

2.C. Resource Uses

2.C.1. Livestock Grazing

Profile

Livestock grazing use in the Jarbidge FO area began around 1871 (Blossom et al., 1988). In the 1870s and 1880s, the range was used by large livestock operations. Livestock grazed in the lower elevation areas in the winter and the higher elevation areas in the summer. A severe winter in 1989 resulted in a reduction of cattle use, leaving much of the rangeland unused. Large transient sheep operations moved their sheep south through the area in the spring and back north over the same rangeland in the fall. Intensive grazing management on the public lands, established livestock numbers, and seasons of use did not exist during this early settlement period. As a result, the number of cattle, sheep, and horses rapidly increased until the early 1900s. During this period of rapid stock increase, livestock grazing became a regulated and permitted activity on National Forests. However, non-forest Federal lands continued to be common areas in which those who moved their stock onto the range first each season secured the use of new forage growth. Rangeland resources and ecological conditions experienced significant harm from overgrazing during this period of unregulated use (Hull Jr. & Hull, 1974; Voight Jr., 1976; Young & Sparks, 1985). Overgrazing resulted in changes to vegetation communities, especially at lower elevations used for winter and early spring grazing. Control of these ranges did not occur until after 1934 with the enactment of the Taylor Grazing Act. Grazing allotments were created and the number and kind of livestock and season of use were established for the area (Blossom et al., 1988).

Range surveys were completed on the public lands during the 1960s to determine the amount of forage produced. Grazing capacity for the allotments was adjudicated by the BLM Boise District with recommendations from the District Grazing Advisory Board following these surveys. The number of livestock authorized on most of the allotments was based on the sustained rangeland production at that time. A Federal Court agreement on April 11, 1975, required BLM to prepare 142 Grazing EISs on public grazing lands over a ten-year period. The Jarbidge RMP/EIS prepared in 1985 complied with this agreement.

Vegetation treatments during the 1960s, primarily plow and seed, were implemented to improve the production of the rangeland. The Clover Flat Fire burned approximately 34,000 acres in 1974. In 1976, approximately 145,000 acres burned in the Bicentennial Fire. Rehabilitation efforts following these fires included seeding large areas to crested wheatgrass and intermediate wheatgrass. Since 1976, the increase in fire rehabilitation seedings, such as the approximately 65,000 acres seeded following the Bicentennial Fire, resulted in a reduction of plow and seed projects or brush control projects. Rehabilitation projects established seedings of non-native perennial plants like crested wheatgrass and intermediate wheatgrass to prevent soil loss, provide forage for livestock, and compete against the invasion of cheatgrass and other invasive plants.

In the 1990s, seedings used perennial native cultivars like Snake River wheatgrass and bluebunch wheatgrass varieties (Goldar, Whitmar, and Anatone) instead of crested wheatgrass. The establishment of seedings over the last 30 years increased livestock forage production in the planning area.

Heavy grazing depleted the native plant communities that preceded the seedings prior to the Taylor Grazing Act of 1934 and produced less vegetation palatable to livestock. Vegetation manipulation seeding projects and fire rehabilitation seeding projects, including plow and seed and fire rehabilitation seedings, established palatable vegetation like crested wheatgrass, intermediate wheatgrass, Snake River wheatgrass, and bluebunch wheatgrass, increasing the carrying capacity for livestock grazing.

The 1987 Jarbidge RMP recognized but did not allocate additional forage because BLM policy was not to allocate forage to livestock based on a one-point-in-time range inventory (BLM, 1987). Other factors affecting forage allocation included: 1) the lack of infrastructure, water developments, and fences to support use of these AUMs; 2) relatively large areas managed as common use grazing units rather than defined grazing allotments; and 3) approximately 160,000 acres encumbered with application for agricultural development under DLE and CA, creating uncertainty of available future use (Jones, 2005). The 1987 RMP stated, “Increased use would not be authorized unless further monitoring studies indicate that the basic soil, vegetation and wildlife resources are being protected and additional forage is available.” The additional forage production was authorized as TNR in accordance with 43 CFR 4110.3-1(a).

To address the on-going nonrenewable grazing authorizations, an environmental assessment (EA) for nonrenewable livestock grazing use in the Jarbidge FO was approved in June 1996. The EA analyzed a process by which nonrenewable grazing use could be authorized. One allotment received an increase in grazing preference following the preparation of an EA and final grazing decision. In 2002, Western Watersheds Project challenged BLM’s decision to continue the authorization of nonrenewable grazing use under the 1996 EA by seeking relief in District Court (Williams 2002). As a result of this lawsuit, BLM agreed not to authorize nonrenewable grazing use based on the process outlined in the 1996 EA. Interim grazing management was put in place for the 30 allotments involved in the lawsuit. This management included levels of grazing use, utilization of riparian areas and uplands, and seasons of use.

In response to grazing permittees concerned that no nonrenewable use could be authorized, Congress has included a rider, referred to as Section 123, in DOI’s appropriations act for each year since Fiscal Year 2004 directing BLM to authorize TNR in the Jarbidge FO to the level of the latest authorization between 1997 and 2003. Section 123 does not apply to allotments involved in litigation.

In 2003 and 2004, BLM prepared four EAs under the grazing regulations in 43 CFR 4110.3-1(b)¹⁷ to analyze vegetation allocation on 30 allotments where nonrenewable grazing use was authorized. Final grazing decisions were issued between September 2003 and December 2004 for 28 of the 30 allotments. Of those, preference was increased in 19 allotments, and the preference remained unchanged in 9 of the allotments. This increase in active use on grazing permits was within the historical AUMs allowed under nonrenewable authorizations in most cases. The remaining two allotments remain under interim grazing measures outlined in a Judge Williams District Court Memorandum of Order dated April 11, 2003. Western Watersheds Project returned to District Court in 2004 to challenge the validity of the

¹⁷ 43 CFR 4110.3-1(b) states, “When the authorized officer determines that additional forage is available for livestock use on a sustained yield basis, he will apportion it.”

EAs analyzing the grazing management implemented in the 28 allotments. The result of this lawsuit was a stipulated settlement agreement (SSA) between the Plaintiffs, Intervenor, and BLM. The SSA includes the completion of the revised Jarbidge RMP by September of 2009. It also outlines interim grazing measures to occur on 28 allotments until the RMP and grazing permit renewal process is completed.

Current Level and Locations of Use

The Jarbidge FO is divided into 93 grazing allotments with 59 permit holders (permittees) on approximately 1,500,000 Federal acres; 1,400,000 acres are BLM-managed public land within the planning area and 92,000 acres are military withdrawn and 5,800 acres are BOR withdrawn land. BLM manages grazing on the military withdrawal land for the Air Force in accordance with Public Land Order 1027 as amended by Public Land Order 4902. The grazing permits in allotments in the military withdrawal do not differentiate the AUMs on military land and BLM public land. In 2006, there were 188,802 AUMs of permitted grazing use on BLM-managed land, military withdrawn lands, and BOR withdrawn lands. The 1987 RMP included a decision to increase grazing use from 149,650 AUMs to 166,096 AUMs initially and to 254,211 AUMs in 20 years¹⁸. Some of the allotments presented in the 1987 RMP have been divided into separate allotments or pastures (Appendix 13).

