Allotment Assessment
Crawfish Allotment

I. Name and Number of Allotment

Crawfish Allotment #01118
Permittee: Kip Gould

II. Livestock Use

1. Preference: 650 AUMs
2. Historic Use Range: 602 to 1067 AUMs
3. Suspended Preference: 0 AUMs
4. Season of Use: 4/01 to 5/31; 10/01 to 11/30
5. Kind and Class of Livestock: 300 cattle
6. Percent Public Land: 100%

III. Allotment Profile

1. The Crawfish Allotment is located in the southwest part of the Jarbidge Field Office Area and is located primarily in MUA-11. A small portion is in MUA-15. There are two pastures in this allotment: North and South. The current permit was issued March 1, 1995 to Blick Ranches authorizing 650 AUMs (permit was transferred to Kip Gould in 2002). This permit is valid until February 28, 2005. During these livestock grazing permits, temporary nonrenewable grazing use (TNR) was authorized in 1991 and 1993 through 1997 (included in Table 1 figures). TNR has not been authorized in the allotment since 1997 because it did not meet the requirements of the 1996 TNR environmental assessment.
2. Federal Acreage: 10,423 acres
3. Objectives (Jarbidge RMP, 1987):
    - Increase forage issued for livestock to 2753 AUMs in the Crawfish Allotment by the year 2005 (D-10); Crawfish is 5% of MUA-11; 20-year use in the Crawfish was to increase to 2439 AUMs. This increase use would result from the availability of additional forage from water developments, brush control and seeding projects and improvement in native range condition (II-3).
    - Maintain existing 21,177 acres of vegetative improvements (II-44, 45).
    - Improve 139,244 acres of lands in poor ecological condition (II-44); Crawfish was noted as having 454 acres in poor condition.
    - Manage big game habitat to support increased populations of mule deer (17%), and winter and yearlong antelope (about 40% and 100% increases, respectively) (II-44).
    - Improve riparian habitat (II-44).
4. Key Forage Species:
    - Bluebunch Wheatgrass
5. Grazing System: The current grazing management plan provides for periodic rest during the critical growth period in the spring between the boot stage and flowering. While the

current permittee is not accurately following the schedule of this plan, they are providing adequate critical growing season rest for pastures.

IV. Management Evaluation

The purpose of this evaluation is to determine the allotment's status in meeting the Standards for Rangeland Health and Guidelines for Livestock Management and to renew the grazing permit with management guidelines to meet these Standards.

A. Summary of Studies Data

1. Actual Use

Table 1 shows the actual use since from 1990 to 2002.

Table 1 - Actual Use

Grazing Season	AUMs
1990	602
1991	769
1992	664
1993	834
1994	1067
1995	799
1996	782
1997	712
1998	652
1999	652
2000	646
2001	604
2002	652

2. Climate

Long term water year precipitation (September through June) for Hollister NOAA Weather Station is 9.62 inches and for the BLM Three Creek Well rain gauge, the 10 year average annual precipitation has been 10.2 inches. Table 2 shows the yearly moisture totals for the past 10 water years at the Three Creek Well station which is located at 5,250 feet and closely represents this allotment. Also shown is the Yield Index for the Hollister Weather Station. The Yield Index is a precipitation-yield relation which provides reliable and effective information for use in comparing annual production yields to what is expected in a normal year. The Yield Index is used in forecasting and adjusting range forage estimates.

Table 2 - Water Year Precipitation and Yield Index

Year	Three Creek Well (Inches)	Yield Index At Hollister
1993	6.1^	1.55
1994	8.1	0.72
1995	14.0*	1.94
1996	10.8	1.28
1997	13.5*	1.41
1998	13.6*	1.72
1999	10.7	1.05
2000	5.9	0.49
2001	7.2	0.52
2002	7.7	0.88
2003	9.3	0.75

^ Incomplete year. 3rd and 4th quarter total only.
*Above average precipitation.

3. Utilization

Table 3 shows the actual data is from sampling on native vegetation at transects in the Allotment.

Table 3 - Utilization Data

Year	Utilization
1997 *	5-22%
2003	8%

* Use prior to TNR authorization.

4. Production

There is no current production data for this Allotment.

5. Condition and Trend

There is no trend data available for this allotment, therefore vegetative and soil cover trends are unknown. As for the vegetative conditions in the allotment, the most recent rangeland surveys were conducted in 1982. According to this survey, approximately 60% of the allotment was delineated as burned, 20% was in fair condition, 15% was in good condition and the remaining 5% was in poor condition. The major ecological site of most, if not all, of the allotment is a Wyoming big sagebrush, Loamy 10-13" type. Table 4 summarizes this information.

