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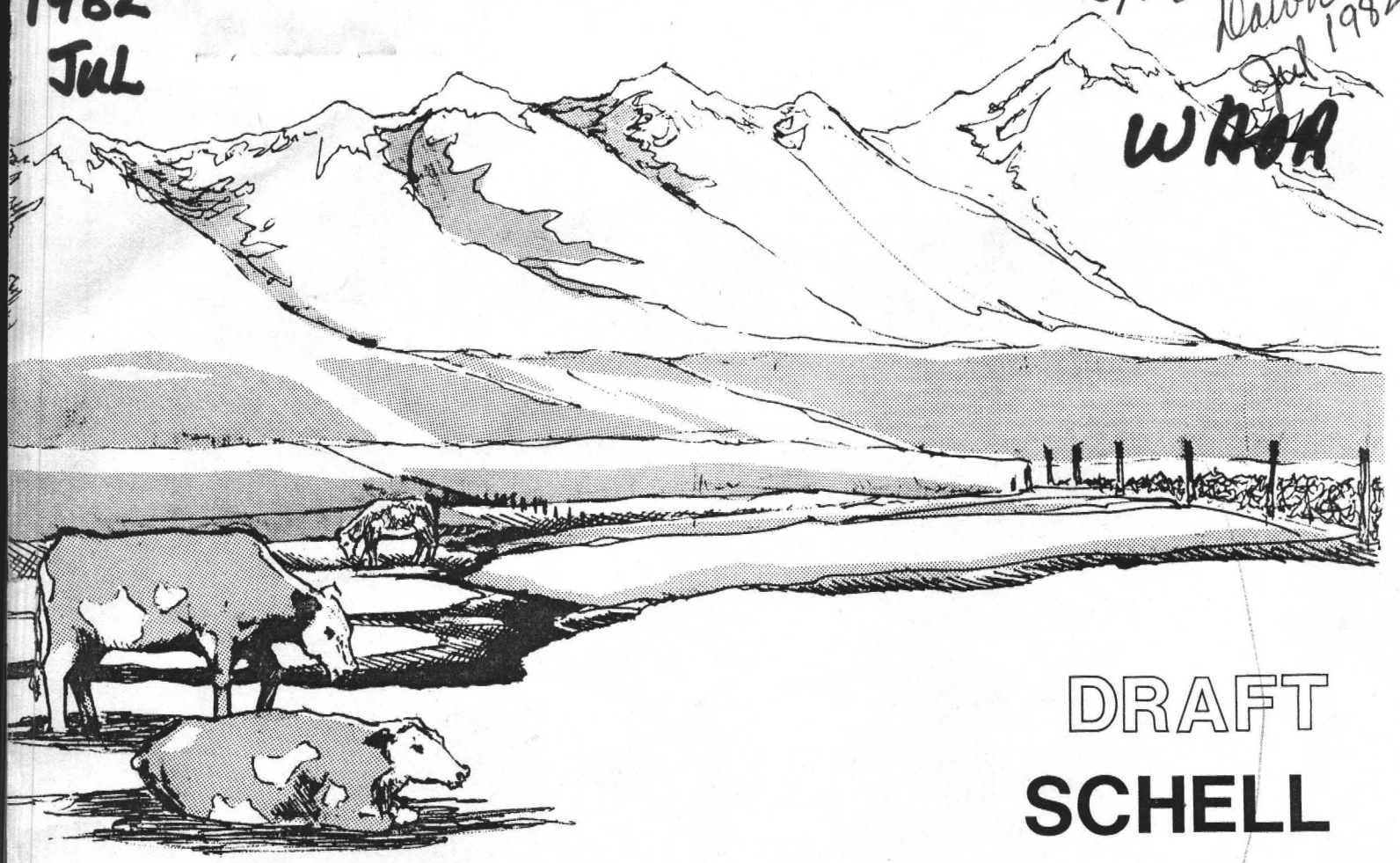


DRAFT

SCHELL

Grazing Environmental Impact Statement

United States Department of the Interior
Bureau of Land Management
Ely District Office
Ely, Nevada

SUMMARY

ALTERNATIVES, INCLUDING THE PROPOSED ACTION

The Bureau of Land Management (BLM) proposes to implement a livestock grazing management program in the Schell Resource Area (RA) of the Ely District, Nevada. The Schell RA encompasses 4,240,000 ac of public land in east central Nevada (see Location Map). About 119,000 ac of private land are intermingled throughout the area. The Humboldt National Forest, Lehman Caves National Monument, and the Goshute Indian Reservation all have lands within, or adjacent to, the Schell RA, accounting for another 1,642,000 ac.

Analyzed in this environmental impact statement (EIS) are the Proposed Action and four alternatives: Resource Protection, Graze at Preference, No Livestock Grazing, and No Action. Chapter 1 discusses the alternatives, including the Proposed Action. Major differences between alternatives revolve around allocation of forage. Management Framework Plan Step 3 (MFP-3) decisions will be made in 1983 on the grazing management program to be implemented. The actual schedule of implementation will not be known until that time. Final decisions will be based on the area Manager's recommendations, this EIS, monitoring data, and inputs from Coordinated Resource Management and Planning (CRMP). The Proposed Action starts with present use (the 1977-1979 three year average) or 136,669 AUMs. Livestock and wild horse adjustments would be made in 3 years when monitoring data would be available to manage forage utilization at sustained yield levels. For analysis purposes in this and the other alternatives, reductions in livestock and wild horse use of 10 percent were assumed to be required in 35 allotments with a present utilization problem. In the short term, increases in use are allowed due to range management actions (seedings, water development, AMPs, grazing systems) that would potentially increase available forage (Summary Figure 1). By the end of the short term, livestock use would be about 138,006 AUMs, 101 percent of present use. Slight increases would occur in the long term due to additional management actions in that in the long term use would be about 104 percent of present.

The Resource Protection alternative would initially reduce present use by 22,156 AUMs (16 percent) which would be allocated to wildlife. Intensive range management actions would increase livestock and wild horse use slightly in the remainder of the short term, but would remain below present levels. In the long term, wild horse and livestock use is expected to increase from short term levels, but still not back to present use. Wildlife use would remain at short term levels.

The Graze at Preference alternative would initially license livestock use at active preference, a 92 percent increase over present use, and remove all wild horses. For analysis purposes, it has been assumed that this would cause severe overgrazing on most allotments, resulting in significant reductions in use within 3 years when monitoring data becomes available. Range management actions, primarily 3-5 years of total rest from livestock grazing, would be required to return most of the area to usable status. In the long term, livestock use would still be nearly 50 percent lower than present use on most allotments.

The No Grazing alternative analyzes the effects of complete removal of livestock grazing, which would provide additional forage for wildlife and wild horses.

The No Action alternative assumes livestock, wildlife, and wild horse use would remain the same as at present in the short and long terms.

The present condition of the affected resource area is discussed in Chapter 2. The environmental impacts of the alternatives, including the proposed action, are discussed in Chapter 3 and are summarized in Summary Table 1. This table outlines by discipline the significant adverse impacts (SAI) and significant beneficial impacts (SBI) of each alternative and provides a basis for public review and for making a choice among options.

During scoping for this EIS, and during the MFP conflict analysis, 5 major resource problems that are occurring in the Schell RA were noted. Objectives were devised to help solve the problems. The problems and objectives are:

1. Problem: Improper utilization of the vegetation resource occurring on portions of the Schell RA.
   Objective: Manage the vegetation resource and its uses to attain utilization rates not to exceed those recommended by the Nevada Rangeland Monitoring Task Force for sustained yield (45 percent for shrubs, 55 percent for grasses and forbs).

2. Problem: A decline in historic wildlife numbers and crucial habitat that is unprotected.
   Objective: Attain and maintain habitat for reasonable numbers of wildlife, reestablish bighorn, pronghorn antelope, and elk on historic ranges, and protect crucial wildlife habitat.

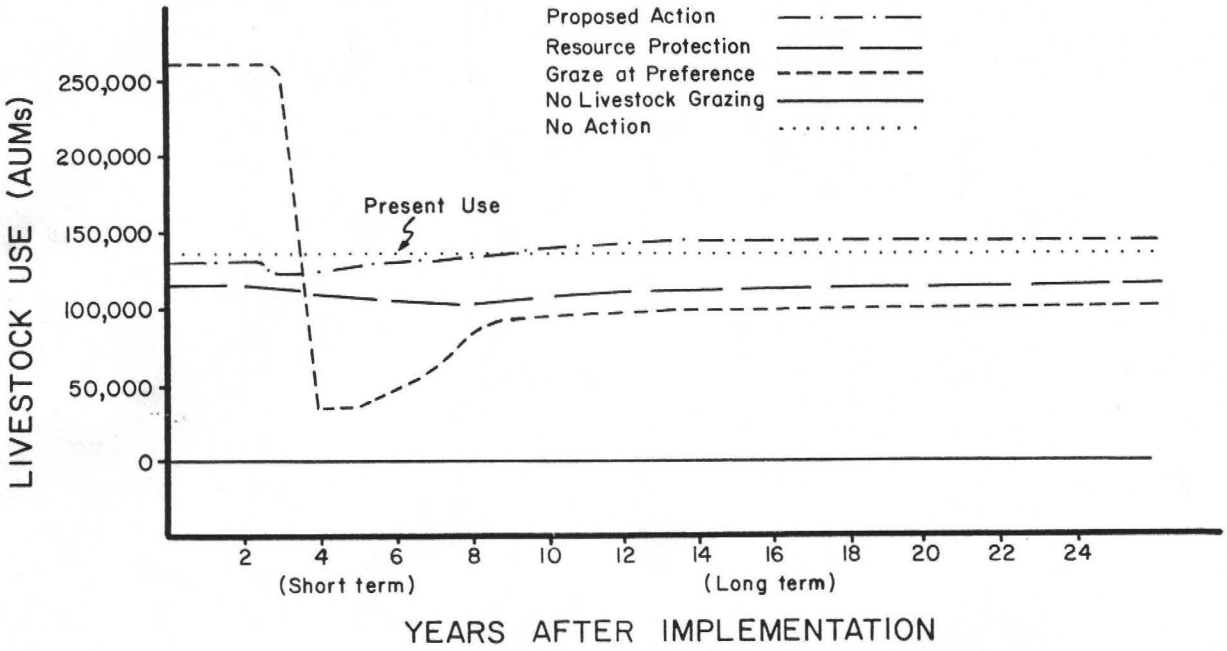
3. Problem: Less than good condition of many riparian and wetland areas.
   Objective: Upgrade and maintain all riparian and wetland areas in good or better condition.

4. Problem: A decline in livestock use in the Schell RA from historic authorized grazing use levels (active preference).
   Objective: Maximize livestock based on sustained yield of the forage resource.

5. Problem: Reduction of wild horse numbers below potential population levels.
   Objective: Maximize wild horse numbers based on sustained yield of the forage resource.

The No Action and Graze at Preference alternatives meet none of the objectives. The Resource Protection alternative meets 3 of the objectives completely, improper utilization, reasonable numbers of wildlife and protection of riparian-wetland areas. The No Grazing alternative meets problems 1, 2, 3, and 5 totally (improper utilization, wildlife, riparian-

Summary Figure 1. Graphic display of changes in livestock use due to implementation of alternatives for the Schell Resource Area grazing management program.



wetlands, wild horses). The Proposed Action meets problem 1 (improper utilization) completely, and partially meets objectives to problems 2, 3, 4, and 5 (wildlife, riparian-wetlands, livestock, and wild horses, respectively).

SCOPING COMMENTS

Scoping meetings were held in April 1981 in Ploche, Ely, Baker, and Reno, Nevada, to elicit public opinion concerning the Proposed Action and alternatives. Numerous additional contacts were made before and after the scoping meetings with various interested federal, state, and local agencies and other interest groups. Five major areas of concern or controversy dominated the comments. Environmental groups were concerned that the Schell RA was presently being overutilized by livestock and wild horses and that continuing existing use would not solve the problem. They suggested making initial forage allocations based on the 1978-79 range survey forage production data, rather than initially licensing at present livestock use and then monitoring to determine changes. Due to a lack of soils information and long term production data, the range survey was not used to adjust use. These groups, and others, were also concerned that inadequate forage and habitat for wildlife were contributing to low wildlife numbers. This concern was especially noted for riparian and wetland areas, often extremely important for wildlife and ecosystem diversity. The ranching community was concerned that BLM was attempting to decrease the level of livestock use, a use that in many cases is several generations old in the Schell RA. Wild horse groups were concerned that wild horse management centered on horse removal, rather than positive management.

Several people did not believe that BLM would be able to fund and carry out an extensive monitoring program, judging from past performance. Another federal agency questioned the format of the No Action alternative. Many of the comments concerned the manner in which vegetation allocation was to be handled in the EIS and centered on BLM administrative decisions rather than impacts to be analyzed in the EIS.

Other alternatives that were considered for this EIS but were dropped because they were neither reasonable nor feasible in light of BLM's multiple use objectives included: maximize wild horses, maximize wildlife, maximize livestock, and a 40 to 50 percent reduction in livestock.

Summary Table 1. Grazing Impact Summary for the Schell Resource Area.

Environmental Elements	Proposed Action	Resource Protection	Graze at Preference	No Livestock Grazing	No Action
Water Quality	Short Term No significant change over present levels. Long Term No significant change over present levels.	Short Term Water quality would improve due to fencing and reduced livestock levels, but not significantly. Long Term Water quality would continue to improve.	Short Term Water quality would decline in most springs and streams due to increased numbers of livestock. Long Term Water quality would probably improve to near present levels.	Short and Long Term Water quality would improve, but not significantly, due to decreased livestock use.	Short and Long Term No change over present levels.
Soils (erosion)	Short Term Improvement in erosion in at least 23 percent of Schell RA due to sustained yield utilization - SBI.[a] Long Term Continued improvement - SBI.	Short Term Improvement in erosion in majority of the Schell RA due to sustained yield utilization and decreased livestock use - SBI. Long Term Continued improvement - SBI.	Short Term Increased erosion in over 50 percent of the Schell RA due to increased livestock use - SAI.[b] Long Term Continued greater erosion than at present in over 50 percent of Schell RA - SAI.	Short and Long Term Improvement in erosion in all of Schell RA except potentially in a few areas of wild horse concentration - SBI.	Short Term No change over present. Long Term Increased erosion in 23 percent of Schell RA in downward trend - SAI.
Vegetation Livestock Condition and Apparent Trend	Short Term Improvement in at least 23 percent of Schell RA in a downward trend due to sustained yield utilization - SBI. Long Term Continued improvement - SBI.	Short Term Improvement in majority of Schell RA due to decreased livestock use and sustained yield utilization - SBI. Long Term Continued improvement - SBI.	Short Term Decline in over 50 percent of Schell RA due to increased livestock use - SAI. Long Term Gradual improvement in most areas but still lower than at present - SAI.	Short and Long Term Improvement in the entire Schell RA due to removal of livestock - SBI.	Short Term Little change over present. Long Term Decline in 23 percent of Schell RA presently in a downward trend - SAI.
Riparian and Wetland Areas	Short Term Improvement in about 250 ac of riparian habitat due to fencing. Long Term Additional improvement but the area is not quantifiable.	Short Term Improvement in 750 ac of riparian and 11,700 ac of wetland habitat due to fencing or other improvement - SBI. Long Term Additional improvement but the area is not quantifiable.	Short Term Decline in all riparian and wetland areas due to increased livestock use - SAI. Long Term No, or very little, improvement from short term - SAI.	Short and Long Term Improvement in all riparian and wetland areas due to removal of livestock - SBI.	Short and Long Term No change over present.
Poisonous Plants and Sensitive Plants	Short and Long Term No significant impacts.	Short and Long Term No significant impacts.	Short Term Potential for increased poisonous plants and destruction of some sensitive plants by heavy grazing - SAI.	Short and Long Term No significant impacts.	Short and Long Term No significant impacts.
Livestock Grazing	Short Term Increase in livestock use of about 1 percent over present use. Long Term Increase in livestock use about 1 percent above short term use.	Short Term Decrease in livestock use of about 11 percent due to reserving forage for wildlife and reductions to achieve sustained yield - SAI. Long Term Additional AUMs (3,596) would accrue due to intensive management actions, increasing livestock use to less than 10 percent below present use.	Short Term Livestock use would decrease 31 percent from present levels due to overutilization during the first 3 years - SAI. Long Term Livestock use would increase but still be more than 10 percent below present levels - SAI.	Short and Long Term All livestock would be removed from public lands, decreasing present livestock production by 136,669 AUMs - SAI.	Short and Long Term Livestock numbers would remain at present levels, although some minor reductions would be expected in the long term.

Why only 23%? Abandon 77%?

Summary Table 1. Continued

Environmental Elements	Proposed Action	Resource Protection	Graze at Preference	No Livestock Grazing	No Action
Wildlife					
Big Game	Short Term Slight improvement in big game habitat condition and increases in population levels due to sustained yield utilization. Long Term Continued slight improvement.	Short Term Habitat and forage for reasonable number of all big game would be reserved and overall habitat condition would improve - SBI. Long Term Continued habitat condition improvement.	Short Term Forage and habitat condition for big game would decrease due to overutilization by livestock - SAI. Long Term No significant improvement would occur, continuing the low short term levels of big game - SAI.	Short and Long Term Big game would be able to expand throughout the Schell RA due to the removal of livestock - SBI.	Short and Long Term No changes in big game populations or habitat condition are expected.
Upland Game and Waterfowl	Short and Long Term No significant impacts.	Short Term The improvement of 750 ac of riparian and 11,700 ac of wetland habitat due to fencing or other actions would benefit upland game and waterfowl. Meadows would improve due to decreased livestock use - SBI. Long Term Continued improvement in habitat for upland game and waterfowl.	Short Term Overutilization of all habitats, especially in 3,265,000 ac where it would be most severe, would decrease habitat condition and therefore populations of upland game and waterfowl - SAI. Long Term Some improvement would occur, but habitat still would be degraded in most of the Schell RA from present levels.	Short and Long Term All habitats would improve due to the removal of livestock use - SBI.	Short and Long Term No change in population levels or habitat condition would occur.
Nongame	Short Term Nongame habitat would improve due to fencing of streams and wetlands and primarily due to habitat improvement in at least 23 percent of the Schell RA due to sustained yield utilization and intensive grazing management - SBI. Long Term Continued improvement in nongame habitat.	Short Term All habitats for nongame wildlife would improve due to livestock reductions, sustained yield utilization and fencing or other improvement of 750 ac of riparian and 11,700 ac of wetland habitat - SBI. Long Term Continued improvement in nongame habitat.	Short Term Habitat condition would decline in 3,265,000 ac due to increased livestock use for 3 years - SAI. Long Term Some recovery would occur, but habitat and population would still be below present levels.	Short and Long Term Habitat condition would improve throughout the area, with increased populations of nongame wildlife, due to the elimination of livestock grazing - SBI.	Short and Long Term No major changes over present conditons would occur.
Aquatics	Short Term Fencing would improve 9.8 mi of fish stream - SBI. Increased livestock use would decrease habitat condition on 5 mi of fish stream - SAI. Long Term Additional streams would probably be improved.	Short Term Fencing or other techniques would improve 31.7 mi of fish streams - SBI. Long Term Additional streams would be improved if their habitat condition was less than good.	Short Term Twenty-two of the 26 fish streams in the area would be degraded by increased livestock use - SAI. Long Term Some improvement would occur in stream habitat quality, but present levels would still not be reached.	Short and Long Term All streams would be improved due to elimination of livestock - SBI.	Short and Long Term Stream habitat condition would remain at present levels.

