

# Three Creeks Timber Sale Project

## Three Creeks Timber Sale Project

### EXECUTIVE SUMMARY



Swan River State Forest Headquarters

Swan River State Forest, Montana Department of Natural Resources and Conservation (DNRC), is planning the Three Creeks Timber Sale Project. The proposed sale area is located approximately 7 miles south of Swan Lake, Montana in the northeast portion of the forest. Harvesting would take place in portions of Sections 1, 3, 4, 9, 10, 11, 14, 15, 16, 22, 25, 26, and 27, all in Township 24 north, Range 17 west. (See Vicinity Map, page 2, and Timber Harvesting Alternative Map, page 3.)



Compound sign



Landscape on Swan River State Forest

This Executive Summary is part of the Final Environmental Impact Statement (FEIS) for the Three Creeks Timber Sale Project.

The FEIS presents:

- descriptions of a no-action alternative and 4 action alternatives and tells how each alternative would affect Swan River State Forest.
- a detailed analysis that explains how the project would affect or impact specific wildlife species, old growth, water quality, fish habitat, etc.



School field trip

This Executive Summary:

- is designed in accordance with the Montana Environmental Policy Act (MEPA) rules;
- is written to be easily understood with supporting photographs and maps;
- briefly describes the project proposal and the alternatives that have been considered; and
- informs you of the next step in this project.



Landing site



Logger cutting down a tree

DNRC has the task of managing State school trust lands. The primary purposes of this timber sale project are to provide income for the school trust, grow new stands of healthy trees, and improve the growth and vigor of the remaining trees. This project follows the *State Forest Land Management Rules (Annotated Rules of Montana [ARM] 36.11.401 through 36.11.450)* and is based on the premise that, for the foreseeable future, timber management will continue to be the primary source of revenue. Timber management will be the primary tool for achieving biodiversity objectives on State forest lands.



