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ENVIRONMENTAL ASSESSMENT  
for the  
Leopold Mine Stabilization and Cleanup

U.S. DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
MEDFORD DISTRICT  
GRANTS PASS RESOURCE AREA

May, 2000

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
MEDFORD DISTRICT

EA COVER SHEET

RESOURCE AREA: Grants Pass

FY & REPORT # EA Number OR-110-00-18

ACTION/TITLE: Leopold Mine Stabilization and Cleanup

LOCATION: T. 35 S., R. 8 W., section 3, South ½, Willamette Meridian, Josephine Co., Oregon

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## **Chapter 1**

### **Purpose and Need for Action and Alternatives**

#### **A. Introduction and Need for the Proposal**

##### 1. Introduction

This environmental assessment (EA) is written to analyze an emergency project to remove an existing impoundment, stabilize a reworked slide area, clean filled settling ponds, and remove existing residential structures and outbuildings on six mining claims on BLM administered lands. The area at the location of the project area is commonly known as the Leopold Mine.

The purpose of this environmental assessment (EA) is to assist in the decision-making process by assessing the environmental and human affects resulting from implementing the proposed project and/or alternatives. The EA will also assist in determining if an environmental impact statement (EIS) needs to be prepared or if a finding of no significant impact (FONSI) is appropriate.

This EA tiers to: (1) the Final EIS and Record of Decision (ROD) dated June 1995 for the Medford District Resource Management Plan dated October 1994; and (2) the Final Supplemental EIS on Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl dated February 1994; and (3) the Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl and its Attachment A entitled the Standards and Guidelines for Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl dated April 13, 1994.

##### 2. Need for the Proposal

On or around January 1, 1997 a landslide occurred on an area above a recently mined site on the Leopold Mine that became saturated by heavy seasonal rains. The slide covered the mining area and non motorized equipment owned by the claimants. Several trees were uprooted above the slide area and were present in the slide debris. The slide consisted of between 15,000 and 20,000 cubic yards of material.

In the spring of 1997 the claimants retrieved the timber within the slide area and decked that material west of the first settling pond for proper disposition by the BLM. The claimants further brought in equipment on the claim to perform the terracing of the slide area, construction of the dam, construction of an access road to the slide area above the existing residence, and the building of two settling ponds (ponds #1 and #2). The BLM was not consulted regarding the above terracing of the slide area, the dam work, or the impoundment.

Over the past few years the slide and dam have eroded significantly causing turbidity into Galice Creek. Two drainages within the slide area contributed to the erosion and sedimentation load. One drainage flows into the impoundment and discharges at low flow beneath the dam. At high flow the overflow spills over the earthen dam causing the nonengineered dam to significantly erode. The second drainage is funneled into a four inch irrigation pipe and piped directly onto the slide causing heavy flows of slide material to erode and wash downslope.

Within the past year the BLM has paid for two engineering studies to review the slide and dam/impoundment to determine if the failure of either, or both, would cause significant sediment load into Galice Creek and/or cause an imminent health or safety concern below the slide area. The engineering studies concluded that the failure of the impoundment and the slide is very likely and that the failure could cause an immediate health and safety risk to the occupants of the existing residence on the mining claim and travelers along the Galice Creek Road, as well as cause an immediate impact to the North Fork of Galice Creek fisheries and water quality of the creek and Rogue River downstream if failure occurs. Both studies recommended that the dam be immediately breached and the slide area stabilized.

The Assistant United States Attorney (AUSA), at the request of the BLM, has filed a complaint in federal District Court against the mining claimant and her family for failing to comply with pertinent federal mining regulations and laws and for conducting activities on the mining claim that have caused unnecessary or undue degradation. In the complaint the AUSA asks that a water impoundment constructed by the claimant within the slide area be dewatered and removed, the slide be stabilized, and that the occupancy be discontinued and the structures removed. In District Court on May 12<sup>th</sup> the judge directed the BLM to complete the stabilization work and removal of the impoundment. The decision on the occupancy of the claims will be made later this summer.

