

PAULINA FALLS OVERLOOK ENVIRONMENTAL ASSESSMENT

Bend Fort Rock Ranger District
Deschutes National Forest
Deschutes County, Oregon

INTRODUCTION

The Bend-Ft. Rock Ranger District of the Deschutes National Forest has initiated an Environmental Assessment (EA) to assess the effects of recreation improvements at the Paulina Falls Day Use Area that is adjacent to Paulina Creek. Refer to the general vicinity map (Figure 1, below). The site is located in Township 21 South, Range 12 East, and Section 34. The associated recreation site is located within Newberry National Volcanic Monument (NNVM). The project area is located within Lake 6th field subwatershed, Newberry 5th field subwatershed, and Little Deschutes 4th field watershed.

MANAGEMENT DIRECTION

The Deschutes National Forest Land and Resource Management Plan (Forest Plan), 1990, establishes broad direction for the Forest. The Paulina Overlook project includes Management Area 11 (Intensive Recreation), which emphasizes developed recreation opportunities and a broad range of accessibility. The NNVM Recreation Master Strategy (1995) calls for replacing the chain link fence and improving accessibility and interpretation at the Paulina Falls Day Use Area.

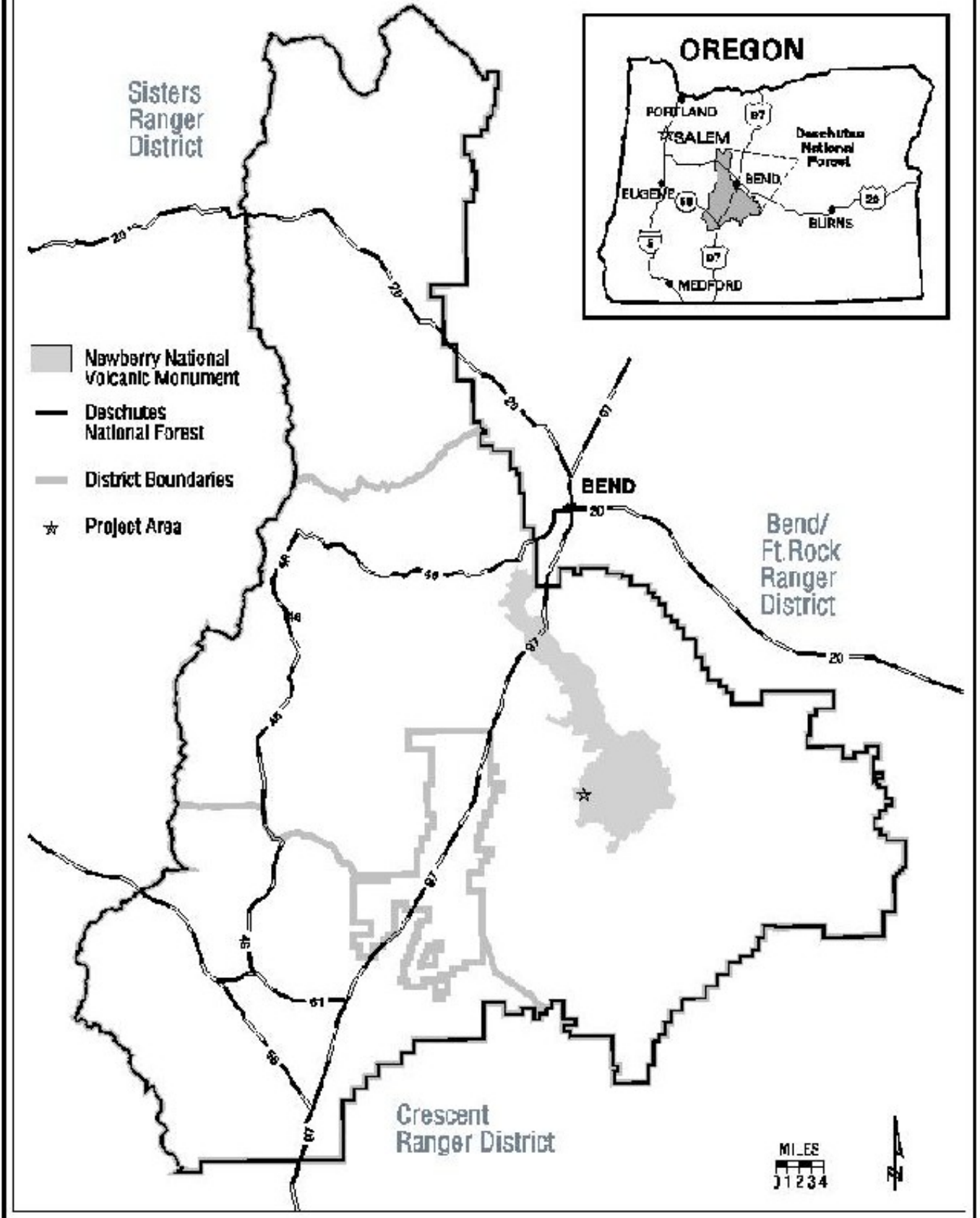
DOCUMENTS TIERED TO

The following documents were used in this analysis and are incorporated by reference. These documents are available for public review at the Bend-Ft. Rock Ranger District Office:

- 1990 Deschutes National Forest Land and Resource Management Plan (Forest Plan) - This plan was developed to guide all natural resource management activities and establish standards/guidelines on the Deschutes National Forest.
- 1994 Newberry National Volcanic Monument Comprehensive Management Plan (NNVMCMP).
- Inland Native Fish Strategy (INFISH).
- Paulina Complex EA (1998).

Figure 1

DESCHUTES NATIONAL FOREST Paulina Falls Overlook



PURPOSE AND NEED FOR ACTION

The purpose of the project is to provide accessibility, safety, and positive aesthetics for the visiting public along the north rim of Paulina Creek at the Paulina Falls Day Use Area. There is presently a marked visual difference between the north rim and south rim of Paulina Creek. The north rim, accessed by the Peter Skene Ogden Trail, provides viewing of Paulina Falls. The trail is well used and compacted, vegetation is being trampled, and the trail is in need of stabilization to prevent sediments from entering the creek. A chain link fence is present between the edge of the rim and trail providing for visitor safety.

