed in coordination with a natural resource specialist to prevent dewatering.
13. Do not pump directly from streams if chemical products are going to be injected into the system. If chemicals are needed, pump from a portable tank, or use a backflow check valve.
14. Application of retardant or foam (aerial or ground) will be avoided within 300 feet of perennial streams or their tributaries occupied by T&E and Candidate species pursuant to the current Red Book guidance.
15. To minimize spread of noxious weeds, equipment used for extended attack or Type I/II incidents should be cleaned before arriving on-site and prior to leaving the incident. Staging areas and fire camps will avoid sites with noxious weed infestations.

Reporting Requirements

At the time of this consultation, the exact timing, site specific suppression methods, location, and size of fires are unknown. In order to monitor the impacts of wildland fire suppression activities

as part of the FMDA, the Level I team will meet immediately after the fire season to review a summary of activities (fire suppression) that may have occurred in or adjacent to T&E and Candidate habitat. If the Level I team identifies fire suppression activities for which more information is needed to ascertain potential effects to the environmental baseline for a particular listed or candidate species, BLM will provide a report providing the necessary information identified by the Level I team to the USFWS Snake River Fish and Wildlife Office or the Eastern Idaho Field Office no later than December 31 for the preceding 12-month period. For example, the types of information that may be needed include:

- The location, timing, size, intensity, and suppression activities used for each fire.
- Any mitigations used during fire suppression activities to avoid effects to T&E and Candidate species and habitat, any T&E and Candidate species or habitat affected, and the estimated extend of effects.
- Results of post-fire reviews and monitoring.

5.2 FIRE AND NON-FIRE VEGETATION TREATMENT RESTRICTIONS

The following fire and non-fire vegetation treatment restrictions will be applied to site-specific restoration and hazardous fuels reduction treatment actions occurring throughout the District, consistent with NFP policy and LUP direction:

General

No chemical treatment would conflict with existing or future national vegetative treatment guidance. To reduce potential resource impacts from chemical treatments, herbicide use would conform to application criteria described in the 1991 Environmental Impact Statement for Vegetation Treatment on BLM Lands in Thirteen Western States or subsequent revisions and/or replacements of this document. Use would conform, to instructions from BLM Manual 9011 Chemical Pest Control, as well as label restrictions and current policies and state statutes. In addition, the prescription for herbicide application (desired, optimum environmental conditions) would evaluate off-site migration and non-target species by assessing wind speed and direction, temperature, precipitation forecast, soil infiltration potential, constraints on overland water transport due to precipitation or flooding, establishment of riparian buffer strips, and risk to special status species. Fishery and/or wildlife biologists would assist project planners in selecting appropriate herbicides for use among or near terrestrial and aquatic flora and fauna sensitive to herbicides.

Consider the economic effects of alternative fuels management practices. Promote local involvement and economic benefits from fuels reduction projects.

Continue to collaborate with local partners to assess WUI areas and update existing mitigation plans to implement fuels treatments.

Threatened, Endangered, and Candidate Species

The following restrictions apply to T&E and Candidate species occupied habitat and designated critical habitat.

1. Treatment activities may occur near or adjacent to T&E and Candidate species habitat and will be designed to minimize or mitigate impacts to T&E and Candidate species occupied habitat and designated critical habitat, so that the species or their habitats will not be adversely affected. All FMDA related fire and non-fire vegetation treatment activities in areas that may affect T&E and Candidate species would be conducted in consultation with USFWS. Further, all such activities would be designed and implemented in such a manner that potential impacts to T&E and Candidate species from disturbance or habitat modification would be so small as to not be meaningfully measured, detected, analyzed, or would be extremely unlikely to occur.
2. T&E and Candidate species with recovery plans, conservation agreements and conservation strategies, will be protected as specified in their respective plans/agreements/strategies. These protections include such measures as adequate habitat and range for a given species, including mitigation measures for multiple land use activities authorized by the BLM.
3. Fuels management and vegetation treatment activities would be conducted according to standards and guidelines in The Pacific Bald Eagle Recovery Plan, 1986. The planning area within the Greater Yellowstone Ecosystem would conduct fuels management and vegetative treatments according to standards and guidelines in the Greater Yellowstone Bald Eagle Management Plan (Greater Yellowstone Bald Eagle Working Group 1996). No vegetation treatment activities associated with the FMDA EIS would occur within one half mile radius of Bald Eagle nesting zones during February 1 through July 31. No activities associated with the FMDA EIS would occur within one half mile (direct line of site) or one quarter mile of winter Bald Eagle concentration sites during November 1 through March 1.
4. Gray wolf *(Canis lupus)* populations in the area, which includes portions of the District, have been designated as experimental/nonessential. Presence or absence of gray wolf dens or rendezvous sites in fuels management or vegetation treatment areas would be determined prior to initiating projects. In the event active den or rendezvous sites are established within the planning area, vegetation treatments would be designed and implemented to minimize noise disturbance or habitat modifications within one mile of the den or rendezvous sites from April 15 through June 30.
5. Fuels management and vegetation treatment areas within grizzly bear (*Ursus arctos horribilis*) management units (BMUs) would be coordinated with USFS activities to comply with road density restrictions, number and juxtaposition of management activities within BMUs, as provided for in the Grizzly Bear Recovery Plan (USFWS 1993), the Final Conservation Strategy for the Grizzly Bear in the Yellowstone Area (USFWS 2003) when it becomes effective.

   When developing vegetation treatment projects, do not increase open and total motorized access routes or trail density within BMUs. When developing vegetation treatment projects within BMUs, the BLM will coordinate with the Interagency Grizzly Bear committee (IGBC) to develop/implement sanitation guidelines.

6. Fuels management and vegetation treatments that may occur within the Little Lost River drainage would be conducted according to standards and guidelines developed for bull trout *(Salvelinus confluentus)* Riparian Habitat Conservation Areas on BLM lands within the geographic range of bull trout (U.S. Fish and Wildlife Service 1999a, 2002).

   Treatments will follow INFISH guidelines near T&E fish habitat.
7. For those portions of the Snake River drainages that support populations of threatened and endangered Snake River mollusks, BLM will consult with the USFWS for fuels management and vegetation treatments where there is potential for effect, to ensure mitigation measures are adequate to avoid adverse effects to Snake River mollusks.
8. Dozer blading would not occur within 300 feet of streams that have occupied habitat or designated critical habitat.
9. Ground disturbing activities other than tree and shrub planting will avoid occupied habitat within 300 feet of all water bodies and springs containing listed snail, Columbia spotted frog and bull trout species.
10. No aerial application of herbicides within one-half mile of all water bodies and springs containing listed snail, Columbia spotted frog and bull trout species.
11. Dozer blading would not occur within 300 feet of perennial streams or their tributaries occupied by T&E species.
12. No ground-based application of herbicides, surfactants or adjuvants would occur within 100 feet of perennial streams or their live water tributaries occupied by TES species.
13. No aerial application of chemicals, e.g., fertilizers or hydro-mulch within riparian habitats containing listed snail, Columbia spotted frog and bull trout species.
14. Herbicide applications will obtain a weather forecast for the area prior to initiating a spraying project to ensure no extreme precipitation or wind events could occur during or immediately after spraying. Spraying will follow label instructions.
15. Aerial application of herbicides will not occur during periods of inversion.
16. Riparian cottonwood forests with willow understories that may be impacted by fuels management and vegetation treatments would be surveyed for yellow-billed cuckoos *(Coccyzus americanus)* prior to initiating project activities. When developing vegetation treatment projects, no ground-based application of herbicides would occur from May 1 through August 31 within 200 feet of occupied yellow-billed cuckoo habitat.
17. Aerial application of chemicals would not occur from May 1 through August 31 within one half mile of occupied yellow-billed cuckoo habitat.

6.0 PLANNING AREA / ACTION AREA

The planning area is comprised of the Burley, Upper Snake, Pocatello, and Shoshone Field Offices, and collectively administers about 5.4 million acres of lands in south-central and eastern Idaho. The planning area encompasses 23 southern Idaho counties: Bannock, Bear Lake, Bingham, Blaine, Bonneville, Butte, Camas, Caribou, Cassia, Clark, Elmore, Franklin, Fremont, Gooding, Jefferson, Jerome, Lincoln, Madison, Minidoka, Oneida, Power, Teton, and Twin Falls. Major communities in the planning area include Burley, Idaho Falls, Pocatello, Shoshone, Sun Valley, and Twin Falls.

BLM-administered lands of the planning area are adjacent to National Forest System (NFS) lands administered by the U.S. Forest Service (USFS), State of Idaho lands, the Fort Hall Indian Reservation, the Craters of the Moon National Monument and Preserve, the City of Rocks, and the Idaho National Laboratory (INL; a U.S. Department of Energy, Idaho Operations Office [DOE-ID] facility). Also within the boundaries of the planning area are private lands in and around the many urban and rural communities.

7.0 FEDERALLY-LISTED SPECIES ACCOUNTS AND STATUS IN PLANNING AREA

This section describes the federally listed plant, wildlife, and fish species that are known or have the potential to occur in the planning area. Status, habitat use, current known range, and relevant life history characteristics are presented for each species.

There are 13 federally-listed threatened, endangered, and candidate wildlife, fish, and plant species known to occur in the counties associated with the planning area. Habitat for the listed plant species is unique or uncommon due to the limited range of the geological formations and parent soil materials with which they are associated. Plant collection, weed invasions, motorized recreation, and the loss of habitat are considered the primary threats to the continued existence of these plants on BLM lands. Other designed land use practices such as grazing and motorized recreation could also affect management goals for the wildlife and fish species

Effects to threatened, endangered, and candidate species are detailed by management decision in Section 8 below.

7.1 PLANTS

7.1.1 Ute Ladies'-tresses Orchid

Status

The Ute ladies'-tresses orchid (*Spiranthes diluvialis Sheviak*) was listed as threatened on January 17, 1992 (57 FR 2048) due to a variety of factors, including habitat loss and modification, and hydrological modifications of existing and potential habitat areas.

Biology

The Ute ladies'-tresses is a perennial, terrestrial orchid with stems 20 to 50 centimeters cm (8 to 20 inches) tall, arising from thickened tuberous roots. Its narrow leaves are about 11 inches long at the base of the stem, and become reduced in size going up the stem. The inflorescence generally consists of 7 to 32 (mean=16) small white or ivory flowers clustered into a spike arrangement at the top of the stem (Sipes and Tepedino 1995). The species is characterized by whitish, stout, ringent (gaping at the mouth) flowers.

Ute ladies'-tresses is very similar morphologically to *S. romanzoffiana*; thus, it is possible to identify Ute ladies'-tresses only when it is flowering. Both species may occur in similar habitats, and the distribution of Ute ladies'-tresses can overlap with *S. romanzoffiana*, especially above 5,000 feet elevation. Due to its similarity to *S. romanzoffiana*, only a qualified, experienced

botanist will be able to positively identify Ute ladies'-tresses. Because Ute ladies'-tresses was first described in 1984 (Sheviak 1984), it is not found in many commonly used botanical keys.

In Idaho, Ute ladies'-tresses generally blooms from early August through mid-September, depending on microsite and climatic conditions. At various sites throughout its range, this species may begin blooming in early July or flower as late as early October. Ute ladies'-tresses populations can have a staggered flowering pattern, i.e., some plants may be in fruit while others are still in bud stage. This staggered phenology may be adaptive, or reflect unique microsite conditions for individual plants (Heidel 1997).

Throughout the species range, Ute ladies'-tresses is endemic to mesic or wet meadows and riparian/wetland habitats in relatively low elevations near springs, seeps, lakes, or perennial streams (Moseley 1998). Soils may be inundated early in the growing season, normally becoming drier but retaining subsurface moisture through the season. (In drought years, however, subsurface moisture may not be present within 12 inches below the soil surface.) Elevations of known orchid occurrences in the planning area range from Ute ladies'-tresses ranges in elevation from 4,800 ft to 5,300 ft.

In Idaho, Ute ladies'-tresses occurs in a variety of areas including swales, mesic meadows, cottonwood stands, and islands. These areas contain at least some component of grass and/or forb-dominated habitat. However, Ute ladies'-tresses plants can be surrounded by, or located in close proximity, to shrubs or trees, such as willows, silverberry, or cottonwoods. Associated species may include: *Agrostis stolonifera* (bentgrass), *Carex lanuginosa* (woolly sedge), *Eleocharis rostellata* (beaked spikerush), *Eleagnus commutata* (silverberry), *Habenaria dilatata* (bog orchid), *Juncus balticus* (Baltic rush), *Equisetum* spp. (horsetails), *Salix exigua* (sandbar willow), *S. lutea* (yellow willow), and narrowleaf cottonwood (*Populus angustifolia*) (Moseley 1997).

Current Conditions

Range-Wide: Range wide, this species occurs below the coniferous zone in areas where the vegetation is relatively open (e.g., grass- and forb-dominated sites), but some populations are found in riparian woodlands (such as cottonwoods) in Colorado, Utah, and Idaho and in riparian shrub (e.g., willow thickets) communities (Moseley 1998). Soils range from fine silt/sand to gravel and cobbles, sometimes highly organic or peaty soils. In some areas, the wetland habitats and soils that support this species are moderately to strongly alkaline. Ute ladies'-tresses may survive in areas where streams remain in a natural condition, or where conditions mimic naturally created and maintained habitat. For example, it may be found along old gravel pits that have been restored as wetlands, in irrigated pastures, or below leaky diversion dams and irrigation canals.

Planning Area: In the planning area, Ute ladies'-tresses was first discovered in 1996 along the South Fork of the Snake River in eastern Idaho. Most occurrences of Ute ladies'-tresses are from along the South Fork of the Snake River floodplain, near the confluence of the Henry's Fork, upriver to the Swan Valley area in Jefferson, Madison, and Bonneville counties. In 2002, Ute ladies'-tresses was found at Chester Wetlands WMA along the Henry's Fork in Fremont County. The Chester Wetland occurrence is managed by Idaho Fish & Game Department (IFGD).

Monitoring of the South Fork populations began in 1997, with modifications to the monitoring methods in 2001 (Moseley 1998, 2000; Murphy 2000, 2001a, 2001b). A human-caused wildland fire burned a portion of the Annis Island population of *Spiranthes diluvialis* during late spring, 2001. Flowering plants were observed in lightly burned areas of the fire, but it was too early to determine the overall effects of the fire to the population at that time (Murphy 2001a). In 2003, 3,856 individual Ute ladies'-tresses plants were observed at 20 occurrences along the South Fork in the Snake River ACEC. The total was the second highest since inception of monitoring, and over 2,100 individuals more than 2002. Six occurrences had more plants observed when compared to 2002, six occurrences had fewer plants, and eight remained approximately the same. All of these occurrences are monitored annually. Threats to Ute ladies'-tresses habitat were similar to prior years. No new threats were observed in 2003. Conservation actions taken by the BLM and Caribou-Targhee National Forest have minimized, decreased, and/or eliminated threats where possible. However, invasion by noxious weeds and exotic species remains an imminent threat to Ute ladies'-tresses on the South Fork Snake River (Murphy 2004).

Data were collected at 15 of the 23 permanent habitat monitoring transects. No major habitat changes from 2002 were documented at the landscape scale, and only a few major habitat changes, (e.g., differences in recreation trailing and late season grazing on some transects) were documented at the population scale. Five transects had cumulative means of habitat attributes (e.g., habitat characteristics, changes and threats) that increased, suggesting an overall decline in habitat conditions. Three transects had cumulative means that decreased, suggesting an overall improvement in habitat conditions. Seven remained the same or nearly the same (Murphy 2004).

On September 6, 2004 the Bureau of Land Management closed Annis Island (T5N, R39E, S18 Lots 6 & 7; S19 Lots 15,16,17,18,26,27 & 28; S20 Lots 9 & 13) to motorized vehicles due to recent damage of Ute ladies'-tresses habitat. The closure will remain in effect for one (1) year, OR until the completion of the Snake River Activity Plan Amendment that will address management of motorized vehicle use within the Snake River Recreation Area.

7.2 BIRDS

7.2.1 Bald Eagles

Status

The bald eagle was listed as endangered under the Endangered Species Preservation Act of 1966. In 1973, the Endangered Species Act (Act) was passed and the bald eagle was originally listed as endangered in the lower 48 states on February 14, 1978. Their status was upgraded to threatened in Idaho and most of the lower 48 States on August 12, 1995, because of progress in recovery (USFWS 1995). The species is also subject to the Bald Eagle Protection Act of 1940. Critical habitat for this species has not been designated. The bald eagle is currently being considered for delisting by the FWS (USFWS 1999b).

Biology

Mature bald eagles have the distinctive yellow bill, white head and tail with a dark brown to black body (Johnsgard 1990). Immature bald eagles are dark in color and can be confused with

golden eagles. Bald eagles are large raptors with a body size ranging from 31 to 37 inches in length. Females are a larger than males (Johnsgard 1990).

