INTER-DEPARTMENT MEMO ---- 1

DATE July 22, 1976

FROM Walt Bodie

TO Tom Leege

SUBJECT Challis EIS Draft Comments

Enclosed is a copy of our rough draft comments on the Challis EIS. This has not been approved by the Department and I am sure they will make some changes in tone one way or the other, but I do not foresee any changes in the facts as stated.

If you have any questions feel free to contact me.

Sincerely, Ualt

Walt

Enclosure WB:cd

CHALLIS EIS COMMENTS

ROUGH DRAFT

WF. ISU

Staff and field personnel for the Idaho Department of Fish & Game have reviewed the Draft Environmental Impact Statement and Proposed Domestic Livestock Grazing Program for the Challis Planning Unit and we offer the following comments, criticisms and recommendations for your consideration.

SPECIFIC COMMENTS

Summary Page

 Under beneficial impacts the statement "wildlife habitat will improve" habitat for some species would improve, but for others it would be degraded.

2. Adverse Impacts - The impression is given that the only competition will be occasional between wildlife and wildhorses. There will be severe competition between wildlife and livestock in some pastures.

Pages 1-9 Recent

A Research done on Wyoming's Whiskey Mountain Bighorn range indicates that Bighorns use 3.93 lbs. of air-dried forage/day or 236 lbs. green weight/month which would equal 3.39 Bighorns/800 lbs. forage/month.

Page 1-43, Paragraph 6

Opportunities for improving wildlife numbers are substantial in this unit. Once the livestock grazing plan is implemented it will be unlikely that further grazing restrictions would be approved. There are insufficient wildlife considerations given in this proposal.

Page 2-12

The problem of overland flow and sediment transportation into streams is pronounced whenever it rains and during spring runoff because of the current state of vegetative cover. (See Figure 2-2) Wind erosion is also quite apparent.

Page 2-19

Total obligated AUMs are 32,703 and it is estimated that 29,842 are available. There is a negative balance of 2,861 AUMs. Where will they come from? Also, the proposal calls for 19,889 AUMs, an increase of 2,463 AUMs. From the data on Pages 3-10 it appears that this difference will be made up in part from AUMs allotted to wildhorses. In actuality, the AMPs indicate that these AUMs will largely be made up in pastures with high wildlife use and little or no wildhorse use.

Page 2-20

<u>Paragraph 1</u> - Considering the importance of these considerations it is poor management to base information on assumptions.

Water quality on the planning unit could be considered above average if coliform and similar indicators are used for criteria. However, if suspended solids are considered, water quality is substandard to most waters of the state. During several weeks of the year, the Salmon River above the East Fork runs very clear. The high turbidity coming from the East Fork degrades the entire Salmon River to such a degree that successful fishing downstream is eliminated. Recreation and economic loss becomes the burden of downstream users. Salmon and steelhead fishing is shortened yearly. Although these impacts are off the planning unit, the effects are directly related to land use practices on the unit.

Page 2-40

What source specifies that the "optimum" turbidity is 5 JTU's or less except during periods of high natural turbidity? State water quality standards list 5 JTU's turbidity as the maximum allowed except when due to conditions other than caused by man. To state that turbidity higher than 5 JTU's occurred during high flows as a "natural phenomenon" is a gross avoidance of the facts. Throughout the report, there are numerous accounts of accelerated sedimentation caused by livestock grazing, hardly a natural phenomenom. Table 2-9 lists turbidity eleven times greater than the 5 JTU level.

Page 2-41

Using water temperature alone, it can <u>not</u> be concluded that "water quality is good for salmonids".

Page 2-41 (cont.)

Stating that turbidity higher than optimum which occurred as a natural phenomenon is inconclusive and misleading. It's possible that turbidity is higher during high flows, but the amount is not quantified. Based on statements such as on Page 2-35: "relatively high numbers of domestic stock have access to the stream during a long grazing season, and soils within the area are erosive", it is more realistic to conclude that the level of natural turbidity has been accelerated due to livestock grazing. (See page 2-263.)

Page 2-42

In order for Shannon-Weiner diversity indices to be meaningful to the thesis of the EIS, a control stream without the effects of grazing is necessary. In the absence of a control, the data only reinforces the statements on erosion due to livestock grazing. Those areas with high indices receive much less grazing than areas of lower indices.

