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Environmental Assessment

Hawkins Rock Source Expansion

**Detroit Ranger District
Willamette National Forest
Linn County, Oregon**

T. 11 S., R. 6 E., Section 8, SE ¼ of NW ¼

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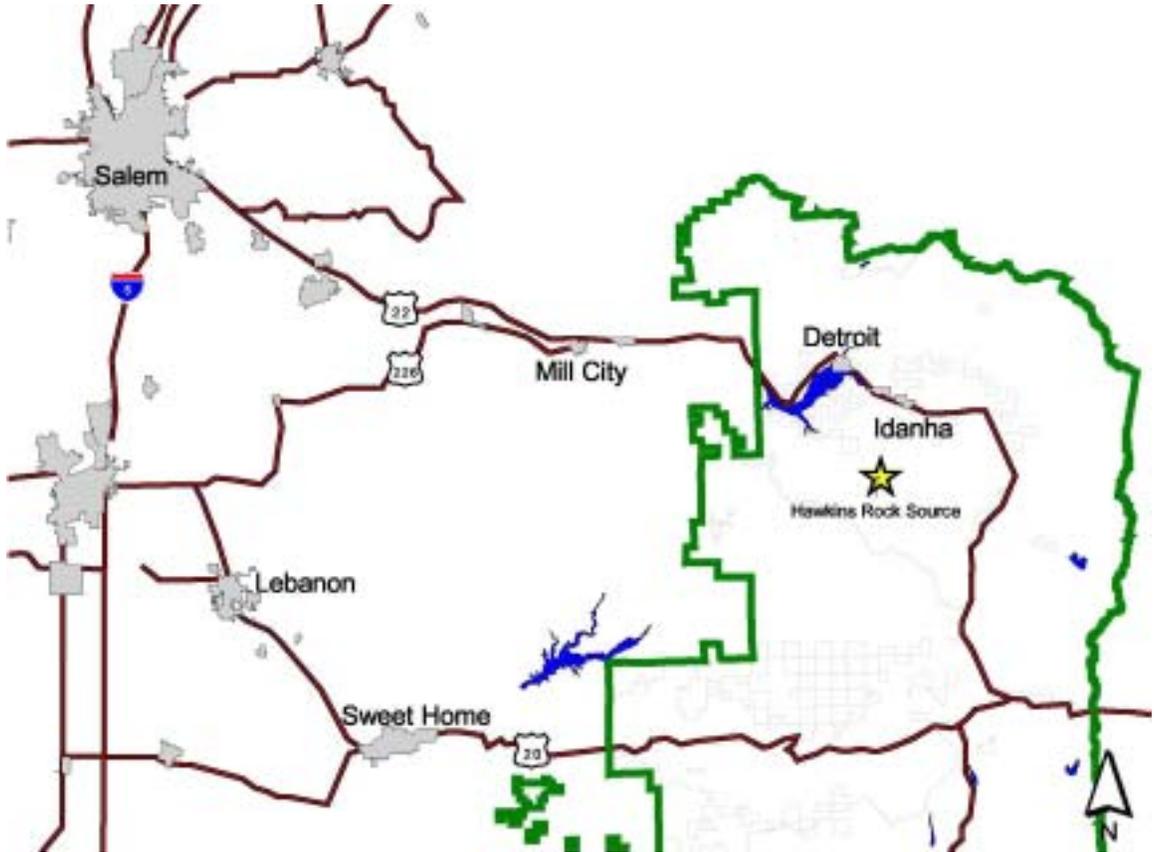
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SUMMARY

The Willamette National Forest proposes to expand its existing Hawkins rock source in order to provide aggregate for road reconstruction and maintenance. There is an immediate need for material from the rock source in the Blowout Road Maintenance project, which has been approved and funded in accordance with the “Rural Schools and Self-Determination Act of 2002 (also known as “Payments to Counties” or Title II).

The proposed expansion area is located on the edge of the existing, developed rock source in an 18 year-old conifer plantation. It is approximately 2 miles west of Cub Point and 0.82 miles north of the confluence of Blowout Creek and Hawkins Creek at an elevation of approximately 2400 feet. Blowout Creek is a major tributary of the North Santiam River at the Detroit Reservoir. The site is at approximate milepost 0.8 of FS Rd. 1013 in T. 11 S., R. 6 E., Section 8, SE of NW and is within the Detroit Ranger District, Willamette National Forest, Oregon.





This action is needed, because within its current development area, the rock source may not provide sufficient material to meet the immediate need in the Blowout Road Maintenance project. It would definitely be insufficient for longer-term aggregate needs in the area.

The proposed action may:

- Increase sediment in runoff and streams from expansion, reclamation, and processing.
- Provide opportunity for spread of noxious weeds
- Affect habitat quality for Northern spotted owls and peregrine falcons due to noise of equipment
- Affect big game winter range due to loss of one acre of hiding cover

In addition to the proposed action, the Forest Service also evaluated the following alternatives:

- *No action: continue to use the rock source within its currently developed area for as long as it can produce material, then discontinue its use.*

Based upon the effects of the alternatives, the responsible official will decide whether or not to expand the rock source.

INTRODUCTION

Document Structure

The Forest Service has prepared this Environmental Assessment in compliance with the National Environmental Policy Act (NEPA) and other relevant Federal and State laws and regulations. This Environmental Assessment discloses the direct, indirect, and cumulative environmental impacts that would result from the proposed action and alternatives. The document is organized into four parts:

- *Introduction:* The section includes information on the history of the project proposal, the purpose of and need for the project, and the agency's proposal for achieving that purpose and need. This section also details how the Forest Service informed the public of the proposal and how the public responded.
- *Comparison of Alternatives, including the Proposed Action:* This section provides a more detailed description of the agency's proposed action as well as alternative methods for achieving the stated purpose. These alternatives were developed based on significant issues raised by the public and other agencies. This discussion also includes possible mitigation measures. Finally, this section provides a summary table of the environmental consequences associated with each alternative.
- *Environmental Consequences:* This section describes the environmental effects of implementing the proposed action and other alternatives. This analysis is organized by environmental component. Within each section, the affected environment is described first, followed by the effects of the No Action Alternative that provides a baseline for evaluation and comparison of the other alternatives that follow.
- *Agencies and Persons Consulted:* This section provides a list of preparers and agencies consulted during the development of the environmental assessment.

Additional documentation, including more detailed analyses of project-area resources, may be found in the project planning record located at the Detroit Ranger District Office in Detroit, Oregon.

Background

The 1996 flood event in northwestern Oregon resulted in areas of extreme damage to Forest Service roads. Blowout Road was destroyed in several areas along several miles of its length. Some of the necessary repair work could not be done with emergency funds such as ERFO. Though the "Rural Schools and Self-Determination Act of 2002 (also known as "Payments to Counties"), funding has become available for projects that would otherwise be unfunded. The Blowout Road Maintenance project has been approved and funded under this Act. In order to perform the funded repairs to the road, a source of quality aggregate rock is necessary. The Hawkins rock source is the most appropriate source. It has provided an abundance of basaltic aggregate (common variety minerals, as defined in the Materials Act of 1947) for Forest and Highway road construction and maintenance on the Detroit Ranger District for over 30 years. Within its current development area, however, the rock source may not provide sufficient material to meet

the need. Expansion of the pit would assure adequate material for the completion of the Blowout Road Maintenance project, as well as for longer-term needs.

