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Standards for Rangeland Health

The Standards for Rangeland Health, as applied in the State of Idaho, are to be used as the Bureau of Land Management's management goals for the betterment of the environment, protection of cultural resources, and sustained productivity of the range. They are developed with the specific intent of providing for the multiple use of the public lands. Application of the standards should involve collaboration between the authorized officer, interested publics, and resource users.

Rangelands should be meeting the Standards for Rangeland Health or making significant progress toward meeting the standards. Meeting the standards provides for proper nutrient cycling, hydrologic cycling, and energy flow.

Monitoring of all uses is necessary to determine if the standards are being met. It is the primary tool for determining rangeland health, condition, and trend. It will be performed on representative sites.

Appropriate to soil type, climate, and landform, indicators are a list of typical physical and biological factors and processes that can be measured and/or observed (e.g., photographic monitoring). They are used in combination to provide information necessary to determine the health and condition of the rangelands. Usually, no single indicator provides sufficient information to determine rangeland health. Only those indicators appropriate to a particular site are to be used. The indicators listed below each standard are not intended to be all inclusive.

The issue of scale must be kept in mind in evaluating the indicators listed after each standard. It is recognized that individual isolated sites within a landscape may not be meeting the standards; however, broader areas must be in proper functioning condition. Furthermore, fragmentation of habitat that reduces the effective size of large areas must also be evaluated for its consequences.

Standard 1 (Watersheds)

Watersheds provide for the proper infiltration, retention, and release of water appropriate to soil type, vegetation, climate, and landform to provide for proper nutrient cycling, hydrologic cycling, and energy flow.

Indicators may include, but are not limited to, the following:

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



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Standard 2 (Riparian Areas and Wetlands)

Riparian-wetland areas are in properly functioning condition appropriate to soil type, climate, geology, and landform to provide for proper nutrient cycling, hydrologic cycling, and energy flow.

Indicators may include, but are not limited to, the following:

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

Standard 3 (Stream Channel/Floodplain)

Stream channels and floodplains are properly functioning relative to the geomorphology (e.g., gradient, size, shape, roughness, confinement, and sinuosity) and climate to provide for proper nutrient cycling, hydrologic cycling, and energy flow.

Indicators may include, but are not limited to, the following:

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



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Standard 4 (Native Plant Communities)

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

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

Standard 5 (Seedings)

Rangelands seeded with mixtures, including predominately non-native plants, are functioning to maintain life form diversity, production, native animal habitat, nutrient cycling, energy flow, and the hydrologic cycle.

Indicators may include, but are not limited to, the following:

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

Standard 6 (Exotic Plant Communities, Other Than Seedings)

Exotic plant communities, other than seedings, will meet minimum requirements of soil stability and maintenance of existing native and seeded plants. These communities will be rehabilitated to perennial communities when feasible cost effective methods are developed.

Indicators may include, but are not limited to, the following:

1. Noxious weeds are not increasing.
2. The number of perennial species is not diminishing over time.



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3. Plant vigor (production, seed and seedstalk production, cover, etc.) of remnant native or seeded (introduced) plants is maintained to enable reproduction and recruitment when favorable climatic or other environmental events occur.

4. Adequate litter and standing dead plant material is present for site protection and for decomposition to replenish soil nutrients relative to site potential.

Standard 7 (Water Quality)

Surface and ground water on public lands comply with the Idaho Water Quality Standards.

Indicators may include, but are not limited to, the following:

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

Standard 8 (Threatened and Endangered Plants and Animals)

Habitats are suitable to maintain viable populations of threatened and endangered, sensitive, and other special status species.

Indicators may include, but are not limited to, the following:

1. Parameters described in the Idaho Water Quality Standards.

2. Riparian/wetland vegetation with deep, strong, binding roots is sufficient to stabilize streambanks and shorelines. Invader and shallow rooted species are a minor component of the floodplain.

3. Age class and structural diversity of riparian/wetland vegetation are appropriate for the site.

4. Native plant communities (flora and microbiotic crusts) are maintained or improved to ensure the proper functioning of ecological processes and continued productivity and diversity of native plant species.

5. The diversity of native species is maintained.

6. The amount and distribution of ground cover, including litter, for identified ecological site(s) or soil-plant associations are appropriate for site stability.

7. Noxious weeds are not increasing.



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Guidelines for Livestock Grazing Management

Introduction

Guidelines direct the selection of grazing management practices, and where appropriate, livestock management facilities to promote significant progress toward, or the attainment and maintenance of, the standards. Grazing management practices are livestock management techniques. They include the manipulation of season, duration (time), and intensity of use, as well as numbers, distribution, and kind of livestock. Livestock management facilities are structures such as fences, corrals, and water developments (ponds, springs, pipelines, troughs, etc.) used to facilitate the application of grazing management practices. Livestock grazing management practices and guidelines will be consistent with the Idaho Agricultural Pollution Abatement Plan.

Grazing management practices and facilities are implemented locally, usually on an allotment or watershed basis. Grazing management programs are based on a combination of appropriate grazing management practices and facilities developed through consultation, coordination, and cooperation with the Bureau of Land Management, permittees, other agencies, Indian tribes, and interested publics.

These guidelines were prepared under the assumption that regulations and policies regarding grazing on the public lands will be implemented and will be adhered to by the grazing permittees and agency personnel. Anything not covered in these guidelines will be addressed by existing laws, regulations, Indian treaties, and policies.

The BLM will identify and document within the local watershed all impacts that affect the ability to meet the standards. If a standard is not being met due to livestock grazing, then allotment management will be adjusted unless it can be demonstrated that significant progress toward the standard is being achieved. This applies to all subsequent guidelines.

Guidelines

1. Use grazing management practices and/or facilities to maintain or promote significant progress toward adequate amounts of ground cover (determined on an ecological site basis) to support infiltration, maintain soil moisture storage, and stabilize soils.
2. Locate livestock management facilities away from riparian areas wherever they conflict with achieving or maintaining riparian-wetland functions.
3. Use grazing management practices and/or facilities to maintain or promote soil conditions that support water infiltration, plant vigor, and permeability rates and minimize soil compaction appropriate to site potential.
4. Implement grazing management practices that provide periodic rest or deferment during critical growth stages to allow sufficient regrowth to achieve and maintain healthy, properly functioning conditions, including good plant vigor and adequate vegetative cover appropriate to site potential.
5. Maintain or promote grazing management practices that provide sufficient residual vegetation to improve, restore, or maintain healthy riparian-wetland functions and structure for energy dissipation, sediment capture, ground water recharge, streambank stability, and wildlife habitat appropriate to site potential.
6. The development of springs, seeps, or other projects affecting water and associated resources shall be designed to protect the ecological functions, wildlife habitat, and significant cultural and historical/archaeological/paleontological values associated with the water source.



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7. Apply grazing management practices to maintain, promote, or progress toward appropriate stream channel and streambank morphology and functions. Adverse impacts due to livestock grazing will be addressed.
8. Apply grazing management practices that maintain or promote the interaction of the hydrologic cycle, nutrient cycle, and energy flow that will support the appropriate types and amounts of soil organisms, plants, and animals appropriate to soil type, climate, and landform.
9. Apply grazing management practices to maintain adequate plant vigor for seed production, seed dispersal, and seedling survival of desired species relative to soil type, climate, and landform.
10. Implement grazing management practices and/or facilities that provide for complying with the Idaho Water Quality Standards.
11. Use grazing management practices developed in recovery plans, conservation agreements, and Endangered Species Act, Section 7 consultations to maintain or improve habitat for federally listed threatened, endangered, and sensitive plants and animals.
12. Apply grazing management practices and/or facilities that maintain or promote the physical and biological conditions necessary to sustain native plant populations and wildlife habitats in native plant communities.
13. On areas seeded predominantly with non-native plants, use grazing management practices to maintain or promote the physical and biological conditions to achieve healthy rangelands.
14. Where native communities exist, the conversion to exotic communities after disturbance will be minimized. Native species are emphasized for rehabilitating disturbed rangelands. Evaluate whether native plants are adapted, available, and able to compete with weeds or seeded exotics.
15. Use non-native plant species for rehabilitation only in those situations where:
 - a. native species are not readily available in sufficient quantities;
 - b. native plant species cannot maintain or achieve the standards; or
 - c. non-native plant species provide for management and protection of native rangelands.

Include a diversity of appropriate grasses, forbs, and shrubs in rehabilitation efforts.
16. On burned areas, allow natural regeneration when it is determined that populations of native perennial shrubs, grasses, and forbs are sufficient to revegetate the site. Rest burned or rehabilitated areas to allow recovery or establishment of perennial plant species.
17. Carefully consider the effects of new management facilities (e.g., water developments, fences) on healthy and properly functioning rangelands prior to implementation.
18. Use grazing management practices, where feasible, for wildfire control and to reduce the spread of targeted undesirable plants (e.g., cheatgrass, medusa head, wildrye, and noxious weeds) while enhancing vigor and abundance of desirable native or seeded species.



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19. Employ grazing management practices that promote natural forest regeneration and protect reforestation projects until the Idaho Forest Practices Act requirements for timber stand replacement are met.

20. Design management fences to minimize adverse impacts, such as habitat fragmentation, to maintain habitat integrity and connectivity for native plants and animals.

Glossary

Accelerated Erosion — Soil loss at a rate in excess of natural or geologic erosion as a result of human-caused disturbance.

Age Class — A classification of woody plant species according to relative age, e.g., seedling, young, mature, or decadent.

Allotment Management Plan — A documented program which applies to livestock grazing on public lands, prepared by consulting, cooperating, and coordinating with the permittee(s), lessee(s), or other interested publics.

Animal Habitat — The place and environment where an animal lives including all biotic, climatic, and edaphic factors.

Best Management Practice (BMP) — A component practice or combination of component practices determined to be the most effective, practicable means of preventing or reducing the amount of pollution generated by nonpoint sources to a level compatible with water quality goals. (Idaho Agricultural Pollution Abatement Plan, August 1993)

Component Practices — Approved practices, used alone or in combination with other practices, are used to develop BMPs. (Idaho Agricultural Pollution Abatement Plan, August 1993)

Connectivity — The state of being functionally connected by movement of organisms, material, or energy. The opposite of habitat fragmentation.