Page 2-50

<u>Paragraph 2</u> - While the criteria for evaluation may be valid for livestock we question whether this is true for wildlife or for natural vegetative communities.

With only 6% of the vegetation on the unit listed in good condition, it is obvious that drastic action is necessary to restore the watershed. Of the acreage of grass vegetative type, over 91% is listed in a downward trend (Table 2-13). Vegetative types that are in good condition or in an upward trend are on sites where little or no livestock grazing is taking place.

Pages 2-65-68

Doesn't adequately address the problem of cattle behavior, i.e., concentrating in stream bottoms. AMPs should be based on the portion of the allotments that cattle actually use and the presence and amount of fragile soils such as Soil Association D. Objectives 1 through 5 can only be adequately reached if cattle distribution problem is solved.

Page 2-67, Paragraph 1

Some species are undesirable for livestock forage but highly desirable for various

wildlife species. Total thrust toward these species is negative throughout the vegetative section.

Page 2-81, Paragraph 1

Mountain mahogany is not resistant to fire, in fact fire kills mahogany rather easily. Lack of litter and the type of site tend to make stand less susceptible to fire.

Tables 2-18 & 2-19

Attached tables have been corrected.

Page 2-96, Paragraphs 1 and 2

This statement concerning forage differences is not true. It is a simplistic statement on a complex subject that deals more with availability, seasonal preferences, site differences, cover availability, etc.

Hansen's Treatment deals with incidence of occurrence of individual plant *Wale and the constant* of the plant *Manual* of the plant *Manual* of the plant *Manual* of the plant of the pl

Page 2-98

Mule deer population estimates are incorrect. 2,500 is the approximate number of deer using the unit south of the Salmon River. An additional 1,500 to 2,000 deer are using the unit north of the Salmon River during the winter months.

Page 2-99

The Bald Mountain Allotment is a major mule deer wintering area but has been eliminated from the list of major deer winter ranges in Paragraph 3. Was this eliminated because of the controversial Centennial Flat Spring Project?

Page 2-101, Paragraph 1

Winter range is only one of the limiting factors.

Page 2-101, Paragraph 4

Actual fawn/doe ratios are 30 to 35 fawns/100 does in Unit 36-A. Also hunters will harvest some fawns. But a larger proportion of the does are harvested resulting in a higher fawn/doe ratio rather than a lower ratio.

Page 2-106

Population estimates for the winter of 75 to 76 indicate that the present Bighorn population in the Birch Creek area is 15 to 20 animals. Also, we see no description of range condition in this area.

Page 2-108, Paragraph 6

1,100 antelope appear to us to be an abundant population for this area. Page 2-110

We disagree with the contention that mountain lion numbers are small. The unit has a population of lions with territories smaller than the average which would indicate a high population level for lions. Population and harvest data is available.

Page 2-113, Paragraph 2, Sentence 1

The exception would be for wintering.

Page 2-140

Fish in Jimmy Smith Lake are rainbow trout.

Page 2-180

The Salmon River is open to year round trout fishing within the unit.

<u>Paragraph 2</u> - The increase in hunter days was related to the extra deer tag, longer seasons and a special non-resident license for the express purpose of reducing deer numbers below winter carrying capacity to allow for an improvement in winter range conditions.

Page 2-184

Numbers of anadromous fish caught off the unit greatly exceed those on the unit. Streams within the unit are very important spawning and nursery areas for anadromous fish, but the bulk of the harvest occurs downstream.

Page 2-185, Table 2-30

Figures given here for deer and elk are a mixture of actual report cards received and adjusted figures and are not comparable.

Page 2-187

A large fishery for steelhead has not occurred on the East Fork, but that does not detract from its importance as a spawning and rearing stream.

Page 2-264 and 2-265

Twelve references are cited to substantiate the detrimental effects of sedimentation and grazing on stream habitat. Due to past and current grazing practices the majority of the habitat is already in fair or poor condition (Table 2-25). Under the proposed action, it is estimated that sedimentation would improve only a meager 11.3% after 15 years. Direct damage to streambanks is caused, in part, by the behavioral aspect of livestock lounging in streambottoms. On Page 3-7 you state: "Animal concentrations along streams and wet meadow areas have occurred under the present situation and this would not change with the proposal". The proposed plan would increase cattle use in streambottoms during Treatments A & B in some pastures, and it is stated on Page 5-1 that: "Additionally the grazing system would cause unavoidable lowering of water quality by increasing biochemical oxygen demand (BOD) and bacterial counts associated with the increased numbers of animals along streams and valley bottoms". Although grass on moist sites will probably respond to the rest rotation systems, the streambanks will suffer and degrade even further than they already are. For example, overhanging bank cover becomes established over time under stable conditions. Once trampled into the stream by livestock and subjected to heavy livestock use at least every third

year, it will never be reestablished.