Table 4 – Condition and Trend Evaluation of Native Vegetation Study Sites

1981-83 Inventory Site	Inventory Site Location	Vegetation Types	1981-83 Ecological Rating*
TH-20	14S10E17	Agsp(burn)	PNC
TH-19	14S10E28	Agsp-Posa3(burn)	PNC
TH-18	14S10E29	Artrw/Agsp	Late
TH-31	15S10E09	Agsp-Agsm(burn)	PNC

*****Jarbidge RMP referred to Range Condition as: Excellent, Good, Fair, and Poor. Since that time these terms have been related to; Potential Natural Community, Late Seral, Mid Seral and Early Seral, respectively. Value terms of excellent, good, fair, poor are only used as a value rating for areas rehabilitated with *Agropyron cristatum* and *Agropyron intermedium.*

B. Rangeland Health Assessment

In 2002, rangeland health data was gathered on the Allotment at four ecological sites within native range. Rangeland health data was collected per Technical Reference 1734-6, *Interpreting Indicators of Rangeland Health*. The rangeland health data was collected by an interdisciplinary team for the purposes of making a quantitative assessment of the soil/site stability, hydrologic function, and the integrity of the biotic community for the various ecological sites.

Four transects were read at various ecological sites and are identified as CF-1 to CF-4. The "Preponderance of Evidence" based on the four transects, is shown in Table 5. The degree of departure or deviation from the potential ecological site description (None to Slight, Slight to Moderate, Moderate, Moderate to Extreme, or Extreme) is made based on an evaluation of the data.

Table 5 - Preponderance of Evidence

Attribute (The sites are considered meeting attributes if not mentioned)		Deviation From Potential				
		Extreme	Moderate to Extreme	Moderate	Slight to Moderate	None to Slight
Soil Site Stability Rationale: Bareground slightly higher than expected because of fire (CF-1, 2, 4). Soil surface resistance to erosion is slightly lower than potential for site (CF-4). There is 1 to 2 inches of surface soil loss, likely after fire (CF-4).	*Native*				CF-4	CF-1, CF-2, CF-3
Biotic Integrity Rationale: There is a moderately weak compaction layer that roots can penetrate (CF-1). Low composition of perennial grasses, perennial forbs and annual forbs (CF-2, 4). Low composition of shrubs resulting from fire (CF-4). Nitrogen fixing legumes in low composition (CF-2, 3). Moderately higher than expected mortality in bluebunch wheatgrass plants as shown by dead centers (CF-2). Cheatgrass common through plant communities (CF-3). The production is 25 to 50 percent at CF-4; and 50 to 75 percent at CF-1 and CF-3.	*Native*				CF-1, CF-2, CF-4	CF-3
Hydrologic Function Rationale: Litter amount is low (CF-1, 2). The high amount of bare ground allows for moisture loss from runoff and evaporation (CF-4). Low production because of low composition of big sagebrush (CF-4).	*Native*				CF-4	CF-1, CF-2, CF-3

1. Standard 1 – Watershed

Three of the four sites assessed (CF-1, 2, 3) in the allotment meet the indicators for soil stability and hydrologic function. Some had slightly higher bareground than expected as a result of past fires which removed the shrub component (CF-1, 2, 4). There was a moderate loss of soil at one site (CF-4). The soil surface resistance to erosion is weak at this site.

2. Standard 2 - Riparian Zones and Wetlands and Standard 3 - Stream Channel/Floodplain

National wetlands inventory maps show the only wetlands in the allotment are associated with some ponds dug in the bottom of the Juniper Draw drainage. Mosquito Lake Reservoir has some wetland plants (Baltic rush) on part of the perimeter. A playa like wetland is also present in Juniper Draw. There is currently no data to show the condition of these wetlands.

There is another wetland area on the northeast corner of the allotment in association with Mosquito Lake. There has been no data collected in regard to the wetland.

There are no stream channels or floodplains in this allotment; therefore, Standard 3 is not applicable.

