APPENDIX H.

Special-Status Plant Survey Report

SWCA
ENVIRONMENTAL CONSULTANTS
Sound Science. Creative Solutions.

Portland Office
1220 SW Morrison, Suite 700
Portland, Oregon 97205
Tel 503.224.0333 Fax 503.224.1851
www.swca.com

Rare Plant and Noxious Weeds Survey Technical Memorandum

To: Idaho Panhandle National Forests and Lolo National Forest
From: Matthew Vesh, Botanist/Wetland Scientist, SWCA Environmental Consultants
Date: July 16, 2015
Subject: Lookout Pass Ski Area Expansion EIS, Shoshone County, Idaho; Mineral County, Montana

INTRODUCTION

Lookout Pass Ski and Recreation Area has proposed to expand its ski area south and west of the current special-use permit boundary onto additional National Forest System (NFS) lands within the Idaho Panhandle National Forests (IPNFs) and Lolo National Forest (LNF). The Proposed Action would add approximately 100 acres of new ski trails and gladed terrain, and would include the installation of two new lifts (Lifts 5 and 6); an upgrade of Lift 1; construction of a new restroom, maintenance shop, and ski patrol building; and the addition of 130 new parking spaces. Also included would be 2.8 miles of new or reconstructed permanent road for administrative and maintenance use by the Forest Service and Lookout Pass Ski and Recreation Area, as well as 1.2 miles of temporary roads for timber harvest and construction access.

The project area is located approximately 12 miles east of Wallace, Idaho, along Interstate 90 on the Idaho-Montana border. The survey area includes the expected disturbance area for the expansion plus a 150-foot buffer.

RARE PLANTS AND NOXIOUS WEEDS SURVEY

Methodology

Two levels of investigation were conducted for the analysis of rare plants and noxious weeds in the survey area: a background review and field surveys.

Background Review

Information on the current status and condition of rare plants in the project area was derived from review of existing vegetation information and the personal knowledge and professional judgment of the Forest Service's regional botanist (Goodnow 2015).

Rare Plants Survey

Field surveys for rare plants were conducted from June 23 to June 27, 2015, by SWCA Environmental Consultants (SWCA) Botanists Matthew Vesh and Amanda Christensen. Controlled intuitive surveys were conducted during an appropriate time of year when rare plants are readily identifiable (late June), and in accordance with Forest Service guidance to target unique habitats and all suitable habitats having

potential to contain rare plants. SWCA botanists identified and surveyed suitable rare plant habitat within the existing road prism and within a 150-foot buffer. To account for ecological boundaries between rare plant metapopulations in different watersheds, surveys were further divided into separate rare plant surveys conducted in the Coeur d'Alene River and St. Regis River watersheds. Rare plant locations were mapped, photographed, and documented on data forms (Attachments A–C). Taxonomic determinations of all plant species were based on the work of Hitchcock and Cronquist (1973), Wilson et al. (2008), Farrar (2006), and Douglas et al. (1998a, 1998b, 1999a, 1999b, 2000, 2001a, 2001b, 2002).

Noxious Weeds Survey

Surveys for noxious weeds were conducted concurrently with rare plant surveys within disturbance areas and in a 150-foot buffer immediately surrounding the disturbance areas. The road prisms and existing ski trails where soil and vegetation have been previously disturbed provide habitat for invasive species. **Attachment D provides a list of state and county noxious weeds provided by local agencies.**

Field Survey Results

One rare plant species and three noxious weed species were identified within the survey area. These results are summarized below, with Forest Service plant survey field forms provided in Attachment A.

Rare Plants

Whitebark Pine (*Pinus albicaulis*)

Whitebark pine was identified within the survey area. Suitable habitat was identified only within the St. Regis River watershed. Suitable on-site habitat consists of lodgepole pine (*Pinus contorta*)–dominant forest above 6,000 feet elevation on slopes with a southern aspect. Plant species co-occurring with this population include grouse whortleberry (*Vaccinium scoparium*), beargrass (*Xerophyllum tenax*), smooth woodrush (*Luzula hitchcockii*), and lodgepole pine. Eight individual plants were identified during the field survey, and all plants were less than 7 feet high (see photographs in Attachment B). An elemental occurrence form for this species is provided in Attachment C.