Courtship varies with location and has been observed in the fall, winter and spring (Harmata 1989). Two eggs are laid in large stick nests from March into April (Harmata 1989). Bald eagles incubate their eggs about 5 weeks and the young fledge after 11 - 14 weeks (Johnsgard 1990). Home ranges of nesting bald eagles in the Cascade Reservoir area varied from 15 to 60 km^2 during the breeding period (Groves et al. 1997). Bald eagles usually do not breed until their fifth or sixth year. Adult female bald eagles may not lay eggs every year (Groves et al. 1997). Bald eagles are known to forage and roost communally in areas of carrion or prey abundance (Keister et al. 1987, Crenshaw and McClelland 1989). Diets of bald eagles are known to include fish, waterfowl, small mammals, and carrion (Lingle and Krapu 1986, Isaacs and Anthony 1987, Keister et al. 1987, Johnsgard 1990, Peterson 1986). Peterson (1986) mentioned that bald eagles prey is determined largely by availability.

Bald eagle nesting, perching, roosting, and wintering sites tend to be in riparian areas near large bodies of water because this species relies primarily on fish for food during the spring, summer, and fall. During the winter they feed on waterfowl and scavenge on dead animals such as deer and elk. Wintering bald eagles tend to congregate near bodies of unfrozen water and roost communally. Major rivers and large reservoirs constitute the majority of winter habitats used, although the temporary presence of high-quality foods may entice eagles to areas far removed from aquatic zones. Roost sites are usually located in stands/clumps of mature or old conifers or cottonwoods.

Nests are generally constructed in conifers or cottonwood trees within close proximity to rivers or other water bodies that support adequate food. Disturbance to eagles during nesting and roosting may decrease reproductive success; thus, any activity that displaces eagles during these times is a concern. As long as humans are present, there may be short-term displacement, which could result in nest failure. Riparian areas loss or modification is also an important management consideration.

Current Conditions

Range-Wide: Currently the lower 48 states include five recovery areas for the bald eagle. The Pacific Bald Eagle Recovery Plan covers 7 western states, including Idaho. Idaho contains all or portions of 10 Management Zones identified in the Recovery Plan for the Bald Eagle (USDI FWS 1986). Four Management Zones are included in the planning area: High Desert (Zone 17), Snake River Floodplain (Zone 20), Great Basin (Zone 37) and Greater Yellowstone Ecosystem (Zone 18). Of the13 bald eagle territories surveyed within Management Zones 17, 20 and 37 in 2003, 10 of the 11 occupied territories successfully produced young (Sallabanks 2003). Of the 30 bald eagle territories surveyed in 2003, within Management Zones 18 on lands administered by the BLM , there was an advanced young per occupied nest ratio of 0.98 (Whitfield 2003)

The number of occupied bald eagle territories within Idaho continued to increase over the past decade. Nesting success in Idaho has also been increasing during the last ten years, and that trend is expected to continue. In 2003, the number of occupied bald eagle territories in Idaho increased to 147. Of these 147 occupied territories, 103 territories successfully produced young. This

represents the highest number of occupied territories and the highest number of territories that successfully produced young documented since annual bald eagle survey reporting was initiated in 1979 (Sallabanks 2003). The FWS has proposed to de-list the bald eagle (USFWS 1999b) because of long-term positive population trends across North America that are expected to continue.

In the late 1960s and early 1970s it was determined that dichlorophenyl-dichloroetheylene (DDE), the principal breakdown product of DDT, an agricultural pesticide, accumulated in the fatty tissues of adult female eagles. The chemical impaired calcium release necessary for eggshell formation, thus inducing thin-shelled eggs that are not viable, leading to reproductive failure. In 1972, DDT was banned from use in the United States, reducing the effects of this threat to the species over time.

However, documented increases in bald eagle populations both within Idaho and most of the recovery areas in the United States, and associated delisting efforts by FWS demonstrate a high degree of certainty of implementation and effectiveness of ongoing conservation efforts for this species.

Recent threats to the bald eagle throughout its range are primarily from shooting, poisoning and loss of nesting, brood rearing, and winter habitat due to rural, residential, and commercial development; however, these threats have been reduced since the species was federally listed in the 1970s. An additional threat to the species is from disturbance during nesting and fledging, which may cause reproduction to fail. Losing large trees for nesting and roosting habitat near large water bodies is a moderate threat (USDI FWS 2002). Individual birds vary widely in their response to human disturbance at nesting and roosting sites. However, documented increases in bald eagle populations both within Idaho and within most of the five recovery areas in the United States, and associated delisting efforts by FWS demonstrate a high degree of certainty of implementation and effectiveness of ongoing conservation efforts for this species.

Planning Area: Bald eagle habitat occurs throughout the planning area. The majority of nesting, brood rearing, and winter habitats occur along the South and Main Forks of the Snake River and to a lesser extent, some principal tributaries such as Clover Creek and Big Wood River drainages. Fifty-seven nests occur within the Greater Yellowstone Bald Eagle Recovery Area, which are managed in accordance with the Greater Yellowstone Bald Eagle Management Plan. The Upper Snake FO administers 24 nest sites on public lands and an additional 10 nests where some portion of the territories occurs on BLM administered lands. Twenty-three of these nests occur within the Snake River ACEC. Two occur within the Henry's Lake ACEC. All of the nests on BLM administered lands are monitored annually. There are four other active nest sites on or near public lands along the Blackfoot and Bear Rivers. The Bowen Canyon ACEC was designated to protect a winter roost on public land 10 miles south of American Falls. In the past ten years, the number of nesting eagles has increased in the planning area and the continued expansion of this population is highly likely. There are no documented active bald eagle nest sites on public land in the Shoshone or Burley FO areas.

7.2.2 Western Yellow-billed Cuckoo

Status

The yellow-billed cuckoo was listed as a Candidate species west of the Rocky Mountain crest in 2001 (USFWS 2001).

Biology

The yellow-billed cuckoo is a medium-sized bird of about 12 inches in length, and weighing about 2 ounces. The species has a slender, long-tailed profile, with a fairly stout and slightly down-curved bill, which is blue-black with yellow on the basal half of the lower mandible (bill). The tail feathers are boldly patterned with black and white below.

The legs are short and bluish-gray, and adults have a narrow, yellow eye ring. Juveniles resemble adults, except the tail patterning is less distinct, and the lower bill may have little or no yellow. The feet are distinctive, with two toes pointing forward and two toes pointing back (zygodactyl foot). Males and females differ slightly. Males tend to have a slightly larger bill, and the white in the tail tends to form oval spots, whereas in females the white spots tend to be connected and less distinct (Hughes 1999).

The yellow-billed cuckoo is a migratory land bird that winters in southern Central America and South America. Yellow-billed cuckoos in the western United States appear to require large blocks of riparian habitat for nesting (particularly riparian woodlands including cottonwoods and willows). Home ranges of nesting birds may include 25 acres or more of riparian habitat. Nesting west of the Continental Divide occurs almost exclusively close to water, possibly due to humidity requirements for successful hatching and rearing of young. A dense understory of foliage appears to be important for breeding success. The blocks of riparian habitat used for nesting are usually greater than 25 acres (USFWS 2001).

Yellow-billed cuckoos are low/shrub nesting birds, and produce an open cup nest. Clutch size is generally 2-4 eggs. 9-11 days are required for incubation, and 7-8 days for fledging of young. Yellow-billed cuckoos primarily feed on large insects such as caterpillars and grasshoppers (Nolan and Thompson 1975, Laymon 1980). Nesting peaks (mid-June through August) may be influenced by an abundance of caterpillars and other prey.

Current Conditions

Range-Wide: Yellow-billed cuckoos are Neotropical migrants that overwinter from Columbia and Venezuela south to northern Argentina. Current bird band return data are insufficient to determine migration or wintering patterns.

Historically, the yellow-billed cuckoo was widespread and common in California and Arizona, locally common in a few river reaches in New Mexico, common very locally in Oregon and Washington, and generally scattered in drainages of the arid and semiarid portions of western Colorado, western Wyoming, Idaho, Nevada, and Utah.

In Idaho, the species was considered a rare and local summer resident. In southwestern Idaho, the yellow-billed cuckoo has been considered a rare, sometimes erratic, visitor and breeder in the Snake River valley. It is thought that the species could become extirpated from the State of Idaho in the near future, although the available information is inadequate to judge population or distributional trends. Detailed information about the distribution and status of the yellow-billed cuckoo throughout the western United States can be found in the 2001 Proposed Rule (USFWS 2001).

Current data suggests that the yellow-billed cuckoo's range and population numbers have declined substantially across much of the western United States over the past 50 years. Analysis of population trends is difficult because quantitative data, including historical population estimates, are lacking. However, historic and recent data are sufficient to allow an evaluation of changes in the species' range in the western United States.

This species is declining in parts of its range due to deterioration and loss of riparian forest habitat in the western U.S. Principal causes of riparian cottonwood forest habitat loss are conversion to agricultural and other uses, dams and river flow management, stream channelization and stabilization, livestock grazing, pesticide use, and competition from exotic plants such as tamarisk. These factors have resulted in the remaining habitat being fragmented. Overuse by livestock has been a major factor in the degradation and modification of riparian habitats in the western United States (USFWS 2001).

Dense understory foliage appears to be an important factor in nest site selection and cottonwood trees are important foraging habitat. The principal threat in the summer range of the species is the loss of riparian habitat, which has always been naturally limited in the western United States (USFWS 2001). Available breeding habitats for yellow-billed cuckoos have also been substantially reduced in area and quality by groundwater pumping and the replacement of native riparian habitats by invasive non-native plants, particularly tamarisk/saltcedar (*Tamarix ramosissima*) in the southwestern United States and to a lesser degree in southern Idaho.

Habitat loss, overgrazing, tamarisk invasion of riparian areas, river management, logging, and pesticides have been identified as causes of decline. These factors are consistent with loss, degradation, and fragmentation of riparian habitat as the primary factor causing yellow-billed cuckoo declines in the western United States. Estimates of riparian habitat losses include 90-95 percent for Arizona, 90 percent for New Mexico, 90-99 percent for California, and more than 70 percent nationwide (Ohmart 1994). Much of the remaining habitat is in poor condition and heavily affected by human use (Almand and Krohn 1978). Local extinctions and low colonization rates have also been identified as factors causing population declines, and pesticides and loss of wintering habitat as potential factors (Hughes 1999).

Planning Area: The species is considered a rare and local summer resident in Idaho, with 64 recorded observations for the State; the breeding population is likely limited to a few breeding pairs, at most (TREC, Inc. 2003). Recent surveys indicated the presence of yellow-billed cuckoos in the planning area near Camas NWR, Market Lake, just above American Falls Reservoir, Deer Parks WMU, and on the South Fork of the Snake River between Lorenzo and Heise (TREC, Inc. 2004).

While there are areas that contain cottonwood riparian forest within the planning area, few if any of the areas could be considered extensive, and presently occur mostly as linear bands adjacent to low elevation river systems. Most of the cottonwood forest within BLM administered lands occurs on moderate-gradients streams, which results in narrow, linear pieces of habitat. Some private in-holdings adjacent to BLM administered lands contain cottonwood forest that could be considered extensive, but some of these have been modified by agricultural development or urbanization. It is likely that some of the more extensive cottonwood stands on the BLM lands were inundated by reservoirs.

7.3 MAMMALS

7.3.1 Grizzly Bear

Status

The grizzly bear was listed as a threatened species on July 28, 1975, within the conterminous 48 States (40 FR 31734). Three basic parameters were selected for use in the 1995 revision of the grizzly bear recovery plan as key indicators of population status. These include: (1) sufficient reproduction to offset the existing levels of human-caused mortality; (2) adequate distribution of breeding animals throughout the area; and (3) a limit on total human-caused mortality, which is related to the previous two parameters. The recovery plan recommends monitoring to include (1) the number of unduplicated females with cubs seen annually, (2) the distribution of females with young or family groups throughout the ecosystem, and (3) the annual number of known human-caused mortalities.

Biology

The grizzly bear was first described as a separate species in 1758, and is a member of the Class Mammalia, Order Carnivora, and Family Ursidae. Grizzly bears have long, curved claws, humped shoulders, and a face that appears concave. Coloration ranges from light brown to nearly black. Guard hairs are often paled at the tips, giving it a silvered, grizzly appearance. The average weight is 182 to 272 kg (400 to 600 pounds lbs) for males and 114 to 159 kg (250 to 350 lbs) for females. Adults stand 1 to 1.4 m (3.5 to 4.5 ft) at the hump when on all fours, and over 2.4 m (8 ft) when on hind legs. Muscle structure is developed for massive strength, quickness, and running speeds up to 72 km/h (45 mi/h). Grizzly bears walk on all four legs, and can stand upright on hind legs to improve sight and smell opportunities.

Grizzly bears have one of the lowest reproductive rates of any land mammal. Age at first reproduction is 3.5 to 8.5 years (5.5 years average) for females. Males become sexually mature at around 4.5 years. The female reproductive interval averages once every 3 years. Mating occurs in late May to mid-July. Embryonic development is postponed by delayed blastocyst implantation, which occurs approximately 0-15 days after denning. Birth occurs in early February. Litter size is 1 to 4 cubs (2 cub average). The cubs are born with eyes closed and remain in the den until late March or early April. Cubs usually remain with the female for 2 years, at which time the female is generally ready to breed again. Individuals have been recorded to live 40 years, but life span in the wild may be closer to 25 years.

Natural mortality factors for grizzly bears are not well known. They may include predation of juveniles by adults, predation of adults by adults, dispersal of subadults into submarginal home ranges, and increased human/bear conflicts while dispersing to preferred spring and fall food sources. Human-caused mortality includes direct human/bear confrontations, attraction to improperly stored food and garbage, improper disposal of livestock carcasses, protection of livestock, declining amounts of grizzly bear habitat, and legal and illegal hunting.

Most existing grizzly bear habitat is characterized by contiguous, relatively undisturbed mountainous habitat that has a high level of topographic and vegetative diversity. Cover seems to be important to grizzly bears in the northern Rockies, particularly during bedding periods. Generally cover used is not more than a kilometer from open parks or meadows.

Grizzly bears den when food availability and air temperatures decline. Den sites are generally at higher elevations in areas where snow is not likely to melt during warm periods through the winter. Bears dig a den in the fall, entering for hibernation around November.

Current Conditions

Range-Wide: Grizzly bears currently occupy approximately 2% of their historic range in the continental United States. The Service has identified seven grizzly bear recovery ecosystems in the northern Rocky Mountains of the western United States: Yellowstone; Cabinet/Yaak; Selkirk; Bitterroot; Northern Continental Divide in Montana; North Cascades in Washington; and the San Juan Mountains in Colorado. Grizzly bears are known to occur in all but the Bitterroot and San Juan ecosystems. Varying portions of the first four ecosystems listed occur in Idaho.

Grizzly bears in the Yellowstone ecosystem occupy over 23,300 square kilometers (km^2) (9,500 square miles [mi^2]) of mountainous terrain in and surrounding Yellowstone National Park. Recovery goals for this ecosystem include maintaining 15 females with cubs over a running six-year average both inside the recovery zone and within a ten-mile radius around the recovery zone; 16 of 18 Bear Management Units (BMU) will be occupied by females with young from a running six-year sum of verified sightings and evidence; and no two adjacent BMUs will be unoccupied; known human-caused mortality will not exceed four percent of the population estimate, no more than 30% of this mortality shall be females; and mortality limits cannot be exceeded during any two consecutive years.

Idaho has populations of grizzly bears in the Cabinet-Yaak Ecosystem and an estimated population of 400-600 bears in the Greater Yellowstone Ecosystem.

Planning Area: Within the planning area, 2006 acres of BLM administered lands occur in BMUs in the USFO. Grizzly bear habitat is managed as Bear Management Units (BMUs); see the Grizzly Recovery Plan (1993). There are two units in the Upper Snake FO, the Henry's Lake 1 and 2 BMUs, which contain 2,006 acres of public land. Of that acreage, 963 are secure habitat. These BMUs are within the Henry's Lake ACEC. Although sightings of GB have been documented on USFS lands, no sighting of GB have been documented on BLM administered lands.

7.3.2 Gray Wolf

Status

In 1994, the U.S. Fish and Wildlife Service approved the Final EIS for the Re-introduction of gray wolves to Yellowstone National Park and Central Idaho (USDI FWS 1994). While the gray wolf was listed as an endangered species throughout its range, the populations south of Interstate 90 in Idaho and Montana are currently classified as experimental/non-essential (USDI FWS 1994). Within the planning area, the gray wolf is a re-introduced experimental/non-essential population (ESA Section 10j) currently managed by the USFWS. Critical habitat for this species has not been designated.

Biology

Gray wolves are wide-ranging predators. The basic social unit in wolf populations is the pack. A pack can consist of 2 to 20 wolves (average of 11). Pack members have a strong social bond to each other, and they establish and defend territories. Home ranges vary in size from 80 square miles in Minnesota to over 600 square miles in Alberta. Home ranges over the last several years for central Idaho packs have ranged from 50 square miles to 360 square miles (USDI FWS 2000). Most packs include a pair of breeding adults, pups, and often yearlings and extra adults. In general, wolves depend upon ungulates for food in the winter and supplement this diet during spring-fall with beaver and smaller mammals. In most wolf populations, reproductive packs occupy exclusive territories, and non-breeding loners either live in the buffer zones between territories or avoid the packs.