The total allowable grazing use in the Jarbidge FO is 205,580 AUMs of active use. Of this active use, 112,620 AUMs are part of interim management resulting from two lawsuits filed against the Jarbidge FO (Table 51). The 30 allotments under the interim grazing measures in the SSA and Judge Williams order are only allowed nonrenewable use as described in the interim measures. Eighteen other allotments have authorized nonrenewable use for an additional 16,786 AUMs of grazing use beyond those authorized under current permits (Appendix 13).

Table 51. AUMs Authorized in the Jarbidge FO, 2006

Legal Obligation	Allotments	Current Permits (AUMs)	Nonrenewable Authorizations (AUMs)
Williams Order	2	27,888	0
Stipulated Settlement Agreement – Winmill’s Order	28	84,732	0
Non-renewable grazing use under Section 123	18	25,896	16,786
Other allotments	45	48,862	0
Total	93	188,802	16,786

Actual grazing use since the 1987 RMP has been as high as approximately 217,000 AUMs in 1997 and as low as approximately 109,000 AUMs in 1998. In the last five years, the average actual use since 1987 is approximately 173,000 AUMs.

BLM conducts rangeland monitoring to track progress toward meeting or making progress

¹⁸ The 1987 RMP included a decision to increase grazing use from 166,269 AUMs to 280,501 AUMs in 20 years. In 1991, the allotments in MUA 1, 2, 3 and parts of MUA 4 and 5 were reassigned to the Four River FO. Without these allotments in the current planning area, the 1987 RMP AUMs were changed from 149,650 AUMs to 254,211 AUMs in 20 years.

toward meeting the Standards for Rangeland Health and management objectives. Monitoring includes collecting data for vegetation trend, livestock utilization and actual use, production, and climate. Active grazing use authorizations and management actions in each allotment are periodically evaluated, based on the monitoring data. If monitoring shows progress towards objectives, management would continue. However, if progress is not being made, the management is adjusted. Adjustments are made by grazing decision after discussions with the permittees in accordance with legislation, regulations, and policy so public land resources are maintained or improved.

Rangeland Status

Three selective management categories were developed in 1981 to prioritize grazing allotments according to management needs. All allotments have been placed into these categories according to management needs, resource conflicts, potential for improvement, and Bureau funding/staffing constraints. Improve category allotments are managed to improve current unsatisfactory resource conditions and receive the highest priority for funding and management actions. Maintain category allotments are managed to maintain current satisfactory resource conditions and are actively managed to ensure that resource values do not decline. Custodial category allotments are managed by the BLM to protect resource conditions and values. The planning area has 69 Improve category allotments, 24 Maintain category allotments, and 2 Custodial category allotments. Appendix 14 provides allotment-specific information including acres by ownership and management category.

The modified grazing regulations issued in 1995 included Standards for Rangeland Health. It directed BLM to establish Resource Advisory Councils (RACs) to develop standards for rangeland health in local areas. In 1996, the RACs developed the standards for Idaho. The regulation required BLM to assess allotments for their status in meeting these Standards. As of 2006, assessments for Rangeland Health have been completed on 44 of the 95 allotments and 61% of the acreage in the Jarbidge FO. Table 52 summarizes the determination of status of the allotments in meeting or making progress toward meeting the Standards for Rangeland Health.

Table 52. Status of Allotments in Meeting the Standards for Rangeland Health

Description	# of Allotments	Acres ^A
Allotments meeting all standards or making significant progress toward meeting the standard	0	0
Allotments not meeting all standards or making significant progress toward meeting the standards, and livestock is a significant factor.	28	590,000
Allotments not meeting all standards or making significant progress toward meeting the standards due to causes other than livestock grazing.	16	250,000
Total number of allotments that have been assessed.	44	840,000
^A Acres have been rounded.		

As one of the conditions of the SSA, the BLM was to re-sample sites established in the

1981-1983 ESI. The Soil-Vegetation Inventory Method (SVIM) used during the 1981-1983 ESI is similar to the current BLM-approved method in how production and plant community composition is determined. However, the manner in which the condition rating of plant communities is determined has changed; therefore, the condition ratings should not be compared.

The data gathered in the early 1980s rated condition based on four components of the range site: 1) the status of the site's composition by weight expressed in percent of the site's potential; 2) the stability of the soil against accelerated erosion; 3) the stand for site (description of species present) compared to species in a climax community; and 4) the percent of the preferred species (the dominant grass in most cases) on the site (e.g., more than 30%, 20-30%, 10-20%, or less than 10%). Table 53 shows the condition rating of the native vegetation sites in 1981-83.

Table 53. Condition Rating of Native Plant Communities at SVIM Sites, 1981-1983

1981-83 Condition Class	Number of Sites	% of Sites
Poor	71	38.4
Fair	58	31.4
Good	32	17.3
Excellent	24	13.0
Total	185	100

Under current policy, condition of native rangelands is rated based on seral stage using a similarity index compared to PNC and expressed in terms of ecological condition: PNC, late seral, mid-seral and early seral ecological condition (Habich, 2001). These ratings compare the production of species to the production of a site in PNC, determined from reference sites, with no additional factors used to adjust this rating. Table 54 shows the ecological condition rating of the native vegetation sites in 2006. The data in Table 53 and Table 54 are not comparable due to a change in the sampling and analysis methods.

Table 54. Ecological Condition Rating of Native Plant Communities, 2006

2006 Ecological Condition	Number of Sites	% of Sites
Early	48	19.1
Mid	125	49.8
Late	63	25.1
PNC	15	6.0
Total	251	100

Grazing use is dependent on management fences separating allotments and pastures within allotments. The Jarbidge FO contains complex pipeline systems fed by creeks, springs, and wells that provide water through most of the planning area. In addition to providing water for livestock, these pipeline systems distribute water used in wildfire suppression activities and serve as a source of water for wild horses and wildlife. Reservoirs were developed by dam construction and excavating pits in playas. Table 55 shows the range infrastructure currently in the planning area.

Table 55. Types and Amount of Existing Range Infrastructure

Type of Rangeland Improvement	Amount
Cattle guards (#)	130
Fences (miles)	2,012
Seedings (acres)	679,627
Reservoirs and Stock Ponds (#)	97
Spring Developments (#)	24
Pipelines (miles)	894
Wells (#)	13

Forecasted Use

Improvement of habitat for wildlife and special status species may include vegetation treatment projects that increase sagebrush and forbs in non-native grass stands. These treatments would likely require, at a minimum, short-term changes in grazing use such the location, timing, and amount of grazing. The increased presence of sagebrush in these communities may reduce the level of forage production for livestock grazing use. Restoration of sage-grouse habitat could increase the demand for grazing in areas currently dominated by crested wheatgrass seedings and annual grasses.

Riparian areas would continue to be protected from damage by livestock through methods such as installing fences, placing water troughs away from riparian areas, and adjusting the timing of grazing.

Livestock grazing use will continue into the foreseeable future; however, conflict over livestock grazing in the western United States has increased as the land base in the West is used to support a rapid population increase, urban sprawl, and lessened ties of much of the public to agricultural production. Anti-grazing activists are making considerable use of the legal systems and media to further their cause. At the same time western ranchers have gained staunch supporters and stiffened their resolve to preserve their ranching heritage (Holechek et al., 2006). There is also a trend toward amenity ranching by owners not normally in the ranching business (Gosnell & Travis, 2005).

Key Features

Livestock grazing use occurs within the planning area year long. Generally, the lower elevation rangeland of the northern third of the planning area is grazed in the fall, winter, and spring. The higher elevation in the middle third is grazed in the spring, summer, and fall, and the high elevations in the southern third is grazed primarily in the summer and fall.