The AUSA is asking the District Court for relief and ask that the removal of the impoundment and the structures, along with the stabilization of the slide, be completed by the claimants immediately. The AUSA is also asking the judge to allow the BLM to complete the work immediately if the claimants fail to do so, or do not have the resources available to complete the work. It is expected that the work outlined above will be done beginning on or about May 15, 2000. If the claimant is allowed/required to complete the work it may only be done to the satisfaction of the BLM as outlined below.

The Leopold Mine is located in Township 35 South, Range 8 West, section 3, south half, Willamette Meridian, Josephine County, Oregon.

## **B. Scoping Issues Relevant to the Proposal**

On a related issue the mining claimant filed a mining plan of operations recently with the Grants Pass Resource Area of the Medford BLM. The plan of operations outlines mining activities that would occur over a period of twelve years. As outlined in the BLM Surface Management Regulations (43 CFR 3809) a plan of operations is considered a federal action and must be reviewed as outlined by NEPA. A BLM interdisciplinary team met for a preliminary review of the plan of operations and analyzed the plan to determine impacts that may occur. However, review of the plan has not been completed and the review will not be continued until the claimant shows that she has permits from appropriate agencies within the State of Oregon with jurisdiction over mining activities on federal lands, and the claimant shows that she has valid water rights to divert water from the North Fork of Galice Creek to perform the activities outlined in the plan of operations. It should be clear that this EA is not written to analyze mining activities in the plan of operations. That EA will be a separate document.

A portion of the plan of operations proposed by the claimant included some stabilization and reclamation work within the slide area. Excerpts from documents that were created when conducting the preliminary review of the plan of operations will be included in this EA where appropriate to discuss possible impacts of removing the impoundment and stabilizing the slide area.

The main issue regarding the removal of the impoundment and the stabilization of the slide centers around the tremendous sediment load within both the impoundment and slide area, and within the full settling ponds at the foot of the slide/impoundment area. As mentioned above the conclusion of two engineering studies concluded that if the dam/impoundment and slide area fails it could cause imminent safety danger to the existing mining claim residents and a tremendous sediment discharge into Galice Creek, an important anadromous fisheries stream.

Another important issue is the removal of the existing structure used for residential occupancy of the mining claims by the claimants and removal of associated outbuildings. The issue of the removal of the residential structure is mostly a social one and most likely not an environmental issue. The septic system associated with the occupancy will be left on site. A determination will be made at a later date whether the sanitation system poses a threat to Galice Creek or other water sources.

## C. Proposed Action and/or Alternatives

### 1. Proposed Action/Preferred Alternative

The proposed action includes plans to dewater and remove the dam within the slide area, stabilize and perform temporary reclamation measures within the slide area, the cleaning of the settling ponds at the foot of the slide, and the removal of all structures and the residence on the mining claims. A restoration plan with specifications for the work to complete the removal of the slide and restoration of the slide was completed in August, 1999 by Grants Pass Engineer Jim Roper. That plan was written with specifications to ensure the work would be adequate for stabilization of the site with minimal impacts to the environment. That restoration plan is referenced herein but not an attachment to this EA. A summary of the work to be completed as described in the restoration plan is discussed below. It should be noted that the restoration plan and specifications will be presented to District Court if necessary to show the type of work that is anticipated. A map (Exhibit A) is attached that shows the location of the slide, dam/impoundment, structures, etc.

The slide and impoundment area totals approximately one acre. The material within the slide and impoundment area that is considered unstable totals approximately 5000 to 7000 cubic yards.

As mentioned above one part of the project is to dewater and remove the earthen dam and impoundment within the slide area. The impoundment stores at full level approximately one quarter million gallons of water. The plan for the dewatering of the impoundment and removal of the dam is two fold. First, if the impoundment is holding water at the time of the implementation of the project the water will need to be removed. Second, after the water is removed from the impoundment, or if the impoundment is dry, the removal of the dam will be done.

If necessary, the dam impounding water at Leopold Mine will be dewatered utilizing a portable pump. Water will be pumped over the dam embankment into the existing downside channel/ravine. If the pumping creates a siphon the pump will be turned off. Filter cloth will be placed on the dam face below the discharge point of the dewatering operation. Upon completion of dewatering an excavator and tracked caterpillar will be moved on site to begin excavation of dam embankment material. Dewatering is expected to require 24 to 48 hours of continual pumping if the impoundment is full to capacity.

