

**USDA FOREST SERVICE
IDAHO PANHANDLE NATIONAL FORESTS
COEUR D'ALENE RIVER RANGER DISTRICT
Kootenai and Shoshone Counties**

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**DECISION NOTICE
Sands Creek Research Project**

Responsible Officials: Russell T. Graham, Research Forester, Rocky Mountain Research Station.

Pat Aguilar, Acting Forest Supervisor, Idaho Panhandle National Forests.

INTRODUCTION

The Idaho Panhandle National Forests in cooperation with the FS-Rocky Mountain Research Station has prepared an Environmental Assessment examining alternatives for a forestry research study in Deception Creek Experimental Forest (DCEF). DCEF encompasses 3520 acres and is located approximately 20 miles east of Coeur d' Alene, Idaho.

The project area includes all, or portions, of the following sections of land:

Sections 28, 29, 31, 32, and 33; T51N R1W; B.M.

The determination of needs for the research project was based on existing stand and watershed conditions, research objectives and long-term forest health.

The purpose for developing and implementing this research project is to study the application of silvicultural methods that differ from established management methods that could be used for restoring and maintaining western white pine forests over time.

This research project (titled: “*Alternative silviculture strategies for restoring western white pine ecosystems of the northern Rocky Mountains*”) would develop silvicultural strategies (regeneration, establishment, and development) that could be used to sustain or restore large, mature western white pine forests throughout the Inland West. The study will be a long-term (minimum of 200 years) controlled experiment in a western white pine and western larch stand.

- The research objective is to quantify current blister rust resistance level of mid-aged western white pines and future resistance levels of natural seedlings.
- Research will also be conducted in a mixed species stand with small amounts of western white pine. The research objective in this stand is to combine individual and group selection regeneration systems (which create variable overstory densities) and evaluate their effectiveness in the establishment and growth of planted and natural western white pine, western red cedar, shrub, and herbaceous species, while maintaining a functioning forest.
- Changes in hydraulic functions and fish habitat metrics of Sands Creek both before and after removal of the adjacent road prism will be evaluated.
- A pilot study will investigate potential treatments that maintain or enhance western hemlock old growth characteristics.

Results from these studies will determine how alternative silviculture strategies will influence the structure, species composition, tree physiology, and disease relations in western white pine forests. See *Figure I-1* for a map showing the general location of DCEF and the proposed project, and *Figure I-2* for a more detailed map showing the proposed project area.

THE DECISION

I have decided to implement Alternative 2 as described in the Environmental Assessment (refer to the enclosed map of the selected alternative). Under this alternative the following activities would occur:

The proposed study would treat approximately 113 acres within the Sands Creek drainage of Deception Creek Experimental Forest. The 113 acres would be treated using a combination of group and individual tree selection (free selection) that would create a variety of stand structures with the objective of regenerating, establishing, and growing stands that have the characteristics of large, mature and old western white pine forests (stands having a plurality of western white pine with smaller amounts of western larch, western red cedar, and western hemlock). Silviculture strategies that can be used (harvesting, prescribed fire, forest floor disturbances) to sustain or restore western white pine ecosystems through the Northern Rocky Mountains and show how these strategies influence the structure, species composition, nutrient dynamics, physiology, and disease relations will be used.

To create the various stand structures approximately one million board feet of sawtimber, consisting of dead and dying western white pine, dead and genetically off site ponderosa pine, western hemlock grand fir, Douglas fir and western red cedar would be harvested. Ground and cable based yarding systems would be used for the harvest.

No new system road construction or reconstruction would occur. 0.7 miles of existing road system will be reconditioned before harvest activities and ripped and barriered after use. Approximately 0.2 tenths of a mile of temporary road would be constructed prior to harvest activities near the ridge above unit 3, and will be obliterated after use.

Prescribed fire would be implemented in the spring or fall, depending on the treatment prescription and research needs.

In addition, 3200 feet of a road adjacent to Sands Creek will be removed. (See *Figure 1-2* for a detailed map on the proposed road obliteration.) This road to be removed will be seeded after obliteration. Large woody debris would be installed within Sands Creek adjacent to the road removal. Western red cedar, and western white pine would be planted in the obliterated road for long-term recruitment of large wood.

Roadsides and landings would be seeded to reduce the potential for noxious weed infestations.

I have selected this alternative because it responds to the research needs, environmental needs, long-term forest health, and the future desired condition within the Sands Creek area of DCEF.

Rationale For The Decision

I have decided to implement the Action alternative after evaluating the alternatives using the following criteria:

1. How each alternative meets the purpose and need for action as described in Chapter 1 of the Environmental Assessment.
2. How the alternative provides consistency with the Forest Plan.
3. How well the alternative responds to research needs, environmental issues and concerns identified by the public, other agencies, Forest Service resource specialists, and the scientists from the Rocky Mountain Research Station.

The following is a discussion of my rational for the decision based on these criteria.

1. Purpose and Need For Action.

The purpose and need for action is described in the Environmental Assessment (page 7) and in the introduction of this Decision Notice. Briefly, the activities will follow research direction for DCEF as directed by the scientist in charge at Rocky Mountain Research Station to improve the long-term forest health within the western white pine type, improve water quality of Sands Creek, and build on the scientific knowledge within this forest type.

2. Consistency with the Forest Plan.

I have evaluated the proposed alternatives and compared them to Forest Plan standards, goals and objectives within Experimental Forests and the analysis area. This project will be tiered to the Forest Plan and will be consistent to Forest Plan direction and the MOU with the FS, Rocky Mountain Research Station. Forest Plan Directions identified for the DCEF will be followed through out the project. (1.5, page 13, Sands Creek E.A.) I have determined that the actions associated with the selected Alternative are consistent with Management Goals within MA/14 and ongoing research objectives.

3. Environmental Issues and Concerns.

The environmental issues and management concerns that helped facilitate development of the alternative are discussed below. They provide the foundation for my decision to implement Alternative 2. Issues and concerns were identified during the public involvement process (scoping) and verified by Forest resource specialists based on their inventories and knowledge of existing conditions.

Western white pine

White pine blister rust has severely disrupted the native successional pathways in the Northern Rocky Mountains. As more white pines are lost the opportunities of capturing the native rust resistance is diminishing. Therefore, it is critical that action be taken in protecting this vital resource.

Aquatics

The entire study area is within the Sands Creek drainage. The interim guidelines for INFISH stream buffers of 300 ft. slope distance on each side of the channel would be maintained to protect the stream corridor. In addition, 3,300 feet of road will be removed that encroaches on Sands Creek. This action will improve the long-term integrity of Sands Creek.

Wildlife

This is not a recovery area for any Threatened or Endangered species. Snags, coarse woody debris, forest floor characteristics all-important for small animals, passerines, and woodpeckers will be maintained.

It is my determination that in order to meet the legal and biological needs of the project area, the following actions shall be applied during the preparation and implementation Of Alternative 2:

Biological Diversity:

- No allocated old growth stands would be harvested.

Timber Resources Health and Productivity:

- All harvesting will avoid rocky and unsuitable sites.
- The number of trees per acre to be left in each treatment area will follow site-specific silvicultural and research objectives.
- Large woody debris would be maintained within harvest units for long-term nutrient cycling, soils, and wildlife needs.

Water Resources and Fisheries:

- All activities would meet rules and regulations of the Idaho Forest Practices Act, Best Management Practices Act, and the Idaho Forestry Act and Hazard Reduction Laws.
- Maintain a 50-foot (no harvest/site preparation) buffer on seeps and springs.
- Maximum widths for skyline corridors are 12 feet with a average distance of 150 feet between corridors.
- Maintain a 300-foot (no harvest/site preparation) buffer on both sides of the channel on stream courses identified as Class I streams. Maintain a 150-foot (no harvest/site preparation) buffer on both sides of the channel on stream courses identified as Class II streams.
- Roads identified to be obliterated by ripping would be cultivated to a minimum depth of 24 inches.
- Trees will be directionally felled away from designated buffer zones.

Wildlife:

- Requirements for the conservation of threatened and endangered and sensitive wildlife species shall be implemented through the application of the Timber Sale Contract Provision C (T) 6.251#, Protection of Endangered Species.

- Temporary roads will be closed to impede traffic after use by recontouring the road for one site distance, or other barriers as designated by the districts wildlife biologist.
- A buffer of 30 acres would be established around any known or discovered goshawk nests. Within the area of the nest site, purchaser operations would be suspended within one-quarter mile (400 meters) of known nest site during the period from March 15 to August 15 to reduce risk of abandonment caused by disturbance.
- A minimum no entry (no harvest or site preparation) buffer of 2 site distances or 100 feet (which ever is less) would be established around any known or discovered elk wallows.

Sensitive plants:

- Requirements for the conservation of threatened, endangered or sensitive plant species shall be met through the implementation of Timber Sale Contract Provision C (T) 6.251#, Protection of Endangered Species.
- If any populations of threatened, endangered, or sensitive plant species were subsequently identified during implementation within the project area, mitigation measures would be designed by the District Botanist and implemented to ensure protection of the species.

Air Quality:

- Procedures outlined in the North Idaho Memorandum of Agreement will be followed. Restrictions imposed by the monitoring unit would be adhered to.
- Burning would be done only to meet research needs, silvicultural needs or fuel management objectives.
- Restrictions on prescribed burning for local air quality reasons may be implemented by the Idaho Panhandle National Forest and/or the Coeur d'Alene River Ranger District in addition to those imposed by the smoke management-monitoring unit.
- Roads will be watered or otherwise treated when operations occur during extended periods of dry conditions to reduce dust emissions.
- All debris piles will be free of soil to reduce smoldering.

Noxious weeds:

- Revegetate road cut and fill slopes, landings, skid trails with fast growing grass and forbs species to reduce the potential for noxious weed establishment. Grass seed will be certified noxious weed free.
- Mulching agents such as hay or straw will be certified noxious weed free before being allowed on the project area.
- Prior to sale closure, through KV Plan review, take appropriate follow-up action to eradicate noxious weed populations if they are discovered within the project area.
- Direction and objectives for weed pest management described in the Coeur d' Alene River Ranger District Weeds EIS will be followed.

Soils:

- Sensitive soil types will be avoided during implementation. No ground based yarding will be allowed on sensitive soils.
- Large woody debris would be maintained within harvest units for long-term nutrient cycling and soil productivity.

Road Management Safety:

- Purchaser would maintain road drainage design features during surface blading.
- Appropriate timber harvest and associated activity warning signs will be placed on access roads during implementation of active operations.

Monitoring:

- Monitoring is designed to
 - Determine if assumptions made for the effects analysis were correct.
 - Determine if resource and research objectives are being achieved: to verify implementation.
 - Ensure that resources are being protected and validating predictions.
 - Assess the degree of specific effects.

Public Participation

Public involvement for this project began in the spring of 2000. The Coeur d'Alene River Ranger District distributed an initial letter describing the need for action and soliciting public comment on April 5, 1999. A legal notice was published in the Spokesman Review, (Spokane, Wa. / Coeur d'Alene, Id.) dated March 31, 2000. Five responses (4 comment letters, 1 request to stay on mailing list) were received in response to the scoping letter and legal notice.

The Environmental Assessment was completed and published February 9, 2001, with the comment period running until March 12, 2001. Two responses were received and relevant issues were taken into consideration before determining the final decision.