Purpose and Need for Action

The purpose of this initiative is to provide aggregate for road reconstruction and maintenance in the Blowout Road Maintenance project in the short term, and to make material available for ongoing road maintenance activities in the area over the long term. This action is needed because the remaining rock within the currently developed quarry may not be sufficient to meet the needs of the Blowout Road Maintenance project, and is definitely insufficient for longer-term use. An estimated 20,000 cubic yards of material is needed for the Blowout Road Maintenance project. 15,000 to 20,000 yards may be available in the current development pattern of the Hawkins rock source. Once the current quarry is depleted, a viable and economical source of aggregate and pit run rock resources will be needed in order to meet the needs of long-term management of and access to the lands within the service area of the Hawkins rock source. The expansion of the Hawkins rock source site provides a logical and cost-effective option for meeting that need.

The Proposed Action

The action proposed by the Forest Service to meet the purpose and need is to expand the east flank of the existing Hawkins rock source by approximately 1 acre in order to allow for further rock extraction and crushing. The expansion would generate approximately 100,000 cubic yards of crushable rock or pit run and produce about 5-8 thousand cubic yards of soil overburden. Stripped soil overburden would be re-contoured in the depleted portion of the existing quarry to aid in reclamation. Crushed rock or pit run processed on the site would be stockpiled on-site (approx. 0.15 mi to the north) for use on the Blowout Road Maintenance project. Excess rock would be available for other needs in the area after work on Blowout Road is completed.

Decision Framework

Given the purpose and need for the expansion of the rock source, together with the analysis in this environmental assessment, the Detroit District Ranger will review the proposed action and the no-action alternative in order to decide whether or not to expand the existing quarry.

Scope of Analysis

Because material from this rock source may be used in a variety of different locations with different sensitivities to the impacts of traffic and haul, analysis of these impacts is outside the scope of this assessment. These impacts are or will be assessed in the NEPA documents associated with the projects that require material from this source. This assessment addresses only the impacts of the expansion and its associated operations and activities.

Consistency with the Forest Plan

The proposed action responds to the goals and objectives outlined in the Willamette National Forest Plan, and helps move the project area towards desired conditions described in that plan (Willamette Land and Resource Management Plan, Eugene, OR, 1990). The Willamette National Forest Land and Resource Management Plan (LRMP), as amended by various updates of the Northwest Forest Plan (NWFP), makes numerous references to the importance of managing rock resources to maintain an adequate supply (e.g. LRMP, Chapter III, Page III-210 and the Forest -Wide Standards and Guides FW-302 to FW-307). The Forest Plan also provides for the continued development, maintenance and management of Forest development road system (FW – 308).

The Forest Service Transportation System is addressed under Title 7700 of the Forest Service Manual. National Forests are directed to have a current forest development transportation plan. Objectives of the transportation system are to provide access to National Forest System lands in order to accomplish management direction and protection objectives while also providing user safety, convenience and efficiency of operations, and minimizing total life cycle costs of roads. Management of a Forest road system requires, in part, the maintenance of an adequate road surface. The proposed expansion of the Hawkins rock source provides an option for project and maintenance needs in its service area.

Public Involvement

The proposal was listed in the Schedule of Proposed Actions in the summer 2004 publication. The proposal was provided to the public and other agencies for comment during scoping in June and July of 2004. In addition, as part of the public involvement process, the agency sent letters to the local tribes, the local newspapers, and to those on the Willamette National Forest's mailing list. One response was received and was taken into consideration in this analysis. It was from Russ Frost of the Oregon Department of Transportation. He commented that:

“If there was a reasonable possibility of ODOT use, the proposed expansion of 1 acre would potentially have been inadequate and may still be.”

“even though ODOT does not see a specific need for the Hawkins Quarry, we do support the expansion of this source. Like mentioned above, normally when looking at source expansions, ODOT looks to clear a minimum of 5 acres due to the cost involved in completing all of the necessary environmental work and the flexibility it allows for long term development. It would seem that the USFS in this case may need to clear more than the projected 1 acre to allow for better long term development of the site and provide for the availability of additional materials over and above the projected project requirements in the event of unforeseen needs.”

Mr. Frost's letter is in the project file. Further analysis and response to the issues raised by Mr. Frost are detailed in the “Alternatives not Considered in Detail” section of this Environmental Assessment (see page 10).

Using the comments from the public, other agencies, and local tribes the interdisciplinary team developed a list of issues to address (see *Issues* section).

Issues

The Forest Service separated the issues into two groups: “significant” and “other” issues. Significant issues were defined as those directly or indirectly caused by implementing the proposed action. “Other” issues were identified as those: 1) outside the scope of the proposed action; 2) already decided by law, regulation, Forest Plan, or other higher level decision; 3) irrelevant to the decision to be made; or 4) conjectural and not supported by scientific or factual evidence. The Council on Environmental Quality (CEQ) NEPA regulations require this delineation in Sec. 1501.7, “...identify and eliminate from detailed study the issues which are not significant or which have been covered by prior environmental review (Sec. 1506.3)...”

Significant Issues

Significant issues were used as the driving force in alternative development.

Economics

The two most import factors affecting aggregate cost are rock quality and haul expense. Production costs are relatively similar between various sources, since clearing, drilling, shooting, and crushing all require approximately the same time and materials investment. The critical factors in determining the relative economic value of a rock source are: the type or quality of rock required, the location of the source, and the distance or difficulty of transportation of material between the source and the project using it. Rock quality can vary from asphalt quality material at the top of the chart to pit run and select barrow at the bottom. As quality needs increase, the willingness to haul rock farther also increases. The Hawkins rock source has provided an abundance of high quality basaltic aggregate for Forest and Highway road construction and maintenance on the Detroit Ranger District for over 30 years. Its continued use is considered the best economic option for aggregate within its traditional service area.

Noxious Weeds and Non-Native Invasive Species

Rock sources inhabited by noxious weeds or other invasive plants result in contaminated rock. Weed seeds are then spread with the gravel to new areas during road construction and maintenance activities. The increased light found along roadsides, combined with continuous disturbance from traffic, provide good habitat for weed seed growth. Roads then become corridors for weed invasion and allow weeds to spread into the surrounding landscape. The Hawkins rock source noxious weed threat is not extreme, having only populations of weeds that are considered “established”, and as such does not pose a dire and immitigable risk.

Several non-native, weedy species are present in the rock pit and stockpile area. The only State-listed noxious weed present in the pit itself is St John’s wort. Other weedy species present in the pit include Queen Anne’s lace, cudweed, tarweed, ox-eye daisy, and bull thistle. The stockpile site has patches of weed species of higher concern: scotch broom, Canada thistle, and horseweed. The density of these species is low to moderate. Clearing and stripping for rock source expansion may create conditions, which, for the short term, would assist in the dispersal of some noxious weeds. Weeds could be spread

from the pit or the stockpile site to project areas using the rock in the absence of proper mitigation measures.

Hydrology

The drainage of the current development is problematic. The culvert that should be draining the pooled water that occurs during high rainfall periods of the year is not functioning as designed. Runoff and overflow of the ponded water in the pit is currently flowing down the cut slope ditch and road-grade at the entrance to the pit. This surface flow has caused serious erosion. Control of drainage from this pit is essential in meeting Best Management Practices. If current structural and erosion issues are not resolved, erosion would likely continue to worsen, perhaps eventually leading to erosion damage to the roads, sediment loads to Blowout Creek, and the possibility of future road failures and landslides

Other Issues

American Peregrine Falcons

The project is in the tertiary management zone of a pair of peregrine falcons. Clearing, stripping, crushing, and other quarry operations would have no effect on peregrine falcons by disturbing nesting birds or altering suitable habitat. However, peregrine falcons may be affected by blasting noise during the period of January 15 to July 31.