Larger ranch operations graze livestock on public land year long. Their permitted use areas range from the north to the south and are used along with USFS grazing permits on the Humboldt-Toiyabe National Forest adjacent to the southern boundary of the planning area. Livestock are wintered in the allotments in the central and northern portions of the planning area. Cattle are gradually moved south through the spring to foothills on the southern portion of the planning area and USFS land. In the fall, cattle are gradually moved back north for the winter. Smaller ranch operations generally use the allotments based on their location as described above.

Avoiding defoliation during the growing season for bluebunch wheatgrass, a native grass, is essential if enhancement of vigor is an objective (Anderson, 1991). In order to prevent livestock from eating native vegetation during the plants' critical growth period, livestock can graze in areas with crested wheatgrass during this time. There are approximately 370,000 acres of crested wheatgrass seedings, not including seeded areas that burned in 2005 and 2006, providing a large amount of forage.

Areas receiving higher grazing use are near available water and areas of preferred vegetation. Concentrated use areas occur around troughs and ponds in the uplands. Livestock are attracted to riparian areas for water and the lush forage resulting from the constant availability of water, especially during the hot summer season. Livestock will congregate in the brush and trees within riparian areas and in aspen stands in the foothills on warm days. Available water includes live streams, reservoirs, pit reservoirs, playas, springs, and pipeline and trough systems. Grazing utilization lightens as distance increases from available water.

Current Management

The 1987 Jarbidge RMP directed the maintenance of existing vegetative improvements. Additional crested wheatgrass seedings have been established since the completion of that RMP. Seedings have not been actively maintained, primarily due to wildfires and, to a lesser extent, periodic heavy grazing use that reduces the occurrence of wolf plants.

The 1987 RMP directed lands in good or excellent ecological condition in MUA 10, based on the 1981-1983 range inventory, be maintained. These terms "good" and "excellent" and the methods to determine those ratings are no longer used in the rating of native vegetation. Data collected in 2996 indicate areas in MUA 10 are in late seral ecological condition overall.

Formal grazing systems were established for the following allotments rated in fair condition in 1987: Inside Desert, Poison Butte, Seventy-one Desert, Juniper Butte, Crawfish, Three Creek #8, and Juniper Ranch. These grazing management systems, excluding Juniper Ranch, are currently part of the SSA. Current and past condition ratings were not done in the same protocol, but the existing trend information indicates a static trend.

A final grazing decision was issued in 2002 outlining management for the Lower Saylor Creek allotment was developed in 2001. Grazing agreements to protect Snake River snails were entered into in 2003 for the Hagerman, Little Three Island, Saylor Creek/North Three Island, Thompson, and Three Island Allotments.

The Saylor Creek West MUA was divided into separate allotments in 1987 as directed by the 1987 Jarbidge RMP.

The 1987 Jarbidge RMP identified AUMs of forage to be allocated for livestock. AUM allocations are listed by allotment in Appendix 13.

The 1987 Jarbidge RMP identified acres for seedings, maintenance, interseeding or reseeded, brush control, and brush control and seedings. Actual acres for each of these actions are identified in Table 56. The number of acres seeded are largely due to fire rehabilitation. Table 57

outlines the number of miles of pipelines, reservoirs or wells, water developments, and fencing completed.

Table 56. Completion of Vegetative Treatments Planned in the 1987 RMP

Vegetation Treatment	Planned	Completed ^A
Acres of Seedings Maintained	348,949	400,000
Acres to be Seeded	75,900	270,000
Acres Interseeded or Reseeded	9,400	0
Acres of Brush Control	31,600	0
Acres of Brush Control and Seeding	13,600	2,600
^A Acres have been rounded.		

Table 57. Completion of Range Infrastructure Planned in the 1987 RMP and 1989 RMP Amendment

Range Improvement	Planned	Completed
Pipelines (miles)	419	262
Water Developments (#)	10	1
Fences (miles)	242	274

The 1987 RMP directed several actions concerning fencing. Approximately 23 miles of five- and six-strand fences have been modified in MUA 12. Approximately 6 of the 10 miles of woven-wire fence have been removed. Several miles of woven-wire fence still need replaced. BLM is currently modifying these fences. Fences in MUA 7 need to be modified to minimize wild horse movement conflicts. Since 1987, approximately 37 miles of gap fences have been built. Fences on Mosquito Lake Reservoir, Rattlesnake Pond and an area of Poison Creek have been constructed with funds from the Jarbidge Sage Grouse Local Working Group. The permittee constructed fence on private land to protect Bear Creek and Shack Creek. He manages them as a riparian pasture for sheep only. A small enclosure has also been built at Antelope Spring.

Adaptive management has been adopted in 30 allotments to address concerns with wildlife crucial habitats. This includes establishing management guidelines that provide parameters on livestock grazing use of browse species. Meeting the parameters set in these guidelines would indicate a need for change in grazing use.

Management Opportunities

A desired outcome for livestock grazing within the planning area would be developed through the RMP process, possibly requiring livestock grazing use to be adapted to meet the desired condition. Implementing adaptive management could provide for opportunities for livestock to be a positive part of meeting the desired condition. For example, reducing frequency and intensity of wildfire could be necessary to re-establish the sagebrush steppe habitat. Livestock grazing use can be used to reduce fuel loads providing for less intense wildfire that can be more easily controlled. This management, however, must consider the needs of the watershed, wildlife, and recreation. It would not include, for instance, heavy grazing use during the critical growing season for plants or the nesting season for sage-grouse. It could include the development of threshold indicators such as utilization levels, use of browse species like sagebrush and bitterbrush, rest, and deferment of nesting habitat.

Adaptive management indicators could be considered for authorizing grazing use. Decisions would be based on a desired outcome using a range of identified management activities for achieving that outcome. Adaptive management could be used to develop grazing schemes to resolve conflicts with fish and wildlife. For example, management schemes could outline seasons of use that do not conflict with wildlife use of crucial winter range and/or nesting of sage-grouse. Indicators would be developed to determine when management changes should be made. Regular monitoring would be established to indicate when thresholds are met, initiating an adjustment in grazing management. Additional forage could be allocated after needs are met for watershed, wildlife, and other uses.

The allocation of vegetation should include meeting watershed needs, wildlife habitat needs, wild horse needs, and livestock needs in that order of priority. This allocation needs to be done in consideration of the desired condition and potential of the resource. For example, it would be necessary to re-establish sagebrush to reduce fragmentation of sagebrush steppe habitat. Ecological sites are only capable of producing a certain amount of vegetation with the constraints of precipitation and in the soil capabilities to hold moisture. Therefore, re-introducing sagebrush, preferred by many wildlife species but not by livestock, would partially replace the grass species preferred by livestock. Any allocation would require projecting the change in useable livestock forage over time as a result of re-introducing sagebrush (Frischknecht, 1963).

Grazing use agreements set up for the protection of Snake River snails could be formalized through the permit renewal process with a grazing management system. Livestock grazing management could be established through permit modification as a result of a monitoring and evaluation process which includes Standards for Rangeland Health and a grazing decision.

Range infrastructure within the planning areas could be re-evaluated to determine the amount of additional water developments, pipelines, and fences needed. The value of installing fences, pipelines, troughs and other water developments could be considered in relation to improving riparian areas and special habitats like slickspot peppergrass and sage-grouse habitat and protecting remnant sagebrush stands. Some improvements may need to be moved to protect or improve these and other resource values. Areas in need of gap fencing could be identified to allow livestock to water while improving riparian areas and protecting cultural resources.

