

Table 1. Wildlife species found on Camp Murray during 2005 field surveys

Birds*	Scientific Name	Detection Type			
		Audio	Visual	Sign	
American Crow	<i>Corvus brachyrhynchos</i>	x	x		
American Goldfinch	<i>Carduelis tristis</i>	x			
American Robin	<i>Turdus migratorius</i>	x	x		
Bald Eagle	<i>Haliaeetus leucocephalus</i>	x	x	feathers/active nest	
Barn Swallow	<i>Hirundo rustica</i>	x	x		
Barrow's Goldeneye	<i>Bucephala islandica</i>		x		
Belted Kingfisher	<i>Ceryle alcyon</i>		x		
Bewick's Wren	<i>Thryomanes bewickii</i>	x			
Black-capped Chickadee	<i>Poecile atricapilla</i>	x			
Black-headed Grosbeak	<i>Pheucticus melanocephalus</i>	x	x		
Black-throated Gray Warbler	<i>Dendroica nigrescens</i>	x			
Brewer's Blackbird	<i>Euphagus cyanocephalus</i>	x	x		
Brown Creeper	<i>Certhia americana</i>	x	x		
Brown-headed Cowbird	<i>Molothrus ater</i>	x			

Bufflehead	<i>Bucephala albeola</i>		x		
Canada Goose	<i>Branta canadensis</i>	x	x	scat	
Caspian Tern	<i>Sterna caspia</i>	x	x		
Chestnut-backed Chickadee	<i>Poecile rufescens</i>	x	x		
Common Merganser	<i>Mergus merganser</i>		x		
Common Raven	<i>Corvus corax</i>	x	x		
Double-crested Cormorant	<i>Phalacrocorax auritus</i>		x		
Downy Woodpecker	<i>Picoides pubescens</i>	x			
European Starling	<i>Sturnus vulgaris</i>		x		
Golden-crowned Kinglet	<i>Regulus satrapa</i>	x			
Great Blue Heron	<i>Ardea herodias</i>	x	x		
Great Horned Owl	<i>Bubo virginianus</i>			feathers/whitewash	
Hutton's Vireo	<i>Vireo huttoni</i>	x			
Killdeer	<i>Charadrius vociferus</i>	x	x		
Lesser Scaup	<i>Aythya affinis</i>		x		
Mallard	<i>Anas platyrhynchos</i>	x	x		
Northern Flicker	<i>Colaptes auratus</i>		x		

Olive-sided Flycatcher	<i>Contopus cooperi</i>	x			
Orange-crowned Warbler	<i>Vermivora celata</i>	x			
Oregon Dark-eyed Junco	<i>Junco hyemalis</i>	x	x		
Osprey	<i>Pandion haliaetus</i>		x		
Pacific-slope Flycatcher	<i>Empidonax difficilis</i>	x			
Pie-billed Grebe	<i>Podilymbus podiceps</i>		x		
Pileated Woodpecker	<i>Dryocopus pileatus</i>	x		holes in snag	
Pine Siskin	<i>Carduelis pinus</i>	x			
Purple Martin	<i>Progne subis</i>		NOT DETECTED		
Red Crossbill	<i>Loxia curvirostra</i>	x			
Red-breasted Nuthatch	<i>Sitta canadensis</i>	x			
Red-breasted Sapsucker	<i>Sphyrapicus ruber</i>	x	x		
Red-tailed Hawk	<i>Buteo jamaicensis</i>	x			
Red-winged Blackbird	<i>Agelaius phoeniceus</i>	x	x		
Ring-necked Duck	<i>Aythya collaris</i>		x		
Rock Dove	<i>Columba livia</i>		x		
Rufous Hummingbird	<i>Selasphorus rufus</i>	x	x	active nest	