Summary Table 1. Continued

Environmental Elements	Proposed Action	Resource Protection	Graze at Preference	No Livestock Grazing	No Action
Wildlife					
Big Game	Short Term Slight improvement in big game habitat condition and increases in population levels due to sustained yield utilization. Long Term Continued slight improvement.	Short Term Habitat and forage for reasonable number of all big game would be reserved and overall habitat condition would improve - SBI. Long Term Continued habitat condition improvement.	Short Term Forage and habitat condition for big game would decrease due to overutilization by livestock - SAI. Long Term No significant improvement would occur, continuing the low short term levels of big game - SAI.	Short and Long Term Big game would be able to expand throughout the Schell RA due to the removal of livestock - SBI.	Short and Long Term No changes in big game populations or habitat condition are expected.
Upland Game and Waterfowl	Short and Long Term No significant impacts.	Short Term The improvement of 750 ac of riparian and 11,700 ac of wetland habitat due to fencing or other actions would benefit upland game and waterfowl. Meadows would improve due to decreased livestock use - SBI. Long Term Continued improvement in habitat for upland game and waterfowl.	Short Term Overutilization of all habitats, especially in 3,265,000 ac where it would be most severe, would decrease habitat condition and therefore populations of upland game and waterfowl - SAI. Long Term Some improvement would occur, but habitat still would be degraded in most of the Schell RA from present levels.	Short and Long Term All habitats would improve due to the removal of livestock use - SBI.	Short and Long Term No change in population levels or habitat condition would occur.
Nongame	Short Term Nongame habitat would improve due to fencing of streams and wetlands and primarily due to habitat improvement in at least 23 percent of the Schell RA due to sustained yield utilization and intensive grazing management - SBI. Long Term Continued improvement in nongame habitat.	Short Term All habitats for nongame wildlife would improve due to livestock reductions, sustained yield utilization and fencing or other improvement of 750 ac of riparian and 11,700 ac of wetland habitat - SBI. Long Term Continued improvement in nongame habitat.	Short Term Habitat condition would decline in 3,265,000 ac due to increased livestock use for 3 years - SAI. Long Term Some recovery would occur, but habitat and population would still be below present levels.	Short and Long Term Habitat condition would improve throughout the area, with increased populations of nongame wildlife, due to the elimination of livestock grazing - SBI.	Short and Long Term No major changes over present conditons would occur.
Aquatics	Short Term Fencing would improve 9.8 mi of fish stream - SBI. Increased livestock use would decrease habitat condition on 5 mi of fish stream - SAI. Long Term Additional streams would probably be improved.	Short Term Fencing or other techniques would improve 31.7 mi of fish streams - SBI. Long Term Additional streams would be improved if their habitat condition was less than good.	Short Term Twenty-two of the 26 fish streams in the area would be degraded by increased livestock use - SAI. Long Term Some improvement would occur in stream habitat quality, but present levels would still not be reached.	Short and Long Term All streams would be improved due to elimination of livestock - SBI.	Short and Long Term Stream habitat condition would remain at present levels.

Summary Table 1. Continued

Environmental Elements	Proposed Action	Resource Protection	Graze at Preference	No Livestock Grazing	No Action
Wild Horses	Short and Long Term No significant impacts. Mortality of 1-2 percent would be expected during period roundups to maintain present levels of use.	Short Term The Antelope Herd would be reduced by 68 horses (27%) - SAI. Additional horses would be removed from other herd units, possibly resulting in significant losses to some herds - SAI. About 1 or 2 horses would die during roundup activities. Long Term No significant impacts.	Short and Long Term All wild horses would be removed from the Schell RA - SAI. About 5-10 horses would die during roundup and holding.	Short and Long Term Wild horses would be allowed to maximize at about 2,000 as forage would be available due to elimination of livestock - SBI.	Short and Long Term Population levels would remain at about present levels as periodic roundups would remove excess animals. A 1-2 percent mortality during roundup would be expected.
Recreation	Short and Long Term Slight increase in fisherman days, increase of 74 hunter days per year, and slight increases in camping and ORV use.	Short and Long Term Slight increase in fisherman days, increase of 7,000 hunter days per year and attendant increases in camping and ORV use - SBI.	Short and Long Term At least a 10% reduction in hunter days is expected - SAI.	Short and Long Term Slight increases in fisherman days, increase of 7,000 hunter days and attendant increases in camping and ORV use - SBI.	Short and Long Term No major changes over present use patterns.
Cultural Resources	Short and Long Term Little significant change over present conditions.	Short and Long Term Reduced chance of loss of cultural resources due to decreased livestock use.	Short Term Increased chance for loss of cultural resources due to increased livestock use. Long Term Decreased livestock use would decrease the chance for significant adverse impacts.	Short and Long Term Reduced potential for loss of cultural resources due to decreased livestock use.	Short and Long Term No major changes from present levels of impact.
Paleontology	Short and Long Term No significant impacts.	Short and Long Term No significant impacts.	Short and Long Term The potential for the loss of scientifically valuable fossils is increased due to grazing at preference - SAI.	Short and Long Term No significant impacts.	Short and Long Term No significant impacts.
Economics Ranch Operations	Short Term No significant impacts. Long Term Sheep operators would have a 5 percent increase in net income if water developments and seedings were placed totally on their allotments - SBI. No other ranch size would be significantly affected by this alternative.	Short Term Small and medium sized cattle ranches would be reduced 6 and 8 percent in net income by livestock reduction - SAI. All ranch classes would be reduced from 7 to 21 percent by livestock reductions and a period of rest - SAI. Some ranchers would go out of business. Long Term Medium sized cattle ranches would be reduced 6 percent in net income without a period of rest - SAI. All ranches except sheep operators would be reduced 7 to 22 percent by a period of rest - SAI.	Short Term Many ranchers would be out of business. All ranch size classes would be significantly reduced (6 to 20 percent) in net income without water or seeding development - SAI. Only small cattle ranches would be significantly adversely affected if water and seeding developments were maximized on these allotments - SAI. Long Term Net income would probably increase but is not quantifiable.	Short and Long Term Most ranchers would go out of business. Sheep operations would be the least affected but net cash income would still be decreased by 26 percent from present levels; cattle operators would be decreased from 18 to 58 percent - SAI.	Short and Long Term No significant changes from present conditions.

Summary Table 1. Continued

Environmental Elements	Proposed Action	Resource Protection	Grazing at Preference	No Livestock Grazing	No Action
Economics					
Regional	Short and Long Term No significant impacts.	Short Term Significant (5 percent) reductions would occur in the livestock and food and feed grain sectors without a period of rest, wholesale and retail sales would also be significantly reduced with a period of rest - SAI.	Short Term Significant decreases in employment and sales in the livestock and food and feed grain sectors would occur by the end of short term - SAI. Long Term Significant adverse impacts would probably continue.	Short and Long Term Changes in livestock and food and feed grain sectors would be greater than 50 percent from present levels - SAI.	Short and Long Term No significant changes from present conditions.
Social					
Ranching Community	Short and Long Term Little significant impact but the overall increase in livestock use due to intensive grazing management would benefit ranchers and the rancher-BLM relationship.	Short and Long Term Livestock reductions for wildlife would cause a deteloration in relationships between ranchers and BLM - SAI.	Short and Long Term Relationships between ranchers and BLM would deteriorate after reductions in livestock use are made. Some ranchers would be forced out of business - SAI.	Short and Long Term The loss of grazing on public land would force most ranchers out of business and cause them to leave the area in search of employment - SAI.	Short and Long Term Ranchers would not be satisfied with the status quo, relationship with BLM would deteriorate - SAI.
Local Community	Short and Long Term No significant impacts.	Short and Long Term Adverse impacts to ranchers would create opposition to BLM policies in the local community - SAI.	Short and Long Term The overall relationship between the local community and BLM would deteriorate - SAI.	Short and Long Term The loss of most of the local ranching would result in strong opposition from the local community, as well as lifestyle and leadership changes - SAI.	Short and Long Term No significant impacts.
Regional and National	Short and Long Term No significant impacts.	Short and Long Term Most wild horse, wildlife, and environmental groups would support this alternative - SBI.	Short and Long Term Wild horse, wildlife, and environmental groups would not favor this alternative due to adverse impacts to multiple use management - SAI.	Short and Long Term Enhanced opportunities for wild horses and wildlife would generally be viewed favorably, although the loss of ranching would be considered adverse by most regional and national groups. Overall impact would be beneficial - SBI.	Short and Long Term Dissatisfaction with present policies by wild horse, wildlife, and environmental groups, especially existing use of livestock, would cause a deterioration of relationships between these groups, BLM, and ranchers - SAI.

[a]SBI = Significant Beneficial Impact.

[b]SAI = Significant Adverse Impact.

CHAPTER 1

ALTERNATIVES INCLUDING THE PROPOSED ACTION

PURPOSE AND NEED FOR ACTION

The purpose of this Environmental Impact Statement (EIS) is to analyze the potentially significant environmental impacts of implementing a grazing management program in the Schell Resource Area (RA) of the Ely District, Nevada. This EIS is being prepared in compliance with Section 102(2) of the National Environmental Policy Act of 1969. It will follow recent direction as outlined in the Council of Environmental Quality Regulations of November 29, 1978. This EIS was written by BIO/WEST, Inc., under contract to, and with considerable assistance from, the Bureau of Land Management (BLM). Please consult Glossary and Acronym sections for definitions of key terms.

To comply with the decision in a 1974 lawsuit brought against BLM by the Natural Resources Defense Council, site-specific EISs must be written by the Agency on the impacts of grazing on public land. The grazing management program being proposed by BLM for the Schell RA is derived from the Schell Management Framework Plan (MFP) for use of public lands. The portions of the MFP-2 involving grazing are the proposed action for this EIS. Table 1-1 displays a summary of the appropriate MFP recommendations. Following the EIS process, the Ely District Manager will issue his decisions on the grazing program to be employed as part of MFP-3.

ALTERNATIVES TO BE CONSIDERED

During Scoping for this EIS, as well as through the MFP conflict analysis process, five major resource problems have been identified in the Schell RA. Objectives for eliminating each of these problems were then developed. The problems and objectives are:

1. Problem: Improper utilization of the vegetation resource occurring on portions of the Schell RA.
   Objective: Manage the vegetation resource and its uses to attain utilization rates not to exceed those recommended by the Nevada Rangeland Monitoring Task Force for sustained yield (45 percent for shrubs, 55 percent for grasses and forbs).

2. Problem: A decline in historic wildlife numbers and crucial habitat that is unprotected.
   Objective: Attain and maintain habitat for reasonable numbers of wildlife, reestablish bighorn, pronghorn antelope, and elk on historic ranges, and protect crucial wildlife habitat.

3. Problem: Less than good condition of many riparian and wetland areas.
   Objective: Upgrade and maintain all riparian and wetland areas in good or better condition.

4. Problem: A decline in livestock use in the Schell RA from historic authorized grazing use levels (active preference).
   Objective: Maximize livestock based on sustained yield of the forage resource.

5. Problem: Reduction of wild horse numbers below potential population levels.
   Objective: Maximize wild horse numbers based on sustained yield of the forage resource.

The alternatives analyzed in this EIS include Proposed Action, Resource Protection, Graze at Preference, No Livestock Grazing, and No Action. These alternatives will be compared on the basis of how well they resolve the 5 resource problems identified for the Schell RA. Obviously, meeting all the objectives in one alternative may not be possible due to the level of range improvement funding available. Therefore, the alternatives are structured to favor certain resource objectives over others and thus provide the required range of assessment for a grazing EIS.

This EIS will be completed in September 1982. The MFP-3 decision on the grazing management program to be implemented on the Schell RA will be made in 1983, and implementation of any livestock adjustments would begin in 1984. Those management actions scheduled for the short term would be implemented within 5 years and for the long term within 20 years.

PROPOSED ACTION

The Ely District of the BLM proposes to implement a grazing management system on the Schell RA to help solve resource problems. The proposals contained in this alternative were derived from MFP-2 for the Schell RA and were considered in light of present funds available for resource management. Table 1-2 lists the allotments on the Schell RA, problems in the allotments, allotment size, and present grazing characteristics. The 5 problems are those discussed above. They are: (1) Improper utilization, (2) Declining wildlife, (3) Poor condition of riparian and wetland areas, (4) Declining livestock numbers, and (5) Artificially controlled wild horses. The following discussion explains the proposals to be implemented in the short term (5 years) and long term (20 years) and which problems they will help alleviate.

Grazing by livestock, wildlife, and wild horses would continue at existing levels except where specific proposals change those levels.

Short Term Management Actions

1. Initially, license livestock use at the past 3-year (1977-1979) average licensed use level, or 136,669 AUMs. Increases in this level

Table 1-1. MFP recommendations affecting rangeland management in the Schell Resource Area.

MFP Recommendations	Conflicting MFP-1 Recommendations	(Multiple Use) MFP-2 Recommendations	Resource Trade-Offs
1. Provide forage for reasonable numbers of wildlife and increased numbers of wild horses and livestock.	1. There is not enough available forage to support all animals at increased levels. There is not enough information on the area to accurately recommend a stocking level among users.	1. Continue to graze all large herbivores at existing levels. Implement a monitoring program to determine the correct level(s) of use between users.	1. During the first 3 years that studies are being implemented some range that is overstocked will continue to deteriorate. During the same time, ranges that are understocked will improve. This may place an economic burden on operators wishing to increase their herd. Wildlife and wild horses will benefit on the understocked range and will be negatively impacted on the overstocked range.
2. Introduce resident herds of Bighorn Sheep, Antelope and Elk into historic range.	2. There is a lack of forage to meet this additional demand. There are potential problems with disease transmittal from domestic sheep to bighorn. Recommendation would limit the kinds of range improvements that could be installed for livestock management.	2. Cooperate with NDOW to facilitate reintroduction of these big game species, once studies show that there is forage in excess of existing demand. Prepare an HMP prior to any introduction. No bighorn sheep are to be introduced into areas where domestic sheep currently graze. When planning range improvements, the potential for introductions will be considered. In areas designated for elk introductions encourage sheep grazing in lieu of cattle grazing.	2. Fewer areas will be available for reintroduction.
3. Protect and improve the key/crucial areas of big game habitat and remove livestock and wild horses from these areas.	3. Recommendation limits construction of range improvements for livestock management, i.e., vegetation conversions, fences, etc. Limits ability to provide forage to increase livestock and wild horses.	3. Insure that the key/crucial areas are protected from any impact that would lessen their ability to support big game during the critical period. Livestock and wild horses will continue to graze these areas unless studies show that their presence is causing an adverse impact.	3. Less area will be available for vegetation conversion. Constrains the placement of other range improvements. There will still be some competition between big game and wild horses and livestock on these areas.

Table 1-1. Continued

MFP Recommendations	Conflicting MFP-1 Recommendations	(Multiple Use) MFP-2 Recommendations	Resource Trade-Offs
4. Fence 32 miles of streams with fair or poor bank cover or stability. Fence and exclude livestock grazing on 11,700 acres of wetlands and riparian areas.	4. Recommendation results in a loss of availability of water for use by livestock and wild horses and a loss of AUMs for livestock. Wild horses would lose the use of the area.	4. Fence up to ten miles of the most critical condition streams. Fences are not to exceed 1/2 mile in length in one stretch. Big game, livestock or wild horses are not to be excluded from adequate water sources. Implement a grazing program on the remaining streams to help improve their condition. Fence the larger areas of wetland/riparian lands. Continue grazing of these areas by livestock under a system which will benefit the vegetation and the wildlife dependent upon it.	4. The streams that are not fenced may not improve or improve at much slower rate than the fenced streams. The fenced wetland/riparian areas will provide better wildlife habitat but not as much as it would if livestock were excluded. Wild horses would not be able to use the fenced areas and may impact the surrounding areas.

Table 1-2. Allotment characteristics in the Schell Resource Area. Refer to Allotment Map for reference.

Allotment	Problem/ Objectives[a]	Federal Acres	Existing Periods of Use	Grazing Preference (AUMs)	3 yr. avg. Licensed Use (AUMs)	% Grazing Preference Used[b]	Wildlife Demand (AUMs)[c]	Reasonable No WL Demand (AUMs)	Wild Horse Demand (AUMs)
Becky Springs 0101	1,2,4,5	40,621	11/1-6/30	3,842	669	17%	25 (D) 48 (A) 73 (T)	59 (D) 83 (A) 142 (T)	152
Goshute Mtn. 0102	1,4,5	5,693	1/1-4/7	465	417	90%	27 (A) 27 (T)	26 (A) 26 (T)	36
Deep Creek 0103	1,4,5	23,932	3/1-2/28	1,722	1,179	68%	51 (A) 51 (T)	48 (A) 48 (T)	591
Chin Creek 0104	1,2,4,5	148,017	3/1-2/28	13,115	2,766	21%	283 (D) 398 (A) 681 (T)	1143 (D) 394 (A) 1537 (T)	1411
Sampson Creek 0105	1,2,4,5	13,212	3/1-6/30	1,592	796	50%	101 (D) 4 (A) 105 (T)	169 (D) 4 (A) 173 (T)	123
Tippett 0106	1,2,4,5	213,198	3/1-2/28	14,455	7,228	50%	2059 (D) 319 (A) 2378 (T)	7491 (D) 310 (A) 7801 (T)	655[d]
Tippett Pass 0107	2,3,4,5	77,161	3/1-2/28	8,177	501	6%	82 (D) 176 (A) 258 (T)	563 (D) 185 (A) 748 (T)	56
Red Hills 0108	2,3,4	35,489	10/16-12/24	2,600	821	32%	27 (D) 56 (A) 83 (T)	88 (D) 63 (A) 151 (T)	--
Mill Spring 0109	2,4,5	5,587	4/1-9/30	418	252 (1 yr only)	60%	48 (D) 5 (A) 53 (T)	328 (D) 5 (A) 333 (T)	--[d]
Pleasant Valley 0110	1,2,4,5	5,113	4/1-9/30	405	100	25%	2 (D) 2 (T)	12 (D) 12 (T)	--[d]
Muncy Creek 0111	2,3,4	207,906	3/1-2/28	12,384	5,929	48%	467 (D) 320 (A) 10 (BH) 797 (T)	1946 (D) 364 (A) 19 (BH) 2329 (T)	--
Indian George 0112	2,4,5	35,683	11/9-5/5	2,860	2,573	90%	25 (D) 133 (A) 158 (T)	179 (D) 149 (A) 328 (T)	--[d]
Meadow Creek 0113	2,4	8,273	3/1-2/28	445	223	50%	10 (D) 4 (A) 14 (T)	38 (D) 5 (A) 43 (T)	--
Bassett Creek 0114	2,3,4	7,328	3/1-2/28	591	296	50%	18 (D) 18 (T)	35 (D) 35 (T)	--
Devils Gate 0115	2,4,5	17,686	11/15-5/2	1,810	695 (2 yr ave)	38%	8 (D) 60 (A) 1 (BH) 69 (T)	46 (D) 68 (A) 1 (BH) 115 (T)	--
Taft Creek 0116	1,2,3,4	28,294	4/15-2/28	1,831	711	39%	158 (D) 12 (A) 170 (T)	311 (D) 14 (A) 325 (T)	--
Smith Creek 0117	1,2,3,4	68,072	11/16-9/15	3,989	3,428	86%	55 (D) 210 (A) 29 (BH) 294 (T)	316 (D) 235 (A) 55 (BH) 606 (T)	--
Stephens Creek 0118	1,2,3,4	3,784	6/1-10/31	318	115	36%	130 (D) 130 (T)	255 (T) 255 (T)	--
Cleveland Ranch 0119	1,2,3,4	11,656	5/1-7/31	1,021	696	68%	236 (D) 34 (A) 270 (T)	464 (D) 39 (A) 503 (T)	--
Negro Creek 0120	1,2,3,4	31,985	3/1-2/28	3,727	2,357	63%	11 (D) 119 (A) 130 (T)	78 (D) 135 (A) 213 (T)	--
Bastian Creek 0121	2,4	13,527	3/1-2/28	1,778	226	13%	55 (A) 55 (T)	62 (A) 62 (T)	--
D - X 0122	2,4	3,611	4/1-4/30	277	227	82%	34 (D) 34 (T)	233 (D) 233 (T)	