Historically, wolves utilized a broad spectrum of habitats including grasslands, sagebrush steppes, coniferous and mixed forest and alpine areas. Habitats used by wolves typically have an abundance of natural prey and, more recently, minimal conflict with human interests and uses.

In the Northern Rockies, wolf pups are born any time from late March to late April or possibly early May. Wolves are particularly sensitive to human activity near den sites and may abandon them if disturbed. Den and rendezvous sites are often characterized by having forested cover nearby and by being distant from human activity. Wolf rendezvous sites are specific resting and gathering areas occupied by wolf packs during summer and early fall after the whelping den has been abandoned. They are characterized by matted vegetation in a meadow, a system of well-used trails through the adjacent forest and across the meadow, and resting beds adjacent to trees. A wolf pack will usually move from the whelping den (or occasionally a second den) to the first rendezvous site when the pups are 6 to 10 weeks of age (late May-early July). The first rendezvous site is often within 1 to 6 miles of the whelping den. A succession of rendezvous sites are used by the pack until the pups are mature enough to travel with the adults (September - early October). Rendezvous sites-- especially the first one--may receive traditional use by wolf packs. It is also the initial rendezvous site at which wolves appear most sensitive to prolonged or substantial human disturbances.

Current Conditions

Range-Wide: Historical information on the distribution of wolves in Idaho indicates that nearly all of Idaho is within the former range of the Northern Rocky Mountain wolf. The present

suitable habitat for gray wolves in Idaho includes the area generally north of the Snake River and portions of the eastern part of the State which border on Wyoming and Montana. There are three recovery areas in Idaho. Gray wolf populations have been increasing since their re-introduction to central Idaho in 1995-96.

The population decline of the gray wolf was a result of: (1) intensive human settlement, (2) direct conflict with domestic livestock, (3) humans lack of understanding of the animal's ecology and habits, (4) fears and superstitions concerning wolves, and (5) the extreme control programs designed to eradicate it. Generally, land development, loss of habitat, poisoning, trapping, and hunting are recognized as important reasons for decline of the Northern Rocky Mountain wolf. Gray wolves are primarily limited by non-habitat factors. Activities that occur in or near den sites or rendezvous sites are also a concern with limited numbers of packs. (USDI FWS 2002).

Although maintenance and improvement of suitable habitat may be the key long-term factor in wolf conservation, an important factor limiting wolf recovery in the Northern Rocky Mountains is human-induced mortality.

Planning Area: Gray wolves in the planning area have been designated as an experimental non-essential population (UDSI FWS 1994a and 1994b). There are two separate wolf recovery areas in the Upper Snake and Pocatello Field Offices. The Central Idaho Wolf Recovery Area includes all the lands in the two Field Offices west of Interstate 15 and the Yellowstone Wolf Recovery Area includes all those lands east of Interstate 15. The most recent sighting in the Shoshone FO area was a dead wolf found about 5 miles east of King Hill Creek in the winter of 2002. There has also been documentation of wolves in the Fish Creek drainage north of Craters of the Moon National Monument. There are no documented sightings in the Burley FO area. The successful translocation of wolves into central Idaho coupled with recent activity of a pack of wolves in Stanley Basin make it more likely that wolves may occur more frequently in the planning area. To date no breeding pairs or packs have been documented on lands administered by the BLM.

7.4 AQUATIC SPECIES

7.4.1 Bull Trout

Status

On June 10, 1998 the Service (USDI 1998a) listed the Klamath River and the Columbia River population segments of the bull trout as threatened.

Biology

Bull trout generally exhibit either resident or migratory life history strategies through much of the current range. These different life history patterns may exist separately or in combination in the same tributary. It is suspected that bull trout give rise to offspring exhibiting both resident and migratory behavior (Rieman and McIntyre 1993). Resident bull trout complete their entire life cycle in the streams or nearby tributaries where they were hatched. Migratory bull trout, in contrast, spawn in tributary streams where juvenile fish rear from one to several years before migrating to larger waters. Fluvial populations move to the large rivers, adfluvial populations move to lakes, and in certain coastal areas, anadromous populations move to saltwater, where

they grow to maturity (Fraley and Shepard 1989; Goetz 1989). These diverse life histories are important to the stability and viability of bull trout populations.

The size and age of bull trout at maturity depends upon life-history strategy. Growth of resident fish is generally slower than migratory fish; resident fish tend to be smaller at maturity and less fecund (Fraley and Shepard 1989; Goetz 1989). Bull trout normally reach sexual maturity in 4 to 7 years and live as long as 12 years. Bull trout typically spawn from August to November during periods of decreasing water temperatures. However, migratory bull trout frequently begin spawning migrations as early as April, and have been known to move upstream as far as 250 kilometers (km) (155 miles (mi)) to spawning grounds (Fraley and Shepard 1989). Depending on water temperature, incubation (fertilization to hatching) is normally 100 to 145 days (Pratt 1992). After hatching, fry remain in the substrate and normally emerge from early April through May again depending upon water temperatures and increasing stream flows (Pratt 1992; Ratliff and Howell 1992).

Bull trout are opportunistic feeders with food habits primarily a function of size and life-history strategy. Resident and juvenile migratory bull trout prey on terrestrial and aquatic insects, macro-zooplankton and small fish (Boag 1987; Goetz 1989; Donald and Alger 1993). Adult migratory bull trout are primarily piscivores, known to feed on various fish species (Fraley and Shepard 1989; Donald and Alger 1993).

Current Conditions

Range-Wide: Though wide-ranging in parts of Oregon, Washington, Idaho and Montana, bull trout in the interior Columbia River basin presently occur in only about 44 to 45 percent of the historical range (Quigley and Arbelbide 1997). Declining population numbers and associated habitat loss and fragmentation have been documented rangewide (Bond 1992; Thomas 1992; Ziller 1992; Rieman and McIntyre 1993; Newton and Pribyl 1994; IDFG in lit.1995). Fragmentation and isolation of bull trout populations or subpopulations has occurred through habitat changes caused by human activities. Overfishing and competition by introduced species of fish have restricted the distribution of bull trout to a small portion of the original range. The original populations have been restricted in the number of individuals they contain, their resilience, and in their proximity to or connection with other populations (Rieman and McIntyre 1993). As a result, some populations are extinct and the risk of extinction for many of the remaining populations has increased (Rieman and McIntyre 1993).

Planning Area: Survey work has documented bull trout in widely scattered areas of its former range. An isolated population is found in the Little Lost River near Howe, Idaho between the Lost River and Lemhi mountain ranges (State of Idaho 1996), however there is no critical habitat for bull trout in the planning area.

7.4.2 Idaho Springsnail

Status

The Idaho springsnail (*Pyrgulopsis* [*=Fontelicella] idahoensis*), also known as the Homedale Creek springsnail, was listed as endangered on December 12, 1992 (57 FR 59244). A recovery

plan that included this snail was prepared in 1995 (Service 1995) and is still being used as a recovery guidance document. Critical habitat for this species has not been designated.

On October 7, 2002, the FWS received a petition, dated October 1, 2002, from Governor Kempthorne of Idaho to delist this species on behalf of the State of Idaho's Office of Species Conservation and Idaho Power (IOSC 2002a). On December 13, 2002, Idaho Power withdrew the petition for delisting when it found inconsistencies in the data used in the petition. Idaho Power's data from 1995 to 2001 has undergoing independent review to correct many of these inconsistencies, but due to difficulties in field identification of this species, the current distribution of the Idaho springsnail is in question.

Biology

The Idaho springsnail has a narrowly elongated shell reaching a height of 0.2 to 0.25 inches, with up to 6 whorls. The empty shell has a pale, olive-tan color that can appear white at the apex. The body of live snails is pale with areas of gray to black with a reddish-brown operculum. When properly preserved the body and snout are typically light to moderate brown, the foot being pale with a brown anterior margin and the visceral coil being black. Unlike most other mollusks, individuals are not hermaphroditic, but instead are either male or female (dioecious). This species is a Blancan (Pliocene-Pleistocene) Lake Idaho relict.

Very little is known about the life history of the Idaho springsnail. This species is primarily found in permanent, unimpounded waters of the mainstem Snake River, although live specimens have been collected from three locations within C.J. Strike Reservoir; one colony within the Bruneau arm of the reservoir contains the highest recorded densities of this species. Frest (2002) noted that although the Idaho springsnail may occur in lake habitats, it requires moving water; this species is not known to persist in "slow water" habitats (*ibid*). This snail has not been found in other Snake River tributaries or in cold-water springs adjacent to the river (Taylor 1982a).

The Idaho springsnail may spend some time as an interstitial dweller occurring on mud or sand with gravel-to-boulder size substrate, but may also be found on the surface of rocks and sometimes on aquatic macrophytes (Frest, in lit. 2002). It often attaches to vegetation (e.g., *Potamogeton*) in riffles. There is currently no conclusive information on the depth distribution of this species in the river profile. It is believed that, on average, the Idaho springsnail lives for about a year, with females laying eggs between February and May, but the number of eggs produced per female is not known. Juvenile snails appear in the population between March and July. Laboratory studies have shown that Idaho springsnails are active in water temperatures ranging from 48.5 °F to 92.7 °F (S. Lysne, Boise State U., unpublished M.S. thesis, 2003), but that snails died within one week if temperatures exceeded 87 °F. The Idaho springsnail has been found in lake habitats where summer temperatures are believed to exceed 71.6 °F. It is not known how such elevated temperatures or other eutrophic conditions might affect this snail's numbers, reproduction, or survival. Although their presence in warmer waters is noteworthy, this does not indicate that they can persist as viable populations under such conditions (Frest, in lit. 2002). The Idaho springsnail has been described by most authors as being dependent on cold water of high quality (Taylor 1982a, Frest et al. 1991). While this snail has been found, in one case in high densities, within C.J. Strike Reservoir, initial reports only record it from two of 168 sampled sites (1.2%) (Cazier 1997b). The revised report for these survey results do not provide

sufficient detail to assess the abundance of the species within the C.J. Strike Reservoir. Additional information is needed to better understand the habitat requirements of this species.

There is a paucity of information on the population dynamics of the Idaho springsnail. The Company has provided some density estimates for some river colonies, but given the naturally patchy distribution and high variation in snail numbers, there are no good sample techniques established to provide confident estimates of population size or trends. In addition, there are no data to confirm the long-term persistence of known colonies. The colony at Bancroft Springs could not be detected over a 5-year period (1995-2000), but was recently re-detected (Shinn, Supplemental 2002). Other colonies have also been detected both within C.J. Strike Reservoir and in the Snake River downstream of that dam, but long-term monitoring of those colonies has not been conducted. The species is declining due to deteriorating water quality and fragmentation of previously continuous habitats with free-flowing waters by dams (USFWS 1995). There is evidence that a non-native snail, the New Zealand mudsnail, may compete with or otherwise negatively impact the Idaho springsnail. To date, no population viability studies have been conducted for the Idaho springsnail.

Current Conditions

Range-Wide: The Idaho springsnail was historically found from Homedale (RM 416) to Bancroft Springs (RM 553) (USFWS 1995). This species has declined due to degradation of habitat (e.g., water quality), and habitat fragmentation due to river impoundments and associated habitat changes (USFWS 1995). The target recovery area includes the main stem of the Snake River between RM 518 to RM 553. With the exception of locations within the Bruneau arm of C.J. Strike Reservoir, this species is not known to occur outside of the mainstem of the Snake River.

Surveys conducted by Taylor in 1982 placed the distribution of this species from Bancroft Springs downstream to C.J. Strike Reservoir (RM 495) at that time. Taylor (1982a) stated that it had vanished from river areas below C.J. Strike Reservoir. Work by Dianne Cazier Shinn, a former Idaho Power biologist, provided insight into the possible current distribution of the Idaho springsnail. She reported finding the species throughout its historic range, as far downstream as Weiser (RM 338) (Shinn, Supplemental, 2002). Recent Idaho Power reports (Stephenson and Bean 2003) include density estimates for known colonies of this species upstream of Grandview, C.J. Strike Reservoir (two locations), and Weiser, with densities ranging from zero to 1,460 snails per square meter, from surveys conducted in Spring, Summer, and Fall of 2002.

A presumed colony of springsnails that had been monitored at Frank Lloyd Wright Rapid (RM 570) was recently determined to be the invasive New Zealand mudsnail. Although this species has been reported from multiple locations from Grandview to Weiser, most of these colonies have only been sampled once and difficulties in making positive identification of this species in the field leave these sightings unconfirmed and questionable. At this time, the status and distribution of this species is not well established and makes the assessment of project-related effects difficult.

Planning Area: The Idaho springsnail is currently known to occur in the Snake River from the Weiser area upstream to the King Hill area, a portion of which is located near lands administered by the Shoshone FO. It is not found in any of the Snake River tributaries or marginal cold-water

springs (Taylor 1982). However, its current known range is based on collections done in 1991 ranges from C.J. Strike Reservoir (river kilometer 834) upstream to Bancroft Springs (river kilometer 890). At present, this snail only occurs as a discontinuously distributed population in permanent, flowing waters of the mainstem Snake River. This species is not known to occur on lands administered by the Burley FO.

Because of the similarity of effects of suppression or fuels-reduction treatments, all the listed Snake River snails are analyzed as a group under the Banbury Springs limpet species description.

7.4.3 Utah Valvata Snail

Status

The Utah valvata snail was listed endangered on December 12, 1992 (57 FR 59244). Critical habitat for this species has not been designated.

Biology

The shell of the Utah valvata measures about 0.2 inches in height, is turbinate, and contains as many as four whorls. An angular carina or ridge runs perpendicular to the raised, transverse threads and attenuates toward the circular aperture margin.

Very little is known about the life history of the Utah valvata. In the Snake River, this snail inhabits a diversity of habitats, such as shallow shoreline waters, deep pools, and perennial flowing waters associated with large spring complexes. Numerous colonies are known to occur throughout Lake Walcott and American Falls Reservoir, indicating the ability of these snails to adapt to lake habitats. Frest (in lit. 2002) noted that although the Utah valvata may occur in lake habitats, it requires moving water; this species is not known to persist in "still water" habitats. The Utah valvata generally avoids areas with heavy currents or rapids (Taylor 1982c). This species appears to prefer well-oxygenated areas of non-reducing calcareous mud or mud-sand substrate among beds of submergent aquatic vegetation. Cazier (1997a) has observed the Utah valvata burrow into soft substrates (mud/sand), apparently an evasive behavior. However, preliminary work conducted by Steve Lysne (Boise State University, unpublished M.S. Thesis, 2003) suggests that under laboratory conditions this snail may spend considerable time on gravel- to cobble-sized substrates. Chara, an aquatic plant that concentrates both calcium carbonate and silicon dioxide, is a common associate with the Utah valvata (Service 1995). The Utah valvata is believed to prefer cool water habitats, however, laboratory studies have shown that they are active in water temperatures ranging from 45.1E to 89.1E F (S. Lysne, Boise State U., unpublished M.S. Thesis, 2003), but that snails died within one week if temperatures exceeded 87E F. This snail may consume diatoms, plant debris, aquatic plants, and sessile organisms, but is generally regarded as a detritivore. The species is hermaphroditic. Observations by Cazier (1997a) suggest that reproduction in the colony at The Nature Conservancy's Thousand Springs Preserve occurs in the fall, followed by a seasonal die-back in December. Analysis of size classes in Lake Walcott suggests that these colonies reproduce between June and September (Weigel 2003).

The Utah valvata is documented from Utah Lake, Utah, from which it is now extirpated, and in the Snake River of southern Idaho from the Henry's Fork as far downstream as Grandview (RM

487). This snail was most likely found in slow-moving portions of the river through southwestern Idaho prior to agricultural development and subsequent changes to the Snake River. Taylor (1982c) reported that empty shells were found downstream of C.J. Strike Reservoir and at Indian Cove Bridge (RM 525.4). There is one collection of this species from the Big Wood River (Gustafson, Montana State University, in lit., 2002). These sightings could represent relict populations or more recent colonization from irrigation returns via canals originating from Lake Walcott and/or Milner Reservoir. A single, empty shell was recovered from the Bruneau Arm of C.J. Strike Reservoir (S. Lysne, U.S. Fish & Wildlife Service, pers. Comm., 2004), but extensive surveys by the Company have failed to locate a living colony or other shell deposits. The target recovery area for this snail is RM 572 to RM 709, and includes the mainstem of the Snake River as well as associated cold water spring tributaries (Service 1995). Population strongholds of the Utah valvata include areas in Lake Walcott, American Falls Reservoir, and the Thousand Springs Preserve. Populations of the Utah valvata have been regularly monitored in Lake Walcott and upstream reaches up to and including American Falls Reservoir (Irizarry 1999; Weigel 2002, 2003) and are known or reported from cold water springs or spring-influenced portions of the river within the planning area such as Thousand Springs (Frest and Johannes 1992) and Box Canyon Springs (Taylor 1985). The most recent reports of this species indicate that it is found in scattered colonies as far upstream as the Henry's Fork of the Snake River, Idaho (Gustafson, Montana State U., in lit., 2003).