Consultation, Coordination, and Cooperation — A process prescribed by the Public Rangelands Improvement Act of involving the permittee(s), lessee(s), federally recognized Indian tribes, and interested publics in the development of allotment management plans and other management programs on public lands. The process also includes trust responsibilities to Federally recognized Indian tribes.

Collaboration — To work jointly with others.

Cover — (See Ground Cover)

Deferment — Nongrazing, either by delay or discontinuance of grazing, from the beginning of plant growth until the seed is set or the equivalent stage of vegetative reproduction.

Diversity — (1) The absolute number of species in a community, species richness; and (2) a measure of the number of species and their relative abundance in a community; low diversity refers to few species or unequal abundances, high diversity to many species or equal abundances.



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Ecological Sites — A kind of land with specific physical characteristics that differs from other kinds of land in its ability to produce distinctive kinds and amounts of vegetation and its response to management. Ecological site is synonymous with range site and ecological type.

Energy Flow — The capture of sunlight energy by plants and the conversion through photosynthesis to biomass.

Exotic Plant Communities, other than Seedings — Assemblages of plants that are not indigenous to the area, such as cheatgrass, yellow star thistle, and medusa head rye.

Fragmentation — The process of dividing habitats into smaller and smaller units until their utility as habitat is lost.

Grazing Management Practices — Techniques used to manage livestock and include season, duration (amount of the time grazing occurs), intensity of use, numbers of livestock, kind of livestock, and distribution (e.g., salting, herding, and water development).

Grazing Plan or Program — A combination of grazing management and/or facilities used to ensure an expectation of meeting or making significant progress toward meeting the Standards for Rangeland Health.

Ground Cover — The percentage of material, other than bare ground, covering the land surface. It may include live and standing dead vegetation, microbiotic crust, litter, cobble, gravel, stones, and bedrock. Ground cover, plus bare ground, totals 100 percent.

Human Activities — Any activity that is initiated or controlled by people, such as recreation, timber harvest, livestock grazing, road and other construction, and mining.

Hydrologic Cycle — The circulation of water in the atmosphere, on the surface of the earth, in the soil, and in the underlying rocks.

Indian Treaty — A contract in writing between the United States Government and Indian tribes formally signed by duly authorized representatives and ratified by the United States Senate.

Indicator — Components or attributes of a rangeland ecosystem that can be observed and/or measured that provides evidence of the function, productivity, health and/or condition of the ecosystem.

Infiltration — A soil, as influenced by soil texture, aspect, slope, and vegetation cover.

Landform — A naturally formed element of the landscape that controls or influences hydrologic, physical, and ecological processes.

Landscape — Landform of a region in aggregate.

Land Use Plan — Land use plan means a resource management plan or management framework plan, developed under the provisions of 43 CFR 1600. These plans are developed through public participation in accordance with the provisions of the Federal Land Policy and Management Act of 1976 and establish management direction for resource uses of public lands. (43 CFR 4100)

Life form — Characteristic form or appearance of a plant species at maturity, e.g., tree, shrub, forb, grass, etc.



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Litter — Dead plant or animal material on the soil surface.

Livestock Management Facilities — Physical facilities, such as fences, water developments, and corrals that are used to handle and control livestock.

Microbiotic Crust — Community of non-vascular primary producers that occur as a “crust” on the surface of soils and made up of a mixture of algae, lichens, mosses, and cyanobacteria (bluegreen algae).

Monitoring — The orderly collection, analysis, and interpretation of resource data and information to evaluate progress toward meeting Standards for Rangeland Health and/or management objectives.

Multiple Use — The definition of multiple use is defined in the Federal Policy and Management Act of 1976 as follows:

"The management of the public lands and their various resource values so that they are utilized in the combination that will best meet the present and future needs of the American people; making the most judicious use of the land for some or all of these resource or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to conform with changing needs and conditions; the use of some land for less than all of the resources; a combination of balanced and diverse resource uses that takes into account the long-term needs of future generations for renewable and nonrenewable resources, including, but not limited to, recreation, range, timber, minerals, watershed, wildlife and fish, and natural scenic, scientific and historic values; and harmonious and coordinated management of the various resources without permanent impairment of the productivity of the land and the quality of the environment with consideration being given to the relative values of the resources and not necessarily to the combination of the uses that will give the greatest economic return or the greatest output."

Native Species — Plants or animals indigenous to the area.

Non-native Species — Plants or animals that are not indigenous to the area.

Noxious Weeds — Exotic plants that are listed by the State of Idaho and subject to Idaho weed control laws.

Nutrient Cycle — The cyclical process by which plants and animals use chemical compounds and elements in the soil, water, and atmosphere to produce plants and animals and the decomposition of plants and animals to return chemical compounds and elements to the soil, water, and air for future use.

Productivity — The ability of a site to produce vegetation.

Proper Functioning Condition (Riparian) —

“Riparian-wetland areas are functioning properly when adequate vegetation, landform, or large woody debris is present to dissipate stream energy associated with high water flows, thereby reducing erosion and improving water quality; filter sediment, capture bedload, and aid floodplain development; improve floodwater retention and ground-water recharge; develop root masses that stabilize streambanks against cutting action; develop diverse ponding and channel characteristics to provide the habitat and the water depth, duration, and temperature necessary for fish production, waterfowl breeding, and other uses; and support greater biodiversity.”

USDI. 1993, Revised 1995. Riparian Area Management, Process for Assessing Proper Functioning Condition, Technical Report 1737-9, p. 4. Bureau of Land Management, BLM/SC/ST-93/003+1737+REV95, Service Center, CO. 51 pp.



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USDI. 1994. Riparian Area Management, Process for Assessing Proper Functioning Condition for Lentic Riparian-Wetland Areas. Technical report 1737-11. Bureau of Land Management, BLM/SC/ST-94/008+1737, Service Center, CO. 37 pp.

Rangeland — A kind of land on which the native vegetation is predominately grasses, grass-like plants, forbs, or shrubs. Rangelands include natural grasslands, savannas, shrublands, most deserts, alpine communities, riparian areas, and wet meadows.

Rangeland Condition — The present status of a unit in terms of specific values or potential.

Rangeland Health — The degree to which the integrity of the soil and ecological processes of rangeland ecosystems is maintained.

National Research Council. 1994. Rangeland Health: New Methods to Classify, Inventory and Monitor Rangelands.

Residual Vegetation — Amount, cover, and species composition of the vegetation on a site after it has been grazed for a period of time.

Rest — Nongrazing for a specified period of time, generally a full growing season up to a full year.

Riparian Areas — A form of wetland transition between permanently saturated wetlands and uplands. The areas exhibit vegetation or physical characteristics that reflect permanent surface or subsurface water influence. Typical riparian areas include such areas as lands along, adjacent to, or contiguous with perennially and intermittently flowing rivers, streams, glacial potholes, and shores of lakes and reservoirs with stable water levels. Riparian areas do not include ephemeral (permanently above the water table and flows only during or immediately after a rainstorm or snowmelt) streams that do not exhibit the presence of vegetation dependent upon free water in the soil. (Bureau of Land Management Technical Reference TR 1737-9 and 11)

Sensitive Plants and Animals — Plants and animals listed by the Bureau of Land Management State Directors.

Significant Progress — Measurable and/or observable (i.e., photography, use of approved qualitative procedures) changes in the indicators that demonstrate improved rangeland health.

Spatial Scale — The relative size of an area under consideration. For example, a small scale is a site, a mid-scale is a watershed, and a large scale is a basin.

Special Status Species — Plant and animal species that are federally listed as threatened or endangered, proposed threatened or endangered, candidate species, State listed as threatened or endangered, or listed by a Bureau of Land Management State Director as sensitive.

Sustained Productivity of the Range — Maintaining the production capability of the rangeland for long periods of time (100 years +).

Trend — The direction of change in ecological status or resource value rating observed over time.



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Use — Human activities (e.g., mining, forestry, livestock grazing, vegetation manipulation, road construction and maintenance, other construction and maintenance activities, wild horses, recreation, habitat manipulation, and management facility construction and maintenance).

Watershed — An area that collects and discharges runoff to a given point. It is often used synonymously with drainage basin or catchment.

Wetland — Areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and which under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Typical wetlands include marshes, shallow swamps, sloughs, lake shores, bogs, wet meadows, and riparian areas. (Bureau of Land Management Technical Reference TR 1737-9 and 11)



The current National Fire-Danger Rating System (NFDRS) fuel models are used to describe fuels and fire behavior for vegetation communities within the resource area. These models are comparable to the FMZs listed below.

FMZ 1.3: Most of the desert shrub communities within the resource area are included in this FMZ because of cheatgrass competition and fire behavior conditions. The objective for this zone is to limit wildfires to 200 acres or less. This zone is located in the northern portion of this resource area.

Model A: This fuel model represents western grasslands vegetated by annual grasses and forbs. Brush or trees may be present but are very sparse, occupying less than one-third of the area. The quantity and continuity of ground fuels vary greatly with rainfall from year to year.

FMZ 2.7: This FMZ is dominated by sagebrush and perennial grasses as the primary fuel types. Wet spring conditions and long hot summers with frequent dry lightning storms provide the potential for large acreages to burn. Terrain within this FMZ varies from steep and mountainous to gently rolling with large flats. The objective for this zone is to limit wildfires to 500 acres or less.

FMZ 2.8: The same conditions occur in 2.8 as in 2.7. The acreage objective is limited to 200 acres or less. This zone is the northern foothills area to the Snake River, and include the Wilson-Murphy area.

FMZ 4.1: Canyonland areas with sagebrush and perennial grasses, and barren areas. The acreage allowed for this zone is 500 acres.

Model T: The sagebrush-grass types of the Great Basin and the Intermountain West are characteristic of T fuels. The shrubs burn easily and are not dense enough to shade out grass and other herbaceous plants. The shrubs must occupy at least one-third of the site or the A or L fuel models are used.