Range improvement projects would be needed to make necessary changes in grazing management to meet the desired condition. Additional pasture fencing may be needed to provide options for management of livestock grazing in these habitats. Gap fencing could be considered in riparian areas not currently fenced. New fences would be constructed and existing fences need to be modified to minimize impacts to wildlife by following BLM standards.

The selective management categories assigned to the allotments could be reviewed and modified, if necessary.

The 1987 Jarbidge RMP directed land in “good” and “excellent” ecological condition to be maintained. Ecological condition can be better described in terms of PNC (see Upland Vegetation). Descriptions of desired plant communities could be developed, especially in areas seeded with non-native perennial species.

2.C.2. Minerals

Profile

Current Level and Locations of Use

The BLM manages the Federal mineral estate for the United States. The land surface overlying this estate is often managed by a Federal agency other than BLM or is owned by a non-Federal entity such as the State of Idaho or private interests. The Jarbidge FO administers the surface of 1,400,000 acres of public lands within the FO boundary and all or part of the mineral estate. These “split-estate” lands present minerals management challenges that require close coordination and cooperation. Cooperation with the surface interests is integral in developing mineral resources and in protecting other resource values and uses on these lands.

Minerals managed by the BLM are categorized according to the laws under which they are managed as leasable, salable, or locatable. Although similar in many ways, each classification is administered differently and may also have different requirements for acquisition, exploration, and development.

Leasable Minerals

Leasable minerals can be explored for and developed under the Mineral Leasing Act of 1920, as amended, other leasing acts, and regulations at 43 CFR 3100, 3200, 3400, and 3500. Leasable minerals include energy mineral resources, such as oil, gas, coal, geothermal steam, and associated geothermal resources, and some non-energy minerals, such as phosphate, sodium, potassium, and sulfur. All minerals on acquired lands are leasable. BLM uses discretionary authority in deciding whether to lease mineral resources for exploration and development. Where the Federal government owns the mineral estate and an agency other than BLM manages the surface, BLM will consult with that agency prior to leasing or approving an operations plan. In some situations, BLM must obtain concurrence as required by law. There is no current leasable mineral activity within the planning area.

Salable Minerals

Salable minerals, or mineral materials, are common varieties of minerals and building materials such as sand, stone, gravel, pumice, pumicite, cinders, and clay. Generally, salable minerals are widespread, of low unit value, and often used for construction or landscaping materials. Their value depends largely on market factors, quality of the material, availability of transportation, and transportation costs. BLM management of salable minerals is under the Materials Act of July 31, 1947 (61 Stat. 681), amended by the Acts of July 23, 1955 (PL 167; 69 Stat. 367), and September 28, 1962 (PL 87 713) and regulations at 43 CFR 3600. BLM is authorized to dispose of mineral materials either through a contract of sale or a free-use permit. BLM has discretionary authority to issue permits for the disposal of salable minerals.

There is ongoing use of salable minerals at several locations in the planning area. Two community pits for rhyolite are located in the Browns Bench and China Creek areas. Community gravel pits include the Balanced Rock North, Big Flat Creek, Magic Waters, and Pasadena Valley #1. Highway districts use gravel from the Big Flat Creek, Magic

Water, Devil Creek, and Three Island pits. The need for housing and related infrastructure has increased as the population in the area increases. BLM and highway districts continue to develop sources of borrow, sand, and gravel for road maintenance projects.

Locatable Minerals

Locatable minerals, those not classified as leasable or salable, are managed under the General Mining Law of 1872 (17 Stat. 91, as amended) and regulations at 43 CFR 3700 and 3800. They include gold, silver, copper, gemstones, lead, zinc, barite, gypsum, and certain varieties of high-calcium limestone, and other uncommon variety minerals. The General Mining Law of 1872 provides United States citizens the right to prospect, explore, and develop these minerals on public domain lands not “withdrawn” from mineral entry by Congress or the Secretary of the Interior. The law also provides for necessary access across public land to conduct these activities. Depending on the stage of exploration or development, reasonable access can range from unimproved temporary roads for prospecting or drilling to more permanent improved roads for full mine development and transportation of ore.

Exploration for and development of locatable mineral resources under the General Mining Law of 1872 are nondiscretionary activities, meaning the BLM cannot prohibit reasonably necessary activities required for the prospecting, exploration, and development of valuable locatable mineral deposits. Since the January 1, 1981 issuance of 43 CFR 3809 regulations, the BLM has had the authority to regulate these activities and require mitigation or changes in operational practices to ensure activities do not result in “unnecessary or undue” degradation of the environment (43 CFR 3809.4). Prior to 1981, BLM had no authority to regulate locatable mining activity. Now, BLM’s Abandoned Mine Lands Program addresses those mining impacts. The 43 CFR 3809 regulations ensure a proposed mineral exploration or development activity conforms to reasonable industry standards for that type of activity, based on the appropriate stage of operation development. If the BLM concludes the proposed activity is not reasonable, it would not be approved under 43 CFR 3809.

A variety of locatable minerals are found within the planning area due to its geologic diversity; however, the area generally lacks any known large, economically viable metallic deposits. There are four active mining claims on public lands, all of which involve Bruneau Jasper, a semi-precious decorative stone. All four are in the Bruneau River Canyon at Indian Hot Springs. There are numerous historic mining claims, the majority of which are placer claims concentrated in the river drainages throughout the planning area. There are no active metal mines despite occurrences of gold, silver, copper, lead, mercury, and other minerals.

Recreational panning and placer mining for gold occur in the planning area. The State of Idaho administers permits for mechanized gold collection, or dredging, in rivers. The Snake River contains placer deposits from American Falls Reservoir downstream to the Idaho/Oregon border. There are no active placer claims in the planning area.

Base metal deposits, which consist of copper, lead, zinc, manganese, and minor molybdenite, are rare in the planning area. There are no active base metal mines in operation and no known commercially viable deposits located within the planning area.

Industrial minerals are those utilized in industrial processes. Examples of industrial minerals are limestone, zeolites, silica, sulfur, perlite, pumice, and peat. There is no current activity related to industrial minerals in the planning area.

Forecasted Use

Salable Minerals

Sand and gravel is found adjacent to the Snake River on the north and Salmon Falls Creek in the east. Over the last six years, an average of 29 permits per year were sold to the public for an average of about 280 cubic yards per permit. The need for sand and gravel will continue for both sales and free-use permits. As population increases, demand for material for road and canal maintenance, as well as for individual use, will also increase. The demand for material will likely be greater closer to populated areas due to lower transportation costs. Sources of material will need to be identified to replace exhausted sites.

Decorative stone is found in the southeastern portion of the planning area near the Browns Bench area adjacent to Salmon Falls Creek Reservoir. An average of 13 tons per year of decorative stone was sold in the last six years, averaging about two tons per permit. As with sand and gravel, the increase in population will increase the demand for decorative stone. Other sites and stone types may need to be identified if the current site in Browns Bench is exhausted.