Current Conditions

Range-Wide: Surveys conducted by Frest and Johannes (1992) identified only two areas within the Thousand Springs Preserve with colonies of the Utah valvata snail. Their population estimate was 6,000 snails per colony with an average population density of 2.2 snails per ft^2 (57 FR 59244). Periodic surveys conducted by Idaho Power suggest one of these colonies has been persistent over time (Cazier 2001, Supplemental). The Utah valvata appears to have relatively large and persistent colonies in Lake Walcott (RM 674-690), where they were found to occur on mud-sand to mud-gravel substrates at depths ranging from 5 to 45 ft. The average life span of this species is believed to be one year, but may slightly exceed this. The reproductive potential of the Utah valvata is unknown, but egg masses with up to 12 eggs have been observed (Lysne, Boise State University, unpublished M.S. Thesis, 2003).

Planning Area: The Utah valvata snail occurs in the middle Snake River from C. J. Strike Reservoir upstream to the confluence of the South and Henry's Fork and Beaver Dick Park. Surveys in the Nature Conservancy's (TNC) Thousand Springs Preserve indicated declines in numbers and range of Utah valvata over a four-year period (Frest and Johannes 1992). The most current information indicates that its most numerous colonies and greatest numbers are found from American Falls Reservoir downstream to Minidoka Dam. Presently, the Upper Snake Field Office is in section 7 consultation for on-going activities and effects to the Utah Valvata snail within the Upper Snake and Pocatello Field Offices.

Because of the similarity of effects of suppression or fuels-reduction treatments, all the listed Snake River snails are analyzed as a group under the Banbury Springs limpet species description.

7.4.4 Snake River Physa Snail

Status

The Snake River physa snail was listed as endangered on December 12, 1992 (57 FR 59244). Critical habitat for this species has not been designated.

Biology

The shells of adult Snake River physa snails are 0.2 to 0.25 inches long with 3 to 3.5 whorls, and are amber to brown in color (Service 1995). This species occurs on the underside of gravel- to boulder-sized substrate in swift currents in the main stem of the Snake River. Live specimens have been found on boulders in the deepest part of the river, accessible to divers, at the margins of rapids.

Very little is known about the life history of the Snake River physa snail. This species existed in the Pleistocene-Holocene lakes and rivers of northern Utah and southeastern Idaho, and is thought to have persisted for at least 3.5 million years in the Snake River (Taylor 1982b, 1988; Thompson 1996). It has been collected only rarely so little is known of its habits other than it appears to prefer rocky substrates in fast-flowing portions of the main Snake River. Based on the life histories of related species of *Physa*, the Snake River physa likely lives for up to, or just over, one year. Nothing is known about its reproductive biology.

Nothing is known of the Snake River physa's population size or natural population dynamics. Surveys conducted by the Company recorded the Snake River physa on two or three occasions over two years (Cazier 1997a, 1999), but the difficulty of distinguishing this species from a more common species of *Physa* make these observations unconfirmed . In each of these observations, the snail was found near turbulent, deeper water and on large cobble- to bolder-sized substrate. Live Snake River physa snails have always been rare at collection sites and fewer than 50 live snails had been collected in the Snake River (Frest *et al.* 1991).

Current Conditions

Range-Wide: The USFWS (1995) reported that the Snake River physa's "modern" range extended from Grandview (RM 487) to the Hagerman Reach (RM 573), and possibly upstream from Salmon Falls. It is believed to be confined to the main stem of the Snake River, never having been reported from tributary streams. Taylor (1982b, 1988) stated that the Grandview sub-population was extirpated in the early 1980's "...as the native bottom fauna has been virtually eliminated in this sediment-laden section of the Snake River." There are recent (late 1995), unconfirmed accounts of this species as far upstream as RM 671 and Idaho Power reports its presence within the Hagerman area as recently as 1996 (Cazier 1997a), but the identity of these specimens were not confirmed. The status of this species remains unknown, but it appears to be very limited in its range and has always been rare. The target recovery area is designated as the Snake River between RM 553 and RM 675 (USFWS 1995).

Planning Area: The recovery area for the Snake River physa snail extends up the Snake River from Grandview to the Snake's confluence with the Malad River. The most recently confirmed collections of live specimens were by Taylor and Bowler (Taylor 1988) and below Minidoka

Dam (river kilometer 1,085) in 1987 (Pentec 1991). Taylor's collections occurred between 1959 and 1985 and were conducted between the Malad River confluence and Grandview, with live specimens coming from the Hagerman Reach, downstream of Lower Salmon Falls Dam (Taylor 1988, Frest *et al*. 1991). Recent communications from Taylor suggests that the species might lie upstream in areas of good water quality, but there have been no confirmed collections of the Snake River physa upstream of Lower Salmon Falls Dam. Snail surveys in southeastern Idaho and northern Utah (Frest et al. 1991) and in a free-flowing stretch near Buhl (Frest and Johannes 1992) failed to find any live specimens.

The Snake River Physa snail occurs in only a few locations in the free-flowing Snake River including a disjunct population in Lake Walcott and at a few locations in the Hagerman and King Hill reaches of the Snake River (Gooding Co.). The free-flowing, cold-water environments required by this snail have been affected by, and are vulnerable to, continued adverse habitat modification and deteriorating water quality from one or more of the following: hydroelectric development, load-following (the practice of artificially raising and lowering river levels to meet short-term electrical needs at local run-of-the-river hydroelectric projects), water pollution, inadequate regulatory mechanisms which have failed to provide protection to the habitat used by the species, and possible adverse affects from exotic species.

Because of the similarity of effects of suppression or fuels-reduction treatments, all the listed Snake River snails are analyzed as a group under the Banbury Springs limpet species description.

7.4.5 Bliss Rapids Snail

Status

The Bliss Rapids snail was listed as threatened on December 12, 1992 (57 FR 59244). Critical habitat for this species has not been designated.

Biology

The Bliss Rapids snail represents a monotypic genus that is restricted to the Mid-Snake River and numerous cold-water tributaries along that river reach. Adult snails measure from about 0.08 to 0.10 inches in length, with three whorls, and are ovoid in shape. There are two color variants of the Bliss Rapids snail, the colorless or "pale" form and the orange-red or "orange" form. The pale form is slightly smaller with rounded whorls and more melanin pigment on the body (Hershler et al. 1994).

Very little is known about the life history of the Bliss Rapids snail. It occurs on hard substrates in spring habitats, primarily within the Hagerman Valley, and in portions of the mainstem Snake River, primarily in areas influenced by springs and tributaries (Hershler et al. 1994). The species does not burrow and avoids fine depositional sediment and surfaces with attached macrophytes (Service 1995), but has been found in association with smaller, pebble- to gravel-sized substrates (Stephenson and Myers 2003). This species is considered negatively phototaxic and primarily resides on the lateral sides and undersides of rocks (Bowler 1990; Hershler et al. 1994). The Bliss Rapids snail can be locally quite abundant, especially in large spring complexes in the Hagerman Valley on smooth rock surfaces with common encrusting red algae (Service 1995). Reproduction appears to occur at different times of the year in different populations of snails.

Those populations found in the main stem of the Snake River lay eggs from December to March, while those located in cold water springs lay eggs from January to June. Eggs are laid individually on the sides and undersides of rocks and require about one month to hatch into fully developed juveniles. The Bliss Rapids snail has been found inhabiting waters ranging from 45.7° to 67.6° F. The Bliss Rapids snail lives for one year and undergoes an annual die-off after reproduction is complete.

Surveys for this snail in pools or reservoirs have failed to locate it. Although the Idaho Power Company (Company) reports this species within every river mile of the main stem Snake River from Bliss Reservoir to Lower Salmon Falls Dam, it is not abundant within the main stem. This species was reportedly collected in a short section of river below Hell's Canyon Dam (RM 225-229), but review of these specimens by qualified taxonomist have called their identity into question (Myers and Foster 2003). At this time the species is not confirmed to occur outside of its historic range.

Idaho Power (Shinn, Supplemental, 2002) reported reproduction and persistence of selected Bliss Rapids snail colonies in both cold water tributaries and within the main stem of the Snake River, but corroborative data to support these findings are not available. Frest and Johannes (1992) noted that this snail was absent from irrigation return waters entering the Snake River at the Thousand Springs Preserve, but were relatively widespread in pristine springs and were able to colonize uncontaminated springs. Even so, those authors noted that water quality alone could not completely explain the species distribution at all locations, as it is absent from some of the more pristine areas within the Thousand Springs Preserve. The target recovery area includes the main stem of the Snake River and cold water spring complexes between RM 547 and RM 585 (USFWS 1995). Other researchers have noted the decline and disappearance of the Bliss Rapids snail from habitats where they were once common (Frest et al. 1991; Frest and Bowler 1992; Bowler, pers. comm. 2003, 2004).

On July 22, 2002, the FWS received a petition, dated July 19, 2002, from Governor Kempthorne of Idaho to delist this species on behalf of the State of Idaho, Office of Species Conservation and the Company (IOSC 2002b). On December 13, 2002, that petition was withdrawn due to inaccuracies and inconsistencies found in the Company's data. The Service is currently conducting an internal review of the species' status in order to ascertain the current status and our understanding of its biology.

Little is known about the population dynamics of the Bliss Rapids snail. This snail reaches its highest densities in cold water springs and tributaries of the Hagerman reach of the mid-Snake. Population densities of this snail are typically much lower in the main stem of the Snake River (Frank Lloyd Wright Rapid, 2001 annual mean = 9.3 per m^2) than they are within tributary springs (Thousand Springs Preserve, 2001 annual mean = 205 per m^2) (Shinn, Supplemental, 2002). The differences between populations occurring in cold water springs and in the Snake River are likely attributable to water quality, but may also be influenced by other undetermined factors.

Taylor (1985) hypothesized that Bliss Rapids snails feed on organic film (perilithon) on cobbles and boulders in moderate current. Taylor (1985) noted that this species is found only on the undersides of rocks, which believed to be a photosensitive response to light (Bowler 1990). Bliss

Rapids snails forage on upper rock surfaces at night (USFWS 1992)**.** In the main stem of the Snake River, Bliss Rapids snails reproduce in October to February, but delay breeding in spring habitats from February through May (USFWS 1992). Egg laying occurs within a 2 months of breeding and the eggs hatch within a month (USFWS 1992). Bliss Rapids snails live, primarily on boulders and cobbles, in swift current in large streams (Taylor 1982). Boulder bars below rapids and rapids/edge environments flanking the shore (USFWS 1992) were described as good habitat. This species has been found in water as shallow as 1 cm as long as water temperature and dissolved oxygen levels were adequate (USFWS 1995b). Cazier and Myers (1996) documented Bliss Rapids snails in white water, eddy, edge-water, and run habitats. Bliss Rapids snails occupied irregular substrates with and without vegetation (Cazier and Myers 1996). Recently, Bliss Rapids snails have been documented in slack water where previously they were not expected to occur.

Current Conditions

Range-Wide: The Bliss Rapids snail is discontinuously distributed in the mainstem Snake River and is especially associated with spring tributaries between Clover Creek (RM 547) and Twin Falls (RM 610.5). Colonies are concentrated in the Hagerman reach in cold water springs (e.g., Thousand Springs, Banbury Springs, Box Canyon Springs, Malad River, and Niagara Springs) and in lower densities in portions of the main stem Snake River (Service 1995), the later likely being influenced by cold water spring discharges (Hershler et al. 1994).

Taylor (1982) commented that the Bliss Rapids snail is a relict survivor from old Lake Idaho in southwestern Idaho about 3.5 million years ago. Historically, Bliss Rapids snails were present from Indian Cove Bridge and upstream past Twin Falls (USFWS 1992). A disjunct population was found near some springs near American Falls Reservoir (USFWS 1995b). Bowler (1990) reported that the expansion of the introduced freshwater snail *Potamopyrgus antipodarum* was a threat to the listed species in the Snake River.

Presently, the Bliss Rapids snail is known to occur sporadically in the Snake River from the mouth of Clover Creek near King Hill upstream to about river mile 589 above Upper Salmon Dam, as well as Box Canyon (Taylor 1982, Taylor 1985). Idaho Power has been conducting inventory for this species as part of renewing their licenses for hydroelectric dams on the Snake River. BLM does not have access to this data. BLM has not conducted inventories for Bliss Rapids snail.

Planning Area: The recovery area for the Bliss Rapids snail extends from the Bancroft Springs area upstream to Twin Falls. Populations of Bliss Rapids snails are found in a few isolated colonies in the main stem of the Snake River from King Hill (river mile 545) to Banbury Springs (river mile 589) in Idaho. The Bliss Rapids snail is discontinuously distributed in the mainstem Snake River and is especially associated with spring tributaries between Clover Creek (RM 547) and Twin Falls (RM 610.5). Colonies are concentrated in the Hagerman reach in cold water springs (e.g., Thousand Springs, Banbury Springs, Box Canyon Springs, Malad River, and Niagara Springs) and in lower densities in portions of the main stem Snake River (Service 1995), the later likely being influenced by cold water spring discharges (Hershler et al. 1994).

Because of the similarity of effects of suppression or fuels-reduction treatments, all the listed Snake River snails are analyzed as a group under the Banbury Springs limpet species description.

7.4.6 Banbury Springs Limpet

Status

The Banbury Springs limpet was listed as Endangered by the FWS on December 14, 1992 (57 FR 59257). Critical habitat for this species has not been designated.

Biology

This snail is a member of Lancidae, a small family of pulmonates (snails that possess lung-like organs) endemic to western North America. The species was first discovered in 1988 (Frest in lit. 1991b) and has not been formally described. It is distinguished by a cap-shaped shell of uniform red-cinnamon color with a subcentral apex, with a length and height that exceeds its width.

The species has been found only in spring-run habitats with well-oxygenated, clear, cold (59 to 60.8^{o}F) waters on boulder or cobble-size substrate. All known locations have relatively swift currents. They are found most often on smooth basalt and avoid surfaces with large aquatic macrophytes or filamentous green algae. Frest and Johannes (1992) found the species in water as shallow as 2 in, but depths up to 6 in were more typical. All lancids are particularly affected by dissolved oxygen fluctuations since respiration is accomplished only through the mantle; lungs, gills, and other specialized respiratory structures are lacking (Frest and Johannes 1992). Common mollusk associates of this species include the threatened Bliss Rapids snail and vagrant pebblesnail (*Fluminicola hindsi*).

Current Conditions

Range-Wide: At present, the Banbury Springs limpet is known to occur only in the largest, least disturbed spring habitats at Banbury Springs, Box Canyon Springs, and Thousand Springs. The limpet was first discovered in 1988 at Banbury Springs (rm 589) with a second colony found in nearby Box Canyon Springs (rm 588) in 1989. During 1991, a mollusk survey at TNC's Preserve revealed a third colony in the outflows of Thousand Springs (rm 584.6). Subsequent to this discovery, a more detailed investigation at the Preserve revealed that the single colony was sporadically distributed within an area of only 129 to 150.7 square feet (ft^2) (Frest and Johannes 1992). Population densities ranged from 4 to 20 individuals/m^2. The total adult population at the Preserve was estimated at between 600 to 1200 individuals. All three known colonies of limpet were discovered in alcove spring complexes. These spring complexes contain large areas of adjacent, presumably similar, habitat that is not occupied by the species.

Planning Area: The Banbury Springs limpet is known to occur in large, relatively undisturbed spring habitats on the north side of the Snake River approximately five river miles upstream and five river miles downstream of the confluence of the Snake River and Salmon Falls Creek. At present, the Banbury Springs limpet is only known to occur in three, minimally disturbed spring habitats at Banbury Springs, Box Canyon Springs, and Thousand Springs between Snake River miles 548.8 and 589.4. A fourth population was recently discovered at Briggs Springs in the Hagerman Valley.

Because of the similarity of effects of suppression or fuels-reduction treatments, all the listed Snake River snails are analyzed as a group under the Banbury Springs limpet species description.

7.4.7 Columbia Spotted Frog

Status

On May 7, 1993 the USFWS published a notice in the Federal Register (58 FR 27260) that listing of the spotted frog as threatened was warranted in four of its five Distinct Population Segments (DPS) but precluded the listing by other higher priority listing actions. The Great Basin (southern Idaho and Nevada) DPS, which occurs in the planning area, was warranted but precluded from listing. Critical habitat for this species has not been designated.

Biology

The Columbia Spotted Frog may be tan, gray, brown, reddish-brown, or red above with irregular black spots with indistinct edges and light centers. The frog has upturned eyes and relatively short hind legs with extensive webbing. There is a stripe on the lower jaw, and dorso-lateral folds or ridges, on both the back and the sides, are usually present. The frog's undersides are usually cream-colored; the lower abdomen and the undersides of the hind legs are usually a reddish-orange, but can also be yellow. Females are generally about 4 inches in size; males are usually about 3 inches.