Table 1-2. Continued

Allotment	Problem/ Objectives[a]	Federal Acres	Existing Periods of Use	Grazing Preference (AUMs)	3 yr. avg. Licensed Use (AUMs)	% Grazing Preference Used[b]	Wildlife Demand (AUMs)[c]	Reasonable No WL Demand (AUMs)	Wild Horse Demand (AUMs)
Sacramento Pass 0123	1,2,4	21,843	11/1-5/31	1,694	401	24%	104 (D) 42 (A) 146 (T)	703 (D) 47 (A) 750 (T)	--
Strawberry Creek 0124	1,2,4	5,992	6/16-9/15	585	345	59%	58 (D) 58 (T)	286 (D) 286 (T)	--
Baker Creek 0125	2,4	55,515	10/15-6/18	4,313	2,910	67%	69 (D) 30 (A) 99 (T)	135 (D) 42 (A) 177 (T)	--
Majors 0126	2,3,4	99,193	4/16-10/31	12,535	6,268	50%	267 (D) 120 (A) 7 (E) 394 (T)	672 (D) 136 (A) 30 (E) 838 (T)	--
Willard Creek 0127	1,2,3,4	10,246	4/15-11/30	1,132	566	50%	37 (D) 37 (T)	107 (D) 107 (T)	--
Scotty Meadows 0128	1,2,4	17,322	6/1-9/30	1,227	748	61%	6 (D) 16 (A) 22 (T)	29 (D) 35 (A) 64 (T)	--
Willow Springs 0129	2,4	84,299	12/1-5/31	6,608	1,914	29%	260 (D) 48 (A) 18 (E) 326 (T)	618 (D) 106 (A) 80 (E) 804 (T)	--
South Spring Valley 0130	2,3,4,5	79,323	4/1-9/30	6,329	3,165	50%	50 (D) 73 (A) 123 (T)	113 (D) 77 (A) 190 (T)	[d]
Chokecherry 0131	3,4	32,334	10/16-5/31	3,408	1,748	51%	33 (A) 33 (T)	58 (A) 58 (T)	--
Cottonwood 0132	1,2,4,5	49,975	11/1-5/31	4,106	2,345	57%	50 (D) 35 (A) 85 (T)	119 (D) 77 (A) 196 (T)	239
Hamblin Valley 0133	1,2,3,4,5	105,831	11/1-5/31	8,177	4,231	52%	516 (D) 86 (A) 602 (T)	915 (D) 161 (A) 1076 (T)	523
N. Chokecherry 0134	2,3,4	8,692	3/1-6/15	641	364	57%	8 (A) 8 (T)	15 (A) 15 (T)	--
McCoy Creek 0135	2,3,4	5,289	3/1-2/28	508	254	50%	45 (D) 45 (T)	89 (D) 89 (T)	--
Fox Mountain 1001	1,2,3,4,5	75,436	11/24-5/15	6,680	2,301	34%	50 (D) 50 (T)	119 (D) 119 (T)	39
Narrows 1002	4,5	6,909	12/26-1/25	535	367	69%			--[d]
Oreana Springs 1003	1,2,4,5	78,646	9/1-5/31	3,433	2,369	69%	23 (D) 23 (T)	87 (D) 87 (T)	53
Timber Mtn. 1004	2,4,5	19,732	3/1-4/15	965	435 (2 yrs Only)	45%	7 (D) 7 (T)	15 (D) 15 (T)	18
Irish Mtn. 1006	2,4	70,861	3/1-2/28	2,915	1,458	50%	118 (D) 118 (T)	188 (D) 188 (T)	--
N. Hiko-Six Mile 1007	1,2,4	14,625	12/1-2/28	543	463	85%	2 (D) 2 (T)	15 (D) 15 (T)	--
S. Hiko-Six Mile 1008	2,4	33,018	3/1-2/28	858	617	72%	19 (D) 19 (T)	23 (D) 23 (T)	--
White River 1009	4	4,722	11/1-3/15	405	96	24%			--
Forest Moon 1010	1,2,4,5	99,968	10/6-8/31	3,980	2,030	51%	939 (D) 939 (T)	1491 (D) 1491 (T)	39
Middle Coal Valley 1011	1,2,4	24,826	9/11-5/31	1,138	1,060	93%	2 (D) 2 (T)	3 (D) 3 (T)	--[d]
Pine Creek 1012	1,2,4	28,598	5/1-10/15	2,207	2,057	93%	98 (D) 98 (T)	155 (D) 155 (T)	--
Bird Springs 1013	2,4	23,192	3/1-2/28	736	420	57%	10 (D) 10 (T)	21 (D) 21 (T)	--

Table 1-2. Continued

Allotment	Problem/ Objectives[a]	Federal Acres	Existing Periods of Use	Grazing Preference (AUMs)	3 yr. avg. Licensed Use (AUMs)	% Grazing Preference Used[b]	Wildlife Demand (AUMs)[c]	Reasonable No WL Demand (AUMs)	Wild Horse Demand (AUMs)
Coal Valley 1014	1,4	25,978	4/1-8/31 11/1-2/28	848	604	71%			--
Cottonwood 1015	1,2,4	42,172	3/1-2/28	3,016	1,229	41%	209 (D) 209 (T)	332 (D) 332 (T)	--
Needles 1016	2,4,5	100,311	12/1-3/14	3,617	2,905	80%	21 (D) 21 (T)	37 (D) 37 (T)	52
Wildhorse 1017	2,4	18,014	3/1-2/28	315	158	50%	58 (D) 58 (T)	92 (D) 92 (T)	--
Batterman Wash 1018	1,2,3,4,5	39,878	11/10-1/31 3/26-4/6	2,093	1,072	51%	203 (D) 203 (T)	323 (D) 323 (T)	--[d]
Seaman Springs 1019	2,4,5	23,560	1/26-4/13	1,619	554	34%	3 (D) 3 (T)	19 (D) 19 (T)	35
W. Timber Mtn. 1020	2,4	10,252	12/6-1/25	735	508	69%	4 (D) 4 (T)	13 (D) 13 (T)	--[d]
Worthington Mtn. 1021	2,4	93,425	12/1-5/31	6,298	3,845	61%	115 (D) 115 (T)	182 (D) 182 (T)	--
Hardy Springs 1022	1,2,4,5	108,331	10/1-5/15	5,746	3,037	53%	663 (D) 663 (T)	1084 (D) 1084 (T)	--[d]
Sunnyside 1023	1,2,3,4,5	219,519	3/1-2/28	8,787	3,390	39%	166 (D) unknown (E) 166 (T)	347 (D) 110 (E) 457 (T)	89
Dry Farm 1024	1,2,4,5	17,532	6/1-8/31	733	644 (2 yr. average)	88%	127 (T) 127 (T)	201 (T) 201 (T)	--[d]
E. Water Gap 1025	1,2,4	29,883	9/1-11/31	1,209	510	42%	1 (D) 1 (T)	2 (D) 2 (T)	--[d]
W. Water Gap 1026	1,2,4	6,357	9/1-10/9	460	230	50%	106 (D) 106 (T)	168 (D) 168 (T)	--
Crescent 1028	2,4	78,442	12/11-4/14	2,245	465	21%	125 (D) 125 (T)	199 (D) 199 (T)	--
Reserved for Wildlife 1031	2,4,5	23,875	None				181 (D) 181 (T)	287 (D) 287 (T)	--
Uhalde Coal Valley 1032	2,4	5,173	12/1-5/31	(Combined with Worthington Mountain)			--	--	--
Pahroc 1052	1,2,4	19,008	10/1-6/15	4,773	3,752	79%	7 (D) 7 (T)	17 (D) 17 (T)	--
Geyser Ranch 1101	2,5	233,341	3/1-2/28	12,108	16,619	137%	1027 (D) 150 (A) 1177 (T)	2398 (D) 163 (A) 2561 (T)	389
Grassy Mtn. 1102	1,2,4	4,072	4/1-12/31	200	201	100%	15 (D) 15 (T)	36 (D) 36 (T)	1[d]
Wilson Creek 1201	1,2,3,4,5	1,077,994	3/1-2/28	53,942	25,809	48%	8676 (D) 175 (A) 8851 (T)	15876 (D) 230 (A) 16106 (T)	1079
Total		4,239,352		262,224	136,669	52%	18216 (D) 2847 (A) 40 (BH) 25 (E) 21128 (T)	41270 (D) 3336 (A) 75 (BH) 110 (E) 44791 (T)	5581

[a]Problems listed for allotments vary considerably in severity; not all problems listed for an allotment are necessarily severe.

[b]Eleven allotments with a 50 percent grazing preference use have been in non-use or in the middle of an operation change, therefore their use was set at 50 percent--the average for the Schell RA as a whole.

[c]D = deer, A = pronghorn antelope, BH = bighorn sheep, E = elk, T = total.

[d]The Seaman, Moriah, Wilson Creek and White River herd units occur within portions of these allotments; however, no or very few AUMs were included because of a low use by wild horses.

What is BLM trying to do? — spend $3 mil just to maintain last 3 yrs avg use?

of licensed use would only be made when monitoring shows additional forage is available. This would lower active preference levels for all but 2 allotments in the Schell RA from 7 to 94 percent--a 48 percent reduction for the area as a whole (Table 1-2). The difference between licensed and preference use would be placed in suspended non-use. This proposal would aid in solving Problem 1.

2. Initially, leave wild horse use at present levels (5,581 AUMs, Table 1-2). Adjustments would be made following monitoring to achieve sustained yield utilization. Numbers of wild horses and livestock would be adjusted on a case by case basis on each allotment. This would help solve Problem 1.

reasonable?

3. Manage habitat to provide for existing levels of big game (mule deer, pronghorn antelope, elk, and bighorn sheep) (Table 1-2).

4. Develop 4,000 ac of multiple use seedings to increase available forage for livestock and big game. The additional AUMs would be divided into 70 percent for livestock and 30 percent for big game. Table 1-3 lists the allotments that may potentially receive the seedings. This proposal would aid in solving Problems 2 and 4.

5. Develop 2 guzzlers and 750 ac of fenced seeding for wildlife in the allotments shown in Table 1-3. These actions would help attain reasonable numbers of wildlife--Problem 2.

6. Develop 10 springs, 10 mi of pipeline, and 2 mi of fence, as shown in Table 1-3, to aid in distribution of livestock. These actions would help solve Problem 4, as well as Problem 2.

7. Develop 71.9 mi of fence to improve distribution of livestock and therefore utilization of vegetation. This action would occur in one or more of the allotments shown in Table 1-3 and would help solve Problem 1.

good!

8. Fence 9.8 mi of riparian stream habitat, including 3.0 mi on Cherry Creek, 5.0 mi on Negro Creek, and 1.8 mi on Silver Creek. These areas have the poorest bank cover and stability in the Schell RA. Fences would be constructed 100 ft on either side of the streams and have openings for wildlife, wild horse, and livestock at least every .5 mi. This action would help the riparian habitat, Problem 3.

9. Place 15 mi of fence to protect 9,700 ac of wetlands in Spring Valley. The area would continue to be grazed, but at a sustained yield level. This action would help alleviate the problem of overutilization of wetland vegetation by livestock, Problem 3.

10. Continue to manage 5 allotments under Allotment Management Plans (AMPs) and develop AMPs on an additional 12 allotments and a grazing system on one allotment as shown in Table 1-3. This would help solve all problems, expecially Problems 1 and 4. Where grazing systems are implemented, utilization exceeding 50 percent may be allowed, in conjunction with a period of rest. Grazing systems to be implemented include one or more of the following grazing treatments.

Treatment 1: Rest from livestock grazing for 2 consecutive growing seasons (approximately May 1 of one year to August 31 of the following year). Two growing seasons of rest would allow key management species to improve vigor and increase litter accumulation, seed production, and seedling establishment.

Treatment 2: Rest from livestock grazing at least once in both the spring (April 1 to May 30) and summer (June 1 to September 1) during each 3- or 4-year cycle.

Treatment 3: Graze each pasture at some time during each grazing year.

Treatment 4: Graze no pasture more than twice in the same growing season (spring or summer) during any 3- or 4-year cycle.

Treatment 5: Graze midsummer to late fall only (approximately July 16 to November 15), and rest during the spring or summer the following year. This would improve the vigor, density, and reproduction of key grass species.

Treatment 6: Provide rest from livestock grazing for 2 years, until seedlings are established, or until it is determined that a vegetation manipulation or recovery project is unsuccessful. This treatment provides the protection necessary for establishment or recovery of key management species following wildfire, prescribed burning, and seeding or spraying projects.

Treatment 7: Defer livestock grazing from early spring to midsummer each year (approximately April 1 to June 30). This would improve vigor and reproduction of key management species in each allotment.

Long Term

It is expected that actions similar to those in the short term would be implemented in the long term to further meet identified problems and objectives as funding is available. Therefore, additional seedings, water sources and fences would benefit livestock, wild horses, and wildlife. Additional streams and wetlands would probably be fenced and grazing systems developed for all areas not fenced. An additional 9 allotments would come under an AMP, 19 more allotments would have grazing systems implemented on them (Table 1-3), and existing seedings would be maintained for continued high productivity. This would leave only 19 allotments to be managed in a custodial manner. Introductions of elk, antelope and bighorn would occur in areas where forage is in excess of existing demand. Bighorn introductions would not occur in areas where domestic sheep are now being grazed. A general policy would be implemented in which natural fires would be allowed to burn on their own in many portions of the Schell RA. Fire has been recognized as a natural occurrence in the range ecosystem and fire suppression as partially responsible for many of the problems in the Schell RA (see Chapter 2 for further explanation).

change over during the past 3 years, would be estimated to have livestock use at 50 percent of preference.

Wildlife and wild horse use would remain as at present (Table 1-2). Wildlife and wild horse populations that are presently increasing or decreasing would continue that trend. Removal of wild horses would continue in order to maintain present levels.

Cost

Table 1-4 shows costs for this alternatives. Since no new range improvements are proposed, all available funds would go to maintenance of existing seedings.

IMPLEMENTATION

INTRODUCTION

The timetable for implementation of each alternative is generally the same. Initial actions, primarily adjustments in livestock and/or wild horse use, would be completed in 1984. Adjustments in livestock and wild horse levels to achieve sustained yield utilization would occur when monitoring data is available, assumed to be 3 years after implementation for analysis purposes. Monitoring information for some allotments may be available as early as 1984, hence grazing use changes may begin earlier than 1987. All short-term management actions would be developed within 5 years (1989), with the associated changes in grazing use occurring within another 5 years (1994). This allows time for grazing changes to stabilize. Likewise, long-term actions would be implemented in 20 years (2004), with another five years required for the changes in grazer use to be completed. Therefore, the short term and long term are 10 years and 25 years respectively, except for range improvement expenditures which are 5 years and 10 years respectively.

COORDINATED RESOURCE MANAGEMENT AND PLANNING

Coordinated Resource Management and Planning (CRMP) would be included as an advisory body throughout the BLM planning system for all alternatives except No Action. CRMP brings together all interests concerned with the management of resources in a given local area, such as landowners, land management agencies, resource users, wildlife groups, wild horse groups, and conservation organizations. All affected interests will be afforded the opportunity to actively participate in the planning process through CRMP, and their input will be considered before BLM makes a final decision on grazing management actions.

SELECTIVE MANAGEMENT

To implement any of the 3 alternatives excluding No Action or No Livestock Grazing, the grazing management program would be proposed for the purpose of improving or maintaining the public land resources through a selective management approach to rangeland management. This approach is based on the concept that: (1) an allotment's resource characteristics, management needs, and potential for improvement can be identified and (2) the timing and intensity of the management actions should be varied according to an allotment's identified needs and potential.

To facilitate the selective management approach, the BLM has developed 3 categories into which allotments will be grouped according to management need and objective: maintain (M), improve (I), and custodial (C). The objectives for these categories are to: (1) maintain current satisfactory condition, (2) improve current unsatisfactory condition, and (3) manage custodially, while protecting existing resource values. The following criteria pertain to the 3 categories, although allotments within each category would not have to meet all the criteria to be managed according to the category objectives:

Maintain Category Criteria

- Present range condition is satisfactory
- Allotments have moderate or high resource production potential, and are producing near their potential (or trend is moving in that direction)
- No serious resource-use conflicts or controversy exist
- Opportunities may exist for positive economic return from public investments
- Present management appears satisfactory
- Other criteria appropriate to EIS area

Improve Category Criteria

- Present range condition is unsatisfactory
- Allotments have moderate to high resource production potential and are producing at low to moderate levels
- Serious resource-use conflicts/controversy exists
- Opportunities exist for positive economic return from public investments
- Present management appears unsatisfactory
- Other criteria appropriate to EIS area

Custodial Category Criteria

- Present range condition is not a factor
- Allotments have low resource production potential, and are producing near their own potential
- Limited resource-use conflicts/controversy may exist
- Opportunities for positive economic return on public investment do not exist or are constrained by technological or economic factors
- Present management appears satisfactory or is the only logical practice under existing resource conditions
- Other criteria appropriate to EIS area

After publication of the Final EIS, the allotments will be categorized using public input and the selective management criteria, the categorization of allotments will be used to guide implementation of the grazing decisions. The implementation strategy by category is as follows:

* reward poor mgt.

Category M Allotment

- Grazing decisions issued within 9 months.
- 2nd priority for funding rangeland improvements with appropriated funds.
- 2nd priority for development of allotment management plans.
- Prescribed flexibility of livestock operations, if appropriate, through terms and conditions of permits, leases and AMP's.
- 3rd priority for use supervision, in the absence of known unauthorized use problems.

Category I Allotment

- Grazing decisions issued within 17 months.
- 1st priority for funding rangeland improvements with appropriated funds.
- 1st priority for development of allotment management plans.
- Prescribed flexibility of livestock operations, if appropriate, through terms and conditions of leases, and AMP's.
- 1st priority for use supervision, in the absence of known unauthorized use problems.

Category C Allotment

- Grazing decisions issued within 12 months.
- 3rd priority for funding rangeland improvements with appropriated funds.
- 3rd priority for development of allotment management plans.
- Prescribed flexibility of livestock operations, if appropriate, through terms and conditions of permits, leases, and AMP's.
- 2nd priority for use supervision, in the absence of known unauthorized use problems.

Decisions will be implemented in consultation with interested groups and individuals through the CRMP process.

VEGETATION MONITORING

The vegetation monitoring system to be used in all alternatives except No Action would include measurement of utilization, actual use, climate, and range condition and trend. Monitoring was initiated in 1981 in the Schell RA so that initial livestock stocking rates could be based on these data by 1984, and then adjusted in later years as more data became available and/or if climate changes vegetative growth. Monitoring methods include:

Utilization. The BLM would use the Key Forage Plant Method--a visual estimate for judging utilization of key species by weight. In this method, the examiner divides noticeable utilization among 5 classes of use within a key area: slight (0-20 percent), light (21-40 percent), moderate (41-60 percent), heavy (61-80 percent), and severe (81-100 percent). Grazing areas would be managed for an annual utilization of 55 percent for perennial grasses and forbs, and 45 percent for shrubs.

Actual Use. Livestock operators would provide records of actual livestock use and BLM personnel would verify this information through periodic allotment checks. Use of the range by wild horses would be determined through census figures, with refinement made by season-of-use data as necessary. Actual use and season-of-use by big game animals would be determined from pellet count and aerial surveys.

Climatic Data. Annual precipitation and growing season have a marked influence on vegetation growth and production. Official weather stations and BLM and State climatic stations would provide the climatic data. These data would be used to correlate climate to plant growth determined in the utilization and trend studies.

Condition and Trend. Condition of a range site is determined by comparing composition by weight of the present plant association with that of the site's climax plant community. Trend is the direction of change in condition of the range observed over time. Changes in trend are categorized as upward, downward, or not apparent, and from 3 to 5 years of observation are needed before any trend can be detected on most range sites. Trend is measured by noting changes in the frequency of key species in key areas over time, using the Quadrat Frequency Method.

For more detailed information on these monitoring procedures, refer to the BLM's 1981 Drafts of the Nevada Range Studies Task Group Monitoring Procedures and the Bureau Monitoring Studies Manual.

The monitoring program, and CRMP input, would provide information and recommendations for the type of range management action that would be needed in a particular allotment. A partial list of possible actions are: change in livestock season of use, construction of fences, water development, vegetation removal (chaining, controlled burns) and reseeding, and livestock adjustment. One objective of the monitoring program is to determine utilization by each of the types of grazers--livestock, wild horses, or wildlife--and to quantify the differences between grazer use. The monitoring program would be an integral part of all the alternatives analyzed in this EIS except the No Action alternative.

Additional monitoring would be conducted in crucial wildlife and wild horse areas. Information gained through these and other efforts would be used in making any grazing decisions.

STANDARD OPERATING PROCEDURES

Certain requirements are inherent in the implementation of any federal action on Bureau managed lands. These requirements, or Standard Operating Procedures, are designed to mitigate impacts stemming from the construction of support facilities necessary to implement any federal action.

The following would be applied to any action resulting from the planning system.

1. Environmental review will be conducted before implementation. Depending on the impacts of this implementation on the resources, modification or abandonment of the project may be considered.

2. Compliance with wilderness guidelines on proposed projects will be in accordance with Section 603 (c) of the Federal Land Policy and Management Act (1976) which provides that until Congress acts on the BLM's wilderness suitability, recommendations for wilderness study areas or on lands still under wilderness review, the following policy will prevail: existing mining and grazing uses and mineral leasing activities may continue in the same manner and degree as was being conducted on October 21, 1976, but new or expanded existing uses will be allowed only if the impacts of these uses would not impair the area's suitability for designation as wilderness. Proposed uses and projects will be analyzed on a case-by-case basis to assure compliance with the Interim Management Policy and Guidelines for Lands Under Wilderness Review, and when applicable, the regulations in 43 CFR Part 3800, Subpart 3802, titled Exploration and Mining Wilderness Review Program. Certain exceptions to the above-stated policy which concerns valid existing rights are explained in the aforementioned documents.

3. Threatened or endangered plant or animal species clearance is required before implementation of any project. Consultation with the Fish and Wildlife Service per Section 7 of the Endangered Species Act is necessary if a threatened or endangered species or its habitat may be impacted. If there is an adverse impact, either relocation or abandonment of the project will follow.