Big Game

Expansion of the rock source may disturb big game by removing one acre of hiding cover in a winter range high emphasis area. Rock crushing in the winter could disturb big game.

Northern Spotted Owls

This project would have no effect on spotted owl nesting, roosting or foraging (NRF) habitat. The project would not occur within spotted owl dispersal habitat. Activities would, however, occur in close proximity to suitable spotted owl habitat.

Spotted owls may be affected by creating noise disturbance above ambient levels during the nesting season March 1 – September 30. Disturbance can occur from any activity producing above-ambient noise within 0.25 miles (0.5 miles for aircraft and 1.0 mile for blasting) of owls during the nesting season.

Both alternatives allow for many of the same types of operations in the rock source, and the disturbance to any owls that may use nearby habitat under either alternative would be noise related.

ALTERNATIVES, INCLUDING THE PROPOSED ACTION

This chapter describes and compares the alternatives considered for the Hawkins Rock Source Expansion project. It includes a description and map of each alternative considered. This section also presents the alternatives in comparative form, sharply defining the differences between each alternative and providing a clear basis for choice among options for the decision maker and the public.

Alternatives ---

Alternative 1

No Action

Under the No Action alternative, current management plans would continue to guide management of the project area. No rock source expansion would be implemented to accomplish project goals.

The estimated 15,000 to 20,000 cubic yards of material remaining in the current development would be depleted with the next entry. Other rock sources could be needed to accomplish the Blowout Road Maintenance Project, and other rock needs in the area would have to be met by using other sources. The use of other sources could increase trucking distance and cost, decrease efficiency of projects requiring the material, and result in spread of off-site noxious weeds.

Under this alternative, repair of the currently dysfunctional pit drainage system would likely be minimal due to cost, and would be governed only by contract specifications associated with the resumption of operations. While extensive changes could be made to pit drainage and current damage could be repaired without expanding the rock source, substantial additional expense of resources would be required. Extra expenditure on pit infrastructure for access to a resource that would probably be depleted with the next entry would divert already scarce resources from other, higher priority needs. See “Alternatives not Considered in Detail” in this document for more discussion.

Alternative 2

The Proposed Action - Expansion of the Hawkins rock source.

Under this alternative, approximately 1 acre of land immediately adjacent to the existing quarry would be cleared of existing vegetation, stripped of topsoil, and quarried. Rock extracted from the source would be stockpiled at the existing stockpile site.

Clearing of the land in the expansion area would involve removing the existing vegetation - an approximately 18-year-old conifer plantation. The timber growing on the expansion area is currently too young to be of commercial value. This material would be made available for use as down woody debris for the area in the existing development that is to be reclaimed. Excess could be piled and burned or made available for special forest products use (i.e. posts, poles, firewood).

The stripping of the expansion area would involve removing the soil overlaying the target rock material. This soil overburden would be placed and contoured in the area of the existing development that is depleted and no longer needed as part of its reclamation. Disturbed, bare, and reclaimed areas would be treated for noxious weeds and competitive plantings would be established in order to prevent weeds from becoming established.

Rock would be quarried from the expansion area according to the pit plan and standard, generally accepted procedures. Applicable Best Management Practices would be followed in order to reduce impacts to other resources.

It could be necessary to build temporary roads within the development area of the rock source. These roads, if constructed, would eventually be removed along with the material beneath them as development of the pit progresses.

Under the action alternative, site-specific engineering and hydrologic prescriptions would be developed to resolve the current development's serious drainage and erosion issues. This could be done by shifting the road 10 to 20 feet towards the pit in order to distance the road from the failing fill slope, and by restoring proper drainage - either through the narrow ridge/cat-road at the north of the current development, or by reconfiguring and maintaining the currently non-functional design. The floor of the pit would be shaped to reduce the flow of water onto the access road. Re-routing the road and drainage in this way would decrease soil erosion damage to the roads, sediment loads to Blowout Creek, and the possibility of future road failures and landslides.

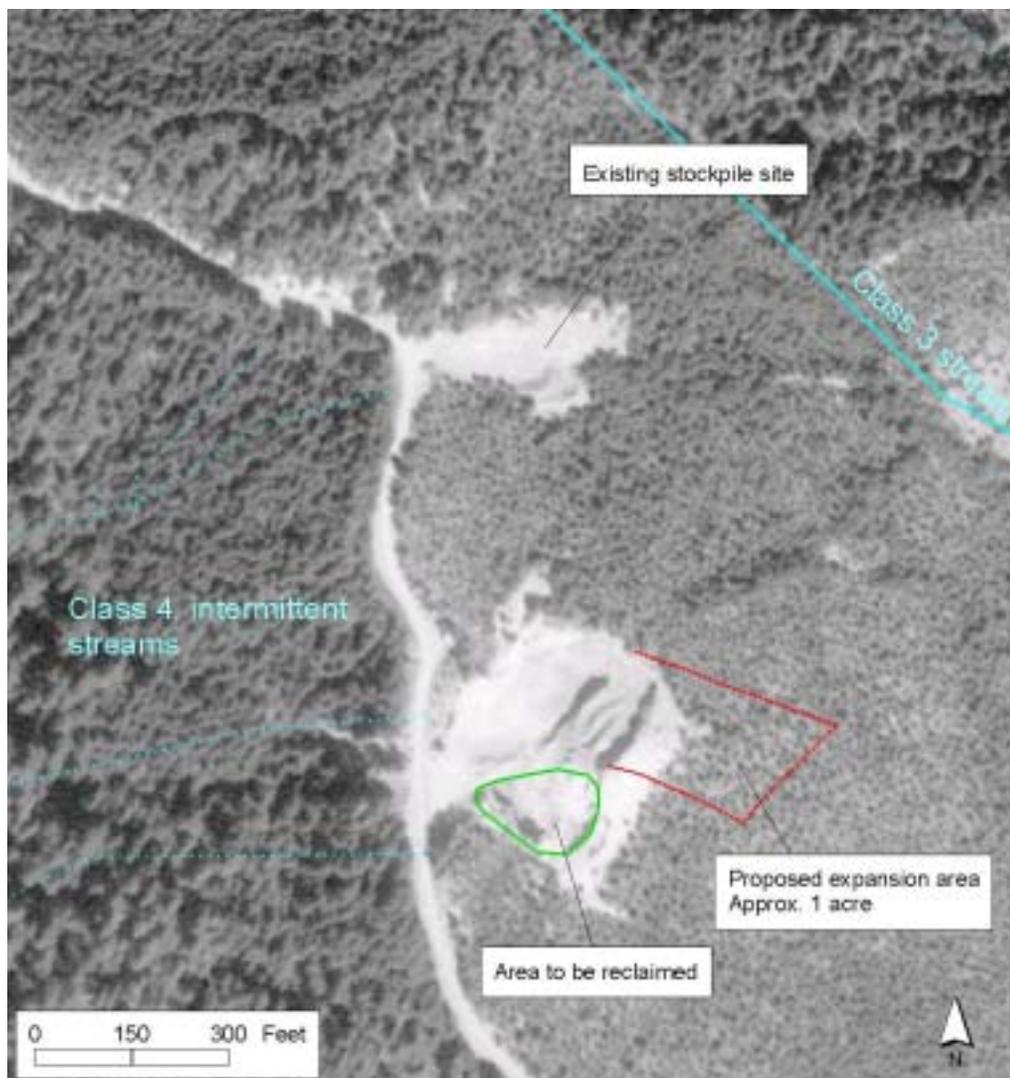


Figure 2. Proposed expansion of the Hawkins Rock Source.