Spotted frogs can be found in areas up to 9850 feet in elevation. They prefer hilly areas near cool, permanent, quiet water in streams, rivers, lakes, pools, springs, and marshes. The frog is highly aquatic, but may disperse into forests, grasslands, and shrublands. In the Northwest, the Columbia spotted frog prefers areas with thick algae and emergent vegetation, but may use sunken, dead, or decaying vegetation as escape cover. Spotted frogs eat a wide variety of insects, along with mollusks, crustaceans, and arachnids. The larvae eat algae, organic debris, plant tissue, and tiny water-borne organisms.

Spotted frogs hibernate depending on range, and are mostly inactive in winter. They may move overland in spring after breeding. This species is in decline across some of its range, but seems to be widespread and abundant in Idaho. Bullfrogs are predators. Spotted frogs are not sexually mature until 4 years for males and 6 years for females. They usually breed between mid-March through June, depending on elevation. A Wyoming study found that females breed yearly at low elevations, but only every two or three years at higher elevations. Females may lay egg masses in communal clusters.

Current Conditions

Range-Wide: The Columbia spotted frog is widely distributed in western North America, from southern Alaska through British Columbia and western Alberta and the states of Washington, Oregon, Idaho, Montana, Wyoming, Utah, and Nevada. Disjunct populations exist south of the main range in southeastern Oregon, Nevada, southwestern Idaho, and Utah; and east of the main range in the Bighorn Mountains of north-central Wyoming.

In the southern part of the species range, the Great Basin and Wasatch Front populations have undergone significant decline, with wetland habitat loss and modification recognized as the primary causative factor (Worthing 1993). Great Basin population has been adversely affected by habitat degradation resulting from mining, livestock grazing, road construction, agriculture, and direct predation by bullfrogs and non-native fishes. In central Nevada, introduction of exotic trout and cattle are likely the most important anthropogenic factors limiting the distribution and persistence of the Columbia spotted frog (Reaser 2000).

Planning Area: The Columbia spotted frog has been documented in the headwaters of Salmon Falls Creek in southern Twin Falls County. Other potential habitat occurs in the Raft River area and habitats associated with springs or small lowland and foothill streams.

8.0 EFFECTS AND DETERMINATIONS FROM IMPLEMENTATION OF PROPOSED PLAN AMENDMENT

8.1 PLANTS

8.1.1 Ute Ladies'-tresses Orchid

Riparian areas in the planning area would be treated incidentally under the Proposed Plan Amendment as part of the treatment of adjacent vegetation types. Treatments have the potential to contribute indirectly to sedimentation to these riparian areas through both wind-born and water-born soil temporarily exposed by the treatment actions. However, it is anticipated that the (required) 300-foot buffer around riparian areas would largely prevent significant sedimentation to these riparian areas. It is unlikely, due to the minute acreage proposed in the Proposed Plan Amendment that treatments would have any direct short-term negative effect on Ute ladies'-tresses. It is not anticipated that areas supporting Ute ladies'-tresses would be treated, unless site-specific information indicates that small-scale RxFire use would be used to maintain a seral community, thus resulting in long term benefits. The Proposed Plan Amendment would result in a long-term maintenance of FRCC-1 in this cover type, accordingly, they would all result in healthy ecosystems with low risk to key ecosystem components supporting this species. This FRCC is identical to that occurring under existing conditions.

Direct Effects

Ute ladies'-tresses needs would be considered when selecting herbicide types and application methods. Non-herbicide treatments would be considered as a preferred method. To protect pollinators and Ute ladies'-tresses aerial application of chemicals would not occur within 0.5 miles of occupied habitat. If the continued existence of Ute ladies'-tresses would be undermined by noxious weed infestation, emphasis would be placed on hand spot spraying and mechanical control in order to avoid risks to Ute ladies'-tresses. No chemical would be applied directly on Ute ladies'-tresses during spot application. BLM Botanist(s) would supervise weed treatment within Ute ladies'-tresses habitat. Ute ladies'-tresses would directly benefit from weed treatments using the identified restrictions.

Fire retardant application would not be directly applied to Ute's ladies tress habitat. A drift component may be an indirect result from an application, however based upon studies

conducted, current retardants would have no adverse affects to the plant species. Similarly, form application studies have indicated the application of foam products to plant species have no affects to those plant species (Labat-Anderson, 1996). Fire suppression activities including dozer line and hand line construction would not be directly applied to occupied riparian habitats due to existing mitigating measures, therefore no effects to the plant species are expected. Given the locations of Ute ladies'-tresses habitats, emergency suppression actions to protect life and property, which would preclude implementation of mitigation measures designed to protect Ute ladies'-tresses, are highly unlikely.

The Proposed Plan Amendment provides restrictions that avoid all ground disturbing activities within Ute ladies'-tresses sites. As a result, mechanical seedbed preparation and seed covering, broadcast seeding with motorized vehicles, construction of fuel breaks, fence construction or reconstruction, off-road vehicle traffic, and aerial herbicide applications would have no adverse impacts to Ute ladies'-tresses. (See restrictions for Special Status Plant Species).

Therefore a may affect, not likely to adversely affect Ute ladies'-tresses orchid determination is applied.

Interrelated and Interdependent Effects

No interrelated or interdependent effects to the Ute ladies'-tresses have been identified for the Proposed Plan Amendment.

Indirect Effects

Site specific treatments such as chemical weed control would be designed so potential impacts would be so small as to be not meaningfully measured, detected, or analyzed, or would be extremely unlikely to occur. Herbicide treatments implemented with the restrictions to protect riparian areas, water quality, and special status aquatic species would also help to avoid adverse impacts on Ute ladies'-tresses due to overlapping habitat areas.

The Proposed Plan Amendment is also expected to contribute to the return of a more natural fire cycle over time, which would assist in the conservation of Ute ladies'-tresses by reducing future habitat loss and fragmentation due to catastrophic wildland fire. The restoration treatments such as noxious and invasive weed control that are anticipated to return areas to more normal fire cycles would also indirectly benefit Ute ladies'-tresses by maintaining or improving habitat condition for pollinator species over time.

Using the restrictions focused on Ute ladies'-tresses, restoration/fuels reduction treatments under the Proposed Plan Amendment would either have "No Effect" or effects would be discountable, insignificant, or completely beneficial to this plant species. Restrictions would avoid adverse affects by prohibiting activities such as ground disturbing activities on Ute ladies'-tresses sites and avoiding aerial chemical applications within 0.5 miles of occupied Ute ladies'-tresses sites.

Restoration treatments such as noxious and invasive weed control, revegetation, and return to more normal fire cycles would directly and indirectly benefit the Ute ladies'-tresses.

8.2 BIRDS

8.2.1 Bald Eagles

Bald eagle habitat in the planning area is confined largely to riparian habitat. Riparian areas in the planning area would be treated incidentally under the Proposed Plan Amendment as part of the treatment of adjacent vegetation types. These treatments have the potential to contribute indirectly to sedimentation to these riparian areas through both wind-born and water-born soil temporarily exposed by the treatment. However, it is anticipated that the 300-foot buffer that would required around riparian areas would largely prevent significant sedimentation to these riparian areas. It is unlikely that treatments would have any direct short-term negative effect on bald eagle habitat. Additionally, it is not anticipated that areas with bald eagle habitat would be treated, unless site-specific information indicated that small-scale treatments would maintain a seral community beneficial to Bald Eagles. The Proposed Plan Amendment would result in a long-term FRCC of 1 in this cover type, accordingly, they would all result in low risk to key ecosystem components supporting this species. This FRCC is identical to that occurring under existing conditions.

Direct Effects

Natural recovery of vegetation would have no adverse affects on the bald eagle.

Disturbance to eagles during nesting and roosting may decrease reproductive success; thus, any activity that displaces eagles during these times is a concern. While it is unlikely that eagles would use habitat burned to the extent that treatments would be necessary, nesting or roosting could occur in adjacent unburned habitat. Noise generating activities such as aerial overflights or motorized vehicle activities may disrupt breeding, nesting, or feeding behavior, and could cause nest abandonment. The Proposed Plan Amendment provides restrictions to avoid adverse impacts to bald eagles during nesting periods (February 1 through July 31) within 0.5 miles of nest locations. In addition, site specific projects within 0.5 miles of bald eagle wintering sites between November 1 and March 1 will be designed so that adverse impacts to wintering bald eagles due to disturbance would be avoided.

Habitat modification in the vicinity of bald eagle nest or winter roosting sites may also adversely impact bald eagle through loss of vegetation associated with a nest or roost site or other habitat components necessary for bald eagle prey populations. Proposed treatments would be implemented such that no adverse impacts to bald eagle would occur, including impacts to nesting and roosting habitat or prey populations. Mechanical seedbed preparation and seed covering, broadcast seeding with motorized vehicles, construction of fuel breaks, fence construction or reconstruction, off-road vehicle traffic, and aerial seeding and/or herbicide applications would have no adverse impacts on bald eagle. Ground disturbing activities and motorized vehicle use would be designed to avoid impacts from disturbance or habitat modification to occupied bald eagle nesting and roosting sites. Repair and replacement of minor facilities for public health and safety, and cultural site protection and stabilization would also incorporate restrictions for minimizing disturbance and habitat modification, resulting in no short or long term adverse effects to bald eagle.

Fire suppression activities within Bald eagle nesting and rearing habitat, including the application of retardant and foam, construction of fire line, and the use of aviation resources would be mitigated through the use of restrictive measures (i.e. 300 foot buffer zones) and the use of resource advisors to indicate where bald eagle closures remain in effect. These measures would effectively restrict helicopter operations away from known bald eagle nesting, rearing and foraging sites. However, a drift component may be an indirect result from the application of retardant or fire suppressing foam. Current studies indicate that the Relative Toxicity from an inadvertent application or drift of retardant and foam will not adversely affect eagles, and that these products are not harmful to the species (Labat-Anderson, 1996). Given the locations of bald eagle habitats, emergency suppression actions to protect life and property, which would preclude implementation of mitigation measures designed to protect bald eagles, are highly unlikely.

Therefore a may affect, not likely to adversely affect bald eagles determination is applied.

Interrelated and Interdependent Effects

No interrelated or interdependent effects to the bald eagle have been identified for the Proposed Plan Amendment.

Indirect Effects

Chemical treatments such as the application of herbicides could impact reproductive success of individual bald eagles or local prey populations over time. Impacts of DDT use on bald eagle reproduction have been well documented; however, use of chemicals with similar adverse effects in the vicinity of listed species such as bald eagle would not occur. Site specific treatments such as chemical weed control would be designed so potential impacts would be so small as to be not meaningfully measured, detected, or analyzed, or would be extremely unlikely to occur. Herbicide treatments implemented with the restrictions to protect water quality and special status aquatic species would also avoid adverse impacts on bald eagle prey availability while promoting native plant recovery.

Habitat modification in the vicinity of bald eagle nest or winter roosting sites may also adversely impact bald eagle by increasing future potential disturbance associated with increased recreational activities or improved access into the area. Proposed treatments would be implemented such that no adverse impacts to bald eagle nesting and roosting habitat would occur.

Over the long-term, proposed treatments implemented with restrictions to conserve bald eagles would accelerate soil stabilization and recovery of native vegetation, especially riparian trees such as cottonwoods, relative to natural recovery. Hand planting and seed covering, construction of hillslope and in-channel erosions control structures, non-aerial chemical weed treatment applications with riparian habitat restrictions, mechanical weed treatment, protective fencing, road closures, and livestock and wild horse management to allow for rest of treatment areas from grazing are anticipated to have long-term benefits to bald eagle as soil stabilization and revegetation would contribute to improved habitat condition for both bald eagles and their prey species over time. In addition, reestablishment of cottonwood trees in burned riparian areas would contribute to the replacement or enhancement of potential bald eagle habitat, benefiting

the species. The recovery of native, riparian vegetation would also contribute to the re-establishment of roosting and nesting habitat for this species, and reduce the risk of post-wildland fire flooding and landslides that could impact the availability of riparian habitat and associated prey species.

The Proposed Plan Amendment is also expected to contribute to the return of a more natural fire cycle over time, which would assist in the conservation of bald eagle by reducing future habitat loss and fragmentation due to catastrophic wildland fire. The restoration treatments such as noxious and invasive weed control and revegetation that are anticipated to return areas to more normal fire cycles would also indirectly benefit bald eagle by maintaining or improving habitat condition for prey species over time.

Using the restrictions specified for the bald eagle and riparian and aquatic habitats, the Proposed Plan Amendment would either have "No Effect" or effects would be discountable, insignificant, or completely beneficial to bald eagle. Restrictions would avoid adverse affects such as habitat alteration, noise disturbance, and impacts to prey species associated with proposed activities within 0.5 miles of occupied bald eagle nesting or winter roosting sites during use periods. Potential impacts to bald eagle are also limited by the relatively low number of potential bald eagle nesting and known bald eagle roosting sites on the USRD.

8.2.2 Western Yellow-billed Cuckoo

Yellow-billed cuckoo habitat in the planning area is confined largely to riparian habitat. As stated previously, Riparian areas in the planning area would be treated incidentally under the Proposed Plan Amendment as part of the treatment of adjacent vegetation types. These treatments have the potential to contribute to indirect sedimentation to these riparian areas through both wind-born and water-born soil temporarily exposed by the treatment. However, it is anticipated that the 300-foot buffer that would required around riparian areas would largely prevent significant sedimentation to these riparian areas. It is unlikely that treatments would have any direct short-term negative effect on yellow-billed cuckoo habitat. Additionally, it is not anticipated that areas with yellow-billed cuckoo habitat would be treated, unless site-specific information indicated that small-scale treatments would maintain a seral community beneficial to the taxa. The Proposed Plan Amendment would result in a long-term FRCC of 1 in this cover type, accordingly, they would all result in low risk to key ecosystem components supporting this species. This FRCC is identical to that occurring under existing conditions.

Direct Effects

Natural recovery of vegetation would have no adverse affect on the yellow-billed cuckoo.

Disturbance to yellow-billed cuckoo during nesting may decrease reproductive success; thus, any activity that displaces yellow-billed cuckoo during this time is a concern. While it is unlikely that yellow-billed cuckoo would use habitat burned to the extent that treatments would be necessary, nesting could occur in adjacent unburned habitat. Noise generating activities such as motorized vehicle activities may disrupt breeding, nesting, or feeding behavior, and could cause nest abandonment. The Proposed Plan Amendment provides restrictions to avoid adverse impacts to yellow-billed cuckoo due to disturbance during nesting periods near nest locations.

Habitat modification in the vicinity of yellow-billed cuckoo nest sites may also adversely impact yellow-billed cuckoo through loss of vegetation associated with a nest site or habitat components necessary for prey populations. Proposed treatments would be implemented such that no adverse impacts to yellow-billed cuckoo would occur, including impacts to nesting habitat or prey populations. Mechanical seedbed preparation and seed covering, broadcast seeding with motorized vehicles, construction of fuel breaks, fence construction or reconstruction, off-road vehicle traffic, and aerial seeding and/or herbicide applications would be designed to have no adverse impacts on yellow-billed cuckoo. Ground disturbing activities and motorized vehicle use would be designed to avoid impacts from disturbance or habitat modification to occupied yellow-billed cuckoo nesting sites. Repair and replacement of minor facilities for public health and safety, and cultural site protection and stabilization would also incorporate restrictions for minimizing disturbance and habitat modification, resulting in no short or long term adverse effects to yellow-billed cuckoo.

Chemical treatments such as the application of herbicides could impact reproductive success of individual yellow-billed cuckoo or local prey populations over time. Chemical weed treatments near occupied yellow-billed cuckoo habitat would be designed so that potential impacts to food resources and cover would be avoided.

Treatments would incorporate the restrictions for minimal disturbance near occupied yellow billed-cuckoo habitat and are not likely to adversely impact the yellow-billed cuckoo. Treatments include seedbed preparation, planting and seed covering, hillslope and in-channel erosion control structures, chemical weed treatments, mechanical weed treatments, protective fencing, road closures, livestock and wild horse management, and rest of treatment areas from grazing within riparian habitats. Repair and replacement of minor facilities for public health and safety, and cultural site protection and stabilization would also be designed to result in no adverse impact to the yellow-billed cuckoo.

Fire suppression activities within yellow-billed cuckoo nesting and rearing habitat, including the application of retardant and foam, construction of fire line, and the use of aviation resources would be mitigated through the use of restrictive measures (i.e. 300 foot buffer zones) and the use of resource advisors to indicate where yellow-billed cuckoo crucial habitat exists. These measures would effectively restrict helicopter operations away from known yellow-billed cuckoo nesting, rearing and foraging sites. However, a drift component may be an indirect result from the application of retardant or fire suppressing foam. Current studies indicate that the Relative Toxicity from an inadvertent application or drift of retardant and foam will not adversely affect yellow-billed cuckoo's, and that these products are not harmful to the species (Labat-Anderson, 1996). Given the locations of yellow-billed cuckoo habitats, emergency suppression actions to protect life and property, which would preclude implementation of mitigation measures designed to protect yellow-billed cuckoos, are highly unlikely.

