

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
ROSEBURG DISTRICT

DECISION RECORD

NEPA #: DOI-BLM-ORWA-R040-2016-0004-CX

BLM Office: Roseburg District, Swiftwater Field Office
777 NW Garden Valley Blvd
Roseburg, Oregon, 97471
Phone: 541-464-4930

Project Title: Cable Crossing Log Deck Removal

Location of Proposed Action: Bureau of Land Management administered lands in Section 13 of T. 26 S., R. 3 W., W.M.

Decision: Based upon the attached Categorical Exclusion, I have determined that the proposed Cable Crossing Log Deck Removal project involves no significant impacts to the human environment and no further environmental analysis is required.

It is my decision to implement the Cable Crossing Log Deck Removal project located in the Connectivity/Diversity land use allocation. No concerns were noted by staff specialists.

Protest Procedures: The decision described in this document is a forest management decision. Administrative remedies are available to persons who believe they will be adversely affected by this decision. A 15-day formal protest period will begin June 21, 2016. To protest a forest management decision, a person must submit a written and signed protest to the Swiftwater Field Manager, 777 NW Garden Valley Boulevard, Roseburg, OR 97471 by close of business (4:30 p.m., PDT) by July 5, 2016. The protest must clearly and concisely state which portion or element of the decision is being protested and why it is believed to be in error, as well as cite applicable regulations. Faxed or emailed protests will not be considered.

For further information, contact Max Yager, Field Manager, Swiftwater Field Office, Roseburg District, Bureau of Land Management, 777 NW Garden Valley Blvd. Roseburg, OR 97471, (541) 440-4930.

Authorizing Official: Paul O. Meinke Date: 6/17/16
for Max Yager
Field Manager
Swiftwater Field Office

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
ROSEBURG DISTRICT

NEPA CATEGORICAL EXCLUSION REVIEW

NEPA #: DOI-BLM-ORWA-R040-2016-0004-CX

BLM Office: Roseburg District, Swiftwater Field Office
777 NW Garden Valley Blvd
Roseburg, Oregon, 97471
Phone: 541-464-4930

Proposed Action Title: Cable Crossing Log Deck Removal

A. Background

Location of Proposed Action:

Bureau of Land Management administered lands in Section 13 of T. 26 S., R. 3 W., W.M.

Description of Proposed Action:

The Cable Crossing fire started on July 28, 2015 and burned 1,860 acres of private, county, and BLM-administered lands on the Roseburg District. Over 900 acres of BLM lands in the General Forest Management Area (GFMA), Connectivity/Diversity Blocks (CONN), Adaptive Management Area (AMA), and Riparian Reserve land use allocations within the Middle North Umpqua and the Little River Watersheds were affected by the fire. During fire suppression activities, sound green trees were cut to reduce fuels along containment lines. The felled trees were consolidated outside of the fire perimeter, along the sides of Road 26-3-13.0 (0.3 miles), Road 26-3-13.2 (0.3 miles), and Road 26-3-15.0 (0.6 miles).

The need exists to return the BLM infrastructure to the pre-suppression status to facilitate public and reciprocal right-of-way use of the roads. The purpose of the project is to remove the fire suppression created logs located within 50 feet of the center line of existing roads, opening ditch lines and turnouts, to allow maintenance and safe use of the roads. The small fuels (less than 6 inches diameter) created during fire suppression activities and created during log removal would be dispersed or piled and burned. Approximately 5 thousand board feet of timber would be removed and sold within the Connectivity/Diversity land use allocation.

Project Design Features:

Access - Logging equipment would operate on existing rocked roads. Access would require no more than maintenance to existing roads.

Noxious Weeds - Equipment would be pressure washed prior to project-related activities to reduce the spread of noxious weed seed in accordance with direction in BLM Manual 9015- Integrated Weed Management. If equipment is removed from the project area, re-cleaning and inspection would be required prior to re-entry onto BLM-administered lands.

Northern Spotted Owl Seasonal Restrictions – If the project is implemented prior to March 1st, 2017, no seasonal restrictions would be required. Beginning March 1st, 2017, in order to minimize disruption to northern spotted owls during the critical breeding season, seasonal restrictions would be required from March 1st through July 15th, both days inclusive.

Peregrine Falcon – There are no disturbance concerns for log deck removal occurring in Section 13 of T26S-R03W.

Fuels Management - All pile burning would have an approved “Burn Plan” and be conducted under the requirements of the Oregon Department of Forestry - Smoke Management Plan (Oregon SMP 2008) in a manner consistent with the requirements of the Clean Air Act (Oregon Department of Environmental Quality and Oregon Department of Forestry 1992). Piles would be burned during the late-fall to mid-spring season when the soil, duff layer (soil surface layer consisting of fine organic material), and large downed wood moisture levels are high and atmospheric conditions are conducive to smoke dispersion and particulate removal.

B. Land Use Plan Conformance

The proposed action is consistent with the 1995 *Roseburg District Record of Decision and Resource Management Plan* (1995 ROD/RMP) because it is specifically provided for in the following decisions:

On Connectivity/Diversity land, the log deck removal project is warranted to:

Provide for salvage harvest of timber killed or damaged by events such as wildfire, windstorms, insects or disease (1995 ROD/RMP, p. 60).

Survey and Manage

(See Appendices A and B for Survey and Manage Species tables)

On February 18, 2014, the District Court for the Western District of Washington issued a remedy order in the case of *Conservation Northwest et al. v. Bonnie et al.*, No. 08-1067- JCC (W.D. Wash.)/No.11-35729 (9th Cir.). This was the latest step in the ongoing litigation challenging the 2007 Record of Decision (ROD) to modify the Survey and Manage (S&M) Standards and Guidelines.

The remedy order contained two components. The order:

1. Vacates the 2007 ROD to Remove or Modify the Survey and Manage S&M Mitigation Measure Standards and Guidelines, and
2. Allows for continued project planning and implementation for projects that relied on the 2011 Consent Decree and were being developed or implemented on or before April 25, 2013 (date of the Ninth Circuit Court ruling invalidating the 2011 Consent Decree).

In summary, the current status of Survey and Manage is:

1. Follow the 2001 S&M ROD and Standards and Guidelines (S&G);
2. Apply the “Pechman exemptions;” and
3. Implement the 2001, 2002, and 2003 ASR modifications to the S&M species list, except for the changes made for the red tree vole.

The project is consistent with the 2001 ROD and Standards and Guidelines for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines, as incorporated into the District Resource Management Plan (USDA and USDI 2001).