Leaseables

Oil and Gas

The Jarbidge FO contained up to 251 oil and gas leases up until 1995. Non-competitive oil and gas leasing activity was widespread in southern Idaho particularly during the 1970s. The activity was extremely speculative and prompted, in large part, by the accelerated exploration activity in the western US spurred by oil crises of the 1970s. The scarcity of drilling data in Idaho resulted in blanket lease applications over this widespread and geologically varied area. There are no records of production from any of the leases, and it is assumed there was no finding of oil or gas that would have led to production. There is little potential in the planning area for oil or gas. No leases have been sold since 1995, nor has there been any interest in lease sales. Exploration in the 1970s revealed the Western Snake River Plain contains structures that could contain oil and gas reservoirs. Four relatively shallow exploratory wells were drilled in the vicinity of Glens Ferry between 1950 and 1973. There are reports exploratory drilling in southwest Idaho found small amounts of natural gas, but they were too small to be worth further exploration or development at the time (McLeod, 1992). The absence of oil and gas is attributed to two possibilities: a lack of organic material from which oil and gas could have been generated despite the structure present that could lead to oil and gas reservoirs, and volcanism passing through the area drove off, or “cooked,” the oil and gas present (McLeod, 1992).

Geothermal Resources

The Snake River Plain crossing the northern half of the Jarbidge FO planning area is generally favorable for low-temperature (< 194°F) geothermal waters. Immediately west of the planning area, the Bruneau area has numerous domestic “thermal” (68 to 104°F) wells. Indian Hot Spring, located along the Bruneau River (160°F), and Murphy Hot Springs (125°F) are notable hot springs in the planning area. While some low-temperature direct utilization is possible, there are no areas with temperatures attractive for energy production with today’s technology and the aquifer is experiencing declines due to increased use (USGS, 2007), making geothermal leasing potential low.

Coal

No coal deposits are known to exist in the planning area. There are no Federal coal leases within the Jarbidge FO.

Oil Shale

Oil shale has not been located within the Jarbidge FO.

Sodium and Nitrate

There are no Federal sodium or nitrate leases in the planning area, and none are expected. No commercially valuable deposits have been identified.

Other Leasable Minerals

There are no other known leasable minerals in quantities sufficient to be economically extracted.

Locatable

Operations at the Bruneau Jasper mines are expected to continue. Each of these operations is a family-run, part-time endeavor (Figure 31). Current activity is comprised of blasting small areas, bulldozing waste rock, and hand collecting the jasper.

Figure 31. Bruneau Jasper Mine



No mining activities are allowed in the segments of the Bruneau and Jarbidge Rivers suitable for inclusion in the WSR system. Mining records held by the BLM Idaho State Office indicate placer mining in the river drainages occurred in the past. If the river corridors are reopened to mineral entry, mining activity could resume.

Historic records of mining activity in the planning area indicate there is not a great amount of locatable minerals. If precious metal prices increase or technology improves, there could be renewed interest in exploration activities, particularly for gold. Little information exists on other locatable mining activity, and little or no activity is anticipated.

Key Features

Oil and Gas

The area of highest potential is adjacent to the Snake River Plain where Lake Idaho and Lake Bruneau sediments are found. The edge of the Snake River Plain, along the northern edge of the planning area, has these characteristics needed for source rock, but no direct evidence of petroleum potential.

Geothermal Resources

The Snake River Plain crossing the northern part of the planning area is associated with some potential for low-temperature geothermal resources. Leasing potential is considered minor due the lack of significant geothermal anomalies.

Current Management

Lands not specifically withdrawn are open to mineral entry. The 1987 Jarbidge RMP identified acres available and recommended for withdrawal for minerals exploration and development, non-energy mineral development, mineral use sites, and leasable minerals. Surface occupancy is not permitted in MUA 16 during winter periods.

Management Opportunities

Directional drilling allows for exploration in otherwise inaccessible areas. Drilling technologies could be analyzed to consider increasing the buffer zone around disturbed areas.

As withdrawals are currently in place to protect portions of the Bruneau and Jarbidge River canyons. Potential withdrawals could be considered to protect more area. Areas already disturbed and near populated areas could be considered for future material use sites to meet BLM, county, and public needs.

2.C.3. Recreation

Profile

BLM provides opportunities for outdoor recreation and nature-based tourism under the concept of multiple-use management. Recreational activities on public lands are multi-faceted and include consumptive and non-consumptive activities. Federal lands within the planning area provide a broad spectrum of outdoor opportunities affording visitors the freedom of recreational choice with minimal regulatory constraints.

Current Level and Locations of Use

BLM accounts for different types of annual recreation use through the Recreation Management Information System (RMIS). RMIS measures recreation participation in 65 types of recreation activities, including visitation. RMIS data sources for most of these activities depend entirely upon observations and professional judgment. In Fiscal Year 2006, the Jarbidge Field Office had approximately 39,000 visitors for a total of approximately 24,000 visitor days¹⁹.

Recreation Management Areas

Recreation Management Areas are BLM's primary means of managing recreational use of the public lands. Public lands are designated as a Special Recreation Management Area (SRMA) or Extensive Recreation Management Area (ERMA). SRMAs require a recreation investment where more intensive recreation management is needed and where recreation is a principal management objective. These areas often have high levels of recreation activity, contain valuable natural resources, or require recreational settings that need special management. ERMAs constitute all public lands outside SRMAs and are areas where recreation is non-specialized, dispersed, and does not require intensive management. Recreation may not be the primary management objective in these areas, and recreational activities are subject to few restrictions. Five SRMAs are identified in the 1987 RMP (Table 58); however, specific boundaries were not delineated, and activity plans were never created.

Table 58. SRMAs Identified in the 1987 Jarbidge RMP

SRMA	Acres	Rationale	Use Trend
Owsley Bridge	2,680	recreational and off-road vehicle values	High
Jarbidge Forks	4,320	wildlife, fisheries, and recreational values	Moderate (slight increase annually)
Bruneau-Jarbidge River	57,000	natural and cultural resources; whitewater recreation	Low to Moderate (depends on water levels)
Salmon Falls Creek	5,600	natural and scenic values	Low
Oregon NHT	16,384	preservation and interpretation	Low (impacts are occurring to remaining ruts and trail features)

Special Recreation Permitting

Five types of uses requiring special recreation permits (SRPs) are authorized by the

¹⁹ One visitor day is equivalent to 12 hours spent in the planning area.

Federal Lands Recreation Enhancement Act of 2004: commercial, competitive, vending, individual or group use in special areas, and organized group activity and event use. SRPs are issued to manage visitor use, protect natural and cultural resources, and accommodate commercial recreational uses and may be issued for ten years or less with annual renewal. Commercial SRPs are issued to outfitters, guides, vendors, recreation clubs, and commercial competitive event organizers providing recreational opportunities or service without employing permanent facilities. SRPs for competitive and organized group events are also included in this category. The Jarbidge planning area has four SRPs authorized for commercial river use. BLM issues SRPs for noncommercial use in certain special areas, including wilderness, rivers, and backcountry hiking or camping areas. Two noncommercial permits have been issued in the past ten years for organized group camping/OHV activities. The maximum number of commercial SRPs in place at one time during last twenty years was six. In 2006, four commercial SRPs were in place for the Jarbidge FO.

Whitewater Boating

Whitewater recreation activities on the Jarbidge and Bruneau River systems continue to be popular locally, regionally, and nationally. These rivers have a growing national reputation for those attracted to remote, wild, and spectacular canyons and challenging whitewater.

The float season lasts approximately one month, with the peak use occurring during the latter part of May. Water runoff from the Jarbidge Mountains snowpack usually dictates the optimum flows for this activity. In 1983, the Jarbidge FO implemented a mandatory registration system for private boaters on the Jarbidge and Bruneau Rivers, which provides some use data. While the Jarbidge FO administers outfitting on the Jarbidge River, maintenance of facilities and accountability for visitor use are shared with the Bruneau FO. The recorded use number for 2005 was 170 individuals, with kayaks as the primary mode of transportation. In 2006, the recorded use number was 320 individuals; the increase in boater registrations was due to an above-average water year.