4. Cultural resource protection requires compliance with Section 106 of the National Historic Preservation Act of 1966, Section 206 of the National Historic Preservation Act Amendments of 1980 and Section 101 (b)(4) of the National Environmental Policy Act (NEPA) of 1969. Prior to project approval, intensive field (Class III) inventories will be conducted in specific areas that would be impacted by implementing activities. Impacts to National Register of Historic Sites and National Register of Eligible Historic Sites will be assessed on a regular basis. Management decisions will be regularly reviewed and revised based on the findings of surveys and monitoring of sites.

5. Visual resource management requires all actions to be in compliance with BLM Visual Resource Management Design Procedures in BLM Manual 8400. On any project which has a visual contrast rating that exceeds the recommended maximum for the visual class zone in which it is proposed, the visual contrasts will be considered significant and mitigating measures must be examined. The ultimate decision in these cases of whether a particular project's visual impact is positive or negative, acceptable or unacceptable, and whether mitigating measures must be implemented or not, rests with the District Manager and must be made on a project-by-project basis.

6. Proposed areas of critical environmental concern will receive priority evaluation. If threatened with immediate disruption, emergency designation and protection during the land use planning process per Sections 201 and 202 of the Federal Land Policy and Management Act will be adhered to.

7. Areas which are disturbed by development of facilities will be reseeded with nonexotic species to prevent erosion and replace ground cover.

8. Deferral of livestock use will be in effect for a minimum of two growing seasons following brush control projects so vegetation may be reestablished.

9. Minimal clearing of vegetation will be accomplished from project sites requiring excavation.

10. Raptor nesting sites will be identified and protected in areas of proposed vegetation manipulation.

11. A fire management plan will be developed before any prescribed burning occurs.

12. All refuse generated by field operations in the project area will be removed to a sanitary landfill.

13. Fence construction must comply with BLM Manual 1737. Lay-down fences will be constructed in wildlife and wild horse areas if necessary and feasible. Fences in wild horse areas will be constructed to minimize interferences with normal distribution and movement patterns of the majority of animals within the herd management areas.

14. Water for wildlife will be made available at the spring source of all spring developments.

15. Water for wildlife and wild horses is to be made available at all water developments in pastures being rested.

16. Water improvement sites will have bird ramps in watering troughs.

17. When required, excess wild horses will be removed from public lands and put in the custody of individuals, organizations, or other government agencies. Field destruction of wild horses or burros will require appropriate authorization.

18. Water availability will be determined by detailed hydrogeological study of the site.

19. Maintenance of livestock management structures (fences, water developments) would be accomplished by operators through cooperative agreements with the BLM.

CHAPTER 2

THE AFFECTED ENVIRONMENT

INTRODUCTION

The information presented in this chapter describes that part of the existing environment of the Schell RA that would be affected by the proposed action or alternatives. Descriptions presented are designed to be brief yet informative with respect to the expected magnitude, intensity, and duration of the impacts. The project area covers the portion of Nevada shown in the Area Map.

REGIONAL SETTING

The Schell RA is located in mideastern Nevada on the Utah border within the Basin and Range Physiographic Province. The topography is characterized by a series of north-south oriented mountain ranges that border broad, flat valleys. Extensive, normal block faulting that created these landforms continues to the present day as evidenced by active fault scarps and frequent minor earthquakes (URA-2, Schell). Elevations range from just under 4,000 ft near Hiko to 13,063 ft on Mt. Wheeler. Alluvial fans and benchlands that line the extremely rocky mountains form gentle slopes and washes.

The region has a semiarid continental climate characterized by a meager amount of precipitation and a high percentage of sunshine. The annual precipitation is divided between summer thunderstorms and winter snows. The average annual precipitation in the valley floors is about 8 in and generally increases with the rise in elevation to 16 in or more in the mountains (National Oceanic and Atmospheric Administration 1978). Sunshine days average 79 percent per year with temperatures ranging from -28 F to 102 F with an average of 60 F in the summer and 34 F in the winter. There are typically 90-120 frost-free days per year. Prevailing winds from the south and southwest in the summer act in conjunction with the moderate temperature to produce an annual free water evaporation rate of approximately 47 in.

Air temperature inversions are common during all months of the year with the greatest occurrence during the cold months. Occasionally smoke from the Kennecott Copper smelting operation near McGill becomes trapped by inverted air layers in Spring Valley. Another factor affecting air quality within the Schell RA is the occurrence of dust storms which are common around dry lake beds in the valley bottoms during late spring and summer.

Geologically recent volcanic rocks contain significant mineral deposits, such as the perlite deposits in Lincoln County (Tschanz and Pampeyon 1970). Among the mineral resources within the area are copper, silver, sodium, potassium, and gold.

WATER RESOURCES

SURFACE WATER

Due to its geologic location and topographic character, the Schell RA has little available surface water, although ground water reserves are thought to be substantial in certain areas. Most valleys are closed basins with no external surface drainage. Surface water from the higher elevations is lost to infiltration and evapotranspiration on the valley slopes; smaller portions are evaporated on the valley floors. The majority of the streams are intermittent, flowing only during spring snowmelt and occasional summer rainstorms.

Major drainage systems of the Schell RA were formed during the Pleistocene, when considerably more surface water was available than today. Drainage systems such as the White River were formed at that time, but today only flow for short distances below spring sources.

WATER QUANTITY

Since most of the streams of the area flow only intermittently, flow gauging is rare and discharge is not well known. Runoff from the area is estimated at approximately 200,000 ac-ft annually, concentrated in the months of March through June. Most of the surface water, both streams and springs, occurs in or very near mountainous areas. Groundwater recharge is estimated at over 219,000 ac-ft annually, while estimated groundwater storage is considered to approximate 14,000,000 ac-ft (USDI, BLM, Schell URA 1980), most of which has not been developed.

WATER QUALITY

A water quality sampling program was conducted in the Schell RA by the BLM in 1979. A total of 67 stations, including 51 springs and 8 streams, were sampled 3 times. In addition, a limited amount of water quality data is available for some streams from a 1981 stream habitat inventory conducted by BLM. Water quality data collected from springs showed levels of total dissolved solids (TDS) in excess of 500 mg/l (suggested maximum for human consumption and irrigation) in 94 percent of the springs sampled. These high levels can be attributed primarily to the movement of water through mineral rich alluvial slopes. Streams varied in the 1979 survey but exceeded 500 mg/l TDS in 62 percent of the 16 stations sampled. Average turbidity levels exceeded 10 NTUs in 27 percent of the 67 springs and streams sampled and was marginal (near 10 NTU) in another 18 percent of the surface waters.

Fecal coliform bacteria exceeded Nevada water quality regulations in only 4 percent of the surface waters sampled. Overall water quality within the area was fair to good with some exceptions.

SOILS

Soils data for the Schell RA are found in two "Third Order" (Hamblin Valley, Meadow Valley), one "Fourth Order" (White River Valley), and one "Exploratory" (White Pine County) soil surveys, which cover approximately 61 percent of the resource area. Range site interpretations were developed only for the third order surveys which amount to 12 percent of the area. The information in the other surveys is useful for general planning, but not for detailed planning for specific purposes such as range site interpretations. For a summary of chemical and physical properties of the soils found in the resource area, refer to the Schell Resource Area URA-2 soils section (USDI, BLM 1980) and the Meadow Valley Soil Survey (USDA, SCS 1976).

Soils within the Schell RA vary considerably in texture and type. The area is generally dominated by loamy soils, with salinity increasing from the alluvial areas to the valley floors. There is no information available on erosion susceptibility in the Schell RA. In order to approximate the needed information, water conservation and development data were used to identify erosion condition classes. Erosion condition classes are identified by their respective Soil Surface Factors (SSF) which are statistical ratings of ground cover and evidence of erosion. Soil Surface Factors are as follows: 0-20 stable, 21-40 slight, 41-60 moderate, 61-80 critical, and 81-100 severe. About 97 percent of the Schell RA has moderate erosion or less and over half has slight erosion or less. The Cattle Forage Condition Map and Sheep Forage Condition Map show the location of areas in critical erosion condition.

VEGETATION

VEGETATION TYPES

The Schell RA is diverse in its topography, soils, precipitation, and elevation. It has fourteen broad vegetation types based on the dominant species (Table 2-1). Plant composition, density, productivity, and potential vary greatly within these types, largely due to differences in climate and soils. Aspect, slope, and elevation also contribute to variation.

These communities are depicted on the Vegetation Type Map. Vegetation types were identified and delineated following a 1978 and 1979 range inventory and include about 112,000 ac of range seedings. The sagebrush and pinon-juniper types are the most common, each covering about one-third of the Schell RA. Other common vegetation types are saltbush, desert shrub, and greasewood.

Riparian vegetation is important in the Schell RA because it provides forage and cover for livestock, wildlife, and wild horses. Although the riparian communities are highly productive, they cover too small an area to be delineated on the Vegetation Type Map. Riparian vegetation occurs along most of the streams in the Schell RA (Aquatic Habitat Map). Many of the streams no longer flow in their natural channels but have been diverted into ditches to supply water to irrigated fields. Soil and other factors along these ditches are not condusive to extensive riparian areas like those that occur along the natural streams. Therefore, riparian habitat is no longer as common as it once was in the Schell RA.

Riparian vegetation is dominated by plants which include cottonwood, willow, birch, aspen, wild rose, chokecherry, and a number of grasses and sedges. Table 2-2 lists streams that were surveyed in 1976, the allotment in which they are found, the length of the riparian area, and whether or not livestock damage was evident. This list does not include all stream areas in the Schell RA since it was conducted on potentially fishable, and therefore larger and more permanent, streams. More miles of riparian habitat occur along intermittent streams, and perhaps near streams not surveyed in 1976. Since the more permanent and larger streams probably have the longest and most important riparian systems, the stream survey data are the best available to use to quantify the riparian habitat.

A 100-ft width on each bank was used to estimate the number of acres of riparian vegetation that could potentially occur along these streams. This distance is generally greater than the extent of the riparian vegetation, but was used because fencing to alleviate livestock damage has been proposed at this distance from the stream. This calculation yields approximately 24 ac of riparian habitat along each mile of stream and a total of 2,173 ac of riparian vegetation in the Schell RA (Table 2-2).

Of the 35 streams studied in 1976, 22 streams had grazing damage to the riparian vegetation, 6 streams had no apparent damage, and the remaining 7 streams were not surveyed because they were dry. Therefore, approximately 75 percent of the riparian areas surveyed had been affected by grazing. Riparian vegetation around Big Spring, Cherry, Negro, and Snowbank creeks has been the most severely damaged.

The wetland vegetation of the Schell RA is very productive, heavily utilized by livestock, and mostly in poor condition. Wetland vegetation is characterized by meadow areas (included in the Meadow vegetation type) dominated by inland saltgrass and alkali dropseed, and surrounded by greasewood or rabbitbrush. There is an estimated 11,700 ac of wetland vegetation in the resource area (Aquatic Habitat Map). The larger wetland areas are located on the west side of Spring Valley, in southern Spring Valley, and along Big Spring Creek. Smaller areas are found around most springs.

PHENOLOGY

The Ely District BLM Office participated in a 4-year (1976-1979) statewide phenology study conducted by Natural Resource Consultants. The phenology study sites were located adjacent to the Schell RA in the Egan Resource Area. Data collected from the Ely and other BLM Nevada districts were used to determine critical growth periods of management species.

Variations in phenology occur from year to year and are probably due to variations in the amount and timing of precipitation and seasonal temperature. Due to this variation in phenology, a 4-year average of the phenological stages of growth was determined (Figure 2-1).

Table 2-1. Important characteristics of the 14 vegetation types found on the Schell Resource Area.

	Vegetation Types	Acres	% Total Area	Elevation ft. above sea level	Average Precip. in inches	Soil Characteristics	Landform	Associated Species[a]
1	Saltbush	268,022	6	4,300-6,000	5-8"	Alkaline	Valley bottoms	Shadscale, Nuttal saltbush, fourwing saltbush, bottlebrush squirreltail, Indian ricegrass
2	Desert Shrub	207,619	5	4,000-6,000	5-8"	Mixed	Lower benches	Blackbrush, spiny hopsage, spiny horsebrush, Indian ricegrass, bottlebrush squirreltail
3	Greasewood	174,836	4	4,300-6,000	5-8"	Saline-clay	Valley bottoms	Black greasewood, Bailey's greasewood, inland saltgrass, alkali dropseed, bottlebrush squirreltail
4	Winterfat	134,409	3	4,300-6,000	5-8"	Silty loam	Valley bottoms, lower benches	Winterfat, budsage, Indian ricegrass, bottlebrush squirreltail
5	Half Shrub	5,852	-	4,300-6,000	5-8"	Mixed	Valley bottoms	Snakeweed, gray molly (Kochia), goldenweed, shadscale, bottlebrush squirreltail
6	Sagebrush	1,718,449	41	5,000-7,000	7-12"	Loamy	Valleys or mountains	Big sagebrush, low sagebrush, black sagebrush, rabbitbrush, Indian ricegrass, bottlebrush squirreltail, needlegrass, bluegrass
7	Pinyon-Juniper	1,547,938	37	6,000-8,000	10-20"	Shallow-rocky	Benches-upper ridges	Pinyon, juniper, big and black sagebrush, bluegrass, bottlebrush squirreltail
8	Mountain Shrub	77,059	2	7,500-10,000	16-20"	Granite and limestone	Mountains	Mountain mahogany, bitterbrush, snowberry, sagebrush, Idaho fescue, thurber needlegrass
9	Broadleaf	523	-	7,000-10,000	12-20"	Shallow, gravelly to deep loam	Mountains and canyons	Aspen, snowberry, big sagebrush, thickspike wheatgrass, common yarrow
10	Conifer	16,587	-	9,000-10,500	16-25"	Rocky, deep loam	Mountains	White fir, Douglas fir, bristlecone pine, mountain mahogany, snowberry
11	Grass	76,738	2	4,300-7,500	7-18"	Mixed	Valleys and benches	Crested wheatgrass, basin wildrye, big sagebrush, galleta
12	Meadow	2,600	-	5,000-7,000	5-12"	non-salty loamy	Valley bottom	Sedge, rush, basin wildrye, alkali dropseed, black greasewood, willow, wild rose
13	Annuals	2,897	-	4,300-8,000	6-16"	Mixed	Valleys to mountains	Cheatgrass, halogeton, Russian thistle, pepperweed, bottlebrush squirreltail
14	Barren	5,357	-	4,300-10,500	5-25"	Alkaline flats, rocky outcrops	Valley bottoms and mountains	
	Untyped	466	-					
	Total	4,239,352	100					

[a]Scientific names can be found in Appendix A.

Source: U.S. Department of the Interior, Bureau of Land Management, Ely District, Schell Resource Area Unit Resource Analysis, 1981.

Table 2-2. Stream riparian areas in the Schell Resource Area.

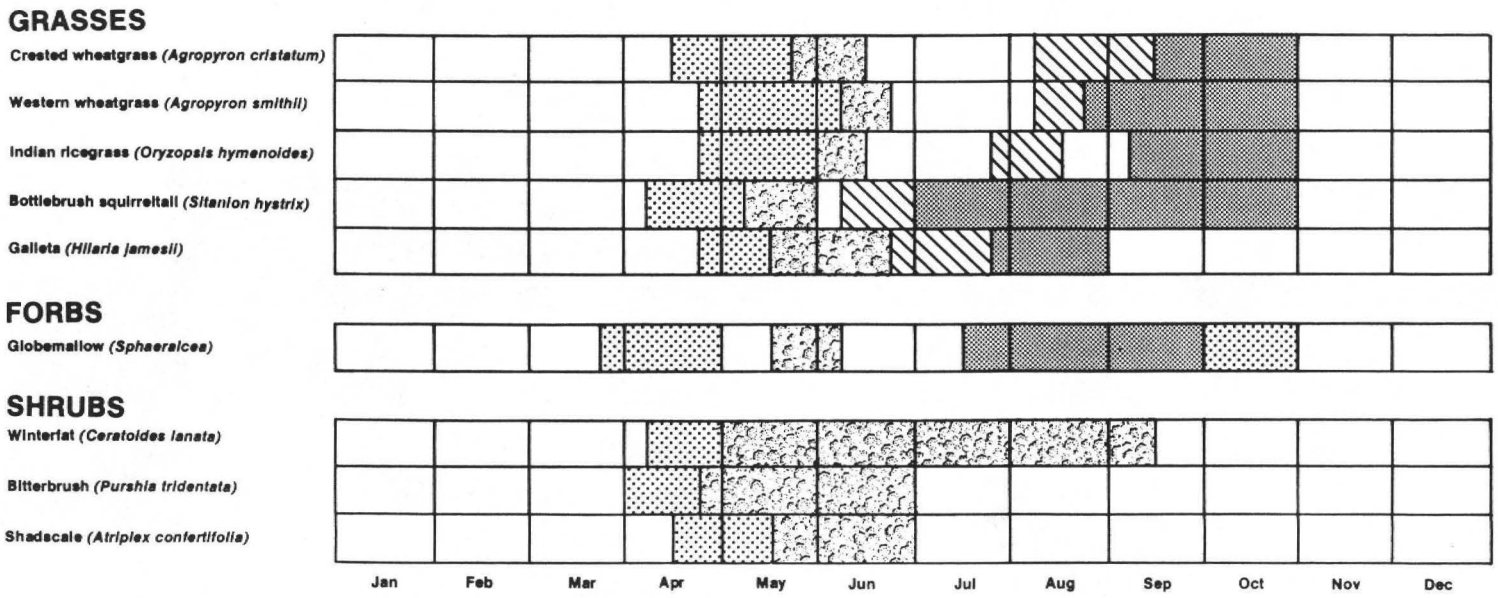
	Allotment	Miles on BLM Land	Livestock Damage	Acres of Riparian
Baker	Baker Creek	2.0 dry	[a]	48
Bassett	Bassett Creek	1.0	yes	24
Bastian	Majors	1.9	yes	46
Big Spring	Hamblin Valley	4.0	yes	96
	Chokecherry			
Big Wash	Baker Creek	3.0	yes	72
Cherry Creek	Batterman Wash	6.0	yes	144
Cleve	Cleveland Ranch	1.8	yes	43
Cottonwood	Cottonwood	10.5 dry	[a]	252
Eight-Mile	Muncy Creek	3.5	yes	84
Frenchman	Red Hills	1.0	[a]	24
Geyser	Geyser Ranch	2.0	yes	48
Hampton	Smith Creek	0.5	no	12
Kalamazoo	Muncy Creek	2.3	yes	55
Lehman	Baker Creek	0.13	no	3
Lexington	Baker Creek	2.2 dry	[a]	53
McCoy	McCoy Creek	1.0	no	24
Meadow	Meadow Creek	0.8	yes	19
Meadow Valley	Wilson Creek	5.0	yes	120
Negro	Negro Creek	5.0	yes	120
North	Geyser Ranch	3.0	no	72
Odger's	McCoy Creek	0.5	no	12
Piermont	Muncy Creek	2.0	yes	48
Pine (Ridge)	Willard Creek	2.0	yes	48
Serviceberry	Wilson Creek	6.0 dry	[a]	144
Seigel	Tippett Pass	0.8	no	19
Silver	Smith Creek	1.8	yes	43
Smith	Smith Creek	1.3 dry	[a]	31
Snake	Baker Creek	3.5	yes	84
Snowbank	Red Hills	2.5	yes	60
Strawberry	Baker Creek	0.2	yes	5
Swallow	South Spring Valley	2.0	yes	48
Vipont	Cleveland Ranch	0.8	yes	19
Weaver	Strawberry Sacramento Pass	5.2 dry	[a]	125
Willard	Willard Creek	1.9	yes	46
Wilson	Wilson Creek	3.4	yes	82
Total		90.53 mi		2,173 ac

[a]No data available.

Source: 1976 and 1981 Schell Resource Area Stream Survey.

FIGURE 2-1

AVERAGE PHENOLOGY OF MANAGEMENT SPECIES ON THE ELY DISTRICT



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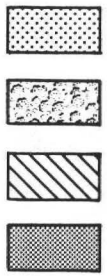

GRASSES	FORBS	SHRUBS
Vegetative Growth	Growth Starts	Leaf Growth
Flower Stalks First Appear	Full Bloom	Twig Growth
Seed Dissemination		
Plants Dry	Plants Dry	

Source: Data taken from Nevada Rangeland Phenology, Bureau of Land Management 1976 to 1979.
Published by Natural Resources Consultants. Las Vegas, Ely, Battle Mountain and Elko Study Sites.

