Bend-Ft. Rock Ranger District
Deschutes National Forest

Seventh Mountain
Rock Pit Expansion Project

Environmental Assessment

July 10, 2000

USDA Forest Service
Bend-Ft. Rock Ranger District
Deschutes National Forest
1230 NE 3rd St., Suite A-262
Bend, OR 97701

Responsible Official:
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Chapter 1 - Purpose and Need

A. Introduction and Background

The 7th Mountain Gravel Pit was originally opened on State-owned lands prior to 1943, most likely for early work on Century Drive (now known as the Cascades Lakes Scenic Byway). The portion of the pit that is on Forest Service lands was opened in 1982 by the Federal Highway Administration (FHWA) to provide materials for reconstruction on the Cascade Lakes Scenic Byway. Since 1981, this part of the pit has been entered several times and a total of approximately 150,000 cubic yards has been removed. The current Forest Service portion of the pit has now been exhausted.

The 7th Mountain Gravel Pit is located in Township 18 S, Range 11 E, NW ¼ of the NE ¼ and NE ¼ of the NW ¼ Section 28.

1. The purpose of the proposed action is to:

The purpose of the proposed action is to expand the 7th Mountain Gravel Pit to access the rock source. This project will implement the Forest Management Goals as stated in the Deschutes Land and Resource Management Plan to provide for exploration, development, and production of a variety of minerals on the Forest (LRMP 4-68). Implementing the project will provide a source for sand, gravel, and aggregate materials to the Deschutes National Forest that is local, economically feasible, and of the required quality.

2. The need for the proposed action is demonstrated by:

The glacial outwash gravels at the 7th Mountain Gravel Pit are the only known viable gravel or hard rock resource known in the northeastern portion of the Bend Ranger District. Based on the known geology and reconnaissance surveys done by the Geology and Geotech Section of the Deschutes National Forest, the probability of finding a new source in this area of the District is very low.

In the short term, reconstruction of Forest Road 41, and other road reconstruction related to two timber sales on the District would use the rock source from the 7th Mountain pit.

In the long term, the expanded portion of the pit would be a source for sand, gravel, and aggregate material for use on the Forest for about the next 20 years.

B. Direction from the Forest Plan

The 1990 Deschutes National Forest Land and Resource Management Plan (Forest Plan) as amended guides all natural resource management activities and provides standards and guidelines for the Deschutes National Forest. The purpose of the Forest Plan is to provide for the use and protection of Forest resources, fulfill legislative requirements, and address local, regional, and national issues and concerns.

Forest Plan standards and guidelines relating to mineral materials state “Use of existing materials sources will be given priority over undeveloped sources. Exceptions could be made when existing sources are unable to economically supply the quantity and quality of materials needed or when conflicts with other resource uses are found to be unacceptable.” (MN-2, Page 4-68).

The existing gravel pit and the area identified for expansion are located entirely within an area designated for Scenic Views by the Forest Plan. Mineral developments are allowed as long as they are designed to blend with the characteristic landscape, and visual quality objectives should be met when viewed from travel routes and other sensitive viewer locations. (M9-84, Page 4-130).

