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EXHIBIT 3

ENVIRONMENTAL ASSESSMENT COVER SHEET

ENVIRONMENTAL QUALITY COUNCIL

DS-251

APPLICANT Department of State Lands

TYPE OF OPERATION Timber Harvest

LOCATION Sec. 16, T16N, R6W - Green Creek

PERSON PREPARING EA Darrel J. Bakken

() DRAFT EIS
(X) NO DRAFT EIS

DATE PREPARED 1-30-92

EXPECTED IMPLEMENTATION DATE

7-1-92

REVIEWED BY *[Signature]*

RECOMMENDATION

() DRAFT EIS
(X) NO DRAFT EIS

REVIEWED BY *[Signature]*

RECOMMENDATION

() DRAFT EIS
() NO DRAFT EIS

REVIEWED BY *[Signature]*

RECOMMENDATION

() DRAFT EIS
(X) NO DRAFT EIS

ADMINISTRATOR'S SIGNATURE *[Signature]*

RECOMMENDATION

() DRAFT EIS
(X) NO DRAFT EIS

SUMMARY OF POTENTIAL IMPACTS

PHYSICAL ENVIRONMENT	SIGNIFICANT		INSIGNIFICANT WITH MITIGATION		INSIGNIFICANT AS PROPOSED	
	SHORT TERM	LONG TERM	SHORT TERM	LONG TERM	SHORT TERM	LONG TERM
1. <u>TOPOGRAPHY</u>					X	X
2. <u>GEOLOGY</u> ; stability					X	X
3. <u>SOILS</u> ; Quality, distribution					X	X
4. <u>WATER</u> ; Quality, quantity, distribution					X	X
5. <u>AIR</u> ; Quality					X	X

PHYSICAL ENVIRONMENT(cont)

	SIGNIFICANT		INSIGNIFICANT WITH MITIGATION		INSIGNIFICANT AS PROPOSED	
	SHORT TERM	LONG TERM	SHORT TERM	LONG TERM	SHORT TERM	LONG TERM
6. <u>UNIQUE, ENDANGERED, FRAGILE, or LIMITED</u> environmental resources					X	X

BIOLOGICAL ENVIRONMENT

1. <u>TERRESTRIAL, AVIAN, and AQUATIC</u> ; species and habitats					X	X
2. <u>VEGETATION</u> ; quantity, quality, species					X	X
3. <u>AGRICULTURE</u> ; grazing, crops, production					X	X

HUMAN ENVIRONMENT

1. <u>SOCIAL</u> ; structures and more					X	X
2. <u>CULTURAL</u> ; uniqueness, diversity					X	X
3. <u>POPULATION</u> ; quantity and distribution					X	X
4. <u>HOUSING</u> ; quantity and distribution					X	X
5. <u>HUMAN HEALTH & SAFETY</u>					X	X
6. <u>COMMUNITY AND PERSONAL INCOME</u>					X	X

HUMAN ENVIRONMENT(cont)

	SIGNIFICANT		INSIGNIFICANT WITH MITIGATION		INSIGNIFICANT AS PROPOSED	
	SHORT TERM	LONG TERM	SHORT TERM	LONG TERM	SHORT TERM	LONG TERM
7. <u>EMPLOYMENT</u> ; quantity and distribution					X	X
8. <u>TAX BASE</u> ; local and state revenue					X	X
9. <u>GOVERNMENT SERVICES</u> ; demand on					X	X
10. <u>INDUSTRIAL, COMMERCIAL</u> and <u>AGRICULTURAL</u> activities					X	X
11. <u>HISTORICAL</u> and <u>ARCHAEOLOGICAL</u>					X	X
12. <u>AESTHETICS</u>					X	X
13. <u>ENVIRONMENTAL PLANS</u> and <u>GOALS</u> local and regional					X	X
14. <u>DEMANDS</u> on <u>ENVIRONMENTAL RESOURCES</u> of land, water, air and energy					X	X
15. <u>TRANSPORTATION</u> networks and traffic flows					X	X

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File (#016.4)

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Environmental Assessment
Green Creek
Sec. 16, T16N, R6W

I. Purpose/Management Objectives:

A. Project Area

The Green Creek proposals are in Section 16, T16N, R6W M.P.M. Green Creek is located approximately 5 miles north of Rogers Pass and 3 miles east of the Lewis & Clark Pass, on the east side of the Continental Divide in Lewis & Clark County.

The Green Creek section has been classified forest land (by the Department of State Lands) since 1967. This section is a part of the Public Schools Land Grant.

B. Management Objectives

Management direction for State owned lands can be found in several State Statutes. Section 77-1-202 which describes the powers and duties of the Board (of Land Commissioners) states that "...the guiding rule and principle is that these lands and funds are held in trust for the support of education and for the attainment of other worthy objects helpful to the well-being of the people of this state. The Board shall administer this trust to secure the largest measure of legitimate and reasonable advantage to the State." Multiple use management for State lands is addressed in Section 77-1-203. Multiple use management is the coordinated management of all the various resources on State land in that combination best meeting the needs of the people and the trust without impairment of the productivity of the land. State land will be managed insofar as is possible to maintain or enhance multiple use values but will make the most judicious use of the land, allowing for changing needs and realizing that some land may be used for less than all of the resources. Section 77-1-601 states that "it is in the best interest and to the great advantage of the State of Montana to seek the highest development of state-owned lands...." Management options and proposals for state lands must comply with, and be evaluated in accordance with these legislated mandates.

Consistent with the forest land classification, the Green Creek section should be managed with an emphasis on the timber and watershed values which it contains. A list of the site specific management objectives is in Table 1.

TABLE 1	
Site Specific Management Objectives	
1)	Timber Production
2)	Maintain water yield from State land
3)	Income to the School Trust
4)	Long term maintenance of wildlife habitat

C. The Decision

The decision to be made is whether the Department of State Lands should continue the current management actions as they are (the no action/project alternative), or if the Department should begin forest management and harvesting actions. The forest management actions which will be considered are those various alternatives which were analyzed as part of this Environmental Assessment. The Central Land Office Area Manager, the State Forester and ultimately, the State Land Board must decide which course of action to follow. The selection will be based upon the combined environmental, social, and economic factors which best meets the general and site specific management objectives for this section.

D. Document Organization

The Table of Contents at the start of this Environmental Assessment outlines the document layout. Section I discusses the project location, management objectives, decision and public involvement processes. The issues which evolved through the analysis process are also listed in Section I. Section II will discuss the alternatives which are being considered. The relationship of issues to the alternatives will also be covered in Section II. The affected environment will be discussed in Section III. Section IV will show the environmental effects on an issue by issue basis. The benefits and/or consequences of each alternative are laid out in Section IV. The Appendixes are located in Section V.

E. Public Involvement and Issue Determination

The general public was invited to comment on the proposals through a legal notice in the Helena Independent Record. The adjacent landowners were all contacted by mail, as was the State's surface leasee. Soils, hydrology, wildlife, and archeological specialists within the Department of State Lands were consulted. The local biologist from the Department of Fish, Wildlife & Parks was contacted. The County Weed Board and the County Conservation

District have jurisdiction over parts of the proposals, so they were contacted.

From these contacts and discussions a list of potential issues were developed. In addition, it is the Department's policy to always consider cumulative effects to watersheds and wildlife as potential issues. The list of potential issues is shown in Table 2.

TABLE 2	
INITIAL POTENTIAL ISSUES	
1)	Cumulative Watershed Effects
2)	Cumulative Effects to Wildlife
3)	Grizzly Bear Habitat & Displacement
✓ 4)	Hunting Season Access
✓ 5)	Noxious Weeds

Through the analysis process we were able to satisfy concerns on issues 4 and 5. Access to the project area required right-of-way agreements with two adjacent landowners. These landowners supplement their ranching income by outfitting/guiding hunters during the big game season. Access for any project would be allowed only if the State agreed to no access for the period of October 1 through November 30th.

The Department must also comply with State Noxious Weed Management Laws. Permits and procedures for the control of noxious weeds are under the jurisdiction of the County Weed Board. Any selected alternative would have to comply with these requirements. Since the Department has no discretion in the actions taken relating to issues 4 and 5, there is no need to further examine alternatives which relate to the access and weed issues.

The remaining important issues are watershed and wildlife cumulative effects. The issue of grizzly bear habitat and displacement is actually a subset of and an overriding concern in the wildlife issue. There is some concern for winter displacement of elk to private lands.

II. Alternatives/Proposals

Through the analysis process the Department was able to develop 4 action and 1 no action proposals. These four proposals will be discussed in this section. The relationship between the issues and the actions in each alternative will be addressed. Table 3 shows the four proposals and a summary of their actions. Maps of Alternatives B, C, D, & E are shown in Figure #1 and again in Appendix A.

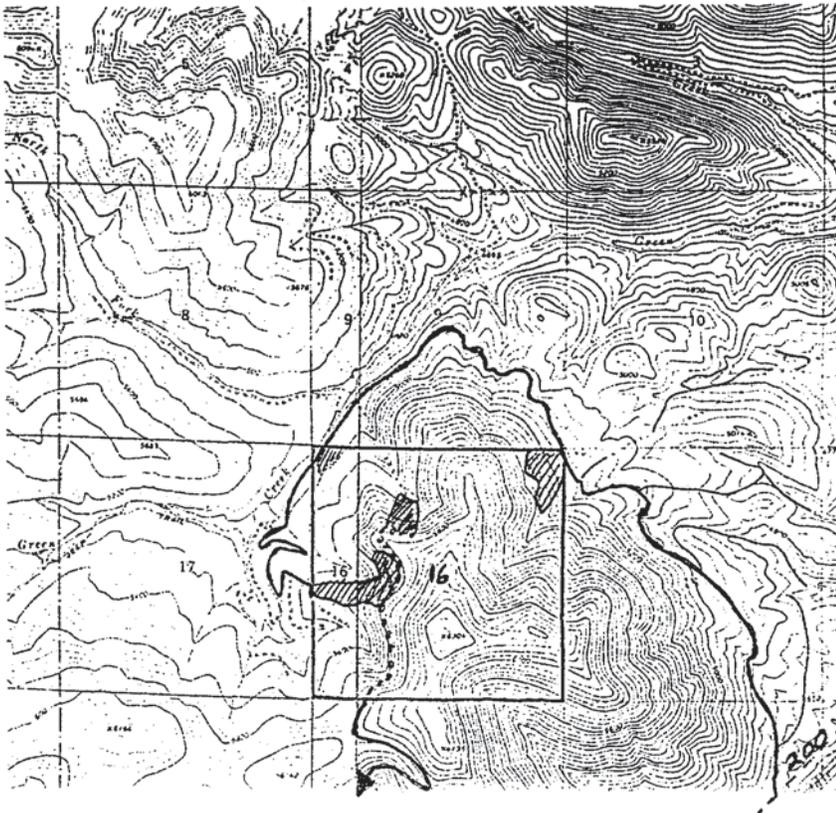
TABLE 3

GREEN CREEK ALTERNATIVES

NAME	NO PROJECT	INITIAL PROPOSAL	REDUCED PROPOSAL	GRIZZLY PROPOSAL	ELK PROPOSAL
Designation	A	B	C	D	E
40 AUM's Grazing	Yes	Yes	Yes	Yes	Yes
Fire Supp.	Yes	Yes	Yes	Yes	Yes
Natural Succession on _Timbered acres	All 525 ac.	479 ac.	492 ac.	492 ac.	492 ac.
Acres under Timber Mgmt.	0	46 ac.	33 ac.	33 ac.	33 ac.
Volume harvested	0	350 MBF	260 MBF	260 MBF	260 MBF
Acres tractor skidded	N/A	27	33	33	33
Acres cable yarded	N/A	19	0	0	0
Roads built	0	.8 mile	0	0	0
Timing	N/A	12/1 - 9/30	12/1 - 9/30	7/1 - 9/30 or 12/1-1/31	7/1 - 9/30
Duration	N/A	7/1992 - 9/1993	7/1992 - 9/1993	7/1992 - 1/1993	7/1992 - 9/1992

only difference between C-E.

Alt. B



- N ↑
- existing road
- new road
- ▨ proposed harvest areas

Alt. C + D + E

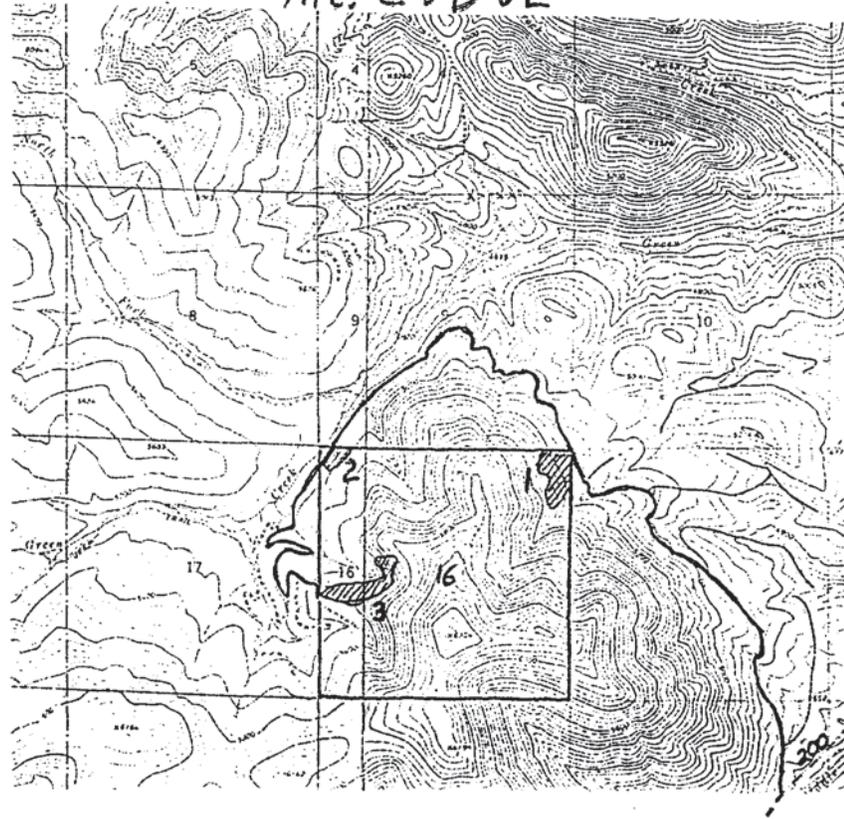


Figure 1

Alternative A

The No Action Alternative is more appropriately named the No Project Alternative (A). This is because there are natural and man-caused actions taking place now, which may have effects in the future. For example, the Green Creek section currently has a State Forest Land Use Authorization for 40 A.U.M.'s of grazing, each year, during the period June 15 - Oct. 15. The Department has and will continue to actively suppress all fires on this section. Also, with no other changes to the Land Management, natural forest succession will continue on the timbered areas. There will likely be some additional timber encroachment into the few available grazing areas. In the long term, this will likely decrease the available livestock carrying capacity. The dominant tree species on the Green Creek section are Douglas-fir and lodgepole pine. Douglas-fir is usually long lived and fairly resistant to low and moderate intensity fires. Lodgepole pine trees are usually shorter lived. The lodgepole pine stands in Green Creek are relatively old and have existing stands of Douglas-fir coming in below them. Over time, the lodgepole pine timber will die out, adding to the fuel loading, and be replaced with Douglas-fir. Past and current fire management coupled with natural succession is increasing the risk of high intensity wildfire in this section. Harvesting on adjacent private lands, which is continuing, is isolating the state's higher fire risk section. Adjacent logging roads also improve access for fire control as needed. Excessive elk use and depredation on adjacent private lands has resulted in a late season hunt in Jan. & Feb. of 1991 and a shift to either sex elk during the fall 1991 season. Another late season hunt may be needed in 1992.

Alternative B

The initial proposal (B) is to harvest approximately 350 MBF on 46 acres. To accomplish this 8/10 of a mile of new road will be required. This road could start at the end of an existing road in Section 21 and contour its way into the center of the State section. Three tractor skidding units (27 ac.) are accessible from the north and west sides of the section on existing roads. The new road could access 2 additional cable yarding units (19 ac.). All actions would be completed between July 1992 and October 1993, excluding the period from 10/1/92 - 11/30/92. Grazing and fire suppression activities will continue as they are now. Natural succession will continue on the remaining 479 acres (91%) of forested land.

The road construction in Alternative B will increase the road densities in an already heavily roaded area. Current road density, if opened to public use, would be above recommended levels for grizzly bear recovery areas. Road use is restricted by the adjacent landowners. Alternative B will decrease available bear cover less than 1%. There may be a moderate to high risk of bear displacement due to the possible duration of the harvesting. Unrestricted use during the period Dec. 1 - May 15 could displace elk onto adjacent private lands where the Dept. of Fish, Wildlife & Parks is trying to reduce elk use.

Road construction costs and more costly cable yarding eat away the income to the school trust in Alternative B. Stumpage income would probably be less in Alternative B than in Alternatives C or D. There should also be a slight, but probably inconsequential, increase in grazing capacity by each of the action alternatives.

Alternative C

Alternative C is to harvest approximately 260 MBF from 33 acres. The new road construction and some of the cable yarding areas have been omitted from this alternative. A portion of the stands which were planned for cable yarding in Alternative B have been changed to long distance tractor skidding units in Alternative C. The operating seasons and duration are the same as in Alternative B. (All actions to take place from July 1992 - Oct. 1993, excluding the period 10/1/92 - 11/30/92.) Again, grazing and fire suppression activities will remain unchanged. Natural succession will be allowed to proceed on the remaining 492 acres (94%) of forested land.

With no new road construction neither the open road density or the total road density will be further compromised. Grizzly bear cover levels will still be reduced by less than 1%. The long potential operating season (same as Alternative B) will again provide a moderate to high risk of grizzly bear displacement in the summer and elk displacement in the winter and spring. By eliminating the road construction costs and the expensive cable yarding the potential minimum revenues to the school trust are higher than in Alternative B. There will be a slight but immeasurable increase in grazing capacity in Alternative C.

Alternative D

Alternative D is quite similar to Alternative C. The estimated harvest is 260 MBF from the same 33 acres. No new road will be constructed and all areas will be tractor skidded. The difference between Alternative C & D is in the operating season. Given the high level of harvest activity on the adjacent land, it is quite likely that all grizzly bears are temporarily displaced from this area. The private operators are planning to continue their operations through 1992. As such, the State could conduct simultaneous operations and have no primary or secondary effects to grizzly bears. The operating season for Alternative D will be July 1, 1992 through Sept. 30, 1992 and/or Dec. 1, 1992 through January 31, 1993. In addition, if operations are conducted during the summer season, they will be subject to the stipulations discussed below.

If a confirmed grizzly bear sighting is made, or if the private logging concludes (leaving the state operation as the only activity), then the state contractor will have two weeks to haul all decks and move out. If work remains, it will have to be completed during the winter season when resident bears are most likely in their dens.

If activities are conducted during the winter they will be restricted to operations in one unit at a time in the following order, Unit 3 first, then Unit 2, then Unit 1. Also, all operations will be restricted to a two month period from 12/1/92 through 1/31/93. This winter season could cause some short term elk displacement in portions of this winter range area.

Alternative D will, like Alternative C, have no additional effect on road densities, and only a slight (less than 1%) decrease in bear cover. The estimated minimum revenues to the trust are the same in Alternative D & C., with a similar slight immeasurable increase in grazing capacity.

Alternative E

Alternative E would allow summer operations only. The proposal would harvest 260 MBF from the same 33 acres planned in Alternatives C & D. The difference is that the operating season would be limited to the period July 1, 1992 through Sept. 30, 1992, with restrictions for grizzly bear protection. As in Alternative D, if a confirmed grizzly bear sighting is made, or if the private logging concludes, (leaving the State operation as the only activity) then the state contractor will have a maximum of two weeks to haul all decks and move out. If the Forest Officer feels that there is eminent threat of confrontation between grizzly bears and humans, the sale may be shut down on one days notice. If work remains after a permanent shut down, then a new environmental analysis will be completed to determine the effects of finishing the work. There is some risk under this option that logs could be left cut or decked on the site, a possible irreversible loss of income to the trust. Fire hazard could also be created and untreated yielding increased fire hazards for the area, if operations are stopped prior to completion. Trees left cut and slash left untreated could also create along term reduction in available wildlife cover by leaving areas in a condition which would be unaccessible by wildlife. These are some of the issues which would have to be addressed in a future E.A. if this alternative is chosen and circumstances require a premature shut down of operations.

Revised
* The Helena Unit prefers Alternative D.