Noxious Weeds

Three noxious weed species were identified by SWCA during field surveys within the survey area.

Spotted Knapweed (*Centaurea stoebe*)

Spotted knapweed, a biennial forb in the Asteraceae family, is considered a widespread noxious weed in the IPNFs and LNF. Scattered individuals were identified on the east slope ski trail and in the grasslands near the proposed maintenance shop in the Coeur d'Alene River and St. Regis River watersheds.

Bull Thistle (*Cirsium vulgare*)

Bull thistle, a biennial forb in the Asteraceae family, is considered a widespread noxious weed in the IPNFs and LNF. A single plant was identified along Forest Service Road 18591 in the St. Regis River watershed.

Common St. John's-wort (*Hypericum perforatum*)

St. John's-wort, a perennial forb in the Asteraceae family, is considered a widespread noxious weed in the IPNFs and LNF. The plant was common and abundant along all roads and trails throughout the survey area in both the St. Regis River and Coeur d'Alene River watersheds.

LITERATURE CITED

Douglas, G.W., G.B. Straley, D.V. Meidinger, and J. Pojar (eds). 1998a. *Illustrated Flora of British Columbia, Vol. 1: Gymnosperms and Dicotyledons (Aceraceae through Asteraceae).* Victoria, British Columbia: British Columbia Ministry of Environment, Lands and Parks and Ministry of Forests.

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ATTACHMENT A

USDA Forest Service Plant Survey Field Form

USDA FOREST SERVICE

PLANT SURVEY FIELD FORM

(® = Required Fields)

General Information

1) SURVEY ID: ® 01 12 05 S#1	**2) SURVEY NAME:** Lookout Pass Expansion	
3) SURVEY STATUS: ® Completed Survey	**4) TARGET:** ® ***TESP; INPA; BOTH***	**5) SOURCE OF WORK**:
6) Survey Type: ® Focused (Intuitive Controlled)		
7) Survey Focus: ® Terrestrial, Riparian, and Aquatic		
8) Estimate of Survey Area Size (acres):	**9) No. of Traverses:**	
10) Elevation: Min: Max: Average:		**11) Elevation UOM:**

12) State: ®	**13) County:** ®	**14) Region:** ®	**15) Forest:** ®	**16) District:** ®
Montana	Mineral	Northern	Lolo	Superior
Idaho	Shoshone	Northern	Idaho Panhandle	Coeur d'Alene

17) Parameters of Survey (*Describe any ecological parameters, survey criteria or combinations of these used to focus the survey. (I.e., north slopes, specific habitat types, certain soils within certain forest conditions, survey timing, etc.):*

18) Survey Comments *(Directions, area description, specific comments by visit date, etc.):*

Survey Visits

Required. Enter a Date (MM/DD/YYYY) and Examiners for each visit made.

19) VISIT DATE ®	**20) LAST NAME ® AND FIRST NAME ® OF EXAMINERS FOR EACH VISIT**
6/23/2015	Vesh, Matthew and Christensen, Amanda
6/24/2015	Vesh, Matthew and Christensen, Amanda
6/25/2015	Vesh, Matthew and Christensen, Amanda
6/26/2015	Vesh, Matthew and Christensen, Amanda
6/27/2015	Vesh, Matthew and Christensen, Amanda

Target Species

Required. List all targeted plant species (TES, INPA, special forest products, or other species of concern) that are the focus of the survey. It may be helpful to separate TES from INPA species by page or block if survey is for both purposes. Enter all the species individually using the NRCS *PLANTS* code and/or scientific name. All columns are required.