Public responses and comments were reviewed to identify relevant issues and concerns. Substantive comments and our responses are provided in Attachment B, with the copies of the letters received. The Deciding Official has considered all comments received during this period in the selection of an alternative.

OTHER ALTERNATIVES CONSIDERED

No Action

The no action alternative is required by NEPA and NFMA. Under the No-action alternative, none of the research activities described in the proposed action would occur. Fire suppression, road maintenance, and recreation activities would continue. Forest research into restoring the endangered western white pine forests would be deferred to a later date. As western white pine blister rust continues to kill trees and more areas become dominated by other tree species the window of opportunity for restoring the few forests of this type that we have left in the West is relatively short. Stand conditions on the 113 acres would continue to move toward a dense, multistory stand structure dominated by western hemlock and grand fir.

More importantly, the knowledge on how white pine blister rust resistance can be increased through mass selection techniques will not be furthered. Planting of rust resistant seedlings will not always be possible because of location, seedling availability, funding, management priorities, or land allocation. Therefore, if western white pine is going to survive as many options as possible and much information are needed so that informed and reasoned natural resource decisions can be made that affect the species.

Reasons for dismissing the no-action alternative.

The development and continued research of the western white pine type, and long-term western white pine restoration and health will be hampered. Research objectives for this study would be deterred, and information obtained would not be available to forest managers, the public or other interested personnel. The no action alternative would not meet the purpose and need of the project or be consistent with Management Goals within MA/14 and ongoing research objectives.

COMPLIANCE WITH THE NATIONAL FOREST MANAGEMENT ACT.

A. Forest Plan Consistency

I have evaluated the alternatives and compared them to the Forest Plan standards, goals and objectives within the Sands Creek Study Project Area. I have determined that the selected alternative will meet the Forest Plan standards and will contribute to reaching the research goals and objectives as described in Chapter 1.5 of the Environmental Assessment. The Selected alternative is consistent with Inland Native Fish Strategy standards and guidelines.

B. Suitability for Timber Production

No timber harvest, other than salvage sales or sale to protect other multiple-use values, shall occur on lands not suitable for timber production. [16 U.S.C. 1604 (k)]. Under the selected alternative, harvest will occur only on lands that have been determined suitable for timber production through the Forest Plan.

C. Vegetative Manipulation

All proposals that involve vegetative manipulation of tree cover for any purpose must comply with the seven requirements found in 36 CFR 219.27(b). Management practices shall:

- 1. Be best suited to the goals stated in the Forest Plan.* Vegetative manipulation is the most effective method of meeting the Forest Plan and research objectives for these harvest areas.
- 2. Assure that the technology and knowledge exists to adequately restock the land within five years after final harvest.* Technology and professional knowledge were applied to assure that adequate stocking would occur within five years after final harvest.
- 3. Not be chosen primarily because they will give the greatest dollar return or the greatest output of timber.* Management practices were governed by research needs within the DCEF and not strictly economics.
- 4. Be chosen after considering potential effects to residual trees and adjacent stands.* Improving timber stand health and knowledge through research will benefit the stands long-term. Potential effects of residual trees were a key consideration in determining research objectives and treatments within the study area and adjacent stands.
- 5. Be chosen after considering potential effects to residual trees and adjacent stands. conservation of soil and water resources.* Features of the selected alternative described in this decision and the environmental assessment will ensure that soil, water, and watershed resources will be protected. This will also be incorporated in the research plan.

6. Be selected to provide the desired effects on water quality and quantity, wildlife and fish habitat, regeneration of desired tree species, forage, production, recreational use, aesthetic values, and other resource yield. Compliance with Forest Plan Standards under the selected alternative will provide for the desired effects.

7. Be practical in the terms of transportation and harvesting requirements and total costs of preparation, logging and administration. The selected alternative is practical in the sense that the timber will likely sell and meet the purpose and need for action.

D. Transportation Facilities

Any roads constructed through contracts, permits, or leases must be designed according to standards appropriate to the planned uses, considering safety, costs of transportation and the effects upon lands and resources. [36 CFR 219.27(a)(10)]. Under the selected alternative 0.2 mile of temporary road would be constructed to a safe standard and obliterated after sale activities.

Only 0.7 miles of existing non-system road will be reconditioned for timber harvest use: and will be ripped and have a barriers in place after sale activities.

1. FINDING OF NO SIGNIFICANT ACTION

The direct, indirect and cumulative effects of the proposed actions have been reviewed as documented in this Decision Notice, the Environmental Assessment, and the project file. The setting of these proposals is in a localized area, with implications only for landscape, drainages and stands within the analysis area. Consideration of the proposed action is based on their impacts to the ecosystem, local communities, county, and at the effected resource level. They do not have any large or lasting effects on the society as a whole, the nation, or the state.

Based on this review, it has been determined that there are no significant impacts on the physical, biological, or social portions of the human environment. The action alternative is consistent with management objectives, standards and guidelines established for the Deception Creek Experimental Forest, and the Idaho Panhandle National Forests.

Significant impacts (both beneficial and adverse): Effects associated with the action alternative are discussed in Chapters II and III of the Environmental Assessment. These impacts are within the range of those identified within the Forest Plan. The actions would not have significant effects on other resources identified and described within the Environmental Document and Project Files.

Activities will result in temporary and low impact effects. Harvesting and log hauling activities will increase traffic on Forest Service and on County roads, which are the primary access roads into the area. Precautionary signings will provide for safety and information in areas of activities.

No significant increase in water yields or sedimentation in the analysis area streams is expected, and State water quality guidelines will be met. Implementation of native Inland Fish Strategy standards and guidelines will protect stream courses from sedimentation. (EA, Chapter II and III, Project Files)

It is my determination that the action alternative will have no significant effects on public health and safety or on any resource attributes of the Sands Creek Drainage.

Unique characteristics of the geographical area, such as proximity to historic or cultural resources, park lands, prime farms, wet lands, wild and scenic rivers, or ecologically critical areas: The analysis area does not contain nor is it in the immediate proximity to such areas. The selected alternative will have no significant effects on unique resource characteristics.

The degree to which the effects on the quality of the human environment are likely to be highly controversial: The effects of these activities on the quality of the human environment are not highly controversial. Past monitoring has determined that the actual effects of similar projects are consistent with estimated effects of the proposed activities. There is a wide professional and scientific agreement on the scope and effects of these actions on the various resources.

The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risk: The planned actions are similar to actions implemented in other areas on the National forest system, state, county and private lands. Effects will be similar to those of past actions. The analysis considered the effects of past actions as a frame of reference in conjunction to the estimated effects of the proposal.

It is my conclusion that there are no unique or unusual characteristics of the area which have not been previously encountered that would constitute an unknown risk to the human environment.

The degree to which the action may establish a precedent for future actions with significant effects or presents a decision in principle about future considerations: The Selected Alternative is not setting a precedent for future actions of significant effects. Management practices are consistent with the Forest Plan and the Research Station and with the capabilities of the land. This action does not represent a decision in principle about future considerations

Whether the action is related to other actions with individual insignificant but cumulative significant impacts: The combined effect of past, other, and responsibly foreseeable actions are discussed in the Environmental Assessment. There is no indication of significant adverse cumulative effect to the environment (EA Chapters II and III).

The degree to which the action may adversely affect districts, sites, highway structures, or objects listed in or eligible for listing in the National Register of Historic Places, or may cause loss or destruction of significant scientific, cultural, or historic resources:

There are no features in the area that are listed or being considered for listing on the national register of historic places. All cultural resources would be protected (EA Chapter III). The potential for impacts to undiscovered sites is address by compliance with Forest Plan standards and guidelines, and through the use of standard timber sale contract clauses.

The degree to which the action may adversely affect an Endangered or Threatened species or its habitat that has been determined to be critical under the Endangered species act of 1973: It was determined that the proposed actions would not affect any Threatened, Endangered or candidate wildlife, fish, or plant species which may occur in the area. Biological Assessments are provided with this Decision Notice (Attachment A). Refer to the Environmental Assessment (Chapter II) and the Project Files for additional information.

Whether the proposed action threatens a violation of federal, state, or local law or requirements imposed for the protection of the environment: The proposal meets federal, state and local laws for air and water quality, streamside management, riparian areas, cultural recourses, and Threatened and Endangered species, and meets National Environmental Policy Act disclosure requirements.

Documents and Project Files

Project files contain the detailed information, data used and decisions made in selecting Alternative 2 for implementation. The Environmental Assessment, Decision Notice and Finding of no Significant Impact are available for inspection during regular business hours at:

Coeur d'Alene River Ranger District, Fernan Office
2502 E. Sherman
Coeur d'Alene, Idaho
83814

Appeal Rights

This decision is subject to appeal pursuant to 36 CFR 215. A written Notice of Appeal must be submitted within 45 days after the date of notice of this decision is published in the Spokesman-Review newspaper. The Notice of Appeal must be sent to the Appeal Deciding Officer (Regional Forester):

USDA Forest Service, Region 1
Attn: Appeals Deciding Officer (RFO)
P.O. Box 7669
Missoula, MT 59807

It is the appellant's responsibility to provide sufficient written evidence and rationale to show why my decision should be remanded or reversed. An appeal submitted to the Appeal Deciding Officer becomes a part of the appeal record. An appeal must meet the content requirements of 36 CFR 215.14. As a minimum, the Notice of Appeal must include:

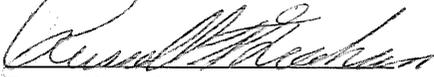
- ✓ a statement that your document is an appeal filed according to 36 CFR part 215
- ✓ your name, address and, if possible, telephone number
- ✓ the decision being appealed by title and subject, date of decision, and name and title of the Responsible Official
- ✓ the specific changes you want to see in the decision or the portion of the decision to which you object
- ✓ a statement of how my decision fails to consider comments previously provided either before or during the comment period specified in 36 CFR 215.6 and, if applicable, how you believe the decision violates law, regulation, or policy

Your appeal will be dismissed if the preceding information is not included in the Notice of Appeal. If no appeal is received, implementation of this decision may occur five business days from the close of the 45-day appeal filing period. If an appeal is received, implementation may not occur for 15 days following the date of appeal disposition.

Appeals must meet the requirements of 36 CFR 215.14.

Implementation

The timber is scheduled to be offered for sale in 2001. Harvest activities are also expected to begin in 2001. Where identified by research needs, site preparation, fuels treatment and reforestation activities will be scheduled to occur one to two years after the completion of the timber sale activities.