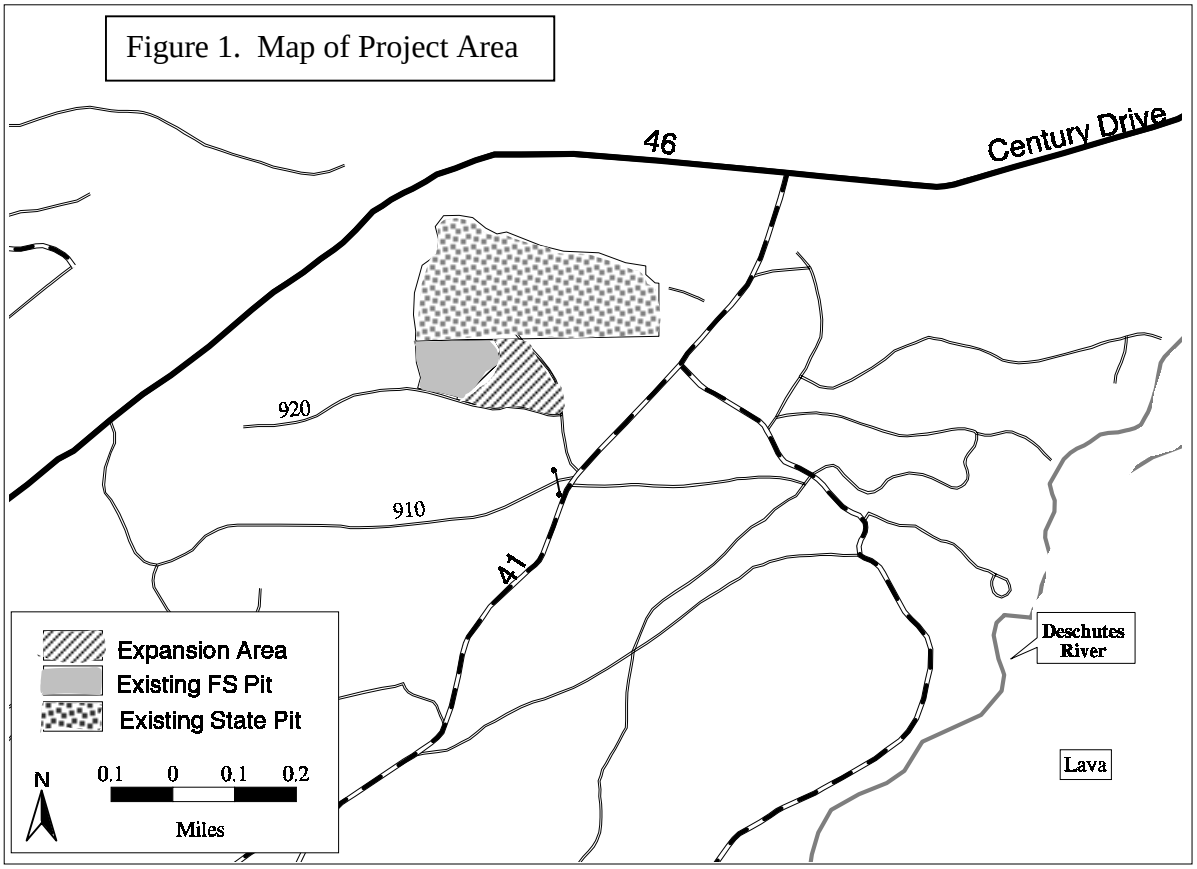
The project is also located in a Key Elk Area. Within Key Elk Areas, management provides for particular habitat conditions related to maintaining elk populations.

Amendments to the Forest Plan are the Revised Interim Management Direction Establishing Riparian, Ecosystem and Wildlife Standards for Timber Sales (Interim Direction), and the Inland Native Fish Strategy (INFISH).

C. Proposed Action

Expansion of the rock pit would be accomplished with standard rock quarrying methods. These methods use equipment and tools such as dozers with push blades, loaders, and rock crushers. To access the new area, trees would be cleared from approximately 7 acres (as estimated using Geographic Information Systems). Two to three feet of overburden (topsoil) would be removed and stockpiled on the existing pit floor. The underlying material would be excavated to a depth of 4 to 8 feet below the current high point for use on National Forest projects. The overburden would be used in the future when the area is rehabilitated. It is expected that 85,000 - 100,000 cubic yards of material will be available from this expansion, and will act as a source for the Forest for up to 20 years.

Figure 1. Map of Project Area



The area is an open ponderosa pine forest. The understory is dominated by grasses and scattered islands of bitterbrush. The overstory of ponderosa pine and all of the understory vegetation would be removed to access the source rock. All trees will be removed, possibly through a timber sale. Most trees are less than 20" in diameter; the few largest trees are approximately 30" in diameter.

D. Issues Identified Through Scoping

The scoping process did not reveal any significant issues related to the proposed pit expansion project. The following items will be considered in the Effects section in Chapter 3, as a way to compare the alternatives.

Scenic Integrity – Areas adjacent to the Cascade Lakes Scenic Byway are classified as 'High Scenic Integrity' (appears unaltered) under the Forest Service's new scenic integrity objects. High Scenic Integrity refers to landscapes where the valued landscape character "appears" intact. Deviations may be present, but must repeat the form, line, color, texture, and pattern common to the landscape character so completely and at such a scale that they are not evident.

Wildlife – The project area provides habitat for a variety of wildlife species. It is also within a Key Elk Area, and partially within the Tumalo Winter Range Cooperative Road Closure.