The material from dam would be moved to within the impoundment area. The waterway through the impoundment area would be channeled to allow unimpeded flow through the area. The waterway would be on bedrock where possible and armored with rock and boulders present on site to minimize erosion. The dam material would be terraced adjacent to the channeled waterway and seeded and mulched.

The slide would be regraded to a slope of 2:1. Material below the dam and within the slide area as shown on the maps within the restoration plan would be moved to flat areas outside the slide area either immediately west of the slide on contour, or at the location of the existing garden area described above. Measures will be taken to stabilize the material to minimize erosion.

The material at the location of the road built above the residence was sidecast. This is a significant sediment load that has not been stabilized. That material will be removed to an appropriate location as discussed above. The road will be reclaimed and decommissioned.

Settling ponds at the foot of the slide and impoundment would be excavated to provide settlement of soils washing from the slide area. The silt material from the ponds would be moved to the west of their present location (upstream of the waterways) near the existing garden area. This material will be seeded and mulched to minimize erosion into Galice Creek. Although the cleaning of the settling ponds is not in the restoration plan written in August, 1999 the work will be done to allow room for the collection of sediment that may leave the slide area prior to the completion of the stabilization work.

The entire slide and impoundment area, along with areas of stockpiled material, would be seeded and hydro mulched at specifications within the restoration plan. An erosion control blanket is described in the restoration plan and would be 4000 square yards in size and would cover the reclaimed slide area and all slopes of 2:1 or greater.

Equipment to be used during all operations regarding the removal of the impoundment and the stabilization of the slide include one excavator, a D6 Caterpillar, one Lowboy, two 10 yd dump trucks, and one hydromulcher.

The total time necessary to complete the work outlined in the restoration plan is fifteen days. It is estimated that the cost of the entire restoration work would be approximately \$27,000.00. The removal of the impoundment will be done beginning on May 16<sup>th</sup>. The material within the dam/impoundment will be stabilized. The stabilization within the slide area will be completed within sixty days of the decision record and during the drying season in June or early July.

The existing residential structure (originally built after 1975), the shop building (constructed approximately 1998) along the North Fork of Galice Creek, the structure near the impoundment, the bridge in the garden area, and other associated small structures would be removed. These structures would be removed manually using an excavator, D9 tractor with rippers, one lowboy, small crane, and three 10yd dump trucks. The material from the structures would be loaded in dump trucks and removed to the Merlin Landfill.

Prior to beginning the removal of the structures they will be checked to ensure no hazardous materials are present, propane tanks where present are disconnected, the water system to the residence is disconnected, and all valuable personal possessions have been removed either by the current occupants or claimants or in the custody of the United States.

When the removal work is done the foundations of the structures will be removed to the Merlin Landfill. The structure locations will be ripped, seeded, and mulched with ground cover as outlined in the restoration plan.

It is estimated that the total time necessary to remove the structures would be approximately one week. The estimated cost to remove the structures is \$26,000.00. The removal of the structures will be done if the court orders the Strubels to vacate the premises.

The total cost to complete the entire project if contracted would be approximately \$53,000.00.

It should be noted that no new undisturbed areas outside the slide area or areas of past mining or habitation will be disturbed. No timber will be cut or removed either.

## 2. Alternatives to the Proposed Action

There are no alternatives regarding the removal of the impoundment, stabilization of the slide, and the cleaning of the settling ponds. The entire work must be done in order to minimize erosion and mitigate the safety concerns.

There are alternatives to the structure removal portion of the proposed action. If the District Court does not agree with the AUSA and the BLM that one or more of the structures should be removed the estimates of time and costs would change. Structures remaining on site not approved by District Court could only be allowed to remain as long as they are reasonably incident to mining.

The decision to allow structures to remain on the claim could only be authorized following a surface use determination by a Certified Mineral Examiner that those structures are reasonably incident to mining, an EA is completed to determine impacts that may occur as a result of the placement of the structure on BLM lands, and the acquisition by the mining claimant of evidence that the structures comply with the Uniform Building Codes of the State of Oregon and that the claimants have permits from the Oregon Department of Environmental Quality for an

appropriate sanitation system. The authorization to build and maintain structures on BLM lands must be in writing from the BLM Authorized Officer.