Therefore a may affect, not likely to adversely affect yellow-billed cuckoo determination is applied.

Interrelated and Interdependent Effects

No interrelated or interdependent effects to the yellow-billed cuckoo have been identified for the Proposed Plan Amendment.

Indirect Effects

Habitat modification in the vicinity of yellow-billed cuckoo nest sites may also adversely impact yellow-billed cuckoo by increasing future potential disturbance associated with increased recreational activities or improved access into a breeding/nesting area. Proposed treatments would be implemented such that no adverse impacts to yellow-billed cuckoo nesting habitat would occur.

Over the long-term, proposed treatments implemented with restrictions would accelerate soil stabilization and recovery of native vegetation, especially riparian trees such as cottonwoods and willows relative to natural recovery. The recovery of native riparian vegetation would benefit the yellow-billed cuckoo by re-establishing vegetation for insect food sources and nesting habitat for yellow-billed cuckoo, and reducing the risk of post-wildland fire invasion by noxious weeds, flooding and landslides that could degrade riparian habitat.

Using the restrictions specified for the yellow-billed cuckoo and riparian and aquatic habitats, the Proposed Plan Amendment would not be likely to adversely impact the yellow-billed cuckoo. Restrictions would avoid adverse impacts such as habitat alteration, noise disturbance, and impacts to prey species associated with proposed activities near yellow-billed cuckoo nesting sites during use periods. Potential impacts to yellow-billed cuckoo from treatments are also limited by the relatively low amount of suitable yellow-billed cuckoo nesting habitat located on the Shoshone and Burley FO areas. Areas of extensive cottonwood riparian forest within the BLM administered lands within the Shoshone and Burley FO areas are limited. Information regarding populations within Idaho indicates this species is extremely rare, and the breeding population is likely limited to a few breeding pairs, at most.

8.3 MAMMALS

8.3.1 Grizzly Bear

Short-term impacts from RxFire and WFU in the Wet Conifer, Aspen/Conifer and Dry Conifer vegetation types that constitute the available grizzly bear habitat in the planning area are largely dependant on the intensity and extent of the fire. Low-intensity fires in these cover types typically improve grizzly habitat both spatially and temporally by clearing underbrush and encouraging the sprouting of new vegetation, particularly elderberry, serviceberry, and huckleberry. Higher-intensity fires in these cover types typically improve wildlife habitat by creating clearings and movement corridors. Grizzly bears have been shown to respond well to fire due to the increased availability of forage (USFS 2003). The potential for individual mortality of grizzly in the planning area in negligible because 1) there have been no confirmed sightings of grizzly in the planning area; 2) vegetation treatments would be managed to avoid large catastrophic fires that are more likely to result in individual mortality; and 3) there are no treatments planned in secure grizzly habitat (i.e., known grizzly habitat more than 500 meters from the nearest road).

The planning area would provide the closest match to DFC with early seral stages ranging from 22 to 30 percent of total habitat, mid-seral stages at 17 percent, and late seral stages ranging from 53 to 71 percent, with these late seral stages typically including decadent aspen stands and older conifer stands with high-fuel loading. The relatively high proportion of early seral stages would provide openings in the forest canopy that would lead to increased production of new forage vegetation for grizzly bears. FRCC for the Proposed Plan Amendment would range from 2 to 3, which indicates a moderate risk to key ecosystem components from high intensity large fires. This FRCC is virtually identical to the existing conditions in this habitat.

Direct Effects

Disturbance to bears may decrease reproductive success; thus, any activity that displaces bears, particularly females, is a concern. While it is unlikely that bears would use habitat burned to the extent that treatments would be necessary, forage, reproduction, and denning may occur in adjacent unburned habitat. A primary concern for grizzly bear populations is the construction of new trails and roads into previously inaccessible areas for timbering practices and trail construction, resulting in increased livestock-bear conflicts, human-bear conflicts, and illegal poaching. Because the rehabilitation and restoration activities do not include construction of new roads or trails, no adverse short or long term impacts would result on grizzly bears.

Fire suppression activities within Grizzly Bear habitat, including the application of retardant and foam, construction of fire line and the use of aviation resources to suppress wildfires, would be mitigated through the use of restrictive measures (e.g. buffer zones, etc.) and the use of resource advisors to indicate where grizzly bear habitat exists to allow avoidance of the secure habitat. Helicopter operations would be limited to established buffer zones to reduce direct impacts and to reduce any form of displacement potential due to helicopter operations. Although the direct placement of retardant or foam within the limited number of grizzly bear habitat acres is remote, the placement of retardant or foam and the possibility of drift of retardant may occur to protect occupied or designated critical habitat. Current studies indicate that Relative Toxicity from the application of retardant or foam will not adversely affect grizzly bears or their dependent habitat, and that those products are not harmful to the species (Labat-Anderson, 1996). On BLM administered lands outside of secure habitat, there is likely to be no adverse affect on grizzly bears since aerial drops of foam and ground spraying of retardants are highly unlikely to occur on the widely scattered parcels comprised of open bottom and meadows lands surrounding Henry's Lake.

Therefore a may affect, not likely to adversely affect grizzly bear determination is applied.

Interrelated and Interdependent Effects

No interrelated or interdependent effects to the grizzly bear have been identified for the Proposed Plan Amendment.

Indirect Effects

The short and long term results of treatments (i.e., noxious and invasive weed control, revegetation of burned areas, and return to more normal fire cycles) that benefit grizzly bear forage species would indirectly benefit the grizzly bear over time.

Using the restrictions specified, activities would either have "No Effect" or be discountable, insignificant, or completely beneficial for grizzly bears. The proposed treatments would not directly affect grizzly bears. This species is found primarily in contiguous, relatively undisturbed mountainous habitats that have a high level of topographic and vegetative diversity rather than in burned areas where rehabilitation activities would occur. The design criteria for not constructing new roads or trails, minimizing activities that attract bears to roads or human facilities, and avoiding lengthy work in BMU riparian areas would all eliminate any potentially adverse impacts.

Treatments such as noxious and invasive weed control, revegetation, and a return to more normal fire cycles that benefit forage species would directly benefit the grizzly.

8.3.2 Gray Wolf

The effect of fire management activities on gray wolf would largely be identical to the effect on their preferred ungulate prey items; moose, elk and deer. Short-term impacts from RxFire and WFU in the Wet/Cold Conifer, Dry Conifer, and Aspen vegetation are largely dependant on the intensity and extent of the fire. Low-intensity fires in these cover types typically improve wildlife habitat both spatially and temporally by clearing underbrush and encouraging the sprouting of new vegetation. Higher-intensity fires in these cover types typically improve wildlife habitat by creating clearings and movement corridors. Many wildlife species including elk and moose have been shown to benefit from the maintenance of small clearings and regeneration of forage vegetation following fires in the Aspen/Conifer cover types (Hansen et al. 1973, Kramp et al. 1983). However, indirect impacts associated with vegetation management activities may include disturbance from increased traffic and noise from mechanical equipment, which may cause short-term displacement of wildlife from the treatment area.

The Proposed Plan Amendment provides positive benefits to wildlife species inhabiting Conifer, Aspen and sagebrush steppe cover types as it provides the closest match to DFC with early seral stages ranging from 22 to 30 percent of total habitat, mid-seral stages at 17 percent, and late seral stages ranging from 53 to 71 percent. In general, these early to mid-seral stages provide browse for the ungulate prey that wolf use, particularly in the winter months. Frequent fire management activities that promote ungulate browse provide ideal gray wolf habitat. FRCC for the Proposed Plan Amendment would range from 2 to 3, which indicates a moderate risk to key ecosystem components from high intensity large fires. This FRCC is virtually identical to the existing conditions in this habitat.

Direct Effects

The proposed treatments would not directly affect the highly mobile gray wolf. Wolves are most vulnerable to disturbance while denning and rearing pups and noise generating activities in the vicinity of wolf denning or rearing locations could impact the reproductive success of individual wolves. While it is unlikely that wolves would den within habitat so severely burned that treatments would be necessary, denning could occur in adjacent unburned habitat. The design criteria for avoidance of activities near an active wolf den or rendezvous site would eliminate any potentially adverse impacts from direct physical impacts or noise disturbance.

Implementation of proposed activities is also not anticipated to negatively impact wolf prey (*e.g.* large ungulates such as elk and deer) availability.

Therefore a not likely to jeopardize the continued existence of the gray wolf population determination is applied.

Interrelated and Interdependent Effects

No interrelated or interdependent effects to the gray wolf have been identified for the Proposed Plan Amendment.

Indirect Effects

The short and long term results of treatments (i.e., noxious and invasive weed control, revegetation of burned areas, and return to more normal fire cycles) that benefit wolf prey species would indirectly benefit the gray wolf over time.

Implementation of activities will not compromise the recovery and de-listing of the species, and will have no adverse short or long-term impacts on wolf prey availability. Activities may benefit the wolf by increasing prey availability over the long term through habitat restoration efforts. The design criteria to limit noise disturbance near an active wolf den or rendezvous site would avoid potentially adverse impacts to wolf reproduction and recovery.

8.4 AQUATIC SPECIES

8.4.1 Bull Trout

Riparian areas in the planning area would be treated incidentally under the Proposed Plan Amendment as part of the treatment of adjacent vegetation types. These treatments have the potential to contribute to indirect sedimentation to these riparian areas through both wind-born and water-born soil temporarily exposed by the treatment. However, it is anticipated that the 300-foot buffer that would required around riparian areas would largely prevent significant sedimentation to these riparian areas. It is unlikely that treatments would have any direct short-term negative effect on habitat quality for the bull trout. It is not anticipated that areas supporting bull trout habitat would treated, unless site-specific information indicates that small-scale vegetation treatments could be used to maintain a seral community and be beneficial to the taxa. The Proposed Plan Amendment would result in a long-term FRCC of 1 in this cover type, accordingly, they would all result in low risk to key ecosystem components supporting this species. This FRCC is identical to that occurring under existing conditions.

Direct Effects:

Non assisted recovery of native vegetation would have no adverse impact on the bull trout.

Treatments such as armoring or repair or replacement of bridges or culverts that include operation of equipment or other activities within the Little Lost sub-basin or occupied habitats may directly injure or kill bull trout. Because in-stream activities will not occur in the Little Lost sub-basin or associated habitats, no direct effects to bull trout would result.

Treatments such as mechanical seedbed preparation and seed covering, broadcast seeding using motorized vehicles, construction of fuel breaks, fence construction or reconstruction, off-road vehicle traffic, and aerial seeding, or aerial herbicide applications would be designed to have no adverse effect on bull trout. Adverse impacts from ground disturbing activities, herbicide applications, and motorized vehicles use would be avoided within riparian habitats and adjacent upland areas that may influence riparian areas that contain or are upstream of bull trout. Specific streamside, wetland, and riparian herbicide restrictions would avoid impacts of aerial and ground-based chemical weed control on aquatic special status species such as bull trout. No aerial herbicide applications would occur within 0.5 miles of occupied habitats. Water quality will be further protected by use of seed mixtures that do not contain added chemicals such as fertilizer and avoidance of hydro-mulch use in riparian areas that contain or are bull trout habitat. Restrictions for fences would avoid impacts to riparian areas due to livestock or wild horse use, retaining stream bank stability and existing riparian vegetation. Riparian restrictions limiting use of off road vehicles or other equipment in live water to designated crossings and work areas would further avoid the potential for impacts to water quality.

Fire suppression activities within bull trout habitat, including the application of retardant or foam, construction of fire line and the use of aviation resources (helicopters with buckets and tanks) would be limited to non-existent through the implementation of restrictive measures (e.g. 300 foot buffer zones, etc.) and the use of resource advisors indicating where occupied or designated critical habitat exists. These measures would effectively restrict helicopter and engine operations away from occupied or designated critical habitat. The potential exists that a fixed wing drift component, from the application of retardant or foam, could indirectly affect bull trout by drifting into the riparian corridor. Current studies indicate that the Relative Toxicity from inadvertent application of these products would be slightly toxic to the species throughout their early life cycle (i.e. trout egg through 60 day growth stage), with affects decreasing into the adult stage (Labat-Anderson, 1996). Foams are considered to be slightly more toxic than long term retardants. Given the locations of bull trout habitats, emergency suppression actions to protect life and property, which would preclude implementation of mitigation measures designed to protect bull trout, are highly unlikely.

Therefore a may affect, not likely to adversely affect bull trout determination is applied.

Interrelated and Interdependent Effects

No interrelated or interdependent effects to bull trout have been identified for the Proposed Plan Amendment.

Indirect Effects

Bull trout may be impacted by a reduction in water quality and/or increase in water temperature due to the introduction of chemicals or sediment into aquatic systems from upstream riparian areas or adjacent upland areas. Adverse impacts to bull trout associated with mechanical seedbed preparation and seed covering, broadcast seeding using motorized vehicles, construction of fuel breaks, fence construction or reconstruction, off-road vehicle traffic, and aerial seeding, or aerial herbicide applications would be avoided by using project wide and site specific restrictions to avoid adverse impacts.

Bull trout would benefit from re-establishment of native riparian plant species such as sedges, rushes, cottonwood, and willow. The recovery of native riparian vegetation would assist in the maintenance of and/or improvement in water quality for bull trout and its occupied or designated critical habitat by maintaining bank stability, reducing sediment loads, maintaining low water temperatures, and diminish the risk of post-wildland fire floods and landslides that could degrade water quality and aquatic habitat.

Over both the short and long-term, proposed treatments with restriction for aquatic animals and riparian habitats would accelerate soil stabilization and recovery of native vegetation, especially native riparian vegetation such as rushes, sedges, cottonwoods, and willows. Treatments that reduce erosion and sediment transport, maintain natural hydrologic cycles, and rehabilitate riparian vegetative cover would: 1) protect water quality (*e.g*. temperature and sediment), 2) maintain channel morphology (*e.g*. dimensions and sediment budget), and 3) protect habitat for all aquatic species, including bull trout.

The Proposed Plan Amendment is also expected to contribute to a return to more natural fire cycles over time, which would assist in the conservation of bull trout by reducing future sedimentation and associated habitat loss as a result of catastrophic wildfire within watersheds and riparian areas upstream of the Snake River.

Using the restrictions specified for the aquatic animals and riparian and aquatic habitats, the Proposed Plan Amendment would either have "No Effect" or effects would be discountable, insignificant, or completely beneficial to bull trout. Treatment restrictions would avoid adverse effects from changes in water quality and temperatures due to introduction of sediments or chemicals into aquatic systems. Adverse impacts to bull trout associated with restoration treatments such as mechanical seedbed preparation and seed covering, broadcast seeding using motorized vehicles, construction of fuel breaks, fence construction or reconstruction, off-road vehicle traffic, and aerial seeding, or aerial herbicide applications would be avoided by using project wide and site specific restrictions to avoid adverse impacts on trout, including INFISH guidelines.

8.4.2 Snake River Mollusk Species

Riparian and wetland areas in the planning area would be treated incidentally under the Proposed Plan Amendment as part of suppression efforts or restoration treatments of adjacent vegetation types. These activities have the potential to contribute to indirect sedimentation to these riparian areas through both wind-born and water-born soil temporarily exposed by the activities. However, it is anticipated that the 300-foot buffer that would be required around riparian areas under restoration treatments would largely prevent significant sedimentation to these riparian areas. It is unlikely that treatments would have any direct short-term negative effect on habitat quality for the Snake River mollusks. It is not anticipated that areas supporting Snake River mollusks habitats would be treated, unless site-specific information indicates that small-scale vegetation treatments could be used to maintain a seral community and be beneficial to the taxa. The Proposed Plan Amendment would result in a long-term improvement/maintenance of FRCC-1 in riparian areas, accordingly, they would all result in low risk to key ecosystem components supporting this species. This FRCC is identical to that occurring under existing conditions.

Factors that lead to further deterioration in water quality would likely lead to extirpation of listed Snake River mollusks. Factors that further degrade water quality include reduced stream flow as a result of water withdrawals for agriculture, warming due to impoundment, and increases in the concentration of nutrients, sediments, and other pollutants reaching the river. The Snake River is affected by runoff from feedlots and dairies, hatcheries, municipal sewage effluent sources, and other point and nonpoint discharges. Return of irrigation water into the Snake River also plays a major role in degrading water quality, introducing an estimated average of over 300,000 pounds of soil into the river daily (EPA 2002). In addition, commercial, state, and Federal fish culture facilities discharge wastewater into the Snake River and its tributaries. These factors coupled with periodic, drought-induced low flows, have contributed to reduced dissolved oxygen levels and increased plant growth and a general decline of cold-water, free-flowing river habitats in the Snake River.

