Colson Creek Rock Pit

Environmental Assessment

North Fork Ranger District

Salmon-Challis National Forest

Lemhi County, Idaho

December 2004

Chapter 1 – Proposed Action and Purpose and Need

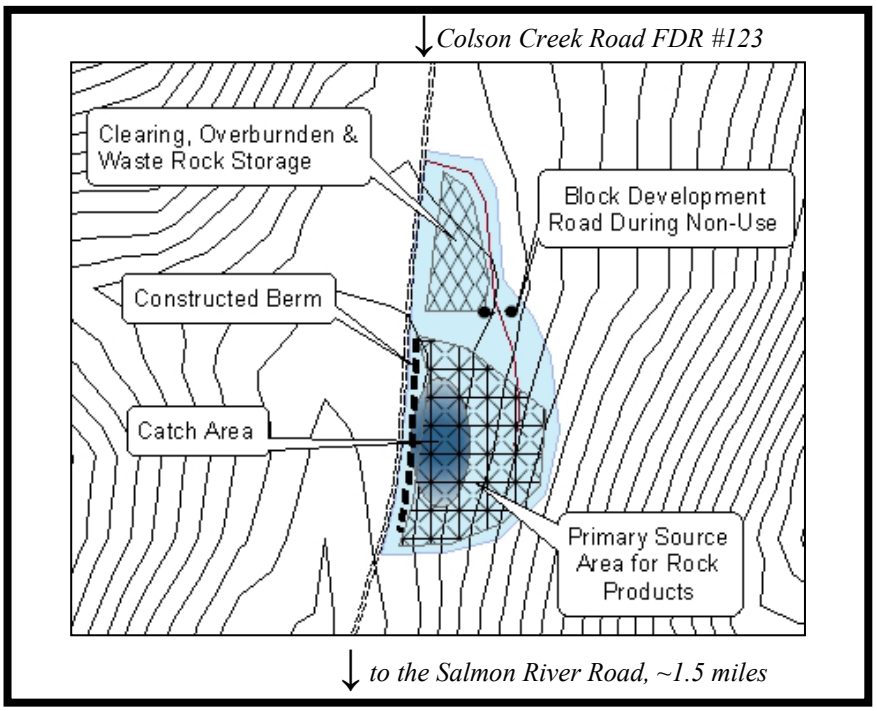
Introduction

The Salmon-Challis National Forest has prepared this Environmental Assessment (EA) in compliance with the National Environmental Policy Act (NEPA) and other relevant federal and state laws and regulations. This EA discloses the direct, indirect, and cumulative environmental impacts that would result from the proposal to develop a rock pit in the Colson Creek drainage. It also provides the supporting information for a determination to prepare a Finding of No Significant Impact (FONSI).

Additional documentation, including more detailed analyses of project-area resources, can be found in the project planning record located at the North Fork Ranger District Office, Salmon-Challis National Forest.