There is a need to reduce the visual differences that presently exist between the north and south rims of Paulina Creek by; 1) Removing the chain link fence for aesthetic purposes along the north rim; 2) Providing safe access to the north rim and improving the integrity of the bluff where the trail is presently located; and 3) Providing an overlook along the north rim to safely take advantage of the view of the falls.

PROPOSED ACTION

The original Decision Notice for the Paulina Complex Project EA (1998) states: "This (preferred) alternative will replace the existing fence at Paulina Falls overlook and on both sides of Paulina Creek with a three foot high rock wall with wood or metal rails on top." The Paulina Falls Overlook EA would: 1) not replace the chain link fence with a 3 foot rock wall as defined in the original EA; 2) provide for an official 12 x 12 foot rock view point; and 3) relocate the Peter Skene Ogden (PSO) trail, and obliterate/rehabilitate the existing Peter Skene Ogden trail.

- Construct a rock overlook on the north side of the creek with a metal railing on top.
- Relocate the existing trail away from the north rim edge of Paulina Creek.
- Obliterate and re-vegetate the existing trail along the north rim.
- Construct an additional trail to access the rim overlook from the relocated trail.
- Construct a juniper split-rail fence along either side of the rim overlook trail.
- Remove the existing chain link fence.

DECISION TO BE MADE

The purpose of this document is to display the effects of the revised proposed action and any alternative methods or mitigation measures in addressing the issues identified for the Paulina Falls Overlook EA. It documents an environmental analysis of the alternatives including the no-action alternative. Based upon this analysis and public comments, the Bend/Fort Rock District Ranger will determine which alternative will be implemented in the project area and if so, where and under what conditions.

AVAILABILITY OF THE PLANNING RECORD

Specialist reports used in the preparation of this Environmental Assessment are on file at the Bend/Fort Rock Ranger District office.