Mitigation Common to All Alternatives

In response to internal and public feedback on the proposal, mitigation measures were developed in order to ease some of the potential environmental impacts the alternatives may cause. The following mitigation measures address Forest Plan standards and guidelines as well as the adverse effects on resources identified in the “Environmental Consequences” section of this analysis. Also listed are common mitigations that apply to a specific management area regardless of alternative.

Big Game

- The project should be scheduled to avoid the winter range closure period of December 1 – April 15. The closure period may begin later or end earlier in the season if winter snow accumulation has not occurred

Fisheries

- The Best Management Practices for erosion and sediment control will be followed. See discussion under Hydrology and Soils.

Fuels/Air Quality

- Excess woody debris generated from the stripping of cover in the expansion area will either be used as down woody debris in reclaimed portions of the pit that will no longer be in use, piled and burned, or used as special forest products (i.e. firewood, posts, poles, etc).

Heritage Resources

- Protect eligible sites. In the event that Heritage Resources are encountered during project implementation, project activity will cease until a qualified archeologist can make a determination of effect on the heritage resource.

Hydrology and Soils

- In order to meet requirements found within BMP R-22, topsoil in excess of that required for reclamation of the currently depleted portion of the existing development will be removed and saved for restoration of the pit at a later date.
- The pit plan will address the control of the surface water generated from the pit and from the surrounding areas that currently drain into the pit.
- Disturbed and reclaimed areas will be seeded and mulched, and drainage from these areas will be controlled in order to minimize risk to water quality and the aquatic environment.
- Any area within the pit that can no longer produce useful material will be rehabilitated.
- The floor of this pit will be shaped to reduce the flow of water from the floor onto the access road. A potential to drain the pit through the small finger ridge to the northwest will be assessed and implemented if appropriate.
- Control of drainage from this pit is essential in meeting Best Management Practices and needs to be addressed even if the pit is not expanded.
- Erosion control measures will be implemented as soon as possible after soils have been disturbed.

Noxious Weeds

- Noxious weeds will be surveyed for and removed where possible in the existing pit, the expansion area, the stockpile site, and along adjacent road systems.
- Temporary roads might be needed within the expansion area. Any temporary roads not immediately decommissioned or removed through development of the pit will be gated or bermed in order to reduce incoming weed seed due to vehicular traffic.
- All equipment will be pressure washed prior to working in the area.
- All disturbed areas, including reclaimed areas and any temporary roads that might be built within the development area, will be seeded with native species in order to reduce weed establishment.

Down Wood Habitat

- Excess woody debris from the stripping of the expansion area will be used as down woody debris in reclaimed portions of the rock source, as appropriate.

Botanical Sensitive Species

- No botanical sensitive species were found in the project area.

Wildlife Proposed (P), Endangered (E), Threatened (T) and Sensitive (S) species (PETS)**Spotted Owl**

- Standards outlined for spotted owls in the Biological Opinion (USDI 2/27/03) will be adhered to.
- Blasting will not be allowed from March 1 to September 30 in order to minimize disturbance to spotted owls that may be present in nearby habitat. All other project-related activities will be restricted during the critical nesting period of March 1 to July 15.

Peregrine Falcon

- Blasting will be restricted from January 15 to July 15.

Northern Bald Eagle

- The expansion of the rock source will not affect bald eagles.

Threatened and Endangered Fish Species

- There are no listed fish within or near the project area. The nearest listed fish species are winter steelhead and spring Chinook that are found below Big Cliff Dam, which is more than 14 miles downstream of the Hawkins Pit. There should be no impact to the fish from the proposed project.

Alternatives Not Considered in Detail

Larger Expansion

The immediate and moderate-term needs for rock materials in the Hawkins rock source service area would most likely be adequately met by the action alternative's proposed one acre expansion. Internal and public comment on the project during scoping presented the possibility of a larger area of expansion (5 acres, for example). Such an expansion would provide for even longer-term needs than the proposed expansion. Assuming that the rock source will eventually need to be expanded beyond its proposed one-acre area in the future, it is valid to reason that performing the environmental analysis now would save time and money in the long run. However, there are two main reasons why this alternative was not considered in detail:

- The need for material is current, but the Willamette National Forest does not currently have the resources for the extensive exploration and drilling required to identify the distribution and extent of the rock present. High quality rock is virtually certain to continue through at least a major portion of the expansion area, but the extent and quality of the rock beyond those bounds is unknown.
- Road system closures and land allocation changes have reduced the need for material in the Hawkins service area. Because of apparent reduced need, further clearing and development may not be necessary.

The wisest use of current resources appears to be to defer any larger scale expansion until such time as the need develops, if ever.

Reconstruction and Repair of Existing Pit Access and Drainage without Expansion

Part of the effects analysis for the two proposed alternatives entails the evaluation of the environmental risks and impacts of retaining the existing, poorly functioning drainage system and associated erosion damage under the no-action alternative. The possibility of repairing and reconstructing the current road access and drainage systems without expanding the pit must be at least considered as an option - either in and of itself, or as part of the continued use of the rock source within its current development pattern.

This option was not considered in detail as an alternative in and of itself because its implementation would not produce the material needed as defined in the Purpose and Need.

This option was not considered in detail as an add-on to the no-action alternative for the following reasons:

- Due to potential need for material from the rock source for repair and reconstruction of the rock source itself, implementation of the option could reduce the amount of material available to the projects and purposes described in the Purpose and Need. Because the material available in the existing development may already be insufficient to meet the Purpose and Need, any additional draws on that material make it less likely that the defined need will be met.

- Were the material to become insufficient to meet the defined need as a result of the additional repairs, it would be necessary to import material from another source, increasing the cost of the projects, complicating or slowing the progression of work, and possibly reducing the amount of work done.

Comparison of Alternatives

This section provides a summary of the effects of implementing each alternative. Information in the table below is focused on activities and effects where different levels of effects or outputs can be distinguished quantitatively or qualitatively between alternatives.

The effects of implementation of the two alternatives are fairly simple because of the scale and scope of this project. Both alternatives allow for continued development of the rock source – the main differences are in the extent and duration of that development. The no-action alternative would result in a smaller area of disturbance and a shorter life-span of the source than the action alternative. It would also necessitate the future importation of rock from a more distant source for needs in the current service area of the Hawkins rock source. The scale of development in the action alternative could encourage the repair or revision of the currently failing drainage and road systems in the immediate area of the pit.

See Table 1 (below) for more detail on the differences in effects between the alternatives.

Table 1. Summary of Effects.