LIVESTOCK FORAGE CONDITION

Since the Schell RA lacks basic soil mapping and range site delineation, range condition (the condition of a range site in relation to its potential) has not been determined. In lieu of range condition, livestock forage condition--an interpretation of the ability of a community to provide forage for cattle or sheep--has been determined (Appendix B). Vegetation preferences of cattle and sheep differ, thus the forage condition of a community will also differ for the two kinds of livestock.

Livestock forage condition for the Schell RA was inventoried in 1979 by the BLM. For cattle (Cattle Forage Condition Map), 9 percent of the range is in good condition overall, 22 percent is in fair condition, and 69 percent is in poor condition; for sheep (Sheep Forage Condition Map), 41 percent of the range is in good condition overall, 28 percent is in fair condition, and 31 percent is in poor condition. Most vegetation communities of the Schell RA are dominated by shrubs. Since sheep generally have a greater preferance for shrubs than do cattle, the Schell RA is generally in better livestock forage condition for sheep than for cattle. It should also be noted that poor livestock forage condition is not necessarily poor range condition. In the Great Basin, many sites favor shrubs over grasses due to soil and climatological factors. Shrub-dominated communities on shallow soils may actually be in healthy climax states and may never have included plants preferred by livestock.

APPARENT RANGE TREND

The present livestock forage condition rating alone does not show whether the plant community is improving or deteriorating. Apparent range trend is a separate determination needed to assess what is happening to the plant community. Apparant range trend information represents only a single year's observations and thus may not reflect the actual long-term trend of an area. Apparent range trend was determined to facilitate analysis and to identify allotments needing special attention during development of management or monitoring plans.

Apparent range trend is determined by observing the key species and erosion of a plant community at one point in time to determine the direction the system is changing--rated as upward, not apparent, or downward. The parameters that were used in the 1979 range trend study of 2,500 sites are shown in Appendix C.

Sixty-nine percent of the Schell RA was classified for apparent trend (Vegetation Trend Map): 33 percent of that area exhibited an upward trend, 44 percent showed no apparent trend, and 23 percent exhibited a downward trend.

TREND THROUGH PHOTO COMPARISON

Areas initially photographed from 1910 through 1923 were rephotographed in 1960 to note trends in vegetation. Of striking contrast in the recent photos is the increase of junipers on the mid to lower mountain slopes and in some places even on the loamy plains below these slopes. Formerly the loamy, moderately rocky soils on the lower mountain slopes, especially in ravines, supported a mixture of grasses and shrubs. Today big sagebrush and juniper have increased at the expense of grass. Fire control, grazing, and drought conditions of the 1930s contributed to the compositional changes in vegetation.

When AUMs were adjudicated following the 1946 and 1964 range surveys, no allowance was made for unsuitable range. Unsuitable range includes areas greater than 4 mi from water, areas with greater than 50 percent slope, highly erodable areas, and areas requiring greater than 50 ac per AUM. Since AUMs were considered on lands without regard to their actual availability, productivity, or condition, extra grazing pressure was placed on preferred areas. This extra grazing pressure, fire control, and drought have led to changes in vegetation composition which favor vegetation types less productive for livestock. This imbalance has led to improper utilization of the vegetation resource.

POISONOUS PLANTS

The most common poisonous plants found within the Schell RA are greasewood and halogeton. Greasewood occurs in dense stands in alkaline flats, valley bottoms, and along washes where the soils tend to be saline. Greasewood is especially toxic to sheep when it is eaten in large amounts (about 2 lbs) with little or no other intake (Kingsbury 1964). Halogeton occupies most disturbed communities at lower elevations and is toxic to sheep and, occasionally, to cattle. Other poisonous plants exist in the Schell RA in lesser abundance and do not have as great an impact on grazing livestock (Table 2-3).

SENSITIVE PLANTS

Harrison (1980) conducted a field survey of the Schell RA and found no officially listed threatened or endangered plant species. Several species found in the Schell RA were included in a 1980 notice of review (Lamberton 1980) which placed proposed species in one of 3 categories depending upon sufficiency of information (Table 2-4). Mozingo and Williams (1980) designated the status of some species by placing them on a recommended watch list and additional information can be found in Pinzl (1978). Most of the sensitive plants are found in relatively restricted areas.

LIVESTOCK GRAZING

There are presently 58 livestock permittees in the Schell RA. Of the 58 permittees, 38 run cattle only, 4 run sheep only, 9 run both cattle and sheep, and 7 have run neither for the last 3 years. Livestock operators were originally awarded grazing privileges according to procedures developed following passage of the Taylor Grazing Act. These privileges have been adjusted in subsequent years following range surveys and have been sold or otherwise transferred freely between operators and to new operators.

As discussed in the Vegetation section of this chapter, AUMs were adjudicated with no allowance for unsuitable range. Also, fire control has led to vegetation composition changes which form vegetation types less productive for livestock.

Table 2-3. Poisonous plants of the Schell Resource Area.

Scientific Name	Common Name
Sarcobatus vermiculatis	Greasewood
Halogeton glomeratus	Halogeton
Tetradymia glabrata	Horsebrush
Delphinium andersonii (and probably other species)	Larkspur
Astragalus lentiginosus	Speckled pod milkvetch
Astragalus miser var. oblongifolius	Poisonvetch
Prunus virginiana	Chokecherry
Zigadenus paniculatus	Death camus
Lupinus caudatus (and other species)	Lupine
Circuta angustifolia	Water hemlock

This has led to improper utilization of the vegetation resource. In response to this problem, livestock operators have taken voluntary reductions in the number of AUMs used and have initiated rangeland improvements at their own expense or have shared the expense with BLM. The result is that the last 3 years' average licensed use (Table 1-1) has been only about 50 percent of grazing preference.

All cattle operations in the resource area are cow-calf operations, mostly characterized by extensive unfenced areas with heavy dependence on public lands. Dependence on public lands ranges from 3 to 72 percent for cattle operations with less than 800 animal units and from 51 to 94 percent for cattle operations with 800 or more animal units. All sheep operations are ewe-lamb operations, with dependence on public lands ranging from 8 to 50 percent throughout.

Livestock movements generally correspond to changing seasons, climatic conditions, and current management practices. Livestock are restricted to the lowlands during the winter months. Grazing in the summer is generally in the high country. Most allotments are grazed during the critical growth period for forage plants (see Figure 2-1).

Five allotments (Muncy Creek, Strawberry Creek, Smith Creek, Geyser Ranch, and Sacramento Pass) are currently run under Allotment Management Plans (AMPs). An AMP determines the manner and extent that grazing operations will be conducted. They are prepared in consultation with the livestock operators or permittees and utilize the benefits of grazing systems and range improvements. Willow Springs is run under a grazing system but without an approved AMP.

WILDLIFE

The Schell RA provides habitat for 388 species of animals (see Schell Unit Resource analysis). Types of habitat range from salt desert shrub to alpine timber, resulting in a highly diverse fauna. Of special importance to the wildlife species diversity of eastern Nevada are riparian zones. Wildlife use riparian zones disproportionately more than any other type of habitat (Thomas et al. 1980). Riparian areas create well-defined habitat zones within the much drier surrounding areas and generally are more productive in terms of biomass, both plant and animal, than the remainder of the area. They provide habitat for species that otherwise wouldn't inhabit the Great Basin region. Riparian zones are also attractive for other uses, such as livestock grazing and recreation which directly conflict with wildlife. There are approximately 90 mi of riparian habitat within the Schell RA (Table 2-2).

In 1979, the Ely District completed wildlife inventories of the entire resource area under the guidelines of BLM Manual 6602, Integrated Habitat Inventory and Classification System. Seventy-four species of mammals, 247 species of birds, 11 species of amphibians, 28 species of reptiles, and 25 species of fish were recorded during the survey. The report is available at the Ely District Office of the BLM.

Wildlife habitat management plans (HMP) have been approved for 4 areas within the Schell RA, Horsethief-Dry Valley, Deep Creek, West Desert, and Shoshone Ponds. A HMP is an officially approved plan for a specific geographical area designed to maintain or improve the habitat of specific wildlife species having high priority

Table 2-4. Sensitive plant species of the Schell Resource Area and their status according to Lamberton (1980).

Scientific Name	Common Name	Status[a]
Asclepias eastwoodiana	Eastwood milkweed	2
Astragalus calycosus var. monophyllidius	One-leaf Torrey milkvetch	1
Astragalus lentiginosus var. latus	Broad milkvetch	2
Astragalus oophorus var. lonchocalyx	Spearcalyx milkvetch	2
Coryphantha vivipara var. rosea	Clokey pincushion cactus	2
Cryptantha interrupta	Interrupted cryptantha	3C
Cymopterus basalticus	Basalt springparsley	2
Erigeron ovinus	Sheep fleabane	2
Eriogonum darrovii	Darrow buckwheat	3C
Frasera gypsicola	Sunnyside green gentian	1
Gilia nyensis		2
Haplopappus watsonii	Watson goldenweed	3C
Lepidium nanum	Dwarf pepperweed	2
Machaeranthera leucanthemifolia	White-leaf machaeranthera	3C
Mirabilis pudica	Bashful four-o-clock	3C
Phacelia parishii	Parish phacelia	2
Sclerocactus pubispinus	Great Basin fishhook cactus	1
Silene scaposa var. lobata	Lobed silene	3C
Thelypodium sagittatum var. ovalifolium	One-leaf thelypody	2

[a] 1 = sufficient information to list; 2 = insufficient information to list; 3C = no longer considered for listing.

for management. None of these plans, however, has been fully implemented. Full implementation is scheduled for 1990, assuming funds are available.

BIG GAME

Mule deer, pronghorn antelope, elk, and bighorn sheep are the big game species occupying the resource area which are directly affected by livestock grazing. Of the four species, mule deer are the most abundant and widespread, followed by pronghorn antelope. Only small populations of elk and bighorn sheep use public lands and then only during certain seasons of the year. It is the desire of BLM and the Nevada Department of Wildlife (NDOW) to increase populations of these game animals.

MULE DEER

Mule deer populations in the northern portion of the area have fluctuated greatly in the past 30 years, peaking in the late 1950s and early 1960s and again in the early 1970s. The most recent trend information indicates the population is static to moving slightly upward. The deer population in the southwestern portion of the area peaked prior to 1957 with a downward trend until 1973 when a minor increase was reported. The population within the central and southeastern part of the area peaked in the early 1960s with a downward trend since that time (Schell URA-3, Wildlife). Indications are that maximum deer levels were reached in the mid-1950s in the southcentral portion of the area and have remained relatively static to date.

Table 2-5. Mule deer habitat condition in acres in the Schell Resource Area.

Season	Excellent	Good	Fair	Poor	Unknown	Total
Summer/Fall	7,100	92,300	85,500	94,600	0	279,500
Winter	0	109,100	330,000	476,700	5,800	921,600
Spring	0	6,800	8,800	12,200	0	27,800
Yearlong	25,000	35,700	359,300	205,100	29,100	654,200
Total Acres	32,100	243,900	783,600	788,600[a]	34,900	1,883,100
Percent Total	2	13	41	42	2	100

[a]Most poor areas due to lack of water.

Source: USDI, BLM URA-3, Wildlife (1980).

Table 2-6. Habitat condition of crucial mule deer range by allotment in the Schell Resource Area.

Allotment	Season of Use	Condition
Muncy Creek	Spring	Good
McCoy Creek	Spring	Fair
Taft Creek	Spring	Poor-Fair
Stephens Creek	Spring	Poor
Cleveland Ranch	Spring	Poor
Majors	Spring	Poor
Geyser Ranch	Summer	Poor - North
		Good - South
Wilson Creek		
White Rock Area	Summer	Good
Mt. Wilson Area	Summer	Fair
Bristol Area	Winter	Fair
Dutch John Area	Winter	Poor
Mule Shoe Area	Winter	Poor - North
		Fair - South

The 1980 estimate of deer numbers in the Schell RA is 4,535. Reasonable numbers, the number NDOW believes could live in the area, are based on average numbers over the last 20 years or so. This is estimated at 10,521 animals (Schell URA-3, Wildlife).

In 1976, NDOW initiated restricted buck only hunting seasons in an attempt to increase deer populations in eastern Nevada. The deer herds on the Schell Creek Range have responded well and are expected to reach reasonable numbers. The deer herds on the Antelope, Kern, White Rock, Wilson Creek, and Fortification Ranges, however, have not responded and, in fact, may be below a threshold where a small mortality factor, such as predation, could severely limit population growth. The NDOW believes that the lack of response is related to habitat condition of the summer range. Winter range is extensive and does not appear to be limiting (Mike Wickersham, Roy Leach, NDOW, Personal communication, 1982). The amount of summer range, however, is quite small, and has historically received and presently receives heavy use by livestock, wildlife, and wild horses. It is suspected that this heavy competition for forage is a primary factor limiting the growth of deer populations.

Habitat condition for mule deer on the Schell RA was determined jointly by BLM (Robinson and Logan 1979) and NDOW. Conditions were evaluated by the quality, quantity, and juxtaposition of available food, water, and cover. In addition, the BLM and NDOW jointly determined forage availability for existing numbers of deer. It was found that forage was lacking on parts of all mountain ranges except the Bristol, North Pahroc, Hiko, Pahranagat, and Worthington mountains.

Table 2-5 shows the habitat condition by season of use for the entire Schell RA. Table 2-6 shows the condition of crucial range by allotment.

As shown on Table 2-5, about 922,000 ac (49 percent) of mule deer habitat on public land within the Schell RA is winter range. Range designated as crucial represents about 2 percent (21,300 ac) of this winter habitat. In contrast, summer range makes up about 280,000 ac (15 percent) of the deer habitat in the Schell RA with about 99,000 ac (35 percent) designated as crucial. Range used exclusively in spring constitutes about 1.5 percent of the deer habitat with almost 50 percent (13,000 ac) designated as crucial.

Yearlong habitat occurs on Becky Peak, Antelope Range, Kern Mountains, Sacramento Pass, Worthington Mountains, Golden Gate Range, Mount Irish, South Egan Range, Fairview Range, Bristol Range, Fortification Range, and Meadow Valley Wash. These areas constitute 654,200 ac (35 percent) of the total mule deer habitat on public land in the Schell RA.

Important forage plants on crucial winter range include mountain mahogany, antelope bitterbrush, and cliffrose. On crucial summer range, the deer key on habitat types such as stream riparian, aspen groves, mountain mahogany stands, white fir stands, and mountain shrub rather than to specific plants. On crucial spring ranges, deer take advantage of grass and forb spring green-up. They may occupy these areas for only 2-3 weeks but their densities often exceed 250 deer per mi^2 (Mike Wickersham, NDOW, Personal communication, 1982).

PRONGHORN ANTELOPE

Pronghorn antelope numbers within Spring, Antelope, and Snake Valleys are thought to be at their highest level in 10 years. The populations in Lake Valley, Hamblin Valley, and near Mt. Wilson show an upward trend (Tsukamoto 1980).

Pronghorn use these areas yearlong. A few winter and spring concentration areas occur in the northern part of the Schell RA (Antelope Valley).

Habitat condition of these ranges was determined jointly by BLM (Robinson and Logan 1979) and the NDOW. The primary factors considered were the overall quality and quantity of available food, water, and cover. Table 2-7 shows the condition of the habitat by seasonal use areas.

Forage is generally sufficient to support existing and also reasonable numbers of pronghorn. Winter ranges in Antelope and Central Spring Valley are the only areas which lack adequate forage.

There are 5 winter ranges in the northern portion of the Schell RA which are considered crucial during long, severe winters. Animals will concentrate on these areas during long periods of extreme snow depth. Other crucial habitat areas are kidding grounds located on the east slope of the northern Schell Creek Range and Antelope Range and in Snake Valley (see Wildlife Map). Peak activity on kidding grounds occurs from May 25 to June 7. The condition of kidding grounds within allotments is shown in Table 2-8.

The potential exists for reestablishing pronghorn populations in Dry Lake, White River, Garden, Coal, and Cave Valleys since these valleys were historically inhabited by pronghorn. Poor distribution of water is the primary factor presently limiting their occurrence in these areas.

ELK

Elk occupy public land in the Schell RA primarily during the winter. The Schell Creek Range is used from December to April by about 10 elk, and the south Egan Range from mid-October to March by about 20 elk. The habitat condition on all 25,200 ac of winter range as determined by BLM (Robinson and Logan 1979) and the NDOW is considered poor. Reasonable numbers of elk in these 2 areas is 28 and 25, respectively. The current trend in the population is believed to be slightly upward (Tsukamoto 1980).

BIGHORN SHEEP

The bighorn sheep is considered a sensitive species by both BLM and NDOW. The NDOW is planning to reestablish sheep in most of its former range. Both the desert and Rocky Mountain subspecies of bighorn sheep occupy the Schell RA. The distribution of each subspecies is shown in Hall (1946). Bighorn were never numerous in

Table 2-7. Pronghorn antelope habitat condition in acres in the Schell Resource Area.

Season	Excellent	Good	Fair	Poor	Total
Yearlong	0	584,700	272,200	340,800	1,197,700
Winter	0	53,100	0	57,900	111,000
Spring	0	6,500	13,700	1,400	21,600
Total Acres	0	644,300	285,900	400,100	1,330,300
Percent Total	0	48.4	21.5	30.0	100.0

Source: USDI, BLM URA-3, Wildlife Section (1980).

Table 2-8. Condition of pronghorn kidding areas in the Schell Resource Area.

Allotment	Condition
Chin Creek	Poor
Tippett Pass/Red Hills	Poor
Smith Creek	Poor - North
	Fair - South

Nevada, but historic populations were higher than at present (McQuivey 1978). Bighorns were infrequently observed in the Snake Range in the mid-1960s but disappeared until 1975 when they were reintroduced on Mt. Moriah. Another population was reestablished on Wheeler Peak in 1979. The Mt. Moriah population uses about 9,400 ac of public land as winter range. Sitings have been made recently on the Schell Creek Range. The existing number of bighorn using this area is presently about 40 but reasonable numbers are estimated at 75 and the current population trend is up. A primary limiting factor for bighorn sheep is disease transmitted to them by domestic sheep, where they occupy the same range.

UPLAND GAME

Sage Grouse

The major sage grouse habitat occurs in Spring, Antelope, Snake, and Hamblin Valleys. Strutting grounds have been identified in Spring and Antelope Valleys. Other important populations occur in Meadow Valley Wash and White Rock Peak, with unverified reports of strutting grounds. Smaller isolated populations occur on Parsnip Peak, Mt. Wilson, Table Mountain, Mt. Grafton, Grassy Mountain, and south Egan Range.

There are approximately 763,000 ac of sage grouse habitat within the Schell RA, all of which is considered yearlong. Strutting grounds, habitat within a 2-mi radius, and meadow riparian areas are considered crucial (see Wildlife Map). Most strutting activity in northeastern Nevada occurs from about March 15 to April 25 (Schell URA-3, Wildlife). Upland meadows are also crucial to the survival of sage grouse in Nevada (Savage 1969, Oakleaf 1971). As forbs dry up on upland sites, the grouse begin to move onto meadows. The timing of this movement varies annually depending on how weather affects the dessication of forbs. Table 2-9 shows the condition of breeding complexes (strutting ground plus 2-mile radius) and selected meadows by allotment.

The 1980 NDOW summer production surveys statewide for sage grouse showed a downward trend compared with 1978 and 1979. It is suspected that unseasonably cold, wet weather during late May and early June was a major contributing factor (Molini et al. 1980). There are indications from hunter success that sage grouse populations in Lincoln County are extremely low in numbers.

Table 2-10. Habitat condition and fish presence in streams in the Schell Resource Area, 1976 survey.