PUBLIC INVOLVEMENT/SCOPING PROCESS USED

A letter requesting public involvement was mailed on September 27, 2001 to approximately 100 individuals, businesses, and

organizations that have an interest in the process. Included in the mailing was The Bulletin, the local newspaper of record. Announcement of the proposed action was included in the Central Oregon Schedule of Projects (Deschutes National Forest publication) starting in the spring of 2001. This notification reaches approximately 3,200 individuals and groups.

ISSUES

The public scoping process for the Paulina Falls Overlook EA and the District Ranger have identified no key issues related to the proposed action in the project area.

ALTERNATIVES CONSIDERED IN DETAIL

This section presents a detailed description of the alternatives responding to the "Purpose and Need" that are considered to be reasonable and viable by the Decision Maker (the Bend-Fort Rock District Ranger). The Proposed Action Alternative is designed to move toward the desired condition consistent with the standards and guidelines of the Forest Plan and NNVMCMP. A site-specific environmental analysis was conducted.

Alternative A (No Action)

In the no action alternative the chain link fence along the edge of the north bluff would remain. The trail that parallels this fence would continue to provide trail access for viewing Paulina Falls.

Alternative B (Proposed Action)

- Construct an approximate 16 feet x 16 feet (260 square feet, outside dimension) rock overlook on the north side of the creek. The creek side of the proposed overlook would angle slightly to the center to soften the design. Ground disturbance for this structure would be approximately 18 feet long by 18 feet wide and up to 3 1/2 feet deep. The structure would consist of concrete footings, a concrete floor, and a concrete block wall with rock fascia on the face of the block wall fastened with mortar. The rock wall would be approximately 2 feet wide and 2 feet high with a metal railing on top. The wall would be constructed on the east, south, and west sides with the north side remaining open to allow entry into the overlook.
- Construct approximately 700 feet of new non-motorized trail, which would relocate the existing trail approximately 150 feet away from the north rim edge of Paulina Creek where the existing trail is located. The proposed trail would be cleared of vegetation 4 feet wide and the tread would be 18 inches wide.
- Approximately 600 feet of existing trail along the north rim would be obliterated and re-vegetated. Obliteration would include placing large rocks and logs on the trail, transplanting small trees and shrubs, and seeding with native grasses.
- An additional 150-foot trail would be constructed to access the rim overlook from the relocated trail. This trail would be cleared 6 feet wide and the tread would be 2- 3 feet wide.
- Construct a juniper split-rail fence, one rail high on either side of the 150-foot rim overlook access trail.
- Remove approximately 400 feet of existing chain link fence from the bluff along the north side of Paulina Creek. Some of these posts may be cut off as they are imbedded in rock.
- One white fir approximately 32 inches DBH (diameter at 4.5 feet above the ground) would be topped and limbed for snag retention. This would improve public safety and reduce the risk of damage to the proposed overlook.

MITIGATION MEASURES

Fisheries/Hydrology:

The following mitigation measures are found in General Water Quality Best Management Practices, Pacific Northwest Region,

1988. For more information on these BMP's, reference this manual.

Although these BMP's are targeted for roads, the same principles apply to trail maintenance and construction.

R-7. Title: Control of Surface Road Drainage Associated with Roads.

Objectives: To minimize the erosive effects of water concentrated by drainage features, to disperse runoff from or through the trail, to minimize sediment generated from the trail.

Installation of water bars in appropriate places and frequency can reduce erosive energy generated by overland flow of water, and prevent sediment input into waterbodies. Whenever possible, outslope waterbars to drain away from Paulina Creek. When waterbars must drain toward the stream, choose drainage areas that allow settling of sediment prior to water entering waterbody, i.e., areas that are well-vegetated, areas with downed wood, or areas that have a valley bottom or floodplain that is relatively wide and gentle-sloped to allow settling of sediments.

R-11. Title: Control of Sidecast Material

Objective: To minimize sediment production from sidecast material during trail construction or maintenance.