Cilly Creek



Limbing felled logs



Elk wintering grounds



Money earned from timber sales helps support schools



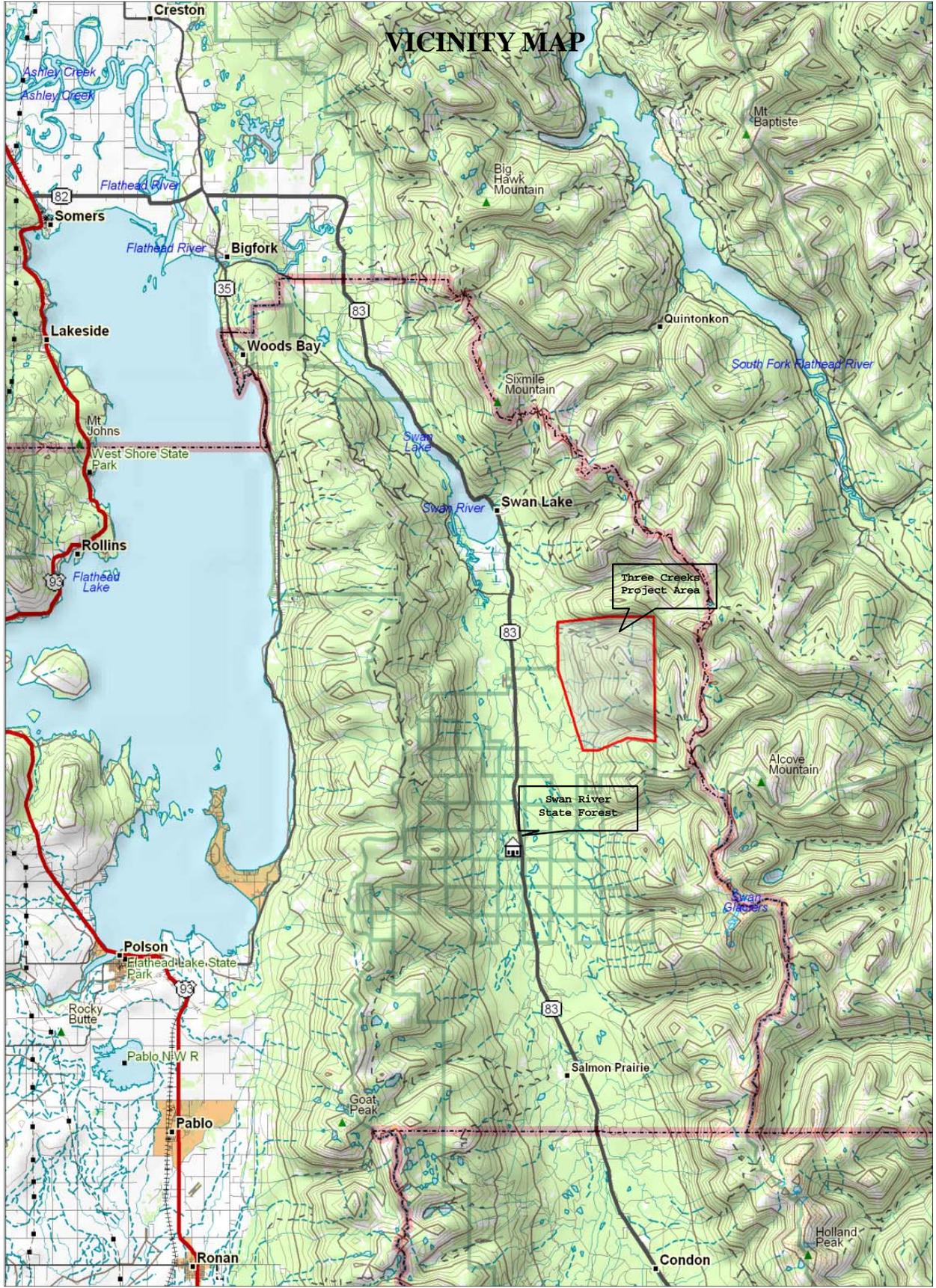
Foresters at work



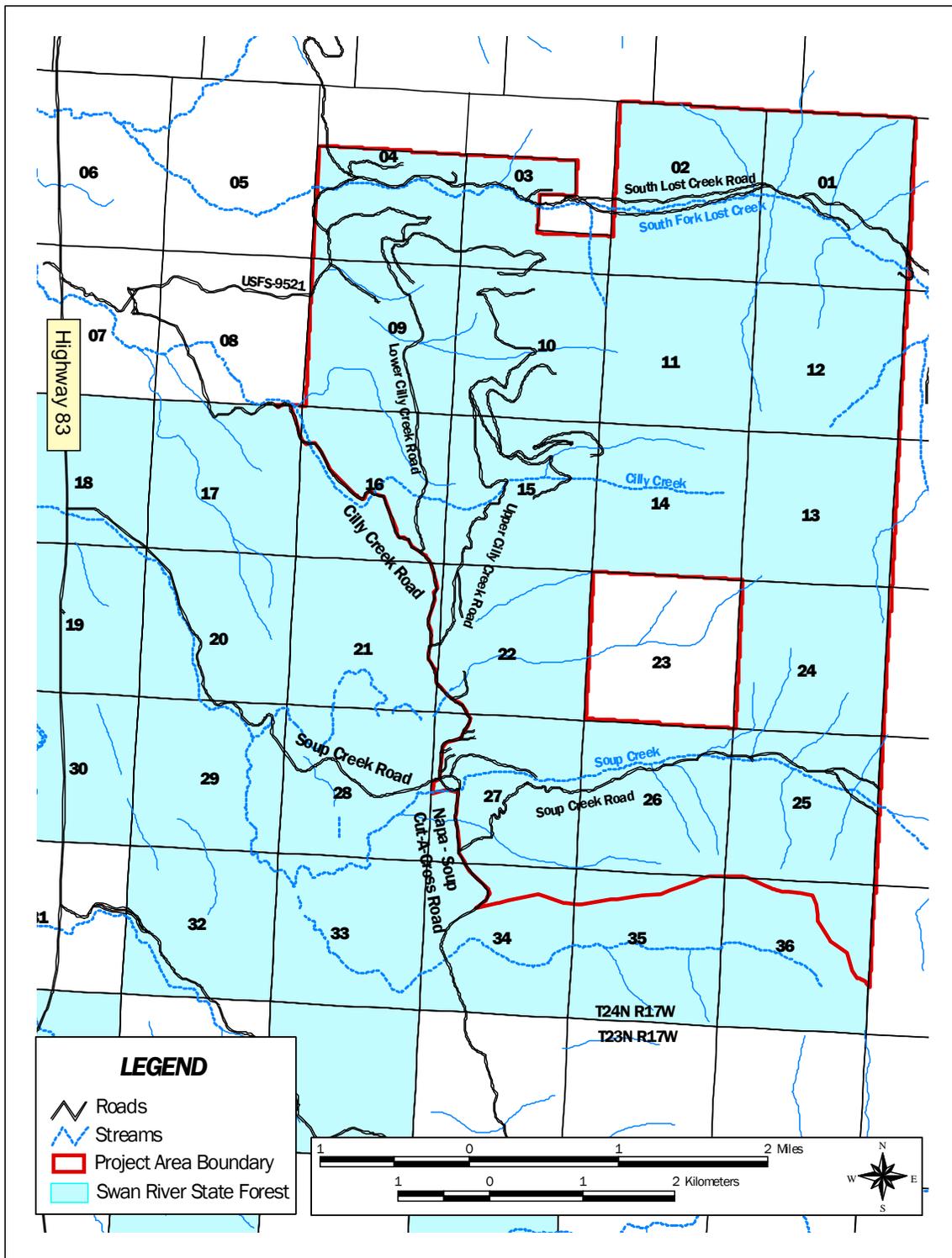
White-tailed fawn



Forested area



THREE CREEKS TIMBER SALE PROJECT AREA MAP



## ACCOMPLISHMENTS TO BE ACHIEVED BY THE ACTION ALTERNATIVES

Depending on whether an action alternative is chosen, and which one, this proposed timber sale project would log 20 to 26 million board feet (MMbf) of timber (4,000 to 5,500 truck loads of logs) from 1,787 to 1,999 acres.

In addition this project would:

- replace 1 wooden bridge that presently cannot support heavy machinery or fire engines;
- remove 5 old bridges (3 along Soup Creek and 2 on the South Fork of Lost Creek), restore the crossing sites, and stabilize the streambanks;
- relocate a portion of the South Fork of Lost Creek Road north of its current location so the road would no longer be within the streamside management zone (smz), a preferred habitat for some wildlife species, and would not contribute sediment to the stream;