21) ® NRCS Plant Code	22) ® Scientific name	23) ® Suitable habitat found	24) ® Plant found	25) ® FS Site ID(s) for EOs (If EO forms completed)
ASTR	Asplenium trichomanes	yes	no	
BLSP	Blechum spicant	yes	no	
BOAS	Botrychium ascendens	yes	no	
BOCR	B. crenulatum	yes	no	
BOLA	B. lanceolatum	yes	no	
BOLI	B. lineare	yes	no	
BOMI	B. minganense	yes	no	
BOMO	B. montanum	yes	no	
BOPA	B. paradoxum	yes	no	
BOPE	B. pedunculosum	yes	no	
BOPI	B. pinnatum	yes	no	
BOSI	B. simplex	yes	no	
BUAP	Buxbaumia aphylla	yes	no	
BUAP	Buxbaumia aphylla	yes	no	
CABU	Carex buxbaumii	yes	no	
CYFA	Cypripedium fasciculatum	yes	no	
CYPA	C. parviflorum var. pubescens	no	no	
GAHI	Gaultheria hispidula	yes	no	
GRBR	Grimmia brittoniae	yes	no	
HOLU	Hookeria lucens	yes	no	
LYDE	Lycopodium dendroideum	yes	no	
MIAL	Mimulus alsinoides	yes	no	
PHCO	Phegoteris connectilis	yes	no	
PIAL	Pinus albicaulis	yes	yes	01 12 05 EO#1
POBR	Polystichum braunii	yes	no	
RHNU	Rhizomnium nudum	yes	no	
STST	Streptopus streptopoides	yes	no	
THNE	Thelypteris nevadensis	yes	no	
TROC	Triantha occidentalis spp. brevistyla	no	no	
WAID	Waldstenia idahoensis	yes	no	
HOAQ	Howellia aquatilis	no	no	
SISP	Silene spaldingii	no	no	

Species List of Surveyed Area

Optional. List other species found during the survey. Record the NRCS *PLANTS* Code, scientific name or both. Indicate habitat (locally defined), lifeform and cover abundance (all optional). Indicate non-native plants with "X"

26) Completeness of species list:	**27) Cover Method** *(if cover recorded):*

28) Comments *(e.g. details about species list approach, habitat focus, vegetation types or structure, etc.):*

29) NRCS Plant Code	30) Scientific Name	31) Life Form	32) Habitat	33) % Cover or Class	34) Non-native

Optional Location Information

Location information to represent the survey area may be recorded,
in addition to entering the spatial feature in the application

35) USGS Quad Number:	36) USGS Quad Name:
37) Forest Quad Number:	38) Forest Quad Name:

39) Legal Description: Required where public land survey is available.

Meridian: **Township and Range:**

Section:__ **Q Sec:___** **QQ Sec: ____** **QQQ Sec: ____** **QQQQ Sec: ____**

40) Latitude and Longitude (either in degrees, minutes, seconds or in decimal degrees)

Geodetic Datum:

Latitude: **Degrees __ __ N** **Minutes** **Seconds __ __.__ __**

Longitude: **Degrees __ __ __ W** **Minutes** **Seconds __ __.__ __**

GPS Datum:

GPS Lat. Dec. Degrees: **GPS Long. Dec. Degrees:**

41) UTM

UTM Datum: **UTM Zone:**

Easting: __ __ __ __ __ __ **Northing: __ __ __ __ __ __**

42) GPS Equipment: Manufacturer:	Model:

43) Metes and Bounds

44) Directions to Survey Area

45) Sketch of Survey Area

ATTACHMENT B

Whitebark Pine Site Photographs

Figure B1. Whitebark pine habitat.

Figure B2. Whitebark pine.

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ATTACHMENT C

USDA Forest Service TES Plant Element Occurrence Field Form

TES PLANT ELEMENT OCCURRENCE - FIELD FORM - USDA FOREST SERVICE

® = required field, ®* = conditionally required field

General Information

1) FS SITE ID: ® 01 12 05 EO#1	**2) DATE: ®** 6/25/15	**3) SITE NAME:** Lookout Pass Exp
4) NRCS PLANT CODE: ® PIAL		
5) SCIENTIFIC NAME: ® Pinus albicaulis		
6) RECORD SOURCE: ® FS	**7) SURVEY ID: ®***	**8) Survey Name:**
9) EXAMINER(S)- LAST: ® Vesh	**FIRST: ®** Matthew	**MIDDLE INITIAL:** A
LAST: Christensen	**FIRST:** Amanda	**MIDDLE INITIAL:**
10) OWNERSHIP: ® Lolo NF	**11) Loc. Uncert: ®** Aerial estimated	**12) Uncert. Dist: ®*** >6.25-25 m
13) E.O. # 1	**14) STATE: ®*** Montana	**15) COUNTY: ®*** Mineral
16) REGION: ®* Norther	**17) FOREST: ®*** Lolo	**18) DISTRICT: ®*** Superior
19) Area (Est):		**20) Area UOM: ®***
21) Canopy Cover Method ®* (circle one): COVER PERCENT; DAUBEN; NRMCOV		