Water quality in the alcove springs and tributary spring streams in the Hagerman Valley area have also been affected, though not as severely as the mainstem Snake River. The unique hydrogeology of the Hagerman area provides conditions for massive cold-water recharge from the Snake River Plain aquifer. However, several of these springs and spring tributaries have been diverted for hatchery use, which reduces or eliminates clean water recharge and contributes flows enriched with nutrients to the Snake River. At TNC's Preserve, colonies of Utah valvata and Bliss Rapids snail have recently declined or been eliminated at several sites. This decline is due to decreases in water quality primarily from agriculture and aquaculture wastewater originating outside of and flowing into the Preserve (Frest and Johannes 1992).

Another threat to the listed species is the competition with the New Zealand mudsnail (*Potamopyrgus antipodarum*) in the middle Snake River. The widely distributed and adaptable mudsnail is experiencing explosive growth in the Snake River and shows a wide range of tolerance for fluctuations in water level, velocity, temperature, and turbidity. Based on recent surveys, the mudsnail is not abundant in habitats utilized by the Banbury Springs limpet or the Utah valvata. However, the species does compete directly for resources with the Snake River physa, the Bliss Rapids snail, and Idaho springsnail in the mainstem Snake River.

Seven proposed hydroelectric projects, including two high-dam facilities, potentially threaten remaining free-flowing river reaches between C.J. Strike and American Falls Dam. Dam construction adversely affects aquatic species through direct habitat modification and impairment of the ability of the Snake River to assimilate point and nonpoint source pollution. Further hydroelectric development along the Snake River would inundate existing snail habitats through impoundment; reduce critical shallow shoreline habitats in tailwater areas due to stage level fluctuations; elevate water temperatures; reduce dissolved oxygen levels in impounded reaches; and further fragment remaining mainstem populations or colonies of the listed mollusks. Load-following threatens native aquatic species habitat when fluctuating flows through a powerhouse dewater aquatic habitats in shallow shoreline areas. With the exception of the Banbury Springs limpet and possibly the Snake River physa, these daily water fluctuations prevent snail species from occupying potentially favorable habitats.

Direct Effects

Natural recovery of vegetation would have no adverse impact on the Bliss Rapids snail, Utah valvata snail, Idaho springsnail, Snake River physa snail, or the Banbury Springs limpet.

Activities such as armoring or repair or replacement of bridges or culverts that include operation of equipment or other activities within the Snake River or occupied spring habitats may directly injure or kill Bliss Rapids snail, Idaho springsnail Utah valvata snail, or Banbury Springs limpet when they occur in shallow water. Snake River physa are found in deeper water and are less likely to be impacted by in-stream treatments**.** Neither suppression or restoration activities are anticipated to occur in the Snake River or associated spring habitats; therefore no direct effects to the listed snails from operations within water would occur.

Activities that may impact water quality such as treatments within upland or riparian habitats that introduce sediment, organic matter, or chemicals into aquatic systems may also adversely impact Snake River snails by increasing water temperatures, reducing dissolved oxygen levels, or exposing individual snails to toxins. The quality of water in these habitats has a direct effect on the survival of native aquatic species. Water temperature, dissolved oxygen concentrations, and turbidity are all critical components of water quality that affect the survival of the listed Snake River snails. These species require cool, clean, and well-oxygenated waters. They are relatively less tolerant of pollution and factors that cause oxygen depletion, siltation, or elevated water temperatures.

Treatments such as mechanical seedbed preparation and seed covering, broadcast seeding using motorized vehicles, construction of fuel breaks, fence construction or reconstruction, off-road vehicle traffic, and aerial seeding, or aerial herbicide applications would be designed to have no adverse effect on listed snails. Adverse impacts from ground disturbing activities, herbicide applications, and motorized vehicles use would be avoided within riparian habitats and adjacent upland areas that may influence riparian areas that contain or are upstream of listed Snake River snail species. Specific streamside, wetland, and riparian herbicide restrictions would avoid impacts of aerial and ground-based chemical weed control on aquatic special status species such as Snake River snails. No aerial herbicide applications would occur within 0.5 miles of the Snake River or occupied spring habitats. Water quality will be further protected by use of seed mixtures that do not contain added chemicals such as fertilizer and avoidance of hydro-mulch use in riparian areas that contain or are upstream of snail sites. Design features for fences would avoid impacts to riparian areas due to livestock or wild horse use, retaining streambank stability and existing riparian vegetation. Riparian restrictions limiting use of off road vehicles or other equipment in live water to designated crossings and work areas would further avoid the potential for impacts to water quality.

Fire suppression activities within Snake River Mollusk habitats, including the application of retardant and foam, construction of fire line and the use of aviation resources (helicopters with buckets or tanks) would be limited to non-existent through the implementation of restrictive measures (e.g. 300 foot buffer zones, etc.) and the use of resource advisors indicating where critical mollusk habitats exist. These measures would effectively restrict helicopter and engine operations away from occupied or designated critical habitats and avoid affecting the snails. Current studies indicate that the Relative Toxicity from an inadvertent application of these

products would be moderately toxic to these species, with foam having a slightly greater toxicity level than retardants (Labat-Anderson, 1996). However, given the 300 ft. buffer and the composition of retardant and foam, it is highly unlikely that these substances would mist or drift and enter the Snake River mollusks aquatic habitat. Habitats of snails are in springs or river channels with snails occurring in or on mud, gravel and boulder-sized substrate. No direct exposure to foam or retardant is expected. Additionally, it is expected the average volume of water flow within these species known habitats would sufficiently dilute the toxicity levels and avoid affects on these populations. Given the locations of Snake River snail habitats, emergency suppression actions to protect life and property, which would preclude implementation of mitigation measures designed to protect Snake River snails, are highly unlikely. No adverse affects on Snake River snails are expected.

Therefore a may affect, not likely to adversely affect Snake River snails determination is applied.

Interrelated and Interdependent Effects

No interrelated or interdependent effects to the Bliss Rapids snail, Snake River physa snail, Idaho springsnail, Utah valvata snail, or Banbury Springs limpet have been identified for the proposed plan amendment.

Indirect Effects

Listed Snake River snails may be impacted by a reduction in water quality due to the gradual introduction of chemicals or sediment into aquatic systems from upstream riparian areas or adjacent upland areas. Adverse impacts to listed Snake River snails associated with treatments such as mechanical seedbed preparation and seed covering, broadcast seeding using motorized vehicles, construction of fuel breaks, fence construction or reconstruction, off-road vehicle traffic, and aerial seeding, or aerial herbicide applications would be avoided by using project wide and site specific restrictions to avoid adverse impacts on snails.

Listed Snake River snails would benefit from re-establishment of native riparian plant species such as sedges, rushes, cottonwood, and willow. The recovery of native riparian vegetation would assist in the maintenance of and/or improvement in water quality for bull trout and its occupied or designated critical habitat by maintaining bank stability, reducing sediment loads, maintaining low water temperatures, and diminish the risk of post-wildland fire flooding and landslides that could degrade water quality and aquatic habitat.

Over both the short and long-term, proposed treatments with design features for aquatic animals and riparian habitats would accelerate soil stabilization and recovery of native vegetation, especially native riparian vegetation such as rushes, sedges, cottonwoods, and willows. Treatments that reduce erosion and sediment transport, maintain natural hydrologic cycles, and rehabilitate riparian vegetative cover would: 1) protect water quality (*e.g.* temperature and sediment), 2) maintain channel morphology (*e.g.* dimensions and sediment budget), and 3) protect habitat for all aquatic species, including listed Snake River snails.

The recovery of native riparian vegetation would assist in the maintenance of and/or improvement in water quality for listed Snake River snail species by maintaining bank stability,

reducing sediment loads, maintaining low water temperatures, and diminish the risk of post-wildland fire flooding and landslides that could degrade water quality and aquatic habitat.

The Proposed Plan Amendment is also expected to contribute to a return to more natural fire cycles over time, which would assist in the conservation of listed Snake River snail species by reducing future sedimentation and associated habitat loss as a result of catastrophic wildfire within watersheds and riparian areas upstream of the Snake River.

Using the restrictions specified for the aquatic animals and riparian and aquatic habitats, the Proposed Plan Amendment would either have "No Effect" or effects would be discountable, insignificant, or completely beneficial to listed Snake River snail species. Treatment restrictions would avoid adverse effects from decreased water quality due to introduction of sediments or chemicals into aquatic systems. Adverse impacts to listed Snake River snails associated with treatments such as mechanical seedbed preparation and seed covering, broadcast seeding using motorized vehicles, construction of fuel breaks, fence construction or reconstruction, off-road vehicle traffic, and aerial seeding, or aerial herbicide applications would be avoided by using project wide and site specific design features to avoid adverse impacts on snails.

8.4.3 Columbia Spotted Frog

Riparian areas in the planning area would be treated incidentally under the Proposed Plan Amendment as part of suppression in riparian areas or restoration activities to the adjacent vegetation types. These activities have the potential to contribute to indirect sedimentation to these riparian areas through both wind-born and water-born soil temporarily exposed by the treatment. However, it is anticipated that the 300-foot buffer that would required around riparian areas would largely prevent significant sedimentation to these riparian areas. It is unlikely that treatments would have any direct short-term negative effect on habitat quality for the Columbia spotted frog. Although care would be taken in treatments in and around riparian areas, these species could still be impacted by treatments in upland areas bordering riparian areas. Vegetation treatments could remove vegetation in upland areas near riparian habitat, increasing the potential for sedimentation to streams and wetland areas supporting habitat for these species. The use of chemical treatments, in particular, has the potential to impact boreal toad and leopard frogs. However, excluding vegetation treatments within the 300-foot buffer zones around riparian areas, combined with prompt rehabilitation or restoration would minimize short-term adverse impacts to these species from fire management activities.

It is not anticipated that areas supporting Columbia spotted frog would treated, unless site-specific information indicates that small-scale vegetation treatments could be used to maintain a seral community and be beneficial to the taxa. The Proposed Plan Amendment would maintain long-term FRCC of 1 in this cover type, accordingly, they would all result in low risk to key ecosystem components supporting this species. This FRCC is identical to that occurring under existing conditions.

Fire suppression activities within Columbia Spotted Frog habitat, including the application of retardant or foam, construction of fire line and the use of aviation resources (helicopters with buckets or tanks) would be limited to non-existent through the implementation of restrictive measures (e.g. 300 foot buffer zones, etc.) and the use of resource advisors indicating where

occupied or designated critical habitat exists. These measures would effectively restrict helicopter and engine operations away from occupied or designated critical habitat. The potential exists that a fixed wing drift component, from the application of retardant or foam, could indirectly affect Columbia Spotted Frogs by drifting into the riparian corridor. Current studies indicate the Relative Toxicity from an inadvertent application of these products would be considered slightly toxic to this species, but have no long term effects (Labat-Anderson, 1996). Additionally, it is expected the average volume of flow within this species known habitat would sufficiently dilute the toxicity levels to only slight affect this species with no long term effects.

Therefore a may affect, not likely to adversely affect the Columbia spotted-frog determination is applied.

9.0 CUMULATIVE EFFECTS OF STATE AND PRIVATE ACTIONS IN THE PLANNING AREA

All actions authorized by the federal government must comply with the ESA of 1973, as amended. The ESA defines cumulative effects (50 CFR 402.2) as the additive effects of state and private activities that are reasonably certain to occur in the watershed where the Federal action occurs. For the purpose of this report, cumulative effects include impacts to federally listed species associated with past, present, and reasonably foreseeable future actions near or within the proposed planning area.

In general, past and existing water diversions for agricultural use, hydroelectric dams, reservoir construction, and agricultural runoff have had and will continue to have a much greater cumulative impact on aquatic special status species than the Proposed Plan Amendment. Similarly, state and private activities, including grazing, motorized recreational use, and agricultural practices will likely continue to impact sagebrush steppe habitat and the special status species that inhabit it. Private land within the planning area is usually concentrated around towns such as of Pocatello, Preston, Soda Springs, Twin Falls, Shoshone, and Idaho Falls. Private land in the uplands will likely continue to be developed for housing, grazing operations, and agricultural use. Development of private land could result in the loss of riparian, river valley, and upland habitats that support special status species. Private land could also be explored and/or developed for their mineral resources, including phosphate. Exploration for and development of these resources could affect the special status species that occur in the area. Finally, locatable and saleable minerals operations (e.g. sand and gravel mining) on private land could contribute to cumulative effects on special status species.

Special status wildlife species associated with the planning area regularly traverse lands managed by state agencies as well as private lands. To ensure the continued viability of the these special status species, efforts must be made between these groups to coordinate land use. There are several planning efforts for these lands currently underway which may, in conjunction with this planning effort, affect the special status species associated with the planning area. These plans include Idaho Statewide Implementation Strategy for the National Fire Plan, the State of Idaho Yellowstone Grizzly Bear Management Plan, and the State of Idaho Bull Trout Conservation Plan. Additionally, several counties in the planning area are developing Risk Assessments and fire management plans to address concerns in the Wildland Urban Interface (WUI). In general,

these state planning efforts are likely to contribute positively to the long-term population viability of special status species in the planning area.

9.1 PLANTS

All occurrences of Ute ladies'-tresses on the South Fork Snake River, except Lower Conant Valley, Upper Conant Valley and possibly Lower Swan Valley, are threatened by either localized human activities (e.g., recreation, inappropriately-timed cattle grazing) and/or noxious weed invasion. Conservation actions and compliance inspections taken by the BLM, Caribou Targhee National Forest (CTNF), and IDFG generally have been effective in minimizing, decreasing, and/or eliminating threats where possible. The types of threats to the Ute ladies'-tresses metapopulation have not changed much over time, and no new threats were observed in 2003. However, the magnitude of threats varies across occurrences and from year to year, even with conservation actions taken to avoid these threats (Murphy 2004). The primary conservation measure on private lands that protect Ute ladies'-tresses habitat consist of land and water conservation easements that limit development within the Snake River corridor.

No rehabilitation actions would be taken in Ute ladies'-tresses habitats, other than spot spraying of herbicides and hand pulling. Therefore, the proposed action would not cumulatively contribute to an increase in weeds, but would benefit Ute ladies-tresses by maintaining or improving habitat for pollinators.

9.2 MAMMALS

As wolf populations increase, additional wolves will disperse from other areas throughout the planning area. This dispersal will bring wolves into increasing contact with human population centers and activities such as domestic livestock grazing on state and private lands. Over the long term, human social pressures will most likely restrict the distribution of wolves to areas of limited human occupation and away from concentrated domestic livestock production. Human tolerance and lack of persecution will be needed to achieve long-term successful recovery. Both regulatory and educational efforts will be important parts of wolf conservation and management efforts.

As grizzly bear populations increase and/or bear-human interactions increase, bear mortality will likely also increase. Over the long term, human social pressures will most likely further restrict the distribution of bears to areas of limited human occupation and away from concentrated domestic livestock production. Proactive habitat management/conservation and lack of persecution will be needed to achieve long-term successful recovery of grizzly bears in Idaho. Both regulatory and educational efforts will be important parts of bear conservation and management efforts.

9.3 BIRDS

Bald eagle nesting and roosting areas occur on both federal and nonfederal land ownerships where large water bodies (lakes, reservoirs, and larger rivers) occur. Actions such as vegetation management, fish population regulation by state agencies, and reservoir level and river flow management by the Bureau of Reclamation, Idaho Power Company, other agencies, and

irrigators may have positive or negative effects on bald eagle habitat and populations. Also, some eagles that winter roost in the planning area spend their summers elsewhere. These summering areas may be on lands not administered by BLM, and may not be managed for the benefit of bald eagles. However, bald eagle populations continue to increase within most of the five recovery areas in the United States. Current BLM Zone 1 closures ensure minimal activities around nesting areas in the Upper Snake Field Office.

Yellow-billed cuckoos may nest and use areas on BLM and other land ownerships where extensive areas of cottonwood riparian forests occur. Most of this type of habitat in the western U.S. is in private ownership because of its desirability for agriculture production due to the presence of water and forage for livestock grazing. One of the best examples of this type of habitat is found downstream of Palisades Reservoir on the South Fork of the Snake River in South Eastern Idaho. Extensive areas of this type of habitat were likely lost during reservoir construction, which was commonplace in the western U.S. Additionally, actions such as vegetation management, livestock grazing, and reservoir level and river flow management (by the Bureau of Reclamation, Idaho Power, other agencies, and irrigators) can have positive or negative effects on yellow-billed cuckoo habitat.

Also, yellow-billed cuckoos that may nest on Shoshone and Burley FO administered lands spend their winters in Central and South America. These wintering areas may not be managed for the benefit of yellow-billed cuckoos.

9.4 AQUATIC SPECIES

Private lands used for irrigated agriculture and livestock grazing within the area will continue to have effects to riparian areas and stream flows. Impacts from past mining activity remain throughout portions of the sub-basin. Diversions on private and federal land that impact stream flows, and in some areas divert streams entirely, will remain a significant effect to aquatic and fisheries resource values in the Little Lost sub-basin. Stream diversions have not significantly reduced or eliminated bull trout migratory forms throughout much of its range. However, the use of ditches as water diversions often entrain bull trout, isolating them from the rest of the population in the stream, or traps them in the fields which ultimately kills individuals.