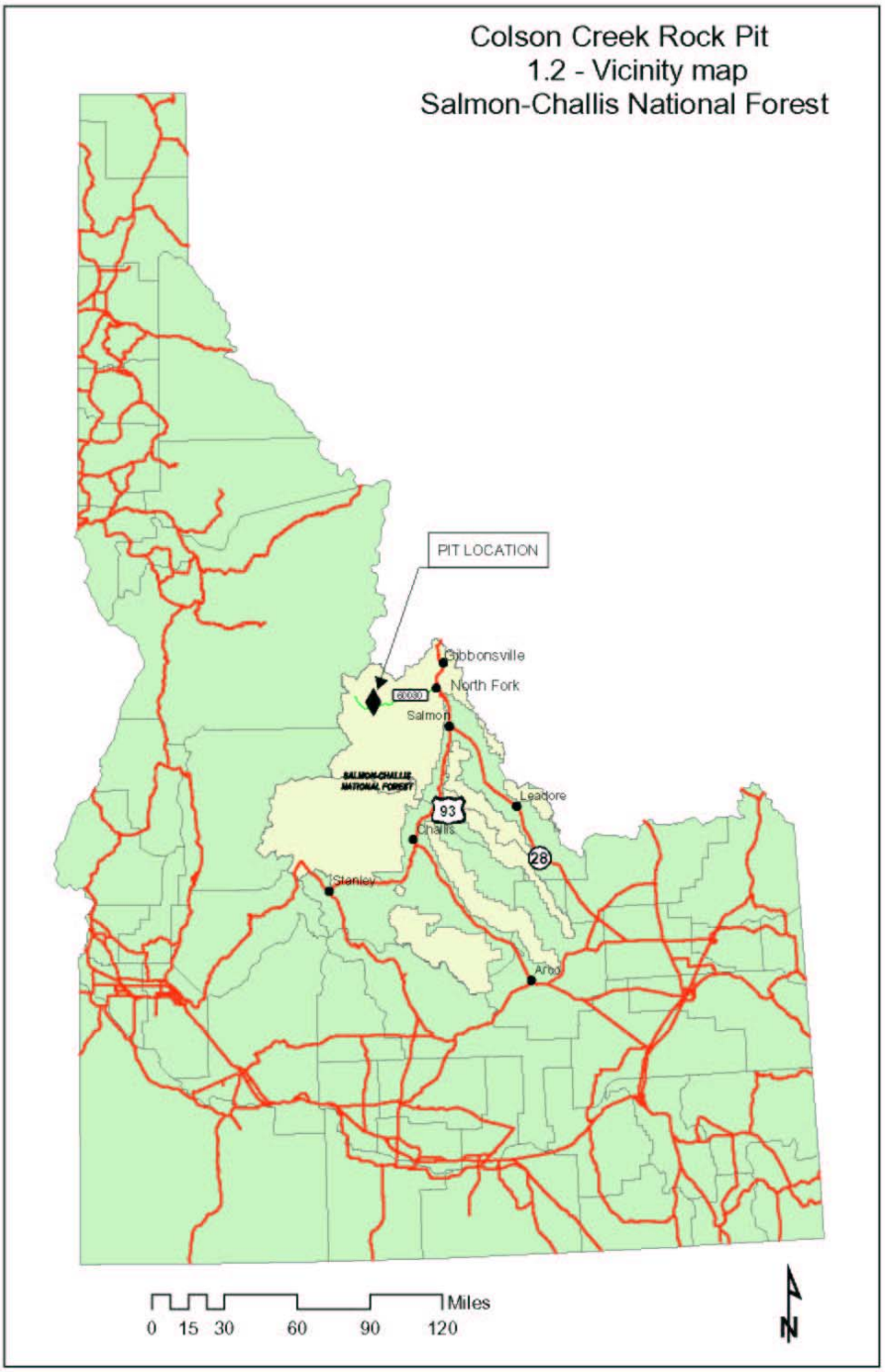
Proposed Action

The North Fork Ranger District on the Salmon-Challis National Forest proposes to develop a rock pit adjacent to the Colson Creek Road 1.6 miles up from the Salmon River Road, **Project Location Map 1.1 and Vicinity Map 1.2**. The legal description of the project location is T 23 N, R 16 E, NW ¼, SE ¼, Section 24 in FLRMP Management Area 4A – Big Game Winter Range. Management Area 4A emphasis is on managing key big game winter range to insure required forage and cover conditions exist to meet big game needs.



Project Location, Map 1.1

The primary product from the pit would be riprap type material, class 1 through 5, but may include crushed gravel products if the rock proves suitable. Crushing would likely occur on-site concurrent with road improvement projects on either the Salmon River Road or the Colson Creek Road.



Vicinity Map 1.2

Target rock material is in the rock outcrop at the south end of the project area, **Photo 1.1**. A shallow pit and berm would be used to catch rocks and prevent them from entering the Colson Creek Road or Colson Creek as the pit is developed.

Photo 1.1 - Colson Creek Road and Rock Out Crop

Vegetative clearing would occur on 1 ½ to 2 acres during the life of the pit resulting in the removal of an estimated 6 CCF of timber, **Photo 1.2**. Not all of the area would be cleared at one time. Only the area of operation at each entry would be cleared. The timber will be piled on site and sold commercially if there is a market.

Photo 1.2 - Vegetation

Vegetative slash, overburden (soil) and non-suitable rock would be stored on the flat area at the north end of the project area. It is anticipated that this material would be available for future reclamation and rehabilitation of the site when usable products are exhausted.

A short development road 500 to 800 feet in length would be constructed to access the top of the pit. Either an excavator or air-track drill would be used to remove the rock from the outcrop. The road would be constructed to the minimum width required to move the equipment into position. During non-use periods this road would be blocked using rock barriers at the approximate location as indicated in **Map 1.l**. The road will be for administrative use only and will be closed at the end of the pit life.

Dust control would be accomplished as needed by either watering or use of a chemical dust palliative to prevent fugitive dust and sedimentation along the Colson Creek Road. The primary trigger for implementing dust control would be the generation of observable dust. Incidental removal of a few loads for small projects would generally not create enough dust to justify the added expense of dust control. Palliatives are generally selected based on cost and surface materials to be treated. For short duration projects water may provide adequate control and economic efficiency.

Prior to the development of the pit the inside ditch and cross drain culverts will be cleaned. Hand-placed rock check dams will be placed on the sections of the Colson Creek Road with greater than 6% grade. The inside ditch will be completely rock lined through these sections after the pit is developed providing sufficient material.

Traffic control on the Colson Creek Road will occur during blasting and periods of heavy truck traffic. These may consist of short-term road closures and/or flagging as needed.

Appropriate fuel storage and fueling (Appendix 1 – Spill Prevention Plan) will be incorporated into the design and operation of the pit. Equipment used off road on the Salmon-Challis NF will be washed and inspected prior to mobilization for the project to prevent the spread and establishment of noxious weeds. Weed control measures will also include herbicide application.

This project would be initially implemented to fortify the Salmon River Road in the vicinity of Fountain Creek. After this initial need, the pit would be used on an as needed basis to supply of needed rock products for future projects.

Need for the Proposal

The need to develop a rock pit down stream of the Cove Creek Bridge arose when the Cove Creek and Pine Creek bridges were downgraded in load capacity in 2003. The load limits on the bridges were reduced significantly. Until the bridges are fixed it is cost prohibitive and inefficient to use rock sources upstream of the Cove Creek Bridge for repairs downstream of the bridge.

An immediate need exists to finalize repairs to the Salmon River Road at Fountain Creek where it was damaged by high water in the spring of 2003. There is also a need to develop a long-term riprap and road surfacing material source for the lower end of the Salmon River Road and adjacent areas in the interim before the two bridges are repaired and to reduce haul distances when repairing roads on the lower end of the Salmon River corridor.

There is also a need to develop a material source outside the federally designated Wild and Scenic Salmon River Canyon since source material adjacent to and along the Salmon River Road cannot be consistently used without impacting the outstandingly remarkable values within the Wild and Scenic River corridor, (FLRMP p. IV-155).

A test pit was completed in the Colson Creek location and determined that an adequate source exists.

The development of this rock pit will help to maintain the Salmon River Road to the standards defined in the Salmon National Forest Land and Resource Management Plan for an arterial road, FLRMP p. IV-65. Maintenance to these standards will help attain the forest goal of a transportation system that provides safe, economical, functional and environmentally sound access for managing and protecting the forest resources, FLRMP pg. IV-4.

Existing Condition

- **Forest Plan Management Area**

Management Area 4A – Big Game Winter Range. Management Area 4A emphasis is on managing key big game winter range to insure required forage and cover conditions exist to meet big game needs.