Element Occurrence Data

22) EO Canopy Cover: %Cov: ***or*** Cover Class Code:		**23) Lifeform:** Tree
24) Number of subpopulations:	**XX) Plant Found (Revisit): Yes or No**	
25) Plant Count: >8	**26) Count Type: *Genets/Ramets/Undetermined***	**27) Count: *Actual* or *Estimate***
28) Revisit needed - Yes *or* No	**29) Revisit Date:**	
30) Revisit Justification:		

31) Phenology by % *(Sum to 100%):*
Vegetative . . . . . ___
Flower/Bud . . . ___
Fruit/Dispersed . ___
Seedlings/
Juvenile . . . . . ___

32) Population Comments: (e.g., distribution, vigor, density, phenology, dispersal)

33) Evidence of disease, competition, predation, collection, trampling, or herbivory: Yes___ *or* No ___

34) Evidence Comments:

35) Pollinator observed – Yes *or* No	**36) Pollinator type(s):**
37) Pollinator comments:	

Site Morphometry

38) Percent Slope:	**39) Slope position:**
40) Aspect: azimuth: ***or*** cardinal:	
41) Elev.: Ave: Min: Max:	**42) Elev UOM: ®***

Soil Characteristics and Light Conditions

43) Substrate on which EO occurs:		
44) Parent Material:	**45) Soil Moisture:**	**46) Soil Texture:**
47) Soil Type:		**48) Light Exposure:**

Site Classifications

Record taxonomic units of the given type(s) if published classifications exist for the area.

CLASSIFICATION TYPE	CLASS CODE	CLASSIFICATION SHORT NAME	CLASSIFICATION SET
49) Existing Veg			
50) Potential Veg			
51) Ecotype			

Habitat Quality and Management Comments

52) Habitat Description: Mapped as PICO in FS6040 DOM. South aspect with 60% PICO cover of which 50% of PICO is standing dead/snag. Understory dominates include XETE and VASC; LUHI common.

53) Dominant Process:

54) Community Quality *(L, M, H):*	**55) Landscape Integrity *(L, M, H):***

56) Process Comment:

57) Disturbance/Threats (present or imminent):

58) Disturbance/Threats Comment:

59) Non-Native Comment:

60) Current Land Use Comment:

Canopy Cover

Record % canopy cover by actual percent, ***or*** by cover class (*as indicated in General Information Block*).

Lifeform Canopy Cover	**61) % Cov *or* Code**	**Ground Cover**	**62) % Cov *or* Code**
Tree		Bare	
Shrub		Gravel	
Forb		Rock	
Graminoid		Bedrock	
Non-vascular		Moss	
Lichen		Litter/Duff	
Algae		Basal Veg	
		Water	
		Road surface	
		Lichen	

Associated Species

List species directly associated with the EO species on this site. Record the NRCS Plant Code, scientific name or both. If desired, indicate lifeform, dominant species, % cover for each species and flag non-native species.

63) Completeness of Species List: ®* C, R, OR S

64) Species List Comment: partial search

65) NRCS Plant Code	66) Scientific Name	67) Life Form	68) Dom. (Y/N)	69) % Cov or Class	70) Non-native
PICO	Pinus contorta	TR	Y	30	
PICO (dead)	Pinus contorta (snag)	TR	Y	30	
XETE	Xerophyllum tenax	FB	Y	35	
VASC	Vaccinium scoparium	SS	Y	35	
LUHI	Luzula hitchcockii	GR	N	5	
PIEN	Picea engalmanii	TR	N	2	
TSME	Tsuga mertensiana	TR	N	1	

EO Specimen Documentation

71) Reference for ID:

72) Primary Collector – Last Name: Vesh **First Name:** Matthew **M.I.** A

Other Collectors – Last Name: Christensen **First Name:** Amanda **M.I.**

73) Collection #: ®* | **74) ID Confirmed: ®*** Y: or N: or Questionable:

75) Verification: Bruce Erickson, silviculturalist,Forest Service - Lolo NF - Superior

76) Specimen Repository: ®*

FS SITE ID: 01 12 05 EO#1

Image Information

77) Image ID	78) Image Description

Location Information

(State, County, Region, Forest, District will be auto-populated by the database application when the spatial feature is entered)

79) USGS Quad Number:	80) USGS Quad Name:
81) Forest Quad Number:	82) Forest Quad Name:

83) Legal Description: Required where public land survey is available.

Meridian: **Township and Range:**

Section:__ **Q Sec:**___ **QQ Sec:** ____ **QQQ Sec:** ____ **QQQQ Sec:** ____

84) Latitude and Longitude (either in degrees, minutes, seconds or in decimal degrees)

Geodetic Datum:

Latitude: **Degrees** __ __ **N** **Minutes** **Seconds** __ __.__ __

Longitude: **Degrees** __ __ __ **W** **Minutes** **Seconds** __ __.__ __

GPS Datum:

GPS Lat. Dec. Degrees: 47.44201 N **GPS Long. Dec. Degrees:** 115.74090 W

85) UTM

UTM Datum: **UTM Zone:**

Easting: __ __ __ __ __ __ **Northing:** __ __ __ __ __ __

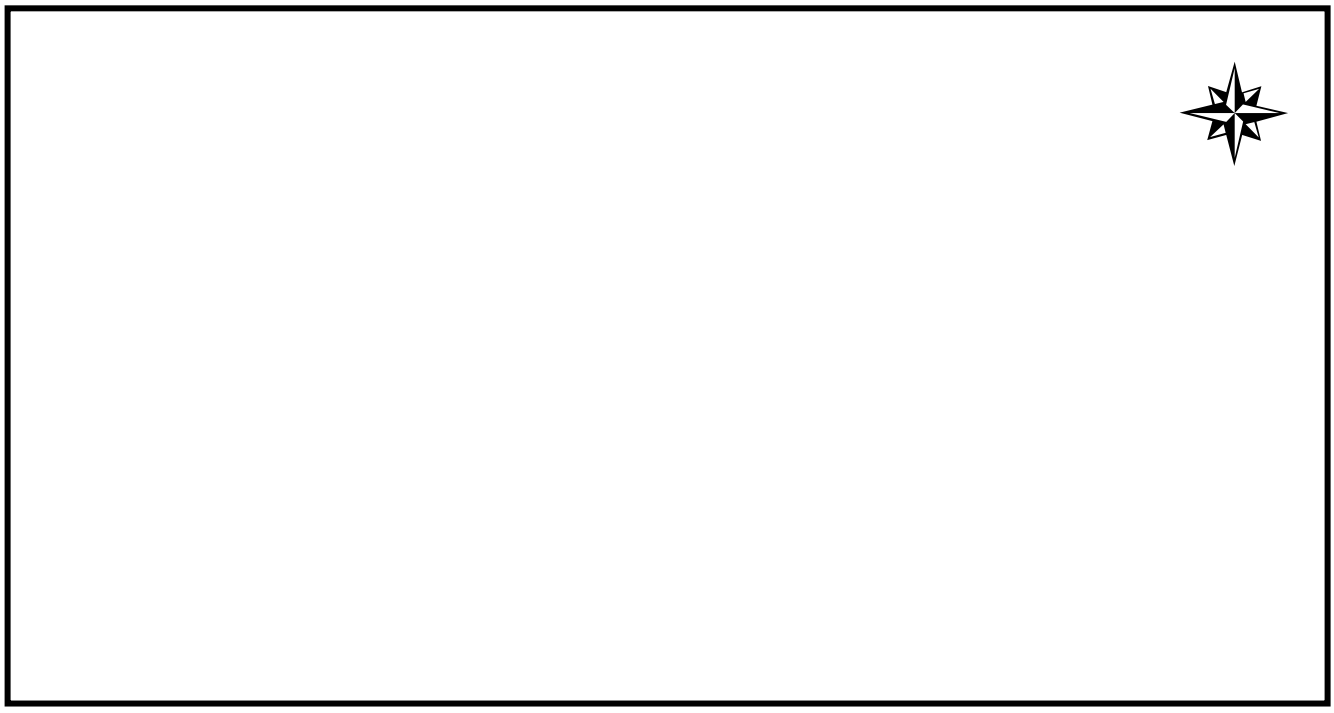
86) GPS Equipment Used (Manufacturer and Model):