The project utilizes the December 2003 species list that incorporates species changes and removals made as a result of the 2001, 2002 and 2003 Annual Species Reviews (ASR) except for changes for the red tree vole.

The project would not be habitat disturbing because it would occur within the existing road prism. Therefore, pre-disturbance clearance surveys are not required for Survey and Manage wildlife species (Appendix A).

During fire suppression related activities, green trees were cut to reduce fuels along containment lines under emergency action procedures. Felled trees are within the road right-of-way, 50 feet from the center line of the road. Because habitat was removed for Survey and Manage plant species during emergency actions and no soil disturbance would be created during the removal of the felled trees, pre-disturbance surveys are not required.

C. Compliance with NEPA

The Proposed Action is categorically excluded from further documentation under the National Environmental Policy Act (NEPA) in accordance with 516 DM 11.9 (C)(2) - *“Sale and removal of individual trees or small groups of trees which are dead, diseased, injured, or which constitute a safety hazard, and where access for the removal requires no more than maintenance to existing roads.”*

This categorical exclusion is appropriate in this situation because there are no extraordinary circumstances potentially having effects that may significantly affect the environment. The proposed action has been reviewed and none of the extraordinary circumstances described in 516 DM 2 apply.

Categorical Exclusions - Extraordinary Circumstances Documentation:

THE PROPOSED CATEGORICAL EXCLUSION ACTION WOULD:	YES	NO
2.1 Have significant impacts on public health or safety.		X
<p>Rationale: The location of the activity is on rocky roads removed from urban/residential areas. The fire-suppression created logs would be removed from areas adjacent to roads to provide safe public access. Log removal operations would follow Occupational Safety and Health Administration (OSHA) standards designed to prevent job-related illness or injuries.</p>		
2.2 Have significant impacts on such natural resources and unique geographic characteristics as historic or cultural resources; park, recreation or refuge lands; wilderness areas; wild or scenic rivers; national natural landmarks; sole or principal drinking water aquifers; prime farmlands; wetlands (Executive Order 11990); floodplains (Executive Order 11988); national monuments; migratory birds; and other ecologically significant or critical areas.		X
<p>Rationale: The project area is not located in any park, recreation or refuge lands, wilderness areas, or national natural landmarks. There are no prime farmlands, wetlands, floodplains, national monuments or other ecologically significant or critical areas present in the project area.</p> <p>Water Resources: There would be no notable impacts to water resources because log removal would occur from existing piles along existing roads and all activity would remain within the road prism. Some of the roads are within Riparian Reserves but there would be no direct impacts to water resources.</p> <p>Migratory Birds: The log deck removal would not affect migratory birds at the population level. Implementation of restrictions for the peregrine falcon and northern spotted owl would provide protection to migratory bird species present within the restriction buffer areas during the breeding season (April – July). In addition, because the project would occur within the existing road prism where birds are less likely to be nesting, direct effects to nest sites would be expected to be minimal.</p>		
2.3 Have highly controversial environmental effects or involve unresolved conflicts concerning alternative uses of available resources [NEPA Section 102(2)(E)].		X
<p>Rationale: The BLM acknowledges that there may be social controversy or differences of opinion regarding the proposed action, however this did not equate to scientific controversy over the nature of effects of the proposal.</p> <p>The Categorical Exclusion authorities for this project allows for the sale and removal of individual trees or small groups of trees which are dead, diseased, injured, or which constitute a safety hazard, and where access for the removal requires no more than maintenance of existing roads.</p> <p>The 1995 ROD/RMP established management direction to provide for log deck removal of trees killed by events such as wildfire. As such, there are no unresolved conflicts regarding implementation of this type of action.</p>		
2.4 Have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks.		X
<p>Rationale: Log deck removal of fire-suppression created logs is a long-standing practice in western Oregon that has not been demonstrated to have highly uncertain or potentially significant impacts, or involve unique or unknown risks. The BLM interdisciplinary team of resource specialists for the Cable Crossing Log Deck Removal project reviewed the project and determined there is no threat of significant environmental effects or unique or unknown environmental risks. The Cable Crossing Log Deck Removal project was designed so that there would be minimal environmental effects to resources.</p>		
2.5 Establish a precedent for future action or represent a decision in principle about future actions with potentially significant environmental effects.		X
<p>Rationale: Log deck removal has been widely used on BLM lands throughout western Oregon and has not been shown to have potentially significant environmental impacts. Log deck removal operations have occurred on the Roseburg District in the past and are likely to occur in the future. Each project contains its own set of conditions that must be evaluated on its own merit, as the BLM has done with this project. Land use allocations and environmental conditions, such as remaining vegetation, slopes, soils, and streams, are unique to each project and must be considered anew as each opportunity for log deck removal occurs. This action does not represent a decision</p>		