- construct 7.5 to 16 miles of new roads and 3 to 7 miles of temporary roads, and maintain existing roads to meet current Best Management Practices (BMPs); and
- prepare logged areas to grow new trees by broadcast burning or piling slash and scarifying the ground to allow seeds to germinate naturally or trees to be planted.



**INITIAL PROPOSAL AND PUBLIC CONCERNS**

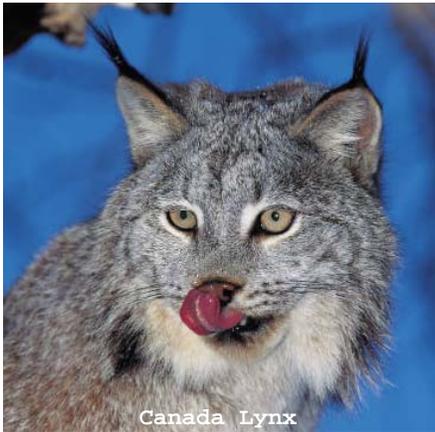
In February 2004, Swan River State Forest started the scoping process. A letter and the Initial Proposal were mailed to adjacent landowners and other interested parties. The public was informed that the drainages of South Fork Lost, Cilly, and Soup creeks were being considered for a timber sale proposal. The objectives of the project, maps, and an overview of past timber harvesting were provided. The Initial Proposal also requested comments and concerns from the public. The public comment period was open until March 19, 2004. Responses from 6 individuals/organizations were received.

An Interdisciplinary Team (ID Team) was formed to study the public’s concerns and the proposed project area. The ID Team consists of wildlife and fisheries biologists, a hydrologist, an engineer, an economist, and foresters.