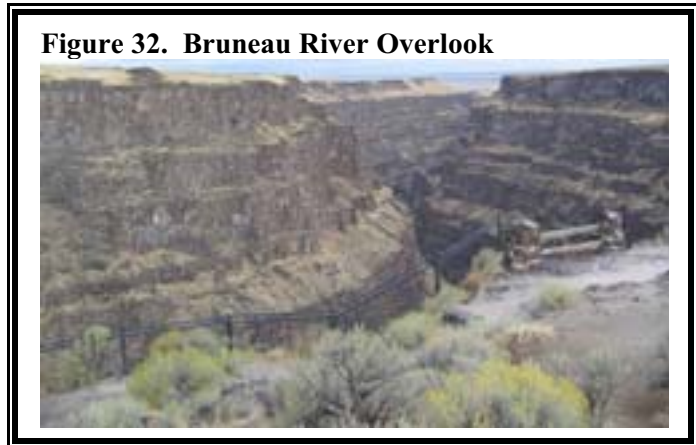
Developed Recreation

Developed recreation sites incorporate visitor use infrastructure such as roads, parking areas, and facilities to protect the resource and support recreational users in their pursuit of activities, experiences, and benefits. Visitor use infrastructure is a management tool that can minimize resource impacts, concentrate use, and reduce visitor conflicts.

There are six developed sites within the planning area, none of which are fee sites. None of the sites has potable water or trash service in the form of trashcans or dumpsters. The following list outlines these sites and their amenities:

- Bruneau Canyon Overlook (Figure 32) – Parking area, interpretive kiosks, and protective fence structures
- Bruneau River Launch Site, East – Parking and information kiosk

- Bruneau River Take-out – Information kiosk
- Cedar Creek Reservoir (Roseworth) – Parking area, vault restrooms, and docks
- East Fork Jarbidge River Recreation Sites (4 sites) – Vault restrooms, picnic tables, and fire rings with grills
- Jarbidge River Recreation Site – Parking area and launch facilities for whitewater boating



Dispersed Recreation

Hunting is the major dispersed recreation use across the entire planning area. In 2005, hunters spent more than 5,600 days in pursuit of mule deer, pronghorn, and elk in the planning area (IDFG, 2006). The number of hunters recreating in the planning area has remained relatively stable over the past five years (IDFG 2006).

Additional designated trail systems have not been necessary due to large amounts of historic and user-created roads and trails in the planning area. Only two recognized trails exist within the planning area. The Idaho Centennial Trail is used for both hiking and motorized vehicles; use of the segment within the planning area is generally low because much of the trail is in remote terrain with difficult access. The Roberson Trail is located in the Bruneau Canyon, and the general landscape dictates a non-motorized use (Figure 33). This trail is used in the spring and early summer by whitewater boaters accessing the Five Mile Rapids, a series of Class IV rapids on the Bruneau River.

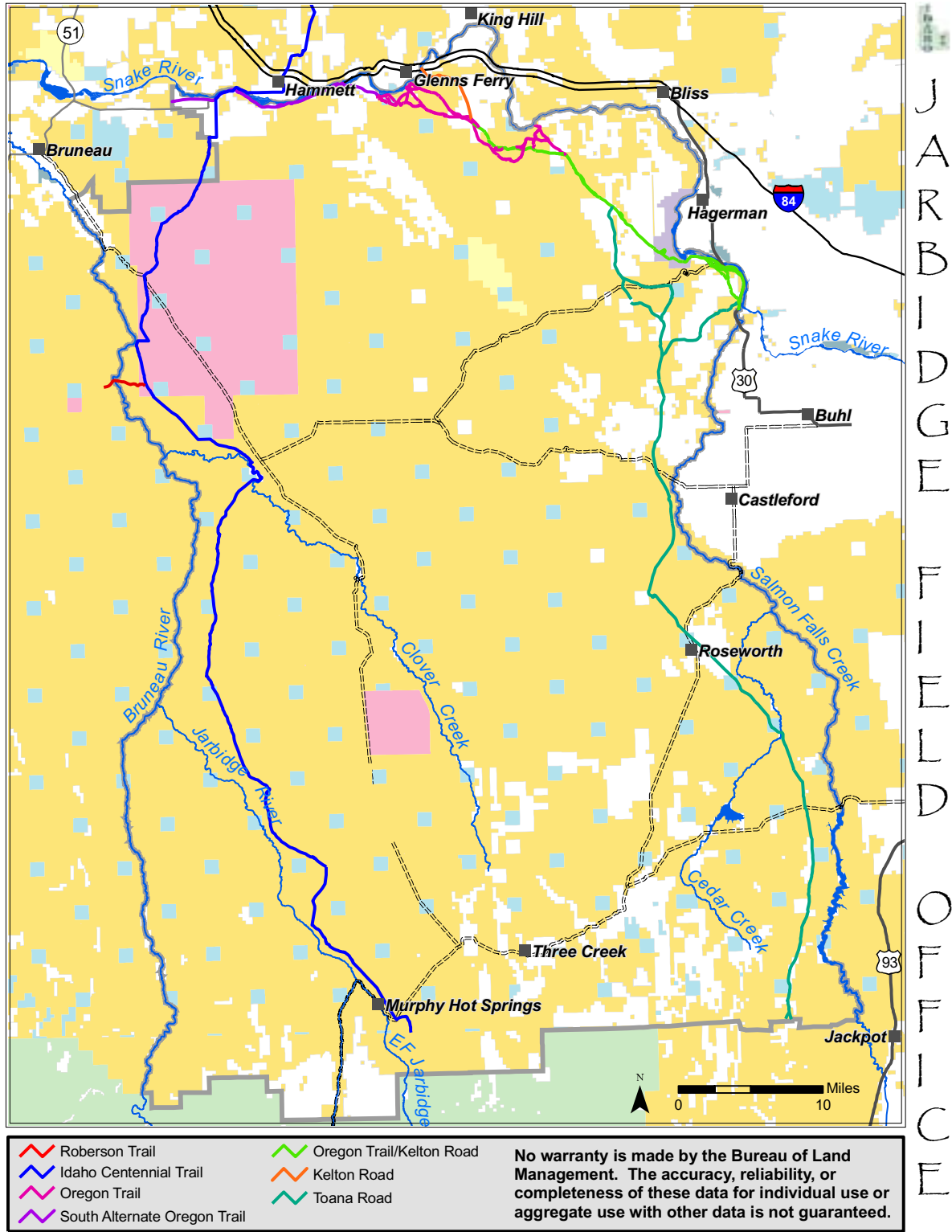
OHV Use

OHV use is one of the fastest growing recreation opportunities in the planning area. Because of its relationship to transportation and access issues, further discussion of OHV use can be found in the Transportation and Access section of this document.

Forecasted Use

Changes have occurred within the planning area in regards to recreational use since the completion of the 1987 Jarbidge RMP. Increased visitor use in certain areas affects soil, visual resources, and vegetation. Additionally, the potential for conflicts between recreationists, livestock permittees, private landowners, and wild horses are increasing. The Jarbidge FO regularly receives an increasing number of complaints regarding OHV. These complaints concern resource and wildlife impacts, conflicts with other OHV users and irresponsible OHV use, motorized use in non-motorized areas, conflicts with grazing management activities, failure to close gates, vandalism to fences, and litter and noise impacts to private landowners adjacent to BLM lands.