<p>in principle about the future actions with potentially significant effects. Log deck removal is addressed and authorized under the 1995 ROD/RMP, and, as such, this project would represent implementation of that land use plan decision, not a decision in principle on future actions.</p>		
<p>2.6 Have a direct relationship to other actions with individually insignificant but cumulatively significant environmental effects.</p>		X
<p>Rationale: Removing fire-suppression created logs along approximately one mile of roads does not effectively alter the existing environmental conditions of the project area or the timber age class distribution in the watershed. The project would not be habitat disturbing for the northern spotted owl because the log deck removal project would occur within the existing road prism; therefore, there would be no cumulative impacts to northern spotted owl habitat. There are no water resources that would be directly impacted within the project area. Some of the area is within Riparian Reserves, but all activity would be limited to within existing roads prisms. The small scale of the project would not have any measurable effect on hydrological functions such as peak flows, sediment inputs, or stream temperature, and therefore would not have a cumulative effect within the drainage area. The small scale of the project would not have a cumulative effect on sensitive plant species, as there are no known populations existing in the project area and because it was determined habitat for the species requiring pre-disturbance clearance surveys was not present or the project is located outside of the species range.</p> <p>The BLM interdisciplinary team of resource specialists reviewed the project based on current on-the-ground conditions. Because of the reasons listed above, the team determined the actions proposed in the Cable Crossing Log Deck Removal project would not result in a cumulatively significant effect when added to relevant past, present, and reasonably foreseeable actions in the area.</p>		
<p>2.7 Have significant impacts on properties listed, or eligible for listing, on the National Register of Historic Places as determined by either the bureau or office.</p>		X
<p>Rationale: The project area has been previously inventoried for cultural resources with negative results (CRS# 18811, 19219, SW1113, and SW1601). No cultural resources have been identified within the project area so the project would have “no effect” on known historic properties. The BLM has met its Section 106 requirements under the 2012 National Programmatic Agreement and Appendix A of the 2015 Oregon Protocol. If any objects of cultural value (e.g. historic or prehistoric ruins, graves, fossils, or artifacts) are found during the implementation of the proposed action, operations would be suspended until the site has been evaluated to determine the appropriate mitigation action.</p>		
<p>2.8 Have significant impacts on species listed, or proposed to be listed, as an Endangered or Threatened Species, or have significant impacts on designated Critical Habitat for these species.</p>		X
<p>Rationale: <i>Northern spotted owl:</i> The Cable Crossing Log Deck Removal project would not be habitat disturbing because it would occur within the existing road prism. The project area is adjacent to suitable habitat that is currently being surveyed and spotted owls have not been detected within the project area to date. If the project is implemented prior to March 1st, 2017, no seasonal restrictions would be required. After March 1st, 2017, seasonal restrictions would be required from March 1st through July 15th, both days inclusive. The log deck removal project would occur within designated critical habitat (subunit WCS 6) for the northern spotted owl; however, because the project would occur within the existing road prism and primary constituent elements would not be affected, no impacts would occur to Critical Habitat.</p> <p><i>Marbled Murrelet:</i> The Cable Crossing Log Deck Removal project would occur outside of the marbled murrelet’s distribution range, and therefore no impacts would occur to the marbled murrelet or its critical habitat.</p> <p><i>Peregrine Falcon</i> – There are no disturbance concerns for log deck removal occurring in Section 13 of T26S-R03W.</p> <p><i>Oregon Coast Coho salmon:</i> The log removal areas are located outside of Riparian Management Areas of occupied coho salmon habitat and designated Critical Habitat for coho salmon. Additionally, there are no streams in the project area. Absent any interaction between the log deck removal project areas and occupied habitat, the action has no mechanism to affect large wood or other instream habitat features in downstream reaches.</p> <p><i>Botany:</i> There are no concerns for Special Status plants. The areas were surveyed for special status plants prior to</p>		

past timber harvest (Appendix B).		
2.9 Violate a Federal law, or a State, local, or tribal law or requirement imposed for the protection of the environment.		X
Rationale: The BLM interdisciplinary team for the Cable Crossing Log Deck Removal project reviewed the project for compliance with applicable laws including the Federal Land Policy and Management Act, Endangered Species Act, Clean Water Act, National Environmental Policy Act, Clean Air Act, National Historic Preservation Act, and Archaeological Resources Protection Act, among others. The resource specialists found the project conforms to the management direction in the Roseburg District RMP, which complies with all applicable Federal and State laws.		
2.10 Have a disproportionately high and adverse effect on low income or minority populations (Executive Order 2898).		X
Rationale: Based on past projects in the Swiftwater Resource Area, the project would provide job opportunities in Douglas County, Oregon. No potential impacts have been identified by the BLM internally or through public involvement indicating that log deck removal projects would have an impact on low income or minority populations in Douglas County.		
2.11 Limit access to and ceremonial use of Indian sacred sites on Federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites (Executive Order 13007).		X
Rationale: No sites of sacred, religious or ceremonial value have been identified in the project area.		
2.12 Contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area or actions that may promote the introduction, growth, or expansion of the range of such species (Federal Noxious Weed Control Act and Executive Order 13112).		X
Rationale: There would be no off-road operation of any heavy equipment that would result in soil displacement or disturbance which could create circumstances favorable to establishment of noxious weeds or non-native species. The project area would be monitored and treated as one of the Roseburg District 2016-2017 weed treatment areas. Cleaning equipment prior to entry onto BLM-administered lands would be required.		

D. Signature

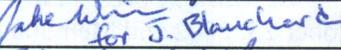
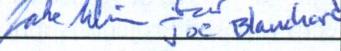
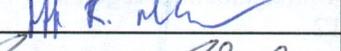
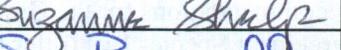
for Paul D. Meinke
 Max Yager
 Field Manager
 Swiftwater Field Office

6/17/16
 Date

Contact Person & Interdisciplinary Team Reviewers

For additional information concerning this Categorical Review, contact:

Werner Krueger, Forester
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 777 NW Garden Valley Blvd
 Roseburg, Oregon, 97471
 Phone: 541-464-4930

Interdisciplinary Team Reviewers			
Name	Resource	Signature	Date
Werner Krueger	Project Lead/Originator		6/15/16
Johanna Blanchard	Botanist	 for J. Blanchard	6/15/16
Elizabeth Gayner	Wildlife Biologist		6/15/2016
Dan Dammann	Hydrologist		6/15/16
Carley Smith	Archaeologist		6/16/16
Joe Blanchard	Soil Scientist	 for Joe Blanchard	6/15/16
Krisann Kosel	Fire and Fuels		6/16/16
Jeff McEnroe	Fisheries Biologist		6/15/16
Suzanne Shelp	Outdoor Recreation Planner		06/15/2016
Erin Banwell	NEPA Compliance		6/15/16

Appendix A. Survey & Manage Wildlife Species

S&M List Date: 2001 Record of Decision and Standards and Guidelines for Amendments of the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines (2001 ROD), December 2003 list.

The Roseburg District compiled the species listed below from the 2001 ROD and includes those vertebrate and invertebrate species with pre-disturbance survey requirements (Category A, B, or C species), whose known or suspected range includes the Roseburg District according to:

- *Survey Protocol for the Great Gray Owl within the range of the Northwest Forest Plan v3.0*, January 12, 2004; (refer to IM-OR-2011-063, Attachment 1-26, July 21, 2011).
- *Survey Protocol for the Red Tree Vole: Arborimus longicaudus (= Phenacomys longicaudus) in the Record of Decision of the Northwest Forest Plan*, Version 3.0, Revision November 2012 (refer to IM-OR-2003-003, October 23, 2002 and Memorandum from the Regional Interagency Executive Committee, November 21, 2012).
- *Survey Protocol for Survey and Manage Terrestrial Mollusk Species from the Northwest Forest Plan*, Version 3.0, 2003 (refer to IM-OR-2003-044, February 21, 2003).