Russell T. Graham
Research Forester
Rocky Mountain Research Station
Forest Sciences Laboratory
Moscow, Idaho 83814

Date 4/17/01

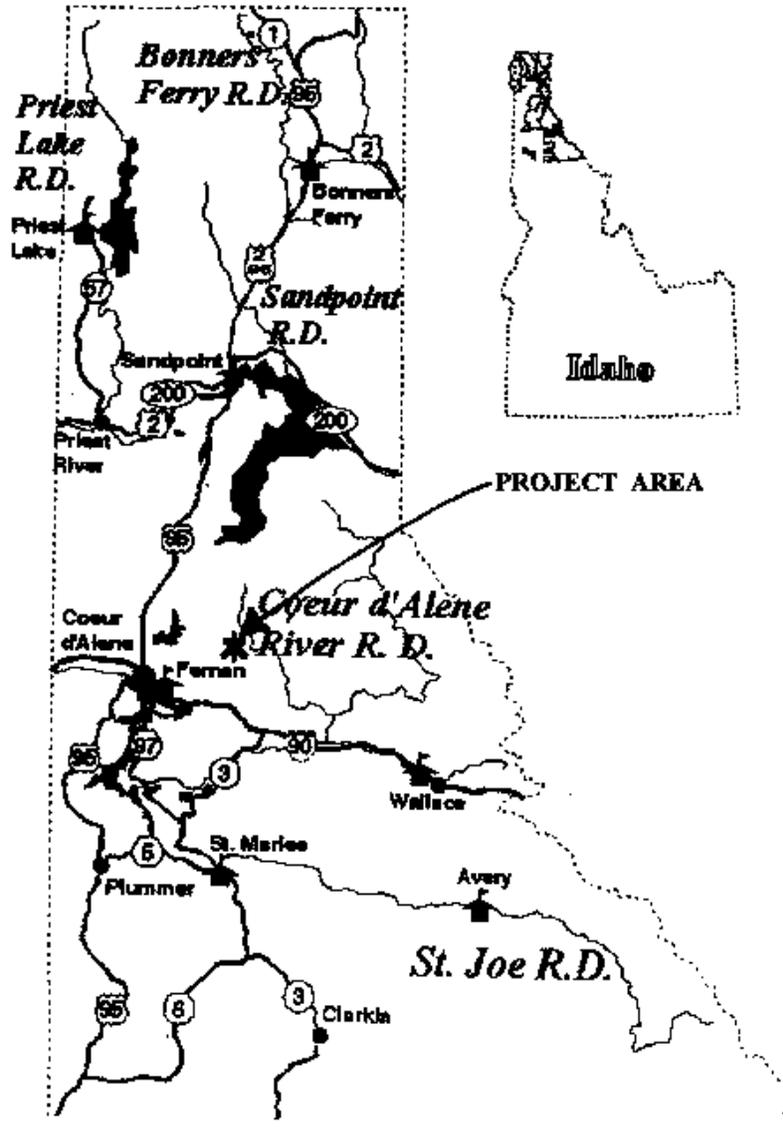


Pat Aguilar
Acting Forest Supervisor
Forest Supervisor's Office
3815 Schreiber Way
Coeur d'Alene, Idaho 83815

Date 4/17/01

**SANDS CREEK ENVIRONMENTAL ASSESSMENT
DECEPTION CREEK EXPERIMENTAL FOREST
IDAHO PANHANDLE NATIONAL FORESTS**

VICINITY MAP FIGURE 1-1



Deception Creek Experimental Forest
 Rocky Mountain Research Station
 Sands Creek Study Area



-  Roads
-  Streams
-  Contours
-  Sale Unit Boundaries
-  Study Area Boundary
-  Sections
-  Road abandonment

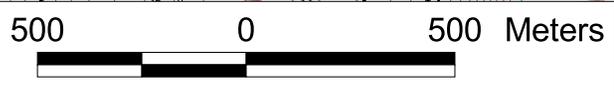
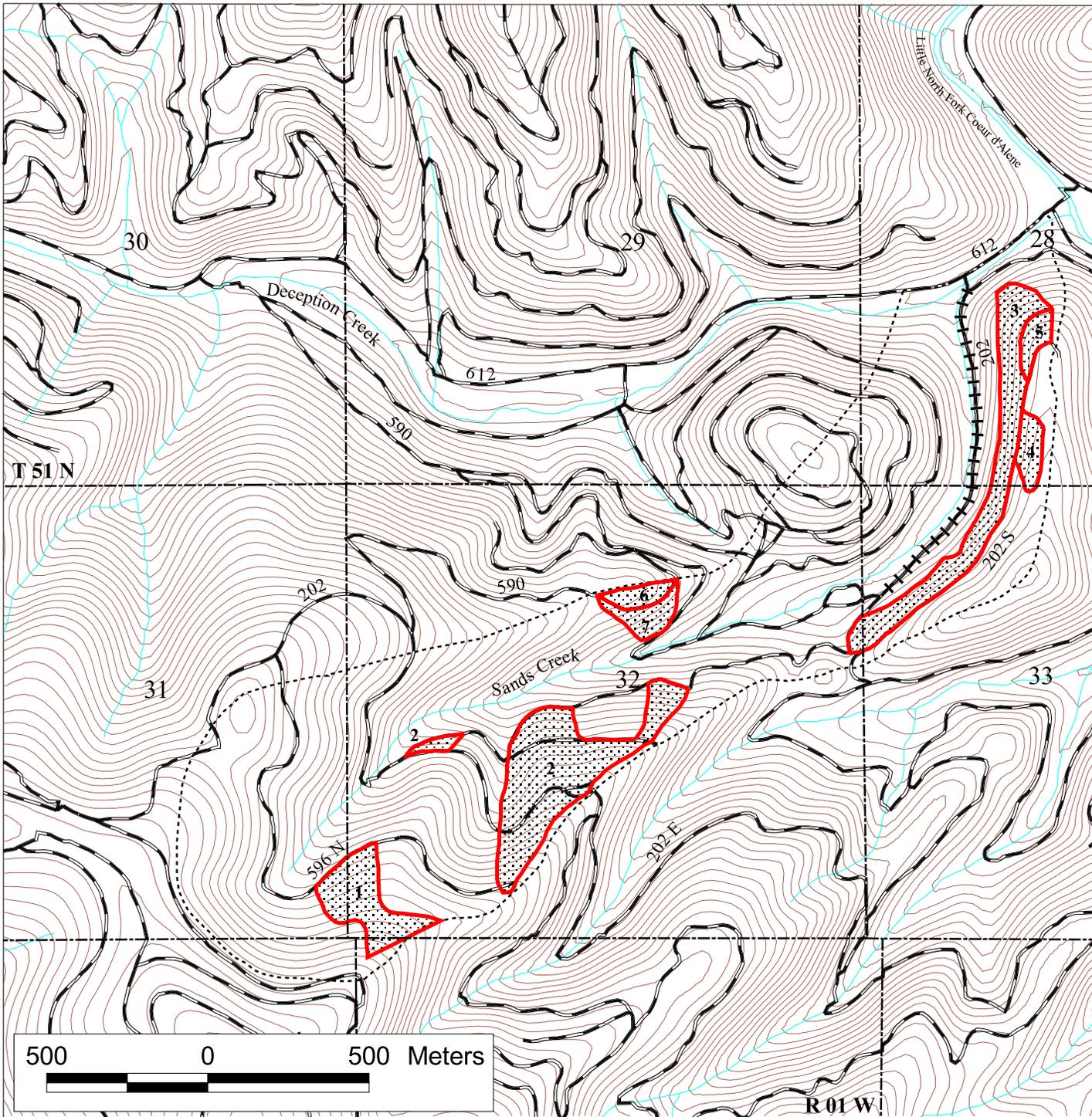
**Idaho Panhandle
 National Forests**

**Coeur d'Alene River
 Ranger District**

Cartography: Jeffery Evans
 Rocky Mt. Research Station
 Moscow, Idaho
 Universal Transverse Mercator
 Grid Zone 11
 Polyconic Projection
 1927 North American Datum



1:18000



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Biological Assessment Attachment A



United States
Department of
Agriculture

Forest
Service

Idaho Panhandle
National Forests

Coeur d'Alene River
Ranger District

Silverton Office
P. O. Box 14
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Fernan Office
2502 East Sherman Avenue
Coeur d'Alene, ID 83814

File Code: 2670 **Date:**

June 16, 2000

Subject: Biological Assessment for actions related to the Coeur d'Alene River Ranger District
Sands Creek Research Project, EA

To: Forest Supervisor, Dave Wright.

To: Research Forester, Rocky Mountain Research Station, Russell T. Graham

This biological evaluation/assessment, prepared in compliance with Forest Service Manual 2672.4 and Section 7(b) of the 1973 Endangered Species Act (ESA), evaluates the possible effects on habitat of listed species within the Sands Creek project area.

Threatened Endangered and Proposed Species on the Idaho Panhandle (USFWS letter 1-9-99-SP-483):

- water howellia (*Howellia aquatilis*)
- Ute ladies tresses (*Spiranthes diluvialis*)
- Spalding's catchfly (*Silene spaldingii*) – proposed Threatened
- bull trout (*Salvelinus confluentus*)
- white sturgeon (*Acipenser trasmontanus*)-- Not found in Planning Area
- grizzly bear (*Ursus arctos horribilis*)-- Outside recovery area (USFWS 1998)
- woodland caribou (*Rangifer tarandus caribou*)-- Not found in Planning Area
- bald eagle (*Haliaeetus leucocephalus*)
- gray wolf (*Canis lupus*)
- lynx (*Lynx canadensis*)

Selected Alternative

The following table displays the estimated amount of harvest by silvicultural prescription, road work, and yarding methods that would occur under the selected alternative.

Table 1. Activities that will occur under the Selected Alternative.

Feature	Estimated Amount
Timber Harvest (Acres):	
Improvement harvest	40
Regeneration	73
Salvage	
Thinning	
Total harvest acres	113
Fuels treatment (Acres)	
Grapple pile	
Handpile	
Jackpot	93
Lop and scatter	(54)
Top-attached	(59)
Underburning	
Total fuel treatment acres	113
Ecosystem burning (acres)	
Road Work (Miles)	
New road construction	0
Temporary road construction	0.2
Brush and Blade	0.7
Yarding Systems (Acres)	
Cable	
Helicopter	
Horse	
Skyline	86
Tractor	27
Expected Harvest Volume:	
Timber volume (CCF) 1	1900
Timber volume (MMBF) 2	1.0

1 CCF = 1 cunit (one hundred cubic feet)

2 MMBF = million board feet

(* Total acres burned will be determined after harvest activities.)

Timber harvest and fuels treatment: From a vegetation standpoint, the objective of this alternative is to test the ability of western white pine to regenerate and grow under various canopy levels, along with the ability of establishing genetic stock planted under various canopy levels. Western white pine showing signs of resistance would be left as seed sources in order to promote resistance in the regeneration. Prescriptions used would be applied in a manner in which a replicated study meeting the research objectives could be installed. Within portions of the units, improvement slashing of unwanted understory may take place after harvest activities. This action could help in establishing white pine within the stands (natural and resistant stock).

Units 1 and 2 would be treated using irregular shelterwood methods with all resistant western white pine, western larch along with a mix of species retained to meet the goals of the research project. Canopy closure will vary within these stands depending on mortality, snow damage, or white pine component. Canopy will vary from 20 to 70 percent remaining overstory. This will test the ability to establish, and quantify growth within the white pine understory. White pine overstory left as the seed source will also be tested for its resistance to blister rust. Post harvest surveys will determine the areas to be jackpot burned within the stands. The burning will be

done in a way to minimize mortality in the overstory (seed source). A non-uniform spotty burn can be expected. Large woody debris will be maintained.