Model L: This fuel model represents western grasslands vegetated by perennial grasses. The principal species are coarser, the loadings heavier and the quantity of fuel is more stable from year to year than Model A fuels.

FMZ 3.1/3.3: This FMZ is dominated by juniper woodlands and communities associated with higher elevation rangelands. The terrain within these zones varies from steep and rugged to gently rolling. The acreages allowed for FMZ 3.1 is 1,000 and FMZ 3.3 is 100 acres. The zone is located south of the Triangle-Jordan Valley road.

FMZ 3.2: The same conditions occur as for 3.1 except this zone is north of the Triangle-Jordan Valley road and includes the Silver City area. The acreage allowed for this zone is 500 acres.

Model C: Perennial grasses and forbs are the primary ground fuel but there is enough needle litter and branchwood present to contribute significantly to fuel loading. Some juniper stands may qualify for this model.

Model H: Short-needled conifers, with some brush, in a healthy stand with sparse undergrowth and a thin layer of ground fuels are in this model. Low sagebrush may also be included in this model. Fires in H fuels are typically slow spreading and are dangerous only in scattered areas where the downed woody material is concentrated.



Appendix RECT-1

River Suitability Summary

Recommendation: It is recommended in the Owyhee Resource Management Plan that 163 miles of the 223 miles of eligible river or stream segments within the Owyhee Resource Area are suitable for designation as components of the National Wild and Scenic Rivers System. This suitability recommendation reflects the management actions described under RECT 3.1. The suitable river/stream segments include those listed below. See Map WSR-1 for locations. The evaluation and suitability determination for each of the segments is presented in the Proposed Owyhee Resource Management Plan and Final Environmental Impact Statement (July, 1999). Also presented for each suitable segment is the proposed legal description in both narrative and map formK

Suitable Wild, Scenic and Recreational River Segments										
Segment #	Segment Name	Miles	Classification	Outstandingly Remarkable Values						
				Scenic	Recreational	Geological	Fish	Wildlife	Cultural	Other
S1a&c S1b	South Fork Owyhee River	26.50	Wild	X	X	X		X		
	South Fork Owyhee River	1.50	Rec	X	X	X		X		
	Total	28.00								
S3a	East Fork Owyhee River	66.00	Wild					X		X
	Total	66.00								
S4a S4b&c S7a	Deep Creek	2.50	Scenic	X	X	X		X		
	Deep Creek	29.5	Wild	X	X	X		X		
	Nickel Creek	8.00	Wild	X	X	X		X		
	Total	40.00								
S8a	Current Creek	7.50	Wild	X	X	X		X		
	Current Creek	1.50	Scenic	X	X					
	Total	9.00								
C5a C5a	Lower North Fork Owyhee River	3.50	Wild	X	X	X		X		
	Lower North Fork Owyhee River	0.50	Scenic	X	X	X		X		
	Total	4.00								
C5b	Upper North Fork Owyhee River	16.00	Wild	X	X	X		X		X
	Total	16.00								
TOTALS		157.00	Wild							
		4.50	Scenic							
		1.50	Rec							
		163.00								



The following are management guidelines for the interim protection of potential wild, scenic, and recreational river values for river segments that are awaiting a determination by Congress.

Wild Classification:

Management of Wild River areas should give primary emphasis to protecting the values which make it outstandingly remarkable while providing river-related outdoor recreation opportunities in a primitive setting. Allowable management practices might include construction of minor structures for such purposes as improvement of fish and game habitat; grazing; protection from fire, insects or disease; rehabilitation or stabilization of damage resources, provided the area will remain natural appearing and the practices of structures will harmonize with the environment. Such things as trail bridges, an occasional fence, natural-appearing water diversions, ditches, flow measurement or other water management devices, and similar facilities may be permitted if they are unobtrusive and do not have a significant direct adverse effect on the natural character of the area. The following program management standards apply:

- a. **Forest Practices:** Cutting of trees will not be permitted except when needed in association with a primitive recreation experience (such as clearing for trails and protection of users) or to protect the environment (such as control of fire). Timber outside the boundary, but within the visual corridors, should, where feasible, be managed and harvested in a manner to provide special emphasis to visual quality.
- b. **Water Quality:** Water quality will be maintained or improved to meet federal criteria or federally approved State standards.
- c. **Hydroelectric Power and Water Resource Development:** No development of hydroelectric power facilities would be permitted. No flood control dams, levees, or other works are allowed in the channel or river corridor. The natural appearance and essentially primitive character of the river area must be maintained. All water supply dams and major diversions are prohibited.
- d. **Mining:** New mining claims and mineral leases are prohibited within one-quarter mile of the river. Valid existing claims would not be abrogated and, subject to existing regulations (e.g., 43 CFR 3809) and any future regulations that the Secretary of the Interior may prescribe to protect the rivers included in the National System, existing mining activity would be allowed to continue. All mineral activity must be conducted in a manner that minimizes surface disturbance, sedimentation, pollution, and visual impairment. Reasonable access will be permitted.
- e. **Road Construction:** No new roads or other provisions for overland motorized travel would be permitted within a narrow incised river valley, or if the river valley is broad, within one-quarter mile of the river bank. A few inconspicuous roads leading to the boundary of the river area may be permitted.
- f. **Agriculture and Livestock Grazing:** Agricultural use is restricted to a limited amount of domestic livestock grazing and hay production to the extent currently being practiced. Row crops are prohibited.



- g. **Recreation Facilities:** Major public-use areas, such as campgrounds, interpretive centers, or administrative headquarters are located outside Wild River areas. Simple comfort and convenience facilities, such as fireplaces or shelters may be provided as necessary within the river area. These should harmonize with the surroundings. Unobtrusive hiking and horseback riding trail bridges could be allowed on tributaries, but would not normally cross the designated river.
- h. **Public Use and Access:** Recreation use, including but not limited to hiking, fishing, hunting and boating is encouraged in Wild River areas to the extent consistent with the protection of the river environment. Public use and access may be regulated and distributed where necessary to protect and enhance Wild River values.
- i. **Rights-of-Way:** New transmission lines, natural gas lines, water lines, etc., are discouraged unless prohibited by other plans, orders or laws. Where no reasonable alternative exists, additional or new facilities should be restricted to existing rights-of-way. Where new rights-of-way are indicated, Wild River values must be fully evaluated in the selection of the site.
- j. **Motorized Travel:** Motorized travel on land could be permitted, but is generally not compatible with this classification. The existing primary road access to the rivers would be maintained. Motorized travel on the water would be prohibited.

Scenic Classification:

Management of Scenic River areas should maintain and provide outdoor recreation opportunities in a near natural setting. The basic distinctions between a Wild and a Scenic River area are the degree of development, type of land use and road accessibility. In general, a wide range of agricultural, water management, silvicultural and other practices could be compatible with Scenic River values, providing such practices are carried on in such a way that there is no substantial adverse effect on the river and its immediate environment. The same considerations enumerated for Wild River areas should be considered, except that motorized vehicle use may, in some cases, be appropriate and that development of public-use facilities within the river area, such as moderate size campgrounds, public information centers, and administrative headquarters, would be compatible if such structures were screened from the river. The following program management standards apply:

- a. **Forest Practices:** A wide range of silvicultural practices could be allowed provided that such practices are carried on in such a way that there is no substantial adverse effect on the river and its immediate environment. The river area should be maintained in its near natural environment. Timber outside the boundary but within the visual scene area should be managed and harvested in a manner which provides special emphasis on visual quality.
- b. **Water Quality:** Water quality will be maintained or improved to meet federal criteria or federally approved State standards.



- c. **Hydroelectric Power and Water Resource Development:** No development of hydroelectric power facilities would be allowed. Flood control dams and levees would be prohibited. All water supply dams and major diversions are prohibited. Maintenance of existing facilities and construction of some new structure would be permitted provided that the area remains natural in appearance and the practices or the structures harmonize with the surrounding environment.
- d. **Mining:** Subject to existing regulations (e.g., 43 CFR 3809) and any future regulations that the Secretary of the Interior may prescribe to protect the values of rivers included in the National System, new mining claims and mineral leases could be allowed. All mineral activity must be conducted in a manner that minimizes surface disturbance, sedimentation, pollution and visual impairment. Reasonable access will be permitted.
- e. **Road Construction:** Existing roads may occasionally bridge the river area and short stretches of conspicuous or long stretches of inconspicuous and well-screened roads or screened railroads could be allowed. Maintenance of existing roads and any new roads will be based on the type of use for which roads are constructed and the type of use that will occur in the river area.
- f. **Agriculture and Livestock Grazing:** In comparison to Wild River areas, a wider range of agricultural and livestock grazing uses is permitted to the extent currently practiced within Scenic River areas. Row crops are not considered as an intrusion of the “largely primitive” nature of Scenic corridors as long as there is not a substantial adverse effect on the natural-like appearance of the river area.
- g. **Recreation Facilities:** Larger scale public use facilities, such as moderate size campgrounds, public information centers, and administrative headquarters are allowed if such structures are screened from the river. Foot trails can parallel the river in close proximity, and associated bridges may cross the river channel.
- h. **Public Use Access:** Recreation use, including but not limited to hiking, fishing, hunting and boating, is encouraged in Scenic River areas to the extent consistent with the protection of the river environment. Public use and access may be regulated and distributed where necessary to protect and enhance Scenic River values.
- i. **Rights-of-Way:** New transmission lines, natural gas lines, etc., are discouraged unless prohibited by other plans, orders or laws. Where no reasonable alternative exists, additional or new facilities should be restricted to existing rights-of-way. Where new rights-of-way are indicated, scenic river values must be fully evaluated in the selection of the site.
- j. **Motorized Travel:** Motorized travel on land may be permitted, prohibited or restricted to protect the river values. Motorized travel on the water would be prohibited.