III. Affected Environment

The Green Creek section is located in mountainous terrain just east of the Continental Divide in Lewis & Clark County. The geology and soils were reviewed by Jeff Collins, soil scientist from the Forestry Division. A copy of his report is in the Appendix, page A17

The hydrology of the area was reviewed by Gary Frank, hydrologist for the Forestry Division. Gary estimates that our proposal, in conjunction with existing and future private logging may have a maximum 4-5% water yield increase. This is well below the allowable threshold for cumulative effects. As such, no adverse cumulative impacts are expected, as long as the usual Best Management Practices are followed.

The Green Creek section contains a full 640 acres. Timbered stands are present on 525 acres. The remaining 115 acres are mostly rocky, noncommercial ridgetops and some small grassy parks. Currently the section supports 40 A.U.M. of livestock grazing. State records show one timber permit in 1919 to C.F. Averman and a domestic firewood permit in 1941 to Steinbach.

The Green Creek section is used by elk, mule deer, blue grouse, black bears, grizzly bears and other non game species. The section is in part of the Northern Continental Divide grizzly bear ecosystem. (Dearborn/Elk Creek Bear Management Unit.) Per John McCarthy's letter, (1-9-92, see Appendix, page A29) this general area supports 400-500 elk and 200-300 mule deer. Recent grizzly bear use and predation are shown on maps in the appendix, as part of John McCarthy's letter.

There have been occasional mountain pine beetle hits on lodgepole pine in this section. Spruce budworm has been an on-going problem in the Douglas-fir. The budworm may be a problem when trying to regenerate Douglas-fir from natural seed, but some older adjacent harvests on private land have regenerated well.

A portion of the old Sterns-Lewis & Clark Pass County road passes through the northwest corner of the Green Creek section. This road is still used by the adjacent landowners. All action alternatives evaluated by the State use a small segment of this old road. The Department archeologist does not anticipate any additional concerns.

There is an old fenceline along the north and east section lines. A gate will have to be constructed to access the stand in the northeast corner of the section in all action alternatives.

IV. Environmental Effects

Each of the five alternatives has some effects on the existing environment. Table 4 shows the effects of each of the five alternatives.

TABLE 4
ENVIRONMENTAL EFFECTS

Alternative	A	B	C	D	E
Water yield changes cumulative	up 4-5% or less (private logging)				
% of timbered area in bear cover - State only	Static 61%	down Trace 60.7%	down Trace 60.8%	down Trace 60.8%	down Trace 60.8%
Cumulative Bear Cover	down 0-10%	down 0-10+%	down 0-10+%	down 0-10+%	down 0-10+%
Total road densities	static 1.8 mi/sec.	up Trace to 1.86 mi/sec.	Static	Static	Static
Additional risk of bear displacement DSL proposals only	none	moderate to high	moderate to high	minimal to none	minimal to none
Risk of elk displacement	low	high	high	moderate	low to none
Acres under timber mgmt.	0	46 ac.	33 ac.	33 ac.	33 ac.
Grazing capacity	down Trace	up Trace	up Trace	up Trace	up Trace
Risk of high intensity fire ST/LT*	high/high	high/high	high/high	high/high	high/high

*ST - Short Term

LT = Long Term

A. Watershed

Water yield increases are used as the measure of potential cumulative effects to watersheds. Gary Frank, (Hydrologist - D.S.L.) evaluated the project areas current and planned harvests and estimates a maximum 4-5% water yield increase for the drainage. This increase is probably due to the past and projected levels of private harvest. The State's projects alone are so small that they contribute no measurable change to the overall water yield in the drainage. A 4-5% increase is well below the level which is normally considered to have cumulative impacts.

B. Wildlife

Wildlife cover, primarily grizzly bear security cover, is currently at 61% of the total area. The state's projects alone will reduce this level less than 1/2 of 1%. The cumulative impact of additional private harvesting could be up to a 10% reduction in cover. The interim Grizzly Bear Standards and Guides for this area recommend (guideline) maintenance of 40% of the total area in cover. The worst we can expect under any of the five alternatives is a reduction to 50 - 51% of the total area remaining in a cover status, well above the guidelines. As such, none of the alternatives are expected to have any significant adverse cumulative effects to bear security cover.

Total road densities are currently at 1.8 miles per section. The standards and guides recommend 1 mile/section or less of open roads. Road management by the adjacent landowners, severely restricts use, so impacts to grizzly bears are limited to logging activity and hunting seasons. Alternative B would require construction of an additional 8/10 mile of road in this area. While this will only increase road densities to 1.86 miles/section, any further increase would be undesirable. Alternatives A, C, D, & E would have no effect to road densities. The state does not control any roads in this area, and therefore does not have road closure of existing roads (to reduce road densities) as an option.

The primary impact to the grizzly populations would be displacement during the logging operations. Due to the widely dispersed private logging, and planned activities by landowners adjacent to the study area, there is no totally secure area for grizzly bears to be displaced to. (See Alan Wood's memo dated 11/21/91, page A19 in the Appendix.) It is quite likely, that the dispersed private logging may have displaced the grizzlies from this area. This has created a situation wherein the state could conduct harvest activities without risk of bear displacement, provided that the operations take place while the continued private logging is underway.

The private logging contractor has plans for additional work through the summer of 1992 only. (See letter from Montelius page A55 in the Appendix.) Alternatives B and C would potentially allow state operations beyond this period. As such, there is a moderate to high risk that the State's operations under Alternatives B and C could prolong if not directly cause displacement of bears. Alternative D & E includes timing and mitigating measures to leave only a "minimal to no chance" of displacement. Alternative D & E best meet the project planning and design standards in the State's interim Grizzly Bear Standards & Guides. Alternative A would obviously contribute no added risk of displacement.

The local Fish, Wildlife & Parks Biologist (John McCarthy) is concerned about growing elk depredation on adjacent private lands north of this area. The Green Creek area provides important thermal and security cover to hold elk off the adjacent private lands from Dec. 1 through mid-May. The adjacent private logging has only been active during the summer months. While it would be desirable to have no activity in this area from Dec. 1 - May 15, some activity may be needed to better protect grizzly bears (an endangered species) during the summer. The State's elk winter range standards and guidelines suggest the following mitigation measures for winter logging.

- 1) elk have access to alternative feeding and cover areas on the winter range.
- 2) logging is confined to one small area at a time.
- 3) logging activities are completed within 2 months.

If we assume winter use will displace elk 1/2 mile on either side of the access route and logging area we can anticipate our winter operations to displace elk from 3.87 square miles. Alternative D would probably meet these winter range guidelines, but in this specific case, winter operations may temporarily displace elk onto private lands causing increased depredation on private lands. Alternative E would omit all winter operations and have no chance of winter elk herd displacement.

C. Summary

In summary, the cumulative watershed effects and wildlife cover level changes are due primarily to the private logging operations. The decision to implement an action alternative on State land will have almost no statistically measurable added effect. Road densities are undesirable now. Alternative B would slightly increase road densities, Alternatives A, C, D, & E would have no effect. Risk of bear displacement in Alternative A is none, in

Alternative B and C is moderate to high and in Alternative D is minimal to none. Risk of elk displacement is high in Alternatives B & C, moderate in Alternative D, and low to none in Alternative E.

Alternative B would allow timber production and management on 46 acres (8.7%) of the State's forested land. Income to the trust would be less in Alternative B than in C or D due to road construction costs and expensive cable yarding. (See Economic Analysis Comparison page A66 in the Appendix.) Added operator risk in Alternative E (due to the very restrictive operating season) will likely reduce bid prices when compared to C & D. This reduction is very hard to estimate. Alternatives C, D, & E would both put 33 acres (6.3%) of the forested State land into commercial timber management. Long term options for additional management are still available in all alternatives, if technology or market changes take place.

Alternative A will likely have a small long term decrease to grazing capacity. Alternatives B, C, D, & E will likely have small short term increases in grazing before they return to current, diminishing, levels.

The risk of a high intensity wildfire, mortality to windthrow or insect or disease losses sometime during the long term is high for all alternatives. This could result in the irretrievable loss of timber resources. Wildlife cover and the watershed will also experience adverse impacts if this takes place. The action Alternatives B, C, D, & E do not substantially reduce the fire risk, but do allow some beneficial uses of the existing timber resource.

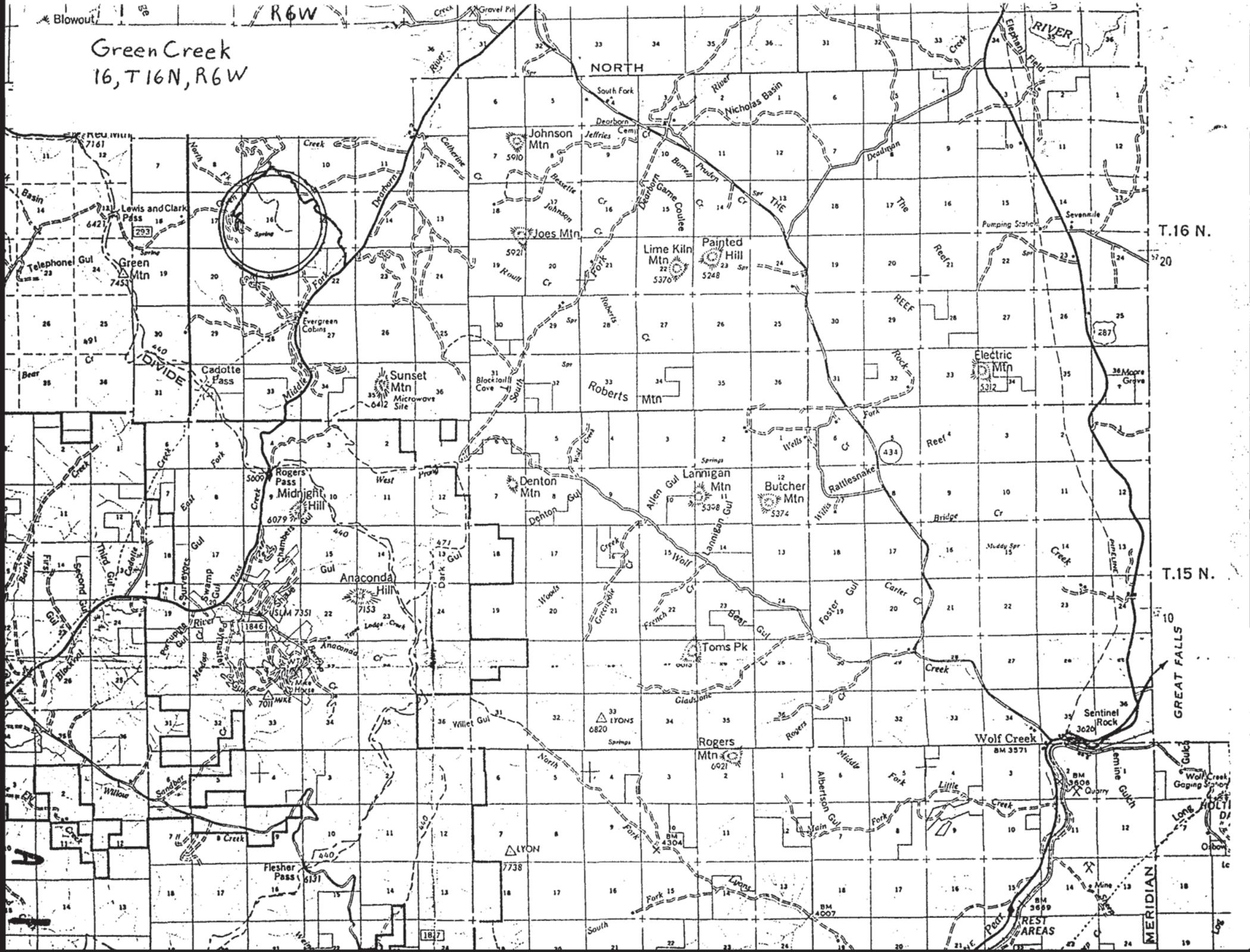
V. Appendix

A.	Project maps	A1 - A3
B.	Temporary Right-of-Way Agreements. . . .	A4 - All
C.	List of Agencies and Persons Contacted .	A12
D.	Copy of Legal Notice	A13
E.	Correspondence	A14-A56
F.	Weed Plan	A57
G.	Sediment Control Ordinance	A64
H.	Economic Analysis Alternative B, C, D,&E	A66

Blowout

R6W

Green Creek
16, T16N, R6W

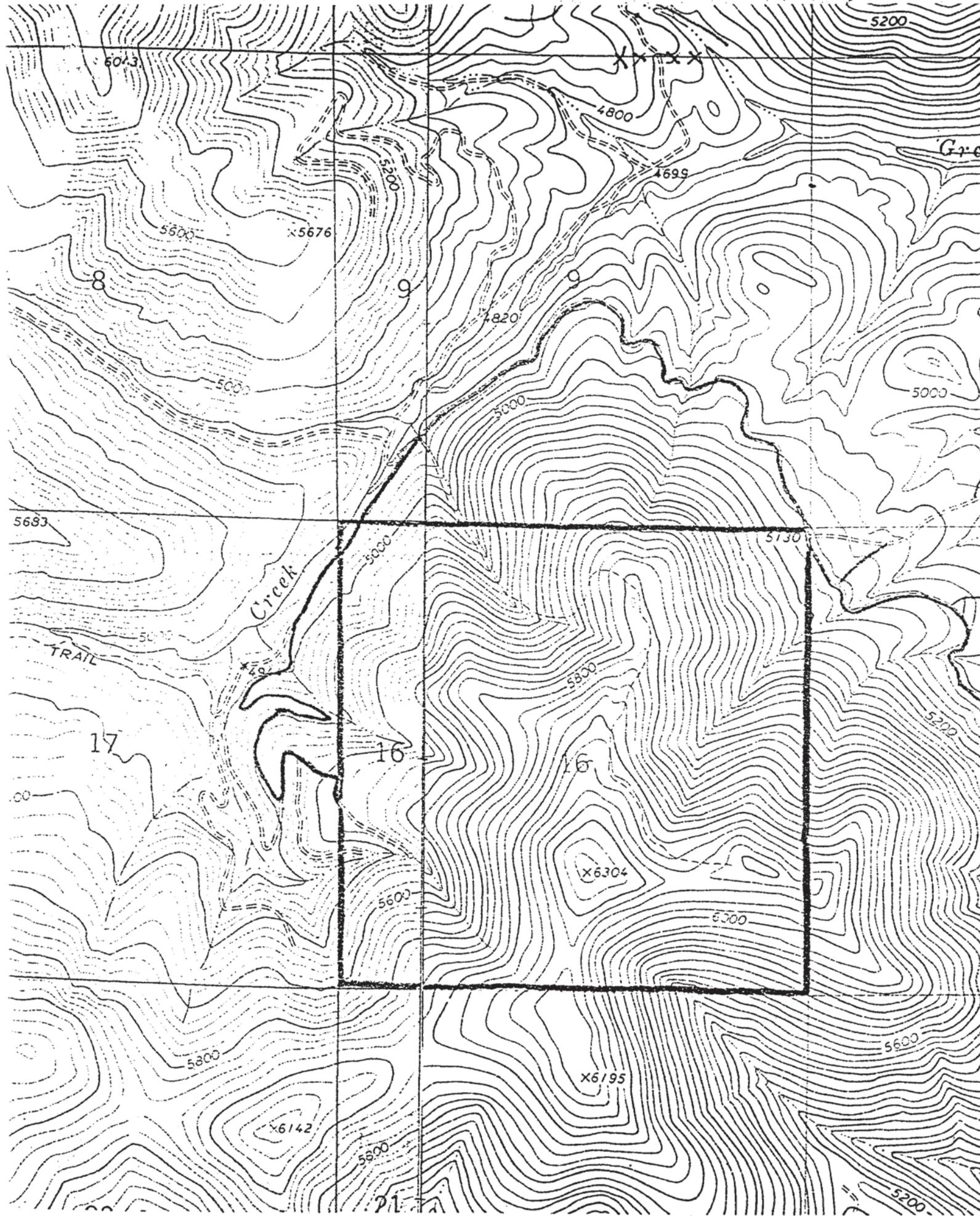


T.16 N.

T.15 N.

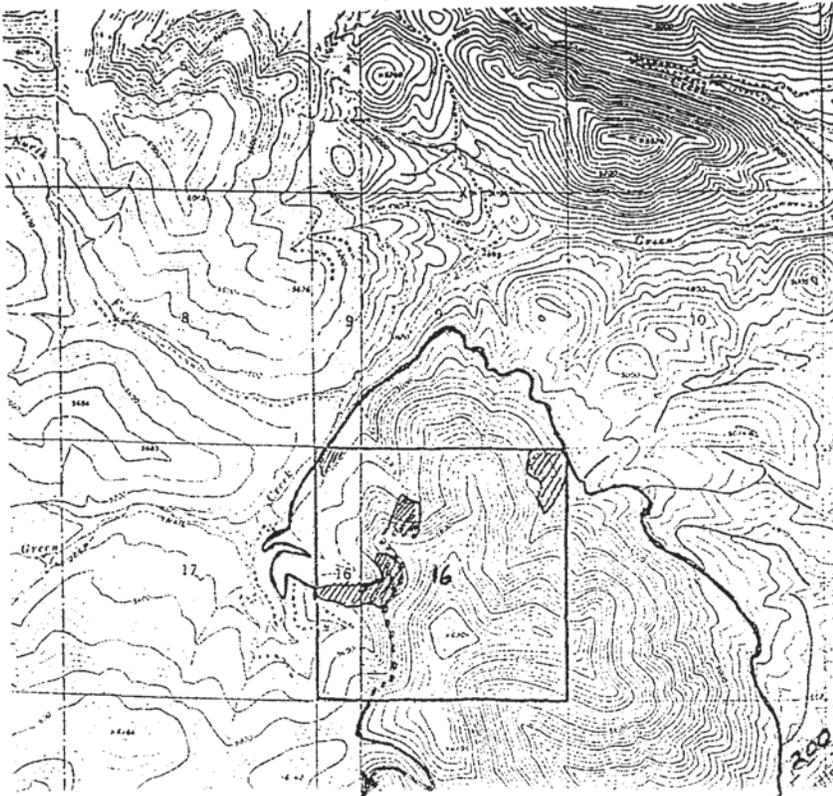
GREAT FALLS

MERIDIAN



A 2

Alt. B

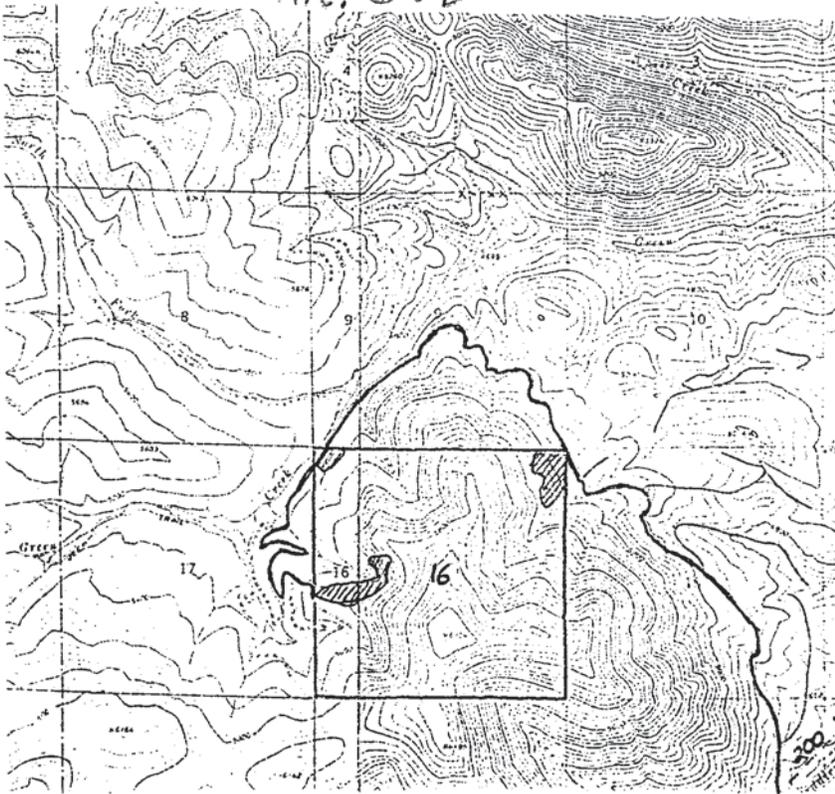


existing road

new road

proposed harvest areas

Alt. C + D



TEMPORARY RIGHT-OF-WAY AGREEMENT

Permission is hereby granted by Barbara and Norman McDonough, of Wolf Creek, MT hereinafter called the "Grantor" to the Montana Department of State Lands and the purchasers of State forest products in section 16, T16N, R6W herein after called the "Grantee", to use, subject to the conditions set forth below, the following described lands:

Existing roads M1/2, N1/2S1/2 section 17, T16N, R6W as shown in blue on Exhibit "A" attached hereto.

Description:

The right-of-way covered by this agreement shall be of the minimum width necessary for roads of like standards, 30 feet in width, 15 feet on each side of the centerline, with such additional width as may be required for adequate protection of cuts and fills.