Chapter 3

Numerous statements on lowering of or adverse effects on water quality are alluded to in this chapter (and elsewhere). Any lowering of water quality is in violation of Idaho State Water Quality Standards and Environmental Protection Agency regulations.

OB.IX

Page 3-20, Paragraph 1

We object to using the term undesirable plant in this context. While plants may be undesirable from the livestock view they may not be for other purposes; wildlife, cover, soil temperature regulation, etc. The vegetative section should be written from the plant ecology standpoint where there is no such thing as an undesirable plant.

No estimation of the potential of plant communities within the Challis Unit have been made. The beneficial results of the proposed grazing systems is an increase of 16,084 AUMs above present production. No estimate is available to judge whether this expected increase is .01 or .50 percent or more of the potential for the unit. Also, six of the allotments within the unit are expected to deteriorate in numbers of AUMs produced. The analogy in the impact statement is that increased AUMs equal improved vegetative communities, conversely a reduction in AUMs equal a degeneration in plant communities.

At least half of the soils in the unit are, according to the impact statement, in the moderate to critical erosion condition classes. Plant communities on many of these sites will improve little if any because of the severity of the site. Many of these areas should never be grazed by domestic stock.

The hoped for improvements in the range condition, AUMs, are predicted on the assumption that rest rotation or deferred rotation will be beneficial to the plant communities. The success of these systems on other range lands can not be argued with. But, these systems have yet to prove their usefulness on rangelands with steep topography and low precipitation during the growing season. The mean annual precipitation at Challis 13 about 7.5 inches. During the growing season, April, May, and June, about 3.12 inches of precipitation fall at Challis.

and the second

GULIX

Effective soil moisture, the important factor for plant growth is apparently an unknown quantity. On Pages 2-11 and 12 it is stated that, "present vegetation is sparse due to a short growing season and distribution of effective moisture".

Few if any evaluations of rest rotation effects have been made for plant communities on steep topography, with low precipitation, and suffering from severe disturbance and soil loss.

Page 3-41, General, Paragraph 1

We would include type of livestock: cows, horses or sheep.

Page 3-42, Paragraph 2

A table should be included showing the use of livestock by pasture and the level of use; high, moderate, etc., and the wildlife use on these pastures. Such a graphic display will more readily display the effect of the proposed plan on wildlife ranges.

Page 3-44, Paragraph 1

Succulent forbs and grasses are necessary for fetal growth and for laying down of fat reserves in adults to assist in surviving the following winter. Page 3-46, Paragraph 1

Also, grasses will be reduced which are important to wintering elk.

Page 3-45 & 46

(Ref_____Pyratt Montana) has shown that pronghorn density is related to level of livestock grazing.

Page 3-47, Paragraph 2

Include lowered production and fawn survival.

Page 3-48, Paragraph 4

Add reduction in available forage to wildlife returning to a Treatment A pasture to winter.

Page 3-49, Paragraph 1

Treatment B would have more adverse effects than those tested. Include spatial competition with wintering wildlife (elk in Sheep Creek & Spring Basin pastures). Direct competition for browse and <u>grasses</u> needed by elk & sheep for wintering.

Page 3-50, Paragraph 1

We entirely disagree with the BLM's hypothesis that Treatment C will Area and a set of a set

Again, grasses are eliminated from consideration as a winter forage for wildlife.