This list also includes any Category D, E, or F species with known sites located within the Cable Crossing Fire log deck removal proposed project. Applicable management recommendations include:

- Conservation Assessment for Great Gray Owl (*Strix nebulosa*), USDA Forest Service Region 6 and USDI Bureau of Land Management, Oregon and Washington, Williams, Elizabeth; Klamath Bird Observatory; April 2012
- Interim management recommendations for the Great Gray Owl were put forth in the 2011 Survey and Manage Settlement Agreement Species List (refer to IM-OR-2011-063, Attachment 1-26, July 21, 2011).
 - *Management Recommendations for the Oregon Red Tree Vole: Arborimus longicaudus, Version 3.0* (refer to IM-OR-2000-086, September 27, 2000).
 - Conservation Assessment for *Monadenia (Shastelixa) chaceana*, Chace Sideband, Service Region 6 and USDI Bureau of Land Management, Oregon and Washington, Ted R. Weasma, November 1998; reconfigured by Nancy Duncan, August 2005.
 - Conservation Assessment for *Pristiloma arcticum crateris*, Crater Lake Tightcoil, USDA Forest Service Region 6 and USDI Bureau of Land Management, Oregon and Washington, Darryl Gowan and Thomas E. Burke, October 1999; reconfigured by Nancy Duncan, September 2004.
 - Management Recommendations for Terrestrial Mollusk Species, *Megomphix hemphilli*, the Oregon Megomphix, Version 2.0. John S. Applegarth; (refer to Attachment 2 of IM-OR-2000-015, November 23, 1999)

IM-OR-2014-037 (June 2014) provides updated direction regarding the Survey and Manage Mitigation Measures as a result of court ruling in Conservation Northwest et al. v. Bonnie et al., Case No. 08-1067-JCC (W.D. Wash.). As a result of the of *IM-OR-2014-037*, this project utilizes the December 2003 species list, which incorporates species changes and removals made based on the 2001, 2002, and 2003 Annual Species Reviews (ASR). This project is consistent with the 2001 ROD and Standards and Guidelines for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines, as incorporated into the District Resource Management Plan (1995).

However, the changes and removals based on the ASRs do not include the red tree vole. The Ninth Circuit Court of Appeals in *KSWC et al. v. Boody et al.*, 468 F3d 549 (9th Cir. 2006) vacated the category change and removal of the red tree vole in the mesic zone, and returned the red tree vole to its status as determined in the 2001 ROD Standards and Guidelines, which makes the species Category C throughout its range. A Category C species is a species that is considered uncommon, however not all known sites or population areas are likely to be necessary for reasonable assurance of persistence and pre-disturbance surveys are practical (2001 ROD, Standards and Guidelines, pg. 10).

Table A-1. Survey & Manage Wildlife Species – Cable Crossing Fire log deck removal project

SPECIES	S&M CATEGORY	SURVEY TRIGGERS			SURVEY RESULTS			SITE MANAGEMENT
		Within Range of the Species?	Contains Suitable habitat?	Habitat Disturbing*?	Surveys Required?	Survey Date	Sites Known or Found?	
VERTEBRATES								
Great Gray Owl <i>Strix nebulosa</i>	C	Yes	No ¹	No ¹	No ¹	NA	0	N/A
Red Tree Vole <i>Arborimus longicaudus</i>	C	Yes	No ²	No ²	No ²	N/A	0	N/A
MOLLUSKS								
Crater Lake Tightcoil <i>Pristiloma crateris</i>	A	Yes ³	No ³	No ³	No ³	N/A	0	N/A
Siskiyou Sideband <i>Monadenia chaceana</i>	A	No ⁴	No ⁴	No ⁴	No ⁴	N/A	0	N/A
Oregon Megomphix <i>Megomphix hemphilli</i>	F ⁵	Yes ^{5a}	No ^{5a}	No ^{5a}	No ^{5a}	N/A	0	N/A

Habitat disturbing and thereby a trigger for surveys as defined in the 2001 ROD S&Gs (p. 22).

N/A = Not Applicable

¹ The stands within the Cable Crossing Log Deck Removal project area does not contain the habitat characteristics, including large diameter nest trees and/or suitable nesting structures or have proximity to natural-openings ≥ 10 acres (A. Worthing, staff review, 2015). Pre-disturbance surveys are not suggested in suitable nesting habitat adjacent to man-made openings at this time (pg. 14, *Survey Protocol for the Great Gray Owl within the range of the Northwest Forest Plan v3.0*, January 12, 2004).

² Suitable habitat for the red tree vole is generally conifer (Douglas fir) forest stands that meet a quadratic mean diameter (QMD) criteria of 18 inches and either of the two general habitat criteria: 1) they are not mature or old growth stands, and 2) they do not contain at least two super-dominant overstory trees per acre. The proposed project would occur adjacent to suitable habitat for the red tree vole. However, surveys for red tree vole is not required because the Cable Crossing Log Deck Removal would occur within the existing road prism and therefore, would not remove or modify red tree vole habitat.

³ Suitable habitat for the Crater Lake Tightcoil is “perennially wet situations in mature conifer forests, among rushes, mosses and other surface vegetation or under rocks and woody debris within 10 meters of open water in wetlands, springs, seeps and riparian areas...above 2000 feet elevation and east of Interstate 5” (*Survey Protocol for Survey and Manage Terrestrial Mollusk Species from the Northwest Forest Plan, Version 3.0, 2003*, pp. 39 and 43). Because the Cable Crossing Log Deck Removal would occur within the existing road prism and would not cause ground disturbance to habitat, pre-disturbance surveys would not be required.

- ⁴ Habitat for the Siskiyou sideband may be found within 30 meters (98 feet) of rocky areas, talus deposits and in associated riparian areas in the Klamath physiographic province and adjacent portions of the south-western Oregon Cascades. Areas of herbaceous vegetation in these rocky landscapes adjacent to forested habitats are preferred. Areas that contain moist, shaded rock surfaces are preferred for daily refuges. In more mesic, forested habitats, especially in the Oregon Cascades, the species is associated with large woody debris and the typical rocky habitat is not required. Forest habitats without either rock features or large woody debris are not currently considered to be suitable habitat for this species (*Survey Protocol for Survey and Manage Terrestrial Mollusk Species from the Northwest Forest Plan, Version 3.0, 2003*, pg. 42). The Swiftwater Resource Area is outside of the range of the species.
- ⁵ Management of known sites is NOT required for Category F because species are uncommon, not rare, and species within this category would be assigned to other categories or removed from Survey & Manage as soon as new information indicates the correct placement. Until that time, inadvertent loss of some sites is not likely to change the level of rarity. In addition, pre-disturbance surveys are not required for Category F species (2001 ROD, Standards and Guidelines, pp. 7, 13-14).
- ^{5a} Suitable habitat for the Oregon Megomphix is mature or late-seral, moist conifer/hardwood forests, usually in hardwood leaf litter and decaying non-coniferous plant matter under bigleaf maple trees. The species may also be present in the absence of bigleaf maple, especially at moist sites where deciduous shrubs, coarse woody debris, rotten logs or stumps and large sword ferns provide abundant cover (p. 42, *Survey Protocol for Survey and Manage Terrestrial Mollusk Species from the Northwest Forest Plan, Version 3.0, 2003*). Because the Cable Crossing Log Deck Removal would occur within the existing road prism and would not cause ground disturbance to habitat, pre-disturbance surveys for the Oregon Megomphix are not required.