At this time no real alternatives exist to be evaluated. Approval of any structures existing or proposed would entail the writing and completion of a separate EA.

### 3. No Action Alternative

The selection of the No Action Alternative would mean that the proposed action regarding the removal of the impoundment, stabilization of the slide area, cleaning of the ponds, and removal of the structures would not occur. This would only occur if the District Court disagrees with the AUSA and BLM and does not allow those activities to occur.

Regardless of whether the No Action Alternative is selected or not the mining plan of operations submitted by the mining claimant will continue to be reviewed as discussed earlier.

### 4. Project Design Features for All Alternatives

Project design features (PDFs) are included for the purpose of reducing anticipated adverse environmental impacts identified in the scoping process and which might stem from the implementation of the proposed action/preferred alternative, or other alternatives. This section outlines these PDFs.

a. Regardless of whether the claimant or the BLM contracts for the work to be done a prework meeting would be conducted on site prior to the commencement of all construction activities. At that time the restoration plan would be discussed and specifics outlined.

b. The Authorized Officer will designate a BLM contact to monitor all activities.

c. Contingency plans in case of emergency spills or leaks by hazardous materials must be in place prior to the commencement of all construction activities.

## **Chapter 2 Environmental Consequences**

### **A. Introduction**

Only substantive site-specific environmental changes that would result from implementing the proposed action or alternatives are discussed in this chapter. If an ecological component is not discussed, it should be assumed that the resource specialists have considered affects to that component and found the proposed action or alternatives would have minimal or no affects. Similarly, unless addressed specifically, the following were found not to be affected by the proposed action or alternatives: air quality; areas of critical environmental concern (ACEC); cultural or historical resources; Native American religious sites; prime or unique farmlands; floodplains; endangered, threatened or sensitive plant, animal or fish species; water quality; wetlands/riparian zones; wild and scenic rivers; and wilderness areas. In addition, hazardous waste or materials are not directly involved in the proposed action or alternatives.

General or "typical" affects from projects similar in nature to the proposed action or alternatives are also described in the EISs and plans this EA is tiered to.

### **B. Affected Environment**

The BLM land at the location of the Leopold Mine is Oregon and California Revested Railroad lands. The claims

are located on the North Fork of Galice Creek. Two forks of a tributary to Galice Creek flow through the area to be worked in relation to the impoundment and slide. Both forks of the creek, which are intermittent, flow through the settling ponds before flowing into Galice Creek.

The lands at the Leopold Mine are in the Fishhook/Galice Late Successional Reserve. The parcel is characterized as a Douglas fir and sugar pine site with associated hardwoods. The area of proposed activities has no significant vegetative cover with no commercial timber present. Annual precipitation averages 42 inches in the project area.

The soils at the slide area, on the hillside above the existing residence, and in the high bench area where the settling ponds are located consist of thick clayey deposits. The material at these areas hold a tremendous landslide potential and is actively eroding copious amounts of sediment into the North Fork Galice Creek.

There is a concern that sediment may leave detention ponds either by seeping through coarse rock berms/dams or flowing through ponds that are full of sediment. If ponds are not adequately sealed fine sediment, that takes time to drop out of suspension, will flow in water through openings between rocks. At the present time all settling ponds are full of sediment thus all new sediment flows unimpeded through the ponds downstream into Galice Creek.

There are no known spotted owl sites within 1.3 miles of the proposed project area. In addition, no habitat that would be used by the spotted owl are being impacted by activities at the location of the proposed activities. No critical habitat for the marbled murrelet exists within the project area. No bald eagles exist, or utilize lands, within the project area.

Consultation with the US Fish and Wildlife Service has initiated during the preliminary review of the mining plan of operations. At that time FWS had no concerns regarding activities outside the riparian reserve or at the location of the slide area. Their concerns also centered on the cutting/clearing of timber.

The National Marine Fisheries Service has been contacted to initiate emergency consultation. NMFS has indicated that they have no concerns with the implementation of the proposed action to minimize sedimentation into Galice Creek. NMFS has verbally agreed to allow the BLM to continue with the project and will review/consult after the emergency work is completed. This is a normal course of action for NMFS to follow when reviewing emergency projects. Where time allows NMFS writes conservation measures to be followed to minimize environmental impacts from the proposed action. Examples of conservation measures were written for this project and submitted by NMFS. Some examples do not appear to be totally pertinent with this proposed action, however, would be more appropriate for the Plan of Operations.