This easement covers a right-of-way as estimated 1 mile in length and is granted for the purpose of log hauling and related forest management activities.

This easement shall be in effect from the date signed until the completion of the State timber sale which is located in section 16, T16N, R6W.

The Grantor has the right to suspend the agreement upon breach of any of the conditions herein. The Grantor shall notify the Grantee in writing of the reason for suspension. If the Grantee fails to take corrective actions within a reasonable time following written notification the Grantor will have the right to terminate the agreement.

Conditions:

1. Access will only be allowed during the period December 1 through September 30, i.e. no access during hunting season. All use by the Grantee will be restricted to dry or frozen conditions to prevent damage to the roadway.
2. If the roadway or any other improvement is damaged due to the Grantee's use, it will be repaired to pre-sale or better conditions in a timely manner.
3. The right-of-way as shown in Exhibit "A" is the only route to be used by the Grantee. Some minor reconstruction may be needed (e.g. widening of curves, installation of drainage structures, etc.) to provide for safer travel and to protect water quality.
4. If the attached Exhibit "A" indicates an area of new road construction the standards of the new construction will be shown in Exhibit "B".

5. Any areas disturbed by the new or reconstruction will be seeded with 10 pounds per acre of grass seed the spring or fall immediately following the disturbance.

6. All gates will be left as found after each passage. The Grantor will allow the Grantee to "double lock" any locked gates so that both parties will have access.

7. No hunting by the Grantee is authorized by this temporary Right-of-Way agreement.

Special Stipulations:

1. All wood hauled over this right-of-way shall be subject to a \$1.00 per MBF road use fee. This fee shall be collected from the Sale purchaser, based on the actual scale (Scribner dec. C), through the regular timber sale billing process. When the sale is completed, the State will make one payment to the grantor to cover the entire amount due.

2. The grantee will be responsible for the management of noxious weeds along the right-of-way. Management shall include the following:

a) Mapping of infestations which are existing prior to the grantee's use, and notifying the Grantor of these locations.

b) Chemical control of new infestations which develop during the grantee's use and which develop within one year following use.

c) Herbicides will be applied only by licensed applicators in accordance with all applicable laws and labeling instructions.

d) The grantee may enter into weed spraying contracts with other authorized applicators, including the grantor.

Liability :

The Grantee agrees to assume all risk of and indemnify and hold harmless, and at its expense, defend the Grantor from and against, any claims, loss, cost legal actions, liability or expense on account of personal injury or death of any person whatsoever, including but not limited to, the grantor, or damage to or destruction of property to whomsoever belonging, including but not limited to property of the Grantor resulting partially or wholly, directly or indirectly, from the Grantee's exercise of the rights herein granted, accepting only such claims, costs, damage, injury or expense which may be caused by the sole negligence of the Grantor.

The estimated volume of timber to be transported over this Right-of-Way is 380 thousand board feet. (Scribner decimal C rule.)

This temporary Right-of-Way shall go with the property if the property should be sold during the term of the agreement. It shall be the full responsibility of the Grantor to notify potential purchasers of the Grantor's property of the existence and terms of this right-of-way agreement.

By signing below the Grantor hereby certifies that they have full legal authority to grant a temporary Right-of-Way to the Grantee.

If the Grantor fails to notify the purchasers of their property of this agreement, or if it is discovered that the Grantor does not have full legal authority to grant the right-of-way, then the Grantee may hold the Grantor liable, either fully or partially for any losses, including but not limited to wages and operating expenses incurred during the preparation of the timber sale.

It is understood and agreed that the permission granted herein is not exclusive and the Grantor reserves the right to use and grant to others the right to use the roads jointly with the Grantee.

IN WITNESS WHEREOF, this temporary Right-of-Way agreement is executed on this the 6 day of January, 1992.

Grantor:

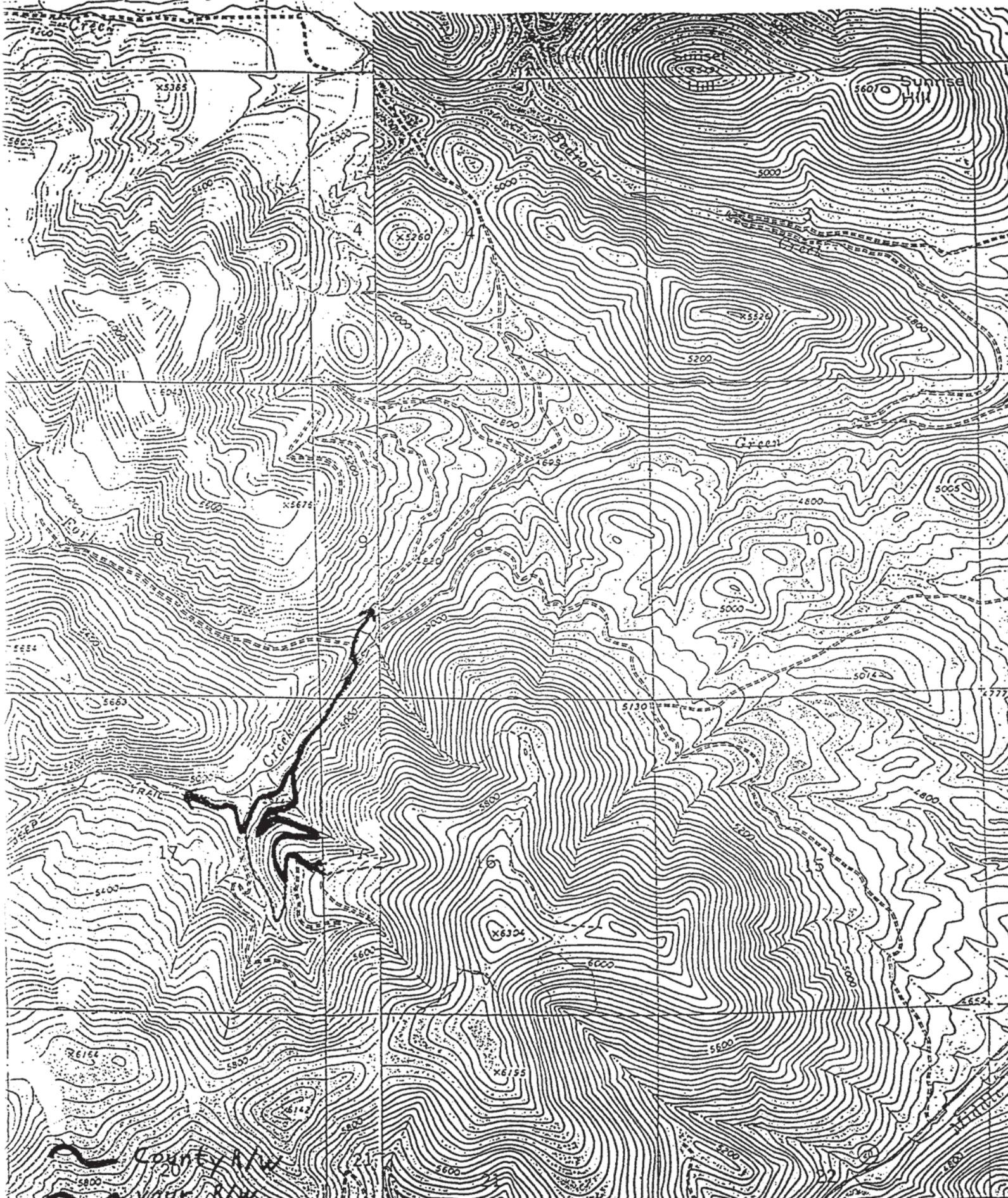
Basil McDonnell

date 12-30-91

Grantee:

David J. Babson
Dept. of State Lands

date 1-6-92



County New
Your River

ROGERS PASS 4 MI.
LINCOLN 22 MI.

} existing Roads
 } proposed Roads
 ROAD CLASSIFICATION

Mapped, edited, and published by the Geological Survey
 Control by USGS and USC&GS
 Topography by photogrammetric methods from aerial
 photographs taken 1961. Field check 1962.

*A 7
 GN

TEMPORARY RIGHT-OF-WAY AGREEMENT

Permission is hereby granted by Kenneth Thompson, of Wolf Creek, MT hereinafter called the "Grantor" to the Montana Department of State Lands and the purchasers of State forest products in section 16, T16N, R6W herein after called the "Grantee", to use, subject to the conditions set forth below, the following described lands:

Existing roadway in sections 9, 15, and 22, T16N, R6W as shown in red on Exhibit "A" attached hereto.

Description:

The right-of-way covered by this agreement shall be of the minimum width necessary for roads of like standards, 30 feet in width, 15 feet on each side of the centerline, with such additional width as may be required for adequate protection of cuts and fills.

This easement covers a right-of-way an estimated 3.5 miles in length and is granted for the purpose of log hauling and related forest management activities.

This easement shall be in effect from the date signed until the completion of the State timber sale which is located in sec. 16, T16N, R6W.

The Grantor has the right to suspend the agreement upon breach of any of the conditions herein. The Grantor shall notify the Grantee in writing of the reason for suspension. If the Grantee fails to take corrective actions within a reasonable time following written notification the Grantor will have the right to terminate the agreement.

Conditions:

- (See special stipulation #1)*
1. Access will be allowed year around while this agreement is in force. All use by the Grantee will be restricted to dry or frozen conditions to prevent damage to the roadway.
 2. If the roadway or any other improvement is damaged due to the Grantees use, it will be repaired to presale or better conditions in a timely manner.
 3. The right-of-way as shown in Exhibit "A" is the only route to be used by the Grantee. Some minor reconstruction may be needed (e.g. widening of curves, installation of drainage structures, etc.) to provide for safer travel and to protect water quality.
 4. If the attached Exhibit "A" indicates an area of new road construction the standards of the new construction will be shown in Exhibit "B".

5. Any areas disturbed by the new or reconstruction will be seeded with 10 pounds per acre of grass seed the spring or fall immediately following the disturbance.

6. All gates will be left as found after each passage. The Grantor will allow the Grantee to "double lock" any locked gates so that both parties will have access.

7. No hunting by the Grantee is authorized by this temporary Right-of-Way agreement.

Special Stipulations:

1. No Logging or Access During Hunting Season (Oct - Nov)
2. New gate posts and a new wire gate will be installed at the highway turnoff, spring 1992.
3. _____

Liability :

The Grantee agrees to assume all risk of and indemnify and hold harmless, and at its expense, defend the Grantor from and against, any claims, loss, cost legal actions, liability or expense or account of personal injury or death of any person whomsoever, including but not limited to the grantor, or damage to or destruction of property to whomsoever belonging, including but not limited to property of the Grantor resulting partially or wholly, directly or indirectly, from the Grantees exercise of the rights herein granted, accepting only such claims, costs, damage, injury or expense which may be caused by the sole negligence of the Grantor.

The estimated volume of timber to be transported over this Right-of-Way is 300 thousand board feet. (Scribner decimal D rule.)

This temporary Right-of-Way shall go with the property if the property should be sold during the term of the agreement. It shall be the full responsibility of the Grantor to notify potential purchasers of the Grantor's property of the existence and terms of this right-of-way agreement.

By signing below the Grantor hereby certifies that they have full legal authority to grant a temporary Right-of-Way to the Grantee.

If the Grantor fails to notify the purchasers of their property of this agreement, or if it is discovered that the Grantor does not have full legal authority to grant the right-of-way, then the Grantee may hold the Grantor liable, either fully or partially for any losses, including but not limited to wages and operating expenses incurred during the preparation of the timber sale.

It is understood and agreed that the permission granted herein is not exclusive and the Grantor reserves the right to use and grant to others the right to use the roads jointly with the Grantee.

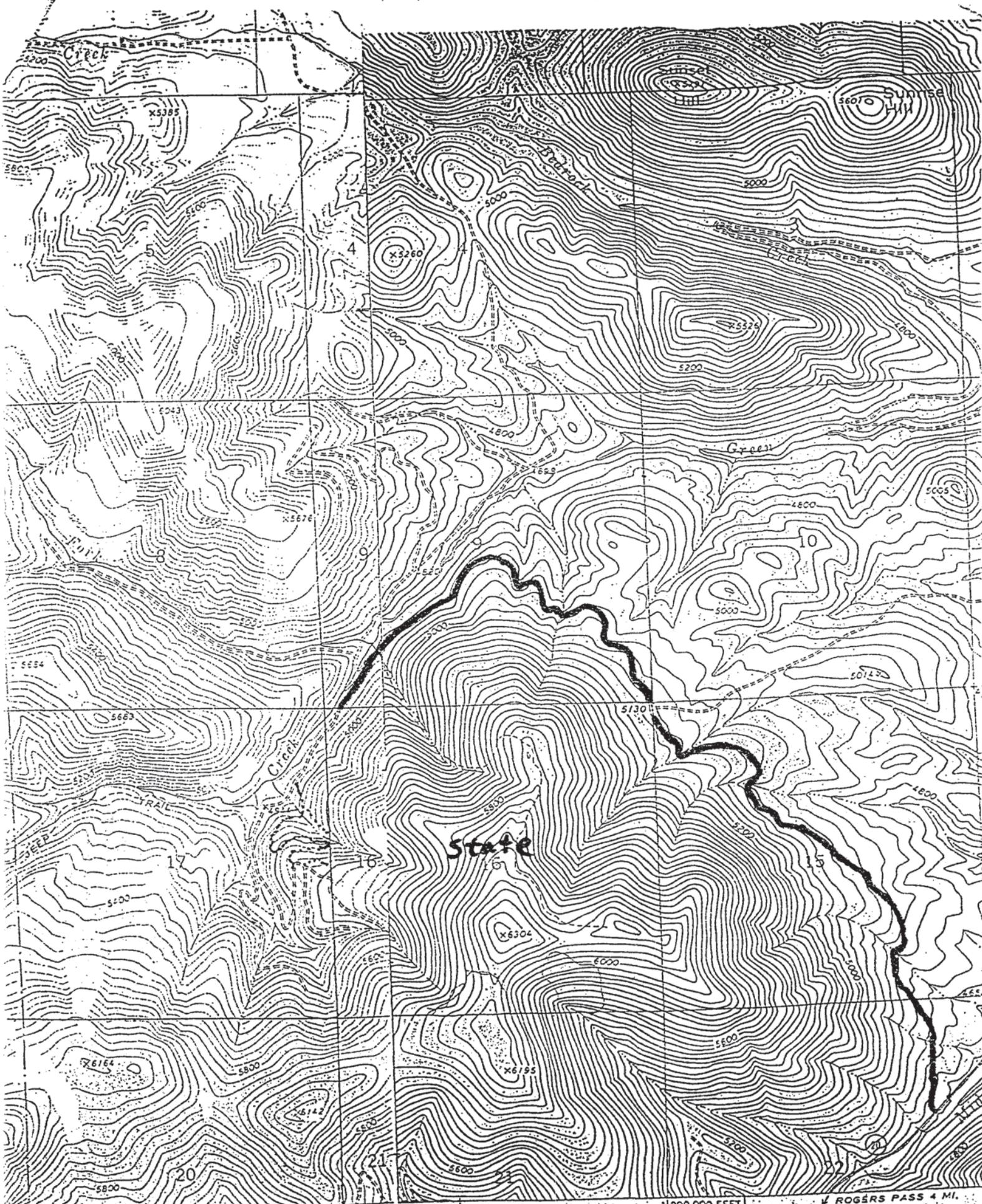
IN WITNESS WHEREOF, this temporary Right-of-Way agreement is executed on this the 5 day of April, 1991.

Grantor:

Kenneth Thomas date 4/5/91

Grantee:

Daryl J. Bohm date 4-16-91
Dept. of State Lands



INTERIOR GEOLOGICAL SURVEY, WASHINGTON, D. C. - 1954

112°22'30" 1396

1:290 000 FEET

ROGERS PASS 4 MI.
LINCOLN 22 MI.

Mapped, edited, and published by the Geological Survey
Control by USGS and USC&GS

A * 11

List of Agencies & Persons Contacted

Department of State Lands

Appendix page

- Gary Frank, Hydrologist, Forest Division A14
- Jeff Collins, Soil Scientist, Forestry Division A17
- Alan Wood, Biologist, Forestry Division A19
- Dori Passmann, Archeologist, Lands Division A25

Department of Fish, Wildlife & Parks

- John McCarthy, Wildlife Biologist, Augusta A26 - A34

Lewis & Clark County

- Weed District A35
- Conservation District A36

Bureau of Land Management, Lewistown, MT

A37

U.S.F.S. - Lincoln Ranger District - contacted by phone, Rod Bullis

- Wilmar Ingersoll, surface leasee and adjacent landowner A47

- Barbara McDonough, adjacent landowner & R/W A49

- Kenneth Thompson, adjacent landowner & R/W A52

- Jerry Montelius, private land logging contractor A55

- Mike Vashro, responding to legal notice in newspaper A56

1985 FORD Bronco air, cruise, 351 cid, auto., good cond., 1-494-1166. or 1-782-7013

1985 TOYOTA Tercel 4x4 Wagon, exc. cond., \$4,495 Nancy 443-4345 D/449-3736 E

1985 TOYOTA 4x4, air, top- per., exc. cond. Red, Must sell. 458-6017 evenings.

1986 FORD F250 4x4, 302 V8, EF1, topper, 31,500 Mi. \$9,000 OBO. 442-0193 eves.

1986 TOYOTA, Extra cab, topper, excellent cond., must sell \$5,995 OBO 227-8459

1987 BRONCO II, V-6, p.s., p.b., new clutch & trans. good cond. \$6,900 obo 449-7191

1988 F150 SUPERCAB 4x4, 12' flatbed trailer, 20' Stinson Walkboard 475-3326

1990 DODGE Dakota, excel- lent shape, low miles, \$11,000. 458-9610 evenings.

GOOD 1979 Blazer 50,000 mi. on new eng., \$2,950 449-7031

995 FOR SALE VANS

1978 FORD Van, runs good, does need work, Best offer 443-2411

1983 VW pass. van, very good mechanical cond. \$2950 OBO. 442-5071 after 5.

1985 DODGE CARAVAN 7 pass., good cond., auto. 1-782-7013 after 6 p.m.

1987 CHEVY Conversion Van, low miles, sharp, load- ed. 933-5586.

LEGALS

NOTICE - NOTICE

The Department of State Lands is hereby re- questing comment from in- terested parties, in compli- ance with the Montana En- vironmental Policy Act, regarding forest manage- ment actions, including possible timber harvest ac- tivities, on the following State School Trust Lands within Lewis and Clark County.

SE ¼; SE ¼ NE ¼ Section 34 and Section 16, T16N, R6W M.P.-M.

Comments may be sent to, and further information may be obtained by con- tacting the:

Department of State Lands
8001 N. Montana Ave.
Helena, MT 59601

Comments will be ac- cepted until June 15, 1991. May 5, 15, 1991

LEGALS

**INVITATION FOR BIDS
TRANSFER STATION
MEAGHER COUNTY,
MONTANA**

Sealed bids will be re- ceived until 2:00 PM on May 21, 1991 and will be publicly opened and read aloud in the office of Schafer and Associates, 611 North Wallace Avenue, Bozeman, Montana, for MEAGHER COUNTY SOLID WASTE TRANS- FER STATION.

Bids shall be submitted on the form provided with the contract documents. Contract documents may be secured at the office of SCHAFFER AND ASSOCI- ATES, 611 NORTH WAL- LACE AVENUE, BOZE- MAN, MONTANA 59715, PHONE: (406) 587-3478. A refundable deposit of \$75.00 is required for each plan set.

Bids shall be accom- panied by bid security in the amount of 10% of the total bid. The successful bidder will furnish approved Per- formance Security and Labor Material Security in the amount of 100% of the contract.

The contractor shall comply with all fair labor practices and state stat- utes.

Each bidder and sub- contractor for work over \$5,000 must have a valid Montana Publicx Contrac- tor's License in the proper classification.

No bidder may with- draw his bid for at least 30 days after the scheduled time for receipt of bids ex- cept as noted in the in- struction to Bidders.

The Owner reserves the right to reject any or all bids and to waive any ir- regularities or informal- ities.

SCHAFFER AND ASSOCIATES
MEAGHER COUNTY,
MONTANA
April 28, May 5, 12, 1991

**INVITATION FOR BIDS
ON
STATE OF MONTANA
MACHINERY
BREAKDOWN
INSURANCE AT
TOSTON DAM**

Sealed proposals for furnishing the State of Montana with a Machinery Breakdown Insurance Poli- cy on turbines, generators and electrical apparatus at Toston Dam will be re- ceived by the Department of Administration at the Office of the Tort Claims Division, Room 111, Sam W. Mitchell Building, Hel- ena, Montana, at 10:00 a.m. (MDT), June 12, 1991, and publicly opened at that time.