Unit 3 will be treated using a free select method (combination group select, individual tree removal). The goal is to leave an "intact forest" while providing areas to reintroduce western white pine and western larch. Existing snow damage areas (mainly western hemlock, grand fir), will be enlarged up to 1 acre in size in order to plant seral species (white pine and larch). Skyline corridors will be planted in order to promote white pine within and red cedar within the stand. Approximately 10 acres of openings scattered through-out the stand may be expected. Removal of individual trees will be determined on a site specific basis in order to maintain western larch, western red cedar, and the few live western white pine remaining in this stand. A large percentage of western hemlock and grand fir will be retained in order to meet research goals. Jackpot burning may occur on approximately 10 acres of openings in order to accomplish the goal. Overall canopy closure should be 60 to 70%.

Units 4 and 5 will be treated using irregular group shelterwood methods. Site preparation will be in the form of a non uniform jackpot burn. Site preparation will be accomplished when mortality to retained canopy will be minimal, and large woody debris can be maintained. Western larch, white pine, and cedar will be favored as leave trees, with western hemlock and grand fir left to maintain shelter and forest cover. Both areas will be planted with genetically resistant white pine and a mix of western red cedar and western larch. Approximately 30% canopy cover will be maintained.

Units 6 and 7 will be treated using a irregular shelterwood, seed tree method. These units consist of high mortality within planted off site (black hills) ponderosa pine and mortality within non-resistant white pine. White pine overstory showing signs of resistance will be maintained as a seed source, with a variety of species left for forest structure and shelter. All offsite ponderosa will be removed with the exception of those retained for snag habitat. Both units will be jackpot burned and planted in resistant western white pine and a mix of western larch and cedar. Overall canopy retention will be low (under 20%) with the exception of the hemlock stand within a portion of unit 7. This area is being treated (approximately 2 acres) as a pilot study in an attempt to promote and enhance hemlock old growth.

The fuels treatment within the stands being harvested will consist of whole tree yarding, top attached yarding, lop and scatter, and low intensity ground fires. A survey will be done after harvest activities on a unit by unit basis to determine acres to be treated with a low intensity ground fire (jackpot burn). Entire stands may not be treated. The objective will be to provide exposed areas for the introduction of seral species, (white pine, and a component of western larch and red cedar).

Two tenths (0.2) of a mile of temporary road will be built on the ridge top in order to harvest a portion of unit 3, and will be ripped and waterbarred after use. Three brushed in roads will be opened within unit 2 for harvest activities, and will be ripped, waterbarred and closed with earthen barriers after harvest activities by the purchaser. All of these roads deadend at the edge of unit 2 and have no existing drainage structures in place. After harvest activities one (1.0) mile of existing system road (202S) will be waterbarred, seeded and closed with the placement of a barrier (gate). The 202S road will remain closed to public use.

The research project would include the obliteration of thirty three hundred (3300) feet of streamside road adjacent to lower Sands Creek. The study would evaluate the hydrologic function and fish habitat metrics of Sands Creek before and after the removal, along with sediment yields from the existing road before and after the removal.

Harvest activities will use cable and ground base yarding systems. Some residual trees may need to be felled within the corridors.

Generally, all of the regeneration units will have variable densities, with small openings throughout, but will maintain forest cover.

Activities in allocated old growth: No allocated old growth exists in the project area.

Activities in roadless areas: No roadless area exists within the project area.

Wildlife security: This project will will open approximately seven tenths (0.7) miles of brushed in roads for harvest activities. All roads currently closed with an earthen barrier or previously made impassable from brush will be ripped and closed with an earthen barrier after use by the purchaser.

The following open system road will be closed with an barrier under this project: #202S. This will be a long term closure using a gate to be placed by the purchaser.

One segment of temporary road, totaling 0.2 miles, will be constructed under this project, and will be ripped and seeded after use by the purchaser. This road lies behind the 202S road, schedule to be closed with this project.

Aquatic features: No harvest will occur within Riparian Habitat Conservation Areas. Standard widths as defined in the Inland Native Fish Strategy will be used. The exception is a small portion of unit 3. Within this section the unit will tie into the existing system road. Temporary road locations are along ridgelines with no stream channel crossings. Temporary roads will be waterbarred and closed to make them hydrologically inert. Thirty three hundred (3300) feet of road would be partially recontoured adjacent to lower Sands Creek.. This net reduction of thirty tree hundred (3300) feet of streamside road should result in promotion of wood into the channel and should have a long term benefit within the drainage. Three additional culverts may be removed up stream from the streamside road rehabilitation if funds are available.

Table 1. Activities proposed under the selected alternative.

**HUC code numbers represent a single 6th+ code, although multiple HUCs are within the analysis area*

Analysis Area	HUC Number	Regen (acres)	Select (acres) 1/	Miles of Temporary Road Construction	Stream side road removal	Rx Burn 2/	Hand Pile	Grapple Pile	Ecoburn
Deception creek	170103010324	73	40	0.2	0.7	113			
Sands Creek		73	40	0.2	0.7	113			

1/ Select includes improvement, salvage, and thinning harvest.

2/-Regen includes: irregular shelterwood, shelterwood, seed tree and group shelterwoods.

*3/ Rx burn includes jackpot burns and underburns. **Jackpot burns** are designed to burn areas of fuel concentrations. Underburns are designed to be a complete burn to prepare the site for planting.*

Plants

Species	No Effect	Not Likely to Adversely Affect*	May Affect - Likely to Adversely Affect	Beneficial Effect
1. Water howellia (<i>Howellia aquatilis</i>) (T)	X			
2. Ute ladies-tresses (<i>Spiranthes diluvialis</i>) (T)	X			
Proposed Species	No Effect	Not Likely to Jeopardize the Continued Existence of the Species or Result in Destruction or Adverse Modification of Proposed Critical Habitat**	Likely to Jeopardize the Continued Existence of the Species or Result in the Adverse Modification of Proposed Critical Habitat	
1. Spalding's catchfly (<i>Silene spaldingii</i>) (PT)	X			

* Requires written concurrence from the US Fish and Wildlife Service

(T) = Threatened species

(E) = Endangered species

Notes: The No Effect determination for threatened plants was based on an assessment of potential habitats and occurrence records for these species. There are no known populations of either of the above listed Threatened plant species on the Idaho Panhandle National Forests. No suitable habitats are present in the proposed Sands Creek treatment area to support these species. The existing habitats in the project area are primarily moist forest western hemlock/ Clintonia uniflora to western hemlock/ Asarum caudatum in microsites and toward the draws. Habitats for water howellia (*Howellia aquatilis*) consist of vernal pools, glacially formed pothole ponds and old river oxbows (Shelly 1994). The preferred habitat for Ute ladies-tresses (*Spiranthes diluvialis*) is lower elevation alluvial valleys with open, mixed conifer and deciduous cottonwood, grass, and shrub-mosaic plant communities (USDI 1998). These habitats do not occur in the project area.

The No Effect determination for Spalding's catchfly (*Silene spaldingii*) was based on an assessment of potential habitat also. Spalding's catchfly is typically found in grasslands dominated by native perennial grasses, such as Idaho fescue or rough fescue (USDI 2000), with other plant associations that indicate an open dry forest plant community. There are no occurrences of this habitat in the project area.

References:

Shelly, J.S. 1994. Conservation Strategy for *Howellia aquatilis*, USDA Forest Service, Northern Region. Missoula, Montana.

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USDI Fish and Wildlife Service. 2000. Section 7 Guidelines *Silene spaldingii*, Spalding's catchfly (proposed threatened), dated January 2000. U.S. Fish and Wildlife Service, Snake River Basin Office, Boise, Idaho.

FISH

This biological assessment, prepared in compliance with Forest Service Manual 2672.4 and Section 7(b) of the 1973 Endangered Species Act (ESA), evaluates the possible effects on habitat of bull trout (*Salvelinus confluentus*) from activities associated with the Sands creek project on the Coeur d' Alene River Ranger District.

Threatened and Endangered Species

Bull trout (*Salvelinus confluentus*)
White sturgeon (*Acipenser trasmontanus*)

Table 2 shows spawning access and existing status of Bull trout within project area and cumulative effects watersheds.

Table 2. Summary of spawning access and the distribution of bull trout (BT) within streams in the project area (sixth- and seventh-scale code watersheds) and their associated Hydrological Unit Code (HUC). Sixth-code HUC's are in bold.

Stream Name	HUC #	Acres	Access	BT
Deception creek	170103010324	3523	Y	N-H
Sands creek		600	Y	LH

Bull Trout Distribution Codes:

Y = Surveyed and present
LY = Unsurveyed but likely present
N = Surveyed but not found
LN = Unsurveyed but unlikely present
H = Documented historic, now unlikely
LH = Likely historic, now unlikely
LNH = Likely not historic

Status of Species and Habitat in the Project Area

Westslope cutthroat trout and bull trout exhibit resident, fluvial and adfluvial life histories (Averett and MacPhee 1971, Bjornn and Liknes 1986, and Goetz 1989). Resident populations remain in their natal streams throughout their life. Migratory populations (fluvial and adfluvial) use tributary streams for spawning and may remain in these areas throughout the summer. In the fall, migratory fish that have not previously returned to rivers (fluvial) and lakes (adfluvial) migrate to deeper water where they congregate and over-winter (Bjornn 1975). These life history strategies allow cutthroat trout and bull trout populations to maintain a degree of resiliency to disturbance regimes that are inherent to geographic areas defined by their native distribution.

Bull Trout

The annual life history cycle of bull trout involves the following pattern. Fluvial and adfluvial spawners begin migrating to spawning tributaries in the spring. These fish remain in staging areas in the river during the summer and await the fall spawning period. Spawning occurs in clear, headwater streams that possess appropriate habitat characteristics with respect to substrate composition, water quality, and cover elements. Spawning adults begin out-migrating to rivers or lakes soon after spawning. Fertilized eggs incubate in spawning gravels during the fall and winter and fry emerge in the spring. Juvenile fish remain in natal streams for three to five years before migrating downstream to more productive river or lake habitat. Resident bull trout exhibit the same annual life history cycle as the fluvial and adfluvial fish but adults remain in the tributaries throughout the year.

Rieman and McIntyre (1993) state that fragmentation and disruption of bull trout habitat will increasingly isolate populations and isolate or eliminate life-history forms. This fragmentation and disruption of habitat will lead to problems for populations and ultimately increase the risk of extinction (Rieman and McIntyre 1993).

EXISTING CONDITIONS

Environmental Baseline: Deception Creek (170103010324)

Population Condition: Bull Trout are not currently known to spawn and rear within this portion of the Coeur d' Alene Basin. No spawning surveys have been conducted. Electrofishing surveys conducted from 1993-1996 (data on the file at the Coeur d' Alene Zone office) has resulted in no observations of Bull trout . *Individuals Likely Absent In Most Years.*

Habitat Surveys: Habitat surveys have been completed within some of this subwatershed (data on the file at the Coeur d' Alene Zone office). These data indicate that habitat conditions within this basin are increasing with the increase of large woody debris recruitment within the last decade..

Land Ownership: Land within this subwatershed are managed by the USFS. The entire basin, is under federal management. Total size of this sub-watershed (analysis area) is 5.5 square miles.