	Alternative 1	Alternative 2
Economics	No initial development cost to continue with current development pattern. Increased cost to haul/import material when source is depleted.	Additional initial cost from clearing and stripping overburden from expansion area. Haul cost lower to service area. No material importation.
Noxious weeds	Weeds are currently present in pit and stockpile site. Mitigation for spread of noxious weed seed to sites using the material. Since the site was initially developed when storage of overburden was not required for later reclamation, soil would have to be imported when the pit is depleted. The importation of soil for use in the reclamation would most likely be deposited incrementally from road maintenance activities in the area. Under this scenario it is likely that the importation would result in introduction of new noxious weeds. If the soil were to be imported specifically from a weed-free source specifically for the purpose of reclamation, the cost would be high or prohibitive.	Weeds are currently present and could be introduced to newly disturbed ground in expansion area. Mitigation for spread of noxious weed seed to sites using the material. Relatively weed-free soil for reclamation would be available from the overburden resulting from the stripping of the expansion area

	Alternative 1	Alternative 2
Hydrology/ Watershed	FS RD 1013 near pit entrance and existing pit drainage system are in poor condition, resulting in soil erosion and runoff. Provided that current drainage system is repaired, overall impacts probably somewhat lesser, although still present since pit would still be developed within its current boundaries.	Greater initially than alternative 1 because of clearing and stripping of expansion area, but still relatively minor. Effects would be longer term. Runoff mitigation would be implemented. Further development of the source would necessitate future reconstruction of the failing road section at pit access, decreasing soil erosion and sediment to Blowout Creek over the long run.
Access, Travel, Recreation	Intermittent truck traffic hauling rock. Mitigated by restricting haul to weekdays.	Intermittent truck traffic hauling rock. Mitigated by restricting haul to weekdays.
Peregrine falcons	Lesser and shorter-term, but still present since pit would still be allowed to be developed within its current boundaries	Longer-term potential disturbance with an initial short term burst of higher potential disturbance during clearing and stripping; however, no peregrine falcons are known in the vicinity and seasonal restrictions would mitigate risk.
Bat Species	No habitat, no impacts	No habitat, no impacts
Big Game	No direct impacts. Noise disturbance during crushing operations mitigated with seasonal restriction.	Loss of 1 acre of hiding and forage habitat. Long-term recovery of reclaimed site would provide forage. Long-term noise disturbance mitigated with seasonal restriction.
Fish	No impacts to any resident or listed fish or their habitat.	No impacts to any resident or listed fish or their habitat.
Geology /Soils	No additional loss of soil productivity from existing site.	1-acre loss of soil productivity from expansion of site. Offset by portion of reclaimed site
Heritage Resources	No impacts	No impacts
Management Indicator Species	No direct habitat impacts. Continued noise disturbance.	No direct habitat impacts. Continued noise disturbance
Migratory Birds	Continued noise disturbance	Loss of 1 acre of habitat. Offset by portion of reclaimed site. Noise disturbance
Spotted owl disturbance	Lesser and shorter-term disturbance in nearby suitable habitat. Disturbance still possible since pit would still be developed within its current boundaries.	Longer-term potential disturbance in nearby suitable habitat, with an initial short-term burst of higher potential disturbance during clearing and stripping; however, no spotted owls are known in the vicinity and seasonal restrictions would mitigate risk.

	Alternative 1	Alternative 2
Sensitive Wildlife Species	No species or habitat.	No species or habitat.
Snags/Down Wood	No direct impacts.	Loss of 1 acre of snag and down wood habitat. Offset by use of wood in reclaimed site.
Vegetation	No impacts	Loss of 1 acres of 18 year old conifer plantation. No visual impacts.

ENVIRONMENTAL CONSEQUENCES

This section summarizes the physical, biological, social and economic environments of the affected project area and the potential changes to those environments due to implementation of the alternatives. It also presents the scientific and analytical basis for comparison of alternatives presented in the table in the previous section.

Because material from this rock source may be used in a variety of different locations with different sensitivities to the impacts of traffic and haul, analysis of these impacts is outside the scope of this assessment. These impacts are assessed in the NEPA documents associated with the projects that require material from this source. This assessment addresses only the impacts of the expansion and its associated operations and activities. Cumulative effects analysis is confined to effects related to development, reclamation, and processing at the source and does not include analysis of effects arising from removing the processed material from the site.

Significant Issue Effects

1. Economics

An economic analysis of present value for the expansion of the rock source was not conducted, as it is difficult to develop hypothetical comparisons between various rock sources without specific volume and quality requirements. However, experience has shown that an average rule of thumb for haul cost is approximately \$1.00 per yard mile (one cubic yard hauled one mile). Using this rule of thumb, it is evident that the cost of hauling from a distant source vs. the Hawkins source to a project within the Hawkins service area could become significant very quickly. This would be especially true if the quantities needed were high. For example, assuming need for 15,000 cubic yards of aggregate at a site averaging 5 miles from the Hawkins source vs. 20 miles from an alternate source, the cost difference would be \$225,000 ($[15,000 \text{ yards} \times 20 \text{ mi} \times \$1/\text{yd.mi}] - [15,000 \text{ yd} \times 5 \text{ mi} \times \$1/\text{yd.mi}]$). Relative to the selection of the action alternative, the initial cost of the no-action alternative would be lower due to lack of contracted time and materials in the clearing and stripping of the expansion area. As time progresses, however, the cost of the no-action alternative relative to the action alternative would increase as more expensive rock haul from more distant sites is implemented, or as road conditions are allowed to decay because of insufficient funds to obtain rock from more distant sites.

Cumulative Effects of Management Activities

The no-action alternative would result in long-term increased cost for road maintenance activity in the Hawkins service area because of increased haul distance once the available material in the current development is depleted. The cost to transport material from more distant sources would likely decrease the available funding for other project work.

The action alternative provides a means of reducing the short and long-term costs of road reconstruction and management in the Hawkins area because of decreased haul distance. Because of the modest size of the proposed expansion, costly mineral exploration and drilling activities are unnecessary, leaving more funding available for other projects. The costs of researching and planning a more extensive development are deferred until future need develops. If expansion beyond the proposed 1 acre were to become necessary in the future, the planning and exploration process would have to be reinitiated – incurring cost above that of doing the extra work in the present environmental assessment. However, the expansion of the pit beyond the proposed 1-acre is conjectural and may never be necessary.

2. Noxious and Invasive Weeds

The following documents guide the treatment of competing and unwanted vegetation in the Pacific Northwest:

- Final EIS for Managing Competing and Unwanted Vegetation (USDA Forest Service PNW Region, November 1988) specified a broad spectrum of appropriate vegetation management techniques for use in the region.
- The Mediated Agreement is a settlement approved in the US District Court in May 1989, between plaintiffs and USDA Forest Service regarding how the Forest Service implements the Final EIS. Specifically, it addresses adequate analysis and evaluation of preventative techniques, how well treatments meet goals and objectives, impacts and long-term site productivity, and environmental and human risk.
- Willamette National Forest Integrated Weed Management Environmental Assessment (1999)
- Executive Order 13112 (February 3, 1999)

Forest Service ground-disturbing contracts are now required to include provisions to minimize the introduction and spread of invasive plants. Weed populations in project areas and along transportation routes must be mapped on the project map and equipment-cleaning areas need to be identified (if applicable).

Rock sources inhabited by noxious weeds or other invasive plants result in contaminated rock. Weed seeds are then spread with the gravel to new areas during road construction and reconstruction activities. The increased light found along roadsides, combined with continuous disturbance from traffic, provide good habitat for weed seed growth. Roads become corridors for weed invasion and allow weeds to spread into the surrounding landscape. Using weed free rock sources is critical to preventing the future establishment of invasive species. The Hawkins rock source noxious weed threat is currently not extreme, having only populations of weeds that are considered “established”. Nonetheless, action should be taken to mitigate the risk of spreading these weeds to other non-infested areas.