- **Transportation System**

There currently are no developed rock sources in the lower part of the Salmon River Canyon below the Cove Creek Bridge. The river road has experienced at least one wash out per year that required larger size rocks such as rip rap to repair the damage.

- **Watershed Resources**

The watershed analysis area for this project is the Colson Creek sub-watershed. This area was selected because it encompasses the geographic area that could contribute to direct and indirect effects to watershed resources, as well as cumulative effects from the proposed management activities.

- **Climate and Hydrology**

The climate of the analysis area is characterized by warm, dry summers and cool, moist winters. Average annual precipitation ranges from about 10 to 20 inches. Snowfall accounts for approximately 50 to 55 percent of the total annual precipitation. An average of less than 8 inches of water is yielded annually. The hydrologic response is very rapid. A large amount of overland flow does occur, due to the excess amount of rock, very steep slopes, and lack of adequate vegetation. Most runoff, however, usually occurs as shallow to moderately deep subsurface flow.

- **Drainage Basin Description**

Colson Creek is a perennial stream. Streamflows near the mouth range from late summer and winter flows of 2 cfs to 20 – 30 cfs during snowmelt runoff. The average yearly flow is approximately 6 cfs. Colson Creek is a tributary to the Salmon River.

- **Soil Resources**

The landscape is dominated by dissected mountain slopelands; steep, benchy mountain slopelands; and ridgelands. Fluvial action and freezing and thawing are major geomorphic processes that have shaped the landscape. The landtype classification that encompasses the proposed pit area is described as a steep canyonland in granite and border zone, hot dry site. Soils comprising this landtype have high inherent erosion hazard, a high to very high debris slide hazard, a very low slump hazard, and a high to very high surface creep hazard.

The proposed pit area is composed of Biotite Quartzite but is not represented at the scale used to develop the landtypes for this area. The quartzite parent material for the proposed pit area is a much more stable feature than the surrounding landtype.

- **Wildlife**

The entire Colson Creek drainage is the analysis area. The proposed project area contains wildlife habitat for various species, including elk, mule deer, black bear, blue and ruffed grouse, and a variety of nongame wildlife, including neo-tropical migratory birds (NTMBs), raptors, and other bird and small mammal species.

Habitat for federally listed threatened and endangered species including the gray wolf is available. The project area provides limited, if any, habitat for bald eagles and is not mapped as suitable habitat for Canada Lynx. Habitat for USFS-R4 designated sensitive species including flammulated owl, and Lemhi penstemon are also found in the vicinity of the proposed project area.

▪ Management Indicator Species

Management Indicator Species (MIS) are defined as "plant and animal species, communities, or special habitats selected for emphasis in planning, and which are monitored during forest plan implementation in order to assess the effects of management activities on their populations and the populations of other species with similar habitat needs which they may represent" (FSM 2620.5).

The Salmon-Challis National Forest recently amended its forest plans changing the species to be monitored to four that represent distinct habitat types found on the forest. Those four species are the Pileated Woodpecker for the coniferous community/habitat type; the Greater Sage-Grouse for the sagebrush community/habitat type; the Columbia Spotted Frog for the riparian habitat/community type; and the Bull Trout for the aquatic habitat/community type. (Proposed Amendments to the Management Indicator Species List for the Salmon and Challis Land and Resource Management Plans Environmental Assessment, DN/FONSI, February 2, 2004)

Within the project area habitat is largely unavailable and unsuitable for the spotted frog and greater sage-grouse; nesting habitat is not available for the pileated woodpecker and very little foraging habitat is present; and no Bull Trout are present in Colson Creek above the private land dam.

▪ Vegetation

The entire Colson Creek drainage is the analysis area. Noxious weeds are non-native plants that have been introduced to North America. The term "noxious" has been legally defined and applied to 35 Idaho weed species by the Idaho Department of Agriculture (Idaho Noxious Weed Law, 1994). At least 12 of these species have been found on the Salmon-Challis National Forest.

Spotted knapweed, a listed Idaho noxious weed, has been observed within the Colson Creek area since the early 1980s. It is established on suitable sites within the entire drainage, and particularly well established along most road and travelways, trails, and upland sites that have been subjected to disturbance. Of perhaps greatest concern is the spread of knapweed within healthy wildlands adjacent to and extending some distance away from roads.

Spotted knapweed occurs as scattered patches along the entire Colson Creek Road as well as along the entire Salmon River Road corridor (Rd #30) and adjacent upland sites. These patches persist along the road within the project area as well as off road within the vicinity of the proposed pit development activities. Infestations located immediately off road are somewhat limited by shade within dense conifers with well developed understories and lack of disturbance. However, knapweed has become well established in numerous patches that extend upslope in open grassland.

- **Fisheries**

The fisheries analysis area (FAA) is the Colson Material Pit Project Area, Colson Creek below the project area and the main stem Salmon River at the confluence with Colson Creek.

The FAA supports populations of coldwater resident and anadromous fish species. A private land dam within 0.5 miles of the main stem Salmon River blocks all fish species upstream migration. Adult steelhead fish have been observed in Colson Creek below the private land dam. Colson Creek supports rainbow trout and west slope cutthroat trout populations above the private land dam.

West slope cutthroat trout are the most widely distributed species throughout Colson Creek. There are no Endangered Species Act listed fish species in Colson Creek above the private land dam. No Bull Trout, Forest management indicator specie, are present in Colson Creek above the private land dam.

Fish population densities, distribution, and presence/absence are related to the 9 habitat elements for spawning and juvenile rearing fish. These 9 habitat elements include: spawning gravel, water quality, water quantity, water temperature, cover/shelter, food, riparian vegetation, space, and access/migration corridor. The 4 habitat attributes, for forested stream systems include: temperature, width-to-depth ratios, large woody debris, and pool frequency. These 9 habitat elements and 4 habitat attributes are directly or indirectly related to the fisheries resource measurement indices used in this analysis.