Page 3-52, Paragraph 3

We are unalterably opposed to the Centennial Flat Spray Project. Deer numbers very on Centennial Flat from 150 to 750 winter animals. This spray project has been proposed and rejected in the past due to the severe impacts it would have on wintering deer and sage grouse. Paragraph 3 talks about the effect of the proposed vegetative manipulation project on Road Creek to deer but does not mention the 1,000 acre spray project in the middle of a large, critical deer winter range in Centennial Flat. There is insufficient assessment of the impacts on

9

Lister

deer of this project. We can expect a reduction in carrying capacity of 300 to 4,500 deer on this winter range. The proposed livestock management plan will not float without this spray project, and we feel that the BLM is trading livestock for deer/.

apart Pr mart

Page 3-53, Paragraph 2

Only beneficial impacts are given. We heartily disagree with this assessment. Adverse impacts would be a major decline in carrying capacity of deer in the Centennial Flat Pasture; ⁶ approximately 300 to 450 head-decline. ⁷ Reduction in wintering carrying capacity on all species depending on sagebrush for winter survival include deer, sagegrouse and antelope. The beneficial impacts are largely untrue or overstated. It appears that the BLM has deliberately refused to address the impacts of this spray project in order to sell the project for livestock purposes. Page 3-55, Last Sentence

Shrub conditions would not improve but the adverse effects of livestock grazing may be lessened.

Page 3-56, Paragraph 2

We disagree with this statement. The plan calls for the reduction by 30% in sage frequency and coverage. Since winter range is the limiting factor (Page 2-101, Paragraph 1) and deer survive mostly on shrubs during the winter, how can a 30% increase in carrying capacity above present levels be projected. It is more reasonable to propose that a 30% decrease in carrying capacity will occur. Page 3-57, Paragraph 1, Sentences 1 & 3

This does not agree with a study conducted by Lauer for the BLM (Ref:

Lauer). Lauer reported that they left the winter range by May 29 but not necessarily BLM lands. Livestock are turned out in early May 05/01 (Page A-119).

Page 3-57, Sentence 6

This statement predicts the elimination of the Birch Creek sheep population as any reduction in a population of 15 to 20 animals would mean elimination.

Page 3-59, Paragraph 2

The use in the Marco Pasture is listed as 109 AUMs every other year. How many AUMs are available in this portion of this pasture? We agree with the adverse impacts listed in Paragraph 2. Are the adverse effects on the vegetation and on the Bighorns a fair trade off for the small gain to the local economy by the 109 AUMs use gained?

Page 3-60 and 61

The important winter range in the Sheep Creek pasture is not listed in this section. Approximately 100 to 125 elk normally winter in this pasture. The grazing proposal calls for 1650 AUMs of use between November 1 and January 30. Why wasn't it included? We have no doubt that the adverse impacts would occur.

The improvements would not have the beneficial impacts on elk as stated. Most of the forage would be removed before elk return to the winter ranges. Reduction in available forage through heavy grazing during Treatment A on elk winter ranges will reduce forage availability to elk. Under Treatment B, direct competition would occur on elk winter ranges for forage and space. The proposed system will increase range condition; but little or none of the increase or past forage will be available for wintering elk. This elk herd will be reduced by 50% to 75% if the plan is approved. Elk may move out of the area completely, thereby eliminating an importand and critical elk winter range. No suitable winter range is available in the immediate area for these elk to move to.

Page 3-61, Antelope

A sufficient supply of succulent forbs and grasses are also needed by adult antelope to allow them to lay down sufficient fat reserves to help them survive the following winter.

Page 3-64, Birds

We suggest theat you include the Spar Canyon Allotment to this list.

Page 3-65, Paragraph 2

How will the proposed livestock plans improve habitat for sagegrouse? Will there be more sage? Will it be more vigorous?

winter

Page 3-74, Paragraph 2

Grasses are also important to wintering elk. Since elk and cows are generally not compatible there would be spatial competition between elk and livestock during Treatment B.

Page 3-75. Paragraph 1

The feast or famine situation here is not beneficial to elk compared to the present system in Sheep Creek and Spring Basin pastures, nor is it beneficial when compared with non-use.

Paragraph 3 How will wintering deer numbers increase due to the system? What important wintering forage species will be increased to allow this increase? Page 3-142, Paragraph 2

We completely disagree with this statement. This plan is not multiple-use oriented. In every instance, with the exception of the proposed Bighorn exclosures, where livestock and wildlife or any other use interferes or would cause a reduction in livestock use the other resource loses. We find this statement to be highly unprofessional and it reflects the dominant use philosophy of the BLM. It appears that multiple-use only occurs when livestock are using a range at maximum levels acceptable to the livestock industry. We're shocked that the BLM would include such a statement.