Stream	Location	Allotment[a]	Total length (mi)	BLM administered (mi)	Fish spp[b,c]	Habitat condition	Conflicts
Bassett Creek	E. side Schell Creek Range	Bassett Creek	4.7	1.0	R.T. C.T.	Fair	Livestock
Bastian Creek	E. side Schell Creek Range	Majors	2.3	1.9	R.T. B.N.T.	Fair	Livestock
Big Spring Creek	S.E. Snake Range	Hamblin Valley Chokecherry	7.0	4.0	R.S. U.C.	Good	Livestock water diversion
Big Wash Creek	E. side S. Snake Range	Baker Creek	10.8	0.5	R.T. C.T. B.N.T.	Excellent	Livestock
Cherry Creek	E. side Quinn Canyon Range	Batterman Wash	9.0	1.0	R.T.	Poor	Livestock
Cleve Creek	E. side Schell Creek Range	Cleveland Ranch	8.5	1.8	R.T. B.T. B.N.T.	Fair	Livestock water diversion
Eight Mile Creek	W. side N. Snake Range	Muncy Creek	3.5	3.5	R.T.	Fair	Livestock pipeline
Geyser Creek	E. side S. Schell Creek Range	Geyser Ranch	2.0	2.0	R.T. B.T.	Excellent	Livestock
Hampton Creek	E. side N. Snake Range	Smith Creek	3.5	0.5	C.T.	Excellent	-
Kalamazoo Creek	E. side Schell Creek Range	Muncy Creek	7.3	2.3	R.T. B.T. B.N.T	Fair	Livestock
McCoy Creek	E. side Schell Creek Range	McCoy Creek	4.6	0.8	R.T. C.T.	Good	Pipelines, dam
Meadow Creek	E. side Schell Creek Range	Meadow Creek	3.5	0.8	C.T. B.N.T.	Fair	Impoundments, livestock
Meadow Valley Creek	S. side Wilson Creek Range	Wilson Creek	18.0	5.0	D.S. P.S.D. M.V.S.D.	Fair	Livestock
Negro Creek	W. side Mt. Moriah	Negro Creek	11.4	5.0	R.T. B.T. C.T. B.N.T.	Poor	Livestock
North Creek	E. side S. Schell Creek Range	Geyser Ranch	3.0	3.0	R.T. B.T. C.T.	Excellent	None
Odger's Creek	E. side Schell Creek Range	McCoy Creek	3.7	0.5	R.T. C.T.	Fair	-
Piermont Creek	E. side Schell Creek Range	Muncy Creek	6.7	2.0	R.T. B.T. C.T. B.N.T.	Fair	Livestock diversion channel
Pine (Ridge)	W. side S. Snake Range	Willard Creek	2.5	2.0	C.T.	Fair	Livestock Channelization
Siegel Creek	E. side Schell Creek Range	Tippett Pass	2.3	0.8	R.T.	Excellent	Dam
Silver Creek	S. side N. Snake Range	Smith Creek	15.0	1.8	R.T. B.T.	Fair	Livestock
Snake Creek	E. side S. Snake Range	Baker Creek	13.5	3.5	R.T. B.T. C.T. B.N.T.	Fair	Livestock
Strawberry Creek	E. side S. Snake Range	Baker Creek	5.8	0.2	R.T. B.T. C.T.	Excellent	Livestock
Vipont Creek	E. side Schell Creek Range	Cleveland Ranch	3.4	0.8	B.T. C.T. B.N.T.	Excellent	Livestock
White River	S.E. Schell Resource Area				R.T., B.T. C.T., B.N.T. L.B., B., C., M., HWRS, M.D., W.S.D., W.R.S		Irrigation, exotic spp.
Willard Creek	W. side Mt. Wheeler	Willard Creek	2.5	1.4	R.T. C.T.	Fair	Livestock
Wilson Creek	N. side Mt. Wilson	Wilson Creek	4.5	3.5		Fair	Livestock

[a] Allotment stream drains into.

[b] R.T. - Rainbow trout, B.T. - Brook trout, B.N.T. - Brown trout, C.T. - Cutthroat trout, R.S. - Red shiner, U.C. - Utah chub, S.D. - Steptoe dace, D.S. - Desert sucker, L.B. - Largemouth Bass, B. - Bullhead, C. - Carp, M. - Mosquito fish, HWRS - Hiko, White River Spring Fish, M.D. - Moopa dace, WRS - White River Speckled Dace, WRS - White River Spine Dace, P.S.D. - Panaca Spinedace, M.V.S.D. - Meadow Valley Speckled Dace.

[c] Includes possible occurrences.

Source: USDI, BLM URA-3, Fisheries Section (1980).

occurrence and distribution of some species is incomplete.

The Pahrump killifish, a federally listed endangered species, exists within the resource area at the Shoshone ponds refugarium (Table 2-11). Killifish were transferred to the refugarium in 1972 due to limited natural habitat and again in 1976 when the last remaining native habitat, Manse Spring in Pahrump Valley, was drained for irrigation. The population in Shoshone Ponds is surviving and reproducing. Other populations exist at Corn Creek (Desert National Wildlife Range) and on the University of Nevada campus at Las Vegas.

The White River springfish is found in several private springs in the White River valley, primarily south of the Preston-Lund area. This fish is apparently well established in some of these springs and doing well despite some alterations in its habitat.

The Hiko White River springfish formerly occurred in Hiko Spring in the southwestern portion of the Schell area. Predation by largemouth bass eliminated them from this spring but a few still occur in Crystal Springs south of the Schell Area.

Steptoe dace historically occurred in Butte and Steptoe valleys of the Egan Resource Area, and Spring Valley of the Schell Resource Area. Steptoe dace were introduced into the Shoshone ponds refugarium in 1977 to help insure their survival and a new population was discovered in 1981 in the northern part of the Schell RA.

Status of the White River spinedace and the White River desert sucker within the area is presently uncertain, but they may occur within the Schell RA.

One endemic trout, the Utah cutthroat, occurs within the Schell area. This subspecies of trout is considered sensitive by the state of Nevada and may become a candidate for federal listing. Pure populations of this trout occur in Hampton, and Pine (Ridge) creeks. Habitat in these streams, however, is limited, particularly on public lands.

WILD HORSES

The Wild and Free-Roaming Horse and Burro Act became law on December 15, 1971. With the passage of this act, the authority to manage wild horses and burros on public land was assigned to the BLM and US Forest Service. The Act proclaimed that wild and free-roaming horses and burros are protected from capture, branding, harrassment, or death. They are to be considered, in the area where they were found in 1971, as an integral part of the natural system.

Wild horses are currently found in 6 herd units on the Schell RA (Wildlife Map). These herd units encompass all or part of 34 grazing allotments. Herd units have been established based upon past historical horse use areas and inventory data gathered from 1973 to 1980. The assignment of specific animals and lands to a herd unit is somewhat indefinite as there is some movement between herds. Horses in the Antelope Herd also utilize the Elko BLM District; those in the Wilson Creek Herd range over portions of Utah as well as the Las Vegas BLM District; the Dry Lake Herd also utilizes part of the Las Vegas District. Therefore, the number of horses in the Schell RA varies depending on where they were when surveys were conducted. Table 2-12 lists the Herd Units, allotments concerned, number of horses during the most recent inventories, and conflicts. There have been few sightings of wild horses during recent inventories conducted in the Moriah (one in 1979) and White River (none in 1979) Herd Management Areas.

Wild horses have periodically been removed from the Schell RA by BLM. Over 500 horses were removed from the area in early 1980. Illegal removal may also occur. Wild horses in the Schell RA are generally healthy and reasonably adapted to their environment. The well-being of the herds can be attributed to an adequate supply of forage, water, cover and solitude.

Major problems which may be faced by the wild horse herds in the future include competition for food and water with livestock, fences that inhibit movement to areas of forage or water and conflicts with humans. Conflicts by Herd Management Area are shown in Table 2-12.

RECREATION

The majority of the outdoor recreation occurring in the Schell RA is of the dispersed variety. Major activities include hunting, fishing, and sightseeing-driving for pleasure; other less utilized recreation includes camping, ORV use, spelunking, hiking, rockhounding, cross-country skiing, snowmobiling, and pine nut and fire wood gathering. The BLM has little data on visitor use in the area. Most recreation apparently occurs on adjacent Forest Service lands, as well as in Spring Valley State Park and the Wayne Kirch Wildlife Management Area, both managed by the state of Nevada. The major site specific recreation area in this portion of Nevada is Lehman Caves National Monument managed by the National Park Service (See Area Map for location of these sites.) According to the 1977 Nevada State Comprehensive Outdoor Recreation Plan, the majority of the recreationists in White Pine, Lincoln, and Nye counties are Nevada residents with only an estimated 2 percent from out of state.

FISHING

The BLM reports 1,567 fisherman days (URA-3, based upon a 3-year average). Fishing on lands administered by the US Forest Service amounts to 1,934 fisherman days. The majority of the fishing visits occur on the Wayne Kirch Wildlife Management Area (21,381) and Eagle Valley Reservoir (33,015) located in Spring Valley State Park.

HUNTING

Big game hunting, principally deer hunting, is a popular activity on the Schell RA. An estimated 5,665 hunter days for big game are made to the BLM portions of the resource area. Of these, 5,265 days are deer hunting. The US Forest Service reports approximately 29,000 hunter days on the Schell RA-related lands they administer, and the State of Nevada reports over 1,200 yearly

Table 2-11. Summary of occurrence and legal status of protected fish and fishes recommended for protection in or near the Schell Resource Area.

Common name	Scientific name	Classification[a] State	Classification[a] Federal	Recommended status (Deacon et al. 1979)	Occurrence within Schell Resource Area
Trout					
Utah cutthroat	Salmo clarki utah	S		T	Hampton's Creek, Pine (Ridge) Creek
Minnows					
Steptoe dace	Relictus solitarus	T			Shoshone Ponds refugarium, Lookout Spring
Killifishes					
Pahrump killifish	Empetrichthys latos latos	T	E	E	Shoshone Ponds refugarium
White River springfish	Crenichthys baileya	T		T	Private springs near Sunnyside

Source: USDI, BLM URA-3, Fisheries (1980).

[a]T = threatened, E = endangered, S = sensitive.

Table 2-12. Wild Horse Herd Unit characteristics for the Schell Resource Area.

Herd Unit	Size (ac)	Allotments	Herd Size 1973	1975	1979	1980	Conflicts Livestock	Fences	Humans
Antelope	311,869	Becky Springs, Chin Creek, Sampson Creek, Tippett, Tippett Pass, Goshute Mt., Deep Creek		321		252	X	X	
Wilson Creek	691,000	S. Spring Valley, Cottonwood, Hamblin Valley, Geyser, Wilson Creek	151		130		X	X	X
Dry Lake	496,500	Narrows, Geyser, Grassy Mt., Wilson Creek, Fox Mt., Sunnyside	113	13	63		X	X	
Seaman	340,100	Fox Mt., Oreana Springs, Timber Mt., Needles, Seaman Springs, Wilson Creek, Forest Moon, Batterman Wash, Sunnyside, Dry Farm		118	20		X	X	X
Moriah	83,673	Pleasant Valley, Tippett, Mill Spring, Indian George		5	1		X	X	
White River	76,570	Hardy Springs Reserved for Wildlife		27	0		?		

Source: USDI, BLM URA - 3 and 4, Wild Horses (1981).

CHAPTER 3

ENVIRONMENTAL CONSEQUENCES

INTRODUCTION

This chapter evaluates, by discipline, the environmental consequences that would be expected from the implementation of each of the alternatives. Both adverse and beneficial impacts to the human environment are presented. Also included here are mitigating measures (not included under Standard Operating Procedures (SOP) of Chapter 1) needed to lessen adverse impacts. All adverse impacts not mitigated are unavoidable adverse impacts. Significance was determined by a variety of factors, primarily the severity and duration of the impact and the importance of the resource to humans. Importance was considered highest when laws, regulations, or other governmental decrees protected the resource to some degree. Irreversible or irretrievable commitments of resources are also summarized for each discipline when they occur. Actions committing future generations to continue a similar course are considered irreversible. Irretrievable is defined as irrecoverable, not retrievable; once used, not replaceable. The relationship between short-term uses of a resource to maintenance and enhancement of long-term productivity is discussed for vegetation.

It has been determined that none of the alternatives would significantly effect climate, topography, geology, minerals, or air quality. Therefore, these disciplines are not analyzed in this EIS.

BASIC ASSUMPTIONS

To facilitate the process of analyzing impacts of each alternative, the following basic assumptions were made.

1. Unless otherwise noted, all impacts identified in this chapter are direct impacts.

2. Since a BLM SOP prohibits modifications that would impair an area's suitability for wilderness, no impacts on potential wilderness should occur in any alternative.

3. The BLM will have the funding and work force to implement and supervise the selected alternative.

4. All baseline data are the best available. Only 69 percent of the Schell RA had been surveyed for apparent trend. Of the surveyed area, 33 percent was upward, 23 percent downward, and 44 percent had no apparent trend. For analysis purposes these percentages were extrapolated to the entire Schell RA.

5. Problem 1, improper utilization of the vegetation resource, is probably the major problem in the Schell RA, and, in fact, is a contributing factor to many of the other problems. The objective of grazing at a sustained yield level is part of all alternatives except No Action. At this point in time it is not known whether present grazing in the Schell RA is utilizing vegetation at a rate above, below, or near sustained yield. It is not known how much grazing use may need to be reduced or increased once utilization monitoring data becomes available. It is suspected that once utilization data are actually collected and analyzed, adjustments in livestock and wild horse use will range from about a 30 percent increase to a 50 percent decrease over past levels for the allotments in the Schell RA. Therefore, for analysis purposes in this EIS, it has been assumed that in each allotment with a utilization problem (Problem 1), a 10 percent decrease in present livestock licensed use and wild horse use would be required. These estimates were based on the professional judgements of the BLM and BIO/WEST, Inc.

6. For analysis purposes, grazing use adjustments were made in proportion to the present use by wild horses and livestock.

DETERMINATION OF SIGNIFICANT IMPACTS

The purpose of this section is to define the threshold used in each resource to identify significant impacts. When an environmental impact exceeds a threshold, that impact becomes significant. Impacts can be either adverse or beneficial, depending on how they alter the resource in question. In all disciplines, existing condition is the baseline that separates beneficial from adverse impacts. Maintaining the status quo results in no significant impacts. The following thresholds have been developed from previous Nevada grazing EISs and professional opinion of BLM and BIO/WEST resource specialists.

WATER RESOURCES

The threshold for water quality parameters would be exceeding Nevada Water Pollution Control Regulations of 1979 for Class B waters. These include 10 nephelometer turbidity units (NTUs) for turbidity and 200 per 100 ml of fecal coliform bacteria.

SOILS

Factors that would increase erosion (adverse impact) or decrease erosion (beneficial impact) from present conditions can be noted but not quantified. The threshold for significance will be when 10 percent or more of the Schell RA (424,000 ac) changes in erosion potential. This threshold was based on professional judgement.

VEGETATION

Thresholds are:

Vegetation trend and condition - A change in livestock forage condition or apparent trend in 5 percent or more of the Schell RA acreage (professional judgement).

Riparian and Wetland Vegetation - A change in livestock forage condition in 10 percent or more of the existing acreage (professional judgement).

LIVESTOCK GRAZING

The threshold of significance in livestock grazing is a 10 percent or greater change over existing levels (last 3-year average use). This was based on the Department of the Interior appropriation act for 1980 which set 10 percent as a limit for appealed reductions.

WILDLIFE

Thresholds are:

1. A change in condition in 10 percent or more of any herd use area or important habitat type for game and non-game species (professional judgement).

2. A 20 percent change in existing numbers in a herd use area for big game species (NDOW).

AQUATIC HABITAT

A change in the habitat condition of 10 percent (4.6 mi) or more of the fish stream miles (professional judgement).

WILD HORSES

The threshold for wild horses would be a change of 10 percent over present numbers by herd unit. This level was set to be commensurate with livestock reductions.

RECREATION

The threshold is a change of 10 percent or more in visitor days from the existing situation for any given activity.

CULTURAL RESOURCES

The threshold would be destruction of scientifically or educationally valuable sites.

PALEONTOLOGY

The threshold would be destruction of any scientifically valuable fossils.

ECONOMICS

No objective measure(s) of what represents a significant impact is available. Therefore, the following analysis assumes thresholds of:

a. A 5 percent change in net ranch income for any ranch size group (professional judgement)

b. A 5 percent change in the employment or sales of any sector would be significant (professional judgement).

SOCIAL CONDITIONS

Current relations among interest groups are characterized by controversy and conflict with regard to management of the Schell RA, and any decision by the BLM is likely to be perceived by some group(s) as having actual or potential significant impacts on their interests. Therefore, in this analysis the threshold level for significant impacts is defined as any change from the existing situation (professional judgement).

PROPOSED ACTION

WATER RESOURCES

It is not expected that surface or groundwater quantity would be affected by the Proposed Action. Water quality, especially fecal coliform and turbidity, are expected to vary dependent on the amount of livestock usage around streams and springs (Kunkle 1970). Fecal coliform and turbidity levels would remain at or near present levels in most streams because livestock use would change only slightly (10 percent) from present use. Cherry, Negro, and Silver creeks are expected to improve in these parameters since they will be fenced on public lands, keeping livestock away from the stream and improving bank stability. Total dissolved solids levels would continue to exceed Nevada water quality criteria since they are primarily the result of subsurface water movements through mineral-rich soils. Over the long term some decreases in TDS levels in streams are expected as watershed conditions improve and erosional processes are decreased.

SOILS

In the short term, reducing grazing to moderate utilization and improving grazing management would increase the effective ground cover, thus decreasing erosion. These projections reflect professional judgement based on the impacts projected for vegetation. In 235 ac of riparian vegetation, erosion would decrease since livestock use would be curtailed by fencing. Rangeland seedings would temporarily disturb 4,750 ac, and other rangeland developments would temporarily disturb an insignificant area of soil. Soil compaction and the removal of ground cover would temporarily increase erosion. As vegetation and litter increase, soil erosion should decline and become insignificant by the end of the short term in these areas. Therefore, erosion throughout the Schell RA would improve in the short term, especially in the 23 percent (982,000 ac) in a downward apparent trend and in 235 ac of riparian area that would be fenced. This would be a significant beneficial impact.

Management actions in the long term would be similar to those in the short term. Additional rangeland developments and the new policy regarding fire suppression would result in a temporary loss of vegetation cover and, thus, a temporary increase in soil ersoion. As vegetation and litter cover increase in these areas, soil erosion should decline. Due to lack of definition on the quantity, extent, and location of rangeland developments in the long term, a specific analysis cannot be conducted. In the worst case, these actions would have no significant impact to the soils of the Schell RA.

Short Term Use Versus Long Term Productivity

This alternative would favor long term productivity over short term use of the soil resource. Erosion would generally be reduced, aiding increased future production.

VEGETATION

Livestock Forage Condition and Apparent Trend

Licensing livestock use at the present level (average licensed use for the 3-year period 1977 to 1979), followed in 3 years by adjustments in livestock and wild horse use to achieve a sustained yield utilization level would have a beneficial effect on livestock forage condition and apparent trend. Grazing at a sustained yield level would allow most plants to complete growth cycles and increase carbohydrate reserves, thereby increasing vigor, reproduction, and composition in the community (Cook and Stoddart 1963, Frischnecht et al. 1953, Van Poolen and Lacey 1978).

Grazing systems, an important part of AMPs, are based on the assumptions that animals in large numbers result in a more uniform use of the forage and that a rest from grazing is beneficial to the plant, even though it must be grazed at a greater utilization level for a shorter time. Animals tend to overgraze certain areas of a range while other areas remain untoucned. Because tender, more nutritious regrowth is more attractive than coarse, older material, animals tend to graze and regraze the same areas. Grazing systems force animals to make more uniform use of the forage. While complete agreement has not been reacned on the latter assumption, researcn summarized by Shiflet and Heady (1971) and Hickey (1971) indicate that improved range condition and/or carrying capacity have been achieved from grazing systems. Grazing systems allow old plants to gain vigor and new plants to become established, and allow increased plant reproduction (Stoddart and Smith 1955). This would have a beneficial effect on livestock forage condition and apparent trend.

Water development and fencing (Table 1-1) would improve the distribution of livestock. Proper distribution of livestock is essential to effective use of the range (Cook 1967). As discussed above, uniform utilization of the range helps reduce areas of overgrazing. This would have a beneficial effect on livestock forage condition and apparent trend.

The exclusion of livestock from 9.8 mi (about 235 ac) of riparian stream habitat would allow plants to complete growth cycles with little or no grazing pressure. Studies in Nevada (Dahlem 1979) and Utah (Duff 1979) showed that a significant improvement in riparian vegetation can be achieved in a short period of time as a result of livestock exclusion.

These management actions would result in improved livestock forage condition and apparent trend throughout the Schell RA, especially in the 23 percent (982,000 ac) of the Schell RA in a downward apparent trend. Livestock forage condition and apparent trend would also be improved in 11 percent (235 ac) of the riparian vegetation, as a result of livestock exclusion, and 83 percent (9,700 ac) of the wetland vegetation, as a result of improved utilization and livestock distribution.

Fencing of riparian vegetation, as described in Chapter 2, would not only improve livestock forage condition and apparent trend, but would also allow extension of riparian vegetation into areas previously occupied by other vegetation types. Though this cannot be quantified, it would be a beneficial impact to riparian vegetation.

Therefore, short-term management actions of the Proposed Action would result in significant beneficial impact to the vegetation of the Schell RA.