All bids must be made to conform to the speci- fications prepared by the Department of Adminis- tration and to include all ob- jects as shown on the lists forming a part of the bid- ding documents. The suc- cessful bidder must be pre- pared to deliver a policy on or before July 1, 1991, or provide an adequate binder by that date.

Bids must show the amount of premium to be charged on each object and location, business in- terruption, and the total amount of the premium bid.

Specifications, instruc- tions to bidders, and lists of items to be insured may be secured from the De- partment of Adminis- tration, Tort Claims Division, Room 111, Sam W. Mitch- ell Building, Helena, Mon- tana.

The Department of Ad- ministration reserves the right to reject any or all bids, to waive any infor- malities, and to accept the bid in the best interest of the State.

All bids must be accom- panied by a certified check or other bid security in the amount of ten percent (10%) of the total amount of the bid.

Bids must be delivered to the address shown above, sealed and plainly marked "Bid on Machin- ery Insurance" no later than 10:00 a.m. (MDT), June 12, 1991.

DEPARTMENT OF AD- MINISTRATION
By: Bob Marks,
Director
May 5, 12, 1991



This legal notice was ran on May 5 & 15, 1991 in the Helena Independent Record.

SEPTEMBER 16, 1991

TO: GARRY WILLIAMS, ACTING MANAGER, CLO
PAT FLOWERS, SUPERVISOR, STATE LAND MANAGEMENT
BOB VLAHOVICH, MANAGER, HELENA UNIT
D.J. BAKKEN, FORESTER, HELENA UNIT

FROM: GARY FRANK, HYDROLOGIST *gf*

SUBJECT: Preliminary Input - Green Creek T.S.

This sale was field reviewed with D.J. Bakken, John Monzie and Allen Wood on September 12, 1991. The purpose of the review was to complete my preliminary input concerning the potential for cumulative watershed effects in the Green Creek watershed (see "Preliminary Input (FY92) CLO Timber Sale Plan" 6/13/91 for general watershed descriptions).

I have completed a water yield analysis for Green Creek drainage. Approximately 10% of the total watershed area has undergone timber harvest in past. The private land adjoining the proposed sale area is currently being harvested and apparently more harvesting is planned in the near future. Most of the recent harvest activity consist of partial cutting (20-40% canopy removal). Channel stability was evaluated at several locations on Green Creek and rated as good.

Water yield increases were calculated using information collected from aerial photos, HRA and Master HRA and field verification. Estimates were made assuming 100% canopy removal and no vegetative recovery. This would represent the maximum possible water yield increase. Actual water yield increases are probably substantially lower because of partial hydrologic recovery from regeneration and the presence of residual canopy cover in most harvest units.

Estimated water yield increase are approximately 4-5%. These figures are well below the allowable threshold values. There are no cumulative watershed effect constraints within the Green Creek watershed at this time.

October 31, 1991

562

TO: GARRY WILLIAMS, ACTING MANAGER, CLO
PAT FLOWERS, SUPERVISOR, STATE LAND MANAGEMENT
BOB VLAHOVICH, MANAGER, HELENA UNIT
D.J. BAKKEN, FORESTER, HELENA UNIT

FROM: GARY FRANK, HYDROLOGIST *GF*

SUBJECT: GREEN CREEK TIMBER SALE (SEC.16 T.16N. R.6W)

WATERSHED: This sale is located in the Green Creek watershed which is a tributary to the Middle Fork of the Dearborn River. The Green Creek drainage is approximately 6377 acres in size and has undergone a moderate level of timber harvest.

CUMULATIVE EFFECTS: There are no cumulative watershed effect constraints with this sale as currently planned. A complete description of a water yield analysis is included in my preliminary input for the sale (memo dated 9/16/91).

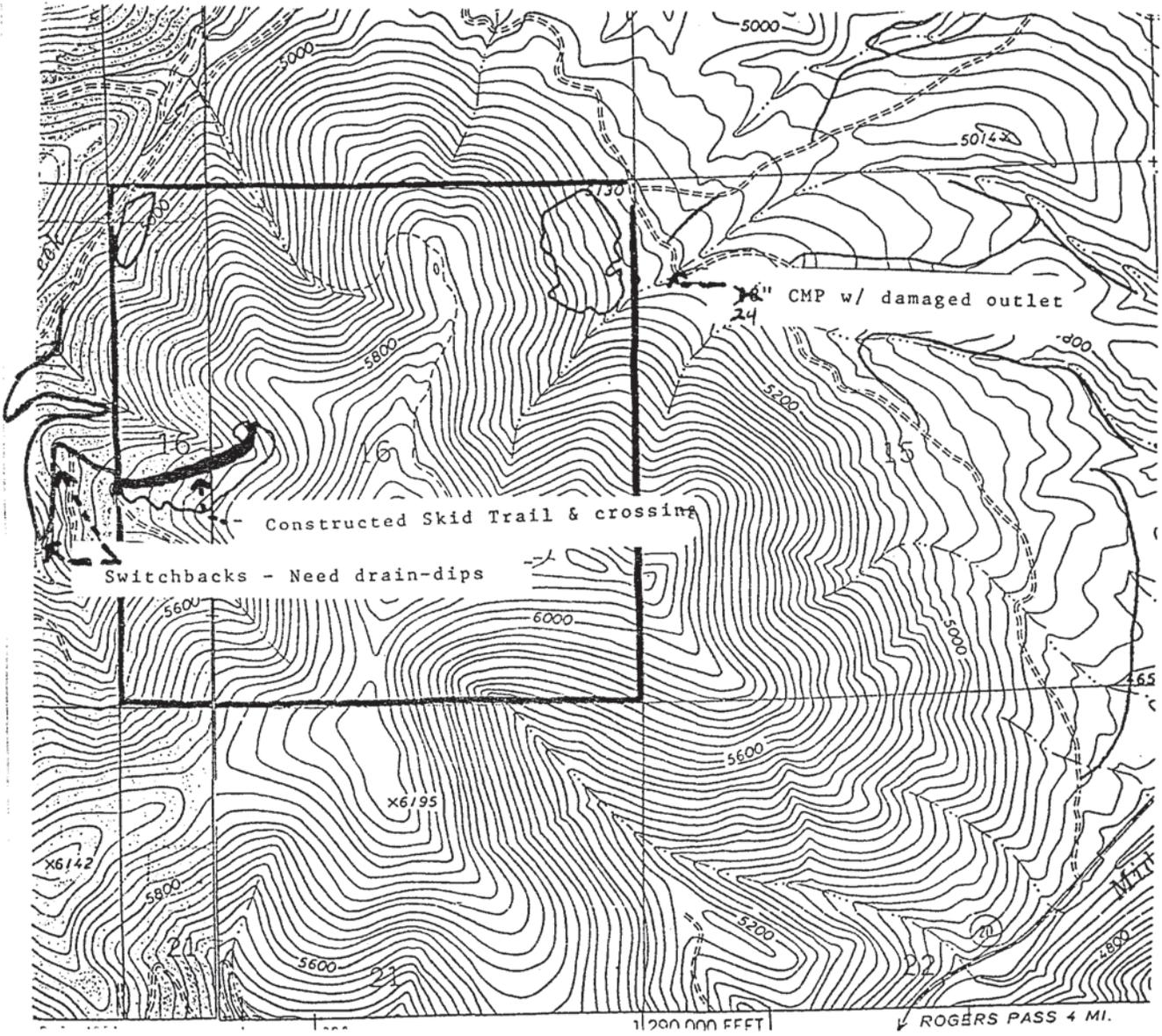
WATER USE: There are existing water rights for domestic consumption, lawn and garden, and livestock watering downstream of the sale section.

ROADS: The sale will utilize an existing road system on private land to access the sale area. The existing road system is acceptable for use as is with the exception of a few minor improvements. Install road surface drainage features at locations discussed in the field. Repair the damaged outlet of an ^{24"}~~16"~~ culvert (location referenced on attached map). If it can't be repaired replace pipe with another 18" cmp.

No new road construction is planned for this sale. The current proposal includes constructing approximately 1/4 mile of skid trail across the slope of one of the harvest units. The constructed trail will cross the head end of an draw. A drive-thru crossing has been located at a site above a springs which is the origins of a perennial stream channel. The crossing site is a broad swale with no evidence of a defined channel.

HARVEST UNITS: There are no defined stream channels within or immediately adjacent to the proposed harvest units. No wet areas or wetland habitat types have been identified. I do not anticipate any water quality impacts with this sale if BMP's are fully implemented.

GREEN CREEK TIMBER SALE



November 20, 1991

552

TO: GARRY WILLIAMS, Silviculturist, Central Land Office
BOB VLAHOVICH, Field Supervisor, Helena Unit
PAT FLOWERS, Supervisor, State Land Management Section

FROM: JEFF COLLINS, Soil Scientist

SUBJECT: GREEN CREEK TIMBER SALE, Sections 16 T15N, R5W

The sale area is located on moderate to steep slopes with residual soils forming in colluvial material weathered from bedrock of red argillite and shale on the sideslopes with deep alluvial gravels along the creek bottom .

Cutting units 1 and 2 are located on moderate slopes which are well drained and droughty. Surface soils are roughly 4 inches gravelly silt loams over deep gravelly silt clay loams.

Cutting unit 3 is located on shallow to moderately deep gravelly silt loams with an intermittent volcanic ash silt loam surface which improves site productivity. Bedrock occurs at a shallow depth. This site is well drained.

GENERAL RECOMMENDATIONS:

Potential soil displacement and erosion of the shallow topsoils are the primary concerns, especially on steep slopes.

In general, tractor skidding will be limited to slopes less than 45% , and tractor brush piling only on slopes less than 35% To reduce slash hazard on slopes over 35% consider; whole tree yard, lop and scatter or jackpot burning.

Timber hauling and equipment operations should be limited to periods when soils are dry, frozen or snow covered. These soils are well drained and typically have a long season of use. Brush piling operations should be done only on dry soils, such as late summer.

ROADS- The existing access road to section 16 has several culverts which need to be cleared of rocks and vegetation.

The existing road includes steep pitches, especially on the access roads on the west side of section 16. Drainage in this coarse material can be handled with standard drain-dips and waterbars.

I do not expect any significant soils related problems with this sale if BMP'S are implemented.

TO: Alan Wood, Jeff Collins, Gary Frank
FROM: D. J. Bakken, Forester - Helena Unit
DATE: Sept. 5, 1991
SUBJECT: Green Creek & Sunset Mtn. SW

Enclosed is a map showing State, BLM, Federal and private ownerships. I have marked those areas of state and private lands which have been harvested since the 70's. I think that this is a pretty complete map, it includes HRA, Master HRA, and State data along with aerial photo interpretation and my estimates of recently completed logging. There has been some logging on BLM which I do not have mapped in Sec. 20, T16N, R6W. I have no data on Forest Service activities. Our proposed areas are shown in red.

I spoke with Jerry Montelims who is logging in Sections 4, 9, 10, 11, 15, 17, 21, 22, T16N, R6W (ie. all around the Green Creek section). He anticipates considerable more harvest off these private lands, but I could not pin him down to an acreage.

The private lands in Section 28, 29, 32, and 33, T16N, R6W are being divided and sold in 20 plus acre parcels. There will probably be some small amounts of clearing for homesites, probably no more large scale harvesting.

Sincerely,



D.J. BAKKEN
Unit Forester
Helena Unit

dh

Encl.

DEPARTMENT OF STATE LANDS
FORESTRY DIVISION



STAN STEPHENS, GOVERNOR

2705 SPURGIN ROAD

STATE OF MONTANA

(406) 542-4300

MISSOULA, MONTANA 59801

November 21, 1991

523.36

TO: Garry Williams, Acting Manager, CLO
Bob Vlahovich, Manager, Helena Unit
L.D. J. Bakken, Forester, Helena Unit

FROM: Alan Wood, Wildlife Biologist, Forest Management Bureau

SUBJECT: Biological evaluation of proposed Green Creek sale

This biological evaluation addresses potential impacts of the proposed Green Creek timber sale on grizzly bears and their habitat. Grizzly bears are listed as a threatened species by the U.S. Fish and Wildlife Service. This section (T16N R6W Sec. 16) is part of the Dearborn Elk Creek bear management unit (BMU), one of 23 designated units in the Northern Continental Divide grizzly bear ecosystem. BMU's are identified areas of sufficient size and adequate habitat quality to support the yearlong habitat needs of a female bear with cubs. Maintaining habitat effectiveness in all BMU's across the ecosystem ensures that the entire ecosystem is capable of contributing to grizzly bear recovery. Thus, each BMU is essential to recovery of the grizzly bear population. Sightings and sign have been reported along the Continental divide throughout the southern portion of the recovery area.

Your proposal, as I understand it, is to harvest timber from 3 units (4, 12 and 17 acres) sometime over the next two years, and includes construction of about 1/3 mile of skid trail in the 12 acre unit. For analysis of this proposal, I identified the Green Creek drainage and three unnamed draws draining the west side of section 16 and the south side of section 10 as the analysis area, approximately 12.5 square miles. Potential impacts on cover, seasonal habitat values and road access will be evaluated over this area. Cumulative effects of human activities on the potential for displacement or risk of bear mortality resulting from bear/human conflicts will be addressed over this analysis area and adjacent drainages.

HIDING COVER

I estimate approximately 2,300 acres of natural openings and 800 acres of recent timber harvest within this area. This provides roughly 4,900 acres of timbered cover for grizzly bears or 61% of the 8,000 acre analysis area. Our proposal would remove 33 acres of cover which results in less than a 1% additional decrease in cover. Harvests on adjacent private lands are expected to continue over the next year or so. Assuming a maximum possible harvest on private land of an additional 800 acres, would result in 4,100 acres or 51% timbered cover. Current grizzly bear guidelines call for at least 40% timbered hiding cover within each analysis area. Consequently, this proposed harvest, even with continued harvest on private lands, should not adversely affect hiding cover for grizzly bears.

SEASONAL HABITAT VALUES

The Douglas fir habitats that are proposed for harvest are widespread and abundant in this area. They provide a variety of summer forages, but due to their availability do not greatly influence the summer distribution of bears. Alpine areas are most important to bears during summer, but the stands proposed for treatment are well below this zone. The area also provides marginal denning habitat. Unit 3 at 5,700 feet elevation (the highest unit) is slightly below the $\geq 6,500$ elevation zone that bears normally prefer for denning. Riparian habitats (with or without surface water) provide more lush vegetative growth and are an important habitat component, particularly during spring and fall. Both Green Creek and the springs adjacent to and south of unit 3 provide suitable riparian foraging areas that could be used by bears. Such riparian areas frequently produce an abundant berry crop that attracts bears in the fall (Aug-Nov). During spring (Apr-Jun), riparian areas provide a critical habitat component that influences the distribution and movements of bears after they emerge from their dens.

Timber harvest in the proposed units would not directly affect important grizzly bear habitat values. However, timber harvest activities (harvest and hauling) adjacent to riparian areas could effectively exclude bears from these habitats. Spring is a time when bears are in the poorest condition and habitats are most limiting. Excluding harvest activities during spring would minimize the potential for impacting seasonal grizzly bear habitat values. ✓

ROAD ACCESS

Open road density across the analysis area currently averages 1.6 miles per section; including jeep trails elevates the estimate to 1.8 miles per section. This road density is well above current Helena National Forest Plan guidelines of 0.5 miles per section or west-side guidelines of 1.0 miles per section. Open road densities at this level could possibly preclude bears from using this drainage effectively. DSL only controls 0.4 miles of road on section 16, and 3.5 miles of road and 1.7 miles of trail in sections 17 and 18 requiring access through section 16. If we closed all these roads and trails it would reduce open road density to 1.3 miles per section, and open road and trail density to 1.5 miles per section. Road closures would improve the situation but not sufficiently to meet even west-side guidelines.

Existing land ownership helps to compensate for current road densities. Access to the Green Creek drainage is controlled by private landowners, effectively closing roads to public use. The roads receive little use with the exception of logging traffic and outfitted hunting. Consequently, levels of use excluding hunting season and active logging operations, are probably comparable to closed roads on State and federal lands. Although road densities are relatively high, road use levels are probably low enough, except during hunting season and timber harvest, to provide for adequate grizzly bear habitat.

CUMULATIVE EFFECTS OF HUMAN ACTIVITIES

Cumulative effects of human activities on the potential for displacement or risk of bear mortality resulting from bear/human conflicts will be addressed over the 8,000 acre Green Creek area and adjacent drainages.

Research has shown that bears are displaced from roads and management activities such as timber harvest. A team of interagency biologists developed recommendations for the Northern Continental Divide (2-22-90) to limit potential cumulative effects of multiple activities. These guidelines are currently being implemented on DSL lands west of the Divide as well as federal lands throughout the recovery area. The goal is to provide bears that may be displaced by a management activity with an adjacent security area of undisturbed habitat of similar kind and quality. Spatial arrangement of activities is also important to ensure that adjacent compartments are not being impacted simultaneously or that an area proposed as an adjacent security area is not needed for security from some other project on other ownership. The security area must be 5,000-15,000 acres within the same BMU, with no development activities and road densities < 1 mile per section.

The Green Creek proposal does not meet these guidelines described above. Within the Dearborn Elk Creek BMU there are timber harvests on private land to the north and south with subdivisions also to the south. East of the analysis area is outside the recovery area and is not suitable grizzly bear habitat. To the west is Alice Creek in the Monture Landers Fork BMU, where a 12 acre salvage harvest is being proposed by the Forest Service for summer 1992. There are timber harvests occurring on private lands all the way to Cuniff Basin, reducing habitat effectiveness for grizzly bears over roughly 51 square miles or 19% of the Dearborn Elk Creek BMU. In addition, 1988 fires reduced cover over large areas of the BMU.

Forage, cover and existing road density (with public use restricted) in the Green Creek drainage provide adequate grizzly bear habitat both now and in the foreseeable future. However, there are significant cumulative impacts of past and current human activities which reduce the bear's ability to use this area. Ironically, the wide geographic distribution of these activities also reduces the likelihood that bears are currently using the area, minimizing the potential for direct bear/human confrontations. Current timber harvest activities on private lands are probably sufficient to cause complete displacement of bears from Green Creek. Consequently, the proposed DSL timber sale is unlikely to add to that potential displacement so long as it is conducted concurrent with these other activities.

If you decide to meet grizzly bear habitat management guidelines, you will need to defer this proposed timber sale for an indefinite period of time. To avoid cumulative impacts from timber harvest activities it would be necessary to defer this sale until one security area could be provided adjacent to each ongoing management activity.