General Basin Condition: This watershed has seen high levels of land management, according to the Upper Columbia River Basin assessment this watershed has one of the highest road densities within the Columbia river basin. Basin elevations indicated that temperatures could be conducive to spawning and rearing of Bull trout. Temperature surveys conducted in the 1980's showed that summer temperatures did not exceed 10-12 C. As a result of the low bull trout populations and poor habitat quality it is unlikely that this watershed will be pivotal in the recovery of bull trout. As a result, actions in this basin will not likely affect the recovery of bull trout within the Coeur d' Alene Basin. The matrix in Table 2 give the existing data for conditions within the watershed. *Highly degraded*

Table 2. Checklist For Documenting Environmental Baseline And Direct, Indirect, And Cumulative Effects Of Proposed/Ongoing Actions Within the Deception creek Subwatershed.

Diagnostocs/ Condition Indicator	Population/Environmental Condition			Effects of the Actions		
	GOOD	MOD D	POOR	LOW RISK	MOD RISK	HIGH RISK
Sensitive Landtypes (percent of watershed)				X		
Sensitive Snowpack (percent of watershed at 3000 - 4500 ft)				X		
Equivalent Clearcut Area (percent of watershed)			P	X		
Past Riparian Harvest		P		X		
Estimated Annual Sediment (tons/mile ² /year)			P	X		
Road Density (miles/miles ²)			11.6	X		
Roads Encroaching at Bankfull Stage (miles)			P		X	
Pools (% of fish bearing stream)		11		X		
Woody Debris (class 5 and 6 wood)		P		X		
Chemicals	P			X		
Stream Temperature (degrees centigrade)	10 C			X		
Connectivity (fish migration barriers)			>3	X		
Exotic Species	none			X		
Integration of Species and Habitat Conditions		P				

Environmental Baseline: Sands creek

Population Condition: Bull Trout are not currently known to spawn and rear within this portion of the Coeur d' Alene Basin, however no spawning surveys have been conducted.. No electrofishing or snorkel surveys have been conducted within Sands creek. Fish habitat surveys conducted in 1993 noted small trout in the stream, but species were not. *Individuals Likely Absent In Most Years*

Habitat Surveys: Habitat survey have been completed within some of this subwatershed (data on the file at the Coeur d' Alene Zone office). These data indicate that habitat conditions within this basin are degraded. Fish migration barriers may exist in the upper sections of Sands creek.

Land Ownership: Land within this subwatershed are managed by the USFS,.

General Basin Condition: This watershed has seen high levels of land management, according to the Upper Columbia River Basin asesement this watershed has one of the highest road densities within the Coulumbia river basin Basin elevations indicated that temperatures could be conducive to spawning and rearing of Bull trout, temperatures taken in the spring and summer of 1975 and 1976 indicated that temperatures were below 10 C during spawning and below 15 C during rearing . As a result of the low bull trout populations and poor physical habitat quality it is unlikely that this watershed will be pivotal in the recovery of bull trout. As a

result, actions in this basin will not likely affect the recovery of bull trout within the Coeur d' Alene Basin. *Highly degraded.*

No check list was created due to small size of watershed

EFFECT ON SPECIES AND HABITAT

Sands creek

Direct/Indirect Effects

Harvest units:. Commercial timber harvest associated with the Sands creek research project will occur under the selected alternative, the direct or indirect effects due to the harvest of timber would be at localized sites which would alter snow accumulation patterns and melt rates. Based on preliminary analysis of the project approximately 16% of the watershed will be treated with this project. Actual crown removal would equal about 7% of the watershed. With this level of management, dispersed harvest and proposed buffers it is anticipated that no impacts would occur within Sands creek.

Road construction/reconstruction: Under the Sands creek project, two-tenths (0.2) mile of road building occurs within the Sands creek watershed. The proposed road will not cross any streams; therefore there will be no additional loss of riparian vegetation. There is little risk of sediment entering the stream due to the location of the temporary road construction. The road will be rehabilitated after the project is complete. No detrimental short term or long term effects are anticipated from the proposed temporary road.

Road obliteration/closures: The lower section of the #202 road will be rehabilitated. The section of road that will be treated lies within the RHCA and portions are considered as encroaching. There would be a short-term introduction of sediment in the channel where sections of the road are removed. Long term the removal of this section of road will be beneficial to the Sands creek watershed and fish habitat.

Culvert upgrades: No pipes will be upgraded with this alternative there fore there will be no short term or long-term effects.

Fish passage: Fish passage will remain unaffected by the selected alternative.

Cumulative Effects

The Sands creek project activities in Sands creek watershed should trend habitat conditions in a manner that has minimal measurable risk to potential Bull trout habitat. In consideration of potential influences from direct and indirect effects associated with the proposed project as well as state and private activities, the cumulative effects are not expected to change the existing condition or trend for fisheries resources in the cumulative effects watersheds. Cumulatively, this analysis indicates that threatened fish are not anticipated to be adversely affected by the project activities analyzed in this document.

Deception creek**Direct/Indirect Effects**

Harvest units: Commercial timber harvest associated with the Sands creek research project will occur under the selected alternative, the direct or indirect effects due to the harvest of timber would be at localized sites which would alter snow accumulation patterns and melt rates. No measurable or observable changes in water yield or sediment yield would occur. (see attached Watsed report). With the low levels of sediment and water yields no changes in fish habitat conditions within Deception creek would occur

Road construction/reconstruction: Under the Sands creek project, two-tenths (0.2) mile of road building occurs within the Sands creek watershed. The proposed road will not cross any streams; therefore there will be no additional loss of riparian vegetation. There is little risk of sediment entering the stream due to the location of the temporary road construction. The road will be rehabilitated after the project is complete., no detrimental short term or long term effects are anticipated from the proposed activity.

Road obliteration/closures: The lower section of the #202 road will be rehabilitated. This section of road is entirely within Sands creek (see discussion below). There would be a short-term introduction of sediment into the Deception creek channel due to the removal of vegetation adjacent to the flood plain. With mitigation it is anticipated that no long-term effects to the channel, fish habitat or fish populations would occur within Deception creek.

Culvert upgrades: No pipes will be upgraded with this alternative there fore there will be no short term or long-term effects.

Fish passage: Fish passage will remain unaffected by the selected alternative.

For the Direct/indirect/Cumulative Effects Population and Stream Habitat Components in this watershed see attached Matrix. (Table 2)

Cumulative Effects

The Sands creek project activities in Deception creek watersheds should trend habitat conditions in a manner that has minimal measurable risk to potential Bull trout habitat. In consideration of potential influences from direct and indirect effects associated with the proposed project as well as state and private activities, the cumulative effects are not expected to change the existing condition or trend for fisheries resources in the cumulative effects watersheds. Cumulatively, this analysis indicates that threatened fish are not anticipated to be adversely affected by the project activities analyzed in this document.

CONDITIONS AND RECOMMENDATIONS

Conditions: none

Recommendations none

CONSULTATION WITH OTHERS AND REFERENCES**Documents Cited**

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DETERMINATION OF EFFECTS

The scope of the activities analyzed within this biological assessment has received the following determinations of effects on bull trout

Table 16. Sixth-scale code HUC's, associated HUC numbers and Biological Determination by six scale HUC.

Name	HUC Number	Biological Determination
Deception creek	170103010324	May affect not likely to adversely effect
Sands creek		May affect not likely to adversely effect

Bull trout (Threatened species, ESA): "May effect, not likely to adversely affect"

No other threatened, endangered, or sensitive fish species are found within the cumulative effects area for this project.

1.1 Wildlife

Listed Species

On March 10, 1999 the U.S. Fish and Wildlife Service provided the Idaho Panhandle National Forests with a listing of threatened, endangered and proposed wildlife species that may be present on the Idaho Panhandle National Forests (Re: #1-9-99-SP-158). These species include the grizzly bear, woodland caribou, bald eagle, gray wolf, and Canada lynx. The peregrine falcon is no longer a listed species, this species was addressed in the EA as a sensitive species. On the Coeur d'Alene River Ranger District, the woodland caribou does not occur (USFWS, 1994).

Gray Wolf

Reference Condition: The northern Rocky Mountain wolf (a subspecies of the gray wolf) was listed as endangered in 1973. However, based on enforcement problems and a trend to recognize fewer subspecies of wolves, the entire species was listed as endangered throughout the entire lower 48 states, except Minnesota, in 1978 (USDI 1987). In the past, substantial declines in numbers of wolves resulted from control efforts to reduce livestock and big game depredations. By the 1940s, the Rocky Mountain wolf was essentially eradicated from its range.

In 1994, final rules in the Federal register made a distinction between wolves that occur north of Interstate 90 and wolves that occur south of Interstate 90, in Idaho. Gray wolves occurring north of Interstate 90 are listed as endangered species and receive full protection in accordance with provisions of the Endangered Species Act. Gray wolves occurring south of Interstate 90 are listed as experimental population, with special regulations defining their protection and management.

Wolves are highly social animals requiring large areas to roam and feed. Conservation requirements for wolf populations are not fully understood, but the availability of prey and limiting risk of human-caused mortality are considered key components (USDI 1987, Tucker et al 1990). The risk of human-caused mortality can be directly related to the density and distribution of open roads.

Existing Condition: The sands creek project on the Coeur d' Alene River RD occurs north of Interstate 90. The project area is outside of a recovery area. Although surveys have not been

conducted in the analysis areas, occasional visual sightings and scat by the public and Forest Service employees over the years have been reported on the east side of the district. However, these sightings seem to indicate transient individuals or lone wolves. A pack of wolves has never been sighted on the zone. There are no known resident wolf packs or den sites in close proximity to the project area. Wolves primarily feed on ungulates. Based on field reconnaissance, no big game trails or signs of big game use were found in the project area. The project area is not located in a big game winter or summer management area. There is one known moose in the project area. The project area is within Elk habitat unit 7, which comprises several compartments. EHU 7 does support moose, elk, white-tailed deer and mule deer as potential prey items. Ongoing sales in EHU 7 are occurring under the Douglas-fir beetle EIS. This was consulted on with a not likely to adversely affect determination. Although no specific population numbers are available, ungulates are common and available enough to provide an ample prey base for wolves. It is highly unlikely that the prey population would limit wolf recovery because of the low number of wolves and the high number of ungulates in the project areas. In addition, the project area has a snowmobile route through it, which may result in moderate disturbance to big game.

Analysis of Effects: The likelihood of affecting wolves is low since there are no known packs and no known sightings within the majority of the analysis areas. It is unlikely that the prey population limits the gray wolf given the high numbers of prey availability. There will be a short term (approximately 1-3 years) minor increase in open road densities of **less than 1 mile**. Post-sale there will be a long term reduction of open road densities beyond the existing condition. Because the project area is not an important area for big game (it is not in winter or summer range), and there will be no timber harvest directly adjacent to the project area, there are no direct or indirect effects from the project. There are no cumulative effects from state or private actions.

There will be no change in open or overall road density with this project. There are no cumulative effects from state or private land expected.

Determination: An adequate prey base will be maintained. Based on field reconnaissance, there is not high quality habitat for big game or signs of their use in the project area. Therefore, this project will have **no effect** on the gray wolf.

Bald Eagle

Reference Condition: All of the area covered by this BA is included in Zone 7 as designated in the Pacific States Bald Eagle Recovery Plan. Historically, this area was likely to have more bald eagles than currently because of the abundant fisheries. At the time of federal listing, bald eagles were uncommon in this zone. Recovery has progressed considerably in Zone 7. Currently, key areas in northern Idaho have contributed enough new territories to reach and exceed goals listed in the Recovery Plan.