The project area lies within the Colson Creek drainage in the Lower Salmon River Endangered Species Act Section 7 Watershed.

Colson Creek is a small high gradient 3rd order fish-bearing stream with a mean width of approximately 5.0 feet that flows into the mainstem Salmon River. Colson Creek supports a spawning and rearing westslope cutthroat trout population. The Colson Creek stream gradient overall is greater than 10% and is a Rosgen Stream Type A3.

The majority of stream habitat within the FAA is on public land (5.6 miles or 91%); private land accounts for 0.5 miles or 9% of productive fish habitat stream miles. There is one private land dam and eight public land culverts that are total or partial upstream fish migration barriers.

Decision Framework

The North Fork District Ranger will decide if rock pit development should be implemented at the Colson Creek site. If the decision is to proceed with the project, the District Ranger will evaluate if the proposal adequately provides for the protection of other resources. If the analysis determines that additional resource protection is needed,

the District Ranger will either modify the proposal or consider the use of mitigation measures in order to avoid unnecessary resource impacts.

Agencies and Persons Consulted

The following agencies were consulted:

State Historic Preservation Office, US Fish and Wildlife Service, NOAA Fisheries, Corps of Engineers, Shoshone-Bannock Tribes, Idaho Department of Fish and Game, Idaho, Department of Environmental Quality, and Idaho Department of Water Resources.

Public Involvement

The project proposal was published in the Schedule of Proposed Actions (SOPA) for the 1st, 2nd and 3rd quarters of 2004 (January – August). The SOPA is published on the Forest web page and is mailed to approximately 150 people and organizations. A legal notice announcing scoping of the project was published in the Salmon, Idaho "Recorder-Herald" newspaper on February 5, 2004. Scoping letters were sent to 50 persons and organizations on February 2, 2004, the letter was also published on the Forest's web page under "Projects and Plans".

This analysis was completed under the revised 36 CFR 215 appeal regulations, effective June 4, 2003. These revised regulations have stringent requirements on commenting. The applicable requirements were included in the scoping letter and in the legal ad.

The district received six letters from groups and individuals in response to the scoping letter; these comments were used in the analysis. The summarized comments can be found in Appendix 2.

An Interdisciplinary Team was formed to analyze the proposals effects on the environment. Specialist reports can be found in the project file and their findings are incorporated in this document.

Issues

As a result of public and internal scoping a number of concerns about the effects of the proposal on various resource areas were identified. These concerns were evaluated to determine their significance. Significant issues are defined as those directly or indirectly caused by implementing the proposed action. Non-significant issues fit into the following categories: 1) they are outside the scope of the proposed action; 2) they have already been decided by law, regulation, Forest Plan, or other higher level decision; 3) are irrelevant to the decision to be made; or 4) are conjectural and not supported by scientific or factual evidence. Issues that are non-significant will be eliminated from detailed study.

The Forest Service did not identify any significant issues pertaining to this project.

Some concerns mentioned in the response letters have been addressed in the design of the rock pit and some concerns involve State and Federal laws which must be followed.

The Endangered Species Act, the National Forest Management Act and Forest Service Manual Regulations require that National Forests provide for the maintenance of viable populations of listed species. Biological Assessments and Biological Evaluations for Wildlife, Fish and Plant listed species have been completed for this project. These documents are in the project file.

Other Environmental Concerns or Considerations

Visual Quality / Recreation Uses / Roadless Areas
There are no significant issues related to visuals or recreation and there are no Roadless areas involved within the project area.

Old Growth
There are no identified old growth retention stands in the proposed project area. Old growth will not be impacted by these proposed project activities.

Heritage Resources

Forest archeological personnel conducted a heritage resource inventory at the proposed pit location. The proposed action will have No Effect to any heritage resources eligible to the National Register of Historic Places. Results of the survey were sent to the State Historical Preservation Office for concurrence. The letters of concurrence are in the project file.

Issues outside the Scope

Comments received in response to scoping included some issues that are beyond the scope of this proposed action. Those issues are summarized in this section and can be found in their entirety in the project file.

- Use stockpiled material from "Mine Hollow". It was suggested that this material would make excellent road base material. This suggestion is beyond the scope of this proposal which is to develop a pit for rip rap material. Other uses of the rock from the pit are incidental, as in crushed gravel. The primary purpose for a pit is to obtain a long term supply of rip rap.

- A request for parking enforcement on the Salmon River Road and to widen the narrow areas of the Salmon River Road to 35 ft. Both of these suggestions are beyond the scope of the proposed project of developing a rock pit at the proposed Colson Creek site.

Chapter 2 – Alternatives

This section provides a detailed description of the proposed action which address the purpose and need of this project. The alternative is consistent with the Salmon National Forest Land and Resource Management Plan. All applicable standards and guidelines have been incorporated in the design of the proposed action.

There were no issues that could not be resolved with the proposed action, therefore there is only one action alternative.

Alternatives considered in Detail

Alternative 1 – No Action

This alternative, required by the National Environmental Policy Act (NEPA), would be to leave the proposed material source pit undeveloped. This alternative represents the existing condition against which the action alternative is compared.

Alternative 2 – Proposed Action

See description in proposed action above.

Alternatives considered but eliminated from detailed study

The following alternatives were considered during the planning process but were not studied in detail.

- Terrace scree slopes adjacent to the Salmon River Road to make parking areas and widen the road. This alternative was not considered because a rock source cannot be developed within the wild & scenic river corridor (FLRMP IV-154). Scree rock is also not large enough to be used as rip rap.

- Use rocks that fall from the cliffs along the river road. This alternative is not feasible because the fallen rocks are not a consistent quantity or quality.

- Using rock from a source other than the proposed Colson Creek location was not further analyzed because it is cost prohibitive. The closest rock source known to exist is approximately 8 miles up the Panther Creek Road. This option was dropped from further consideration due to the additional haul distances and because large heavy loads cannot be hauled over the Cove Creek bridge. An off site source would significantly raise the cost and lower the efficiency of any projects on the lower Salmon River Road.