If you decide to proceed with this sale, our activities should be conducted over a short time and concurrent with existing harvest activities. DSL timber harvests concurrent with activities on private lands in Green Creek would have minimum potential for bear/human confrontations and would be unlikely to add to existing displacement problems. If our timber harvest continues or occurs after other harvests conclude, then it is clearly our activities that would be adding to significant cumulative displacement. If this option is chosen it will be necessary to include two contract stipulations to avoid potential significant impacts. If bears begin to use this area despite these activities, our sale would have to be suspended pending further environmental review. If timber harvest activities on private land are finished prior to completion of our sale, we would need to complete our activities within a period of no more than 2-3 weeks for the reasons mentioned above.

cc: Pat Flowers

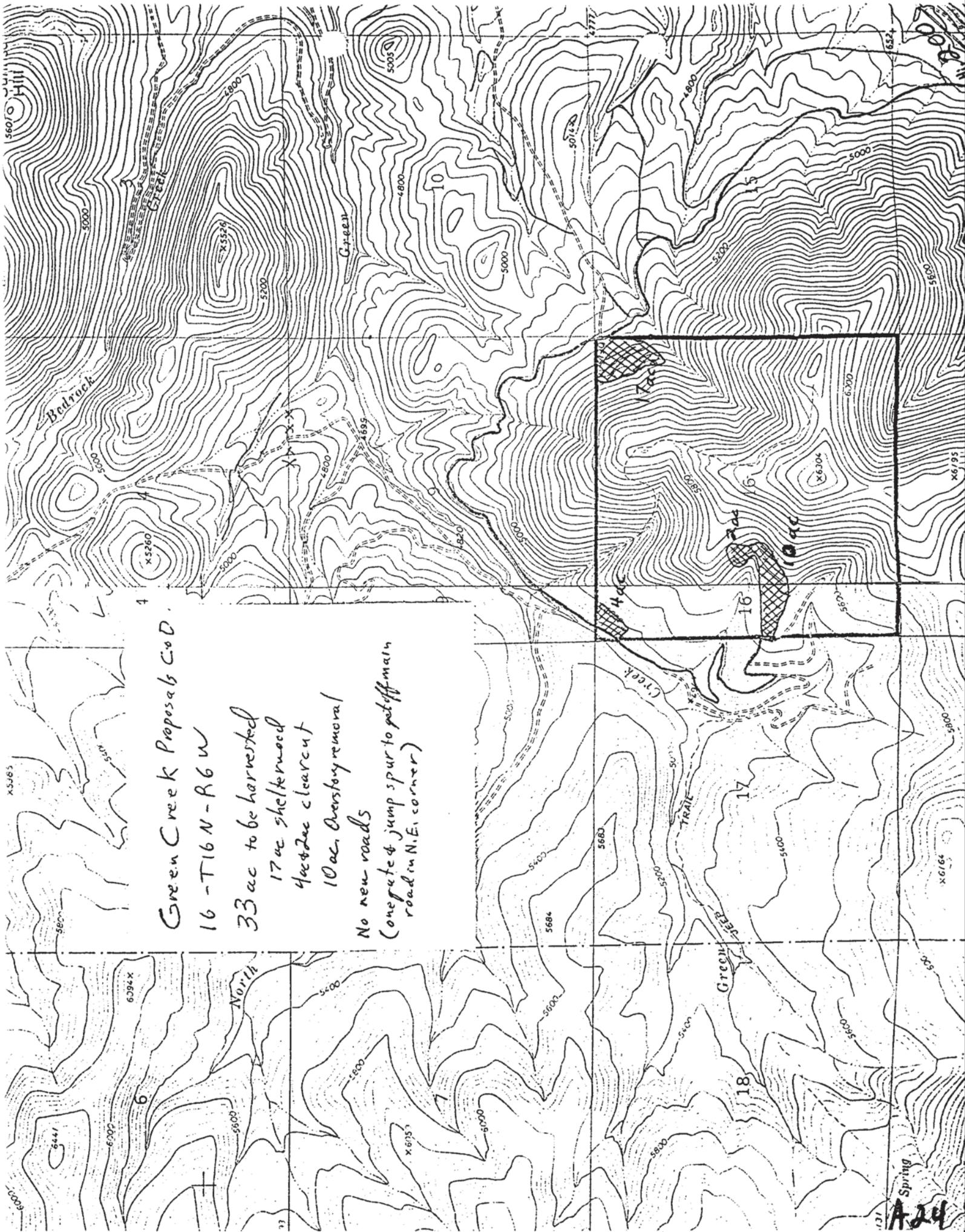
PJ

TO: Dori Passman, Archaeologist, Surface Management Bureau
FROM: D.J. Bakken, Forester, Helena Unit *DJ*
DATE: January 31, 1992
SUBJECT: Green Creek

Last summer Garry Williams sent you a list of CLO sections on the sale plan. Green Creek (16-T16N,R6W) was listed as a new proposal. The attached map shows the location of tentative harvests. The most likely alternative does not include any road construction. (A short spur would be built to get trucks off the main road for loading, in the extreme NE corner of the section.)

I have not heard back from you regarding the needs for archeological review. I am currently working on the draft E.A. for this proposal. Please let me know A.S.A.P if there are any archeological issues to consider.

A23



Green Creek Proposals CoD.

16 - T16 N - R6 W

33 ac to be harvested

17 ac shelterwood

4 ac 2 ac clearcut

10 ac. Overstory removal

No new roads

(one gated jump spur to pit off main road in N.E. corner)

DEPARTMENT OF STATE LANDS



STAN STEPHENS, GOVERNOR

CAPITOL STATION

STATE OF MONTANA

(406) 444-2074

1625 ELEVENTH AVENUE
HELENA, MONTANA 59620

February 5, 1992

MEMORANDUM

TO: D.J. Bakken, Forester, Helena Unit, CLO

FROM: Dori Passmann, Archaeologist, Land Management Section 

RE: Green Creek Timber Sale
16-16N-6W

As stated in my May 16, 1991 memorandum to Garry Williams, this timber sale does not require any cultural consideration. Due to the steep slopes significant cultural properties are not likely on this section.

Please let me know if I can be of further assistance.

DP/mm

DEPARTMENT OF STATE LANDS
FIELD OPERATIONS DIVISION



STAN STEPHENS, GOVERNOR

CAPITOL STATION

STATE OF MONTANA

Central Land Office: Helena, MT (406) 444-3633
Eastern Land Office: Miles City, MT (406) 232-2034
Northeastern Land Office: Lewistown, MT (406) 538-5989

Northwestern Land Office: Kalispell, MT (406) 752-7994
Southern Land Office: Billings, MT (406) 259-3264
Southwestern Land Office: Missoula, MT (406) 542-4200

8001 North Mont. Ave.
Helena, MT 59601
March 20, 1991

John McCarthy
Dept. of Fish, Wildlife & Parks
Box 284
Augusta, MT 59410

Dear John:

The Dept. of State Lands will be reviewing two more classified forest sections in your area for possible forest management needs. These two parcels are Sec. 16 and the SE $\frac{1}{4}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$, Sec. 34, T16N, R6W. I am sure that you have some concerns regarding the cumulative effects of additional harvesting on elk security cover. In addition, I believe Section 16, T16N, R6W lies within grizzly bear management unit #25 (Dearborn - Elk Creek).

I plan on reviewing these parcels in more detail during the next few months. In order to develop a sound forest management proposal I would appreciate your response to a few questions.

- 1) How much elk use have you recognized in these sections?
- 2) What areas, drainages, etc. are included in the summer range, and winter ranges of these herds?
- 3) What is the current population status of these herds (increasing, static, decreasing)?
- 4) Have you identified any grizzly bear use in these sections? Specifically, do you know of any females with young in this area?
- 5) What specific area (biological unit) needs to be considered when reviewing the grizzly bear cumulative effects?
- 6) Are you aware of any bear/human conflicts within this area?

If you have any other general items you want me to incorporate into a proposal, please let me know. Once I have a draft proposal I will contact you for field review. I would like to receive your comments by May 31, 1991.

Sincerely,

A handwritten signature in cursive script, appearing to read "David J. Bakken".

D.J. BAKKEN
Unit Forester
Helena Unit

dh

DEPARTMENT OF STATE LANDS
FIELD OPERATIONS DIVISION



STAN STEPHENS, GOVERNOR

CAPITOL STATION

STATE OF MONTANA

Central Land Office: Helena, MT (406) 444-3633
Eastern Land Office: Miles City, MT (406) 232-2034
Northeastern Land Office: Lewistown, MT (406) 538-5989

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Southern Land Office: Billings, MT (406) 259-3264
Southwestern Land Office: Missoula, MT (406) 542-4200

3001 North Mont. Ave.
Helena, MT 59601
Nov. 1, 1991

John McCarthy
Dept. of Fish, Wildlife & Parks
Box 284
Augusta, MT 59410

Dear John:

Through the summer we worked on a sale proposal for Sections 16, and the SE $\frac{1}{4}$ NE $\frac{1}{4}$, and SE $\frac{1}{4}$ Sec. 34, T16N, R6W.

The management options for state land in Section 34 will be reviewed further in coming years but for now actions in Sec. 34 will be deferred. We do not feel that the State can economically manage this piece of real estate given today's stumpage values.

Section 16 does have profitable forest management options. I have three logging units flagged on this section. (See the attached map.) Our Soils & Hydrology Specialists have already reviewed the proposal and see no problems. I also consulted Alan Wood, our DSL Wildlife Biologist. Alan had some concerns regarding grizzly bear management in the area and I think he was going to contact you about the proposal.

Alan felt that our ability to enter the area would hinge on locating a sizeable area of undisturbed land for bear security. What are your thoughts on this?

I am also concerned with a season of use for the area. Gayle Joslin might have contacted you regarding the scheduling of our actions in Lyons Creek given the recent grizzly siting in that drainage. I would like to work any reasonable seasonal restrictions into the plan for this area so that we are not caught by surprise again. Our easements forbid access in October and November. Alan Wood suggested summer use, say July - Sept. Would this provide adequate security for bears as they are coming out in the spring and denning up in the fall?

I need your comments as soon as I can get them. In December we hope to finalize the field work on this proposal and I would like to hear from you before we do.

Sincerely,

Handwritten signature of D.J. Bakken in cursive.

D.J. BAKKEN
Unit Forester
Helena Unit

**Montana Department
of
Fish, Wildlife & Parks**



John J. McCarthy
Augusta, Mt 59410
January 9, 1992

D.J. Bakken
Dept. State Lands
8001 N. Mont.
Helena, Mt. 59601

Dear D. J.,

I have several concerns about your proposed timber harvest in Section 16, T16N, R6W. As is apparent from the map showing previous harvest sites in this area a good deal of the security cover for elk and mule deer has been removed or reduced in effectiveness. We currently winter between 400 and 500 elk in this area, as well as 200-300 mule deer. Over the past several years elk depredation on private lands has become an increasing problem that culminated in a hunt in January and February of last year and may require another late hunt this year. Increases in elk numbers north of Highway 287 have corresponded with decreased numbers in the heavily logged areas south of the Highway.

One of my concerns is that after our hunt in the area last year the elk had distributed themselves in several small bands, two of which made use of the sites you have selected for harvest. These sites were used during the hunt for security cover and following the hunt as thermal cover through the winter. If the effectiveness of these sites is reduced these elk are going to be forced to again utilize private lands in this vicinity where we are trying to reduce elk use.

Efficient and effective use of these State Lands by elk would also be disrupted if we ran into problems similar to those being encountered in Lyons Creek. Activity in this area during the period elk were on winter or spring ranges would definitely result in a shift of use to private lands. Elk are forced to use these sites until snow conditions over Lewis and Clark Pass are such that they can again move to higher ranges West of the Divide. Elk generally move into this area by December 1, and, with the right snow conditions, may remain through mid-May.

Another concern for the area is the cumulative effects of this activity and several others in progress or scheduled to occur that will affect the wildlife resource. These include;

No C.E. analysis

subdivision of the lands north of the Evergreen Cabins (Sec. 21,22 & 28 T16N, R6W), open pit mining in the Mike Horse area, timber harvest in Alice Cr. and on private lands along the East Front, oil and gas leasing on the Helena National Forest west of Green Cr., snowmobiling and other winter recreation in the Alice Cr. drainage and the effects of the '88 Canyon Cr. Fire.

Green Creek is located within the Dearborn Elk Creek Grizzly Bear Management Unit (BMU), and is also within the grizzly recovery area along the East Front. Guidelines that have been recommended to regulate activities in the recovery area, and have been implemented on all federal lands and some DSL holdings in other parts of the State, are not going to be met on this sale considering the activities on adjacent private lands.

I am including a map of grizzly observations made in the area between 1976 and 1987 as well as a list of observations and reported livestock depredation that we have received between 1988 and 1991. (Map 1, Table 1.) This section of the Front serves as Spring and Fall range for the bear and is an important travel corridor between northern and southern expanses of grizzly habitat. And as our observations and other instances of human/bear encounters indicate there is still a high degree of bear activity in the vicinity of Green Creek.

Considering the seasons of use by grizzly, elk and mule deer, and the human activities in or scheduled for this area, I do not feel adequate undisturbed areas adjacent to the sites exist in order to meet guidelines. Additionally, while scheduling work to take place in July - Sept. would minimize impacts on grizzlies, adjacent activities would increase the importance of Green Creek to bears during this period.

With the above in mind I recommend against selling this timber until such time that these conflicts between the sale and wildlife can be resolved.

Sincerely,


JOHN J. MCCARTHY
Wildlife Management Biologist
Augusta, Mt.

STRONG

Ⓢ location shown on map

Reported Grizzly Bear Observations in the Dearborn - Rogers Pass Area, 1988-91.
=====

Date	Location	Sec;T N;R W		Observation Data
4/27/88	Little Skunk Cr.	29;17;6	①	Single subadult
7/11/88	N. Fk. Green Cr.	7;16;6	②	Single bear
3/8/88	Dearborn River	30;18;6	③	Single bear
4/20/89	Falls Cr./Twin Buttes	9;17;7	④	Single bear
5/19/89	Middle Fk. Dearborn	30;17;5	⑤	
5/24/89	Skunk Cr.	29;17;6	⑥	Single bear
5/14/91	Lower Dearborn River	6;17;7	⑦	Female w/ 1 yearling

Grizzly - Human Conflicts for the Dearborn - Rogers Pass Area, 1985-91.
=====

Date	Location	Description
② 8/2/85	M. Fk. Dearborn/Melany Ranch	Livestock depredation - 2 bears
④ 8/6/85	L. Skunk Cr./Steinbaugh Ranch	Livestock depredation
⑩ 7/17/87	E. Fk Falls Cr./Skunk Cr. Ranch	Livestock depredation
① 8/3/87	Cunnif Cr./Moser Ranch	Livestock depredation
⑫ 8/7/87	Cunnif Cr./Moser Ranch	Livestock depredation
⑬ 9/4/87	Cunnif Cr./Moser Ranch	Livestock depredation
⑭ 9/10/87	Dearborn River/Moser T Bar	Livestock depredation
⑮ 7/24/88	Green Cr./Thompson Ranch	Livestock depredation
⑯ 8/4/88	Falls Cr./Barrett Ranch	Livestock depredation
⑰ 8/23/88	Cunnif Cr./Moser Ranch	Livestock depredation
⑱ 9/15/88	E. Fk Falls Cr./Skunk Cr. Ranch	Livestock depredation
⑲ 5/20/89	M. Fk Dearborn/Ingersall Ranch	Grizzly by ranch buildings
⑳ 8/29/90	Green Cr./Thompson Ranch	Livestock depredation
㉑ 8/26/91	Green Cr./Lewis & Clark Pass	Livestock depredation

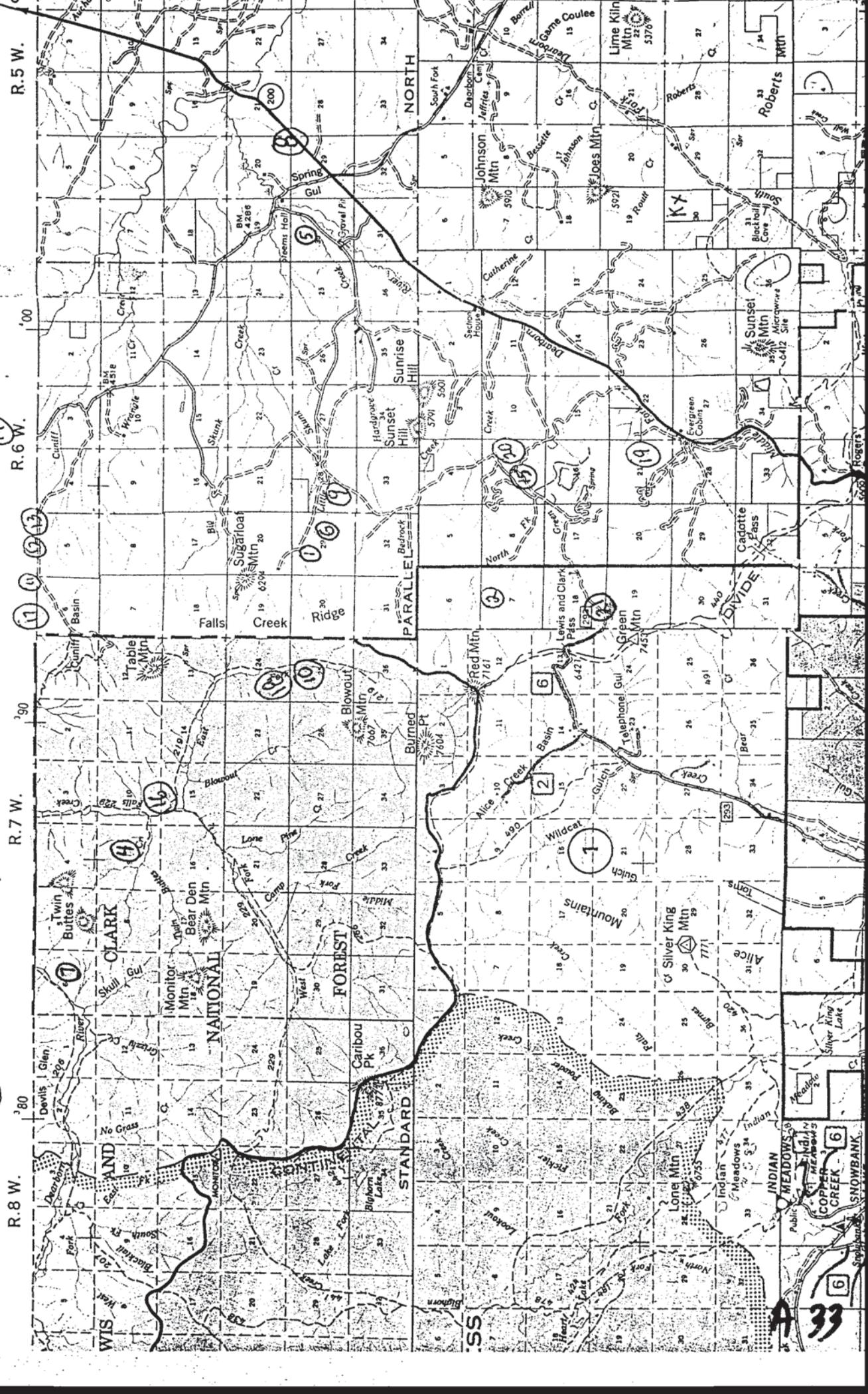
locations 1-7 on the map are correct to the section
locations 8-21 are general locations to the drainage.

grizzly data 8165 - 8191 from J. McCarthy - plotted to map by D.J.

3 4 112°30' 5 15' 6

(1-7) locations accurate to section
(8-21) locations accurate to drainage

(LINCOLN RANGER DISTRICT AND WESTERN PART OF HELENA RANGELAND)



A 33

Hunt

Continued from Page 1A

Elk hunt worries Lincoln

Two animals lost for every pregnant cow shot, but ranchers bemoan depredation

By MARIE HOFFNER
IR Staff Writer

Sportsmen who hunt in the Scapegoat Wilderness north of Lincoln are concerned about a late hunt that might be held in response to elk damage on two ranches east of the Continental Divide.

Montana Fish, Wildlife and Parks Department officials will decide by Friday on the depredation hunt, which would take place in hunting District 422 east of Rogers Pass, about 40 miles north of Helena.

The hunt, which would permit the killing of cow elk only, would take place on scheduled days throughout this month in order to disperse the elk herd, said Mike Aderhold, FWP Region Four supervisor.

"Our program is not designed to reduce the herd," Aderhold said. "It's to alleviate depredation on private land."

The department could allow as many as 200 hunters to participate in the hunt. Game officials will select from the pool of hunters who were unsuccessful in their applications for cow permits during the last hunting season, a game official said.

The hunt would be held in response to complaints by two ranchers whose land has been damaged by at least 200 elk. In a

(More HUNT, page 8A)

similar hunt last year, 33 elk were killed.

"It's not just the fact that there are 200 elk," Aderhold explained. "It's the potential for them to grow to 400 head... and graze on the newly sprouted vegetation. They take the portion of the plant that controls growth."

The area's elk population, which has grown from 150 to about 500 head in the last 20 years, spends most of the year west of the Continental Divide. During the winter the animals migrate east of the divide and onto the property of the two ranches.

Outfitters and sportsmen who hunt west of the Continental Divide near Lincoln insist that a late hunt would needlessly slaughter pregnant cow elk and reduce numbers of elk in the Scapegoat Wilderness.

"I don't like it at all," said Carlos Lagomasino, a Lincoln resident and sportsman.

"Last year there were no fish and game officials there, and hunters were scattered throughout the area.

"Several individuals saw bulls killed. That is wasted elk."

Lagomasino said if FWP officials decide to conduct the hunt again this year they should: limit it to the two ranches; patrol the hunting area; record all kills; allow hunting only long enough to disperse elk, and make efforts to keep the public informed.

But rancher Ray Krone said the only solution is to harvest the elk.

"I'm all for the game," said Krone, who has requested that a hunt be held on his ranch.

"But the problem is that the elk are channeled in here between Highway 200 and the county road. And then the snow gets so cotton-pickin' deep throughout the timber, that once they come out, you can't force them to go back."

Krone said last year's hunt "worked like a charm."

"The only thing to do is harvest them and get them down to where the land can handle them," Krone said. "I get the flak from the people around Lincoln, but they're not pasturing the elk. I am."

This article was in the Helena I.R. on 2-4-92.

The area described is all around the Green Creek Section

16-T16 N-R6 W

df

A-34

DJ

DEPARTMENT OF STATE LANDS
FIELD OPERATIONS DIVISION



STAN STEPHENS, GOVERNOR

CAPITOL STATION

STATE OF MONTANA

Central Land Office: Helena, MT (406) 444-3633
Eastern Land Office: Miles City, MT (406) 232-2034
Northeastern Land Office: Lewistown, MT (406) 538-5989

Northwestern Land Office: Kalispell, MT (406) 752-7994
Southern Land Office: Billings, MT (406) 259-3264
Southwestern Land Office: Missoula, MT (406) 542-4200

8001 North Mont. Ave.
Helena, MT 59601
November 13, 1991

Dave Burch, Weed Supervisor
Lewis & Clark Co. Weed Dist.
3402 Cooney Drive
Helena, MT 59601

Dear Dave:

Enclosed are two weed management applications for proposed timber harvesting operations on State Land in Lewis & Clark county. If you need additional information, please contact me. I can be reached at the above address or you may call 444-3633.