3. Standard 4 (Native Plant Communities)

All four of the sites evaluated were in the Loamy 10-13" ecological site. A portion of the allotment burned in the 1970's and was not drill seeded. Sagebrush cover varied from 0 percent (CF-4) to a high of 18 percent (CF-2), an unburned area. Sites CF-1 and 3 had 9 percent and 3

percent of sagebrush respectively. Of concern at site 1 was the 14 percent cover of rabbitbrush. Average sagebrush height at the sites was 20.8 inches (CF-2), 31.3 inches (CF-3) and inches 33.0 (CF-1). The most common grass intercepted (hit) was Sandberg bluegrass (CF-1 24 percent; CF-2 23 percent; CF-3 23 percent; CF-4 35 percent). The dominant late seral grass for this ecological site was bluebunch wheatgrass. Bluebunch wheatgrass cover varied from 6 percent (CF-3), 9 percent (CF-1), and 10 percent (CF-2) to a high of 35 percent (CF-4). Other native grasses present include bottlebrush squirreltail, and thickspike/western wheatgrass. CF-3 had 40 percent cover of thickspike/western wheatgrass. Bare ground varied from a low of 9 percent (CF-3) to a high of 27 percent (CF-2). Biological soil crusts provided 0 percent cover at CF-4 and 14 percent at CF-2. Biological soil crusts should have been higher for this ecological site. Exotic annuals provided 2 (CF-1), 12 (CF-3), and 7 (CF-4) percent, respectively. Exotic annual cover included cheatgrass and bur buttercup. Russian thistle was present in some areas. A small infestation of medusahead rye, an invasive annual, had been observed in the allotment in the past.

A large portion of the southern pasture in the Crawfish Allotment is in crucial antelope winter range.

4. Standard 5 - Seedings

This standard does not apply.

5. Standard 6 - Exotic Plant Communities, Other Than Seedings

This standard does not apply

6. Standard 7 - Water Quality

This standard is not applicable. There are no perennial streams or open water bodies of any significance present in the allotment that may effect or impact water quality concerns within or outside of the allotment.

7. Standard 8 - Threatened and Endangered Plants and Animals

A number of species presently designated as Sensitive species are present in the allotment. For the most part, the allotment has not been inventoried for sensitive species. Sensitive species occurrences are frequently from incidental observations. Also a number of wildlife species presently designated as “watch” are present. Watch species are **not** presently designated as Sensitive species, but may be added to the sensitive list in future years. BLM has not inventoried for pygmy rabbit nor any bat species in this allotment. No known locations of BLM sensitive plants occurr in the Crawfish Allotment, however, slickspot peppergrass did occur in the Crawfish Allotment historically. It is unknown whether the standard was being met for special status plant species. There was no information available to determine whether livestock grazing management was having a significant impact on sensitive plant species or not. All the above mentioned species are shown in Table 7.

Table 7 - Idaho BLM Sensitive and Watch species in the Crawfish Allotment

Common Name	Scientific Name	Status	Presence
Greater sage grouse	*Centrocercus urophasianus*	S	C
Prairie falcon	*Falco mexicanus*	S	C
Ferruginous hawk	*Buteo regalis*	S	C
Loggerhead shrike	*Lanius ludovicianus*	S	C
Brewer's sparrow	*Spizella breweri*	S	C
Sage sparrow	*Amphispiza belli*	S	C
Spotted bat	*Euderma maculatum*	S	L
Swainson's hawk	*Buteo swainsoni*	W	C
Wilson phalarope	*Phalaropus tricolor*	W	C
Sage thrasher	*Oreoscoptes montanus*	W	C
Brewer's blackbird	*Euphagus cyanocephalus*	W	C
Western burrowing owl	*Speotyto cunciularia*	W	C
Short-eared owl	*Asio otus*	W	C
Slickspot peppergrass	*Lepidium papilliferum*	C	H
Status codes: S = designated Sensitive species; C = FWS candidate species; W = Watch category Presence codes: C = presence confirmed in allotment; L = presence likely in the allotment; H = historic, likely extirpated			

Greater sage grouse. No sage grouse leks have been documented in the Crawfish Allotment. No inventory has been done in this allotment in the past 20 years. Eight active or historic leks are in the surrounding allotments within 2 miles. Sage grouse from these leks are known to use the Crawfish Allotment to some extent. Population trend for sage grouse leks in the area is generally down (Table 7). Sage grouse nesting occurs in areas with adequate shrub cover (10-30%). Plant communities where Sandberg bluegrass, bottlebrush squirreltail, and Thurber needlegrass are grazed to 40% use level will not provide adequate residual vegetation for nesting sage grouse from 0.5 miles or more from water. In areas where bluebunch wheatgrass is dominant, 40% use will likely provide for some nesting cover at 0.5 miles from water.