Chapter 3 – Environmental Consequences

This chapter discusses the environmental consequences of the proposed action compared to the no action alternative. The Direct, Indirect and Cumulative effects are considered in each resource.

Past, present and reasonably foreseeable future actions are considered in the cumulative effects analysis. For all resources the following actions were considered:

Action	Past	Present	Reasonably Foreseeable Future
Proposed Action Material Pit Development			**X**
Fires, wild and management ignited	**X**	**X**	**X**
Commercial Timber Sales	**X**		
Personal use and commercial firewood harvesting	**X**	**X**	**X**
Motorized recreation, all seasons		**X**	**X**
Noxious Weeds	**X**	**X**	**X**
Private Land Development and Activities	**X**	**X**	**X**
Private Land Road Development, ingress and egress	**X**	**X**	**X**
Special Use Permits	**X**	**X**	**X**

▪ Watershed Resources

Alternative 1 – No Action

This alternative would not address the immediate need to finalize repairs to the Salmon river Road at Fountain Creek or the need to develop a long-term riprap and road surfacing material source for the lower end of the Salmon River Road and adjacent areas.

Direct and Indirect Effects Development of the Colson Creek rock source pit will not occur under this alternative so there will be no direct or indirect effects associated with this alternative. The Colson Creek watershed will maintain its low risk rating. Colson Creek will continue to meet state water quality standards and beneficial uses will be maintained at their present level.

Cumulative Effects This alternative in combination with past, present, and future proposed federal, state, and private activities in the Colson Creek watershed will not cumulatively have an effect on the Colson Creek watershed.

Alternative 2- Proposed Action

Direct and Indirect Effects The direct effects related to pit development include removal of trees from the three-acre site and effects from hauling materials from the site. The potential for large rocks rolling directly into the stream during development will be contained by a constructed berm along the inside of the road to keep materials in the pit working area. The removal of trees from the three acre site will not measurably change the 4.2 percent of the watershed in stands less than thirty years old. The increased traffic along the haul roads in Colson Creek will be mitigated by adding rock to the inside ditch and a dust palliative if conditions dictate or a predetermined use threshold is met. Detailed results from WEPP: Roads modeling of the rocked ditch mitigation can be found in the Soil Resources- Affected Environment section of this document. Fuel and chemical storage at gravel pit sites will be properly contained. The pit areas will be internally drained keeping storm water and sediment on site.

Cumulative Effects Cumulative effects to water resources are essentially the same as those described for the No Action Alternative. The risk of adverse cumulative watershed effects was calculated and found to be low for Colson Creek. Road density would not increase as a result of the action alternatives, therefore the risk of adverse cumulative effects based on road density and percentage of stands less than 30 years old would not change from the existing condition. With the design elements described above in combination with the haul road treatments no substantial impacts are predicted to occur as a result of the action alternative in conjunction with the ongoing and proposed projects.

Consistency with the Forest Plan The desired condition for watershed resources as stated in the Land and resource Management Plan for the Salmon National Forest (FLRMP IV-90) is to maintain watershed conditions and water quality such that downstream beneficial uses are protected and compliance with State water quality standards is achieved. This project would be consistant with the forest plan desired condition.

▪ Soil Resources

The analysis presented here will focus on erosion and sediment delivery, and maintenance of site productivity.

The “WEPP:Road model” (an interface of the WEPP model[Water Erosion Prediction Project]) was used as an analytical tool to evaluate percent reduction in erosion from road surfaces and sediment yield to streams.

Alternative 1 – No Action

This alternative would not address the immediate need to finalize repairs to the Salmon river Road at Fountain Creek or the need to develop a long-term riprap and road surfacing material source for the lower end of the Salmon River Road and adjacent areas.

Direct and Indirect Effects No development of a material source would occur in Colson Creek under this alternative, therefore no project-related effects would occur.

To address the potential rates of erosion and sediment delivery for the No Action Alternative three gradient scenarios were evaluated using WEPP: Road. This provided the projected level of erosion and sediment delivery from the road systems and the basis to compare the action alternatives. The projected soil erosion and sediment delivery rates are displayed in Table 4-1. Under the No Action alternative the level of sediment erosion and delivery would remain the same as the current condition. The accuracy of the projected rates is, at best, plus or minus 50 percent. Any predicted runoff or erosion value, by any model, will be within only plus or minus 50 percent of the true value (Elliot, 2000). Total resource commitments would not change from the existing condition under the No Action Alternative.

Table 4-1: A comparison of Projected Sediment Delivery Rates of the No Action and Action Alternatives for representative road grades. For comparison of haul effects alternatives were modeled with yearlong haul. Estimates do not consider the effects of dust abatement.

Colson Creek	No Action Low Traffic Bare Ditch	Proposed Action High Traffic Bare Ditch	Proposed Action Low Traffic Rocked Ditch	Proposed Action High Traffic Rocked Ditch
4% Grade	Current condition	165% increase	54% decrease	31% increase
8% Grade	Current condition	185% increase	57% decrease	83% increase
12% Grade	Current condition	199% increase	48% decrease	108% increase
Average	Current condition	183% increase over the current condition	53% decrease below the current condition	74% increase over the current condition

Cumulative Effects These activities are not expected to contribute to substantial adverse cumulative effects to soil resources within the analysis area.

Alternative 2 – Proposed Action

Direct and Indirect Effects Between the no action and action alternatives the WEPP: Road model predicts a net reduction in sediment yield of 55 percent from the Colson Creek road (Table 4-2). If in the future the proposed pit experiences heavy use with two months of haul traffic (Pete Schuldt, USDA Forest Service personal communication) the model predicts a decrease in sediment yield of 18% (Table 4-2). The model predictions show that by rocking the inside ditch and providing adequate drainage the yearly average sediment yield from the 1.6 mile haul section of the Colson Creek road will be below the

current condition. The addition of dust palliatives when heavy traffic is predicted will enhance the effectiveness of the road treatments and reduce airborne transport of fine particles to the stream.