Sincerely;

A handwritten signature in cursive script, appearing to read "D. J. Bakken".

D. J. BAKKEN
Unit Forester
Helena Unit

encl.

jm

LEWIS & CLARK COUNTY CONSERVATION DISTRICT
FOB DRAWER 10022, 301 SOUTH PARK AVENUE
HELENA, MONTANA 59626-0022
PHONE: 449-5278

December 20, 1991

DJ Bakken
Department of State Lands
8001 No Montana
Helena, MT 59601

Dear DJ:

At the December 16, 1991 regular meeting of the Lewis & Clark County Conservation District Board of Supervisors, the Board reviewed your Notices of Proposed Timber Harvest for the 32 acres of sawlogs near Green Creek and the 25 acres of sawlogs near Sawmill Gulch you proposed to harvest.

It was the decision of the Board to consider the submitted information for both Notices as adequate. You may proceed with the proposed activity upon obtaining all other necessary permits.

If you have any questions or comments, please feel free to contact me at 449-5278 after December 29. Thank you.

Sincerely,



Connie J. Olsen
Administrative Secretary

cjo
enclosure

c: L & C Co Commissioners
L & C Co Weed District
L & C Co Road Dept

4/25/91

D.J.,

Thanks for the list of HRA's. Several are logging next to BLM land which I will check out this summer. Might be able to sell a little BLM wood to them!

Your Rogers Pass sale proposals look interesting. Hope the enclosed information will help you. When do you plan to advertise these sales? Our advertised sale ran through FY-92 is unchangeable due to easement termination dates. Otherwise a joint sale might be something to look into. We have the flexibility to add to our sale plan if it wouldn't be too time consuming.

I'm not familiar with the timber stands next to the state land in Section 34 so maybe the best thing to do is spend a day or two looking it over this summer. I can also help you run the property lines between the state and BLM if you want.

Give me a call if you have any questions about the enclosed information. Hope to see you on Rogers Pass this summer.

John

A37

APPENDIX A

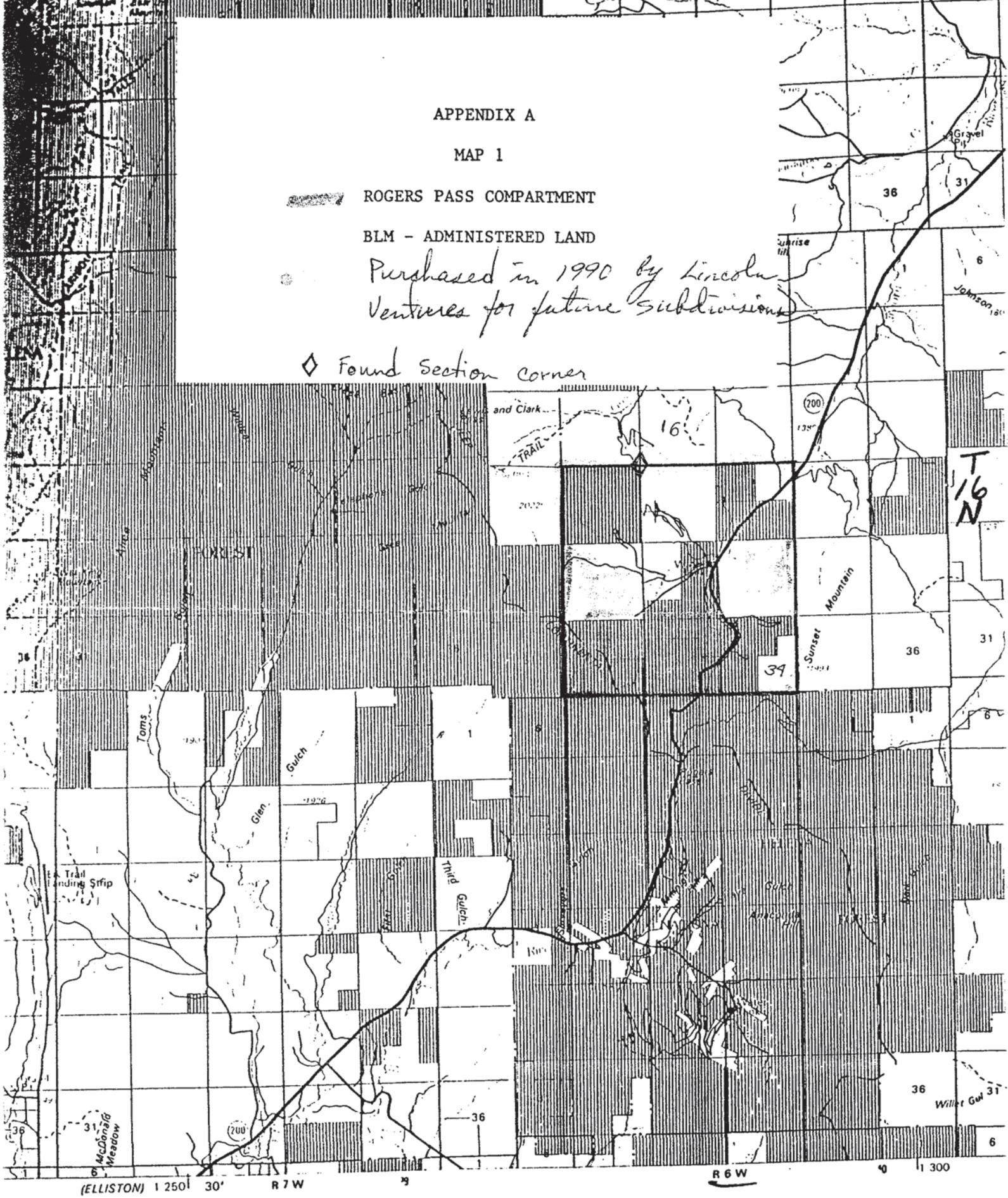
MAP 1

 ROGERS PASS COMPARTMENT

BLM - ADMINISTERED LAND

Purchased in 1990 by Lincoln Ventures for future subdivisions

 Found Section Corner



(ELLISTON) 1 250' 30' R 7 W

R 6 W 40 1 300 6

SCALE 1:100 000

MONTANA

A38

typed in the Douglas-fir series (drier types) or in the subalpine fir series (moist types). Present overstory timber stands consist of pure lodgepole pine, mixed lodgepole pine and Douglas-fir, or mixed lodgepole pine, Douglas-fir, and subalpine fir. An occasional ponderosa pine is found on the driest sites. Understory conifers primarily consist of Douglas-fir. Douglas-fir and lodgepole pine should be the species managed for on these sites. TPCC writeups, map, and acreages are found in Appendix E.

There is presently very little damage from forest insects. However, most of the lodgepole pine stands in the compartment have a high risk susceptibility to mountain pine beetle infestation (Ammon and others, Report INT-36, 1977). Susceptibility of these stands can be lowered by reducing the basal area, reducing the average diameter breast high (DBH), or converting to Douglas-fir which is a non-host species.

Approximately 94 acres have been cutover in the past. Logging appears to be more than 30 years old. These old clearcuts have come back into mixed stands of lodgepole pine, Douglas-fir, and subalpine fir. These stands should be precommercially thinned within the time frame of this plan.

Vegetation on the non-forested sites include rough fescue, Idaho fescue, and sedges. Numerous annual forbs are also present.

Spotted knapweed is also present on the compartment, primarily on disturbed areas on private land. This weed appears to start and increase on disturbed areas such as newly constructed roads, skid trails, and landings.

Wildlife Habitat

The primary wildlife habitat on the compartment is dense forest interspersed with open parks and grassland. Some of the timber on private land in the compartment has been cut in the last 10 years providing openings in excess of 40 acres. Most cutover areas more than 5 years old are being reestablished naturally with conifers. This mixture of habitats combines to be excellent year-round mule deer and elk habitat.

* The compartment is on the southern fringe of an area used by a herd of 200-400 elk primarily as winter range. During mild winters the north and west part of this compartment would serve as very important winter range because the south and west exposures would be open feeding sites. However, during severe winters elk would spend little time in the compartment as snow depths would be prohibitive and elk would winter at lower elevations to the northeast. The north and west part of the compartment is transitional range between nearby winter range and summer range west of the Continental Divide. Therefore, elk densities on the compartment probably are highest during the spring and fall periods. Some calving may occur in the northwest part of the compartment but data from radio collared cows indicates that documented calving for this herd has occurred west of the Continental Divide (Personal Communication, John McCarthy, Montana Department of Fish, Wildlife, and Parks).

This elk herd would use your Sec. 16. The F, W, & P had a special late season this last winter to reduce the numbers of this herd. Understand herd size was about 500 heads. Don't know how successful the hunt was!

The Preferred Alternative would place 1,489 acres of productive forest land under intensive timber management. Stands with the highest priority for management are the stands most susceptible to loss by mountain pine beetle. It is believed the four most susceptible stands are 1478, 1483, 1485, and 1487. All are located in Section 20 and contain 329 acres. The first entry into Section 20 will concentrate on these stands. The following restrictions will apply to timber management on Section 20:

1. No operations between April 1 and June 30 will be allowed.
2. Clearcut harvest units will be less than 20 acres in size.
3. Maintain a minimum of 50 percent security cover for big game.
4. Slash will be piled and burned or lopped and scattered to within 18 inches of the ground.

Logging operations under the Preferred Alternative would probably result in spotted knapweed invading some of the disturbed areas. Noxious weeds found on BLM-administered land will be controlled by means provided by federal law and policy guidelines.

Wildlife Habitat

Wildlife habitat would be altered very little under the No Action Alternative.

Timber harvest would temporarily reduce security cover for big game while adding to the forage and browse available to them under the Preferred Alternative. Elk displacement would occur during the roading and harvest period in Section 20. Displacement would be mitigated by not allowing logging in the spring and controlling non-logging traffic to the timber sale area (Montana Cooperative Elk-Logging Study, 1985).

Road density on BLM-administered land would increase under the Preferred Alternative. However, road density will remain below two miles per section on BLM-administered land, and there will be no public use of the roads in Section 20.

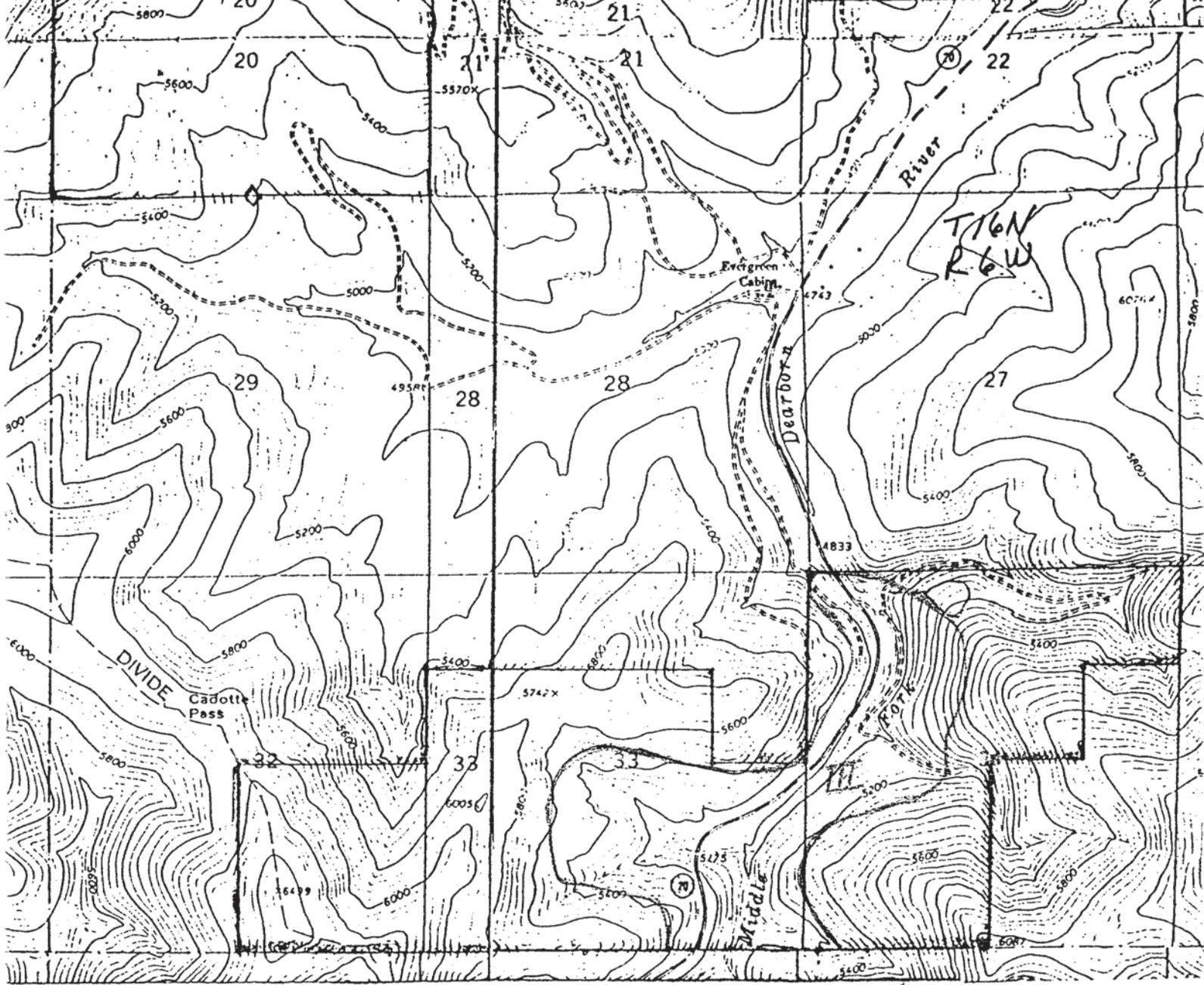
There should not be any irreversible or long term adverse impacts to wildlife habitat.

Threatened and Endangered Species

The No Action Alternative would have little effect on threatened and endangered species.

Habitat alterations that would occur from the proposed silvicultural actions should not be detrimental to the future existence of the T and E species. In fact, an increase in principal bear foods could result from partial cutting.

Appendix G contains a complete biological evaluation on the grizzly bear and gray wolf.



APPENDIX F

VRM Classification

III No clearcuts within this area

APPENDIX G

BIOLOGICAL EVALUATION

Rogers Pass Compartment Management Plan (CMP)

(A 20 year Forest Management Plan for 1,840 acres of BLM administered land in Lewis and Clark County located in T. 16 N., R. 6 W., Sections 20, 22, 32, 33 and 34.)

Great Falls Resource Area
Lewistown District Office
May 1987

INTRODUCTION

This biological evaluation discusses the anticipated effects of proposed silvicultural actions as described in the Rogers Pass CMP and EA on gray wolf (Canus lupis) and grizzly bear (Ursus arctos horribilis) occupancy and habitats.

EFFECTS TO LISTED SPECIES

Gray Wolf - The area of concern lies within gray wolf habitat but no documented sightings have been recorded in the project area. However, recent wolf activity in northernly portions of the Rocky Mountain Front increases the likelihood of wolf activity in the project area. The key to avoiding detrimental effects to gray wolf centers on maintaining or enhancing the prey base and their habitats. Prey in the project area include deer and elk. Habitat values for these two species would not be significantly affected in a negative manner, thus no effect to gray wolf would be anticipated from loss of prey base. Protection of riparian zones is also important for wolf recovery and habitat enhancement, as riparian can be especially important during the warmer months. Maintenance of a vegetation buffer along riparian will aid in protecting these habitats.

Grizzly bear - Habitat alterations that would occur from the proposed silvicultural actions should not be detrimental to the future existence of the grizzly bear. In fact, an increase in principal bear foods, huckleberry and possibly other shrubs, could result, especially from partial cutting.

During operational periods of disturbance from road construction and logging, displacement or habituation of grizzlies could occur indicating a slight increase in the risk of mortality. For that reason, timing of activities to coincide with noncritical bear periods is essential. Habitat mapping for the CMP area has been delineated as spring range (attached). In addition, it must be noted that almost all roads, that will be used, already exist and human entry to the area is through a private gate that has usually been locked.

Should appropriate measures ^{1/} be applied, no negative effects should be evidenced as a result of the proposed action on any T & E species:

These measures include:

1. Leave an adequate buffer along all riparian (enough to protect riparian habitats and allow protected cover lanes of travel).
2. Do not allow human activity on spring grizzly habitat from April 1 - June 30. (An exception to this measure will be the harvest of firewood, post and poles, or house-logs within the first ridgeline or one-fourth mile of Highway 200, whichever is closer.)
3. Do not allow logging crews to accumulate garbage or other edible refuse at anytime.
4. Permits should include a clause providing for cancellation or temporary cessation of activities, if necessary, to prevent grizzly-human conflicts.
5. Retain frequent dense cover areas adjacent to roads and timber harvest units for travel corridors and security cover necessary to protect important habitat components. Three sight distances are desirable to provide visual security for grizzlies. A sight distance is the average distance at which a grizzly or other larger animal is essentially hidden from the view of an observer by vegetation cover.
6. Use minimum road and site construction specifications based on projected transportation needs. Locate roads to avoid important wildlife habitat components based on a site specific evaluation.
7. Roads which are not compatible with area management objectives and are no longer needed for the purpose for which they were built will be closed and reclaimed.
8. Prohibit dogs during work periods.
9. Prohibit firearms during work periods or in vehicles traveling to and from work locations (except during legal deer and elk hunting seasons).

We applied these measures to our timber sale in Sec. 20

^{1/} Most measures listed are also given in the Interagency Rocky Mountain Front Wildlife Monitoring/Evaluation Program Guidelines.

Application of the above protective measures insures a no effect determination on the silvicultural actions proposed for the subject area. If any of the measures listed above are not applied or habitat conditions or species use of the area changes, another biological evaluation will be necessary which may result in at least informal consultation under Section 7 of the Endangered Species Act.

Thomas A. Day

Thomas A. Day
Wildlife Management Biologist
Great Falls Resource Area

Attachment

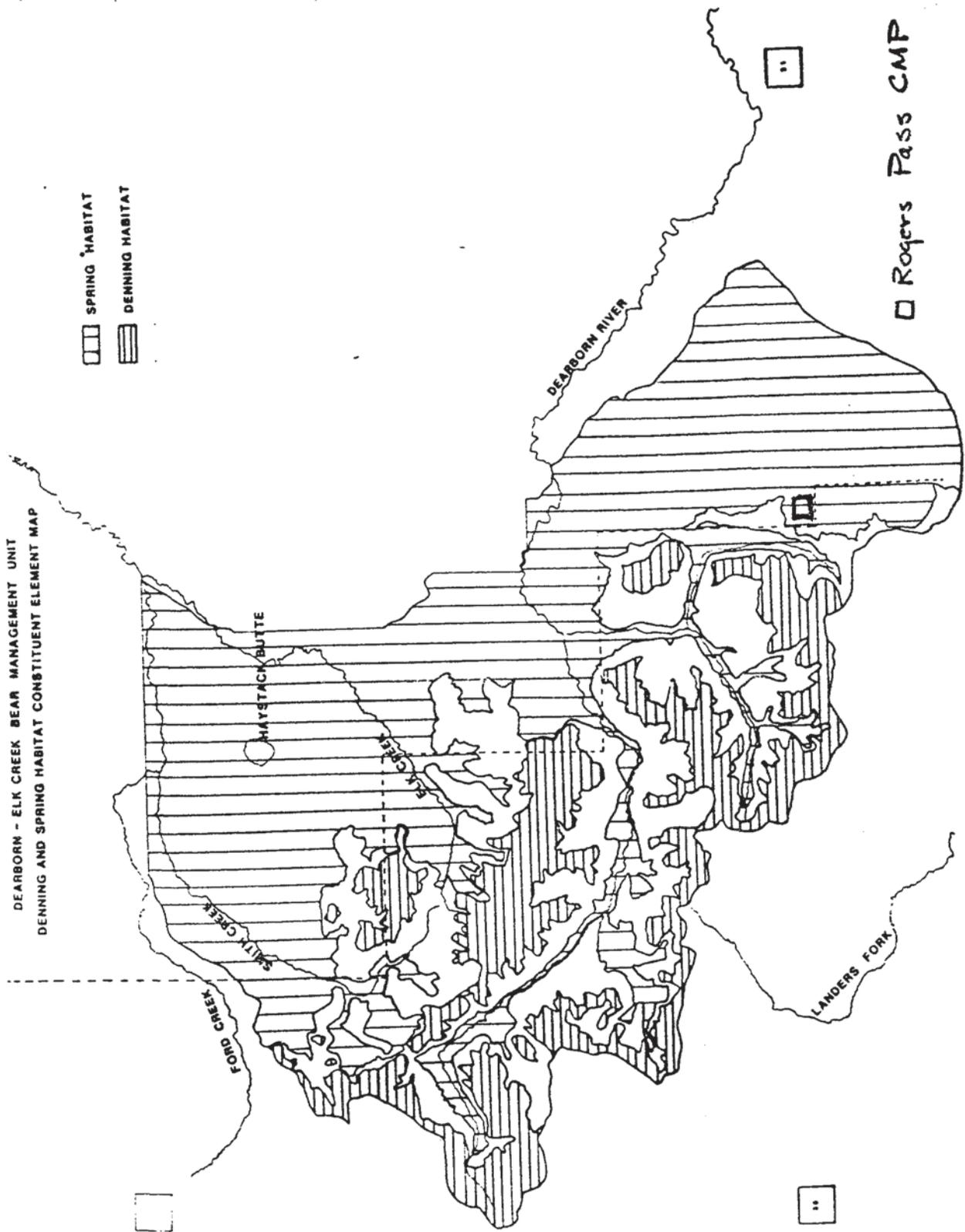


Figure 3d, Constituent element maps, 1/1/66

DEPARTMENT OF STATE LANDS
FIELD OPERATIONS DIVISION



STAN STEPHENS, GOVERNOR

CAPITOL STATION

STATE OF MONTANA

Central Land Office: Helena, MT (406) 444-3633
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Northeastern Land Office: Lewistown, MT (406) 538-5989

Northwestern Land Office: Kalispell, MT (406) 752-7994
Southern Land Office: Billings, MT (406) 259-3264
Southwestern Land Office: Missoula, MT (406) 542-4200

8001 No. Mont. Ave.
Helena, MT 59601
April 19, 1991

John Nesselhuf
Bureau of Land Management
Airport Road
Lewistown, MT 59457

Green Cr.
4
See [unclear]

Dear John:

Enclosed are maps of two State sections which I will be working on this summer. Section 34, T16N, R6W is part State and part B.L.M. land. I am currently doing office work to come up with different road options. With this latest snow, it will probably be July before fieldwork can begin.