87) Metes and Bounds

FS SITE ID: 01 12 05 E0#1

88) Directions to Site

89) Sketch of Site or Area



90) General EO Comments

ATTACHMENT D

State and County Noxious Weeds Lists

Montana Noxious Weed List

Effective: July 2015

PRIORITY 1A These weeds are not present or have a very limited presence in Montana. Management criteria will require eradication if detected, education, and prevention:

(a) Yellow starthistle (*Centaurea solstitialis*)
(b) Dyer's woad *(Isatis tinctoria*)
(c) Common Reed *(Phragmites australis ssp. australis)*

PRIORITY 1B These weeds have limited presence in Montana.
Management criteria will require eradication or containment and education:

(a) Knotweed complex (*Polygonum cuspidatum, P. sachalinense, P. × bohemicum, Fallopia japonica, F. sachalinensis, F. × bohemica, Reynoutria japonica, R. sachalinensis, and R.× bohemica*)
(b) Purple loosestrife (*Lythrum salicaria*)
(c) Rush skeletonweed (*Chondrilla juncea*)
(d) Scotch broom (*Cytisus scoparius*)

PRIORITY 2A These weeds are common in isolated areas of Montana. Management criteria will require eradication or containment where less abundant. Management shall be prioritized by local weed districts:

(a) Tansy ragwort (*Senecio jacobaea, Jacobaea vulgaris*)
(b) Meadow hawkweed complex (*Hieracium caespitosum, H. praealturm, H. floridundum, and Pilosella caespitosa*)
(c) Orange hawkweed (*Hieracium aurantiacum, Pilosella aurantiaca*)
(d) Tall buttercup (*Ranunculus acris*)
(e) Perennial pepperweed (*Lepidium latifolium*)
(f) Yellowflag iris (*Iris pseudacorus*)
(g) Blueweed (*Echium vulgare*)
(h) Eurasian watermilfoil (*Myriophyllum spicatum*)
(i) Flowering rush (*Butomus umbellatus*)

PRIORITY 2B These weeds are abundant in Montana and widespread in many counties. Management criteria will require eradication or containment where less abundant. Management shall be prioritized by local weed districts:

(a) Canada thistle (*Cirsium arvense*)
(b) Field bindweed (*Convolvulus arvensis*)
(c) Leafy spurge (*Euphorbia esula*)
(d) Whitetop (*Cardaria draba, Lepidium draba*)
(e) Russian knapweed (*Acroptilon repens, Rhaponticum repens*)
(f) Spotted knapweed (*Centaurea stoebe, C.maculosa*)
(g) Diffuse knapweed (*Centaurea diffusa*)
(h) Dalmatian toadflax (*Linaria dalmatica*)
(i) St. Johnswort (*Hypericum perforatum*)
(j) Sulfur cinquefoil (*Potentilla recta*)
(k) Common tansy (*Tanacetum vulgare*)
(l) Oxeye daisy (*Leucanthemum vulgare*)
(m) Houndstongue (*Cynoglossum officinale*)
(n) Yellow toadflax (*Linaria vulgaris*)
(o) Saltcedar (*Tamarix spp*.)
(p) Curlyleaf pondweed (*Potamogeton crispus*)
(q) Hoary alyssum (*Berteroa incana*)

Priority 3 Regulated Plants: (NOT MONTANA LISTED NOXIOUS WEEDS)
These regulated plants have the potential to have significant negative impacts. The plant may not be intentionally spread or sold other than as a contaminant in agricultural products. The state recommends research, education and prevention to minimize the spread of the regulated plant.