Table 4-2: Modeled estimates of sediment yield from the road surfaces for the proposed alternatives assuming a maximum 2 month work period per year. Estimates do not consider the effects of dust abatement.

Colson Creek	**No Action Low Traffic Bare Ditch**	**Proposed Action High Traffic Bare Ditch**	**Proposed Action Low Traffic Rocked Ditch**	**Proposed Action High Traffic Rocked Ditch**
8% Average Grade	Current condition	32% increase	55% decrease	18% decrease

Dust-control agents such as magnesium chloride will contribute to the stabilization of the road surface and the reduction in sediment production. Dust-control agents have been shown to reduce dust production by 50 to 70 percent as compared to no treatment (Bader 1997) and when used along with aggregate surface can reduce road-surface sediment production by as much as 80 to 90 percent as compared to unsurfaced roads, depending on the treatment used and specific site conditions (Burroughs and King 1989).

Cumulative Effects Cumulative effects to soil resources are essentially the same as those described for the No Action Alternative. The past, ongoing, and proposed activities are not expected to contribute to substantial adverse cumulative effects to soil resources within the analysis area.

Consistency with the Forest Plan The No Action Alternative and Action Alternative meet Forest Plan Standards for soil resource management. Detrimental soil disturbances would not exceed 20 percent of the activity area and total resource commitment would not exceed 5 percent of the activity area.

▪ Wildlife

Analysis Methods
Data gathered to support this analysis were obtained from field reviews and surveys from 1991 to present.

Alternative 1 – No Action

Direct and Indirect Effects This alternative would sustain current habitat conditions for wildlife.

Cumulative Effects This alternative would sustain current habitat conditions for wildlife.

Alternative 2 – Proposed Action

Direct and Indirect Effects Some wildlife species such as birds and small mammals may be temporarily displaced due to disturbance activities. Because large scale changes in habitat will not occur, the status of wildlife species and the habitats that support them will not be significantly influenced by the implementation of this alternative.
The proposed project area was searched for evidence of pileated woodpecker feeding and nesting activities during October 2003; no such activities were identified. Additionally surveys for pileated woodpecker were completed in the Colson Creek drainage, including the project area, during April 2004. No pileated woodpeckers were found. There are no known population trends for pileated woodpeckers within the Central Idaho Mountains Ecological Resource Unit (ERU), other than the Breeding Bird Survey data and some limited surveys related to project analyses. However, Wisdom et al. (2000) estimates an increase of 21 percent in source habitat, from historical to current times, for this species within the Central Idaho Mountains ERU, which includes essentially all of the Salmon-Challis Forest. This species is unlikely to be affected by the proposed project because of the lack of individuals, limited available habitat, and that large scale changes in successional stages of forested habitat will not occur.

Surveys for Lemhi penstemon were completed during July 2004; no plants were found within the project area. No negative and/or measurable impacts to threatened, endangered, proposed or sensitive species are anticipated (Wildlife and Plants, BA/BE Haggas, April 2004).

Cumulative Effects Because large scale changes in habitat will not occur, the status of wildlife species and the habitats that support them will not be significantly influenced by the implementation of this alternative.

▪ Vegetation

Analysis Methods
Data gathered to support this analysis were obtained from field reviews and surveys from 1991 to present throughout the Indian Creek drainage.

Alternative 1 - No Action

Direct and Indirect Effects Areas already colonized by noxious weeds will naturally increase in size unless treated. This is particularly true along roadways and other disturbed sites, especially when the adjacent habitat types are susceptible to invasion. Weed density may also increase depending on the resistance of the existing vegetation.

Cumulative Effects All actions have the potential to impact the spread of noxious weeds and will continue to do so unless preventative and/or control measures are implemented. Of these actions, only the noxious weed treatment activities are likely to reduce weed density and spread in select areas. Areas subjected to invasion by noxious weeds will likely increase unless control measures are implemented. A change in species diversity

together with a potential replacement of established desirable vegetation along roadsides may occur over the long term. This situation can produce adverse impacts on watershed quality by the replacement of desirable species that help control erosion along roadways and within upland sites (Lacey et al 1989). Long term impacts to erosion control and watershed quality may be at risk.

The risk of noxious weed spread and subsequent colonization of adjacent upland native communities is also of concern. Areas are steadily being converted from native plant communities to those dominated by exotic species. A few decades of landscape level impacts will likely include degraded and/or decreased forage available for wildlife and livestock, decreased species diversity, increased risk of additional invasion by exotics and subsequent changes in recreational use patterns.

Alternative 2 – Proposed Action

Direct and Indirect Effects Initially, the risk of potential importation and/or spread of existing noxious weed populations will likely increase above the natural rate of expanding weed populations due to ground disturbing activities associated with pit development and road construction. Ground disturbance is likely to expose buried knapweed seeds to conditions of light and moisture that favor germination. This is of special concern because knapweed seeds are viable in the soil for long periods of eight to ten years. Weed seeds can then be easily transported throughout the project area on equipment, personnel, and wildlife, and facilitate weed spread. However, infested acres within the project area are not anticipated to increase with the implementation of the proposed project design.

Cumulative Effects All actions have the potential to impact the spread of noxious weeds and will continue to do so unless preventative and/or control measures are implemented. Of these actions, only the proposed action and noxious weed treatment activities are likely to reduce weed density and spread in select areas. Areas subjected to invasion by noxious weeds will likely increase unless control measures are implemented. A change in species diversity together with a potential replacement of established desirable vegetation along roadsides may occur over the long term. This situation can produce adverse impacts on watershed quality by the replacement of desirable species that help control erosion along roadways and within upland sites (Lacey et al 1989). Long term impacts to erosion control and watershed quality may be at risk.