After discussing these concerns and studying the area, we found that explanations of the effects that the proposed timber sale project would have on the following resources were needed:



Landscape of Swan Range



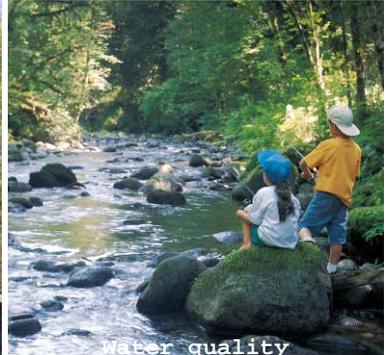
Canada Lynx



Gray Wolf



Road work



Water quality

- Vegetation (trees, including old growth)
- Hydrology (water)
- Soils
- Fisheries
- Wildlife
  - Threatened and Endangered Species
    - Canada lynx
    - Gray wolf
    - Grizzly bear
  - Sensitive Species
    - Fisher
    - Pileated woodpecker
  - Big Game Species (elk and mule deer)
- Economics
- Management of Roads

## DEVELOPING THE PROJECT AND DISPLAYING THE CONCERNS

On March 13, 2003, the Department adopted the *Administrative Rules for Forest Management (Rules)*. The Rules provide guidance on how DNRC will manage their forests and deal with specific items that need to be considered when planning and conducting a timber sale. The ID Team followed these rules during the development of this timber sale project proposal. The Rules may be found on the web at: [www.dnrc.mt.gov/trust/default.asp](http://www.dnrc.mt.gov/trust/default.asp). In general these Rules cover how the following items should be managed:

- biodiversity (the forest conditions are managed for a desired mix of stand structures and forest types);
- roads;
- watersheds;
- fisheries;
- wildlife species, including those listed as threatened, endangered, and sensitive, and big game;
- weeds; and
- economics.

## SUMMARY OF ALTERNATIVES

After studying the list of concerns, 5 possible choices (alternatives) were developed by the ID Team. Each of the following alternatives was designed to address a particular concern or group of concerns.

### • ***No-Action Alternative A***

- Trees would not be harvested.
- Roads would not be improved.
- Road maintenance projects, access to fight fires, recreation, and timber salvaging would continue as they do currently.
- No money would be contributed to the school trust funds or the Forest Improvement (FI) Program.

### • ***Action Alternative B***

- Timber would be harvested from 1,884 acres.
- Old-growth timber on 1,221 acres would be included in the harvest.
- 23.7 mmbf of timber would be made available for purchase.
- 47 miles of roads would be improved and 19 miles of new roads would be constructed.
- Approximately \$3,459,900 would be contributed to the school trust funds and \$462,150 would be contributed to the FI Program.

### • ***Action Alternative C***

- Timber would be harvested from 1,787 acres.
- Old-growth timber on 1,122 acres would be included in the harvest.
- 22.7 mmbf of timber would be made available for purchase.
- 45 miles of roads would be improved and 19 miles of new roads would be constructed.
- Approximately \$3,309,800 would be contributed to the school trust funds and \$442,650 would be contributed to the FI Program.

- ***Action Alternative D***

- Timber would be harvested from 1,970 acres.
- Old-growth timber on 1,114 acres would be included in the harvest.
- 25.8 mmbf of timber would be made available for purchase.
- 53 miles of roads would be improved and 21 miles of new roads would be constructed.
- Approximately \$3,505,300 would be contributed to the school trust funds and \$503,100 would be contributed to the FI Program.

- ***Action Alternative E***

- Timber would be harvested from 1,999 acres.
- Old-growth timber on 446 acres would be included in the harvest.
- 24.0 mmbf of timber would be made available for purchase.
- 56 miles of road would be improved and 10 miles of new roads would be constructed.
- Approximately \$3,301,400 would be contributed to the school trust funds and \$468,000 would be contributed to the FI Program.

#### **GENERAL DIFFERENCES OF THE ACTION ALTERNATIVES**

Differences among the action alternatives:

- the amount of money earned for the school trust;
- the total number of acres harvested;
- the amount of board feet harvested;
- the number of miles of road built for permanent or temporary purposes;
- Action Alternatives D and E would have more helicopter logging; and
- Action Alternative E has the least amount of old-growth harvest acres, approximately one-third the amount of the other action alternatives.