A cultural clearance has been completed at the location of the slide and dam/impoundment. No cultural resources were identified within the project area.

Galice Creek is a tributary to the congressionally designated Rogue Wild and Scenic River. Galice Creek is an important anadromous fishery hosting the coho salmon, a federally listed threatened species under the Endangered Species Act.

## **C. Site Specific and Cumulative Beneficial or Adverse Affects of the Alternatives**

### **1. Proposed Action**

#### **a. Beneficial Impacts**

The restoration project would be beneficial in that it would minimize/eliminate sediment loads within the slide area and cause the removal of an ill designed dam that could fail potentially causing a large flow of water and sediment downslope. This reduction in sediment load will help ensure that impacts to the fisheries of Galice

Creek and the Rogue River are minimal thus not contributing to the further listing of the presently federally listed Coho Salmon, or further listing of other species.

Removal of the structures from the site will ensure that no unauthorized occupancy of the structures occurs in the future. In addition, since the structures and sanitation facilities have not been permitted by the State as discussed above, and since they most likely do not meet the Uniform Building Codes, the continuance of an imminent health and safety threat would be minimized.

The work outlined in the proposed action will, upon its completion, enhance the water quality and health of Galice Creek and the anadromous fisheries.

b. **Potential Adverse Impacts and Mitigating Measures**

**Botany** - No surveys for Bureau sensitive or Survey and Manage vascular and/or non vascular plants will occur since habitat for those species is currently void in the immediate project area. Numerous plant populations (both vascular and non vascular) have been located in the Galice/Rand/Peavine area in similar habitat.

**Fisheries** - adverse impacts to the fisheries of Galice Creek may occur if a rain event occurs during the planned activities on site, and will occur during the first event following the completion of work. The amount of sediment load will be minimized as the ground cover is grown and the erosion cover is stabilized.

**Soils/Hydrology** - short term stabilization of the slide means implementation of the BLM Leopold Mine Restoration plan as discussed above. The slide is will continue to be actively moving, however, chances of movement occurring in the short term will be reduced with implementation of the BLM proposal.

The cleaning of the settling ponds and the stabilization of the slide will reduce sediment loads downstream.

**Wildlife** - no spotted owl seasonal restrictions would be necessary. No impact to the marbled murrelet, or its habitat, would occur as a result of the implementation of the proposed action. No impact to the bald eagle, or its habitat, would occur. No surveys for Bureau sensitive or Survey and Manage wildlife species will occur since habitat for those species is currently void in the immediate project area.

3. **No Action Alternative**

**Botany** - none.

**Fisheries** - If this alternative is selected and the present sediment load continues to exist at the location of the slide, dam/impoundment, and at the hillside above the existing residence the sediment delivery combined with storm event runoff has a high potential to impair adult salmon and steelhead migration. The delay to spawning grounds could cause fish mortality and definitely harass or deter fish from normal spawning behavior. Additionally, excessive sediment delivery will produce indirect mortality to juvenile fish from impaired feeding in the summer months and this will impair adult fish migration and spawning.

**Soils/Hydrology** - sediment that are now leaving detention ponds either by seeping through coarse rock berms/dams or flowing through ponds that are full of sediment will continue if this alternative is selected. Sediment will continue to flow beyond the pond into the stream. At the present time all settling ponds are full of sediment thus all new sediment flows unimpeded through the ponds downstream into Galice Creek.

**Wildlife** - no spotted owl seasonal restrictions would be necessary. No impact to the marbled murrelet, or its habitat, would occur as a result of the implementation of the proposed action. No impact to the bald eagle, or its habitat, would occur.

### **Chapter 3**

#### **Agencies and Persons Consulted**

##### **A. Public Involvement**

Scoping for the project was done within both the core and interdisciplinary teams. No outside public scoping was done since the proposed activity is of an emergency nature.

##### **B. Availability of Document and Comment Procedures**

Copies of the EA document will be available in the BLM Medford District Office. No newspaper notification of adjacent landowners or the public was done since this is an emergency EA.