Table 7 - Numbers of male sage grouse at leks near the Crawfish Allotment for which there is data.

Lek #	# Males	Year of Recent Count	Highest # Males	Year of Count
2O-073	0	1992	12	1981
2O-078	0	1996	76	1951
2O-091	0	1992	10	1981
2O-101	0	2002	11	1999
2O-102	5	2002	30	1999
2O-103	16	2002	16	2002
2O-105	0	2002	22	1998
2O-153	11	2001	15	1998

Prairie falcon. Prairie falcons have been observed in the Crawfish Allotment. Cliff habitat within the allotment is very limited. Prairie falcons most likely forage in the allotment and nest in cliffs along Clover Creek or Flat Creek.

Ferruginous hawk. Two ferruginous hawk nests have been documented in the Crawfish Allotment. One nest site is on a rock outcrop, whereas, the other nest is located in a juniper.

Loggerhead shrike. Loggerhead shrikes have been observed perching along fences in the Crawfish Allotment. Areas with tall sagebrush likely provide suitable nesting habitat for this species.

Brewer's sparrow and sage sparrow. Both sparrow species are present in areas where islands of big sagebrush remain.

Spotted bat. Spotted bats have been documented in the canyon associated with Clover Creek. They likely forage in the uplands in this allotment, particularly over ponds and the wetland at Crawfish Crossing.

Slickspot peppergrass. Slickspot peppergrass is not known to occur in this allotment, however, 2747 acres of suitable habitat does occur. Threats to this species include degradation of slickspots and surrounding area habitat, trampling from livestock, weed invasion.

C. Guidelines for Grazing Management

There are no formal grazing management guidelines implemented for the allotment. The permittee rotates grazing between the two pastures which provides periodic rest during the critical growing season. Not all water troughs have functional escape ramps for wildlife. The fence wire spacing is not to BLM specifications for mule deer, and antelope. Top wire is generally too high.

Per the *Idaho Standards for Rangeland Health and Guidelines for Livestock Grazing Management* the following Guidelines need to be implemented to promote significant progress toward the Standards:

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

V. Conclusions

All indicators for the applicable Standards for Rangeland Health are being met in the allotment for Standard 1 (Watershed), but not for Standard 2 (Riparian/Wetlands), Standard 4 (Native Plant Communities), and Standard 8 (Special Status Species). The reason for not meeting these standards is because of past fires which removed the shrub component and current livestock management.

VI. Consultation

Jim Klott, Wildlife Biologist
Arnold Pike, Range Conservationist
Sheri Hagwood, Botanist
Max Yingst, Recreation
Jeff Ross, Archeologist
Clare Josaitis, Natural Resource Specialist
John Ash, NRS - Climate, Monitoring, and Water quality
Kip Gould

VII. Recommendations

Maintain the current allocation of forage at 650 AUMs. This use has been based on monitoring and evaluation studies. TNR should not be authorized in this allotment for the term of the new permit.

Conduct Ecological Site Inventory of those acres previously determined to be in poor condition to quantify current status. Seed or plant native shrubs, grasses and forbs into poor condition ecological sites and rest as necessary to ensure their establishment. This would result in improvement of poor condition range.

Manage for light utilization levels (up to 40%) at key areas in order to maintain the existing native communities. Under the forage allocation proposed, a percent of the forage production would be allocated to watershed and wildlife and would allow the native plant communities to recover, and provide habitat for wildlife.

Establish grazing management guidelines to implement periodic rest during the critical growing season for the key species.

Seed or plant native shrubs and forbs into burned areas and rest as necessary to ensure establishment. Restore sagebrush into the allotment to improve habitat for sage grouse and other wildlife species as well as water cycling. This would result in improvement of poor condition range.

Insure that all water troughs have correctly installed and functioning wildlife escape ramps. Provide water in all troughs, even if livestock are not present, from May through October.

Apply measures to control noxious weeds (medusahead rye) in the allotment.

Move the trough in the south-central portion of the South pasture to one or more miles from existing water troughs.

Fence-off the water gap area in the southeast end of the South pasture at Crawfish Crossing. Re-vegetate area to native perennial plants, rest as needed for establishment.

Fence wetland area in northeast corner of North pasture to exclude livestock and improve wildlife habitat.

> *Note: 50% use on key woody species is not allocated to livestock. Use is expected to be low except for during the winter if snow covers herbaceous vegetation. Crucial winter range was identified in this allotment.