Recreational Classification:

Management of Recreational River areas should be designed to protect and enhance existing recreational values. The primary objective will be to provide opportunities for engaging in recreation activities dependent on or enhanced by the largely free-flowing nature of the river. Recreation facilities may be established in close proximity to the river, although Recreational River classification does not require extensive recreation developments. Recreation facilities may still be kept to a minimum, with visitor services provided outside the river area. Future construction of impoundments, diversions, straightening, riprapping, and other modification of the water way or adjacent lands would not be permitted except in instances where such developments would not have a direct and adverse effect on the river and its immediate environment. The following program management standards apply:

- a. Forest Practices: Timber harvesting would be allowed under standard restrictions to protect the immediate river environment, water quality, scenic, fish and wildlife, and other values.
- b. Water Quality: Water quality will be maintained or improved to meet federal criteria or federally approved State standards.
- c. Hydroelectric Power and Water Resource Development. No development of hydroelectric power facilities would be allowed. Existing low dams, diversion works, riprap and other minor structures may be maintained provided the waterway remains generally natural in appearance. New structures may be allowed provided that the area remains natural in appearance and the practices or structures harmonize with the surrounding environment.
- d. Mining: Subject to existing regulations (e.g., 43 CFR 3809) and any future regulations that the Secretary of the Interior may prescribe to protect values of rivers included in the National System, existing valid mining claims and mineral leases on existing operations are allowed to continue. All mineral activity must be conducted in a manner that minimizes surface disturbance, sedimentation, pollution, and visual impairment. Reasonable access will be permitted.
- e. Road Construction: Existing parallel roads or railroads can be maintained on one or both river banks. There can be several bridge crossings and numerous river access points.
- f. Agricultural and Livestock Grazing: In comparison to Scenic River areas, lands within Recreational River areas may be managed for a full range of agriculture and livestock grazing uses, consistent with current practices.
- g. Recreation Facilities: Interpretive centers, administrative headquarters, campgrounds, picnic areas and foot trails may be established in close proximity to the river. Foot trail bridges may cross the river channel. However, recreational classification does not require extensive recreation development.
- h. Public Use and Access: Recreation use, including but not limited to hiking, fishing, hunting and boating, is encouraged in Recreational River areas to the extent consistent with the protection of the river environment. Public use and access may be regulated and distributed where necessary to protect and enhance Recreation River values.



- i. Rights-of-Way: New transmission lines, natural gas lines, water lines, etc., are discouraged unless prohibited by other plans, orders or laws. Where no reasonable alternative exists, additional or new facilities should be restricted to existing rights-of-way. Where new rights-of-way are indicated, Recreation River values must be fully evaluated in the selection of the site.

- i. Motorized Travel: Motorized travel on land or water will generally be permitted, on existing roads. Controls will usually be similar to surrounding lands and waters.



**Recreation Opportunity Spectrum (ROS)
Classification and Criteria**

Criterion	Class I Primitive	Class II Semi-Primitive Non-Motorized	Class III Semi-Primitive Motorized	Class IV Roaded Natural	Class V Rural	Class VI Urban
Remoteness	Lands greater than 1.5 miles from all roads and trails with motorized use. Vegetation and topographic relief may make distances substantially shorter.	Lands not more than 1.5 miles from all roads or trails with motorized use; but at least 1/4 mile from primitive roads and trails and 1/2 mile from better than primitive roads.	Lands within 1/4 mile of primitive roads or trails used by motor vehicles; but not closer than 1/2 mile from better than primitive roads.	Lands within 1/2 mile from better than primitive roads.	No distance standards.	No distance standards.
Size	At least 5,000 acres (may be smaller if adjacent to Class II).	At least 2,500 acres (may be smaller if adjacent to Class I).	At least 2,500 acres.	No size standards.	No size standards.	No size standards.
Evidence of Human Use	Setting appears as an essentially unmodified natural environment.	Setting may have subtle modifications.	Settings may have subtle modifications.	Setting includes moderate evidence of human modification. Alterations do not dominate the setting and generally harmonize with the natural landscape.	Natural setting is substantially modified. Culturally modified landscapes are constantly in view. May include pastoral, agricultural, or intensively managed wildland landscapes.	The natural setting is clearly subordinate to culturally modified landscapes.



**Recreation Opportunity Spectrum (ROS)
Classification and Criteria**

Criterion	Class I Primitive	Class II Semi-Primitive Non-Motorized	Class III Semi-Primitive Motorized	Class IV Roaded Natural	Class V Rural	Class VI Urban
Evidence of Human Use (cont.)	<p>Evidence of surface or vegetative disturbance is very limited and disturbed areas are small. Trails may be present, but should not exceed standards suited for wildlands use.</p> <p>Structures for recreation and/or rangeland management are few, isolated and small. Recreation facilities are rustic.</p>	<p>Evidence of surface or vegetative disturbance is limited and disturbed areas are small. There is little or no evidence of primitive roads or ORV use.</p> <p>Small isolated recreation and/or rangeland management facilities are present. Recreation facilities are rustic.</p>	<p>Evidence of surface or vegetative disturbance is limited. Disturbed areas are small. Primitive roads and evidence of ORV use are present.</p> <p>Small isolated recreation and/or rangeland management facilities are present. Other types of facilities such as powerlines may be present. Recreation facilities are small and rustic.</p>	<p>Surface and vegetative modifications are typical. Constructed roads and highways are present. Some cultivated lands may be present.</p> <p>Structures are generally scattered and remain visually subordinate. Structures may include rangeland powerline and recreation facilities. Recreation facilities are generally small.</p>	<p>Surface and vegetative modifications are typical. Constructed roads and highways are present. Cultivated lands are common.</p> <p>Structures and structure complexes are dominant. These may include towns, second home developments, industrial sites, major resorts, etc.</p>	<p>Surface and vegetative modifications are extensive. Exotic vegetation and surface paving may be common. Roads, highways, and parking areas to support intensive vehicle use are available.</p> <p>Structures and structure complexes are dominant. These may include towns, second home developments, industrial sites, major resorts, etc.</p>



Recreation Opportunity Spectrum (ROS) Classification and Criteria

Criterion	Class I Primitive	Class II Semi-Primitive Non-Motorized	Class III Semi-Primitive Motorized	Class IV Roaded Natural	Class V Rural	Class VI Urban
Social Setting	Less than 6 parties per trip encountered on trails or water courses. No parties visible at campsites. Little or no evidence of previous recreation use.	More than 6 parties per trip encountered on trails or water courses. No more than 1 party visible at campsites. Limited evidence of previous recreation use.	Low to moderate contact frequency.	Frequency of contact is moderate to high at developed sites and on roads; low to moderate elsewhere.	Frequency of contact is moderate to high at developed sites and on roads; moderate elsewhere.	Large numbers of users on sites and in nearby areas.
Managerial Setting	Onsite regimentation is low with controls primarily off-site. Directional and interpretive signing absent.	Onsite regimentation and controls present but subtle. Directional and interpretive signing may be present.	Onsite regimentation and controls present but subtle. Directional and interpretive signing present but limited.	Onsite regimentation and controls are noticeable, but harmonize with the natural environment. Directional and interpretive signing widespread.	Regimentation and controls obvious and numerous, generally in harmony with the manmade environment. Signing widespread.	Regimentation and controls obvious and numerous. Signing widespread.



Appendix VISL-1 Visual Resource Management Classification and Objectives

Class I: The objective of this class is to preserve the existing character of the landscape. This class provides for natural ecological changes, however, it does not preclude very limited management activity. The level of change to the characteristic landscape should be very low and must not attract attention.

This VRM classification applies to BLM special administrative designations where public interest and BLM management call for the preservation of a pristine landscape.

Under this classification, construction of new rangeland (livestock, watershed, wild horse, and wildlife) facilities, roads, recreation sites and vegetation treatment projects is not permitted. Construction of recreational trails is permitted.

Class II: The objective of this class is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.

This VRM classification applies to BLM special administrative designations where public interest and BLM management call for the protection of existing primitive landscapes regardless of scenic quality. Highly scenic, semi-primitive landscapes within the extensive management area can also have this classification. The affected lands are generally natural in appearance but are not pristine landscapes.

Maintenance and reconstruction of existing facilities such that the lines, forms, colors, and textures associated with the rehabilitated facilities harmonize with those of the characteristic natural landscapes is permitted. Except within wilderness study areas (WSAs), very limited construction of new rangeland facilities and vegetation treatment projects is permitted. Limited new recreation facilities (trails and small recreation sites) and limited road construction, reconstruction, and maintenance is permitted. If the visual contrast of the project cannot be built/rebuilt to minimize visual impacts to the characteristic natural landscape, then the project work will not be undertaken. Within WSAs, no surface disturbing activities, other than trail construction, would be allowed.

Class II-IMP: Under this classification, lands would be managed under Class II objectives during the time that nonsuitable wilderness study area (WSA) lands remain under the BLM Wilderness Interim Management Policy (IMP), with the exception that no surface disturbing activities, other than trail construction, would be allowed. If the unsuitable WSA lands are released by Congress, the affected lands would convert to VRM Class IV areas.

Class III: The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.

This VRM classification applies to BLM special administrative designations and to travel corridors across the extensive management area where public interest and BLM management calls for protecting the appearance of the existing landscape; the landscape may already be highly modified. The classification occurs where the amount of use is relatively high and scenic quality is generally good.



Maintenance, construction, and reconstruction of rangeland facilities and vegetation treatment projects is permitted. Recreation site and road construction and reconstruction is permitted. In all cases, emphasis will be placed on construction techniques that will reduce the project's visual impacts to the characteristic natural landscape.

Class IV: The objective of this class is to provide for management activities which would require major modification of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management activities may dominate the view and be the major focus of viewer attention. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic elements.

This VRM classification applies to all BLM lands in the Owyhee Resource Area not contained in special designation areas or visually sensitive areas. These lands generally reflect those lands of lesser (fair) scenic quality along major travel corridors or lands remote from travel corridors with fair to good scenic quality; the affected lands may or may not already be highly modified.

Maintenance, construction, and reconstruction of rangeland facilities and vegetation treatment projects is permitted. Recreation site construction and road construction and reconstruction is permitted. An attempt will be made to minimize visual impacts wherever possible.



Range improvements are proposed to help reduce resource management conflicts and to achieve multiple use management objectives.

The following standard procedures and design elements will be adhered to in constructing range improvements within the Owyhee Resource Area. Design elements have been standardized over time to mitigate adverse impacts encountered during range improvement installations.