Table A-2. Effects of Proposed Action on Survey & Manage Wildlife Species.

SPECIES	GENERAL HABITAT REQUIREMENTS	PRESENT IN PROJECT AREA?	IMPACTS TO SPECIES	
			NO ACTION	PROPOSED ACTION ALTERNATIVE
VERTEBRATES				
Great Gray Owl <i>Strix nebulosa</i>	Habitat characteristics of suitable habitat include: (1) large diameter nest trees, (2) forest for roosting cover, and (3) proximity [within 600 feet] to openings that could be used as foraging areas (<i>Survey Protocol for the Great Gray Owl within the range of the Northwest Forest Plan v3.0</i>). No natural meadows are present within proximity to the proposed units. However, clear cuts are present in proximity to suitable forest habitat adjacent to units and, therefore great gray owls could be present within the project area. The Cable Crossing Log Deck Removal would occur within the existing road prism and would not impact habitat.	Suspected	No Effect	
Red Tree Vole <i>Arborimus longicaudus</i>	Suitable habitat is almost exclusively in forests having Douglas-fir in the canopy, and associated primarily with late-successional (older, structurally complex) forests (Huff <i>et al.</i> 2012). One red tree vole nest was located within the adjacent stand to the proposed project while identifying project boundaries. The tree was not climbed and assumed to be occupied in accordance with the <i>Survey Protocol for the Red Tree Vole Arborimus longicaudus (=Phenacomys longicaudus in the Record of Decision of the Northwest Forest Plan, v3.0, November 2012, pg. 19)</i> . The Cable Crossing Log Deck Removal would occur within the existing road prism and would not impact habitat.	Documented	No Effect	
MOLLUSKS				
Crater Lake Tightcoil <i>Pristiloma arcticum crateris</i>	Perennially wet areas in late-seral forests above 2,000 feet elevation and east of Interstate-5; seeps, springs, riparian areas. Suitable habitat is not present within the project area. <i>Also listed as a Bureau Sensitive Species on the SSS list (Appendix A)</i> . The Cable Crossing Log Deck Removal would occur within the existing road prism and would not cause ground disturbance to habitat.	No Suitable Habitat Present	No Effect	
Siskiyou Sideband <i>Monadenia chaceana</i>	Habitat for the Siskiyou sideband may be found within 30 meters (98 feet) of rocky areas, talus deposits and in associated riparian areas in the	Out of Range	No Effect	

SPECIES	GENERAL HABITAT REQUIREMENTS	PRESENT IN PROJECT AREA?	IMPACTS TO SPECIES	
			NO ACTION	PROPOSED ACTION ALTERNATIVE
	<p>Klamath physiographic province and adjacent portions of the south-western Oregon Cascades. Areas of herbaceous vegetation in these rocky landscapes adjacent to forested habitats are preferred. Areas that contain moist, shaded rock surfaces are preferred for daily refuges. In more mesic, forested habitats, especially in the Oregon Cascades, the species is associated with large woody debris and the typical rocky habitat is not required. Forest habitats without either rock features or large woody debris are not currently considered to be suitable habitat for this species (<i>Survey Protocol for Survey and Manage Terrestrial Mollusk Species from the Northwest Forest Plan, Version 3.0, 2003</i>, pg. 42).</p>			
<p>Oregon Megomphix <i>Megomphix hemphilli</i></p>	<p>Suitable habitat for the Oregon Megomphix is mature or late-seral, moist conifer/hardwood forests, usually in hardwood leaf litter and decaying non-coniferous plant matter under bigleaf maple trees. The species may also be present in the absence of bigleaf maple, especially at moist sites where deciduous shrubs, coarse woody debris, rotten logs or stumps and large sword ferns provide abundant cover (p. 42, <i>Survey Protocol for Survey and Manage Terrestrial Mollusk Species from the Northwest Forest Plan, Version 3.0, 2003</i>). The Cable Crossing Log Deck Removal would occur within the existing road prism and would not cause ground disturbance to habitat.</p>	<p>Suspected</p>		<p>No Effect</p>

Appendix B. Survey & Manage and Sensitive Botanical Species

Table B-1. Survey and Manage and Sensitive Species Survey Requirements, Survey Results, and Rational for Exclusion from Detailed Analysis

Status ¹	Scientific Name	Common Name or Taxon	Habitat	Elevation (feet)	Identified on Roseburg District	Survey Results
Bureau Sensitive S&M B	<i>Boletus pulcherrimus</i>	Fungi	Associated with the roots of conifers and hardwoods, mostly white fir, mountain hemlock, Douglas fir, and western hemlock.	42-5620	Different Watershed	Surveys Not required
Bureau Sensitive S&M A	<i>Bridgeoporus nobilissimus</i>	Fungi	Large, dying and dead noble fir and Pacific silver fir in late-successional old-growth forests.	1000-4300	No	Habitat Not Present
Bureau Sensitive S&M B	<i>Dermocybe humboldtensis</i>	Fungi	Associated with various members of the pine family.	1337-1781	Different Watershed	Surveys Not required
Bureau Sensitive S&M B	<i>Helvella crassitunicata</i>	Fungi	Montane old-growth forests containing true firs.	1533-9673	No	Surveys Not Required
Bureau Sensitive S&M B	<i>Phaeocollybia californica</i>	Fungi	Roots of Pacific silver fir, Sitka spruce, Douglas fir and western hemlock.	206-3855	Different Watershed	Surveys Not required
Bureau Sensitive S&M B	<i>Phaeocollybia gregaria</i>	Fungi	Associated with Sitka spruce and Douglas fir.	486-3628	No	Surveys Not required
Bureau Sensitive S&M B	<i>Phaeocollybia oregonensis</i>	Fungi	Associated with Pacific silver fir, Douglas fir, and western hemlock.	721-3916	No	Surveys Not required
Bureau Sensitive S&M B	<i>Pseudorhizina californica</i>	Fungi	Rotted stumps or logs of coniferous trees or on soil rich in rotted wood.	668-6515	No	Surveys Not required
Bureau Sensitive S&M B	<i>Ramaria amyloidea</i>	Fungi	Associated with true fir, Douglas fir, and western hemlock.	1592-5729	No	Surveys Not required
Bureau Sensitive S&M B	<i>Ramaria rubella</i> var. <i>blanda</i>	Fungi	Growing on rotting wood from spruce and alder in hemlock/conifer forests.	442-1813	Different Watershed	Surveys Not required
Bureau Sensitive S&M B	<i>Ramaria spinulosa</i> var. <i>diminutiva</i>	Fungi	Associated with hosts from the pine family.	1470	No	Surveys Not required
Bureau Sensitive S&M B	<i>Rhizopogon chamaleontinus</i>	Fungi	Growing on roots of Douglas fir and sugar pine.	1000	No	Surveys Not required
Bureau Sensitive S&M B	<i>Rhizopogon exiguus</i>	Fungi	Associated with Douglas fir and western hemlock.	54-3844	No	Surveys Not required
S&M A	<i>Bryoria pseudocapillaris</i>	Lichen	Habitat with frequent maritime fog on exposed trees (Sitka spruce and shore pine) and shrubs growing on coastal windswept dunes, rocky headlands, and occasionally coastal mountains, within 10 miles of the ocean.	0-2240	No	Surveys Not required