Economics – The trade offs of the No Action and Action alternatives provide a cost comparison.

Water Quality – The project area lies about one mile from the Deschutes River.

Cultural Resources – Cultural resource surveys were completed at the project site.

PETS Plants – Proposed, endangered, threatened, and sensitive species of pants were considered and a survey was conducted at the project site.

Threatened and Endangered Species – A Biological Evaluation has been prepared to review the potential for effects to threatened and endangered species and species proposed for listing.

E. Decision to be Made

The decision maker will decide if the project is appropriate to meet road management needs while protecting other uses and resources of the Bend-Ft. Rock Ranger District. The decision will be based on information contained in this document and supporting information contained in the analysis file, such as the Biological Evaluation, and specialists' reports. The deciding official will be the Ranger of the Bend/Ft. Rock District, Deschutes National Forest.

Chapter 2 – Alternatives

This chapter describes the alternatives that were developed by an interdisciplinary team to display a range of management options that respond to the purpose and need listed in Chapter 1.

A. Alternatives Eliminated from Detailed Study

The interdisciplinary team discussed what alternatives might be available for analysis. The following alternative was looked at briefly, but eliminated from detailed study.

Locate a new pit somewhere else. This idea would not be feasible as the Seventh Mountain location is the only known quality source of rock material in this area of the Bend/Ft. Rock Ranger District.

B. Alternatives Analyzed

1. No Action (Alternative 1)

As required by the National Environmental Policy Act, the No Action alternative forms a basis for describing and comparing the effects of the proposed action. In this case, no action means that the Seventh Mountain Rock Pit would not be expanded and the existing pit would remain at approximately 8 acres. Rehabilitation of the Rock Pit would eventually take place, although it would be contingent on available funding.

The Bend District's requirements for sand, gravel, and aggregate for road maintenance and reconstruction would come from more distance rock pits on the Forest, or would have to be purchased commercially.

2. Proposed Action (Alternative 2)

The proposed action includes the following specific activities:

- Overburden material that had been excavated from existing pit and stockpiled on the new source area would be spread back over the existing pit floor. This would allow access to the new source area, and begin rehabilitation of the exhausted area.
- Remove all vegetation from the new source area (approximately 7 acres).
- Remove the overburden (topsoil) from the new source area.

a. Mitigation Measures and Project Design

1. Restoration of the gravel pit will be required.
2. Once excavation has been completed on all or part of the pit area, the pit will be restored to the requirements of the pit plan.
3. Prior to removal of gravel and rock, topsoil will be saved in a stockpile for surface dressing in the post-operation rehabilitation period.
4. Seeding, mulching, and drainage of the pit should be considered as part of the restoration of the pit.

5. Access roads to the site shall be obliterated when the life of the pit is exhausted.

Mitigation Measures Related to Wildlife

Cavity Nesters/Neotropical Migratory Birds

6. To avoid potential nest destruction and loss of broods for cavity nesters and passerine birds, do not conduct green tree harvest or snag removal during the period April 1st – August 15th.
7. Do not remove shrub habitat prior to rock extraction occurring. Remove the shrub layer as the overburden layer is removed.

Raptors

8. Any raptor encountered before or during management activity implementation will be reported to a Bend/Fort Rock Ranger District wildlife biologist. If this occurs, proper seasonal restrictions and habitat protection measures would take place.

Bats

9. Do not remove shrub habitat prior to rock extraction occurring. Remove the shrub layer as the overburden layer is removed.

Big Game

10. Operation would be prohibited during the Tumalo Winter Range road closure from December 1 through March 31.
11. Seed the exhausted portion of the rock pit with native forage species including needlegrass and bottlebrush squirreltail. Once ground disturbance has ceased within the proposed project area, also seed with native forage species.
12. Road 4600-920 will be closed.

Mitigation Measures Related to Visual Objectives

13. Leave standing trees and shrubs in strategic locations along the perimeter of the pit to serve as screening.
14. Construct 2 to 3 foot berms with topsoil to create a gradual grade change from the pit to the adjacent road, and seed the berms with native grasses to prevent erosion and plant with trees. Berms and tree planting should be located to fill in gaps between trees that are left on the perimeter.
15. Planted trees will be watered initially to provide for plant establishment.
16. While in operation, roads will be watered to minimize dust as necessary.