Avoid sidecasting at areas that would likely result in sideslope failure with introduction of sediments into a waterbody. Sidecast material can be difficult to stabilize and is susceptible to erosion, settling, and mass instability. Any waste areas from excess materials generated during trail construction should be deposited and stabilized in areas that won't contribute sediments to Paulina Creek.

R-12. Title: Control of Construction in Streamside Management Units

Objective: To reduce the adverse effects of sediment from nearby trails on slope stability, vegetation, and aquatic resources in riparian areas.

Locate new trail construction and reroutes in areas that would avoid adverse effects to water quality. Areas likely to have adverse effects are: in riparian areas or adjacent to the stream; steep slopes; and areas devoid of vegetation upslope of the stream.

T-21. Title: Servicing and Refueling of Equipment

Objective: To prevent pollutants such as fuels and lubricants from being discharged into the stream.

Service and refuel equipment in areas that would not lead to contamination of the stream in the event of an accidental spill. Maintain a distance of a minimum of 100' from the stream for servicing of hand operated power tools and small heavy equipment.

Rec-8. Title: Protection of Water Quality Within Developed and Dispersed Recreation Areas

Objective: To protect water quality by regulating the discharge and disposal of potential pollutants.

Prevent concrete materials from entering the stream during construction of the rock walls at the overlooks. Dispose of excess concrete materials properly. No excess concrete materials to be left on site.

Scenic Quality:

The proposed management activities may affect scenic resources within the Foreground landscape as seen from Road 21 and viewing from other locations. The mitigation measures are designed to help reduce impact on Scenic Resources and meet Forest Plan standards and guidelines.

- A Landscape Architect shall work closely with Paulina Falls Overlook Interdisciplinary Team on conceptual site design and site rehabilitation prescriptions to help minimize any potential impact on scenery and ROS classification.
- Use design criteria to soften the angles of the proposed overlook as viewed from south side overlook. Maintain a similar stonewall fascia size and color as found on the south side wall.
- Plant native shrubs and grasses to soften the edge and reduce the imposing form of the proposed overlook on the north side.
- Reduce soil and color contrast by completely covering up impacted area with native materials such as pine needle casting, local topsoil of similar color, or bark mulch following construction completion.

Botany:

- Use contract and permit clauses to prevent the introduction or spread of noxious weed by contractors and permittees. See Appendix B in Noxious Weed Report for the Equipment Cleaning Clause approved by the Regional Forester.
- After management activities seed with native plant species any areas that have been disturbed.
- Monitor the project work area in the period during and after work is completed, map and pull any new noxious weed sites as necessary.

Cultural:

- No ground disturbance would be done in association with the obliteration of the old trail with the exception of native transplants. Approved ground disturbance is associated only with the rock wall, overlook construction and the relocation/ construction of the trail.
- In the case that cultural resources are found during construction, the USFS would be notified and construction would terminate until a qualified Archaeologist determines the significance of the site.

ENVIRONMENTAL CONSEQUENCES

This section describes the beneficial and adverse impacts to the environment that would occur if the alternatives were implemented. Estimated effects are discussed in terms of environmental changes from the current situation and include qualitative as well as quantitative assessments of direct, indirect, and cumulative effects.

Recreation

Existing Condition:

There is presently a marked visual difference between the south and north sides of Paulina Creek at the Paulina Falls Day Use Area. Implementation of the Paulina Complex Project EA, 1998, removed the chain link fence on the south side of the creek. The fence was replaced with a rock wall with metal rails on top. This included an overlook viewpoint of the falls. On the north side of the creek, the chain link fence remains. The Peter Skene Ogden trail, with access from the day use area, accesses the north rim of Paulina Creek and is adjacent to the fence. The trail is well used, compacted, and vegetation is being trampled. No work was accomplished along the north side under the Paulina Complex Project decision (1998).

Alternative A (No Action):

The existing chain link fence on the north rim would not be replaced. The marked visual difference between the north and south sides would continue. The north rim access trail would continue to provide the opportunity for viewing Paulina Falls. Compaction of the soils, trampling of vegetation, and risk of sedimentation into the creek would continue.