Status ¹	Scientific Name	Common Name or Taxon	Habitat	Elevation (feet)	Identified on Roseburg District	Survey Results
S&M A	<i>Bryoria spiralifera</i>	Lichen	Coastal dune forest on exposed trees (Sitka spruce and shore pine) and shrubs, up to 2 miles from the ocean with frequent fog.	0-200	No	Surveys Not required
Bureau Sensitive S&M B	<i>Bryoria subcana</i>	Lichen	Sitka spruce, western hemlock, wet Douglas fir, wet noble fir and mixed hardwood-coniferous forests. In coastal bays, streams, dune forests, and high precipitation ridges and summits within 30 miles of the ocean.	<2000	Same Watershed	Surveys Not required
Bureau Sensitive S&M E	<i>Calicium adpersum</i>	Lichen	The bark of living grand fir, Douglas fir, oak, California redwood and western red cedar. Generally in relatively open stands in drier microhabitats where sheltered from precipitation. On trees greater than 200 years.	<2000	No	Surveys Not required
S&M C	<i>Hypogymnia duplicata</i>	Lichen	Occurs as an epiphyte on mountain hemlock, western hemlock, Pacific silver fir, Douglas-fir and subalpine fir in old-growth forests of the western Cascades, Olympics, and Coast Range. Habitat for Oregon populations is noted mostly as moist hemlock stands and true fir forests.	1100-5450	No	Surveys Not required
S&M A	<i>Leptogium cyanescens</i>	Lichen	On shaded twigs of deciduous trees and shrubs in humid habitats, rarely in exposed situations.	0-2000	No	Surveys Not required
Bureau Sensitive	<i>Lobaria linita</i>	Lichen	Cool and humid, mesic to moist, old-growth Pacific silver fir, mountain hemlock, or western hemlock forests (possibly oak forest and late mature tanoak and madrone).	700-4500	Same Watershed	Surveys Not required
S&M C	<i>Nephroma occultum</i>	Lichen	Old growth and younger forests of Douglas fir and western hemlock in the Cascade Range.	<3000	Same Watershed	Surveys Not required
S&M A	<i>Niebla cephalota</i>	Lichen	Sitka spruce and shore pine stands on marine terraces and dunes in regions of moderate winter temperatures and rainfall on the immediate coast.	<1000	No	Surveys Not required
Bureau Sensitive	<i>Pilophorus nigricaulis</i>	Lichen	Cool, moist, rocky slopes in the open but where sheltered by surrounding topography. Substrate is non-calcareous rocks, primarily volcanic.	130-4700	No	Surveys Not required

Status ¹	Scientific Name	Common Name or Taxon	Habitat	Elevation (feet)	Identified on Roseburg District	Survey Results
S&M A	<i>Pseudocyphellaria perpetua</i>	Lichen	Conifer litter in a riparian old-growth Sitka spruce, Douglas fir, and western hemlock forest on the immediate coast, and on shaded branches of bristly manzanita in an unspecified shrub community on stabilized sand dune.	<1000	No	Surveys Not required
S&M A	<i>Pseudocyphellaria rainierensis</i>	Lichen	Primarily on conifer trees in cool, humid, old-growth to climax forests in the Western Hemlock or lower Pacific Silver Fir zones.	330-4000	Different Watershed	Surveys Not required
Bureau Sensitive	<i>Stereocaulon spathuliferum</i>	Lichen	Sheltered microsites in cool moist habitats, especially talus slopes and cliffs on non-calcareous rock.	3000-5000	No	Surveys Not required
S&M A	<i>Teloschistes flavicans</i>	Lichen	Forested headlands and dunes of the coastal fog belt, especially on capes or peninsulas. It occurs on exposed branches, twigs, and boles of Sitka spruce, shore pine, and stems of Hooker's willow in old Sitka spruce/western hemlock or shore pine stands.	<1000	No	Surveys Not required
Bureau Sensitive	<i>Cephaloziella spinigera</i>	Liverwort	Growing in bogs and fens.	>5000	No	Surveys Not required
Bureau Sensitive	<i>Gymnomitrium concinnatum</i>	Liverwort	Growing on peaty soil of cliffs and rock outcrops.	subalpine parklands	No	Surveys Not required
Bureau Sensitive	<i>Phymatoceros phymatodes</i>	Liverwort	Bare, mineral soils which remains moist until late spring or summer.	<2100	No	Surveys Not required
Bureau Sensitive	<i>Porella bolanderi</i>	Liverwort	Forming shaded to partly exposed mats on a variety of rock types (siliceous, calcareous, and metamorphic) and trunks of oaks, Oregon myrtle, and big leaf maple. Primarily within Oregon white oak, ponderosa pine, and Douglas fir forests.	500-3000	No	Surveys Not required
Bureau Sensitive	<i>Bryum calobryoides</i>	Moss	Forming sods or occurring as individuals among other mosses on rocks and soil.	3000-7000	No	Surveys Not required
Bureau Sensitive	<i>Campylopus schmidii</i>	Moss	Nutrient-poor sandy substrates near the coast. Forms sods in open stands of shore pine and Mendocino cypress.		Different Watershed	Surveys Not required
Bureau Sensitive	<i>Codriophorus depressus</i>	Moss	Forming mats on rocks in perennial or intermittent streams, and in the spray zone of waterfalls.	400-11000	No	Surveys Not required
Bureau Sensitive	<i>Entosthodon fascicularis</i>	Moss	Individuals or small sods on seasonally wet exposed soil in seeps or along intermittent streams. Including grasslands, oak savanna, grassy balds, and rock outcrops.	<3000	No	Surveys Not required