Mitigation Measures Related to Noxious Weeds

17. Use permit clauses to prevent the introduction or spread of noxious weeds by contractors and permittees.

18. If the timber is removed via timber sale, to prevent the spread of the present weed population, use the regional contract clause found in Appendix B of the Noxious Weed Assessment (in project file).

19. Monitor the project work area in the period during and after work is completed and pull any new or existing sites as necessary.

Chapter 3 - Environmental Effects

This section of the environmental analysis considers the environmental consequences of implementation of the two alternatives. The following issues and environmental components did not shape the range of alternatives because they are not considered significant, but analyzing the effects to them is important for assessing how well the alternatives meet the purpose and need for the project and protect other resources.

A. Scenic Integrity

Scenic Integrity Levels describe the existing condition of the landscape's appearance, and also describe the standard of management or desired future condition. The areas adjacent to the Cascade Lakes Scenic Byway are classified as High Scenic Integrity (appears unaltered) under the scenic integrity objectives to be met for the desired character of the project area. High Scenic Integrity refers to landscapes where the valued landscape character "appears" intact.

The Cascade Lakes Scenic Byway is a major scenic travel corridor and would be classified as having a High Concern Level in the Scenery Management System due to its national and/or regional importance of the area's association with recreation use and tourism.

Although the location of the proposed site is not adjacent to either the Cascade Lakes Scenic Byway or Road 41, portions of the site are visible from both roads. The views from the Cascade Lakes Scenic Byway are mostly screened by existing trees and by the topography sloping downwards and away from the highway. An opening between the trees provides a view to the state-owned pit that is directly north of the proposed project. The views from Road 41 are to the southern portion of the project site.

Under the No Action Alternative (Alternative 1), there would be no effects to the scenic quality of the area.

In the Proposed Action of Alternative 2, the scenic quality of the area would be affected by the excavating and transport operations. There would be removal of vegetation and topsoil in addition to the mining material, and increased noise and dust. Retaining existing trees within a 50' vegetative buffer and screen around the perimeter of the project site and also planting additional trees for screening would help mitigate these effects. Scenery Management Objectives of High Scenic Integrity (Retention) would be met if effective screening occurs.

B. Wildlife

The 7th Mountain Rock Pit Expansion area provides habitat for a variety of wildlife species. Very few snags for cavities are located within the project area, but it does provide foraging habitat for many cavity nester species. Nesting and additional foraging habitat are also available adjacent to the project area. The area of the proposed project does not contain any late and old structural stands.

Alternative 1 is the No Action alternative. It would have no impact on any wildlife species or wildlife habitat.

With the Proposed Action, habitat alteration would occur in two stages (removing the trees, and then removing overburden and extracting the rock). The removal of trees will have a more immediate impact than the rock extraction. Certain wildlife species and their habitat would be negatively impacted by this project, including passerine birds, cavity nesters, bats, raptors, small mammals and big game. However, the impact would not compromise population viability for any species at the landscape level. By following mitigation measures, the impacts to species and habitat on a local level would be reduced.

Although this project would not be impacting connectivity between late and old structural stands, it would be eliminating 7 acres of wildlife habitat. Implementation of this project as proposed is not expected to negatively impact connectivity, but would create a larger block of fragmentation, thus opening additional habitat to negative impacts from edge effects. Edge effects include drying and invasion by early successional plant species and opportunistic wildlife species such as crows and brown-headed cowbirds.

This project occurs within the Ryan Ranch Key Elk Area as identified in the Deschutes LRMP. This project also occurs within part of the Tumalo Winter Range Cooperative Road Closure. The project area is not critical habitat for deer or elk. Implementation of Alternative 2 would reduce available cover and forage, but due to the limited size of the project, this reduction would be negligible at the landscape level. Closure of the 920 road adjacent to the expansion area would benefit deer and elk that utilize habitat in this area.

Logging, overburden removal, and the rock extraction would permanently remove habitat for some small mammal species. Direct negative impacts would result to species that dwell underground during overburden removal. This area is not considered critical habitat for any small mammals, thus loss of this habitat would not be significant.

C. Economics

The no action alternative would require that materials be delivered from a different site to complete projects in the area of the 7th Mountain Rock Pit. For example, the next scheduled project is resurfacing of the 41 Road, which is in the immediate vicinity of the proposed rock pit expansion. To deliver approximately 14,000 cubic yards of ¾ minus rock to this site would add about $40,000 to the cost of this one project, as compared to using material from the 7th Mountain Rock Pit.