Management actions in the long term would be similar to those of the short term: additional water sources would be developed and more fence would be constructed to improve livestock distribution; additional riparian and wetland vegetation would be protected from overuse; and an additional 9 AMPs and 10 grazing systems would be established. As previously discussed, improved livestock distribution and protection of riparian and wetland vegetation from overutilization would have a beneficial effect on livestock forage condition and apparent trend. Establishment of AMPs and grazing systems in allotments which would have been grazed at a sustained yield level for at least 7 years would have little, if any, beneficial effect on livestock forage condition and apparent trend.

In addition, a policy of allowing natural fires to burn on their own in many portions of the Schell RA would be implemented. Fire is harmful, to some degree, to almost all perennial vegetation; however, the severe effect it has on shrubby vegetation does not occur in herbaceous species because the perennial parts are below ground (Stoddart and Smith 1955). Sagebrush and nonsprouting juniper such as Utah juniper (Juniperus utahensis) are easily killed by fire. In the Snake River Plains of Idaho, Pechanek and Stewart (1944) found that forage production can be more than doubled by controlled burning followed by correct grazing. Based on this discussion, the policy of allowing natural fires to burn on their own would have a beneficial effect on livestock forage condition and apparent trend.

Therefore, long term management actions would result in improved livestock forage condition and apparent trend. Due to lack of definition on the quantity, extent, and location of these actions, a specific analysis cannot be conducted. In the worst case, these actions would have no significant impact to the vegetation of the Schell RA.

Short Term Use Versus Long Term Productivity

This alternative would favor the long term use and productivity of the vegetation resource since vigor, cover, and reproduction would be improved.

LIVESTOCK GRAZING

Initially, livestock use would be licensed at the present level (136,669 AUMs), a 48 percent reduction from grazing preference. After 3 years, sufficient monitoring data would be available to make livestock adjustments. For analysis purposes, it has been assumed that each allotment with a utilization problem (Problem Area 1, Table 1-2) would require a 10 percent decrease in present use. This would result in a 7,316 AUM re-

duction from present use in the Schell RA (Table 3-1).

Multiple use seedings would provide additional forage for livestock, wild horses, and big game. Based on the experience of the Schell RA area manager, a conservative estimate of the forage provided by multiple use seedings in the Schell RA would be 0.1 AUMs per ac. Therefore, 4,000 ac of multiple use seedings would provide 400 AUMs. Since 70 percent of the AUMs would be allocated to livestock, this would provide an additional 280 AUMs for livestock grazing (Table 3-1).

Water development would open up about 104,400 ac previously ungrazed due to distance from reliable water, providing an additional 3,367 AUMs for livestock grazing (Table 3-1).

Shiflet and Heady (1971) and Hickey (1971) summarized studies of grazing systems. They reported improved range condition or carrying capacity, or both, when grazing systems were used. As stated in the vegetation section, establishment of grazing systems and AMPs would result in improved livestock forage condition and apparent trend. As livestock forage condition and apparent trend progress upward, vegetation production would also increase (dependent on range site). Based on the cited references, the above discussion, and the professional judgement of the BLM and BIO/WEST, Inc., it is conservatively estimated that a 10 percent increase in present use would result from the additional forage provided by AMPs and grazing systems. This would provide an additional 5,679 AUMs for livestock grazing (Table 3-1).

Based on the above discussion, short term management actions would result in an increase from present use (136,669 AUMs) to 138,006 AUMs. An increase of 1,337 AUMs (about 1 percent of present use) would not be a significant impact to livestock grazing in the Schell RA.

Management actions in the long term would be similar to those of the short term. AMPs and grazing systems would provide forage for an additional 3,596 AUMs (Table 3-1), and seedings and water development would provide additional forage for livestock use. Due to lack of definition on the quantity, extent, and location of these actions, specific analysis cannot be conducted. In the worst case, these actions would have no significant impact to livestock grazing in the Schell RA.

WILDLIFE

Big Game

The 4,000 ac of multiple use seedings and 750 ac of wildlife seedings would provide 195 AUMs of forage for big game, most of which would be utilized by mule deer. The 195 AUMs is less than one percent of the forage needed to support reasonable numbers. The significance of this action would depend on the distribution of the seedings. If they were divided among the 8 allotments (Table 3-1), the benefits to each wildlife herd or population would be slight. If, however, they were all placed in one area with specific wildlife problems, such as summer deer range in the Wilson Creek or Chin Creek Allotments, the benefits to a single herd could be significant. As a result of these actions, it is estimated that the mule deer population would reach about 4,600 animals in the short term, an increase of about 65 deer.

Water developments would encourage the expansion of pronghorn antelope herds and allow mule deer to forage in areas adjacent to presently occupied ranges which traditionally lacked sufficient water. Livestock, however, would also use these areas and concentrate near water, discouraging use by wildlife. Those water developments which would be fenced would be most beneficial to big game. The cumulative impact of water developments would have a beneficial but insignificant impact to big game.

The installation of 71.9 mi of fence would have both beneficial and adverse impacts to big game. The improvement of livestock distribution and subsequent release of certain areas from overgrazing would reduce livestock/wildlife competition if the fences were strategically placed in the Chin Creek, Tippett, and Wilson Creek Allotments where deer summer range problems exist. However, fences would likely cause pronghorn antelope and deer mortality in the above allotments and in the Deep Creek Allotment. These allotments contain key winter range where both of these big game species concentrate and entanglement in fences could occur, especially with pronghorn antelope during severe winter storms (Spillett et al. 1967). Overall, the impacts from the additional fencing would not be significant.

The effects of intensive livestock management such as grazing systems and AMPs upon wildlife have not been studied extensively and the results of some studies are inconclusive (Mackie 1981). Skovlin et al. (1968) found that in Oregon, mule deer preferred sites of rotational grazing over sites of year-round grazing. Other studies reported little difference in forage plant selection and range use habits of mule deer on rest-rotational pastures as compared with continuously grazed range (Knowles 1975, Komberec 1976). Knowles (1976) found that mule deer distribution and movements appeared to be somewhat influenced by grazing treatments and fawn production and survival may be depressed on ranges where pastures are subject to heavy livestock grazing. The overall results of his study, however, are largely inconclusive with respect to the ultimate effects of rest-rotation grazing on mule deer.

In the Schell RA, it is anticipated that there would be an overall improvement in the quality and quantity of vegetation from the actions proposed in this alternative resulting in a significant beneficial impact to big game. There would, of course, be some adverse impact to both populations and habitat from intensive livestock management. Additional fences, as mentioned earlier, could result in big game mortality from entanglement, especially in key pronghorn antelope winter range in the Deep Creek, Chin Creek, Tippett, and Tippett Pass allotments. Season of use of certain pastures could have serious effects on the quantity and quality of forage on key ranges, such as winter and spring use areas (Deep Creek, Chin Creek, Tippett, Tippett Pass, and Wilson

Table 3-1. Initial livestock licensing levels and proposed management actions for the Proposed Action, Schell Resource Area (LS = livestock, WH = wild horses).

Allotment	Initial Licensed Use (AUMs)	Reductions due to Overutilization AUMs		SHORT TERM												LONG TERM			
				4000 ac. Seeding Multiple Use	2 Guzzlers	750 Acres WL Seeding 4.5 mi Fence	10 Springs, 10 mi Pipeline, and 2 mi Fence	71.9 mi. Fence	Stream Fence	15 mi. Fence Wetlands	A = AMP, G = Grazing System, E = Existing		Total AUMs		Increases Due to Intensive Management A = AMP, G = Grazing System		Total AUMs	
		LS	WH								LS	WH	LS	WH	LS	WH	LS	WH
Becky Springs	669	67	15	X			X	X			A 67	15	669+[a]	152			669+	152
Goshute Mtn.	417	42	4					X					375	32			375	32
Deep Creek	1,179	118	59	X				X			A 118	59	1,179+	591			1,179+	591
Chin Creek	2,766	227	141	X	X		X	X			A 277	141	2,766+	1,411			2,766+	1,411
Sampson Creek	796	80	12	X				X					716+	111			716+	111
Tippett	7,228	723	66	X	X		X	X			A 723	66	7,228+	655			7,228+	655
Tippett Pass	501										A 50	6	551	62			551	62
Red Hills	821												821				821	
Mill Spring	252												252		G 25		277	
Pleasant Valley	100	10											90				90	
Muncy Creek	5,929									X			5,929				5,929	
Indian George	2,573												2,573		G 257		2,830	
Meadow Creek	223												223		A 22		245	
Bassett Creek	296												296		A 30		326	
Devils Gate	695												695		G 69		764	
Taft Creek	711	71								X	G 71		711				711	
Smith Creek	3,428	343							X				3,085				3,085	
Stephens Creek	115	12								X			103				103	
Cleveland Ranch	696	70								X			626		G 70		696	
Negro Creek	2,357	236							X	X			2,121		G 236		2,357	
Bastian Creek	226												226		A 23		249	
D - X	227												227				227	
Sacramento Pass	401	40											361				361	
Strawberry Creek	345	35											310				310	
Baker Creek	2,910												2,910		G 291		3,201	

Table 3-1. Continued

Allotment	Initial Licensed Use (AUMs)	Reductions due to Overutilization AUMs LS	Reductions due to Overutilization AUMs WH	SHORT TERM: 4000 ac. Seeding Multiple Use	2 Guzzlers	750 Acres WL Seeding 4.5 mi Fence	10 Springs, 10 mi Pipeline, and 2 mi Fence	7½.9 mi. Fence	Stream Fence	15 mi. Fence Wetlands	A = AMP, G = Grazing System, E = Existing LS	A = AMP, G = Grazing System, E = Existing WH	Total AUMs LS	Total AUMs WH	LONG TERM: Increases Due to Intensive Management A = AMP, G = Grazing System LS	Increases Due to Intensive Management A = AMP, G = Grazing System WH	Total AUMs LS	Total AUMs WH
Majors	6,268												6,268				6,268	
Willard Creek	566	57											509		G 57		566	
Scotty Meadows	748	75											673		A 75		748	
Willow Springs	1,914					X			X				1,914				1,914	
S. Spring Valley	3,165										A 316		3,481	1			3,481	1
Chokecherry	1,748										A 175		1,923				1,923	
Cottonwood	2,345	235	24								A 235	24	2,345	239			2,345	239
Hamblin Valley	4,231	423	52								A 423	52	4,231	523			4,231	523
N. Chokecherry	364												364				364	
McCoy Creek	254												254		A 25		279	
Fox Mountain	2,301	230	4										2,071	35	G 230	4	2,301	39
Narrows	367												367				367	
Oreana Springs	2,369	237	5										2,132	48	G 237	5	2,369	53
Timber Mtn.	435												435	18			435	18
Irish Mtn.	1,458							X					1,458		G 146		1,604	
N. Hiko-Six Mile	463	46											417		G 46		463	
S. Hiko-Six Mile	617							X					617		G 62		679	
White River	96												96				96	
Forest Moon	2,030	203	4					X					1,827	35	A 203	4	2,030	39
Middle Coal Valley	1,060	106											954		G 106		1,060	
Pine Creek	2,057	206						X					1,851		A 205		2,056	
Bird Springs	420												420				420	
Coal Valley	604	60											544		G 60		604	
Cottonwood	1,229	123											1,106		A 123		1,229	
Needles	2,905												2,905	52			2,905	52

Table 3-1. Continued

Allotment	Initial Licensed Use (AUMs)	Reductions due to Overutilization AUMs LS	WH	SHORT TERM: 4000 ac. Seeding Multiple Use	2 Guzzlers	750 Acres WL Seeding 4.5 mi Fence	10 Springs, 10 mi Pipeline, and 2 mi Fence	71.9 mi. Fence	Stream Fence	15 mi. Fence Wetlands	A = AMP, G = Grazing System, E = Existing LS	WH	Total AUMs LS	WH	LONG TERM: Increases Due to Intensive Management A = AMP, G = Grazing System LS	WH	Total AUMs LS	WH
Wildhorse	158												158		G 16		174	
Batterman Wash	1,072	107						X	X				965		G 107		1,072	
Seaman Springs	554												554	35			554	35
W. Timber Mtn.	508												508				508	
Worthington Mtn.	3,845												3,845		G 385		4,230	
Hardy Springs	3,037	304						X			A 304		3,037				3,037	
Sunnyside	3,390	339	9					X			A 339	9	3,390	89			3,390	89
Dry Farm	644	64						X					580		G 64		644	
E. Water Gap	510	51											459		G 51		510	
W. Water Gap	230	23											207				207	
Crescent	465												465				465	
Reserved for Wildlife	-												-				-	
Uhalde Coal Valley	-												Combined with Worthington Mt.				-	
Pahroc	3,752	375											3,377		A 375		3,752	
Geyser Ranch	16,619					X							16,619	389			16,619	389
Grassy Mtn.	201	20											181	1			181	1
Wilson Creek	25,809	2,581	108	X		X	X	X			A 2,581	108	25,809+	1,079			25,809+	1,079
AUMs																		
LTVestock	136,669	-7,989		+280	0	0	+3,367	+	0	0	+5,679		138,006		+3,596		141,602	
Wildlife				+120	+	+75	0	+	+	+	+		+					
Wild Horses			-503	0	0	0	0	0	0	0		+480	5,558	5,558		+13		5,571

[a]A+ means this allotment may receive AUMs as a result of the improvements indicated by an X.

Creek allotments), resulting in nutritional deficiencies and ultimately lower reproductive capacity. These adverse impacts would not be significant.

In problem 1 allotments, a 10 percent reduction in wild horse use and present livestock licensed use would not significantly benefit big game in areas where livestock/wildlife competition is severe, such as deer summer range in the Chin Creek and Wilson Creek allotments. It would have the effect of reducing the extent of competition but not in an amount that would be beneficial to big game. There may be isolated areas where a small reduction would be beneficial but in the Schell RA as a whole, the impact would be insignficant.

The long term impacts of the management actions would be similar to those discussed for the short term. Additional seedings would provide more forage for big game although the amount would not be sufficient for reasonable numbers. It is estimated that the mule deer population would reach about 4,700 animals in the long term as a result of management actions. Additional water developments would improve distribution of big game, especially pronghorn antelope, and allow more forage to become available for mule deer. It is expected that big game habitat would be improved in the allotments receiving AMPs and grazing systems, although the significance of the improvement cannot be predicted.

Allowing wild fires to burn may have a significant beneficial impact to the quality of big game habitat. Fires retard succession and produce suitable browse. Since mule deer prefer browse and midsuccessional seral stages, burning could increase the quantity and quality of their habitat.

In summary, there would be an overall improvement in big game habitat in the Schell RA as a result of the proposed action. It is suspected, however, that neither the short term nor long term actions would be adequate to alleviate problems with mule deer populations associated with summer range in the Chin Creek, Tippett, Pleasant Valley, and Wilson Creek allotments. As discussed in Chapter 2, these populations are at critically low levels and probably would remain so unless there is a significant decrease in livestock use.

The proposed action would have significant beneficial impacts to both elk and bighorn sheep if introductions were accomplished. The probability that introductions would occur is unknown.

Upland Game and Waterfowl

The removal of sagebrush prior to multiple use and wildlife seedings would have an adverse impact to sage grouse if placed within their habitat. Because sage grouse are so dependent upon sagebrush for their entire life cycle, removal would be detrimental. The severity of the impact would depend on the location and proximity to strutting grounds, since nesting areas are usually within 2 miles from them. Any impacts resulting from vegetation manipulation, however, could easily be mitigated through careful choice of the area to be manipulated.

Water developments would have a beneficial but unquantifiable impact to sage grouse. It would allow them to better utilize the available habitat and possibly aid in increasing the population.

The initiation of AMPs and grazing systems would have positive but unquantifiable beneficial impacts to both sage grouse and blue grouse through the improvement in the condition of meadows and an increase in herbaceous understory vegetation for food and cover (Oakleaf 1971). Most benefits would be realized in the Becky Springs, Chin Creek, Tippett, Tippett Pass, and Wilson Creek allotments.

The fencing of 9,700 ac of wetlands in Spring Valley would improve the wetland vegetation, but since grazing would still occur, only limited benefits to waterfowl would be realized. Studies on similar vegetation in riparian areas suggest even light or intensively managed grazing does not significantly improve wildlife habitat in those areas (Thomas et al. 1980).

The continued addition of water sources would be a beneficial but unquantifiable impact in the long term to all upland game. Positive benefits to blue grouse would be attained as more riparian areas are fenced and intensive livestock management is continued resulting in the improvement of meadows.

Nongame Wildlife

Nongame wildlife would benefit from water developments, fencing of wetlands and riparian areas, and any improvement in overall vegetation condition resulting from intensive livestock management. The herbaceous understory and overhead canopy cover of the rangelands would be allowed to develop with less grazing pressure resulting in a more complex vegetation structure and thus larger and more diverse wildlife populations. Since at least 23 percent of the Schell RA would improve, this would be a significant beneficial impact to nongame species in the Schell RA.

AQUATICS

A considerable amount of literature has been published during the last few years on the effects of grazing on western cold water streams (Platts 1978, Cope 1978, Van Velson 1978, Bowers et al. 1979, Platts 1981, Duff 1979). Almost all of the studies have shown that cattle and sheep grazing around streams have drastic effects on fishery habitat and fish populations. The general conclusion is that fencing out livestock is the only sure way to improve stream habitat, although stream habitat can be maintained in good to excellent condition with light grazing. These generalizations probably hold true for the Schell RA. Comments in the 1976 BLM stream survey concerning livestock damage indicated that light grazing on one stream (North Creek) due to rotational grazing maintained the stream in excellent quality. Most other streams were rated fair, primarily due to livestock damage.

Therefore, it has been assumed for analysis purposes, and because more detailed data are not available, that streams that are fenced will

improve dramatically in habitat quality, streams that are in allotments with increased livestock use will degrade from present levels, and that streams in allotments with decreased grazing will remain in existing condition or improve slightly. Using these criteria for the Proposed Action, aquatic habitat in Cherry, Negro, and Silver creeks would improve dramatically in the short term due to fencing. This would be a significant beneficial impact. In the long term, these streams may all reach excellent condition. Five other streams (Cleve, Hampton, Pine (Ridge), Vipont, and Willard creeks) may benefit from decreased livestock use in the short term. Two streams (Big Spring and Siegel Creek) would degrade in habitat quality due to increased livestock use, a significant adverse impact. The other 28 streams in the Schell RA are not expected to change in habitat quality in the short term.

In the long term, increased livestock numbers are predicted, hence the potential for stream habitat degradation could increase. The increased potential for fencing, along with utilization at sustained yield levels and development of AMPs and grazing systems should alleviate many of the potential adverse problems. The chance for a significant beneficial impact is quite high as streams in the Schell RA should continue to improve.

Fish populations should increase in both the short and long term due to better habitat condition. Utah cutthroat populations in Pine (Ridge) and Hampton creeks may be slightly improved due to decreased livestock use. Other protected fishes would not be affected by the Proposed Action.

WILD HORSES

Under the Proposed Action, wild horse use in the Schell RA over the short term would decrease by 23 AUMs. Establishment of an AMP in the Tippett Pass Allotment would result in an additional 6 AUMs over those presently used by the horses in the Antelope Herd Unit. AUM reductions in Sampson Creek (-12) and Goshute Mountain (-4) to provide for sustained yield utilization would reduce the total by 10 AUMs for the herd unit, an insignificant impact.

A reduction of 13 AUMs in the short term for wild horses in the Fox Mountain (-4), Oreana Springs (-5), and Forest Moon (-4) allotments (problem 1 allotments) would also occur. Since Fox Mountain is shared by the Dry Lake and Seaman Herd Units, the herd unit which would lose the AUMs would have to be determined. The other 3 herd units (Wilson Creek, Moriah, and White River) would not change in wild horse use. Therefore, short term management actions would have an insignificant impact as far as wild horse population reductions are concerned. Since only 2 horses would need to be removed, it is doubtful roundups would be made.

Periodic roundups would be required to maintain present use levels. These roundups would use helicopters to herd the horses into winged traps. A mortality of 1-2 pecent during roundup and holding was noted during the most recent operations in the Ely District, and this level of mortality would be expected in future roundups.

In the long term, 13 AUMs would be added to either the Dry Lake or Seaman Herd Units, also an insignificant impact.

RECREATION

Initially, the fencing of streams could increase their fisheries and in turn fisherman numbers could increase. This would be an unquantifiable beneficial impact.

With full implementation, approximately 195 additional AUMs could be made available for big game. If wildlife numbers were able to increase to utilize these AUMs, hunting use of the Schell should increase. This increase in wildlife numbers would be about 65 deer which in turn could mean an additional 74 hunter days on the Schell RA if the number of hunters and hunter days remain at the present ratio to the number of deer. Since these people generally camp in the areas they hunt, the number of camping occasions would also increase. The same is true of off-road vehicle (ORV) use. These would all be insignificant beneficial impacts to recreation on the Schell RA.