Several non-native, weedy species are present in the rock pit and stockpile area. The only State-listed noxious weed present in the pit itself is St John’s wort, which is nearly ubiquitous on the Willamette National Forest. Other weedy species present in the pit include Queen Anne’s lace, cudweed, tarweed, ox-eye daisy, and bull thistle. The

stockpile site has patches of weed species of higher concern: scotch broom, Canada thistle, and horseweed. The density of these species is low to moderate.

The rock source would continue to be developed under both the no-action and action alternatives – the difference being in the extent and duration of that development. As such, there are two effects of operations that are common to both alternatives:

- New weed species may be introduced on equipment.
- Weeds could be spread from the pit or the stockpile site to project areas using the rock in the absence of proper mitigation measures.

Possible mitigation measures include equipment-washing requirements prior to operation in the pit and stockpile areas, survey for and pre-treatment of existing weed sites prior to operations, and use of competitive plantings of native grasses and forbs in order to exclude weeds on newly disturbed ground.

Alternative 1 – No Action

The risk of spreading noxious weeds to sites using the material from the rock source is nearly as high under the no-action alternative as it is under the action alternative. Since the pit and stockpile site are already infested, use of the available material in the current development would likely result in the spread of these weeds without appropriate mitigation measures. Because there is no clearing and stripping in this alternative, however, there is no risk of spreading or introducing weeds to the newly disturbed ground.

Once the existing development is depleted of useful material, projects in the service area of the Hawkins rock source would require material from other sources. The imported material could be significantly more contaminated than the material that would be available with expansion of the Hawkins rock source.

Alternative 2 - Expansion of the Rock Source

Clearing and stripping the expansion area may enhance habitat for weed species by opening up the canopy and creating seed germination sites in the disturbed soil. It is possible that weeds not currently on the site could become established and further contaminates the material from the rock source. If weeds were to become established in the expansion area, the risk of noxious weed spread from the source to sites using the material would be somewhat increased relative to the no-action alternative. This risk could be mitigated with survey for and treatment of weeds after the clearing and stripping of the expansion area. Contracts resulting from the implementation of the alternative would be required to contain equipment cleaning clauses and specifications. Reclaimed areas and soil stockpiled for later reclamation would be treated for weeds and competitive plantings would be established to reduce the risk of noxious weed establishment.

Cumulative Effects of Management Activities

The action alternative provides mitigation measures that would reduce the long-term likelihood of expanded weed populations. These include equipment washing, survey and control, and pretreatment of existing weed sites. The same mitigations apply to the no-

action alternative, although they would be required by the contract that governs the next entry. Whether the rock source is expanded or not, diligence would be required in order to keep invasive species from overtaking the rock source and stockpile site over the long-term.

3. Hydrology and Watershed Effects

Seasonal drainage from the project area flows directly into Blowout Creek, a 303d listed stream. 303d listed streams are those that do not meet a State parameter for water quality. The parameter that Blowout Creek does not meet is temperature. The State-approved Water Quality Management Plan for Blowout Creek prescribes maintenance of the shading forest canopy of the existing riparian reserves and restoration of those reserves currently with less than 70 percent shade canopy. Because there are no perennial streams or riparian reserves within the proposed project area, the both alternatives comply with the Water Quality Management Plan for Blowout Creek. No flood plains or jurisdictional wetlands are present within the project site.

The drainage of the current development is problematic. The culvert that should be draining the pooled water that occurs during high rainfall periods of the year is not functioning. Runoff and overflow of the ponded water in the pit is currently flowing down the cut slope ditch and road-grade at the entrance to the pit. This surface flow has caused serious erosion.

Alternative 1 – No Action

Under the no-action alternative the road and pit drainage would likely continue to erode the road-grade and fill-slope, eventually causing serious damage and possible negative water quality impacts in Blowout Creek.

Alternative 2 - Expansion of the Rock Source

Under the action alternative, the road would be shifted 10 to 20 feet towards the pit and drainage would be restored (either by means of a culvert through the narrow ridge/cat-road at the north of the current development, or by reconfiguring and maintaining the currently non-functional design). Re-routing the flow in this way would reduce erosion damage to the access road, sediment loads to Blowout creek, and the possibility of future road failures and landslides.

Cumulative Effects of Management Activities

Implementation of the action alternative would make active and substantive changes to the current, poorly functioning drainage system. These improvements would better preserve the site and offset any short-term impacts above those incurred by preserving the status quo. While the no-action alternative could result in lower short-term impact to water-quality, it is likely that it would also result in higher long-term impact due to worsening of the current erosion damage to the road and drainage system. Long-term effects anticipated under the action alternative include additional accumulation of snow from reduced canopy levels, and higher drainage peak flows (from rain over snow and reduced vegetative cover). Given the mitigation measures and maintenance proposed, the

size and nature of the streams involved, and the small size of the project, it is not anticipated that adverse cumulative effects would occur from implementation of the action alternative. The net result of this alternative would be the much-needed repair of an existing drainage problem and a reduction in risk to water quality in Blowout Creek.

Other Effects

Access, Travel Management, and Recreation

Forest visitor traffic is busiest during summer and fall weekends, especially during the various deer and elk hunting seasons. Expansion of the rock source would generate intermittent, but extensive truck traffic with rock haul when the pit is being utilized. In order to avoid user conflicts and potential accidents, rock haul would generally be restricted to weekdays. For similar reasons, blasting (if required for rock excavation) would be confined to weekdays. (Note: other blasting-period time restrictions are also be required for wildlife protection.)

American Peregrine Falcons

The project is in the tertiary management zone of a pair of peregrine falcons. Clearing, stripping, and quarry operations would have no effect on peregrine falcons by disturbing nesting birds or altering suitable habitat.

Peregrine falcons may be affected by blasting noise during the period of January 15 to July 31. Blasting is not expected to be necessary. If blasting is later determined to be necessary, a seasonal restriction during the above period would be observed under either alternative, resulting in no noise disturbance to the falcons.

Bat Species

Sites commonly used by bats for roost sites and hibernacula include caves, mines, snags and decadent trees, wooden bridges and old buildings. The relatively young, thin barked, 18 year old trees of the managed stand proposed for the rock source expansion generally do not provide habitat for bats. There are no known caves, abandoned mines, wooden bridges or buildings within the project area. There may be some disturbance in nearby habitat due to noise during operations, but given the rock source's long history of similar use, no significant effects on these species are expected.

Big Game

Alternative 1 – No Action

There would be little or no direct impact on big game under Alternative 1. The area proposed for quarry expansion would continue to provide forage and hiding habitat for deer and elk. Major rock crushing operations could disturb big game if they were to occur from December 1 to April 15. Big game disturbance could occur if operations were to occur in the winter, when snow accumulation in the higher ground pushes deer and elk down to this area. The contract that governs

the next entry would likely impose a seasonal restriction on operations in the period of December 1 to April 15, unless snow accumulation has not occurred.

Alternative 2 - Expansion of the Rock Source

Disturbance to big game would likely occur from expansion of the rock source. Alternative 2 would remove hiding cover in a high emphasis area of winter range that has adequate hiding cover. Additional disturbance could occur if operations were to occur in the winter, when snow accumulation in the higher ground pushes deer and elk down to this area. For this purpose, operations would be seasonally restricted during the period from December 1 to April 15 unless snow accumulation has not occurred (see “Mitigation Measures” in this document and the “Effects of Implementation for Wildlife Species” report in the project file).

Approximately 1 acre of deer and elk winter range hiding and forage habitat would be eliminated in this alternative. The limiting habitat component in this area is forage. In the long term the project would provide more forage than the no-action alternative, since depleted areas of the existing development would be reclaimed by depositing the soil overburden removed from the expansion area and planting to forage species.

