



United States  
Department of  
Agriculture

Forest  
Service

Willamette National  
Forest

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**File Code:** 2630 Management of Wildlife and Fish  
Habitat

**Date:** January 4, 2012

**Route To:** 2840 Reclamation

**Subject:** Ruth and Morning Star Waste Rock Evaluation for Fish Impacts

**To:** Pete Jones

### **Introduction:**

On 5/23/2011 Grady McMahan (Detroit Ranger District Ranger), Stacey Forson (Willamette Recreation Land and Minerals Staff Officer), Judith McHugh (Willamette Public Affairs Officer), Dani Pavoni (Detroit Ranger District Recreation Staff officer), Darrin Neff (Detroit Ranger District Fish Biologist), Brad Peterson (Detroit Ranger District Wilderness, Trails Program Manager), Doug Shank (Willamette Geologist), Pete Jones (R6 Oregon CERCLA Coordinator), and Dave Halemeier (Detroit Ranger District Hydrologist) met on site to inspect the Morning Star and Ruth Mine sites. Dani, Doug and Dave have worked within the area for a combined time exceeding 60 years between the three of them and so their insights were shared. Other members that had additional information discussed this with the group.

The purpose of the visit was twofold. First, to share information with attendees as to the history and proposed scope of future actions relating to the sites; and second, to review GeoDesign waste rock pile stability evaluations and compare to District specialist's observations and opinions.

Under item #1, Pete Jones informed the group of the recent studies of the mines, and the alternatives proposed for future action. Under item #2, Doug Shank discussed the potential risk for slope stability failures in the upslope stream banks and disclosed that, due to the type of geology and the soil types found within the area, that a low risk of failure exists. This concurs with GeoDesign's findings. Dave Halemeier discussed the historic impacts of the 1996 flood event and shared his findings from reconnoitering the channel (Blue Jay Creek) above the Morning Star adit.

Although the potential for slope stability failures is low, there is the potential for localized channel bank failures associated with high water events. This could result in mine waste rock being eroded and re-deposited downstream in Battle Axe Creek.



## **Fish Habitat Impacts From Mine Waste Rock Pile Failure:**

Blue Jay and Ruth Creeks are both non fish-bearing streams. Battle Axe Creek, located 750 feet below Ruth Adit 4 and 600 feet below the Morning Star Adit, provides habitat for westslope cutthroat trout (*O. clarkii*) as well as several species of sculpins (*Cottus*). In the Little North Santiam watershed Upper Willamette Steelhead (*O. mykiss*) and Upper Willamette Spring Chinook (*O. tshawytscha*) spawning and rearing habitat is known to occur, however the closest either of these ESA listed species are to the proposed action area is over six miles and as such no affect from either the action or no action alternative is anticipated.

Westslope cutthroat trout, an MIS (management indicator species) and sculpins are not anticipated to be negatively impacted from the proposed action. The stabilization of streamside waste rock piles reduces the risk of localized impacts to both species in Battle Axe Creek by minimizing the volume of fines potentially affecting spawning areas.

The no action alternative has a greater, although still low risk, ability to impact westslope cutthroat trout and sculpins. Impacts could include localized (within 1,000 feet of confluence) smothering of spawning areas and some aversion response associated to higher than normal sediment transport.

Any work occurring within the ordinary high water mark must occur during the ODFW in-stream work period for this area, June 1<sup>st</sup>-October 15<sup>th</sup>.

Darrin A. Neff  
District Fish Biologist