(a) Cheatgrass (*Bromus tectorum*)
(b) Hydrilla (*Hydrilla verticillata*)
(c) Russian olive (*Elaeagnus angustifolia*)
(d) Brazilian waterweed (*Egeria densa*)
(e) Parrot feather watermilfoil (*Myriophyllum aquaticum or M. brasiliense*)

Mineral County Noxious Weed List

Noxious Weeds in Mineral County are those designated noxious by the Montana Department of Agriculture (Priority 1A, 1B, 2A, 2B and 3) in addition to weeds declared noxious by the Mineral County Weed Board (Category 4) and are prioritized accordingly.

PRIORITY 1A

Yellow Starthistle (*Centaurea solstitialis*)
Dyer's woad (*Isatis tinctoria*)
Common Reed (*Phragmites australis ssp. Australis*)

These weeds are not present or have limited presence in Montana. Management criteria will require eradication if detected; education, and prevention.

PRIORITY 1B

Purple loosestrife or lythrum (*Lythrum salicaria, L. virgatum*, and any hybrid crosses thereof)
Japanese knotweed complex (*Polygonum cuspidatum, P. sachalinense & P. polystachyum*)
Scotch broom (Cytisus scoparius)
Rush skeletonweed (*Chondrilla juncea*)

These weeds have limited presence in Montana. Management criteria in Mineral County will require eradication and containment if possible, in addition to education.

PRIORITY 2A

Tansy ragwort (*Senecio jacobaea*)
Meadow hawkweed complex (*Hieracium* spp.)
Orange hawkweed (*Hieracium aurantiacum*)
Tall buttercup (*Ranunculus acris*)
Perennial pepperweed (*Lepidium latifolium*)
Yellow flag iris (*Iris pseudacorus*)
Blueweed (*Echium vulgare*)
Eurasian water milfoil (*Myriophyllum spicatum*)
Flowering rush (*Butomus umbellatus*)

These weeds are common in isolated areas of Montana. Management criteria will require eradication or containment where less abundant. Prevention, education and continued management are priorities for these weeds in Mineral County.

PRIORITY 2B

Canada thistle (*Cirsium arvense*)
Field bindweed (*Convolvulus arvensis*)
Leafy spurge (*Euphorbia esula*)
Whitetop (*Cardaria draba*)
Russian knapweed (*Centaurea repens*)
Spotted knapweed (*Centaurea stoebe* or *maculosa*)
Diffuse knapweed (*Centaurea diffusa*)
Dalmatian toadflax (*Linaria dalmatica*)
St. Johnswort (*Hypericum perforatum*)
Sulfur cinquefoil (*Potentilla recta*)
Common tansy (*Tanacetum vulgare*)
Oxeye daisy (*Chrysanthemum leucanthemum* or *Leucanthemum vulgare*)
Houndstongue (*Cynoglossum officinale*)
Yellow toadflax (*Linaria vulgaris*)
Saltcedar (*Tamarix* spp.)
Curlyleaf pondweed (*Potamogeton crispus*)
Hoary alyssum (*Berteroa incana*)

These weeds are abundant in Montana and widespread in many counties. Management criteria will require eradication or containment where less abundant. Prevention, education and continued management are priorities for these weeds in Mineral County.

PRIORITY 3 (Regulated Plants)

Cheatgrass (*Bromus tectorum*)
Hydrilla (*Hydrilla verticillata*)
Russian olive (*Eleagnus angustifolia*)
Brazilian waterweed (*Egeria densa*)
Parrot feather watermilfoil (*Myriophyllum aquaticum* or *M. brasiliense*)

These regulated plants have the potential to have significant negative impacts. The plant may not be intentionally spread or sold other than as a contaminant in agricultural products. The state recommends research, education and prevention to minimize the spread of the regulated plant.

CATEGORY 4

Common mullein (*Verbascum thapsus*)
Scentless chamomile (*Matricaria perforata*)
Mayweed (Dogfennel) (*Anthemis cotula*)

Category 4 noxious weeds have been determined by the Weed Board to pose significant threat to the natural resources of Mineral County. These weeds are capable of rapid spread and invasion of lands, rendering lands unfit for beneficial uses. Management criteria include awareness and education, monitoring and containment of known infestations and eradication where possible.