Status ¹	Scientific Name	Common Name or Taxon	Habitat	Elevation (feet)	Identified on Roseburg District	Survey Results
Bureau Sensitive	<i>Helodium blandowii</i>	Moss	Forming mats and small hummocks in montane fens, usually with calcareous groundwater.	5000-6000	No	Surveys Not required
Bureau Sensitive	<i>Meesia uliginosa</i>	Moss	Turfs in medium to rich montane fens growing on saturated ground, usually in full sunlight	5000-6000	No	Surveys Not required
Bureau Sensitive S&M A	<i>Schistostega pennata</i>	Moss	Growing on damp rock, soil, and decaying wood in dark places.		No	Surveys Not required
Bureau Sensitive S&M A	<i>Tetraphis geniculata</i>	Moss	Forming small turfs on well-rotted stumps and logs rarely on rocks in shaded, humid locations.	sea level to subalpine	No	Surveys Not required
Bureau Sensitive	<i>Tomentypnum nitens</i>	Moss	Forming loose or dense sods or intermixed with other bryophytes in medium to rich montane fens.	5000-6000	No	Surveys Not required
Bureau Sensitive	<i>Tortula mucronifolia</i>	Moss	Forming small cushions on soil, tree roots, and sheltered ledges and crevices of rock outcrops and cliffs. Primarily in true fir and riparian forests.	5000-7000	No	Surveys Not required
Bureau Sensitive	<i>Trematodon asanoi</i>	Moss	Forming loose mats on moist bare soil along the edges of trails, streams, and ponds in the subalpine zone.	subalpine zone	No	Surveys Not required
Bureau Sensitive	<i>Adiantum jordanii</i>	California maiden-Hair	Growing on seasonally moist, shaded, rocky banks, canyons, and ravines.	<3600	Different Watershed	Surveys Not required
Bureau Sensitive	<i>Arabis koehleri</i> var. <i>koehleri</i>	Koehler's rockcress	Growing on serpentine and limestone outcrops.	300-3000	Different Watershed	Surveys Not required
Bureau Sensitive	<i>Arctostaphylos hispidula</i>	Hairy manzanita	Growing on rocky serpentine soils or sandstone. Generally associated with interior chaparral and open woodland.	300-3750	No	Surveys Not required
Bureau Sensitive	<i>Asplenium septentrionale</i>	Grass-fern	Growing in the crevices of granite.	750-10050	Different Watershed	Surveys Not required
Bureau Sensitive	<i>Bensoniella oregana</i>	Bensonia	Periphery of meadows in the true fir zone.	1800-4500	Different Watershed	Surveys Not required
S&M A	<i>Botrychium minganense</i>	Gray moonwort	Dense forest to open meadow and from summer-dry meadows to permanently saturated fens and seeps. The species is often found in association with old (>10 year) disturbances such as logging roads and road shoulders. Commonly found on basaltic soils of the Blue Mountains of northeast Oregon.	1000-5000	No	Surveys Not required
S&M A	<i>Botrychium montanum</i>	Mountain grape-fern	Under old growth western red cedar on alluvial terraces along small streams where the soil is moist and high in organic matter. In fens, seeps and meadows along streams where the substrate is saturated.	1000-5000	No	Surveys Not required

Status ¹	Scientific Name	Common Name or Taxon	Habitat	Elevation (feet)	Identified on Roseburg District	Survey Results
Bureau Sensitive	<i>Calochortus coxii</i>	Crinite mariposa-lily	Serpentine soils on north facing open grassy or wooded slopes.	450-3200	Different Watershed	Surveys Not required
Bureau Sensitive	<i>Calochortus umpquaensis</i>	Umpqua mariposa-lily	Transitional zone between forest and grasslands, on serpentine soils.	800-2500	Different Watershed	Surveys Not required
Bureau Sensitive	<i>Camassia howellii</i>	Howell's camas	Grassy wet meadows, swampy ground and transitional areas between wet meadows and coniferous woodlands on serpentine soils.	720-4050	No	Surveys Not required
Bureau Sensitive	<i>Carex brevicaulis</i>	Short stemmed sedge	On coastal dunes or headlands.	<1200	No	Surveys Not required
Bureau Sensitive	<i>Carex comosa</i>	Bristly sedge	Growing in relatively wet locations.	<1200	No	Surveys Not required
Bureau Sensitive	<i>Cicendia quadrangularis</i>	Timwort	Growing in open, wet locations.	360-1170	Different Watershed	Surveys Not required
S&M A	<i>Coptis asplenifolia</i>	Spleenwort-leaved goldthread	Moist, cool, mossy sites, in old-growth forests with a well-developed litter layer.	<2800	No	Surveys Not required
S&M A	<i>Coptis trifolia</i>	Three-leaf goldthread	Margins of boggy, wet, seepage areas within mature coniferous forests in the Western Hemlock and Silver Fir Zones.	3280-3800	No	Surveys Not required
S&M A	<i>Corydalis aquae-gelidae</i>	Cold-water corydalis	Close proximity to seeps, springs or streams with relatively cold water, a substrate of gravely sand, upper level canopy closure of 70 to 90 percent, and little herbaceous competition.	1200-4260	No	Surveys Not required
Bureau Sensitive S&M C	<i>Cypripedium fasciculatum</i>	Clustered lady's slipper	Growing in a variety of habitats with 60-100% cover.	990-5235	Different Watershed	Surveys Not required
S&M C	<i>Cypripedium montanum</i>	Mountain lady's slipper	Wide variety of substrates in wooded communities with 60-80 percent canopy closure in mixed conifer and mixed evergreen/oak woodland plant communities.	1500-6500	Different Watershed	Surveys Not required
Bureau Sensitive	<i>Delphinium nudicaule</i>	Red larkspur	Found on moist talus, wooded, rocky slopes.	<7800	No	Surveys Not required
Bureau Sensitive	<i>Epilobium oregonum</i>	Oregon willow-herb	Found in bogs and small streams on serpentine soils.	1650-5400	Different Watershed	Surveys Not required
Bureau Sensitive	<i>Eschscholzia caespitosa</i>	Gold poppy	Growing in open chaparral sites.	<5400	No	Surveys Not required
Bureau Sensitive S&M A	<i>Eucephalus vialis</i>	Wayside aster	Found in gaps and edges of dry, open Douglas fir forests. Generally on shallow, rocky soils.	250-2200	Different Watershed	Surveys Not required