Page 3-143

The economic comparisons are insufficient and should show present and projected hunting, fishing, recreation, etc. benefits. A comparison cost vs benefits should be included to sufficiently evaluate the trade offs being proposed.

Page 4-2, Paragraph 3 - #1

In what areas and pastures will this change occur? Will this mean even more competition with wintering elk?

Page 4-3

Why will only 50 acres of the wet meadows be fenced?

Page 5-2

The statement that sufficient forage on upland areas will lure livestock away from stream bottoms is questionable. There are upland areas on the planning unit now that have sufficient forage, but the livestock prefer the stream bottoms. (Montally Hust's met.) Page 5-7, Paragraph 3

This statement grossly underestimates the effects on wintering deer.

Fage 5-9, Elk

The adverse effects of the proposed action on elk are grossly misstated and we question how objective this evaluation has been. The most important elk winter range, Sheep Creek, is not mentioned at all. The proposed system will be disastrous to this elk herd and the adverse effects evaluation should reflect this. Page 5-15

Increased sedimentation impacts the downstream fishery as well as the fish habitat.

Page 5-17, Paragraph 1

The instability of the Road Creek watershed resulted in an enormous amount of $(\frac{1}{12})$ sediment load in the spring of this year. The proposed action includes increased grazing use in this watershed which "could continue after fifteen years". It's inconceivable that an agency entrusted with stewardship of public resources would allow continued degradation of public lands for the negligable benefits to a few livestock operators.

Page 5-17, Paragraph 2

The adverse effects of increased total use along streambanks would affect fisheries and fish habitat downstream.

Page 6-4, Aquatic Life

Because of increased use of stream bottoms, it's very unlikely that there would be less sedimentation of streambeds and it's equally unlikely that there will be increased streambank and channel stability over the long term.

Page 6-9

We can expect a reduction in hunter recreational tags with a decrease in elk and deer population to be expected if this proposal is implemented.

Page 6-11

There will be a reduction in monies generated to local areas from hunters and wildlife observers.

Page 8-28, Paragraph 2

The number of anadromous fish produced in streams within the Challis Unit could be increased with improved watersheds and streambank stability. More production of juvenile fish would return more adults even in the face of downstream problems.

General

- Because the plan was written on the AMPs rather than the MFP, insufficient consideration was given to other resources. Because of this approach the plan is single use oriented. We do not believe the BLM can do a responsible job of resource management without considering the needs of all uses.
- There are minor mistakes in the wildlife inventory data; the appendix to these comments contain the corrections.

3. The AMP and EIS is lacking in sufficient range inventory data to make it possible for the responsible official to make a decision on the future management of the Challis Planning Unit.

Many errors and omissions were found in the inventory data. The most significant was the lack of data on available AUMs by pasture. To fully comprehend the effects of the grazing program, such data are necessary. As an example, the most important elk winter range in the planning unit is in the Sheep Creek pasture. During treatment period B, as indicated on Page A-99, the plan calls for 1650 AUMs of livestock grazing from November 1 to January 30. The consequences to wintering elk competing with livestock during the winter months can be expected to be severe. Although not included in the EIS, information available from the BLM indicates that only 970 AUMs are available on this pasture. From this we can readily see that the impact on elk will be disastrous and can only result in a drastic reduction to this elk herd.

- 4. There appears to be a lack of sufficient coordination with our department on the use of available data and little consideration was given to department programs both past and future for the enhancement of the wildlife resource.
- 5. The AMP bases its beneficial impacts upon the prediction that livestock grazing can be used to improve range conditions. We have serious doubts that livestock grazing can bring about significant improvement in range conditions in dry poor soil areas with less than ten inches of annual precipitation. Soil erosion has been shown to be a major problem in these areas. The statement recognizes that most of the top soil has been lost in many areas. This has resulted in a loss of a viable seed source for grasses and forbs except where they are protected by shrubs. The restoration of these plants in areas of poor topsoil may not be feasible.

Vegetative transects in Morgan Greek, which adjoins the Challis Planning Unit, show no significant change in frequency or coverage of plants in either the grazed or ungrazed portions of this unit on dry sites. The six to nine year prediction of improvement on dry sites is not realistic.