- Preparation of a site-specific environmental assessment prior to implementation of range improvements will be required. Proposed range improvements may be modified or abandoned if the assessment indicates that significant adverse environmental impacts cannot be avoided or mitigated.
- A wilderness inventory, required by FLPMA, has been completed in the Resource Area. All rangeland management activities in wilderness study areas will be consistent with the Interim Management Policy and Guidelines for Lands Under Wilderness Review (IMP) unless and until the area is removed from the study category (either designated or released by congress). Impacts will be assessed before implementing management activities to ensure that they meet the guidelines.
- Every effort will be made to avoid adverse impacts on cultural resources. A cultural resources inventory will be completed on all areas prior to any decision to perform ground-disturbing activities. This will be part of the preplanning step of a project and the results will be analyzed in the environmental assessment addressing the action (BLM Manual 8100, Cultural Resources Management). If significant cultural values are identified, the project may be relocated, redesigned or abandoned. However, where that is not possible, the BLM would consult with the State Historic Preservation Officer and the Advisory Council on Historic Preservation in accordance with the Programmatic Memorandum of Agreement (PMOA) by and between the BLM, the Council and the National Conference of State Historic Preservation Officers, dated January 14, 1980, which sets forth a procedure for developing appropriate mitigative measures, in compliance with Section 106 of the National Historic Preservation Act (1966) as implemented by 36 CFR Part 800. Management adherence to agreed upon mitigative measures will be implemented in compliance with these regulations.
- If a project might affect any listed threatened or endangered species or its critical habitat, consultation with the USFWS will be initiated (50 CFR 50 402: Endangered Species Act of 1973, as amended). The project will be modified, relocated or abandoned in order to obtain a “no effect” determination. If a project may contribute to the need to list a Federal candidate or BLM sensitive species, a technical assistance request will be made to the USFWS.
- Surface disturbance at all project sites will be held to a minimum. Disturbed soil will be rehabilitated to blend into surrounding soil surfaces and reseeded as needed with a mixture of grasses, forbs and browse as applicable to replace ground cover and reduce soil loss from wind and water erosion.
- Seeding will only be done to enhance and sustain multiple use values. Vegetation treatment projects will be designed using irregular patterns (untreated patches, mosaics, etc.) to provide optimum edge effect for visual quality and wildlife. Layout and design will be coordinated with local IDF&G biologist.



- Seeding will be accomplished by use of the rangeland drill in most cases. Broadcast seeding will occur on small disturbed areas, rough terrain and rocky areas. Brush will be controlled prior to seeding. Some projects will have brush control only. Brush control methods could include burning, chaining, cutting and spraying. The method to be used for individual projects will be determined on a site-specific basis during project planning. Generally, areas containing needlegrasses or rabbitbrush and areas with sandy soils will not be burned. Seeding mixtures will be determined on a site-specific basis during project planning using past experience and recommendations of appropriate state and local range and wildlife experts as needed. Anticipated increases in production through vegetation treatment projects will not be allocated until seedings are established and ready for use. All seedings will be deferred from livestock grazing for a minimum of two growing seasons to allow seeding establishment. Where deep furrow drills are used, slopes will be drilled on the contour to prevent soil erosion.
- The seeding policy for the Owyhee Resource Area is as follows: Seedings to change vegetation composition may be used when they are the most efficient method to accomplish the resource objectives identified through the planning process. The selection of the seeding area and the species to be seeded shall be based on a site-specific evaluation which considers ecological potential, technical and economic feasibility, location of unique resources, plant diversity and cumulative impacts on the ecosystem. Adapted native species that can enhance vegetative diversity composition must be given consideration in species selection. To ensure establishment, seedings must be protected for a minimum of two growing seasons or until the vigorous seedlings produce their first seed crop. Once established, seedings shall be properly managed and monitored to ensure that resource objectives are accomplished.
- It is anticipated that the existing road and trail system will provide sufficient access for range improvement construction. If needed, unimproved trails and tracks will be created to reach construction sites. These trails will continue to be used for project maintenance.
- It is assumed that normal maintenance such as replacement of pipeline sections, fence posts and retreatment of vegetation will occur.
- VRM procedures will be employed to minimize adverse visual impacts caused by the range improvement project.

Additional design features are identified below.

Reservoir construction - Reservoir development will involve construction of pits and dams to impound water for livestock and wildlife use. Pits will be in dry lake beds or other natural depressions. Dams will be constructed in drainages. Water storage capacity will range from 1 to 2 acre feet. Fill material, if needed, will come from the impoundment area or a borrow area for dams. Excavated material from pits will be piled adjacent to the pit. Top soil will be stockpiled and used to rehabilitate the borrow areas.

Wells - Wells will be cased with steel pipe and sealed with concrete to prevent cave-ins and contamination. All State of Idaho water well drilling regulations will be adhered to, both in drilling and equipping. A safety device will be installed on new powerline transformers to prevent electrocution of raptors. Metal storage tanks, painted to blend with the surrounding landscape, will be placed at each well site. Generally, tanks will be enclosed and will measure 15 to 30 feet in diameter and 6 to 12 feet in height.



Springs - Spring development will involve digging or drilling to intercept naturally occurring water flow, installing perforated pipe or concrete boxes to collect water and installing pipelines and water troughs. The spring source and trough overflow area will be fenced to prevent livestock grazing and trampling and to provide meadow habitat. A small waterhole will be developed inside the fenced overflow area for wildlife use. Ramps, rocks or float boards will be provided in all water troughs for birds and small mammals to gain access to and escape from the water.

Pipelines - Pipelines will convey water from wells to areas that lack an adequate water supply. Generally, 1 to 2 inch diameter plastic pipe will be buried with a pipe-laying device consisting of a modified ripper tooth mounted on a tractor. The pipe will normally be laid as deep as possible under ground but no deeper than 30 inches. Where obstructions prohibit pipe burial, the pipe will be laid on the ground surface and covered with borrow soil. Reservoirs will be constructed along the pipeline and fenced to exclude livestock. This will provide wildlife water and serve as an emergency water supply in case of equipment failure. Water troughs will be installed approximately one per every mile along the pipeline. Ramps, rocks or float boards will be provided in all water troughs for birds and small mammals to gain access to and escape from the water.

Fences and cattleguards - Fences shall be designed to prevent passage of livestock without impeding wildlife movement. All fences will be constructed in accordance with Bureau Manual 1741. Fencelines will not be bladed or scraped. All fences will comply with VRM procedures. Cattleguards or gates will be installed where fences cross existing roads.

Prescribed burning - Prescribed burns will be conducted to reduce juniper encroachment, to improve the ecological condition of native plant communities and to meet other resource objectives for range, wildlife and watershed. Areas with seral juniper stands and dense sagebrush stands will be evaluated for burning. Generally, no prescribed fires will be allowed in climax (old growth) juniper sites. Individual burns will be limited to 3,000 acres with a 72 hour interval between burns and will be coordinated with other activities impacting air quality to meet air quality standards.

Watershed Stabilization Projects - Watershed stabilization projects would be used to secure eroding streambanks and prevent further erosion in side slope gullies. The projects would use unlimbed juniper trees to line stream channels (attached by steel cables), rock gabion dams, wooden planks or other materials. Disturbances associated with rock gabion dams would be mitigated by riparian vegetation regrowth and channel siltation in less than 5 years. Juniper logs would become imbedded in streambanks within 5 to 10 years. Once vegetation is restored the affected stream channels would show an overall improvement attributed to the increased abundance and diversity of riparian vegetation. Increasing riparian vegetation could also improve the year-long abundance of surface waters.

Wildlife Guzzlers - Wildlife guzzlers would consist of an apron made of corrugated steel roofing material to intercept rain water and a buried storage tank equipped with a ramp to permit access to water by game birds and other small animals. Aprons would generally be about 200 to 500 square feet in size and would be painted to blend with the surrounding landscape. The guzzlers would be fenced to exclude livestock. These guzzlers would be constructed in lower elevation desert habitats where dependable water is scarce.



Decisions outlined in the Owyhee RMP will be implemented over a period of ten to twenty years or more, depending on the availability of funding and personnel. The effects of implementation will be monitored and evaluated on a periodic basis over the life of the plan. Monitoring will be conducted to determine where problems exist with management activities, to evaluate management objectives as to whether or not they are being achieved, to assess the progress toward meeting the standards for rangeland health, and to recommend future actions. If monitoring studies indicate that objectives are not being met or that progress is not being made toward meeting the standards for rangeland health, then management actions will be adjusted accordingly.

Priorities for monitoring allotments will be established. The methodology and intensity of study that is chosen for a particular allotment will be determined by the nature and severity of the resource conflicts that are present in that allotment. Monitoring studies are established and read on a regular basis. However, personnel, time and funding constraints limit the number of established studies and the frequency with which data is collected at established studies.

Minimum monitoring standards have been adopted by the State of Idaho, BLM. All studies will be consistent with the minimum standards recommendations where they are applicable. Study methods will be revised to reflect any changes in minimum standards which may occur.

Monitoring Methods

The purposes of monitoring and assessment are to determine the effects of management actions on the public land resources including vegetation and water and to determine the effectiveness of on-the-ground management actions in achieving resource management objectives within planned timeframes. Monitoring provides qualitative and quantifiable data for the periodic review and evaluation of management objectives, and it provides data to identify and support needed management actions.

Monitoring is generally conducted at key areas within each allotment. The key area is a relatively small portion of the rangeland. It is selected based on its location, use or grazing value as the area on which to monitor the effects of grazing use. It is assumed that key areas, if properly selected, will reflect the overall acceptability of the current grazing management over the entire grazing unit (allotment or pasture). Each allotment or pasture may have several key areas. Additionally, there could be one key management area in the allotment or pasture which represents a single area within an allotment or pasture that influences or limits the management opportunities of the land surrounding it. Examples of potential key management areas include meadows and riparian zones. Each grazing unit, allotment or pasture, may have more than one key area, but it may have only one key management area.