Figure 33. Trails and the Oregon NHT



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Dispersed camping use is increasing at certain sites within the planning area. This increase in

camping and associated impacts is especially obvious on the west side of Salmon Falls Creek Reservoir and selected fishing areas along the Snake River. Impacts include soil compaction and vegetation loss, rock fire rings, user-created routes, and littering. As OHV use continues to increase, potential conflicts with users will increase, and impacts to wildlife, archaeological resources, wild horses, and soil and vegetation resources will increase. The increase in OHV use requires updated management tools and active OHV management.

Recreational use overall is likely to increase, especially motorized recreation. Some recreation users are advocating trail development in the planning area, particularly a trail system in the Glens Ferry area. There is an opportunity for interpretive recreation at some cultural sites such as the Oregon NHT and historical sites in the Murphy Hot Springs/Jarbidge area to educate visitors on cultural resource values.

Key Features

Areas with moderate to high recreational use include:

- Salmon Falls Creek Reservoir (west side)
- Jarbidge Foothills and Diamond A Desert
- Owsley Bridge (Yahoo) OHV area
- Snake River Canyon (Hagerman to King Hill)
- Rosevear Gulch/Paradise Valley OHV area

Current Management

The 1987 Jarbidge RMP called for Recreation Activity Management Plans (RAMPs) to be developed for various locations within the planning area. RAMPs were written for recreation sites on the Jarbidge River and East Fork of the Jarbidge River.

The Jarbidge River North Forks was designated an SRMA following the 1987 Jarbidge RMP. Three recreation sites, Big Cottonwood, Juniper Grove, and Forks, were developed along the East Fork of the Jarbidge River to reduce public health concerns and resource damage. A whitewater put-in was installed just below the east Fork Jarbidge confluence to reduce resource damage caused by whitewater recreationists.

Management Opportunities

Specific management initiatives such as travel plans, recreation zoning, Travel Management Areas, developed sites, and improved interpretation and education could be considered to improve opportunities and reduce conflict. Opportunities exist to partner with interest groups; communities; and Federal, State, and local agencies to enhance or contribute to achieving desired recreation outcomes.

Existing SRMAs were designated primarily because of traditional and estimated demands at the time of 1987 RMP. The current planning process should consider a framework that will identify existing recreation niche opportunities and determine the viability of listed SRMAs and new SRMAs. SRMAs would assist in protecting resources from the impacts of recreation use and in improving recreational opportunities, experiences, and benefits for the recreationist.

Recreation along travel corridors and developed sites remains popular. As potential visitation to these sites increases, management of the areas may need to focus more on providing defined recreation experiences.

Different recreation experiences and opportunities exist for the Salmon Falls Creek Reservoir area and the Jarbidge River. Recreation is becoming the principal management objective for the Salmon Falls Creek area. Recreation niche opportunities should be evaluated and identified. Interdisciplinary management objectives and guidelines should be developed and SRMA viability for existing and potential recreation activities should be determined. Similar actions should take place for the Jarbidge River focusing on its dispersed recreation opportunities.

Benefits-based Management (BBM) is an innovative framework for guiding recreation and visitor services planning and management as it is an outcome-based, collaborative, and business-oriented approach to managing recreation. BBM engages recreation service providers as partners in managing quality recreation settings to produce desired recreation experiences, and personal, social, economic, and environmental benefits. Recreational opportunities are provided to benefit communities, economies, and the environment. The revised Jarbidge RMP could incorporate elements of BBM.

2.C.4. Renewable Energy

Profile

Current Level and Locations of Use

There are no renewable energy developments on public lands within the planning area for either geothermal, wind, hydroelectric, or solar power. However, within the last five or six years, the Jarbidge FO has had several inquiries for wind energy-related interests on public land. The only authorized use granted to date is the 2004 Renewable Energy Systems (RES) ROW for wind velocity test towers on China Mountain. The authorization allowed RES to construct four anemometer sites within the 13,000-acre ROW area. In May 2007, RES submitted an application to construct a wind farm in portions of the Jarbidge and Elko FOs. The proposed wind development would produce 425 megawatts on approximately 13,000 acres²⁰. The Jarbidge FO received an application for an upgrade on a road that will support another wind farm on private land in the Bell Rapids area. Other applications are being submitted for related uses on private land and interest in wind farms on other public land within the Jarbidge FO and elsewhere in the TFD.

Forecasted Use

The Idaho Public Utilities Commission is in the process of determining who must pay for costs related to upgrading the power transmission system to handle new power generating projects (Sterling, 2006). Proposed projects in the Hagerman/Bell Rapids area, if approved, would require a power transmission system upgrade for the Boise metropolitan area. Idaho Power has petitioned for the companies proposing to build wind power generating facilities to pay for the upgrade.

Geothermal Energy

Available data suggests that there is insufficient heat energy in the geothermal resources of the FO to generate electricity. Advances in technology could change that in the foreseeable future. Historically, there has been one Known Geothermal Resource Area (KGRA) in the planning area. The Bruneau KGRA was established in 1975. While geothermal interest decreased in the subsequent 25 years, a subtle re-emergence of interest in alternative energy sources is now occurring in the western US. Generating electricity is not the only use of geothermal energy. Non-energy producing activities currently being pursued in Idaho include fish farming and recreational resorts or spas. If this trend continues, it is anticipated that the Jarbidge FO could receive one or two geothermal exploration proposal and one geothermal lease applications during the life of the revised RMP.

The northern portion of the planning area is the most conducive to geothermal energy development. The area is within the southern portion of the Western Snake River Plain physiographic province. The Western Snake River Plain is a fault-bounded valley, or graben, that is dropped down relative to the northern and southern edges. The geology is made of rocks differing in age and composition. The youngest are gravels currently being deposited in streams and rivers throughout the planning area. In the Glens Ferry

²⁰ The acreage in the plan of the development is subject to change.

Formation, sedimentary rock units have been dated back ten million years. These sedimentary units were deposited in both lake and river settings mixed with volcanic ash layers of varying age. Igneous and metamorphic rocks thought to be at least 70 million years old lie beneath the sedimentary rocks. The greatest potential for geothermal resources is located where faulting has allowed waters to penetrate as far as the basement rocks.

Geochemical thermometer methods indicate that aquifers do not exceed 300° F (Young et al., 1974). Hot springs in the area are not uncommon in the planning area. Several have been developed using the geothermal energy directly, in the form of recreation and agriculture. To date, no thermal resources have been sufficient for the production of electrical energy.

The level of potential geothermal exploration and development will be determined by the temperature, reservoir characteristics, and extent of the geothermal resource as defined by exploration. Other financial, technological, and practical considerations will also impose limits.

Wind Energy

Wind energy has become a higher visibility component of the search to find clean, renewable energy sources. In 2005, BLM prepared a national Programmatic Environmental Impact Statement (PEIS) for wind energy, which amended the 1987 RMP.

The need for energy in the western United States will probably increase due to increase in the population. According to Census Bureau records, Idaho's population increased 29% between 1990 and 2000, and 10% from 2000 to 2005. Interest in wind energy is increasing, as shown by the recent Cotterel Mountain project in the neighboring Burley FO. That project is expected to contain as many as 130 towers producing 190 to 240 Megawatts. There are numerous other small installations in southwest Idaho, all on private property.

Unlike geothermal resources, which are managed as leasable minerals, wind energy developments are managed through land use authorizations. Although the Jarbidge FO has only two wind farm related projects being processed at this time, it is anticipated the FO will receive several applications for wind energy exploration and development during the life of the revised RMP.