Alternative B (Proposed Action):

Under the proposed action, the chain link fence along the north rim would be removed. A new rock overlook would be constructed. The existing trail would be relocated approximately 150 feet away from the edge of the north rim for safety reasons and

environmental concerns. The existing rim edge trail would be obliterated to discourage use. The combination of fence removal, trail relocation, and viewing area would improve public safety and eliminate the visual contrast between the north and south rims.

Scenic Quality

Existing Condition: One viewing distance zone, Foreground landscape, falls within the project area. The existing scenic integrity has a mixed variety of disturbed and undisturbed areas. Past natural and human caused activities have intruded into the expected "natural appearing" landscape character. The current use is considered high at the Paulina Falls day use area.

Existing developed recreation facilities found within and nearby the Paulina Falls Day Use Area are well established, with strong historical, cultural, and recreational values. In general, most of these facilities are well blended and very much subordinated to the existing natural environment. However, certain man-made structures could never completely blend in with nature, such as the heavy trail use impacts, chain link fencing (on the north side overlook), railing, and stone wall. The impact on landscape from man-made alteration on the expected "natural appearing" landscape character will always be evident.

Alternative A (No Action): There is no change to the existing recreation experience, landscape character or scenic quality. Routine site maintenance would be maintained as required to meet health and safety standards and guidelines.

Alternative B (Proposed Action): The effect on scenery, landscape character, and recreation experience is expected to be minimal. With effective mitigation measures, the effect(s) on scenery and landscape character is expected to fully meet the Forest Plan and the NNVM standards and guidelines, and the Recreational Opportunity Spectrum (ROS) classification of Roded Natural for the Paulina Falls Overlook project area.

Scenic quality would be greatly improved with the effective control of existing erosion (sloughing) by the proposed stonewall extension. The proposed removal of existing chain link fence on the north side of Paulina Creek, along with the relocation of the existing trail and its rehabilitation, would greatly improve scenic vistas as viewed from the south side overlook.

The proposed 12' x 12' north rim overlook would be visible from other viewing locations and may be dominant to the existing natural environment.

Wildlife

Existing Condition: Species List - The following wildlife/habitats have been reviewed ("x", na = not applicable) to determine if the project/activity would have any adverse effects on listed, proposed, candidate or sensitive species in order to meet the requirements for a biological evaluation. Only those species or habitats with an "x" occur within or adjacent to the project area and could be potentially impacted by the project/activity.

Northern Spotted Owl (NSO) - na	Canada Lynx LAU - na	Oregon Spotted Frog - na
NSO Critical Habitat - na	Canada Lynx KLA - na	Northern Bald Eagle - na
NSO NRF habitat - na	Regional Sensitive Spp. (list attached) - na	

Alternative A (No Action): There would be no on the ground changes that would affect wildlife.

Alternative B (Proposed Action): There are no TES species present in the project area. There would be no effect to Threatened, Endangered, or Sensitive (TES) animals or other wildlife based on implementation of the proposed action.

Fisheries/Hydrology

Existing Condition: Paulina Creek is a small, high gradient perennial stream. Numerous falls prevent fish movement upstream. The annual maximum flow is approximately 50 cubic feet/second, but occasionally dries up in the downstream reaches. The stream is included on the Oregon Department of Environmental Quality list of water quality impaired streams (303(d) list). The parameter that

determines this listing is high summer water temperatures. There are no native fish present. Some fish, primarily brown trout, move from Paulina Lake past the screened outlet into the stream. The stream was last stocked in 1981 (ODFW 1994). Survival in the stream was poor due to angling success and poor over-wintering survival. The riparian zone is generally narrow, less than 30 feet on either side of the stream, consisting of willows, sedges, and grasses.

Alternative A (No Action): Overland flow of fine sediments from the trail and overlook areas would continue. Over 300 feet of trail and associated overlooks adjacent to the creek would continue to input sediments. Additional user-created spur trails to the stream would be developed, over time, with the proximity of the trail to the stream. This would lead to increased overland flow of sediments into the stream. Increases in fine sediments degrade water quality, fish spawning habitat, and macroinvertebrate habitat (Meehan, 1991).