#### **GENERAL SIMILARITIES OF THE ACTION ALTERNATIVES**

In addition to other information provided in this summary, following are the general similarities of the action alternatives:

- the 6 older stream crossings that are in various stages of collapse would be removed and the sites would be restored;
- a bridge crossing on Soup Creek would be improved;
- the South Fork Lost Creek Road would be relocated approximately 200 feet north in order to move the road from the smz; and
- other than a limited amount of salvage harvesting, the majority of the proposed stands have not been previously harvested .

## SUMMARY OF EFFECTS

### VEGETATION

If fires had been allowed to burn in natural cycles, the mixture of tree species on Swan River State Forest would be different today. The forest contains many more acres of shade-tolerant species (grand fir, Engelmann spruce, subalpine fir, western red cedar) than would have been present with normal fire cycles. The average number of trees per acre is higher and the trees are older than if fires had occurred. The current densities provide enough fuel for fires to burn more severely than they would have historically.

Swan River State Forest is also experiencing many problems with insects and diseases. The Douglas-fir bark beetle and root diseases are killing Douglas-fir trees. The white pine blister rust, dwarf mistletoe, and Indian paint fungus are other diseases affecting the forest. The primary trees selected for harvesting have been affected by insects and diseases.

The majority of the stands selected for logging would be treated with a regeneration harvest (seedtree or shelterwood). Removing the majority of the trees in the existing stands would better allow western larch, ponderosa pine, Douglas-fir, and, in some places, western white pine to reproduce and grow. After the site is prepared, the harvested area would grow trees from seeds of trees remaining in or surrounding the harvest unit or be planted with seedlings. In the other stands proposed for harvesting, about half of the existing trees would be removed. By thinning these stands, the remaining trees would have more room to grow, which would improve the health of these trees in general.

Approximately 32.4 percent of Swan River State Forest meets the definition of old growth. Each action alternative would harvest some old-growth timber. Action Alternative B would include harvesting in 1,221 acres of old-growth timber, Action Alternative C would include harvesting in 1,122 acres, Action Alternative D would include harvesting in 1,143 acres, and Action Alternative E would include harvesting in 446 acres.

### HYDROLOGY

The current conditions of the stream channels for South Fork Lost, Cilly, and Soup creeks were considered. These creeks were evaluated for the amount of sediment delivery and increased streamflow that would result by cutting trees, constructing and improving roads, and other logging activities, such as log hauling.

#### ➤ South Fork Lost Creek

About 20 tons of sediment is currently delivered to South Fork Lost Creek each year from existing roads. The proposed road repairs would reduce the future amount of sediment to about 1 ton per year.

Past logging has increased streamflows about 1 percent above natural conditions. The proposed actions would increase streamflows approximately 2 percent, which is not enough to cause channel erosion. The risks to water quality or streamflows in South Fork Lost Creek is low for all alternatives.

#### ➤ Cilly Creek

About 3 tons of sediment is currently delivered to Cilly Creek each year from existing roads. The proposed road repairs would reduce the future amount of sediment to 1 or 2 tons per year.

Past logging has increased streamflows about 2 percent above natural conditions. Action Alternatives B and C would increase streamflows to about 9 percent, while Action Alternatives D and E would increase streamflows to about 12 percent. An increase of 9 percent is not enough to cause channel erosion. An increase of 12 percent could cause a small increase in channel erosion if large storms or fast-melting snow occur. The streamflows in Cilly Creek is low for Action Alternatives B and C, and low to moderate for Action Alternatives D and E.

➤ **Soup Creek**

About 36 tons of sediment is currently delivered to Soup Creek each year from existing roads. The proposed road repairs would reduce the future amount of sediment to about 2 tons per year.

Past logging has increased streamflows about 1 percent above natural conditions. The proposed actions would increase streamflows to 2 or 3 percent, not enough to cause channel erosion. The risks to water quality or streamflows in Soup Creek is low for all alternatives.