Monitoring methods must be suitable for the vegetation types, animal species or resource conditions that will be encountered. The capability of the methods to detect subtle changes due to management over short periods of time must be carefully considered. For monitoring data to be meaningful and useful over time, there must be consistency in the kinds of data that are collected and the manner in which they are collected. However, the need for changes in sampling may occasionally arise when problems are detected during a cursory review of the collected data, when analyzing and interpreting the data or when conducting an assessment or evaluation. Serious consideration must be given to the effect changes will have on the historical value of existing data prior to instituting such changes.

The methods discussed here are the methods currently in use in the Owyhee Resource Area. These methods are consistent with State Monitoring Guidance as outlined in Minimum Monitoring Standards for BLM-Administered Rangelands in Idaho and other documents and with Bureau Policy. These are subject to change as a result of revision in State or National Standards. Quantitative and qualitative assessment methods are included.



Ecological Site Inventory

Ecological Site Inventory (ESI) is the basic inventory of present and potential vegetation on BLM rangelands and provides data for determining site capability, site condition and resource management objectives. Ecological sites are differentiated on the basis of significant differences in kind, proportion, or amount of plant species present in the plant community. Ecological site inventory utilizes soils, the existing plant community and ecological site descriptions (range sites) to determine the appropriate ecological site for a specific area of rangeland and to assign the appropriate ecological status. Ecological status is the present state of vegetation of a range site in relation to the potential natural community for that site. It is an expression of the relative degree to which the kinds, proportions and amounts of plants in a plant community resemble that of the potential natural plant community for the site. Inventory provides baseline data for seral stages and reinventory provides data on change and progress of change.

Ecological site inventory has not been conducted in the Owyhee Resource Area. The basic inventory of the Resource Area was conducted in 1977-1978 utilizing the Soil-Vegetation Inventory Method (SVIM) which is similar to ESI.

Rangeland Health Assessment

Qualitative assessments of rangeland health provide managers with information on site stability and biotic integrity. In the Qualitative Assessment Procedure, biotic and physical indicators are evaluated for the site and an appropriate descriptive category is selected for each indicator to provide the observational rating measurement. The variety of indicators evaluated include cover by vegetation lifeform, ground cover, species abundance, physical environment indicators which assess soil and watershed stability including measures of soil movement and surface stability and biotic environment components such as diversity and structure of the community, presence of exotic plants, seed production and recruitment. Indicators can be added or deleted depending on site requirements.

Evaluation of the site assessment is made relative to ecological reference areas, those areas in which ecological processes are functioning and which have resiliency to disturbance. Subsequent to the rating of the indicators, an evaluation of the site status is made based on the relative significance and rating for each individual indicator and their relative role at the site. This process provides a determination of the health status of the rangelands in a relatively rapid fashion.

Vegetation Utilization

Utilization data is collected to provide information concerning the percentage of forage that has been consumed or destroyed on an area of rangeland during a specific period of time and the grazing pattern on the allotment. Utilization data are important in evaluating the effects of grazing use on specific areas of rangeland and identifying areas of concentrated use.

The methods used in the Resource Area for measuring utilization in upland vegetation sites are the Key Forage Plant method, utilization pattern mapping, and Cole Browse transects. Utilization in the riparian zone is monitored with stubble height measurements. Utilization is generally expressed as a percentage of available forage weight or numbers of plants, twigs, etc., that have been consumed or destroyed, and is expressed in terms of the current year's production removed. Utilization transects are generally conducted at key areas within the grazing allotment. These key areas are selected to reflect the general use pattern within the allotment or are areas where sensitive resources occur.

The key forage plant method is an ocular estimate method of judging utilization within one of six utilization classes on one or more key herbaceous and/or browse species. The key forage plant transects are done at key areas using key forage species. Mapping utilization patterns involves traversing the allotment or pasture to determine the levels of use throughout the pasture. Utilization pattern mapping is utilized in conjunction with the key forage plant method to determine the level of utilization the pasture has received, to identify areas receiving an unacceptable level of use and to identify usable areas which are not receiving use.



The Cole browse method is utilized to monitor key browse species and is conducted at key areas. The primary species monitored in the Owyhee Resource Area is antelope bitterbrush. This method provides data on the level of utilization of the current years leader growth and on the age and form class of the shrubs.

Grazing utilization in riparian zones is determined by measuring the height of key grasslike species along a transect and utilizing the median height to determine an overall use level.

Utilization is considered with actual use and climate data to determine resource use levels and to identify the need for adjustments in management actions, adjustments in grazing use levels, and/or range improvement projects.

Utilization is collected annually for grazed pastures with an emphasis on high priority allotments.

Vegetation Trend

Trend data are important in determining the effectiveness of on-the-ground management actions and evaluating progress toward meeting management objectives and the standards for rangeland health. They indicate whether the rangeland is moving toward or away from its potential or from achieving specific management objectives and meeting the rangeland health standards. Trend refers to the direction of change and indicates whether rangeland vegetation is being maintained or is moving toward or away from the desired plant community or toward or away from other specific vegetation management objectives. Trends of rangeland may be judged by noting changes in composition, density, cover, production, vigor, age class, and frequency of the vegetation, and related parameters of other resources.

The primary method utilized to monitor trend of the uplands in the Resource Area is nested frequency. The indicator of trend monitored with this method is frequency of occurrence of plant species. The analysis is measuring the changes in the frequency of occurrence of a plant species over time. Close-up and general view photographs are included with this method. Supplementing the nested frequency trend sites are ground cover data and shrub density.

The 3 x 3 photo plot method is also used to measure trend. This method includes taking a close-up photograph of a 3 x 3 foot plot and a general view photograph of the study site. Diagrams of plot vegetation are generally included with the 3 x 3 photo plots.

Methods utilized to monitor trend of riparian habitats include greenline, cover board, cross-channel profiles and photo points. Greenlines are a line intercept method to identify riparian plant community types and monitor changes in the community type over time. Cover boards monitor changes in vertical coverage of shrub species along a transect. Cross channel profiles are used to monitor changes in the size and shape of the stream channel. Photo points are used to visually monitor changes in the riparian zone at permanently marked locations. General view photographs are included with all of these methods.

Low-level, large-scale, color infra-red photography is also utilized to monitor trend of vegetation in riparian areas. Measurements can be made from the photos to determine the amount of riparian tree, shrub and herbaceous cover along the stream channels. Repeat photography is utilized to determine if changes in the amounts and types of cover have occurred over time.

Trend data are collected on a regular periodic basis depending on the allotment priority.

Wildlife Monitoring

Emphasis within the BLM's wildlife program is on habitat management and monitoring. Methods for monitoring upland, riparian and aquatic wildlife habitat including vegetation utilization, cover, species composition, plant vigor, trend and water quality monitoring are addressed elsewhere in this appendix. However, selected wildlife population monitoring is also necessary to fully assess the impacts of ongoing management actions and allocations.



Primary emphasis for wildlife population monitoring is on special status species although limited monitoring of some game and other nongame species is also conducted. As time, funding and management priorities permit, monitoring conducted may include:

- monitoring of special status raptor nests to determine occupancy and success (this is in addition to intensive monitoring of all nesting raptors within the Snake River Birds of Prey NCA);
- annual mid-winter eagle counts to monitor wintering populations of bald and golden eagles within important wintering areas;
- transects within long-billed curlew nesting habitat to determine the number of breeding pairs and the extent of occupied nesting habitats;
- monitoring of sage grouse by counting the numbers of birds present at sage grouse leks each spring;
- periodic spot counts and/or other breeding bird surveys to monitor density and diversity of neotropical migrants and other birds within selected habitats;
- mist netting of bats to determine species composition and relative abundance;
- periodic inspection of most other known special status species habitats to confirm continued species presence and extent of occupied habitat.
- pellet group transects to determine the amount of wildlife use which is occurring in specific habitats or vegetation communities.

This monitoring is completed either by BLM biologists or others through various types of agreements with the IDF&G, universities and other groups and organizations having the required expertise.

Monitoring of game species is primarily the responsibility of the IDF&G with the occasional assistance of BLM biologists. It includes periodic aerial and ground counts or surveys within important deer, elk, pronghorn antelope, bighorn sheep and upland game habitats, as well as the collection of harvest and population information at hunter check stations and through other types of hunter surveys.

The IDF&G also maintains a database containing field observation information for most special status species through its Conservation Data Center.

Wildlife monitoring is conducted on a regular basis as applicable for individual species.

Actual Use

Actual use monitoring provides information concerning the actual amount of grazing use occurring on an area of rangeland during a specific time period. It is a record of livestock use in each pasture of an allotment and represents forage consumed in terms of AUMs. Livestock actual use is provided by the permittees. Data is verified by field checks and occasional counts. The report includes livestock numbers, pasture usage, and turn-out and gathering dates.

Actual use is collected in all “I” and “M” allotments annually.

Use Supervision

Effective use supervision with proper documentation is an integral part of all rangeland monitoring efforts. It includes not only tagging or counting livestock and observing distribution patterns but also inspecting range improvements, observing apparent trend, growing conditions, wildlife and wild horse populations and movements, wildlife habitat, and watershed or riparian conditions.

Use supervision is conducted on a regular periodic basis depending on allotment priority.

Estimated Use

Estimated use by wild horses is derived from direct animal counts conducted aerially and on-the-ground, and from extrapolation. One adult horse or one mare with foal are considered one animal unit. A foal is considered an animal unit when it is determined to be six months of age or older.

Estimated use is collected in all pastures in all of the wild horse herd management areas.



Wild Horses

Components monitored for wild horses include the vegetation resource, wild horse movements and preferred areas, the physical environment and population characteristics. The vegetation resource will be monitored with the health assessment, utilization, trend, actual use and estimated use studies previously discussed. Specific study sites for wild horses may be established. The movements of wild horses monitored include identifying and recording seasonal use areas (both summer and winter), migratory routes, key use areas and crucial areas as they relate to the distribution of wild horses. Monitoring of the physical environment includes inventory of the physical components which may influence the wild horse population in a detrimental or beneficial fashion. Examples include the presence or absence of fences, roads, trails, streams and springs.