The noise from operations under this alternative would last much longer than in Alternative 1. The life span of the rock source within its 1-acre expansion would depend on use and demands.

Fish

There are no fish in the area above Detroit Dam that are listed under the Endangered Species Act. The nearest listed fish are Upper Willamette winter steelhead and Upper Willamette spring chinook that are found in the North Santiam River below Big Cliff Dam. The expansion of the Hawkins Rock Source would have no effect on listed fish populations below Detroit Dam. There is no chance that any project associated disturbance or sediment could impact down stream habitat occupied by listed species. Detroit reservoir would act as a settling pond for any sediment that might travel that far before it settles out. The site is located on a slope approximately 200 feet from any active streams. This project would require an approved site management plan, adequately maintained haul roads, and sediment reduction measures to the degree practical.

Effects on Recreational Fisheries (Executive Order 12962) – The action alternative is consistent with the Aquatic Conservation Strategy outlined in the Northwest Forest Plan.

Blowout Creek, and its major tributaries, such as Hawkins and Divide Creeks support populations of wild rainbow and cutthroat trout. Kokanee salmon (land locked sockeye salmon) that live in Detroit Reservoir move up Blowout Creek in the fall to spawn. Kokanee are not native to the North Santiam system but were stocked originally by the Oregon Department of Fish and Wildlife to increase the sport fishing opportunity in Detroit Reservoir. There should be no impacts to resident fish or their habitat from the expansion of the Hawkins Rock Source as long as Best Management Practices are followed.

Geology and Soils

The loss of soil productivity is addressed in the Chapter IV of the LRMP in the discussion of Irreversible and Irrecoverable Commitments of Resources section on page IV-178. Overburden soils would be stripped and placed along the south and west side of the existing pit for reclamation. Once the rock source is depleted, the resulting flat rock bench would be sloped to drain. Excessive soil erosion from the site would be controlled by standard erosion control measures during operation and ditching during periods of inactivity. Off site soil loss would remain within established guidelines as indicated in the WNF LMRP and the State of Oregon.

Heritage Resources

No heritage resources were found in the proposed expansion area. In the event that Heritage Resources are encountered during project implementation, project activity would cease until a qualified archeologist can make a determination of effect on the heritage resource.

Management Indicator Species

Forest planning regulations require the management of wildlife habitats to “maintain viable populations of existing native and desired non-native vertebrate species in the planning area” (Willamette National Forest Land and Resource Management plan 1990, FEIS III-69).

Management Indicator Species (MIS) selected in the Forest Plan to facilitate management of all species are summarized in Table 2, below.

Effects to northern spotted owls, big game (deer and elk winter range), peregrine falcons, and fish are addressed in other sections of this chapter.

Table 2: Management Indicator Species

Indicator Species	Habitat Feature	Selection Criteria
Spotted Owl	Old-growth and mature conifers	Ecological Indicator; Federal Register List of T&E species
Pileated Woodpecker	Old-growth and mature conifers	Ecological Indicator
Marten	Old-growth and mature conifers	Ecological Indicator
Elk	Winter range	Commonly hunted
Deer	Winter range	Commonly hunted
Cavity Excavators (Woodpeckers)	Dead and Decaying trees	Ecological Indicator
Bald Eagle	Old-growth conifers near large bodies of water	Federal Register List of T&E species
Peregrine Falcon	Cliff nesting habitat Near abundant prey	Sensitive species
Anadromous Fish	Water quality	Commonly fished
Resident Fish	Water quality	Commonly fished

Pileated Woodpecker

Pileated woodpeckers are associated with forest habitats that have large trees, especially snags, for nesting and foraging (Csuti et al., 1997). There is little or no habitat for pileated woodpeckers in the proposed expansion. There may be some disturbance in nearby habitat due to noise during operations, but given the rock source's long history of similar use, no significant effects on this species are expected.

Marten

Marten prefer mature forests with closed canopies but would utilize other habitats provided down logs are available for cover (Csuti et al. 1997). Marten habitat would not be affected by the expansion of the rock source. There may be some disturbance in nearby habitat due to noise during operations, but given the rock source's long history of similar use, no significant effects on this species are expected.

Cavity Excavators

There is little or no habitat for cavity excavators in the proposed expansion. There may be some disturbance in nearby habitat due to noise during operations, but given the rock source's long history of similar use, no significant effects on this species are expected.

Bald Eagle

Bald eagles do not occur within the project area. They prefer large bodies of water with sufficient fish or waterfowl populations for prey and large trees for roosting and nesting. The expansion of the Hawkins Rock Source would not alter habitat or disturb foraging bald eagles.

Migratory Birds

On January 10, 2001 an executive order was signed to protect migratory birds. One purpose of the order is to ensure that environmental analyses evaluate the effects of actions on migratory birds. Habitats vary broadly for this group of species.

There are 85 bird species recognized as neotropical migrants on the Forest. Thirty-five of these species are identified as "species of concern" in "Neotropical Migrants on National Forests in the Pacific Northwest" by Brian Sharp (1992). These species are associated primarily with old growth, riparian, rocky cliffs, or grass habitats.

Alternative 1 – No Action

Since the no-action alternative allows for continued operation in the current development, this alternative may affect migratory birds through noise-related disturbance. The contract that governs the next entry would likely impose a seasonal restriction on operations for northern spotted owls. This seasonal restriction would also minimize impacts to migratory birds.

Alternative 2 - Expansion of the Rock Source

This alternative may affect migratory birds through disturbance and habitat modification. Approximately one acre of suitable habitat would be removed. This loss of an acre of habitat would be partially offset by reclamation of depleted areas of the current development. Seasonal operating restrictions planned for spotted owls would also minimize disturbance to migratory birds (see “Mitigation Measures”). The noise from operations under this alternative would last much longer than in alternative 1. The life span of the rock source within its 1 acre expansion would depend on use and demands.

Northern Spotted Owls

This project would have no effect on spotted owl nesting, roosting or foraging (NRF) habitat. The project would not occur within spotted owl dispersal habitat. Activities would, however, occur in close proximity to suitable spotted owl habitat.

Spotted owls may be affected by creating noise disturbance above ambient levels during the nesting season March 1 – September 30. Disturbance can occur from any activity producing above-ambient noise within 0.25 miles (0.5 miles for aircraft and 1.0 mile for blasting) of owls during the nesting season.

Both alternatives allow for many of the same types of operations in the rock source, and the disturbance to any owls that may use nearby habitat under both alternatives would be noise related.

Alternative 1 – No Action

Noise from operations in the pit could be a disturbance to any owls that might use nearby habitat, although no spotted owls are known to occur in the immediate area. The noise from operations under this alternative would last as long as the rock source continues to produce material from its existing development area. The contract that governs the next entry would likely impose a seasonal restriction on operations during the nesting period.

Alternative 2 - Expansion of the Rock Source

As in alternative 1, the noise of operations in the pit and expansion of the pit could be a disturbance to any owls that might use nearby habitat. The noise from operations under this alternative would last much longer than in Alternative 1. The life span of the rock source within its 1-acre expansion would depend on use and demands.

Under this alternative a seasonal restriction of March 1 – July 15 will be imposed on all clearing and quarry operations to protect owls from disturbance during the critical nesting season. Blasting would be allowed only during the period of October 1 – February 28 and quarry operations during the period of July 16 – February 28.