Alternative B (Proposed Action): Following recommended Best Management Practices, the proposed activities of trail re-routes, trail obliterations, and rock wall construction at overlooks, would reduce the amount of sediments entering Paulina Creek from the immediate area. Over 300 feet of trail immediately adjacent to the stream would be closed and rehabilitated. Water quality and fish habitat would be protected and maintained. The proposed activities would not retard or prevent the attainment of the Riparian Management Objectives (RMOs) within the Riparian Habitat Conservation Area (RHCA).

Cultural

Existing Condition: The area in and around the Caldera within Newberry National Volcanic Monument has been determined to be culturally important. The area affected by the proposed action has been surveyed for cultural resources.

Alternative A (No Action): This alternative would have no impacts on cultural resources.

Alternative B (Proposed Action): The proposed action would not affect cultural resources in the area.

Soils

Existing Condition: Soils in general are typically volcanic ash with moderate to high porosity. Sites may vary depending on soil particle size. As particle size increases, porosity increases.

Alternative A (No Action): There would be no change to the soil resource.

Alternative B (Proposed Action): There would be surface disturbance with trail, rock wall, and overlook construction. Surface disturbance would occur on six one hundredth (.06) acre. The depth of disturbance would vary from 6 inches on the trail up to 20 feet long x 20 feet wide x 3 feet deep at the north rim viewpoint.

Botany

Existing Condition: No TES plant species or noxious weeds were found in the areas of proposed activities.

Alternative A (No Action): The No-Action Alternative would not affect TES plant species or the treatment and control of noxious weeds within the project area.

Alternative B (Proposed Action): The project poses a moderate risk of noxious weed introductions or spread for all sites. Sites given a moderate rating would have heavy equipment used, ground disturbance for all proposed sites, and some sites would have soil and fill transferred in. See Mitigation Measures for noxious weed control. There would be no impact on TES plant species.

EFFECTS COMMON TO ALL ALTERNATIVES

Road Access

Road access to the site would not change.

Noise

Existing noise is associated with people using the area for recreation. Public impacts would be of short-term duration during construction. The project would be implemented after the core high use recreation season, after Labor Day, 2002.

Prime Lands

There are no lands within the planning area that are classified as prime farm or rangelands. There would be 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".

Irreversible and Irretrievable Resource Commitments

The existing commitment of resources would continue under both alternatives, there are no additional irreversible or irretrievable resources committed in this alternative.

Civil Rights and Environmental Justice

Civil Rights legislation and Executive Order 12898 (Environmental Justice) direct an analysis of the proposed alternatives as they relate to specific subsets of the American population. The subsets of the general population include ethnic minorities, disabled people, and low-income groups. The purpose of the analysis is to determine whether adverse civil rights impacts are anticipated on an underrepresented population. The analysis is to determine also whether disparate or disproportionate impacts associated with the alternatives are anticipated. A primary purpose of the alternatives is to provide for the health and safety of all members of the public by reducing the risk of entrapment from wildfire. Provision of these benefits does not discriminate between subsets of the general population.

List of Planning Participants

This section identifies the Forest Service personnel who participated in the analysis and the preparation of the Paulina Overlook EA. For a list of organizations and individuals contacted during the scoping process, as well as persons and organizations responding to the proposed action and copies of their comments, refer to the project file located at the Bend-Ft. Rock Ranger District.

Marvin Lang	IDT Leader/Writer
Shelley Borchert	Wildlife Biologist
Lucy Hamilton	Heritage Resources
Charmane Levack	Botanist
Larry Sharp	Engineering
Ronnie Yimsut	Landscape Architect
Thomas Walker	Fishery Biologist

[Deschutes and Ochoco National Forests Website](http://www.fs.fed.us/centraloregon/manageinfo/nepa/documents/bendfort/paulinafalls/ea.html)

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