**FISHERIES**

The presence of bull trout and westslope cutthroat trout in South Fork Lost Creek, Cilly Creek, Soup Creek, and an unnamed tributary (Unnamed Creek) were considered. Cilly Creek is currently inhabited by nonnative eastern brook trout. Also analyzed were the possible effects of logging and roadwork to the creeks and specific fisheries habitats.

➤ **South Fork of Lost Creek**

Bull trout and westslope cutthroat trout currently reside in South Fork Lost Creek, along with a presence of eastern brook trout. None of the proposed alternatives are expected to have unfavorable impacts to the bull trout or westslope cutthroat trout species' presence, genetics, or connectivity. Expected impacts range from almost none to low in the habitat components of flow regimes, sediment, channel forms, riparian function, large woody debris, and stream temperature. The combined potential effects to fisheries in South Fork Lost Creek are expected to be low for all alternatives.

➤ **Cilly Creek**

Nonnative eastern brook trout populations inhabit the lower reaches of Cilly Creek. No fish inhabit the upper reaches. The proposed actions are not expected to have adverse impacts to the trout species' presence, genetics, or connectivity. Expected impacts range from almost none to moderate in the habitat components of flow regimes, sediment, channel forms, riparian function, large woody debris, and stream temperature. Depending on the selected alternative, the combined potential effects to fisheries in Cilly Creek are expected to range from low to moderate.

➤ **Unnamed Creek**

Nonnative eastern brook trout populations inhabit the lower reaches of this Unnamed Creek. No fish inhabit the upper reaches. Due to very high seasonal stream temperatures, bull trout and westslope cutthroat trout very likely have never utilized this creek. No proposed actions are expected to have unfavorable impacts to this trout species' presence, genetics, or connectivity. Expected impacts range from almost none to moderate in the habitat components of flow regimes, sediment, channel forms, riparian function, large woody debris, and stream temperature. Depending on the selected alternative, the combined potential effects to fisheries in Unnamed Creek are expected to range from low to moderate.

➤ **Soup Creek**

Populations of bull trout and westslope cutthroat trout inhabit Soup Creek, along with a presence of eastern brook trout. The proposed actions are not expected to have unfavorable impacts to bull trout or westslope cutthroat trout species' presence, genetics, or connectivity. Expected impacts range from almost none to low in the habitat components of flow regimes, sediment, channel forms, riparian function, large woody debris, and stream temperature. The combined potential effects to fisheries in Soup Creek are expected to be low for all alternatives.

**WILDLIFE**

➤ **Threatened and Endangered Species**

• ***Canada Lynx***

Each action alternative would result in a short-term reduction in Canada lynx habitat. However, adequate amounts of denning and foraging habitats would be retained. All of the action alternatives are expected to result in a low risk of reducing the ability of lynx to survive and reproduce in the area in the short term. As new trees grow in the timber stands where trees have been harvested, habitat for snowshoe hares would be increased. Thus, lynx could benefit from this harvest in 10 to 20 years by an increased availability of prey in the area.

• ***Gray Wolf***

Under each action alternative, the density of open roads would increase, hiding cover would decrease, and restricted roads would be constructed. All could affect the way wolves use the area and their ability to survive in the analysis area. Measures would be taken to protect key sites from human disturbance, retain hiding cover, and keep motorized access at current levels. Big game (prey) populations in the harvest area likely would not be substantially affected. Therefore, each alternative presents a low risk of increasing the mortality of wolves or substantially reducing their prey in the analysis area.

• ***Grizzly Bear***

Under each action alternative, the density of open roads would slightly increase, hiding cover would decrease, and restricted roads would be constructed. All changes produced by any alternative would meet the stipulations outlined in the Swan Valley Grizzly Bear Conservation Agreement. The risk of increasing habitat that grizzly bears would avoid or increasing of the mortality for grizzly bears using the area would be slight.

➤ **Sensitive Species**

• ***Fisher***

Timber harvesting would remove fisher habitat from the uplands while not changing the amount of fisher habitat along streams. However, habitat in and along riparian (wet) areas would be reduced in quality. When considering other past, present, and future activities, each proposed action alternative would likely result in a low risk to fishers.