The risk of noxious weed spread and subsequent colonization of adjacent upland native communities is also of concern. Areas are steadily being converted from native plant communities to those dominated by exotic species. A few decades of landscape level impacts will likely include degraded and/or decreased forage available for wildlife and livestock, decreased species diversity, increased risk of additional invasion by exotics and subsequent changes in recreational use patterns.

▪ Fisheries

Alternative 1 – No Action

Direct and Indirect Effects Under the no action alternative, there would be no development of a materials pit in the Colson Creek drainage. There would also be no road maintenance activities associated with the pit development.

R1/R4 Stream Habitat Inventory:
Current stream habitat trends and natural fluctuations in stream flow timing and magnitude would continue. Although changes may occur, they would be in response to natural events. Continued natural trends and fluctuations in channel morphology are also expected.

Fish Presence/Absence and Population:
Strong self-sustainable populations of both anadromous and resident fish characterize the desired future condition for fish species in this project's analysis area. Fish distribution and densities are expected to remain near current conditions. In general, the fish populations within the FAA would be considered Functioning at Risk because of the stream connectivity problems.

Stream Sediment % Fines by Depth:
Continued natural trends and fluctuations in percent fines by depth are expected because no change in stream habitat conditions or riparian/upland habitats would occur because of human activities. Although changes may occur, they would be in response to natural events.

Stream Temperature:
Water temperature of the streams in the Fisheries Analysis Area (FAA) would continue to fluctuate naturally because no change in stream habitat conditions or riparian/upland habitats would occur because of human activities.

Stream Connectivity:
Stream connectivity would continue to be a problem with one private land dam and eight fish barrier culverts on public land.

Cumulative Effects This alternative in combination with past, present, and future proposed federal, state, and private land activities in the Colson Creek drainage will not cumulatively have a negative effect on Colson Creek.

Alternative 2 – Proposed Action

Direct and Indirect Effects Determinations of the effects of the development and use of the Colson Creek Materials Pit activities upon the fisheries resources analyze the effects on the measurement indices.

The Salmon National Forest Soil and Water Standard and Guidelines, Best Management Practices (BMPs), PACFISH, INFISH, Forestry BMP's for Idaho (2000), and site-specific soil/water/fisheries mitigation measures are designed to address, minimize, and eliminate potential impacts, from these activities to fish and fish habitat. Implementation of the above measures shall ensure 1) sediment generated as a result of these activities is both minimized and intercepted before entering stream channels, 2) riparian integrity is maintained or enhanced to ensure adequate shading of stream channels, future LWD recruitment is maintained or enhanced, and the retention of streams overhead cover from predators, 3) activities do not result in physical or chemical fish immigration or emigration problems, 4) transportation route crossings of streams containing fisheries resources are designed and maintained to accommodate fish species specific migration needs, 5) basin harvest intensity is constrained to levels which do not produce significant modification of peak streamflow intensities and/or timing, and 6) State Water Quality for Coldwater Biota and salmonid spawning are met or exceeded.

These proposed activities and objectives are consistent with the PACFISH Timber Management standard/guideline TM-1 page C-10 (TM-1 b. "Apply Silvicultural practices in a manner that does not retard attainment of Riparian Management Objectives and that avoids adverse effects on listed anadromous fish."), with the PACFISH Roads Management standard and guidelines (RF-1 thru RF-5 pages C-10 thru C-12), with the PACFISH Minerals Management standard and guidelines (MM-1 thru MM-6 pages C-13 thru C-15), with the PACFISH Recreation Management standard and guidelines (RM-1 thru RM-3 page C-13), and with the General Riparian Area Management standard/guidelines RA-1 thru RA-5 page C-17.

These proposed activities and objectives are also consistent with the INFISH Timber Management standard/guideline TM-1 page A-7, with the INFISH Roads Management standard and guidelines (RF-1 thru RF-5 pages A-7 thru A-8), with the and INFISH Minerals Management standard and guidelines (MM-1 thru MM-6 pages A-9 thru A-10). With the INFISH Recreation Management standard and guidelines (RM-1 thru RM-3 pages A-9), and with the General Riparian Area Management standard/guidelines RA-1 thru RA-5 page A-12.

R1/R4 Stream Habitat Inventory:
The project as designed and planned would maintain the measurement indices: width-to-depth ratio, large woody debris, and pool frequency. Rationale: There would be no ground disturbing activities that would be introducing measurable amounts of sediment into stream channels. There are no ground disturbing activities, associated with the materials pit's activities within the

SNFLRMP designated filter strip width. This filter strip is designed to intercept potential sediment delivery to a stream channel.

Fish Presence/Absence and Population:
The project as designed and planned would maintain the measurement indices fish species presence and population trends. Rationale: There would be no activities degrading fish habitat parameters or having a negative impact directly or indirectly on the fish species, including threatened, endangered, proposed, or sensitive species and their critical habitat (Fisheries BA/BE, Garcia, August 2004).

Stream Sediment % Fines by Depth:
The project as designed and planned would maintain or restore the measurement indices stream sediment % fines by depth. Rationale: There would be no ground disturbing activities that would be introducing measurable amounts of sediment into stream channels. There is no ground disturbing activities, associated with the materials pit's activities within the SNFLRMP designated filter strip width. This filter strip is designed intercept potential sediment delivery to a stream channel. The pit would be designed to be self-draining. There would be no overland water flow coming from the pit. The road maintenance activities would reduce road surface sediment runoff into Colson Creek.

Stream Temperature:
The project as designed and planned would maintain the measurement indices stream temperature. Rationale: There would be no shade component removed between the road and Colson Creek. The trees removed from within the pit area would have no measurable affect on stream temperatures within Colson Creek because the drainage is a narrow confined watershed where the steep terrain plays an important role in shading the stream channel.