Status ¹	Scientific Name	Common Name or Taxon	Habitat	Elevation (feet)	Identified on Roseburg District	Survey Results
Bureau Sensitive	<i>Frasera umpquaensis</i>	Umpqua swertia	Found in coniferous forests dominated by true firs, in damp, shaded sites under forest canopy, forest edges.	3000-6100	Different Watershed	Surveys Not required
S&M A	<i>Galium kamtschaticum</i>	Boreal bedstraw	Most often occurs on low angle slopes with saturated soils, under dense shrub or lady fern thickets, in old-growth forest canopy gaps, and in the silver fir/devil's club-Alaska huckleberry plant association.	1930-2900	No	Surveys Not required
Bureau Sensitive	<i>Horkelia congesta</i> ssp. <i>congesta</i>	Shaggy horkelia	Growing in grasslands, oak savannas and grassy balds.	275-1700	Different Watershed	Surveys Not required
Bureau Sensitive	<i>Horkelia tridentata</i> ssp. <i>tridentata</i>	Three-toothed horkelia	Found in meadows and open woodlands.	150-2100	No	Surveys Not required
Bureau Sensitive	<i>Iliamna latibracteata</i>	California globe-mallow	Growing within conifer forests.	1500-6000	Different Watershed	Surveys Not required
Bureau Sensitive	<i>Kalmiopsis fragrans</i>	Fragrant kalmiopsis	Growing on rock outcrops and crevices, in sun or shady coniferous forests.	1400-3900	Different Watershed	Surveys Not required
Bureau Sensitive	<i>Lathyrus holochlorus</i>	Thin-leaved peavine	Found along low elevation roadsides, fencerows, creek banks, forest edges, oak savannas, shrublands, and grasslands.	100-2000	No	Surveys Not required
Bureau Sensitive	<i>Lewisia leeana</i>	Lee's lewisia	Growing on granite, serpentine cliffs, rocky slopes, and under conifer forest.	3900-10050	No	Surveys Not required
Bureau Sensitive	<i>Limnanthes gracilis</i> ssp. <i>gracilis</i>	Slender meadowfoam	Growing in seasonally wet meadows, rocky slopes and basins, on serpentine soils.	450- 5100	Different Watershed	Surveys Not required
Bureau Sensitive	<i>Lotus stipularis</i>	Stipuled trefoil	Found in thickets and chaparral sites, often within previously logged locations.	500-3600	No	Surveys Not required
Federally Threatened	<i>Lupinus oreganus</i> var. <i>kincaidii</i>	Kincaid's lupine	Found in upland prairie grasslands, oak savanna, and woodland edges.	500-6000	Different Watershed	Surveys Not required
Bureau Sensitive	<i>Meconella oregana</i>	White fairypoppy	Growing in shaded canyons.	<3000	No	Surveys Not required
Bureau Sensitive	<i>Pellaea andromedifolia</i>	Coffee fern	Growing on rocky or dry sites.	90-5400	Different Watershed	Surveys Not required
Bureau Sensitive	<i>Perideridia erythrorhiza</i>	Red-rooted yampah	Meadows and swales which are vernal moist and dry out in the summer. Found within oak woodlands.	400-900	Different Watershed	Surveys Not required
Federally Endangered	<i>Plagiobothrys hirtus</i>	Rough popcorn flower	Growing in wet meadows and vernal pools,	270-450	Different Watershed	Surveys Not required

Status ¹	Scientific Name	Common Name or Taxon	Habitat	Elevation (feet)	Identified on Roseburg District	Survey Results
S&M C	<i>Platanthera orbiculata</i> var. <i>orbiculata</i>	Large roundleaf orchid	It is found at low to middle elevations, on moderate slopes, and on sites that are neither very dry nor very wet.	750-3260	No	Surveys Not required
Bureau Sensitive	<i>Polystichum californicum</i>	California sword-fern	Growing in woodlands, stream banks, and rocky open slopes.	<3300	Different Watershed	Surveys Not required
Bureau Sensitive	<i>Romanzoffia thompsonii</i>	Thompson's mistmaiden	Found in seasonally wet, open, sunny cliffs and gravelly slopes.	700-6100	Same watershed	Surveys Not required
Bureau Sensitive	<i>Schoenoplectus subterminalis</i>	Water clubrush	Growing in fresh water lakes and streams that are low in nutrients.	<6900	No	Surveys Not required
Bureau Sensitive	<i>Scirpus pendulus</i>	Drooping bulrush	Growing in marshes, moist meadows, and ditches, on calcereous soils.	0-2000	No	Surveys Not required
Bureau Sensitive	<i>Sisyrinchium hitchcockii</i>	Hitchcock's blue-eyed grass	Found in prairies and oak savannas.	200-650	Different Watershed	Surveys Not required
Bureau Sensitive	<i>Utricularia gibba</i>	Humped bladderwort	Growing in shallow water or mud.	20-6900	No	Surveys Not required
Bureau Sensitive	<i>Utricularia minor</i>	Lesser bladderwort	Growing in shallow (generally <30 cm) acidic waters.	0-50, 2100-5500	Different Watershed	Surveys Not required
Bureau Sensitive	<i>Wolffia borealis</i>	Dotted water-meal	Found in freshwater ponds and slow flowing ditches with high levels of organic material, natural ponds as well as log and sewage treatment ponds.	350-1500	Different Watershed	Surveys Not required
Bureau Sensitive	<i>Wolffia columbiana</i>	Columbia water-meal	Found in freshwater ponds and slow flowing ditches with high levels of organic material, natural ponds as well as log and sewage treatment ponds.	20-1500	Different Watershed	Surveys Not required

¹ Survey and Manage Standards and Guidelines (2001 S&M ROD, pp. 7-13)

Category A – Require pre-disturbance surveys in suitable habitat and management of all known sites.

Category B – Considered rare, and pre-disturbance surveys are not considered practical.

Category C – Require pre-disturbance surveys in suitable habitat and high-priority sites are to be managed. Manage all sites until identification of high-priority sites.

Category E – Considered rare and of undetermined status. No management recommendations exist but in the interim all known sites are to be managed.