• ***Pileated Woodpeckers***

Each action alternative would reduce potential woodpecker habitat in the harvest units. The habitat outside of the units, which consists of high densities of snags that provide forage and nesting structures, could offset the loss of timber harvested in the harvest units. Some large

snags and snag-recruitment trees would be left in the harvest units for pileated woodpecker use to provide short-term foraging structure and longer-term nesting structure. The reduction of nesting and foraging habitat for pileated woodpeckers is expected to result in a low risk of decreased use and reproduction in the area for the short term.

➤ **BIG GAME**

Each action alternative would reduce the amount of big game thermal cover. Under each of these action alternatives, enough thermal cover would be left on these DNRC-managed lands to provide adequate winter range habitat for elk and mule deer. Therefore, the risk of reducing the winter-range carrying capacity is expected to be low under each action alternative.

**SOILS**

The soils analysis considered the current level of impacts to soils in the project area. Soils were evaluated that had been compacted and displaced by the operation of heavy machinery on areas logged previously. The possible effects to soil conditions from the operation of heavy equipment and the use of cable systems to pull logs up steep slopes were also analyzed.

Approximately 14 percent of the project area has been logged in the past, and about 10 percent of that area still shows signs of compaction or displacement. Less than 9 percent of the project area would be compacted or displaced from heavy equipment and cable systems with each action alternative. This amount is less than the limits proposed in the *State Forest Land Management Plan* and, therefore, acceptable soil conditions should remain in the logged areas. The risks to soil conditions are low for all alternatives.

**ECONOMICS**

Income from timber sales is transferred to the Office of Public Instruction for Common Schools trust and other appropriate trusts based on the trust ownership under which it was earned. This revenue is distributed to various educational institutions through the legislative process. If an action alternative were selected, the money generated from that alternative could, based on the average cost of educating a student for one year and the alternative selected, pay for students to attend school in Montana.

The Three Creeks Timber Sale Project indirectly provides school revenue through property and income taxes generated by the jobs the timber sales create. Secondary employment and income are also generated as workers who are directly employed as a result of the timber sales spend their income in other areas of the economy.

<b>ACTION ALTERNATIVE</b>	<b>JOBS SUPPLIED</b>	<b>TOTAL INCOME</b>	<b>ACTION ALTERNATIVE</b>	<b>MONEY GENERATED</b>	<b>STUDENTS FUNDED</b>
B	252	\$9,779,600	B	\$3,459,900	489
C	241	\$9,350,200	C	\$3,309,800	467
D	273	\$10,610,400	D	\$3,505,300	495
E	254	\$9,860,600	E	\$3,301,400	466

No money would be deposited into the school trust under Action Alternative A.

## INFORMATION AND OVERVIEW OF THE FEIS

The FEIS contains a more complete description of the purpose, development, analyses, and conclusions of the proposed project. The FEIS also has appendices on specific resources (water quality, wildlife, soil, etc.). The resource appendices were written by the ID Team and include lengthy technical discussions of methodologies, research, the monitoring of baseline data, analyses, etc. The FEIS summarizes the resource appendices in plain language to ensure that all interested parties, regardless of their scientific or technical abilities, are able to understand this proposal and its effects.

The analysis work required highly advanced technical procedures and terminology. Therefore, information in the appendices would need to be utilized for any scientific, technical, or legal review.

To receive a copy of the Three Creeks Timber Sale Project FEIS and its resource appendices, contact Karen Jorgenson by calling at the Swan River State Forest (406) 754-2301 or writing to Swan River State Forest, 34925 MT Highway 83, Swan Lake, Montana 59911 or email at [kjorgenson@mt.gov](mailto:kjorgenson@mt.gov). The documents are also available at the [www.dnrc.mt.gov/eis\\_ea.html](http://www.dnrc.mt.gov/eis_ea.html) website.

The FEIS and appendices will be sent to people that have, over the course of this project, requested the documents. A summary will be sent out to everyone on the DEIS mailing list. If you would like a copy of all the documents, please contact the Swan River State Forest office. At least 15 days following publication of the FEIS, Dan Roberson, decisionmaker, will choose an alternative or a combination of alternatives. This decision will be recommended to the State Board of Land Commissioners. The Land Board has the ultimate decision responsibility.