Sensitive Wildlife Species

Region 6 sensitive wildlife species were evaluated to determine if they or their habitat would be impacted by this project. There is no habitat in the expansion area for any sensitive animal species. Further information can be found in the Biological Evaluation.

No direct, indirect, or cumulative effects to sensitive wildlife species are expected under either alternative due to the limited size and scope of the project

Special Habitats

Special habitats are non-forested areas including seeps, rock outcrops and gardens, caves, and meadows. These sites are important reservoirs of biodiversity, providing habitat for a variety of plants, fungi, and animals not often found in forested areas. In addition, many sensitive species are found in special habitats.

No special habitats were found in the proposed expansion area.

Snag and Down Wood Habitat

Dead and dying trees (snags) are important structural components of forest communities and used by wildlife species in a variety of ways. In forests of western Oregon, snags are used by nearly 100 species of wildlife, of which 53 species (39 birds and 14 mammals) are cavity dependent (Brown 1985).

Down wood is also an important component of forest communities. In addition to cycling minerals and nutrients within the forest ecosystem, it creates structure and diversity of habitats for a variety of terrestrial and aquatic wildlife.

Alternative 1 – No Action

There are no direct effects to snags and down wood under this alternative.

Downed wood for use in reclamation of depleted portions of the existing development would not be as readily available as in the action alternative.

Downed wood for reclamation would need to come from off-site, or not be used.

Alternative 2 - Expansion of the Rock Source

This alternative would remove all snags and down wood from the area proposed for expansion. This loss of habitat would be partially offset by the reclamation of the depleted portions of the existing pit development, in which a large amount of cleared trees and wood would be placed on the re-contoured soil overburden.

Vegetation

Existing vegetation within the proposed expansion area is that of a typical 18-year-old conifer plantation at this elevation. The habitat is open and disturbed, having no unique features. Further information can be found under the headings of “Noxious Weeds” and “Big Game”. The effects of the expansion on the visual resource would be insignificant due to the small size of the pit and its distance from developed recreation sites, the reservoir, and Highway 22.

Consultation and Coordination with Indian Tribal Governments (Executive Order 13084 and Indian Sacred Sites Executive Order 13007)

The Confederated Tribes of the Siletz Indians, Confederated Tribes of the Warm Springs, Confederated Tribes of the Grand Ronde, and the Klamath Tribe were notified of the project during the scoping of issues and concerns as part of the public participation process. No comments were received from these groups. No specific sacred sites have been identified in the proximity of the proposed units. No impacts, as outlined in the American Indian Religious Freedom Act, are anticipated upon American Indian social, economic or subsistence rights.

Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations (Executive Order 12898)

Federal agencies are directed to address effects accruing in a disproportionate way to minority and low-income populations; the closest populations or habitations to the project area are Idanha, Marion Forks, Detroit, Gates, and Mill City. These communities contain some low-income and minority people. No disproportionate impacts to the citizens of these communities are anticipated. All contracts offered by the Forest Service contain Equal Employment Opportunity requirements.

Consumer, Civil Rights, Minority Groups and Women

Implementation of any alternative may not by itself have any effect upon consumers, but in combination with other road management projects may have an effect upon the local economy, especially on communities of Idanha, Detroit, and Mill City. The LMRP addresses social and economic effects on pages IV 119-128.

Implementation of this project has not been planned to either favor or discriminate against any social or ethnic group. Contracting procedures would ensure that projects made available through this project would be advertised and awarded in a manner that gives proper consideration to minority and women-owned business groups and meet Equal Employment Opportunity requirements. Because of this consideration, there would be no direct, indirect, or cumulative effects to consumers, minority groups with implementation of any of the alternatives

Relationship between Local Short-term Uses of Environment and Long –term Productivity

The action alternative would result in a short term loss of soil productivity which is also addressed in the Irreversible and Irretrievable Commitment of Resources section below. The overburden of soils would be re-used in the existing pit reclamation. Offsite soil loss would remain within established guidelines. Quality and quantity of water may fluctuate as a result of short-term uses, but no long-term effects to water resources are expected to occur as a result of management activities

The salvage and use of standing timber can be considered a short-term use of a renewable resource. As a renewable resource, trees can be re-established and grown again if the productivity of the land is not impaired. The removal of timber would also have a short-term effect to big game forage and hiding habitat. The reclamation of the depleted rock source would offset and replace the loss of habitat in the long term.

Probable Adverse Effects Which Can't be Avoided

Several expected adverse effects, including some that are minimal and/or short term, were identified during the analysis. Resource protection measures or mitigations were identified and considered for each of these as a means to lessen or eliminate such effects on specific resources. See mitigation measures starting on page 9. Resource areas determined to have potential adverse effects (resulting from either of the alternatives are documented within the appropriate Environmental Consequences sections of each resource in this chapter. See the following sections:

- Economics
- Noxious and Invasive Weeds
- Hydrology and Watershed Effects
- Access, Travel Management, and Recreation
- American Peregrine Falcons
- Big Game
- Geology and Soils
- Migratory Birds
- Snags and down Wood Habitat
- Vegetation

Irreversible and Irretrievable Commitment of Resources

The anticipated effects for the alternatives described in this document are the same as those discussed in the LRMP on page IV-178. Some erosion and soil movement would result from the rock source expansion activities. Crushed rock from the quarry would be committed to construction of temporary spur roads and landings or maintenance of the existing classified road system and would be irretrievable, if used. Energy used to grow, manage, and harvest trees, and in other management activities is also generally considered irretrievable

Prime Lands

The project area does not contain any prime farmlands or rangelands. Prime forestland is not applicable to lands within the National Forest System. There are no direct, indirect, or cumulative adverse effects to these resources and thus are in compliance with the Farmland Protection Act and Departmental Regulation 9500-3, "Land Use Policy".

Executive Orders 11988 (Floodplain Management) and 11990 (Protection of Wetlands)

Executive Orders 11988 and 11990 direct Federal agencies to avoid, to the extent possible, both short-term and long-term adverse impacts associated with the modifications of floodplains and wetlands. None of the alternatives have specific actions that adversely affect wetlands and floodplains. Proposed activities are compliant with the orders and USDA Departmental Regulation 9500-3. See discussions related to this topic in the hydrology, fisheries and soils resource sections in Chapter 3 for more information.

CONSULTATION AND COORDINATION

The Forest Service consulted the following individuals, Federal, State, and local agencies, tribes and non-Forest Service persons during the development of this environmental assessment:

ID TEAM MEMBERS:

Noel Bacheller - Team leader and Botanist, Robb Ginn – Sweet Home Ranger District Mining and Minerals Administrator, Dave Halemeier - North Zone Hydrologist, Cara Kelly - Detroit Ranger District Archaeologist, Mike Roantree - Detroit Ranger District Botanist, Doug Shank - North Zone Geologist and Hazardous Materials Specialist, Wayne Somes - North Zone Fisheries Biologist, and Daryl Whitmore - Detroit Ranger District Wildlife Biologist.

FEDERAL, STATE, AND LOCAL AGENCIES:

The Oregon Department of Transportation was contacted and a comment was received (see “Scoping”).

TRIBES:

The Confederated Tribes of the Siletz Indians, Confederated Tribes of the Warm Springs, Confederated Tribes of the Grand Ronde, and the Klamath Tribe were contacted.

OTHERS:

Notice was given to the public in the newspaper of record (the Eugene *Register Guard*), in the Willamette “Forest Focus” quarterly mailer (SOPA), and in a letter to those on our mailing list.

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