Bald eagles are winter visitors and year-long residents of northern Idaho and northeast Washington. They are attracted to the area's larger lakes and rivers which provide most of their foraging opportunities (i.e. fish, waterfowl). Accordingly, bald eagles select isolated shoreline areas with larger trees to pursue such activities as nesting, feeding, loafing, etc. Nesting habitat include proximity to sufficient food supply, dominant trees, and within line-of-sight of a large body of water (often within 0.25 mile of water). Nest trees typically are large ponderosa pine, Douglas fir, western larch or cottonwood trees with open crowns in areas that are relatively free from human disturbance (Montana Bald Eagle Working Group 1991).

Perch sites, roost sites and access to prey are the essential components of winter habitat. Bald eagles generally use traditional communal roost sites in the winter, especially during periods of severe weather. Roosts are often located in large trees at the head of sheltered draws that provide protection from wind and inclement weather. Although proximity to food resources is not

critical, roosts are often in the closest available forest stand. Roosts at greater distances from food sources will require more energy expenditure (Montana Bald Eagle Working Group, 1991).

Winter roosts are relatively uncommon in the Idaho Panhandle. The majority of wintering eagles leave their nesting areas and congregate on unfrozen open water because of forage availability. These include Lake Pend Oreille, Pend Oreille River, Kootenai River, and Lake Coeur d'Alene. Only a limited number of winter roost sites are known in this entire area, despite annual aerial winter counts. The highly vegetated shorelines are likely to provide adequate protection such that habitual roosts appear to be generally unnecessary. Of the three known roosts associated with Lake Coeur d'Alene, two roosts are within 0.5 miles, and one is 1 mile from the associated water body (pers. comm. with S. Robinson, BLM wildlife biologist, to S. Jacobson, April 14, 1999). Of the three known winter roost sites associated with Lake Pend Oreille, two sites are less than 0.1 mile from shoreline and the other is approximately 0.1 mile from shoreline (Crenshaw 1987).

Existing Condition: Deception Creek, which flows into the Little North Fork of the Coeur d'Alene River, is approximately ¼ mile from the nearest unit. The Little North Fork is within 1 mile of the project area. Bald eagles have been reported along the Little North Fork of the Coeur d'Alene River during the winter months. There are no known roost sites. The area may serve as spring foraging for individual bald eagles. However, due to the size of the Little North Fork of the Coeur d'Alene River, it is unlikely that the river supports enough prey base for nesting bald eagles and it does not meet the requirements of potential bald eagle nesting habitat as outlined in the "Habitat Management Guide for Bald Eagles in Northwestern Montana" (Montana Bald Eagle). There are no lakes within the analysis area. There are no units within a topographic line of site of the Little North Fork. Private and federal roads along the North Fork of the Coeur d'Alene River have moderately altered roosting habitat in the draws. Current winter disturbance moderately reduces potential winter roost sites. No nesting territories are located within or in close proximity to the project area. Winter surveys have not been done in the project area. There are no known roosting or nest sites in the area. National Forest land surrounding the area provides potential perching habitat, and potential night roosting habitat. Disturbance to the area is moderate and infrequent, including motorcycles, vehicles, and backcountry aircraft.

Analysis of effects: Activity will occur after spring foraging eagles have left the Little North Fork so no disturbance is expected when eagles may be present. Helicopters will not be used. No trees will be harvested along the Little North Fork or along the Deception Cr.. Potential perching trees and night roosting habitat will be maintained. There are no cumulative effects from state and private land.

Deception creek Analysis Area Determination: Because this project does not effect bald eagle habitat or disturb potential foraging birds, there are **no effects** to the bald eagle.

Lynx

Reference condition: The lynx is one of the three species of wild cats that occur in the temperate forests of North America. Lynx are relatively common throughout forested areas of Alaska and Canada, although intensive trapping in the past has eliminated or reduced numbers in localized areas. The conservation of lynx populations is of greatest concern in the western mountains of the contiguous United States, at the southern periphery of the species' range.

Lynx occupy regions in North America of arctic or boreal influence. They are restricted to forested habitats within this region and are found from western Alaska to the eastern edge of New Foundland. The northern boundary of this range coincides with the northern extension of the boreal forests. The southern boundary of lynx range is along the high elevation or boreal

forested areas of the Cascades and Rocky Mountains into Washington, Idaho, Montana, Wyoming, Colorado, and Utah.

Lynx are considered low-density species with home ranges averaging 24 square miles, depending on prey abundance. They occur primarily in moist habitat in Northern Idaho above 3,000 to 4,000 feet in (Weaver personal communication 1998). Even though lower elevations can be important in some instances, evidence suggests lynx tend to use these areas less because of competition with other predators and overheating in the summer.

Existing Condition: The Coeur d'Alene Basin does not have an abundance of habitat for lynx. Generally, the country is steep and dissected. Stands that provide for lynx habitat occur on this district above 4,000 feet (Weaver pers. comm. 1998), with the Idaho Montana border providing the largest amount of habitat on the district. The analysis areas are not located along the Idaho/Montana border. The majority of the wildlife analysis acreage is below 4,000 feet. The project area does not lie within an LAU and is not considered Lynx habitat. During the winter of 1998-1999, a lynx was reported by Forest Service employees approximately 2 miles from the project area. Based on descriptions of prints seen in snow and visual description of the cat, the biologist considers it a probable sighting.

Analysis of Effects: The project area is not in an LAU. There is no sub alpine fir or lodgepole habitat in the analysis area. There are no cumulative effects from state and private land.

Determination: Due to the fact that the project area is not within an identified LAU the project will have **no effect to lynx**.

Grizzly Bear

The grizzly bear is not likely to occur on the district, and the district is not within a recovery area (USFWS 1997, MacCracken and Goble 1994). However, Fish and Wildlife Service requires the district to go through the consultation process with the grizzly bear outside of the recovery areas (USFWS 1998).

Reference Condition: Grizzly bears were more abundant within the Coeur d'Alene River District historically than they are today. Hudson Bay trapping records show grizzly bears were harvested by early fur trappers in the Coeur d'Alenes, primarily in the northern portion of the Coeur d'Alenes (Coeur d'Alene Geographical Assessment). Today the basin is influenced by human presence and development through timber harvesting and associated road building, mining, recreation, and urbanization. These changes have influenced the distribution of wildlife species, including the grizzly bear (Coeur d'Alene Geographical Assessment).

Existing Condition: Grizzly bears are occasionally sighted in the Coeur d'Alene River Basin, especially in the Upper North Fork area. The most recent sightings occurred in 1995. Both sightings were in the Upper North Fork, approximately 20 air miles from the project. No high quality grizzly bear habitat has been identified in the Coeur d'Alenes and the area does not lie within a recovery zone for the bear.

Analysis of Effects: The project will not measurably change open road densities in the project area. There are no cumulative effects on state or private land.

Determination: Due to the low quality of habitat for the grizzly bear in the project area, and the low likelihood of use for the grizzly bear, this project will have **no effect** to the grizzly bear.

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Summary of Effects

See specific sections of this B.A. for explanations of these summarized effects.

Plants

There would be **no effect** to either of the threatened species water howellia (*Howellia aquatilis*) or Ute ladies tresses (*Spiranthes diluvialis*) from activities that will take place with implementation of the preferred alternative.

White Sturgeon: White sturgeon or their habitat are not found, presently or historically, within the project area or any watershed potentially affected by this project.

Bull Trout: This evaluation of effects within this Biological Assessment was completed for:

Name	HUC Number	Biological Determination
Deception creek	170103010324	May affect not likely to adversely effect
Sands creek		May affect not likely to adversely effect

Gray Wolf

Analysis area	Biological Determination
Deception Cr.	No effect

Grizzly Bear

Analysis area	Biological Determination
Deception Cr.	No effect

Bald Eagle

Analysis Area	Biological Determination
Deception Cr	No effect

Lynx

Analysis Area	Biological Determination
Deception Cr.	No effect

PLANTS ANALYSIS AND DOCUMENTATION:

Prepared by

/s/ Bonnie England

Bonnie England, Botanist

Date, Oct. 28, 2000

Reviewed by

/s/ Val Goodnow

Val Goodnow
Zone Botanist

Date, Oct. 28, 2000

FISHERIES ANALYSIS AND DOCUMENTATION:

/s/ Edward Lider

Edward Lider
Zone Fish Biologist
Certified Fisheries Scientist

Date, Oct. 28, 2000

WILDLIFE ANALYSIS AND DOCUMENTATION:

/s/ Kristen Philbrook

Kristen Philbrook
Zone Wildlife Biologist

Date, Oct. 28, 2000

Attachment B PUBLIC COMMENT

Two comment letters were received during public review of the Environmental Assessment for the Sands Creek Research Project. Mike Mihelich provided comments on behalf of Kootenai Environmental Alliance, and Jeff Juel provided comments on behalf of The Ecology Center, Alliance for the Wild Rockies, and the Lands Council. The content of each letter was analyzed by the interdisciplinary team to identify comments. Each comment was categorized by resource concerns (i.e. Ecosystems, Fisheries, Wildlife). Each comment, question or concern, and IDT response was considered by the deciding official and Acting Forest Supervisor prior to signing the Decision Notice.

The comments and our responses to each are provided below.

Old Growth

1. Comment: The EA claims consistency with the Forest Plan, yet nowhere does it discuss consistency with old growth standards. (Ecology Center)

This project does not propose to enter any stands that are managed as old growth. Within the 3520-acre Deception Creek Experimental Forest the 300-acre Monford Creek Research Natural Area has been set aside to provide non-manipulative studies within late succession western white pine types. The RNA will not be entered at any time for harvest activities and will retain old growth characteristics within this forest type.

2. Comment: There is no discussion in the EA regarding whether the trees to be logged have old growth characteristics. (KEA)

Units 3, 4, and 5 are late succession western hemlock forests. Within these units small openings will be created to reintroduce western white pine and western red cedar into the stands. Overall forest structure will be maintained. This area is late succession western hemlock type and is not managed or allocated as old growth. The remainder of the study will occur in stands under 70 years of age.

3. Comment: How many acres of allocated old growth exist in compartment 313. (KEA)

Compartment 313 has 213 acres of allocated old growth; this figure does not include the Monford Creek Research Natural Area, as discussed earlier. (Management Area 14)

Sensitive Plants

1. The EA does not provide assurances that the population of round-leaf rein orchid will persist in the area following the proposed activities. (Ecology Center)

The portion of the project area containing the round-leaf rein orchid will be buffered from activities as specified by the District Botanist, (though not listed as sensitive, it is on the watch list for the Coeur d'Alene River Ranger District) (EA, chapter III, sensitive plants). No activities will occur within the buffer.

Roads

1. Comment: Will any culverts be removed or replaced within the project area. Are culverts within the project area adequate? (KEA)

Culvert removal is possible with this project, or in the near future. All are located within the main Sands Creek Drainage and are listed as opportunities. These culverts are upstream from the proposed road obliteration, and are not part of the transportation system for this project. All seem to be adequate, but are not being used with this project or in the foreseeable future. Culverts along the #202.2 road were updated to meet Inland Native Fish Strategies (INFS) standards with the adjacent Skookum Salvage Sale. No other culverts were determined to be in need of upgrading within the project area.