The China Mountain area in the southeast portion of the planning area has high wind production. The National Renewable Energy Laboratory, which is part of the Department of Energy (DOE), has produced maps showing wind resources at 50 meters in altitude (Figure 34, Figure 35, Figure 36, Figure 37). This map shows that parts of the China Mountain area to be excellent to outstanding in wind production potential.

Figure 34. National Renewable Energy Laboratory Wind Energy Resource Map of Idaho

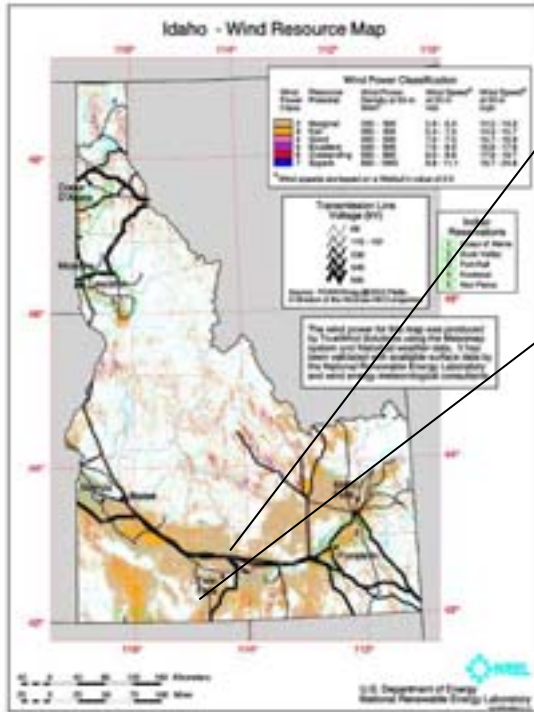
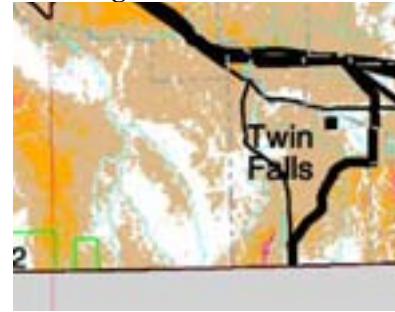


Figure 35. Close Up of Planning Area



Several areas in the planning area are rated fair for wind energy potential. The fair category areas are mostly adjacent to the Snake River south of Hagerman, where the existing Fossil Gulch Wind Park is located. This seven turbine wind farm, operation since January 2005, sells electricity to Idaho. Most of the remainder of the planning area is rated marginal.

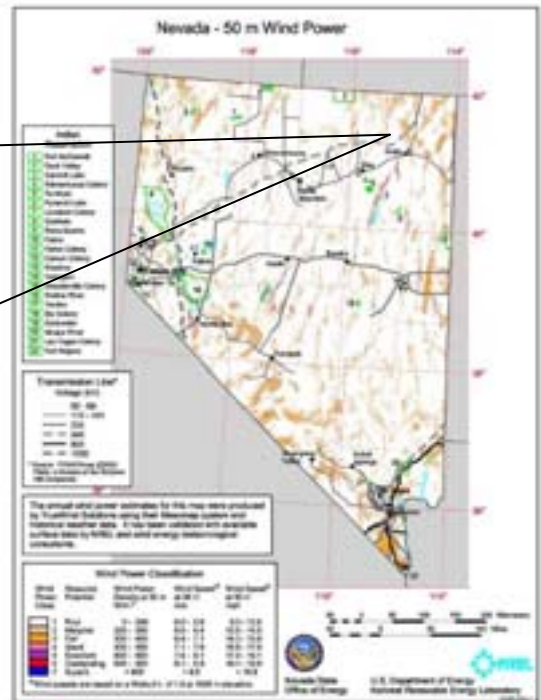
Figure 37. Close Up of Planning Area



Hydroelectric Power

Studies done by the Idaho National Laboratory (INL) suggest Idaho has as much as 1,600 Megawatts (MW) of electrical energy potential in hydroelectric power that is not being utilized (Conner et al., 1998). The Jarbidge FO has no hydroelectric power plants on public land, although the FO borders several miles of

Figure 36. National Renewable Energy Laboratory Wind Energy Map of Nevada



reservoirs related to Idaho Power hydroelectric projects on the Snake River.

Potential sites for high power output hydroelectric developments are limited to those with the most water available, which are associated with the Bruneau, Jarbidge, and Snake Rivers and Salmon Falls Creek. If the current Wild and Scenic River eligibility and suitability recommendations remain in place for the Jarbidge and Bruneau Rivers and Salmon Falls Creek, or if those river segments are designated, it is anticipated that the only foreseeable development for high power output would be in the Snake River. Other sources of water that could be utilized are irrigation canals and drainages. Diverting these waters through a penstock and turbine where the water would normally be discharged into the river could harness otherwise wasted energy potential. The amount of potential energy output would depend on the water quantity and head distance.

Microhydro development could occur throughout the planning area. The low power output allows for a greater flexibility in placement of the power generating equipment. The most likely projects would be for small independent operations in remote locations.

Solar Energy

Unlike hydroelectric power, solar energy does not require water storage or a transport mechanism. Unlike wind-driven turbines, there are no moving blades that can harm airborne animals. Solar energy projects require large areas of land, possibly affecting wildlife habitat.

The only requirement for a solar energy production site is relatively flat land to construct the energy plant. The site would be located away from mountains or hills that would limit the exposure to the sun.

There is no current interest in commercial quantity solar energy projects. There have been small photovoltaic (PV) units powering remote electrical fences and other facilities throughout the planning area. With advances in technology, it is anticipated that interest in commercial applications of solar energy could occur in the future. The most likely scenario for solar energy development will be for isolated home or ranch power needs. Any commercial installation would need to be relatively close to the existing power grid to minimize transmission line costs. This would limit the possible locations to the corridors near Salmon Falls Creek up to the Snake River, and along the Snake River itself.

Key Features

Geothermal

The most likely area of use would be in the northern portion of the planning area. There are geothermal occurrences in the middle and southern areas, but exploiting the potential energy would be prohibitively expensive because of a lack of infrastructure and transmission.

Wind

The China Mountain area has the highest wind energy potential. The high energy

potential combined with relatively close electrical transmission lines could lead to development. Wind energy development is also likely in the area adjacent to the Snake River, as wind energy potential along the river generally falls into the moderate category.

Hydroelectric Power

The Snake River would be the most likely area for larger sized hydroelectric power projects due to the high power capacity and the proximity to existing transmission lines. Projects on any of the drainages that feed into the Snake River would be less likely the farther they are from the existing infrastructure.

Solar

The northern portion of the planning area would be the most likely area for a solar project due to the relatively flat lands and proximity to the existing electrical transmission lines would be the primary reason.

Current Management

The 1987 Jarbidge RMP did not address any management actions for renewable energy. Renewable energy resources are managed according to BLM policy.

Management Opportunities

With increasing interest in renewable energy and rising energy prices, there is an opportunity for proactive management of these resources. Areas could be allocated as open, open with moderate or major constraints, or closed for geothermal exploration and development. ROW development, avoidance, and exclusion areas could be identified for wind or solar energy projects.

Withdrawals could be considered for areas with hydroelectric power potential. Approval of energy leases and/or facilities could be dependent on securing a buyer.