It looks like the best route would be by Option "A" or Option "C". Another possible option is "B". This route would cross quite a bit of the B.L.M. land. I do not know if there is any opportunity for a joint B.L.M. harvest, perhaps you do?

A second section which I will be looking at this summer is Section 16, T16N, R6W. This section is near Section 20, T16N, R6W where I believe, you have a nearly completed sale. I plan on accessing this section via private roads in Sections 9, 15, 17, T16N, R6W. Areas of potential harvest are shown on the map. To date, I have only seen those areas which are adjacent to existing roads.

Did you encounter any adverse cumulative effects (elk cover, grizzly bear habitat, or watershed) with your recent sale? If so, I would be interested in your findings.

Please send your comments by July 1, 1991. It will probably be July before we get to involved with fieldwork in this area and I would like to have your comments by then.

Sincerely,

Handwritten signature of D.J. Bakken in cursive.

D.J. BAKKEN
Unit Forester
Helena Unit

dh

Encl. *maps of Green Cr & Sunset SW*
w/ tentative harvest & rd plans

DJ

DEPARTMENT OF STATE LANDS
FIELD OPERATIONS DIVISION



STAN STEPHENS, GOVERNOR

CAPITOL STATION

STATE OF MONTANA

Central Land Office: Helena, MT (406) 444-3633
Eastern Land Office: Miles City, MT (406) 232-2034
Northeastern Land Office: Lewistown, MT (406) 538-5989

Northwestern Land Office: Kalispell, MT (406) 752-7994
Southern Land Office: Billings, MT (406) 259-3264
Southwestern Land Office: Missoula, MT (406) 542-4200

3001 North Mont. Ave.
Helena, MT 59601
March 20, 1991

Wilmer Z. Ingersoll
Rogers Pass Rte.
Wolf Creek, MT 59648

Dear Mr. Ingersoll:

I am writing regarding two of your state leased grazing sections near Rogers Pass. These sections are the SE $\frac{1}{4}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ Sec. 34, T16N, R6W (part of State Forest Land Use Authorization #3072737) and Sec. 16, T16N, R6W (State Forest Land Use Authorization #3072738). The forest land on these two parcels of land will be reviewed this year to determine forest management potential.

Our timber inventory indicates some mature stands of commercial timber on these parcels. I plan on reviewing these areas in more detail during the next few months. In order to better integrate our forest management plans with your grazing use, I would appreciate your responses to a few questions.

- No 1) Do you have any concerns regarding a possible timber sale on these leases?
- No 2) Are you aware of any noxious weeds on your lease? If yes, are you currently treating them?
- yes 3) Are these sections part of a larger scale grazing plan on your ownership?

I do not yet have a specific management proposal for your review. My goal is to examine the area more closely and develop a tentative plan. Your responses may help me arrive at a better plan. I would like to receive any comments you have by May 31, 1991.

Sincerely,

D.J. BAKKEN
Unit Forester
Helena Unit

over

A47

Mr. Ingersoll was in on 5/10/91 - said he had no
concerns, thought logging might open up
country, possibly make more grass. Rds might
even help cow dispersal.

I said I would keep him informed as our
plans develop.

DJ

DEPARTMENT OF STATE LANDS
FIELD OPERATIONS DIVISION



STAN STEPHENS, GOVERNOR

CAPITOL STATION

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3001 North Mont. Ave.
Helena, MT 59601
March 21, 1991

Barbara & Norman McDonough
Rural Route
Wolf Creek, MT 59648

Dear Barbara & Norman:

The Dept. of State Lands will be reviewing Section 16, T16N, R6W for forest management and possible harvesting opportunities. Our records indicate that there may be some potential for harvesting. I have briefly looked at this state section while inspecting C & J Logging (Jerry Montelius) Companies slash piling on Kenneth Thompson's property.

The most logical access route for this section utilizes some of the existing roads on your land in Section 17, T16N, R6W. This route is shown on the attached map. I would like to negotiate a temporary right-of-way agreement to use your road. A sample agreement is enclosed. If you have any specific concerns or stipulations which you would like to add, please contact me.

I would like to begin a more thorough field review of this area this spring. Hopefully, we can settle on the terms of a right-of-way agreement by May 31, 1991. I will be awaiting your reply.

Sincerely,

Handwritten signature of D.J. Bakken in cursive script.

D.J. BAKKEN
Unit Forester
Helena Unit

dh

Encl.

DEPARTMENT OF STATE LANDS
FIELD OPERATIONS DIVISION



STAN STEPHENS, GOVERNOR

CAPITOL STATION

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3001 North Mont. Ave.
Helena, MT 59601
April 24, 1991

Barbara & Norman McDonough
Rural Route
Wolf Creek, MT 59648

Dear Mr. & Mrs. McDonough:

I received the Temporary Right-of-Way Agreement with your suggested additions. Thank you for your prompt reply.

I wanted to clarify the dates for the hunting season closure. Kenneth Thompson requested a similar closure. I think we will be using an October 1 through November 30 closure on Mr. Thompson's right-of-way. Are these dates satisfactory to you?

*o.k.
on dates*

I was also hoping that we could reduce the right-of-way payment to \$1.00/MBF. I have agreed to higher rates in the past, but in those cases, the State was not responsible for the blading and maintenance necessary to use the road. In this case we (or our contractor) will bare this maintenance expense. Would \$1.00/MBF be satisfactory? I also need to know how you would like to receive payment. The two most common options I have used are to 1) pay a lump sum, pre-use fee based on the estimated volume, or 2) pay a fee, after the use is completed, based on the actual scaled volume. In the later case, the State bills the purchaser and then the State pays you after the sale. In the first case, we usually have the purchaser pay you directly. Would one of these options be OK, or do you have something else in mind?

I will be awaiting your reply.

Sincerely,

Handwritten signature of David J. Bakken.

D.J. BAKKEN
Unit Forester
Helena Unit

dh

*add weed clause
1.00 o.k.
pay after use on scale*

DEPARTMENT OF STATE LANDS
FIELD OPERATIONS DIVISION



STAN STEPHENS, GOVERNOR

CAPITOL STATION

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3001 North Mont. Ave.
Helena, MT 59601
June 28, 1991

Barbara & Norman McDonough
Rural Route
Wolf Creek, MT 59648

Dear Mr. & Mrs. McDonough:

I have made the changes you requested to the right-of-way agreement. The hunting season closure is in Condition 1, the use fee is Special Stipulation 1, and the weed management/spraying requirement is Special Stipulation 2.

Do these items look satisfactory to you? If so, please sign and return the new agreement. I will be out of the office until the second week of July if you need to discuss these terms before signing, you can contact John Monzie or Bob Vlahovich at this office (444-3633).

Sincerely,

Handwritten signature of D.J. Bakken in cursive.

D.J. BAKKEN
Unit Forester
Helena Unit

dh

Encl.

*called on 12-30-91
she said she thought she signed it
& sent it back - she will look
for her copy - it was all o.k.
by her. If we don't get it in a
week - send her a new one
to sign*

Handwritten initials, possibly "DJ", at the end of the note.

DEPARTMENT OF STATE LANDS
FIELD OPERATIONS DIVISION



STAN STEPHENS, GOVERNOR

CAPITOL STATION

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8001 No. Mont. Ave.
Helena, MT 59601
April 13, 1991

Kenneth Thompson
Wolf Creek, MT 59648

Dear Mr. Thompson:

Enclosed is a copy of our Temporary Right-of-Way Agreement for your records. The access restriction for hunting season is acceptable. Do you want access closed from Oct. 1 through Nov. 30? If you are only concerned with a rifle season closure then a Oct. 15 through Nov. 30 closure may be suitable. If you are also concerned with an archery season restriction then a Sept. 15 through Nov. 30 closure may be more appropriate.

For now I will assume that you want no access from Oct. 1 through Nov. 30. If I don't hear back from you then I will use these dates for all future planning.

This spring or summer I would like to access the area for sale preparation and cruising. How may I get a key for access? It would be convenient for me to borrow one for the summer but a week by week loan when we are actually working in the area would also suffice. Or, if you prefer to maintain stricter control of your keys, perhaps I could put a state lock on the gate for the summer.

I will be awaiting your reply.

Sincerely,

A handwritten signature in cursive script, appearing to read "D. J. Bakken".

D.J. BAKKEN
Unit Forester
Helena Unit

dh

Encl.

DEPARTMENT OF STATE LANDS
FIELD OPERATIONS DIVISION



STAN STEPHENS, GOVERNOR

CAPITOL STATION

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Southwestern Land Office: Missoula, MT (406) 542-4200

8001 North Mont. Ave.
Helena, MT 59601
October 23, 1991

Kenneth Thompson
Rural Route
Wolf Creek, MT 59648

Dear Mr. Thompson:

Just a note to let you know the status of our timber sale plans in Green Creek. On Sept. 26th, we finished flagging in our tentative harvest units. The next step in our sale process is to show the tentative plans we have to our soils, water and wildlife specialists. The temporary right-of-way agreement I have with you specifies no access in October or November. Would it be possible to access the area for one day on October 30 or 31st to show the area to our specialists? Please call me about this. You can reach me at 444-3633 or 1-800-821-6415. My home number in the evening is 458-5054.

Also, the last day we worked in Green Creek (Sept. 26th) we came upon some fellows cutting firewood. They didn't want to move their truck so we drove our pickup down the other route (see map) to get to the highway. I hope this was not a problem, I prefer to stick to the designated route only, when a written right-of-way agreement is in place.

Sincerely,

A handwritten signature in cursive script that reads "D.J. Bakken".

D.J. BAKKEN
Unit Forester
Helena Unit

dh

Encl.

*Said
O.K.*

DEPARTMENT OF STATE LANDS
FIELD OPERATIONS DIVISION



STAN STEPHENS, GOVERNOR

CAPITOL STATION

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Southwestern Land Office: Missoula, MT (406) 542-4200

3001 North Mont. Ave.
Helena, MT 59601
October 31, 1991

Kenneth Thompson
Rural Route
wolf Creek, MT 59648

Dear Mr. Thompson:

Thank you for letting me use your road for access on the 30th of October. In return, I will (next spring) install a new gate post and build you a new wire gate. The existing gate is indeed in very poor shape.

Sincerely,

A handwritten signature in cursive script, appearing to read "D. J. Bakken".

D.J. BAKKEN
Unit Forester
Helena Unit

dh

Clinton MT
Jan 31, 1992

Dept of State Lands
8001 North Montana Ave.
Helena MT 59601

Attn: D J Bakken

I plan on participating in logging
activities on the Steinhack and Thompson
properties during the summer of 1992.

C & J Logging
Jerry Mathews em

To: DJ

from: Williams ~~gram~~

Date: 5/6/91

Subject: Legal Notice on Timber Sale preparation

I received a call from Mike Vashro regarding your legal notice in Sunday's paper. He wanted to know what information ~~or~~ comments you were seeking at the present time and if there were EA's out on these proposals. I told him we were interested in knowing what concerns he may have in that general vicinity as we to date had not conducted a lot of fieldwork in the area and that it was best to develop our sale plans with those concerns in mind. I told him to drop you a note if he was interested in working with you or providing specific input at a later date. That way you would have his name, address and phone number to contact you as our plans progress. He has inquired about the Ogilvie Gulch plans his address is: Mike Vashro
1204 Sorenson Rd **A56**
Helena MT 59601

no further
comment from Mr.
Vashro was ever
received. JJB
1-14-92

WEED MANAGEMENT

No. _____

APPLICATION

Date Received _____

1. NAME OF APPLICANT Dept. of State Lands
 ADDRESS 8001 N. Montana Ave. CITY/TOWN Helena
 STATE MT ZIP CODE 59601 TELEPHONE NO. 444-3633

2. Location of the proposed area _____ 1/4 _____ 1/4 _____ 1/4 Section 16
 Township 16 N Range 6 W (Green Creek).

3. Brief description of activity: Timber Harvest, no new road construction,
summer logging operations. One unit will be a shelterwood harvest, ~~17 ac~~ ^(17 ac), one will
be a clear cut (4 ac), and the third will be an overstory removal (11 ac)
skid trails and landings will be seeded w/ 20 lbs/ac PLS in the following mix (see attached)

4. Date activity is proposed to commence: July 1, 1992 / or July 1, '93
 Date activity is expected to be completed: Sept 30, '92 / or Sept 30, '93

5. THE APPLICANT CERTIFIES THAT THE STATEMENTS APPEARING HEREIN ARE TO THE BEST OF HIS KNOWLEDGE TRUE AND CORRECT AND HEREBY AUTHORIZES THE INSPECTION OF THE PROJECT SITE BY THE WEED BOARD OR REPRESENTATIVE.

Signature Darrell J. Babiker Date: 11-8-91

RETURN COMPLETED FORM AND PROPOSED PLAN AND NOTIFICATION OF DISTURBANCE SIGNED BY APPLICANT TO THE LEWIS AND CLARK COUNTY WEED DISTRICT OFFICE, 3402 COONEY DRIVE, HELENA, MONTANA 59601.

(The following to be completed by the Lewis and Clark Weed Board.)

=====

Weed Management Plan Submitted Yes No

The Weed Management Plan is is not accepted.

Plan changes or additions: _____

WEED BOARD SIGNATURES:
 _____ Date _____

Date of Site Inspection: _____ By: _____

REGULATION FOR RE-VEGETATION OF DISTURBED AREAS AND
WEED MANAGEMENT PROGRAM

Under Section 7-22-2121 New Section C. New County Weed Law

1. The Weed District must be notified by anyone significantly disturbing vegetation on soil:
 - a. Weed District application form must be completed.
2. A written plan shall be used to accomplish re-vegetation. The plan must describe:
 - a. time and method of seeding
 - b. fertilization practices
 - c. recommended plant species
 - d. use of weed free seed
 - e. weed management procedures
3. The weed management program procedures shall include the following:
 - a. review the distribution and abundance of each noxious weed species known to occur at proposed site; a map of location must be included.
 - b. estimate personnel, operations, and equipment cost of the proposed procedure.
 - c. where at all possible, methods for such control shall include cultural, chemical and biological.
 - d. include geographic data of elevation, soil type, vegetation, precipitation, slope and acreage.
4. The plan is subject to approval by the district by the board, which may require revisions to bring the re-vegetation plan into compliance with district weed management plan. Upon approval by the board, the re-vegetation plan must be signed by the chairman of the board and the person or agency responsible for the disturbance and constitutes a binding agreement between the weed district and such person or agency.

STANDARD AND GUIDELINES FOR
RE-VEGETATION OF DISTURBED AREAS
AND WEED MANAGEMENT CONTROL PROGRAMS
FOR LEWIS AND CLARK COUNTY WEED BOARD

Standards and guidelines are designed to help the Lewis and Clark County Weed Board determine whether or not a Re-vegetation of Disturbed Areas and Weed Management Plans are practical and beneficial. These will be in coincidence with county weed management program.

Upon meeting the regulations for re-vegetation and weed management, a determination can be made for an approval or disapproval.

Procedure Outline:

1. Applicant must request rules, regulations and application forms.
2. Applicant must submit application form and management plan to the Weed District.
3. The Weed District Supervisor will review all plans and submit recommendation to the Board.
4. Board will take under advisement all recommendations and determine approval or disapproval.
5. If application is disapproved, reasons must be stated and letter of such must be presented to applicant by Weed District Supervisor for their approval of revision.
6. If application is approved, the plan will be sent back along with cover letter stating approval.
7. After completion of project a weed board member or weed supervisor will inspect for completion and date such action.

Seed Mixture:

40% Smooth Brome
50% Orchard Grass
10% Slender Wheatgrass

All off road logging equipment will be pressure washed prior to entering the site.

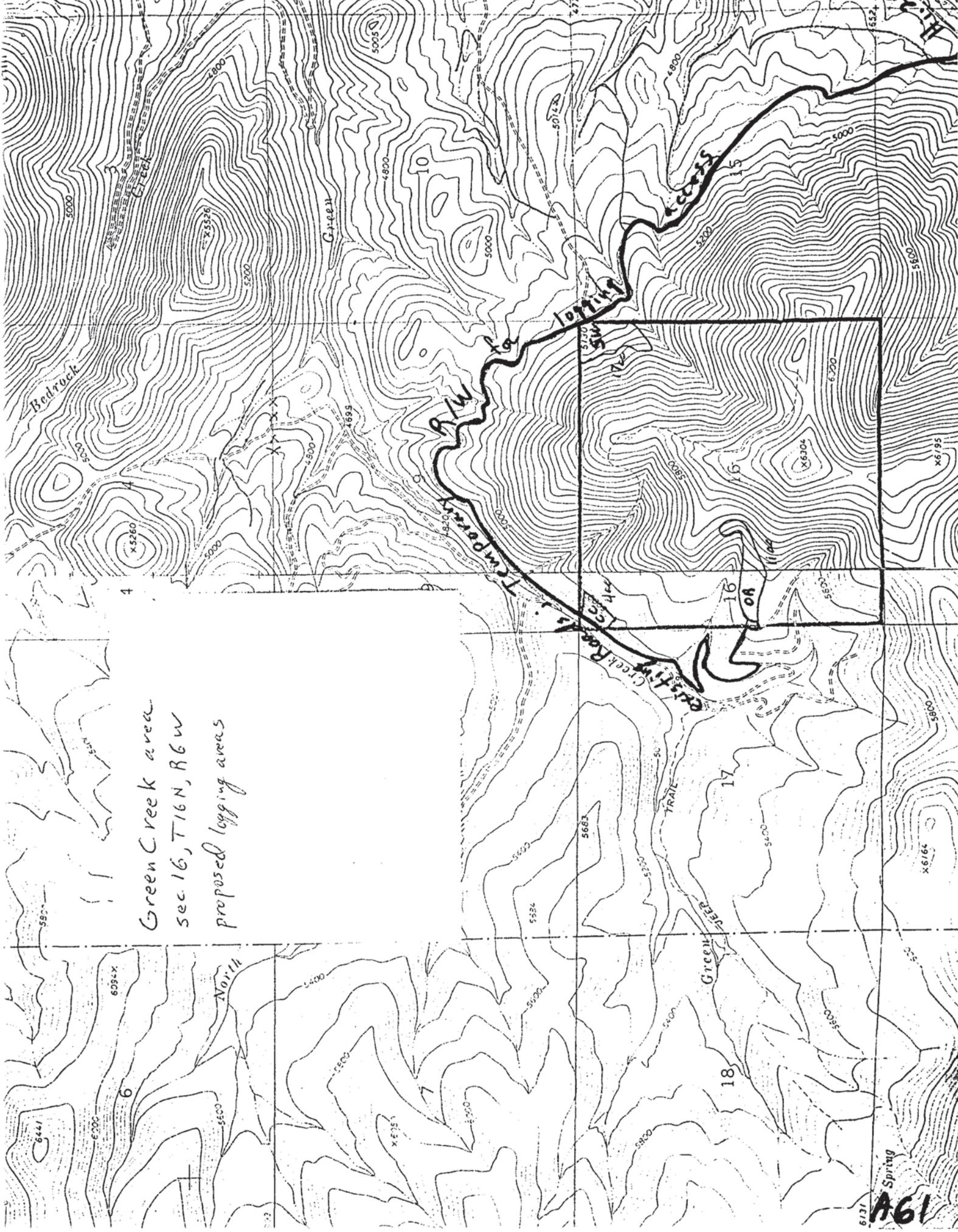
At this time, I am not aware, nor is our leasee aware of any noxious weed infestations on this site. We will monitor the site for several years following the harvest. If a weed infestation develops, then a detailed management plan will be worked out.