Stream Connectivity:
The project as designed and planned would maintain the measurement indices stream connectivity. Rationale: The activities associated with the materials pit development would have no effect on existing fish migration barriers and will not create any new fish migration barriers. The activities would also not have any effect on dewatering any stream channels or restoring fish migration opportunities.

Road Density:
This project as designed would have no effect on road density and would have NO change to the low watershed risk rating.

Percent of stands less than 30 years:
The removal of trees from the material pit area will not measurably change the 4.2 percent of the watershed in stands less than 30 years old. The removal of

the trees on these three acres would have immeasurable effects to fish and fish habitat and would have NO change to the low watershed risk rating.

Cumulative Effects

R1/R4 Stream Habitat Inventory:
The project as designed and planned along with the list of projects to be considered cumulatively would maintain the measurement indices: width-to-depth ratio, large woody debris, and pool frequency. Rationale: Because the activities associated with this alternative would not be degrading stream banks, would not be reducing existing or future large woody debris recruitment, and would not be decreasing pool frequency.

Fish Presence/Absence and Population:
The project as designed and planned along with the list of projects to be considered cumulatively would maintain the measurement indices fish species presence and population tends. Rationale: There would be no activities degrading fish habitat parameters or having a negative impact directly or indirectly on the fish species.

Stream Sediment % Fines by Depth:
The project as designed and planned along with the list of projects to be considered cumulatively would maintain the measurement indices stream sediment % fines by depth. Rationale: The materials pit design and road maintenance activities are designed to minimize and prevent road sediment delivery to stream channels.

Stream Temperature:
The project as designed and planned along with the list of projects to be considered cumulatively would maintain the measurement indices stream temperature. Rationale: The materials pit design and the road maintenance activities are designed to minimize and prevent road sediment delivery to stream channels. And there would be no overstory removal of trees providing shade to stream channels.

Stream Connectivity:
The project as designed and planned along with the list of projects to be considered cumulatively would maintain the measurement indices stream connectivity. Rationale: The materials pit design and the road maintenance activities would not create any new fish migration barriers but at the same time will not be restoring fish migration at the private land dam and the eight identified fish migration barrier culverts within the FAA.

Road Density:
The project as designed and planned along with the list of projects to be considered cumulatively would maintain the measurement indices road

density. Rationale: There would be no road construction outside of the disturbed area of the pit. There would be immeasurable effects to fish and fish habitat and would have NO change to the low watershed risk ratings.

Percent of stands less than 30 years:
The project as designed and planned along with the list of projects to be considered cumulatively would maintain the measurement indices percent of stands less than 30 years. Rationale: The removal of trees from the material pit area will not measurably change the 4.2 percent of the watershed in stands less than 30 years old. The removal of the trees on these three acres would have immeasurable effects to fish and fish habitat and would have NO change to the low watershed risk rating.

- **Transportation System**

Alternative 1- No Action

Direct and Indirect Effects Making road repairs on the Salmon River Road and collector roads will be more costly and complex to accomplish if a rock pit is not developed below the Cove Creek Bridge.

Cumulative Effects The effect of the No Action alternative would not have a cumulative effect on the transportation system as is.

Alternative 2 - Proposed Action

Direct and indirect Effects The development of a rock pit in the lower Salmon River Canyon will reduce haul distances making road repairs on the Salmon River Road and collector roads more economical and efficient.

Cumulative Effects The effect of the proposed action would not result in a greater effect when considering all past, present and foreseeable future actions in the project area.

Appendix 1

Spill Prevention Control and Countermeasures

The EPA requires Spill Prevention Control and Countermeasures (SPCC) plans for non-transportation storage facilities under 40 CFR 112 when one of the following conditions exists:

1. Above ground storage exceeds 1320 gallons or a single storage container exceeds 660 gallons.
2. Underground storage exceeds 42,000 gallons.
3. Facilities which due to location or capacity could be reasonably expected to discharge into waters of the United States if a spill occurs.

Spill control and countermeasures plans that fall under 40 CFR 112 is required to be certified by a professional engineer as to having met good engineering practices and met the requirements of the regulation.

Transportation of fuel, explosives and other hazardous materials is regulated by the Department of Transportation. Small quantities (explosives excepted) are generally exempt from special handling regulations as they are considered materials of trade and are transported on an as needed basis in quantities that do not require more than short-term storage. An example of this would be the pickup mounted fuel tank that is used to transport fuel to a work site but is not intended as a storage facility.

Requirements as they apply to the Colson Creek Pit

The Colson Creek Pit is will be operated on an intermittent and small-scale basis. It is not anticipated that fuel, explosives, pesticides etc. would be transported or stored in quantities that would require the development of a SPCC plan for on site storage. Transportation would be in quantities that fall within either the Materials of Trade category or by qualified drivers with HAZMAT endorsements and operating appropriate vehicles used to transport the material.

Spill Prevention

In order to prevent or minimize risks associated with the servicing and fueling of equipment, implement the following practices:

- Inspect equipment and replace or repair suspect hydraulic hoses, fittings etc. prior to mobilization.
- Avoid to the extent possible major service in the field. If oil changes, substantial service to hydraulic systems or like repairs need to be made in the field, utilized to the extent possible drip pans, extractors or other means to capture fluids.
- Fueling and servicing of equipment will occur well away from surface water at a location within the pit that allows access to both the transport vehicle and the equipment.

- To prevent fuel spills resulting from overflow of the tank being fueled, fueling must be attended while pump is running.
- Transport the minimum amount of fuel needed to complete work on a daily basis, avoid storing fuel on site where possible.

Spill Control

If a spill occurs, implement the following practices:

- Minimize the spread of the spilled material through use of absorbent materials, dikes or other methods to contain the spread of spilled materials.
- Remove and dispose of contaminated materials or soils following prescribed methods of disposal for the material spilled. The Forest Hazmat coordinator may be able to help implement any cleanup that is required.