Contraction of the second second

- 6. Stated impacts on deer are unrealistic and contradictory. The plan lists among the beneficial impacts of grazing an increase in grass and forbs and a decrease in sagebrush frequency, vigor and reproduction. Since deer survival during the winter months is dependent on sagebrush, it is difficult to see how this plan will allow for a 30 percent increase in deer numbers. A one-thousand acre spray project proposed for the Centennial Flat deer winter range has been previously rejected due to adverse impacts on winter deer populations. Are deer of less importance now than they were before? With the spray project an approximate reduction of 300-400 deer can be expected. Without the project, livestock grazing is in jeopardy in this pasture. Here is one area where it becomes obvious deer are being traded for livestock.
- 7. The concern over the decline of Bighorn sheep herds in the area was one of the catalysts that initiated the current legal suit and resulting EIS, yet there is little emphasis on Bighorns in the Statement and data presented on this species are incomplete. No information is shown on historic sheep numbers or use areas. The EIS directs itself completely to present Bighorn sheep ranges and does not consider the impact that livestock grazing and other activities have had on the areas where bighorns once ranged. The plan calls for a small increase in Bighorns to approximately 125 wintering animals. This is an insufficient number of animals to provide for the security and survival of this population. We would recommend that management be directed at increasing the East Fork population to a minimum of 200 animals and the Garden Creek herd to 125-150 animals.

- We do not believe that sufficient time was allotted for gathering of inventory data. This has resulted in AMPs being written on very questionable range data.
- 9. We found the Environmental Impact Statement to be confusing, difficult to read and deficient in the following areas as required by Executive Order 11514:
 - 8402: "The environmental statement must be of sufficient detail to allow the responsible official to make a decision with full consideration of the environmental impacts to be expected. <u>Major points of view should be</u> <u>identified and discussed in the environmental statement</u>. <u>The statement</u> <u>should show the logic and sequence of the proposed decision(s)."</u>
 - 8412.2: "The alternatives must be composed using criteria relevant to the objectives.
 - c. The basis of the selection of the alternative chosen for action must be given.
 - d. The information must be presented in a logical sequence."

We do not believe that any of the alternatives presented are acceptable. While the department is not against grazing on public lands the poor choice of alternatives forces one to choose the no-grazing alternative as it is the only one which provides sufficient protection to soil, water and wildlife refources. An alternative should have been included that takes into account the benefits of rest-rotation at livestock levels balanced to the number of AUMs available for each pasture and allowing a sufficient amount of forage to be left for wildlife needs. While Hormay states that all vegetation can be removed in Treatment A, he also states that plants will respond better if not used that level. Also other resource needs may mean a reduction in use in the heavy use pasture.

Recommendations

- It is our recommendation that the Impact Statement be redrafted to demonstrate that all activities on these lands have been adequately considered and that the grazing plan is being incorporated into a true multiple-use program. We recommend that the EIS be written on the MFP for this unit.
- 2. When a grazing plan is implemented, we recommend that qualitative and quantitative range transects be placed in all pastures. If a significant degree of improvement is not observed within a reasonable length of time on any given pasture, then all livestock grazing on that pasture should be removed and other range improvement programs be initiated. Grazing cannot be justified if adverse losses of vegetation, litter, soil compaction and reduced water infiltration result in increased surface and sediment flows.
- 3. We strongly recommend that the critical elk and Bighorn winter ranges in the Warm Springs, East Fork and Garden Creek allotments be removed from livestock grazing and other methods be prescribed for range improvements.
- Include historic data on Bighorn sheep use areas and population numbers to adequately determine past livestock impacts on Bighorn populations.
- 5. We recommend that management be directed at increasing the East Fork population to a minimum of 200 animals and the Garden Creek herd to a minimum of 150 animals.
- A more simple and organized approach to the document should be used with more accurate, and available wildlife data included.
- 7. The adverse effects of the proposed plan on elk and deer populations are often underestimated and sometimes completely wrong. An <u>objective</u> evaluation of adverse effects should be made.
- 8. Bring the EIS into compliance with Executive Order #11514, Sec. 8401, etc.

- 9. It does not appear that the six objectives listed for this unit can be met immediately. A reevaluation of livestock use should be made based on what forage is actually available.
- Sufficient up to date range data should be gathered to enable managers to design a reasonable livestock management system.
- A table listing present available AUMs, wildlife AUMs and proposed AUMs of livestock use by <u>pasture</u> should be included.
- 12. A realistic cost-benefit analysis that includes recreation and other uses should be included to objectively compare various proposals.