2. Comment: Will more streamside roads within Sands Creek be obliterated with the research project? (Ecology Center)

No other streamside road segments will be removed with this project. Additional channel sites upstream from the road obliteration may be removed (see above). Roads upstream from the site are further from Sands Creek, and contain part of a long-term ongoing snow-monitoring course, established within the DCEF.

3. Comment: How will brushed in, and temporary roads be treated after harvest activities. (Ecology Center)

All temporary roads and brushed in roads open for activities will be deep ripped and closed by recontouring and/or barriers as directed by the wildlife biologist. All channel crossings along these segments would be pulled back to resemble the natural slope. These segments will be seeded after closure.

Soils

1. Comment: The project ignores opportunities to research important issues such as soil productivity responses to logging, skidding and burning. (Ecology Center)

As in all the research projects within DCEF, soil productivity will be maintained, and studied throughout the project. This will include maintaining large woody debris on site along with the incorporation of other options as specified in the research plan. Research into soil productivity and determination of woody debris guidelines has been part of past research conducted by the Rocky Mountain Research Station, and will continue.

2. Comment: Will research opportunities include soil productivity/ tree growth on obliterated roads and reclaimed temporary roads? (Ecology Center)

Tree growth and soil productivity will be included in the research plan for the proposed road obliteration. Various methods may be used to meet research objectives, including planting western white pine and western red cedar, shrub species, woody debris placement and quantity, and natural regeneration and response. This will be incorporated into the research design of the streamside road removal, consisting of 3300 feet of the lower Sands Creek area.

Wildlife

1. The EA fails to demonstrate consistency with all forest wide and project specific standards from the Lynx Conservation Strategy and Assessment. (Ecology Center)

As stated in the EA (Chapter III, wildlife) there is no potential lynx habitat (or Lynx Analysis Unit) in or adjacent to the project area. Therefore, a determination of “No effect“ on Lynx was made and documented in the Biological Assessment for threatened and sensitive wildlife species. (Attachment A)

Timber Resources

1. Comment: How much offsite ponderosa pine is in the area, and how much will be removed? (Ecology Center)

The offsite ponderosa is limited to Units 6 and 7 of the study area and encompass approximately 5 acres within these units. The majority of the dead would be retained as wildlife snags and woody debris for the site. The stands are approximately 60 years old with heavy mortality in both the offsite ponderosa pine and the western white pine.

2. Comment: Why not just girdle or fall the trees without removing the material. (Ecology Center)

Build-up of fuels within these units would be unmanageable. Natural white pine regeneration would be hampered, leading to heavier concentrations of western hemlock and grand-fir regeneration. This buildup could cause fires to burn at a higher intensity,

causing a loss in the long-term health and productivity of these sites. As discussed in the EA, Deception Creek Experimental Forest has been set aside to study western white pine types, including maintenance and restoration of white pine, using various methods to achieve the goal, including timber harvests to meet research objectives. Money generated from the sale will be used for the streamside road obliteration and white pine, western red cedar restoration within the drainage.

3. Comment: Why not use fire or other forest responses to mimic natural disturbance. (Ecology Center)

Harvesting gives us more options that will allow us to meet both research project and long-term management objectives. This also gives us more time to establish white pine as the dominant/ co-dominant species. Existing conditions would not allow the reintroduction of fire without the loss of the natural white pine seed source used to study the natural resistance of the overstory and understory. These stands are not within historic ranges and it is not reasonable to restore fire to its historic character within these forest types.

Water/Fisheries

1. Comment: The streams response to past logging and roading is not disclosed in the EA and Watsed has never been validated, so how can that be your only cumulative effects analysis. (Ecology Center, KEA)

Past management activities were included in the analysis of existing conditions. Preliminary WATSED validation monitoring was performed on the IPNF in 1999. (See WATSED, project files). For peak flow and flow durations, WATSED estimates were found to be slightly low, but very close. For sediment, WATSED tended to overestimate both sediment yield and length of recovery from management.

2. Comment The EA vaguely refer to past activities in the Sands Creek watershed, but fails to meet NEPA requirements that cumulative effects be fully disclosed and analyzed. (Ecology Center)

Cumulative effects from past management within the DCEF were included for the analysis of existing condition of the project area. The WATSED model used for analysis utilizes the TSMRS Data Base that tracks past projects, including harvesting within the DCEF. This data provides information on the existing condition within the drainage.

3. Comment: The EA does not address effects to the watershed from previous timber sales that have occurred within the DCEF. (KEA)

As listed above (Comment 2), effects from previous timber sales within DCEF were included in the analysis.

4. Comment: The Sands Creek EA and the project files do not mention the degree of bedload movement that currently exists in Deception Creek. (KEA)

The current degree of bedload movement was considered. The scope of the project would not influence current movement within Sands Creek, Deception Creek or the Little North Fork of the Coeur d'Alene. WATSED shows a slight increase of 1% peak flow water yield. This would not be measurable within the watershed. Removal of the streamside road adjacent to Sands Creek will reduce sediment and return the stream to a higher level of hydraulic stability.

5. Comment: Is Deception Creek listed as Not Properly Functioning. (KEA)

Deception creek is listed as not properly functioning, but is not listed as a 303d (Water Quality Limited) watershed by the Environmental Protection Agency.

6. Comment: There is insignificant information in the EA that shows the proposed project would fully meet the Clean Water Act. (KEA)

Based on the limited scope of this proposal, management activities would have no measurable sediment increases, (Project Files WATSED and Chapter III, Sands Creek EA.) the pollutant of concern. The estimated 1% change is statistically insignificant and would not be observable or measurable. With the removal of the streamside road on Sands Creek, there will be a large decrease in sediment delivery to the Sands Creek drainage (WATSED Project File Report, project files.)

7. Comment: Within Unit 3 how much of the unit will not meet INFISH buffers along Sands Creek, and does this section not promote woody debris into the stream channel? (KEA)

Streamside buffers identified under the Inland Native Fish Strategy (INFS) will be implemented with no modifications, and maintained for the length of Unit 3 as stated in the EA.

8. Comment: Detailed information on past negative impacts to fisheries within Deception Creek is lacking in the EA. (Ecology Center)

Negative impacts to fisheries from past road building and various early harvesting are recognized within the DCEF. Existing conditions were part of the cumulative effect analysis. The scope of this project will not influence existing conditions of Deception Creek. Increases in peak flow, water yield and sediment delivery will all be approximately 1% (see project files, WATSED) with sediment dropping after the removal of the road encroaching on Sands Creek. Positive impacts will occur as a result of the placement of wood within the stream adjacent to the road obliteration.

9. Comment: Current ECA values for the project area are not listed in the EA, and there is no information as to the percentage of the project area that is within the rain on snow zone or sensitive landtypes. (Ecology Center, KEA)

Equivalent clearcut acres and present conditions within DCEF were taken into effect for the cumulative effects analysis (WATSED, TMSRS Data). Due to the low level of harvest, approximately (41 ECAs) (1% of the Deception Creek drainage), no rain-on-snow analysis was conducted. Approximately 5 percent of the harvest will occur on sensitive landtype #463 (rated moderate). Map units rated as moderate have soils with subsoils formed in the material resistant to erosion. Slopes greater than 60 percent are rated moderate if the soil is deep and no soil ground water is perched within the subsoil or substratum. No ground-based harvesting would occur within these areas (Soils, project file). The removal of the road within these land types encroaching on Sands Creek will reduce the amount of sediment delivered into the drainage.

9. Comment: The sensitive fish BE does not list the percent of the watershed that has sensitive land types. The percent of the watershed that has sensitive snow pack is also not listed in the BE, nor is the ECA for the watershed listed. (Ecology Center)

The Fish Biologist used the data described above and actual site observations visits to prepare the Biological Evaluation and Assessment for fish species (discussed above).

Cumulative Effects

1. Comment: Does the cumulative effects analysis include any portion of the 4000 acre Skookum Creek resource area as described in the 1992 Skookum E.A. (KEA)

The Skookum Resource Area was considered in the cumulative effects analysis for wildlife. Analysis for watershed and fish took in the Deception Creek drainage, which flows into the North Fork above the mouth of the Skookum Creek area. All activities are within Deception Creek Drainage; this is the boundary of the DCEF.

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March 28, 2001

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Russell T. Graham, Research Forester
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Gentleman:

These are comments on the Sands Creek Research Project Environmental Assessment (EA), on behalf of the Ecology Center, the Alliance for the Wild Rockies, and the Lands Council. As discussed with Steve Bateman at the Coeur d'Alene River Ranger District, our comments will be considered timely if submitted no later than April 2, 2001.

The responses to concerns stated in our scoping comments are not apparent in this EA. Therefore, we incorporate our scoping comments as comments on this EA.

One of the concerns we expressed in scoping is that the experiment would log in late-successional forest. Yet, the EA hardly discusses old growth at all. The EA claims consistency with the Forest Plan, yet nowhere does it discuss consistency with old growth standards. This may be an experimental forest, but you must take into consideration the context. This is national forest land. It belongs to the public. The public participated in development of the Forest Plan. The Plan, and NFMA, requires maintaining viable populations. To do that you must, at minimum, discuss compliance with habitat Standards. We believe that responsiveness to public values must remain a higher priority than research projects.

Research suggests that a localized distribution of 50% old growth should be maintained to allow for viability of goshawks (Suring et al. 1993).

The EA also fails to demonstrate consistency with all forestwide and project-specific Standards from the Lynx Conservation Strategy and Assessment. The IPNF should actually be amending its Forest Plan to incorporate public involvement with the recovery and protection of this threatened species.

We are concerned over the premise that logging is necessary to maintain western white pine. All treatments involve commercial logging, an unnatural disturbance. It is likely that commercial logging will be banned in national forests long before the conclusion of the 200-year

duration of the experiment. Why not use fire or other methods to examine tree and forest responses to more natural disturbances?

Removal of dead and "dying" pine is totally unnecessary for this experiment. This aspect of the proposal is quite troubling. It seems that timber production is an unspoken priority. Snags provide habitat for species for which the EA claims "no impacts" or insignificant impacts. Species have already been impacted significantly because of the region-wide impacts of logging big trees and salvage logging. The Integrated Scientific Assessment for Ecosystem Management in the Interior Columbia Basin and Portions of the Klamath and Great Basins recognizes the importance of maintaining large, old trees and the loss of big trees in Columbia Basin from logging. On page 178 that document states,

(S)alvage emphasizes the extraction of specified volumes of dead and green trees at risk of dying. As such, harvest will emphasize larger trees, both green and recent dead, of desirable species ... Our findings suggest that this type of harvesting is not compatible with contemporary ecosystem-based management.

The IPNF's 1998 Forest Plan Monitoring and Evaluation report admits that salvage has occurred over vast areas of the Forest. The IPNF has failed to monitor the impacts of these large-scale, forestwide cumulative effects on indicator species. Why are you removing important habitat components for already imperiled species?

Why yard out the logs at all? Logging is not necessary for determining tree response to creation of openings. Why not cut the trees and do the burning? Large pieces of wood on the ground are necessary habitat. Or why not just girdle the trees and leave them?

The EA refers vaguely to past activities in the Sands Creek watershed, but fails to meet NEPA's requirements that cumulative effects be fully disclosed and analyzed.

