

BOTANICAL EVALUATION of the BLUE LEDGE MINE PROJECT;

**Federally-listed, State-listed, Forest Service Sensitive, and locally rare species
of**

Vascular Plants, Bryophytes, Lichens, and Fungi.

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with minor edits by Wayne on 9/18/2009

Notes:

1. In this document, the term “project area” includes all areas where disturbance may occur at the Mine site, along proposed new access road corridors near the mine, the two proposed repositories and the Forest Service roads between the Mine site and the repositories. In addition, it specifically includes the entire area within the “potential disturbance” polygon (my words) that Pete Jones drew on the project map for IDT members in July/August 2009. While this is a federally-funded project, with the exception of the north repository, the project area is entirely on private land.
2. The set of Forest Service sensitive species considered in this document are the known or suspected species for Rogue River-Siskiyou National Forest on the Region 6 January 2008 list, and for Klamath National Forest on the Region 5 list I received in March 2009.
3. The set of locally-rare species (not Federally-listed or FS sensitive) considered in this document are those known or recognized as such by myself, based on my knowledge of the local flora.

STEP 1: PRE-FIELD REVIEW

Federally-listed Threatened or Endangered Plant Species:

There are no known occurrences of Federally-listed plant species in the project area. In addition, based on the known ranges and suitable habitat characteristics of Federally-listed plant species in southwestern Oregon and northwestern California, there is no potential habitat for any Federally-listed plant species in the project area.

Known occurrence information and habitat information for *Fritillaria gentneri*, a Federally-listed species, also listed by the states of California and Oregon, was reviewed. Since known Oregon occurrences in the Applegate watershed are much farther north, known Siskiyou County occurrences are in the Cascades, and typical habitat (oak woodland or open Douglas fir or mixed conifer woodland) does not occur in this project area, I determined there was no potential habitat for this species in the project area.

State-listed Threatened or Endangered Plant Species:

There are no known occurrences of State-listed (California or Oregon) plant species in the project area.

Based on the known ranges and suitable habitat characteristics of State-listed plant species in southwestern Oregon and northwestern California, before the field reconnaissance was conducted, potential habitat for *Calochortus persistens* (listed by the State of California) was thought to be present.

Note the short discussion about *Fritillaria gentneri* above.

Forest Service Sensitive vascular plants, bryophytes, lichens, and fungi:

Parts of the project area have been surveyed by Forest Service botanist Barbara Mumblo in the past. She did not find any FS sensitive species in the project area.

There are no known occurrences of Forest Service vascular plants, bryophytes, lichens, and fungi within the project area. There is one nearby occurrence of *Cypripedium fasciculatum*.

In addition to the *Cypripedium fasciculatum* mentioned above, before the field reconnaissance described in the next section of the document, the following FS Sensitive species were judged to have potential habitat within the project area:

Buxbaumia viridis (R5 list)
Calochortus persistens
Carex nervina
Carex serratodens
Cypripedium montanum (R5 list)
Delphinium nudicaule
Erigeron cervinus
Eriogonum hirtellum
Eucephalus vialis
Fissidens aphelotaxifolius (moss, R5 list)
Horkelia hendersonii
Hydrothyria venosa (aquatic lichen, R5 list)
Keckiella lemmonii
Lewisia leana
Pedicularis howellii (R5 list)
Poa rhizomata
Ptilidium californicum (liverwort, R5 list)
Raillardella pringlei
Saxifragopsis fragarioides
Smilax jamesii
Solanum parishii

Thermopsis robusta (R5 list)
Tortula mucronifolia (moss)

In addition, not listed here by scientific name but potentially occurring are all six species of fungi on the Region 5 list for Klamath N.F.

Locally rare species:

Sedum oblancoletatum is known to be in the project area, along FS Road 1060 and other locations near the project area. *Abies amabilis* (Pacific silver fir) is nearby, but considerably higher in elevation and probably would not occur within the project area. *Picea breweriana* (Brewer's spruce) is nearby and likely to be in the project area.

No attempt is made to list other locally rare plants that may have potential habitat in the project area.

STEP 2: FIELD RECONNAISSANCE

I conducted the botanical field reconnaissance of the project area on 8/16/2009. My reconnaissance was at a time of year, and done with enough thoroughness that if species discussed in the Pre-field review above were present, it is likely I would have detected them. No Federally-listed, State-listed, or Forest Service Sensitive species were found.

I did find the locally rare *Picea breweriana* (Brewer's spruce) in a number of locations in the project area (southern 1/3 of the "potential disturbance" polygon plus directly above the adits from which waste piles 1 and 2 originated). No large spruce trees were found. They may have been present but removed in the earlier private land logging. Some of the remaining spruces are mid-story or co-dominant.

STEP 3: CONFLICT DETERMINATION AND ANALYSIS OF SIGNIFICANCE OF EFFECTS

Federally-listed, State-listed, and Forest Service Sensitive vascular plants, bryophytes, and lichens:

Since there are no known occurrences of these taxa in the project area, and I could not detect any during my field reconnaissance, they are assumed to not be present. Therefore there is no conflict with proposed activities and no further analysis of significance of effects is required. No project design criteria or mitigation measures are recommended for these species.

Forest Service Sensitive Fungi:

Almost all current Forest Service Sensitive fungi are former Northwest Forest Plan Survey and Manage species which are usually closely associated with late successional forest habitat. Little or none of the habitat areas on the private Blue Ledge Mine property have late successional forest (its all been logged off). The one FS area where activities may occur, the north repository,

is an old landing where this habitat condition does not exist. For these reasons, I estimate that there is less likelihood of these species being present in the project area than in the surrounding matrix of FS lands (where forest is often more mature).

Field reconnaissance in August is very unlikely to detect Forest Service Sensitive fungi. Field reconnaissance in Fall would be more likely to detect a small subset of these species. However, there is no time of year when field reconnaissance for these species can allow a determination that they are NOT present. This is because the actual organisms are in the soil and around their mycorrhizal host roots and are only detectable when they form above-ground sporocarps, a very irregular event. So field reconnaissance for these species is considered impractical. There is some risk that local populations of these fungi are present in the project area and there is some risk that project activities could affect the viability of local populations. However, since only a minor fraction of the suitable habitat in the general VICINITY of the project area would be affected, and since project area habitat conditions are less suitable than in the surrounding FS areas, it is unlikely that the project would negatively affect the viability of FS Sensitive fungi in the local area (Joe Creek watershed).

RECOMMENDATIONS

1. Not all Brewer's spruce trees can be avoided during project activity. However, minimize cutting Brewer's spruce trees where it is practical to do so. This can best be achieved by having a knowledgeable individual FLAG spruce trees that are in the new access road corridor once it is flagged, and in or near other activity areas, so that the contractor can avoid them during road construction and other contract activities where practical.