Data collected on population characteristics of the wild horses include estimates of numbers and population dynamics. Population estimates are the enumeration of the approximate number of animals inhabiting a specific area. These estimates will be developed whenever wild horse populations are adjusted or when determining estimated use for a specific area. Direct counts will be used and may be either total counts or a sampled count of the census area. Other population characteristics sampled in conjunction with population estimates include recordation of color, animal condition and average band/animal size. Periodic observation of wild horses also provides population dynamic information concerning the age class and sex ratio of animals in the herd area which can be used to determine productivity of the herd and recruitment of foals into the adult age class.

Wild horses are monitored periodically throughout the year depending on the attribute being monitored.

Climate

Climate studies provide a comparison of grazing season climatic conditions with long-term normals. Crop year (September-June) precipitation accounts for approximately 80 percent of the variation in vegetation production in the Intermountain area. Climate data is collected at a number of locations in or around the Owyhee Resource Area including NWS weather stations, NRCS Snowtel and snow marker sites, and BLM RAWs stations.

Depending on the variable, climate data are collected on a daily, monthly and/or annual basis.

Water Quality/Fish Habitat

The goal of the Resource Areas water quality monitoring program is to detect progress made toward (or away from) meeting the objectives of the Clean Water Act and State of Idaho's Antidegradation Program. Elements monitored include fecal coliform, water temperature, water chemistry, sedimentation, macroinvertebrate community, fish community components, and stream riparian habitat.

Fecal coliform and water chemistry are monitored by direct sampling of the stream and subsequent water analysis. Water temperature is collected through the use of instantaneous readings or continuous recorders which record numerous daily readings over a period of time. Cobble embeddedness and Wolman pebble counts are utilized to monitor sedimentation of the stream channel. The fish community component is monitored utilizing electrofishing equipment to sample species of fish present. The stream riparian habitat is monitored by collecting information on streambank stability and on riparian vegetation. Streambank stability is determined by estimating the percent of the streambank surfaces in each of four stability classes. The greenline method described earlier is utilized for monitoring vegetation change at the water edge. Other components measured include age class of woody species, herbaceous riparian stubble height and overstream canopy coverage. Detailed descriptions of methodologies can be found in Boise District's Water Quality Program Guide (1992).

Water quality data are collected on a regular basis as needed to monitor the impacts of management actions.



Assessment and Evaluation

The analysis and interpretation of inventory and monitoring data are extremely important in the evaluation of management actions to determine their progress in meeting resource management objectives outlined in the RMP and in the determination concerning the progress toward meeting the standards for rangeland health. This process must be carefully accomplished to determine if adjustments in grazing use and management actions are needed, and, if so, to what extent.

The assessment or evaluation process involves complete review of the available monitoring and other data including any necessary analysis, interpretation or evaluation and review of the management objectives as well. In order for management actions to be monitored and progress to be evaluated, the objectives must be measurable, and reasonably attainable within a reasonable timeframe. In some cases, detection of a trend toward the desired value may be sufficient to justify continuation of the management practice being evaluated, especially on poor condition rangelands where vegetation objectives will be attainable only in the long-term. Progress in meeting the management objectives will be evaluated and recommendations made for management changes or changes in monitoring techniques or other areas. The assessment will provide the information necessary to make a determination if the standards for rangeland health are being achieved or if significant progress is being made toward meeting the standards. The detail and intensity of the assessment will be dependent on the complexity of the resource concerns in the allotment.

Assessments are conducted on a regular basis as determined by the implementation of prescribed management actions, the grazing cycle length, allotment priorities, funding, and the monitoring schedule.



Areas of Critical Environmental Concern (ACEC)

ACECs are defined in the Federal Land Policy and Management Act of 1976 (FLPMA) as areas within the public lands where special management attention is required to protect and prevent irreparable damage to important historic, cultural, or scenic values, fish and wildlife resources or other natural systems or processes, or to protect human life and safety from natural hazards. Areas designated as Research Natural Areas (RNAs) and Outstanding Natural Areas (ONAs) are also designated as ACECs.

Guffey Butte/Black Butte Archaeological District (7,750 acres)

The Guffey Butte/Black Butte Archaeological District was first designated as an ACEC on March 30, 1983 in the Kuna Management Framework Plan. The boundary encompasses 32,228 acres (26,714 public land acres) along 33 miles on both the north and south sides of the Snake River Canyon and corresponds with the Snake River Birds of Prey Natural Area boundary established in 1971. This area is within the Snake River Birds of Prey National Conservation Area established in 1993 by Public Law 103-64. About 7,750 acres of the Guffey Butte/Black Butte ACEC are within the Owyhee Resource Area. The remainder of the ACEC is located in the Bruneau Resource Area.

The Guffey Butte/Black Butte Archaeological District has long been known to be an area of intense prehistoric occupation. Its significance was recognized by its placement on the National Register of Historic Places in February, 1979. The 114 sites which comprise the district include a wide diversity of historic and prehistoric sites. The historic sites include Swan Falls Dam, Guffey townsite and railroad bridge, and the Halverson Bar mining settlement. A portion of the Oregon Trail also passes through the area. The prehistoric sites include a spectacular rock art site known as the Wees Bar petroglyph field and Shellbach Cave, the first scientifically excavated site in Idaho.

Owyhee River Bighorn Sheep Habitat Area (141,796 acres)

The Owyhee River Bighorn Sheep Habitat Area was first designated as an ACEC on March 30, 1983 in the Bruneau and Owyhee Management Framework Plans. The boundaries of that ACEC encompassed 180,000 acres along the Owyhee River and in the Battle Creek-Deep Creek-East Fork Owyhee River and the South Fork Owyhee River areas; 129,763 acres in the Owyhee Resource Area with the remainder in the Bruneau Resource Area. The ACEC was designated to protect and enhance habitat for bighorn sheep, to maintain or improve the habitat to at least a good range condition class, and to protect and maintain the scenic and natural values present in the area. Habitat evaluation has resulted in identification of an additional 12,033 acres of suitable bighorn sheep habitat for a total of 141,796 acres in the Owyhee Resource Area. The ACEC is located within the following six Wilderness Study Areas (WSAs) of the Owyhee Resource Area: Owyhee River Canyon, Little Owyhee River, Owyhee River-Deep Creek, South Fork Owyhee River, Yatahoney Creek, and Juniper Creek. All six of these areas have been recommended as suitable for wilderness designation. The Tules area, which encompasses 114 acres, is within the southeast portion of the Bighorn Sheep Habitat Area ACEC (see description below). The Tules is designated as an RNA only since it is encompassed by the much larger ACEC.

California bighorn sheep, a BLM sensitive species which formerly occupied this region, were reintroduced into this area during the 1960's. It is estimated that about 500-700 bighorns occupy this area at the present time and it is anticipated that the populations will continue to expand into adjacent habitat in Nevada. The bighorns have already extended their range into the adjacent habitat in Oregon. In addition to bighorn sheep, the area also contains a diversity of other special status animal species including wintering bald eagles, ferruginous hawks, sage grouse, redband trout and several species of bats and neotropical



migratory birds. The ACEC also contains crucial deer winter habitat, as well as habitat for pronghorn antelope, mountain lion, river otter, beaver, chukar, and a diversity of waterfowl, raptors and other nongame birds, mammals, reptiles and amphibian species typically associated with riparian, canyon and shrub steppe habitats. The area contains numerous rugged, deep canyons which have exceptionally high scenic quality, and the Owyhee River, a popular early spring whitewater boating river. This river segment has been recommended suitable as a component of the Wild and Scenic Rivers system. It has also been designated as a Stream Segment of Concern (SSOC).

Boulder Creek (6,978 acres)

Boulder Creek is comprised of a deep, winding canyon which cuts through a basalt and rhyolite tableland. A 10,741 acre area was recognized as an Outstanding Natural Area (ONA) in the 1981 Owyhee MFP based on high scenic values and multiple natural resource values. Interdisciplinary analysis concluded that 6,978 public land acres meet the ACEC criteria. This area is designated an Outstanding Natural Area (ONA/ACEC).

The dominant plant communities represented in the area include western juniper-Idaho fescue (*Juniperus occidentalis-Festuca idahoensis*) and western juniper-low sagebrush (*Artemisia arbuscula*), in addition to the riparian shrub component. The area also contains a number of special status animal species including redband trout, sage grouse and several species of bats and neotropical migratory birds as well as other wildlife including elk, mule deer, mountain lion, pronghorn antelope, river otter, beaver, chukar partridge, and a diversity of waterfowl, raptors, mammals and other nongame species.

Cinnabar Mountain (277 acres)

Cinnabar Mountain, on the eastern edge of the Owyhee Mountains and at an elevation of 7,000 feet, contains excellent examples of reasonably undisturbed high elevation mountain mahogany (*Cercocarpus ledifolius*), Douglas-fir (*Pseudotsuga menziesii*), and subalpine fir (*Abies lasiocarpa*) communities. It also includes a low sagebrush-bluebunch wheatgrass (*Agropyron spicatum*) community on a windswept portion of Hayden Peak. Extensive historical as well as current use of the Owyhee Mountains has resulted in few such communities in excellent condition. Therefore, Cinnabar Mountain serves as a valuable rangeland reference area. Because of its elevation, Cinnabar Mountain also has high scenic values. A number of special status animal species are known or expected to occur in the area including sage grouse, one or more species of bats and neotropical migratory birds and a diversity of other wildlife species including elk, mule deer, mountain lion, several species of raptors and other nongame animals. Cinnabar Mountain is designated a Research Natural Area (RNA/ACEC).