It is estimated that over the life of the pit the savings would be a minimum of $150,000. Alternative 1 has more costs associated with it than Alternative 2, because of the need to transport material to projects in the area.

D. Water Quality

The project lies within the Deschutes River drainage basin. The Deschutes River is on the Department of Environmental Quality list for water quality-impaired streams (303(d) list). The parameters for which it is listed are dissolved oxygen, sedimentation, temperature, turbidity, flow modification, and habitat modification.

Alternative 1 (no action) will have no effect on water quality.

Alternative 2, the proposed action, will not create any measurable type of disturbance that would contribute to pH increases in the Deschutes River. The distance from the project area to the river and the use of sufficiently stringent measures during the development of the project will ensure there are no measurable adverse effects to water quality. All applicable Forest Plan Standards and Guidelines will be incorporated to ensure water quality is protected.

E. Cultural Resources

A cultural resource survey was conducted in the project area. No cultural resources were found. There will be no effect on cultural resources from either alternative.

F. PETS Plants

Alternative 1 would have no effect to PETs plants.

Habitat for green-tinged paintbrush is present on the project site. A survey conducted by a Forest Service botanist did not locate any proposed, endangered, threatened, or sensitive (PETS) plants. There are no expected direct, indirect, or cumulative effects to PETS plants from Alternative 2, the proposed project.

G. Threatened and Endangered Species

The proposed project area was evaluated to determine which species might occur based on the presence of required habitats and known locations. A field review occurred at the project site by District Wildlife Biologist. It was determined that no suitable habitat exists for any listed species within the proposed expansion area. No effects are expected to occur to any PETS or Candidate species under either alternative. The Proposed Action should have NO EFFECT or IMPACT on individuals or populations of PETS or Candidate Species or their habitat.

Required Disclosures

1. Wetlands and Floodplains

No wetlands would be affected by the proposed project. The project is not located within a floodplain.

2. Consumers, Civil Rights, Minority Groups, and Women

Analysis of effects on these groups was beyond the scope of this project. The effects are within those described in the Deschutes National Forest Plan.

3. Prime Lands (Farm, Range, and Forest)

There are no lands within the boundaries of the Deschutes National Forest that meet the definition of prime farmland, or are considered prime farmland as discussed in the Final Environmental Impact Statement, Deschutes National Forest Land and Resource Management Plan. National Forest Land is generally not considered “prime” forestland. This project, therefore, would not affect prime lands.

4. Irretrievable and/or Irreversible Commitment of Resources

Under Alternative 2, the rock resources are an irreversible commitment once used. The area of the quarry is an irretrievable commitment of the resources that occupy the surface of the expansion area. After the rock pit is reclaimed, some of the surface resources, such as topsoil and plants, can be returned to the site.

5. Short-term Uses versus Long-term Productivity

The use of the rock pit will span approximately 20 years. This is a relatively short-term use. Long-term productivity is expected to return to the site after the rock source is exhausted and rehabilitation takes place.

6. Cumulative Effects

The portion of the rock pit owned by the State of Oregon covers 38 acres. The Forest Service portion currently covers about 6 acres. Expanding the rock pit by an additional 7 acres will bring the total excavated area to approximately 51 acres. Other cumulative effects are discussed under individual resources as appropriate.

Chapter 4 - Consultation with Others

A. Public Notification

The public was first notified of the proposed project on March 2, 2000. A letter describing the proposed action and requesting input was sent to 42 individuals and groups who have expressed interest in our planning process.

On July 12, the Environmental Analysis or notice of its availability was sent to 45 individuals and groups. Notice of the availability of the EA for public comment was published in the Bend Bulletin on July 12, 2000.

B. Public Participation

One comment was received during the preliminary scoping period. The respondent, a resident of Bend, was in favor of the proposed action.

C. List of Preparers

Interdisciplinary Team:

Leonard Wesley, Engineering

Robert Jensen, Geologist

Larry Chitwood, Geologist

Charmane Levack, Botanist

Robin Lee, Landscape Architect

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Beth Peer, Team Leader & Writer

Specialists Consulted:

Randy Gould, Hydrologist

Chris Lipscomb, Archaeologist

Mollie Chaudet, NEPA Coordinator