CULTURAL RESOURCES

Due to incomplete cultural resources data for the Schell RA, it is impossible to predict the exact numbers and types of cultural resource sites which might be impacted as a result of implementation of any of the proposed alternatives for the grazing management program. It is possible, however, to note trends in cultural resource site deterioration which may be anticipated under each of the alternatives. In addition, most potential adverse impacts to historic and prehistoric sites will be avoided through adherence to the Standard Operating Procedures (SOP) outlined in Chapter 1 and to the conditions included in the Programmatic Memorandum of Agreement between the BLM and the Advisory Council on Historic Preservation (Appendix D). Therefore, no unavoidable adverse impacts are listed for any alternative.

Since cultural resource sites are situated on or just below the ground surface, they are highly susceptible to many forms of impact. Aside from vandalism (surface collecting of artifacts, defacement, or unauthorized excavation), considerable destruction may occur as a result of grazing (Roney 1977). Trampling by cattle, wild horses, and large-sized wildlife, as well as disturbances resulting from range development projects, cause potentially significant impacts to cultural resources. Overgrazing and reduction of vegetation also can result in accelerated erosion and deterioration of cultural resource sites.

The Proposed Action would produce little change in the present level of cultural resource impact due to grazing because livestock, wild horses, and wildlife numbers would not change much. The development of seedings, springs, pipelines, and fences where relocation is not possible could all potentially directly impact cultural resources. But since these areas are site specific, the completion of the required cultural resource surveys and data recovery or salvage prior to construction would result in quantitative and qualitative increases in

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July 29, 1982

Mr. John Sparbel
State Planning Coordinator
State Clearinghouse
Capitol Complex
Carson City, NV 89710

Dear John:

The Nevada Department of Wildlife appreciates the opportunity to review and comment on the Draft Schell Grazing EIS (SAI NV #83300003) and I especially appreciate the time extension for comments that was allowed by your office. We firmly believe that grazing EIS's are an important part of the planning process in terms of management direction and therefore like to insure that all fish and wildlife related matters have been incorporated and considered in a duly manner, an evaluation that is very time consuming. In view of the above, please find listed below those items discussed in the document that are of concern to our agency.

GENERAL COMMENTS

There appear to be major omissions and flaws in the data used to develop this draft. Specifically, riparian habitat and mesic sites were not properly identified to facilitate knowledgeable resource management decisions. The proposed action gives very little real consideration for big game. For example, an increase of 165 deer in 20 years and no recommended bighorn or antelope introductions points out this lack of consideration.

The stated goals of protection and enhancement of wildlife, scenic, and recreational opportunities for the "Resource Protection Alternative" seems rather biased toward producing a negative reaction to the alternative, as if the only things benefitted would be wildlife, scenics and recreation. Actually this alternative would protect and enhance the basic land resources such as soil, water, and vegetation which is the heart of the multiple use concept. If these basic land resources are protected and enhanced, then a productive future for wildlife and livestock can be assured. The short term sacrifice for the long term benefit seems to be an acceptable price to pay. The "Graze at Preference Alternative" is probably unacceptable to the BLM and certainly unacceptable to wildlife resources, but will likely be supported by the livestock industry because of the obvious benefits.

If time permits, we would suggest the development of an alternative that would combine portions of the "Proposed Alternative" and the "Resource Protection Alternative." This would at least deal in a generally favorable way towards the basic land resources and not be geared for a specific resource user group.

SPECIFIC COMMENTS

Page 3, Table 1 - Riparian and Wetland Areas

The stated improvements should be quantified with the current condition and trend of riparian areas categorized. The expected condition and trend under various alternatives should also be listed for comparative purposes.

The 250 acres of improvement represent what percent of available riparian and wetland habitat? This should be quantified and qualified as in the section on Vegetation Livestock Condition and apparent trend in Table 1.

Page 4, Table 1 - Upland Game and Waterfowl

Under Short and Long Term - No Significant Impact, the quantity, condition and trend of key upland game and waterfowl habitats (sage grouse brood meadows, wetland habitats) must be determined and evaluated before a determination of impacts can be made.

Page 1-2, Table 1-1 - MFP-2 Recommendations

Change statement number 2 to read, "Cooperate with NDOW to facilitate reintroductions <u>of bighorn, antelope and elk when</u> studies show that there is forage in excess of existing demand."

Page 1-2, Table 1-1 - Resource Trade-Offs

The statement "Fewer areas will be available for reintroduction." is an understatement since licensed livestock use will equal the 1977-79 average at the onset and most areas are admittedly in an overgrazed condition.

Page 1-2, Table 1-1 - MFP-2 Recommendations

"No bighorn sheep are to be introduced into areas where domestic sheep currently graze." Although this statement may be prudent, it is not a decision which should be unilaterally made.

Page 1-2, Table 1-1 - MFP-2 Recommendations

An HMP should not be used as a vehicle to facilitate supplemental releases to augment existing, select or low-level populations of big game.

Page 1-3, Table 1-1 - MFP-2 Recommendations

The recommendations do not make reference to maintenance, improvement or management of key or critical habitats for sage grouse which include nesting areas, upland meadows, and water sources.

Page 1-4, Table 1-2 - Allotment Characteristics

The following allotments lack adequate identification in the Problem/Objectives category. We would suggest the following changes:

Allotment	No.	Problem/Objectives
Chin Creek	0104	1, 2, 3, 4, 5
Tippett	0106	1, 2, 3, 4, 5
Tippett Pass	0107	1, 2, 3, 4, 5
Red Hills	0108	1, 2, 3, 4
Mill Spring	0109	1, 2, 3, 4
Muncy Creek	0111	1, 2, 3, 4
Sacramento Pass	0123	1, 2, 3, 4
Pine Creek	1012	1, 2, 3, 4
Needles	1016	1, 2, 3, 4, 5
Hardy Spring	1022	1, 2, 3, 4, 5
Worthington Mtn.	1021	2, 3, 4

Page 1-7, No. 3 - Short Term Management Actions

Existing numbers (1982) are, in some instances, very different from the numbers in 1980, 1977 or 1975. What numbers are represented in the discussion? How does this decision fit with NDOW intent for population growth or BLM acceptance of reasonable numbers? This section is very confusing and should be clarified.

Also, will monitoring be accomplished to document forage available to big game as well as livestock (see No. 1, Short Term Actions) and how will forage increases be allotted?

Page 1-7, No. 4 - Short Term Management Actions

The assumption that 4,000 acres of seedings will benefit big game cannot be made unless a number of stipulations are made. In most instances seedings will have to be designed to benefit livestock or wildlife. Very seldom can seedings be highly beneficial to wildlife if livestock forage is the primary concern. What specifications and design criteria will be applied to insure that seedings benefit wildlife?

Page 1-7, No. 5 - Short Term Management Actions

The development of sound grazing management will contribute more to attain reasonable numbers than would 750 acres of seeding.

Page 1-7, No. 8 - Short Term Management Actions

As long as there is a justification for 71.9 miles of new fence to improve the distribution of livestock, there is equal or greater justification to fence riparian zones. The 9.8 miles of riparian fencing is not even a sufficient token, let alone a reasonable response to the recognized need to protect riparian zones. Therefore, the fencing of 31.7 miles of riparian zones that are in less than good condition should be a priority decision. A yearly evaluation of unfenced riparian zones should be completed and those found in a state of degradation should be fenced or otherwise protected.

Page 1-7 - Long Term

Again the general assumption is made that seedings will benefit wildlife. This is not a valid assumption unless very specific design and analysis of benefits versus impacts is done. The assumption is also made that fences will benefit wildlife. In many cases fences have very detrimental effects on wildlife.

We question the statement that a general policy would be implemented in which natural fires would be allowed to burn on their own in many portions of the Schell RA. This technique is of dubious value. A P-J climax may lend itself to this management, but uncontrolled burning should never be allowed in mountain brush areas, particularly where livestock grazing will occur within five to ten years after the fire.

Utilization, in conjunction with a period of rest, probably can exceed 50 percent on upland sites, but we questions whether any recovery of riparian areas can be accomplished with this utilization or system.

Management actions are not quantified or expressed and as such do not permit an analysis of benefits and impacts of long term management. For example, the statement, "Introductions of elk, antelope and bighorn would occur where forage is in excess of existing demand." does not specify upper limits for competing uses of the vegetative resources or establish existing demand.

Page 1-20 - Implementation, Introduction

No timetable is provided for wildlife introductions for either short or long term management actions.

Page 1-22 - Standard Operating Procedures

Areas of Critical Environmental Concern are not specified or identified. Further standard operating procedures should include:

1. The Western States Sage Grouse Guidelines should be included as a mitigating measure.

2. The NDOW/BLM Memorandum of Understanding needs to be listed as a method for mitigating management actions.

3. Specific guidelines should be established concerning size of protected area and procedures to protect raptor nesting sites.

4. Key or critical wildlife habitats need to be listed as ACEC's or designated as areas where special management will be applied to maintain the areas in good or improving condition.

Pages 2-2 and 2-3 - Vegetation Types

The narrative estimates 11,700 acres of wetlands vegetation. Table 2-1 shows only 2,600 acres in the meadow vegetation type. URA data is incomplete, and did not include individual vegetative type areas of less than 20 acres, and did not adequately identify the extent or condition of numerous mesic sites (spring sources and attendant meadows, upland meadow, stream bank meadow) which are key wildlife habitats.

Page 2-4, Table 2-2

Some stream riparian areas omitted from analysis include:

Stream	Allotment	Wildlife Use
Chin Creek	Chin Creek	SG, MD, PA, NG
North Creek	Chin Creek	SG, MD, PA, NG
Middle Creek	Chin Creek	SG, MD, PA, NG
Sharp Creek	Chin Creek	SG, MD, NG
Schellbourne Pass Cr.	Tippett	SG, MD, PA, NG
Spring Valley Creek	Tippett, Tippett Pass	SG, MD, PA, NG, HP

*Key: SG = Sage Grouse MD = Mule Deer PA = Pronghorn Antelope
NG = Nongame HP = Hungarian Partridge

Stream riparian habitat is critical to wildlife and resource inventory of these areas is incomplete. analysis of grazing impacts has not been measured.

Page 2-7 - Wildlife

Riparian zones are identified as "special importance to wildlife species diversity" and as receiving disproportionately more wildlife use than any other habitat type, yet inventory of this habitat type was not completed during the URA nor draft EIS process.

Page 2-7

The list of HMP's is incomplete and should be revised to include the East Schell HMP and Kern Mountain HMP. As is the case with the other four HMP's listed in the EIS, little or no work has been accomplished on these HMP's. The ability of the BLM to develop and implement HMP's for high priority wildlife habitat should be addressed in a realistic manner.

Page 2-10 - Mule Deer

Use of crucial spring range may extend from March 1 through May 15, annually or for two and one-half months. It is doubtful that use periods of less than four weeks are experienced on crucial spring range.

"... heavy use <u>of summer range</u> by livestock, wildlife and wild horses. It is suspected that this heavy competition for forage is a primary factor limiting the growth of deer populations." Is there any <u>real</u> documentation of heavy deer use on summer ranges? This section implies this, but presents no data.

Page 2-10 - Pronghorn Antelope

Pronghorn populations (1982) in Spring, Snake and Antelope Valleys remain at record high levels since aerial surveys were initiated in 1970. Significant changes in grazing use patterns (voluntary non-use, limited seasonal grazing and removal of wild horses) are factors which have probably contributed to increased pronghorn numbers.

Page 2-10 - Pronghorn Antelope

Although water distribution is not optimum, pronghorn could be reestablished in Dry Lake, Cave and White River Valleys.

Page 2-10 - Pronghorn Antelope

Key pronghorn habitat as delineated on Map 9 and described in the narrative is inadequate. More recent information has been compiled and species distribution maps are being updated.

In the basin desert environment that is characteristic of pronghorn habitat in the Schell Resource Area, water is the key component of the habitat. Pronghorn depend more on free water in the late spring, summer, and fall especially when climatic conditions are abnormally dry. When antelope kids are nursing, the water requirement increases for does that are lactating.

During those periods when pronghorn are more dependent of water, the area within a three mile radius of that watering site is also a key component of the habitat. It is within this zone that pronghorn obtain the majority of their forage intake. Excessive livestock or feral horse concentrations at isolated watering sites could preclude pronghorn use resulting in reduced production and survival of pronghorn in those areas.

Grazing management practices should consider these key components of pronghorn habitat and insure that water and forage are made available to meet the needs of pronghorn antelope.

Page 2-11 - Bighorn Sheep

"Sightings have been made recently on the Schell Creek Range. The existing number of bighorn using this area is presently about 40 but reasonable numbers are estimated at 75 and the current population trend is up." Regarding this statement, according to records in the Ely office, one bighorn ram was observed by several individuals. According to the narrative in the EIS, there is an obviously viable population of

bighorn sheep in the Schell Creek Range with an upward trend. It is suspected that the description of the bighorn population was meant for the Moriah area and the sentence concerning the Schell Creek Range was misplaced in the narrative.

Page 2-11 - Sage Grouse

The narrative states that sage grouse habitat occurs in Spring, Antelope, Snake and Hamblin Valleys and strutting grounds have been identified in Spring and Antelope Valleys. Supplemental information gathered in 1982 documented the presence of strutting grounds in all four valleys mentioned.

The narrative fails to identify that smaller isolated populations of sage grouse also occur in Cave and White River Valleys.

Table 1-2 - Sage Grouse

It is interesting to note that 24 allotments are listed as having Problem #1 but not Problem #3. Since Problem #1 is "Improper utilization of the vegetation resource occurring on portions of the Schell RA," it would seem logical that Problem #3 would also occur, "less than good condition of many riparian and wetland areas."

Some examples of this situation where Problem #1 is listed for the allotment in Table 1-2 and Problem #3 is not, but riparian areas can be found in "less than good condition" include the following allotments: Becky Spring, Chin Creek and Tippett.

Wildlife Map

The wildlife map showing key range and introduction proposals needs to be updated with regard to bighorn sheep introductions, key pronghorn habitat and sage grouse breeding complexes.

Page 3-1 - Determination of Significant Impacts

It is unclear how maintaining the status quo for grazing will result in no significant impacts. In allotments or other areas determined to be currently overstocked and subsequently overgrazed, maintaining the status quo would necessarily continue to provide impacts. Overgrazing will maintain range in a deteriorated condition which is a serious impact on other resource values.

Page 3-2, Wildlife - Determination of Significant Impacts

In many cases, the thresholds described have already been exceeded to arrive at existing conditions in mule deer habitat (Antelope Range and Kern Mountains), pronghorn habitat (Cave and White River Valleys)

and sage grouse habitat (Antelope Range and North Spring Valley). To apply these criteria now will not result in adequate improvement of wildlife habitat, but rather special management is needed.

Page 3-4 and 3-8

A long term consequence that permits mule deer herd growth of only 165 deer over the next 20 years is not considered as an acceptable alternative by our agency.

Page 3-8

Fire, particularly in mountain brush communities, does not "retard succession" or "produce suitable browse" as stated. Burning is not a panacea and wildfire must be controlled in seasonal big game habitats.

While our agency personnel have other concerns relative to the draft EIS, we believe that those listed above summarize most of the significant comments. If you have any questions on this matter or need further input, please advise.

Sincerely,

Willie

William A. Molini
Director

RPM:DE:LG:pw

cc: Region II
Paul Bottari
Rose Strickland

SIERRA CLUB

Toiyabe Chapter – Nevada and Eastern California

PLEASE REPLY TO: ☐ _____

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August 16, 1982

Merrill DeSpain, Manager
BLM/Ely District
Star Route 5, Box 1
Ely, NV 89301

Dear Manager DeSpain,

Thank you for the opportunity to comment on the draft Schell Grazing Environmental Impact Statement. I am commenting on behalf of the Toiyabe Chapter of the Sierra Club and the Nevada Outdoor Recreation Association. We are pleased to submit the following comments:

Summary. The summary tables were somewhat confusing. We could not determine, for instance, if the 23% improvement in range condition listed for the Proposed Action means that 77% would continue to deteriorate, or if sustained yield is a major goal of the Resource Protection Alternative, but not the Proposed Action. Also, although the DEIS is supposed to use the MFP-II recommendations, it was not at all clear that BLM planning is incorporated into the DEIS. Is the Proposed Action the area manager's MFP-II recommendations?

Chapter I. We are unconvinced that the major innovation of this DEIS, placing the difference between licensed use and past 3-year's average use into suspended non-use will either improve range management or resolve resource problems. We can see a problem with this process penalizing a good operator who has reduced cattle use on an allotment due to poor range condition and reward the over-capacity grazing of less long-sighted ranchers. More rationale is needed for this proposal.

What is BLM trying to accomplish with the Proposed Action? It appears that BLM proposes to spend over $3,000,000 just to maintain the last 3-years average use. We feel the Proposed Action does not go far enough to improve range conditions or to resolve resource conflicts. The range improvement program appears reasonably conservative; fencing 9,8 miles of riparian stream habitat is good, but not enough; fencing 15 miles to protect 9,700 acres of wetlands is good, but not enough; and placing 19 allotments into custodial management is not at all justified. Conservationists strictly oppose the writing-off of any lands as incapable of being improved and managed properly.

The Resource Protection alternative goal of protecting all areas from overgrazing should be required for all the alternatives and BLM management actions. Does this statement mean overgrazing will be allowed in the Proposed Action?

The Sierra Club does not support the reduction of livestock or wild horses to increa se wildlife to reasonable numbers. We support reducing overgrazing by all animals, improving range condition and then increasing all animals proportionately. We believe properly managed range can accomodate livestock preference, reasonable wildlife numbers and viable wild horse herds.

Fencing 31.7 miles of stream riparian habitat is better than that proposed in the Proposed Action, but probably not enough. The same is true of the fencing of 11,700 acres of wetlands. We support reintroduction of big game species when the forage is available. We strongly support the proposed two month rest for allotments in the Spring in those without AMPs or grazing systems.

We feel the Grazing At Preference alternative, if implemented would be very disruptive to the livestock industry starting a boom which would soon bust and penalizing good operators who do not exceed carrying capacity. Ofcourse this alternative would institutionalize overgrazing in the Schell RA,also. If this really what the ranchers want? Obviously, BLM cannot maintain big game at present levels if livestock levels are increased to preference, so the analysis is also faulty.

We approve of the benefits to the land resource of the No Grazing alternative, but feel that resource conflicts would be better resolved if BLM follows the principles of multiple use and sustained yield.

We highly suspect the No Action alternative to be the real proposed action!

Implementation

We greatly doubt whether the monitoring data proposed to be collected and so heavily relied upon to base management decisions will ever be used to reduce livestock AUMs. If monitoring data shows reductions are necessary, the data will be challenged. (See p.3-22, ranching community comments on using "political influence and legal avenues to protect its interests and avoid losses.") We wonder if BLM believes that the best data is data not yet collected!

CRMP. The emphasis on CRMP is too optimistic as effective 100% participation from all interests will be impossible to achieve and sustain. CRMP will not ultimately rescue BLM from having to make hard management decisions eventually.

Selective Management. The process is too simplistic as each allotment has areas of overuse and underuse. Averaging (categorizing) will not solve resource problems. And the system rewards I permittees with range improvement funds, but not M ranchers who are doing a good job. C is totally unacceptable to conservationists. There is no throw-away land. Placing allotments in this category is totally unjustifiable and unjustified in the DEIS.

Vegetation Monitoring. Monitoring should have the first priority for range improvement funds as monitoring is critical to any management plan.

Standard Operating Procedures. What is meant by #17?

Chapter II. The information presented seems comprehensive. At least the Ely District appears to know the land resources. Table 2-2 is very useful, although problem #3 should occur almost always when problem #1 occurs.

Chapter III. This chapter appears a more honest assessment than in most other EISs. The analysis suffers from the lack of site-specific management actions and thus is probably in violation of NEPA as well as the court orders on grazing EISs.

Overall, the EIS is surprisingly well-written, though short. The alternatives are unique to my experience - worst case types - which are not that realistic but perhaps easier to analyze in a programmatic EIS. At least, the EIS admits resource management problems. Unfortunately, the DEIS only offers non-specific management and then asks the public to trust that whatever BLM ends up doing will solve resource problems and improve range conditions. We fear that the poor conditions in the Schell RA will only be exacerbated by continued overgrazing (last three years average use), especially if eventual reductions based on monitoring data are blocked as threatened by ranchers and/or range improvement funds and BLM staff are further crippled by budget cuts.

We would like to believe that BLM can do a better job of managing the public lands than is presented in the Schell DEIS.

Thank you for considering our comments.

Sincerely,

Rose Strickland, Chair
Public Lands Committee
(702) 747-4237