Our right-of-way agreement will (in all likelihood) include the following special stipulations:

The Grantee (the State) will be responsible for the management of noxious weeds along the right-of-way. Management shall include the following:

- a. Mapping of infestations which are existing prior to the Grantee's use, and notifying the Grantor (Barbara McDonough) of these locations.
- b. Chemical control of new infestations which develop during the Grantee's use and which develop within one year following use.
- c. Herbicides will be applied only by licensed applicators in accordance with all applicable laws and labeling instructions.
- d. The Grantee may enter into weed spraying contracts with other authorized applicators, including the Grantor.

Green Creek area
sec 16, T16N, R6W
proposed logging areas



6131 Spring
A61

REVEGETATION PLAN FOR WEED MANAGEMENT
Montana Department of State Lands - Forestry Division

The Department of State Lands (DSL) management objective on forested State lands is to manage the land to secure the largest measure of legitimate and reasonable advantage to the school trust in the long run, while protecting the natural environment. Various silvicultural treatments are used to meet this objective. Those treatments are targeted primarily at timber production but they also affect competing vegetation, including noxious weeds. Thus, sound silviculture is the foundation of DSL's revegetation plan for weed management on State forest lands. The specific practices comprising the State's weed management efforts on State forest land are:

1. DSL will prescribe silvicultural practices intended to provide for prompt and successful tree regeneration, and maintenance of vigorous stands of timber;
2. Certified weed-free grass seed mixtures will be applied to all newly constructed and most reconstructed road cuts and fills, and road surfaces following road construction. Seed will be applied as soon as possible after construction or reconstruction and prior to spring run-off. Grand fir, cedar and subalpine fir habitat types may not require seeding following reconstruction, because of rapid regeneration of native vegetation on these sites. The mix of plant species to be seeded will be based on site specific conditions. The mix will usually include some combination of the following species: pubescent wheatgrass, crested wheatgrass, slender wheatgrass, intermediate wheatgrass, Siberian wheatgrass, hard fescue, sheep fescue, tall fescue, smooth brome, mountain brome, yellow sweet clover, white clover, alsike clover, orchard grass, Canada bluegrass, creeping foxtail, red top.

3. Road closures may be used whenever possible to prevent the transference of noxious weed seed by the recreating public;
4. Minimize brush piling and scarification efforts when noxious weeds are in seed set stage;
5. DSL's personnel are or will be trained in the identification and control of noxious weeds;
6. DSL will cooperate with county weed control boards, Conservation Districts special weed districts, adjacent private landowners, leasees, and public agencies to control the spread of noxious weeds. This may include co-operating on a herbicide spraying program.

DSL views the establishment and spread of noxious weeds as an important management concern. We expect the prevention and control measures outlined here to adequately address this concern.

Signed: William R. Hult
William Mosher
Ronald H. Hult
Lewis & Clark County Weed Board

Harry S. Hult 12/5/87
Silviculturist
Dept. of State Lands
Central Land Office

LEWIS & CLARK COUNTY CONSERVATION DISTRICT
SEDIMENT CONTROL PROGRAM
ORDINANCE NO. 77-01-SEC 8

FOB Drawer 10024
301 S Park Ave
Helena, MT

57626-0022

NOTICE OF PROPOSED TIMBER HARVEST

1. a. Name of Applicant Dept. of State Lands
Address 8001 N. Montana Ave. City or Town Helena
State MT Zip Code 59601 Telephone No. 444-3633
 - b. Name and address of owner of site (if different from applicant).

Telephone No. _____
 - c. Name, address and title of applicant's authorized agent for permit application coordination: (attorney, business manager, etc.)
D. J. Bakken, Forester
address same as above Telephone No. same
 2. Location of the proposed timber harvest activity: (Green Creek)
_____ $\frac{1}{4}$ _____ $\frac{1}{4}$ _____ $\frac{1}{4}$ Section 16 Township 16N Range 6W
_____ $\frac{1}{4}$ _____ $\frac{1}{4}$ _____ $\frac{1}{4}$ Section _____ Township _____ Range _____
 3. Description of Proposed Activity:
Purpose Timber Harvest Products Saw logs
Approximate Acres 3.2 and Volume to be harvested 260 MBF
Describe the method of harvest, size and type of equipment, need for road construction and etc. Unit 1 is proposed for a shelterwood harvest on 17ac, Unit 2 a clearcut on 4ac, and unit 3 an Overstory removal on 11ac. Equipment will likely include dozers and/or rubber tired skidders of moderate size. No New Roads.
 4. Starting Date: ^{1) 7-1-92} 2) 7-1-93 Completion Date: ^{1) 9-30-92} 2) 9-30-93 (i.e. July-Sept. of either '92 or '93)
 5. SEDIMENT AND EROSION CONTROL PLAN: Use the reverse side of this form to prepare your plan of operation for the control of sediment.
 6. WEED MANAGEMENT - REVEGETATION PLAN: See attached application and instructions. This required plan has been forwarded to the Lewis & Clark County Weed District. Yes No _____ If no, explain.

- NOTE: This application will not be approved until the above requirement has been met.
7. Has any agency denied approval for this activity? Yes _____ No
If yes, explain. _____
 8. NATURAL STREAMBED & LAND PRESERVATION ACT: If perennial streams are involved in this project (stream crossings, bridges, culverts and etc.), have you applied for a permit under this act. N/A Yes _____
No _____ If no, explain. _____

The applicant or his authorized agent certifies that the statements appearing herein are to the best of his knowledge true and correct, and hereby authorizes the inspection of the project site by a conservation district supervisor.

David J. Bakken
Signature of landowner or authorized agent

11-8-91
Date

Signature of applicant

Date

x A64

SEDIMENT AND EROSION CONTROL PLAN

Describe the approved methods to be used in controlling erosion and sediment during this activity. (Use separate sheets if necessary. See forestry guidelines attached and Forestry and Water Quality booklet available from the Division of Forestry and the Soil Conservation Service.

As a minimum, address the following items in the plan:

- A. Backsloping and revegetation of constructed roads.
- B. Installing structures for dispersing surface run-off from roads and skid trails.
- C. Revegetation of skid trails, decking areas and other severe impact areas.
- D. Leaving appropriate buffer zones along stream sides.

No new road construction is planned. Some drain dips will be installed above and below switch backs on the existing road in section 17. One existing 24" CMP along the R/W has a partially smashed outlet. This pipe outlet will be jacked back open to improve flow through the pipe. Landings and skid trails will be broadcast seeded with 20 lbs/ac PLS (40% Smooth Brome 30% Orchard Grass & 10% slender wheatgrass).

There are no streams in or adjacent to a planned harvest area.

Harvest operations will be covered by our usual timber sale contract and bonding procedures.

The Sediment and Erosion Control Plan as submitted is adequate and applicant can proceed with proposed activity as planned.

Paul E. Steiner 12-16-91
 Supervisor signature Date

Additional planning and information is needed before a Sediment and Erosion Control Plan can be approved. Explanation: _____

 Supervisor signature Date

Additional planning and information is needed. Along with a recommended team inspection of applicant and Conservation District supervisor before a Sediment and Erosion Control Plan can be approved. Explanation: _____

 Supervisor signature Date

The Sediment and Erosion Control Plan as modified is adequate and applicant can proceed with the proposed as planned.

 Supervisor signature Date

X A65

Economic Analysis, Green Creek Alternatives B, C, D

	B	C & D	E				
Roads	21.12/M	1.75/M	1.75/M				
landings	.38/M	.38/M	.38/M				
needs	1.00/M	1.00/M	1.00/M				
grass seed	1.15/M	1.15/M	1.15/M				
Felling	32.16/M	32.16/M	32.16/M				
skidding	66.44/M	45.45/M	45.45/M				
loading	9.00/M	9.00/M	9.00/M				
hauling	56.25/M	56.25/M	56.25/M				
R/W	4.00/M	2.00/M	2.00/M				
overhead	3.06/M	3.06/M	3.06 + /M <small>and risk</small>				
Brush	11.00/M	11.00/M	11.00/M				
TSI	8.00/M	8.00/M	8.00/M				
Total Logging cost	213.56/M	171.20/M	171.20 + /M				
delivered log price Av.	235.00/M	235.00/M	235.00/M				
Av. min. stumpage	21.44/M	63.90/M	63.90 - /M				
Volume	350 M	260 M	260 M				
Total stumpage to trust.	\$7504.	\$16588.	\$16588 -				

Minimum Stumpage Appraisals

Silvicultural Prescriptions
Green Creek Timber Sale
Sec. 16, T16N, R6W

There are eight (8) commercial stands of timber located on the Green Creek section. The selected management alternative was to implement forest management and harvesting on 33 acres in 3 areas of the section. One of the planned areas actually contains two distinctly different timber stands requiring different actions and different unit designations. The overall extent of the four (4) units covered by these silvicultural prescriptions is identical to the extent of the three (3) areas selected for management in the decision memo.

Table A summarizes the current stand conditions and the treatments for the four (4) harvest stands. As you can see, Stands 3 & 4 were considered as one area in Alternative E of the Green Creek Environmental Assessment. Please note the stand conditions which warranted the two distinctly different treatments. The following paragraphs will further describe the selected silvicultural treatments.

Stand 1 is a 17 acre stand located in the northeast corner of the state section. The road passes through the very corner of this stand. The timber in Stand 1 is Douglas-fir saw timber, medium stocking. The average age is 90 years, height is 50' - 60', and average d.b.h. is nearly 12 inches. There are approximately 124 trees/acre over 7" d.b.h. (minimum merchantable size). There is on-going spruce budworm damage, typical of these low elevation dry site Douglas-fir stands. This unit is too large for adequate seed dispersal from uncut adjacent timber. The area is also very windy making seed tree methods impractical. This stand should be managed with a shelterwood system. Leave trees of good form and crown condition should be left on about a 70 foot spacing or as found. (The leave tree selection is poor at best.) The leave trees should be marked with blue vertical stripes on 3 sides of the tree. All non-merchantable timber should also be left during harvesting. Attempt to get moderate scarification with the logging operation, 30% - 60%. Skid trees whole to a landing area in the northeast corner of the stand adjacent to the road. After burning the landing pile, rehabilitate the pile and landing by seeding grass. Complete regeneration surveys 5, 10, & 15 years after harvest. When 300 seedlings per acre are established, remove the overstory to prevent budworm damage to the new stand.

Stand 2 is a four (4) acre stand located in the northwest corner of the State section. The road also passes by the bottom of this stand. The timber in Stand 2 is also Douglas fir saw timber, medium stocking. The average age in Stand 2 is 125 years, height is 50 - 60 feet, and the average d.b.h. is nearly 13 inches. There are approximately 115 merchantable trees/ac. Spruce budworm is also present in this stand. Steep slopes determine the upper unit boundary a short distance before the timber stand actually changes to a non-commercial status. As such, there is sufficient suitable seed source along the upper edge of this small unit, allowing for good seed dispersal. This stand should be managed with a clear cut. The northwest slope should not develop any heat stress conditions, and by clearcutting we can forego the need for future overstory removal. Attempt to get moderate scarification (30-60%) through tree length logging. Complete regeneration surveys in years 5, 10, & 15 after the harvest. No additional treatments are anticipated.

Stand 3 is a 10 acre stand located in the west central portion of the section. An existing road comes to the section line at this location. The timber in Stand 3 is a two storied, two aged stand. The overstory is overmature lodgepole pine about 155 years old, 10 inches average d.b.h. and averaging 60 feet tall. The understory is mostly Douglas-fir with trace amounts of Subalpine fir about 30 - 60 years old, 2-6 inches d.b.h., and 30 feet tall. There are approximately 244 trees per acre over 7 inches d.b.h. The understory is heavily stocked with several thousand stems per acre. Steep slopes and a timber type change to a moderate to poorly stocked stand occur above the unit boundary. (Slopes define upper boundary about 1-2 chains before the type change takes place.) The advanced regeneration in the understory will be managed as the next timber stand. Harvest all merchantable lodgepole pine and other species from the overstory. Skid trees whole on skid trails (averaging 50' spacings) to a main skid trail on the slope break along the north side of the stand. Intermediate landings should be located every 150 - 200 feet along the trail. Clear all sub-merchantable trees from the landing areas. The trees which are skidded onto the intermediate landings should be limbed and topped with slash piled. The logs will then be skidded or forwarded to the road on the section line for loading to trucks. The logging operation will perform a non-selective mechanical thinning of the dense understory. Considerable logging damage is anticipated. All skinned up, leaning, pushed over trees need to be felled then lopped or trampled to an 18 inch depth. A second option for logging damaged trees would be to fell them and yard them to the nearest landing for piling. Tops which break out of the merchantable trees must also be lopped, trampled or yarded. The target is for 200+ undamaged saplings/acre after the harvest. After logging the area must be evaluated to determine if additional thinning is needed in some areas.

Stand 4 is a two acre stand located off the end of Stand 3. The timber in Stand 4 is Douglas-fir sawtimber, well stocked. The average age in Stand 4 is 155 years, heights are 55-60 feet and the average diameter is 10 inches. There are approximately 244 merchantable trees per acre. There is some spruce budworm in the stand. A natural open park occurs on the ridge just above this stand. A buffer of about 1 chain will be left along the edge of the park for wildlife and livestock cover and security, and to provide seed for the harvested area. Clearcut all trees on this unit and skid log length on the main skid trail through Unit 3 to the truck landing. To provide microsites and shading for seedling establishment, all slash will be left on the site. Slash should be lopped or trampled to an 18 to 24 inch depth. Complete regeneration surveys in years 5, 10, and 15 after the harvest.

TABLE A
Stand Conditions and Prescriptions
Green Creek - Alternative E

Stand	1	2	3	4	5	6	7	8	NC
Unit #	1	2	3	4	--	--	--	--	--
Area	17 ac	4 ac	10 ac	2 ac	4 ac	10 ac	8 ac	10 ac	460 ac
Slope Avg.	25%	35%	35%	35%	30%	55%	55%	35%	35%
Aspect	NE	NW	NE	SW	NW	N	NW	NE	All
Habitat type	Psme/ caru	Psme/ syal	Psme/ vagl	Psme/ syal	Psme/ vagl	Psme/ vagl	Psme/ vagl	Psme/ vagl	--
Timber /type	DF9M	DF9M	LP9WM	DF9W	DF9M	DF9MP	LP9MP	DF7MP	NC
Age(s)	90	125	155/ 30-60	155	155	155	155	30/ 155	155
Avg. dia.	11.9"	12.9"	10.1/ 2"-6"	10.1	11"	9"	8"	<5	7
T.P.A. over 7" d.b.h.	124.3	115.0	244.3	244.3	100	200	200	50	--
Net vol per ac.	5.9M	8.8M	10M	12M	6M	8M	6M	2M	2M
Target stand sp	DF	DF	DF	DF	--	--	--	--	--
Seedling stocking	300/ac yr 15	300/ac yr 15	200/ac pst/hv	300/a yr 15	---	---	---	---	---
Final Stocking	150 TPA	150 TPA	150 TPA	150 TPA	---	---	---	---	---
Silv. trmt.	SHWD	CC	OSR	CC	---	---	---	---	---
Brush trmt.	tree length	tree length	tree length	tramp slash	---	---	---	---	---
TSI trmt.	none	none	yes	none	---	---	---	---	---
Alt E Harv area	1	2	3	3	---	---	---	---	---

CENTRAL LAND OFFICE
Silviculture Preparation
Field Analysis

Sec. 16 Twp. 16 N Rge 6 W

Acres: 17 Slope: 25% Unit # 1

Aspect: NE Elevation: 5200'

Habitat Type: Panicle

Description of Existing Stand:

Age: Dominant 78-105 (890) yr
Codominant 90 yr
Understory —

Height: 50-60'
Growth: slow
I & D: spruce budworm

Constraints:

steep slopes at upper end of stand

Silvicultural Objectives - Target Stand:

Structure: single story - even age
Species: DF
Stocking: 300/acre at 15 yr
150/acre at 100 yr.

Treatment Alternatives:

- ① clear cut all stems - Avg. dist from seed source would exceed avg. dist. of seed dispersal
 - ② seed tree - leaves adequate seed - but high winds in area will topple seed trees
 - ③ shelterwood - leaves seed, protects seed source from wind, but threatens seedlings w/ budworm
- choose 3 - need to get regen. first - then worry about OSR
stand readily accessible for D.S.R.

Site Preparation/Hazard Reduction:

minimize scarification 20-60% max,
over top to landing area

ISI:

After regen is established we may need to remove overstory

CENTRAL LAND OFFICE
Silviculture Preparation
Field Analysis

Sec. 16 Twp. 16N Rge 6W

Acres: 4 Slope: 35% Unit # 2

Aspect: NW Elevation: 5000'

Habitat Type: Psme/syal

Description of Existing Stand:

Age: Dominant 120-135 (\bar{x} 125) yr
Codominant —
Understory —

Height: 50'-60'

Growth: slow

I & D: some minor budworm

Constraints:

steep slopes at upper end of stand

Silvicultural Objectives - Target Stand:

Structure: single-story - even-aged

Species: DF

Stocking: 300/ha @ 13 yr
150/ha @ 100 yr

Treatment Alternatives:

- * ① clearcut - small unit, all areas well within ecological dist. of recent stands
- ② seed tree - not needed - would likely blow down anyway
- ③ shelterwood - at worst largest - result in \neq of suitable leave trees

choose 1 - open from adj. seed sources

Site Preparation/Hazard Reduction:

minimize bear-creation (20-60% max.)
for wildlife landing area

TSI:

none

CENTRAL LAND OFFICE
Silviculture Preparation
Field Analysis

Sec. 16 Twp. 16N Rge. 6W

Acres: 10 Slope: 35% Unit # 3

Aspect: NE Elevation: 5400-5800'

Habitat Type: Forest

Description of Existing Stand:

Age: Dominant 100-160 (X 155 yr)
Codominant —
Understory 20-60

Height: D = 60' U = 30'
Growth: slow to med
I & D: some minor damage

Constraints:

dense understory of DF below moderately
stocked old LP

long skids

Silvicultural Objectives - Target Stand:

Structure: single-story even-aged
Species: DF
Stocking: 200 TPA after harvest
150 TPA in 40-50 yr

Treatment Alternatives:

- ① Overstory removal - cut all merchantable LP, create skid trail 80m wide, spaced designated skid trails to intermediate landings along main trail - do limit back here, pile slash - use skid as forward logs to reach landing at property line (end of Rd)

Site Preparation/Hazard Reduction:

minimize scarification 0-30% max
tree length to intermediate landings for best treatments
var broken tops or tip to 15" maximum ht.

ISI:

fell logging damaged trees, especially along skid trails, & top to 15' high on yard to landing & pile

evaluate leave stand following harvest - some areas may require further thinning

CENTRAL LAND OFFICE
Silviculture Preparation
Field Analysis

Sec. 16 Twp. 16 N Rge. 6 W

Acres: 2 Slope: 35% Unit # 4

Aspect: SW Elevation: 5800'

Habitat Type: Psmc / spal

Description of Existing Stand:

Age: Dominant 155 yr
Codominant -
Understory -

Height: 55'-60'
Growth: Slow
I & D: budworm

Constraints:

no more space for OSR
ground at top of
slope is steep

Silvicultural Objectives - Target Stand:

Structure: single tree stand
Species: DF
Stocking: 300/acre at 15 yr
300/acre at 60 yr

Treatment Alternatives:

- * ① clearcut - small size, all across, no thin seed distribution, slope will be
from prevalent winds, maybe able to counteract heat on SW exposure w/ slash residue
fast shading
- ② shelter wood - would provide on-site shade, but risk budworm to small trees
& stand is not easily accessible for OSR
- chouse - mitigate seedling shade req. w/ slash treatment

Site Preparation/Hazard Reduction:

minimize scarification - 30-60% max. - log length skid
log or trample slash to an 18"-24" depth

TSI:

may require some additional logging by state after the sale