Examples of failure to consider cumulative effects are for watershed. There is a very high density of roads in Sands Creek, yet the EA ignores cumulative effects by failing to perform a true watershed assessment. The stream's response to past logging and roading is not disclosed in the EA. WATSED has never been validated, so how can that be your only cumulative effects analysis? Where's the science?

The EA does not disclose how much off-site ponderosa pine is in the area, and how much would be removed.

The project ignores opportunities to research other important issues such as soil productivity responses to logging, skidding, and burning. Page-Dumroese and others (2000) discuss the importance of monitoring to determine if soil protection Standards are adequate. The IPNF ignores this everywhere else, now even in the Experimental Forest. Other research opportunities include soil productivity/tree growth on reclaimed "temporary" roads and obliterated roads.

The map included in the EA shows that, in addition to the streamside road to be obliterated, there is even more streamside road encroaching on Sands Creek upstream. That segment is no more necessary than the



Kootenai Environmental Alliance

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Daniel E. Frigard
Coeur d'Alene River Ranger District
Fernan Office
2502 East Sherman Avenue
Coeur d'Alene, ID 83814

March 8, 2001

Dear Mr. Frigard:

The following comments pertain to the Sands Creek Research Project E.A.

ECAs/Watersheds/Fisheries:

Page 16 of the EA contains the following sentence "The purpose of this document is to disclose the effects and consequences of alternative actions considered in detail". NEPA requires that environmental information be made available to citizens before decisions are made and before actions are taken. NEPA also requires high quality information, and "Accurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing NEPA."

Detailed information is lacking in the EA regarding the causes of negative impacts to fisheries and fisheries habitat in and adjacent to the DCEF. There appear to be cumulative effects to the Deception Creek watershed from past logging within and adjacent to the project area but there is no information in the EA regarding past research projects in the DCEF that may have contributed to the degraded condition of Deception Creek.

Current ECA values for the project area are not listed in the EA, and there is no information in the 2-page Watershed section as to the percentage of the project area that is in a rain-on-snow zone.

The following ECA discussion is from the July 1995 Wallace Ranger District Cougar Creek EA. Under the discussion of Streamflow Regime on page III-26 there are the following sentences. "The equivalent clearcut area (ECA) procedure is a mathematical model used to estimate the percent of a watershed that is in a hydrologically unrecovered state. The method accounts for acres, date and degree of disturbance relative to the size of the watershed." Also, "The ECA model uses tree growth (canopy closure) to estimate peak flows. Channels do not recover immediately in response to tree growth. There is a lag time between hillslope recovery (tree growth) and channel recovery. The length of lag time is difficult to predict, but is probably on the order of several decades depending on the degree of disturbance, inherent channel stability, and the size of the drainage area."

Page III-27 contains the following discussions concerning rain-on-snow zones, peak flow increases and the ECA model. "The rain-on-snow zone is an elevation band (2500-4500 feet) in which both the rate of snow accumulation and melt in harvested areas is greater than in similarly unharvested areas above and below this zone. The rain-on-snow analysis method (Kappesser, 1991) assigns the greatest risk to south, southwest, and southeast facing slopes. The model does not allow for any recovery of rain-on-snow risk until 40 years after harvest, at which point the stand is considered equivalent to a partial harvest until 68 years. The rain-on-snow recovery is premised on observations that existing clearcuts 40 years or older do not seem to be accumulating and retaining as much snow as do younger clearcuts (H. Logsdon and S. Russell: 1992, Idaho Panhandle National Forests) as well as information from technical literature (Harr and Coffin, 1991). The procedure assesses the relative vulnerability, or exposure, of the snowpack to direct rainfall and warm moist winds that accompany rain-on-snow events. Snowpack melt rate increases with increasing vulnerability of the snow surface. Rapid melt of a large part of the snowpack can result in large instantaneous peak flows."

A review of the project files for logging activity in the project area indicates that there are approximately 407 acres of clearcuts in or adjacent to the project area that are less than 40 years old. The 407 acres of clearcuts cannot be considered as hydrologically recovered according to the information in the Cougar Creek EA. The proposed regeneration logging on 73 acres will in some stands reduce the canopy to 20%, unnumbered page 1 of the BE for Sensitive Fish Species. The WATSED Summary lists the Natural Watershed condition (average annual) Water Yield as 25.5 inches or 7,480 Acre Feet. One acre-foot is 325,850 gallons of water. The 7,480 AF is equivalent to approximately 2,437,358,000 gallons of water. This is a significant volume of water moving in the watershed. Page 27 of the EA indicates that the proposed logging would consist of approximately 40 acres of ECA's. The large volume of water moving in the watershed apparently is associated with the findings on page 7 of the BE for Sensitive Fish Species of highly degraded for the Deception Creek watershed. Current canopy openings and new canopy openings and rain-on-snow events would be expected to increase water yields in the watershed above the average annual 7,480 AF. Any increases in peak flows would not be expected to improve the highly degraded condition of the watershed.

Page 7 of the Sensitive Fish Species BE does not list the percent of the watershed that has sensitive landtypes. The percent of the watershed that has sensitive snowpack is also not listed in the BE, nor is the ECA for the watershed listed.

The 1992 Fernan Ranger District Skookum EA did supply information for the Deception Creek subdrainage and the numbers are as follows.

The ROS Risk Factor was listed at 1.31. The ECA was listed as 33.0 % of the watershed area, and Spring Peak Flow was listed as 13.8% above background.

The adjoining Skookum Creek subdrainage had a ROS Risk Factor 1.12, the ECA was listed as 24.0 % of the watershed area, and Spring Peak Flow was listed as 12.0 % above background, figure III-4 of EA.

Page III-26 of the Skookum EA also had the following sentences regarding the ECA procedure. "Watersheds that have more than 20 to 25 percent ECA are considered to be at high risk for channel damage. The channel disturbance is related to the increase in flow volume associated with the largest flows of the year (peak flow). Disturbed watersheds that have an increase in peak flow of more than 10 to 15 percent are considered to be at high risk for channel instability." The information in the Skookum EA indicates a significant portion of the Deception Creek watershed has been negatively impacted from past logging and road building. Because of the impacts to the watershed, it is likely that Deception Creek is Not Properly Functioning (NPF). The Final document should indicate if the 1992 ROS, ECA, and Spring Peak Flow figures have increased.

The Sands Creek EA and project files do not mention the degree of coarse bedload movement that currently exists in Deception Creek. It would be expected that there is an ongoing coarse bedload movement problem that has contributed to the highly degraded condition of Deception Creek in light of the large volumes of water moving in the watershed. There is no indication in the EA as to how any increase of peak flows into Deception Creek would not impact coarse bedload movement problems in the Creek. Since there are reproducing populations of Cutthroat trout in Deception Creek, the EA should have provided analysis of impacts to the populations of Cutthroat trout that could occur if there is any increase in coarse bedload movement from the logging of 113 acres.

Sediment:

The WATSED SUMMARY lists the Sediment Inc Annual % as 725 under the No Action Alternative, project file. There is no mention in the EA whether this figure of 725% is contributing to the highly degraded condition of the watershed. The Final document should provide information that will indicate whether this figure is for fine sediment only.

Cumulative Effects Analysis (CEA)/timber sales:

The EA does not discuss effects to the watershed from previous timber sales that have taken place within and adjacent to the project area. The Deception Creek timber sale that took place in 1966 apparently had four large clearcuts that were; 41 acres, 57 acres, 56 acres and 56 acres, in size. The stands are 31003013, 3014, 3015, and 3016, according to information in the project files. The Final document should indicate whether any of these units are within the Sands Creek CEA. The EA did not indicate whether previous timber sales in the DCEF are directly related to the current highly degraded condition of Deception Creek.

The Final document should supply analysis of the effects to Deception Creek from sales that took place within the boundaries of the DCEF after 1960. It is not clear from the information in the project file if any of the following timber sales had units that were within the DCEF: Haynes Creek, Blue Down, Echo Peak, Hoodoo, Paul Bunyan Salvage, Tamarack Hill, Deception Creek, Blue Rock, Miller Salvage, Blue Rock, and Graham Cracker.

It is not clear in the EA, page 27, whether the CEA includes any portion of the 4,000 acre Skookum Resource Area as described in the 1992 Fernan R. D. Skookum EA. The Sands

Creek EA did not indicate if there are any logging units that were created from the Skookum Salvage timber sale that are within the Sands Creek CEA.

Old Growth:

There is no discussion in the EA regarding whether the trees proposed to be logged have any Old Growth characteristics. The final document should supply data from Compartment 313 that indicates how many acres of Allocated Old Growth exist in the Compartment. The Final document should also indicate how many acres of the 113 acres proposed for logging have trees with Old Growth characteristics.

Culverts:

There is contradictory information in the EA and project files as to whether any culverts will be removed and replaced. Unnumbered page 4 of the BE for Sensitive Fish under c. habitat access stated "Upgrading of undersized channel structures will occur." However, on page 9 under direct/indirect effects, regarding Culvert upgrades it is stated, "No pipes will be upgraded with this alternative and there for there will be no short term or long term effects."

If there are undersized pipes this indicates flows of water exceed the capacity of one or more of the pipes in the project area. An 18" culvert can flow 6 cfs at capacity. This is approximately 2,692.98 gallons of water per minute or 161,578.8 gallons of water per hour. A 24" pipe can flow 12 cfs at capacity. 12 cfs is approximately 5,385.96 gallons of water per minute or approximately 323,157.6 gallons of water per hour. The EA on page 27 does indicate that there are several large pipes upstream that will be removed when they are no longer needed. Are these pipes within the boundaries of the project area?

The Final document needs to state whether any culverts will be removed and replaced with larger pipes. If any culverts will to be removed and not replaced, the Final document needs to indicate the size of each pipe planned to be removed. The Final document also should indicate the size of the large pipes mentioned on page 27 of the EA.

If unnumbered page 4 of the BE is incorrect and culverts will not be removed, the Final document should clarify the issue of channel structures in the project area and include the size(s) of the pipes in the project area that do not need to be replaced.

Unit #3:

There is a discussion at the top of a page 3 in the project file regarding Unit 3 that is unclear. There are the following two sentences at the bottom of the paragraph about Unit 3. "(*within unit 3, one area along the 202.2 road, which will remain in place, harvest will take place closer than the 300 foot buffer for Sands Creek. This area does not provide wood into the drainage."

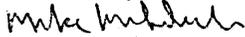
The Final document should clarify the extent of proposed logging within the 300-foot buffer in this unit. The Final document should also clarify whether the statement about not providing wood into the drainage applies to the entire unit.

Clean Water Act:

Page 40 of the EA states that the project would have no effect on water quality. The requirements of the CWA include maintaining the physical and biological integrity of the Nation's waters. An interim goal of the CWA is also the protection of fish. Due to the highly degraded condition of the Deception Creek watershed, the CWA does not permit any further degradation of Deception Creek. Our understanding of the CWA is that any short-term degradation to Deception Creek that would occur due to the proposed activities will not meet the requirements of the CWA. There is insufficient analysis and information in the EA that shows the proposed project would fully meet the requirements of the CWA.

We wish to receive a copy of the Final document when it is released.

Sincerely,



Mike Miheich

Forestry and Water Committee