Coal Mine Basin (1,604 acres)

The extensive and colorful ash beds present in Coal Mine Basin contain a diverse assemblage of plant communities, three BLM special status plant species, a large diversity of special status and other animal species, scenic values, and fossils of both vertebrates and plants. Smooth stickleaf (*Mentzelia mollis*), Packard's lomatium (*Lomatium packardiae*), and Malheur yellow phacelia (*Phacelia lutea* var. *calva*), are narrow endemic BLM sensitive plant species present at several locations within the area. Other special status plants such as Owyhee clover (*Trifolium owyheense*) and biennial princesplume (*Stanleya confertiflora*), grow in similar habitats but have not yet been found in this area. Plant communities include Wyoming sagebrush-bluebunch wheatgrass (*Artemisia tridentata* ssp. *wyomingensis*), mountain mahogany-Idaho fescue, Wyoming sagebrush-Idaho fescue, Great Basin wildrye (*Elymus cinereus*), needle-and-thread grass (*Stipa comata*), and low sage-Idaho fescue. Fossils of roots, leaves, fish, Oreodonts, and horses may



be found throughout the area. The layering and color variation of the ash flows combined with their topographic relief create a rugged and highly scenic landscape. Among the special status animal species known or very likely to occur are sage grouse, pygmy rabbit, and several species of bats and neotropical migratory birds as well as mule deer, pronghorn antelope, chukar, gray partridge, and a diversity of raptors and other nongame birds, mammals, reptiles and amphibians. This area is designated a Research Natural Area (RNA/ACEC). Seven hundred fifty-five acres (755) adjacent to this area were addressed by the Vale District, Oregon BLM for designation as an RNA/ACEC in the October 1998 Draft Southeast Oregon RMP/EIS. If designated in Oregon, the two adjoining areas would have the same name and be referred to collectively as the Coal Mine Basin RNA/ACEC.

Jump Creek Canyon (612 acres)

Jump Creek Canyon contains excellent examples of several different undisturbed riparian communities along its perennial stream, a diversity of special status animal and other wildlife species, pockets of excellent condition Wyoming sagebrush-bluebunch wheatgrass, and high scenic values. Riparian communities include syringa-red-osier dogwood (*Philadelphus lewisii* - *Cornus stolonifera*), water birch-syringa (*Betula occidentalis*), and a water birch gallery forest. Special status animal species include redband trout which occur throughout the length of the creek, several species of bats and neotropical migratory birds that are known or expected to occur within riparian and canyon habitats bordering the creek and adjacent sagebrush steppe uplands, and the Mojave black-collared lizard which occurs in outcrops near the lower end of the canyon. Mule deer, mountain lion, various raptors and other nongame birds, mammals, reptiles, amphibians and fish also occur within this unique area. The presence of numerous waterfalls, springs, pools, and steep canyon walls have created a unique and highly scenic environment. A small portion of the area is currently designated as a recreation site, and the remainder is within the Jump Creek SRMA. Jump Creek is designated as a Stream Segment of Concern (SSOC).

McBride Creek (261 acres)

McBride Creek provides habitat for four BLM sensitive species, including smooth stickleaf, barren milkvetch (*Astragalus sterilis*), Cusick's false yarrow (*Chaenactis cusickii*), and Malheur yellow phacelia. All four are limited in distribution to volcanic ash flows on or near the Idaho-Oregon border. The area is designated a Research Natural Area (RNA/ACEC).

North Fork Juniper Woodland (4,204 acres)

This area includes the North Fork Owyhee River Canyon and several tributary drainages which shed water from rhyolitic rock outcrop uplands at 5,000 to 5,800 feet elevation. This area was designated as an Outstanding Natural Area (ONA) in the 1981 Owyhee MFP. The area was also evaluated on the basis of "illustrative character, condition, diversity, rarity, and value for science and education" and, in 1987, the National Park Service recommended that the area be designated the North Fork Owyhee River National Natural Landmark (NNL) as the best example of a "montane western juniper woodland subtheme" in the Columbia Plateau Natural Region.

This area is dominated by a canopy of old-growth and mature stands of western juniper, with an upland understory of Idaho fescue intermingled with low sagebrush. Willow (*Salix*), chokecherry (*Prunus virginiana*), dogwood, alder (*Alnus* spp.), currant (*Ribes* spp.), wild rose (*Rosa woodsii*), sedges (*Carex* spp.) and grasses are dominant along the perennial and intermittent stream channels in the canyon bottoms. The area supports a number of special status animal species including redband trout and several species of bats and neotropical migratory birds as well as other wildlife including elk, mule deer, mountain lion, river



otter, beaver and a diversity of waterfowl, raptors and other nongame birds, mammals, reptiles and amphibians typically associated with western juniper, riparian and shrub steppe habitats. This segment of the North Fork Owyhee River has been recommended suitable as a component of the Wild and Scenic Rivers system. The area is also within the North Fork Owyhee River WSA which has been recommended suitable for wilderness designation. This area is designated an Outstanding Natural Area (ONA/ACEC).

Pleasant Valley Table (1,467 acres)

Present within Pleasant Valley Table are excellent examples of Owyhee sagebrush-Sandberg bluegrass (*Artemisia papposa-Poa secunda*) and low sagebrush-Idaho fescue community types. The area has remained relatively undisturbed due to its rocky terrain. Owyhee sagebrush was at one time listed as a special status plant species in Idaho, but it has since been removed from that list. Although it is still a regional endemic, it is more common than previously believed. However, extensive and good condition communities dominated by this species are rare. Pleasant Valley Table also contains a rare community type occupied by silver sagebrush (*Artemisia cana*) and Idaho fescue. A number of special status animal species including sage grouse and several species of bats and neotropical migratory birds are known or expected to occur within the area as well as other wildlife including elk, mule deer, mountain lion, and a diversity of raptors and other nongame birds, mammals, reptiles and amphibians typically associated with sagebrush steppe habitats. The entire area is within the North Fork Owyhee River WSA which has been recommended suitable for wilderness designation. This area is designated a Research Natural Area (RNA/ACEC).

Sommercamp Butte (440 acres)

This area is noteworthy for its extensive, good ecological condition mountain mahogany-bluebunch wheatgrass community type. The rimrock butte top supports a mountain mahogany-gland ocean-spray (*Holodiscus dumosus*) community type. Mountain mahogany communities are currently poorly represented in special management areas within the Owyhee Uplands ecological region. The Sommercamp Butte area ranges in elevation from 6,000 to 6,360 feet. Because of its elevation, Sommercamp Butte also has relatively high scenic values. It is bordered to the north and east by State of Idaho land. Special status animal species known or expected to occur in the area include sage grouse, numerous neotropical migratory birds, bats, and a diversity of other wildlife including elk, mule deer, pronghorn, and a variety of raptors and other nongame species. Sommercamp Butte is designated a Research Natural Area (RNA/ACEC).

Squaw Creek (150 acres)

Two of the three physically separated portions of Squaw Creek are represented by excellent condition, low elevation Wyoming sagebrush-bluebunch wheatgrass communities. The northeast segment is within the Hardtrigger Wild Horse Herd Management Area. Both of the northern segments have been partially protected from livestock grazing by a lack of water, topography, and the presence of an old road-cut on all but one side. The third parcel to the south burned in 1989, and is now a bluebunch wheatgrass community, with Wyoming sagebrush beginning to return. It is also in excellent condition due to nearly complete isolation from grazing for many years. All areas contain an extensive microbiotic soil crust, resulting in little exposed soil. Squaw Creek is particularly valuable as a rangeland reference area, since so few low elevation bunchgrass communities in excellent condition remain. Special status animal species known or likely to occur in this area include sage grouse, California bighorn sheep, and several species of bats and neotropical migratory birds as well as other wildlife including mule deer, chukar, gray partridge, and a diversity of raptors and other nongame birds, mammals, reptiles and amphibians. This area is designated a Research Natural Area (RNA/ACEC).



The Badlands (1,833 acres)

The broken volcanic topography of The Badlands yields an area of high scenic value and diverse botanical features. The area's dominant plant communities include western juniper-low sagebrush-Idaho fescue and an uncommon bunchgrass community comprised of California oatgrass (*Danthonia californica*), with lesser amounts of Idaho fescue. The global distribution of the latter community, present only in dry washes and small upland pockets within The Badlands, is unknown, but it is presumably uncommon in Idaho. Simpson's hedgehog cactus (*Pediocactus simpsonii* var. *robustior*), a BLM sensitive plant species, is present where other vegetation is sparse and soils are thin and rocky. Bailey's ivesia (*Ivesia baileyi*), a regional endemic of rhyolitic canyon walls, also occurs on suitable habitat within The Badlands. The area supports a number of special status animal species including sage grouse and several species of bats and neotropical migratory birds and a diversity of other wildlife including mule deer, mountain lion, and a variety of raptors and other nongame birds, mammals, reptiles and amphibian species. The Badlands is designated a Research Natural Area (RNA/ACEC).

The Tules (114 acres)

The Tules is an abandoned oxbow of the Owyhee River where the river is incised 300 feet into the Owyhee Plateau. Most of the area is isolated from grazing by the steep canyon walls. It is located within the Owyhee River Bighorn Sheep Habitat Area ACEC, the Owyhee River SRMA and the Yatahoney Creek WSA. The river has also been designated a Stream Segment of Concern (SSOC) and has been recommended suitable as a component of the Wild and Scenic Rivers system. The Tules contain a diverse assemblage of plant communities, from riparian to upland. Its riparian communities include red-osier dogwood-coyote willow (*Salix exigua*), hardstem bulrush (*Scirpus acutus*), and water sedge-beaked sedge (*Carex aquatilis*-*C. rostrata*). Upland communities of seven different types are present, including mountain big sagebrush-bluebunch wheatgrass (*Artemisia tridentata* ssp. *vaseyana*), basin big sagebrush-needle and thread grass (*A. tridentata* ssp. *tridentata*), basin big sagebrush-Great basin wildrye, low sagebrush-bluebunch wheatgrass, gray rabbitbrush-Sandberg bluegrass (*Chrysothamnus nauseosus*), and ninebark (*Physocarpus malvaceus*). In addition, the BLM sensitive plant species, rattlesnake stickseed (*Hackelia ophiobia*), occupies portions of The Tules. Most of the special status animal and other wildlife species associated with the Owyhee River Bighorn Sheep Habitat Area ACEC are also known or expected to occur within this area, although The Tules is of special importance to waterfowl and a large diversity of other species dependant upon or associated with wetland/riparian habitats. This area is designated a Research Natural Area (RNA). The Tules is designated only as an RNA since it is encompassed by the much larger Owyhee River Bighorn Sheep Habitat Area ACEC.



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