Operation of the Little Lost River Flood Control Project is the largest stream flow reduction impact on bull trout on the Little Lost River sub-basin. The lower 10.5 miles of the lower Little Lost River is dewatered in the winter. The annual loss of trout has not been estimated but it is likely that some adult bull trout are lost every winter when the diversions begin.

The free-flowing, cold-water environments required by the listed Snake River snail species have been affected by, and are vulnerable to, continued adverse habitat modification and deteriorating water quality from one or more of the following: hydroelectric development, load-following (the practice of artificially raising and lowering river levels to meet short-term electrical needs at local run-of-the-river hydroelectric projects), water pollution, inadequate regulatory mechanisms which have failed to provide protection to the habitat used by the listed species, and possible adverse affects from exotic species.

Ongoing activities on nonfederal lands that may impact listed Snake River snails include water diversion and discharge of irrigation return water into the Snake River associated with agricultural activities, and impacts to water quality associated with runoff from feedlots and dairies, hatcheries, municipal sewage effluent sources, and other point and nonpoint discharges. In addition, discharge of wastewater from commercial, state, and Federal fish culture facilities into the Snake River and its tributaries also may impact listed Snake River snails.

Hydroelectric facilities along the Snake River may impact listed Snake River snails by inundating snail habitats through impoundment; reducing critical shallow shoreline habitats in tailwater areas due to stage level fluctuations; elevating water temperatures; reducing dissolved oxygen levels in impounded reaches; and fragmenting mainstem populations or colonies of the listed snails. Load-following may also impact native aquatic snail habitat when fluctuating flows through a powerhouse dewater aquatic habitats in shallow shoreline areas.

Commercial or recreational activities on non-federal lands may also impact listed Snake River snails by contributing to the spread of the New Zealand mudsnail. Use of equipment or discharge of water that contains this invasive snail species may inadvertently introduce New Zealand mudsnail into reaches of the Snake River or its tributaries currently not inhabited by this exotic species.

10.0 OTHER CONSULTATIONS OF FEDERAL ACTION AGENCY IN THE PLANNING AREA TO DATE

Resource management plan level consultations are currently being developed by BLM for all proposed and listed species throughout Idaho. Consultation has also occurred or is pending on individual projects in relation to proposed and listed species.

BLM has completed Section 7 consultation with FWS regarding the Boise to Borah powerline for both bald eagle and listed Snake River snails. In 2000, Section 7 consultation was also completed for the Bell Mare ESR Project for listed Snake River snails. Section 7 consultation for listed Snake River snails in relation to ongoing livestock grazing allotment permits is currently being worked on by BLM.

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12.0 LIST OF CONTACTS/CONTRIBUTORS/PREPARERS

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JUN 2 0 2006

Memorandum

To: Joe Kraayenbrink, District Manager, Idaho Falls District Office, Bureau of Land Management, 1405 Hollipark Drive, Idaho Falls, Idaho 83401

From: Deb Mignogno, Supervisor, Eastern Idaho Field Office, Fish and Wildlife Service, 4425 Burley Drive, Suite A, Chubbuck, Idaho 83202

Subject: Biological Assessment for Fire Fuels and Related Vegetation Management Direction Amendment (Memorandum 1610), Request for Concurrence
File #1004.0000 TAILS 2006-I-0736

This memorandum acknowledges the U.S. Fish and Wildlife Service's (Service) June 13, 2006 receipt of the Bureau of Land Management's (Bureau) June 12, 2006 memorandum and May 19, 2006 Biological Assessment (Assessment), requesting the Service to review the Assessment and concur with its findings. In the Assessment, the Bureau found that actions described in the Proposed Plan Amendment for the Fire Fuels and Related Vegetation Management Direction Amendment (FMDA) may affect, but are not likely to adversely affect the Ute ladies'-tresses (*Spiranthese diluvialis*), bald eagle (*Haliaeetus leucocephalus*), yellow-billed cuckoo (*Coccyzus americanus*), grizzly bear (*Ursus arctos*), bull trout (*Salvelinus confluentus*), Idaho springsnail (*Pyrgulopsis idahoensis*), Banbury Springs limpet (*Lanx spp.*), Snake River Physa snail (*Physa natricina*), Utah valvata snail (*Valvata utahensis*), and the Great Basin population of Columbia spotted frog (*Rana luteiventris*), and the proposed actions in the FMDA are not likely to jeopardize the continued existence of the gray wolf (*Canis lupus*). The Service's comments are provided in accordance with the provisions of section 7 of the Endangered Species Act of 1973 (Act), as amended.

The Service and the Bureau originally consulted on the proposed FMDA and, by memorandum dated October 14, 2005 (attached), the Service concurred by with the Bureau's finding that the proposed actions covered under the FMDA may affect, but are not likely to adverse affect the above species. Since that time, the BLM has slightly modified the proposed actions and now requests Service concurrence with its findings that the actions described in the revised proposed FMDA may affect, but are not likely to adversely affect the above species.

The FMDA emphasizes the conservation and restoration of sagebrush steppe by maintaining existing, high-quality sagebrush habitat and increasing the quantity of resilient sagebrush.

Additionally, FMDA activities aim to reduce the risk of stand-replacing fires in forested vegetation types by mimicking historical disturbance regimes and succession patterns through fire, mechanical and chemical treatments, and post-wildland fire rehabilitation and proactive restoration. Over a 10-year period, up to approximately 1,500,000 footprint-acres would be treated, assuming FMDA actions would not be limited by existing operations capabilities and resources. Restoration would be emphasized (approximately 90 percent of footprint-acres), and rehabilitation would be conducted as needed (approximately 10 percent of footprint-acres).

The goals and objectives for the FMDA include reducing risks to public and firefighter safety, dealing with impacts of invasive species on fire intervals and wildlife, reducing hazardous fuel loads at the wildland-urban interface, and decreasing the potential for repeated fires in the same areas. These goals and objectives provide direction for making progress toward maintaining wildland fire within the historical range of variability for areas within four Bureau Field Offices of the Idaho Falls and Twin Falls Districts.

FMDA activities associated with fire and non-fire vegetation treatments and wildland fire suppression all have the potential to affect each of the federally-listed species in the action area. However, the Bureau's determination that the proposed action may affect, but is not likely to adversely affect any of the listed species within the action area are based on the following measures that the Bureau will undertake to protect threatened, endangered and candidate species (TEC).

The Service concurs that effects to the above-listed species resulting from implementation of the proposed Plan Amendment are entirely beneficial, insignificant, or discountable. Service concurrence with the Bureau's determination that the proposed action may affect, but is not likely to adversely affect listed species is partially based on the measures the Bureau will implement to avoid adverse impacts to TEC, including:

Wildland Fire Suppression TEC Protection Measures

1. Firefighter and public safety are the first priorities in response to fire suppression. At no time will the activities described in the Assessment compromise firefighter and public safety.
2. The Bureau will coordinate annually with the Service to update species status in the planning area.
3. Field Managers will ensure resource staff initiates emergency consultation with the Service whenever suppression activities may impact listed species habitat; more specifically, during emergency suppression actions to protect life and property.
4. Control lines, base camps, support facilities and other suppression related facilities should not be established within:
    a. ½ mile of known bald eagle or yellow-billed cuckoo nests (February 1 – August 15),
    b. 1 mile of occupied gray wolf den sites (April 15 – June 30),
    c. 300 feet of occupied Ute ladies'-tresses habitat,
    d. 300 feet of all water bodies and springs occupied by TEC, and
    e. Secure habitat within designated grizzly bear management unit (BMU).

5. Follow Minimum Impact Suppression Techniques (MIST) guidelines in occupied TEC habitat, where appropriate (Appendix T in: Interagency Standards or Fire and Aviation Operations, 2005). MIST guidelines direct suppression techniques, procedures, tools, and equipment that least impact the environment. Water and wetlining (using water to soak/saturate fuels) are the preferred fireline construction tactic.
6. Field Managers will assign a Bureau Resource Advisor or other designated representative as per the current Red Book guidance.
    a. The Bureau will notify the Service, when appropriate, to discuss endangered and/or threatened species mitigation within the suppression area to assure conservation practices are being followed to avoid adverse effects.
    b. When Incident Management Teams are required, the Resource Advisor will brief the Incident Commander about conservation measures needed to avoid adverse effects.
7. Where grizzly bears may reasonably occur:
    a. The Bureau Resource Advisor will brief all fire crews on general operating procedures including proper bear safety, sanitation, and food storage.
    b. Incident Commanders, Fire Management Officers, and Scouts should be equipped with and trained to use bear deterrent spray.
    c. Garbage should be disposed of in bear-proof containers, when possible, and removed from camps daily, preferably in the evening.
8. No water-dipping by helicopters will occur within ½ mile of any occupied bald eagle nest.
9. Fuel storage, fuel trucks, and refueling activities will not occur within 300 feet of live waters containing TEC species. The current District Hazardous Material plan will be followed to ensure TEC and habitat will not be adversely affected in the event of a spill.
10. Dozer blading should not occur within 300 feet of perennial streams or their tributaries occupied by TEC.
11. Drafting equipment for pumps will be properly screened to prevent entrapment of listed fish species. Maximum screen mesh size shall be 3/32-inch diameter.
12. If chemical products will be injected into the system, water will not be pumped directly from streams. If chemicals are needed, water will be pumped from a portable tank or a backflow check valve will be used.
13. Application of retardant or foam (aerial or ground) will be avoided within 300 feet of perennial streams or their tributaries occupied by TEC pursuant to the current Red Book guidance.
14. To minimize spread of noxious weeks, equipment used for extended attack or Type I/II incidents should be cleaned before arriving on-site and prior to leaving the incident. Staging areas and fire camps will avoid sites with noxious weed infestations.

At the time of this consultation, the exact timing, site specific suppression methods, location, and size of future wildfires are unknown. In order to monitor the impacts of wildland fire suppression activities as part of the FMDA, the Level 1 team will meet immediately after the fire season to review a summary of fire suppression activities that may have occurred in or adjacent to TEC habitat. If the Level I team identifies fire suppression activities for which more information is needed to ascertain potential effects to the environmental baseline for a particular TEC, the Bureau will provide a report containing information identified by the Level I team to

the Service's Snake River Fish and Wildlife Office or the Eastern Idaho Field Office no later than December 31 for the preceding 12-month period. For example, the types of information that may be needed include:

- The location, timing, size, severity, and suppression activities used for each fire;
- Any mitigations used during fire suppression activities to avoid effects to TEC and habitat, any TEC or habitat affected, and the estimated extent of effects; and
- Results of post-fire reviews and monitoring.

Fire and Non-Fire Vegetation Treatment Restrictions TEC Protection Measures

1. Treatment activities may occur near or adjacent to TEC habitat and will be designed to minimize or mitigate impacts to TEC-occupied habitat so that the species or their habitats will not be adversely affected. All FMDA related fire and non-fire vegetation treatment activities in areas that may affect TEC would be conducted in consultation with the Service. Further, all such activities would be designed and implemented in such a manner that potential impacts to TEC from disturbance or habitat modification would be so small as to not be meaningfully measured, detected, and analyzed, or would be extremely unlikely to occur.
2. TEC with recovery plans, conservation agreements and conservation strategies will be protected as specified in their respective plans/agreement/strategies. These protections include such measures as adequate habitat and range for a given species, including mitigation measures for multiple land use activities authorized by the Bureau.
3. Herbicide applicators will obtain a weather forecast for the area prior to initiating a spraying project to ensure no extreme precipitation or wind events could occur during or immediately after spraying. Aerial application of herbicides will not occur during periods of inversion. Spraying will follow label instructions.
4. Fuels management and vegetation treatment activities would be conducted according to standards and guidelines in the Greater Yellowstone Bald Eagle Management Plan (Greater Yellowstone Bald Eagle Working Group 1996) or the Pacific Bald Eagle Recovery Plan (USFWS 1986). No vegetation treatment activities associated with the FMDA would occur within 0.5 mile radius of bald eagle nesting zones during February 1 – July 31. No activities associated with FMDA would occur within 0.5 mile (direct line of site) or 0.25 mile of winter bald eagle concentration sites during November 1 – March 1.
5. Riparian cottonwood forests with willow understories that may be impacted by fuels management and vegetation treatments would be surveyed for yellow-billed cuckoos prior to initiating project activities. When developing vegetation treatment projects, no ground-based application of herbicides would occur from May 1 – August 31 within 200 feet of occupied yellow-billed cuckoo habitat.
6. Aerial application of chemicals would not occur from May 1 – August 31 within 0.5 miles of occupied yellow-billed cuckoo habitat.
7. Fuels management and vegetation treatment areas within BMUs would be coordinated with U.S. Forest Service activities to comply with road density restrictions, number and juxtaposition of management activities within BMUs, as provided for in the Grizzly Bear Recovery Plan (USFWS 1993) or the Final Conservation Strategy for the Grizzly Bear in the Yellowstone Area (USFWS 2003) when it becomes effective.

8. When developing vegetation treatment projects, do not increase open and total motorized access routes or trail density within BMUs. When developing vegetation treatment projects within BMUs, the Bureau will coordinate with the Interagency Grizzly Bear Committee to develop/implement sanitation guidelines.
9. Gray wolf populations in the area have been designated as experimental/nonessential. Presence or absence of gray wolf dens or rendezvous sites in fuels management or vegetation treatment areas would be determined prior to initiating projects. In the event that active den or rendezvous sites are established within the planning area, vegetation treatments would be designed and implemented to minimize noise disturbance or habitat modifications within one mile of the den or rendezvous sites from April 15 – June 30.
10. Fuels management and vegetation treatments that may occur within the Little Lost River drainage would be conducted according to standards and guidelines developed for bull trout Riparian Habitat Conservation Areas on Bureau lands within the geographic range of bull trout (USFWS 1999, 2002).
11. No aerial application of herbicides within 0.5 miles of all water bodies and springs containing listed snails, Columbia spotted frog, and bull trout.
12. No ground-based applications of herbicides, surfactants, or adjuvants would occur within 100 feet of perennial streams or their live water tributaries occupied by listed snails, Columbia spotted frog, and bull trout.
13. No aerial application of other chemicals (e.g., fertilizers or hydro-mulch) within riparian habitats containing listed snails, Columbia spotted frog, and bull trout.
14. Dozer blading will not occur within 300 feet of streams that have habitat occupied by TEC.
15. Ground disturbing activities except for shrub and tree planting would not occur within 300 feet of all water bodies and springs containing listed snails, Columbia spotted frog, and bull trout.
16. Treatments will follow PACFISH/INFISH guidelines in bull trout habitat.
17. For those portions of the Snake River drainages that support populations of threatened and endangered Snake River mollusks, the Bureau will consult with the Service for fuels management and vegetation treatments where there is potential for effect, to ensure mitigation measures are adequate to avoid adverse effects to Snake River mollusks.

Direct effects to species from treatments in areas supporting federally-listed species are not anticipated, unless site-specific information indicates that small-scale treatments would result in long term benefits to the species. However, treatments are anticipated to occur in areas near or adjacent to listed species and their habitats. If treatments do occur in areas that may affect listed species, treatments will take place in consultation with the Service, and treatments will be conducted in such a manner as to avoid adverse effects. Further, such activities will focus on reducing future habitat loss and fragmentation by returning fire cycles to their natural regimes, and reducing the spread of invasive exotic species. These actions will benefit listed species through improved habitat conditions and reduced competition from exotics. Finally, no interrelated or interdependent effects were identified in the Assessment, and FMDA-related activities should not contribute to any of the potentially adverse cumulative effects (non-federal) in the action area.

Alternatively, wildland fire suppression activities or fire and non-fire vegetation treatments which may adversely affect any of the federally listed species in the action area are not covered in the Assessment or this Letter of Concurrence. That is, any activities related to wildland fire suppression that may adversely affect any of the listed species should only occur when life or properties are at risk and would, thus, fall under a separate section 7 emergency consultation. Likewise, all fire and non-fire vegetation treatments that may affect listed species must be conducted in consultation with the Service, and the Service must concur that those actions either have no effect or are not likely to adversely affect listed species.

Based on information provided in the Assessment, and other information available to the Service, we concur with the Bureau's finding that the proposed actions described in the Assessment may affect, but are not likely to adversely affect the Ute ladies'-tresses, bald eagle, grizzly bear, bull trout, or any of the listed Snake River snails, and are not likely to jeopardize the continued existence of the gray wolf in the project area. Further, the Service acknowledges the Bureau's determination that the proposed actions are not likely to adversely affect the yellow-billed cuckoo or the Great Basin population of Columbia spotted frog, two candidate species.

This concludes informal consultation pursuant to section 7 of the Act. Please contact the Service to verify the above determination is still valid if: 1) project parameters are changed or new information reveals effects of the action to a listed species to an extent not considered in the Assessment; or 2) a new species is listed or critical habitat is designated that may be affected by one or more of the projects.

Thank you for your continued interest in threatened and endangered species conservation. If you have any questions about the consultation process or the above Service letter please contact Troy Smith or me at 208-237-6975.

cc: Twin Falls District Office, Twin Falls (Hedrick)
SRFWO, Boise

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