Song Sparrow	<i>Melospiza melodia</i>	x	x		
Spotted Sandpiper	<i>Actitis macularia</i>	x	x		
Spotted Towhee	<i>Pipilo maculatus</i>	x	x		
Stellar's Jay	<i>Cyanocitta stelleri</i>	x	x		
Varied Thrush	<i>Ixoreus naevius</i>	x	x		
Violet-green Swallow	<i>Tachycineta thalassina</i>	x	x		
Warbling Vireo	<i>Vireo gilvus</i>	x			
Western Gull	<i>Larus occidentalis</i>	x	x		
Western Tanager	<i>Piranga ludoviciana</i>	x			
Western Wood-pewee	<i>Contopus sordidulus</i>	x			
White-breasted nuthatch	<i>Sitta carolinensis</i>		NOT DETECTED		
Wilson's Warbler	<i>Wilsonia pusilla</i>	x			
Winter Wren	<i>Troglodytes troglodytes</i>	x			
Yellow Warbler	<i>Dendroica petechia</i>	x	x		
Yellow-rumped Warbler	<i>Dendroica coronata</i>		x		
Mammals		Audio	Visual	Sign	
Black-tailed Deer	<i>Odocoileus hemionus columbianus</i>		x	tracks	

Coyote	<i>Canis latrans</i>		x		
Douglas' Squirrel	<i>Tamiasciurus douglasii</i>	x	x	cone piles	
Eastern Gray Squirrel	<i>Sciurus carolinensis</i>	x	x		
Raccoon	<i>Procyon lotor</i>		x		
Fish		Audio	Visual	Sign	
Brown Bullhead	<i>Ameiurus nebulosus</i>			**	
Kokanee	<i>Oncorhynchus nerka</i>			**	
Largemouth Bass	<i>Micropterus salmoides</i>			**	
Pumpkinseed	<i>Lepomis gibbosus</i>			**	
Rainbow Trout	<i>Oncorhynchus mykiss</i>			**	
Resident Cutthroat Trout	<i>Oncorhynchus clarki clarki</i>			**	
Rock Bass	<i>Ambloplites rupestris</i>			**	
Smallmouth Bass	<i>Micropterus dolomieu</i>			**	
Yellow Perch	<i>Perca flavescens</i>			**	
* - Species order consistent with the American Ornithologist's Union Check-list of North American Birds.					
** - Species List for American Lake obtained from Fort Lewis websites and personal communication with anglers.					

Source: Turnstone 2006a

Table 2. Vascular plant species found on Camp Murray during 2005 field surveys

Common Name	Species Name	Family
alsike clover	<i>Trifolium hybridum</i>	Fabaceae
American brooklime	<i>Veronica americana</i>	Scrophulariaceae
annual blue grass	<i>Poa annua</i>	Poaceae
annual vernal grass	<i>Anthoxanthum odoratum</i>	Poaceae
big-leaf maple	<i>Acer macrophyllum</i>	Aceraceae
black cottonwood	<i>Populus trichocarpa</i>	Betulaceae
black medick	<i>Medicago lupulina</i>	Fabaceae
bracken fern	<i>Pteridium aquilinum</i>	Polypodiaceae
brittle bladderfern	<i>Cystopteris fragilis</i>	Polypodiaceae
bull thistle	<i>Cirsium vulgare</i>	Asteraceae
California figwort	<i>Scrophularia californica</i>	Scrophulariaceae
California poppy	<i>Eschsholtzia californica</i>	Papaveraceae
chamomile	<i>Anthemis cotula</i>	Asteraceae
chickweed	<i>Stellaria media</i>	Carophyllaceae
climbing nightshade	<i>Solanum dulcamara</i>	Solanaceae

colonial bentgrass	<i>Agrostis tenuis</i>	Poaceae
common bedstraw	<i>Galium aparine</i>	Rubiaceae
common groundsel	<i>Senecio vulgaris</i>	Asteraceae
common mouse ear chickweed	<i>Cerastium fontanum</i>	Carophyllaceae
common nipplewort	<i>Lapsana communis</i>	Asteraceae
common plantain	<i>Plantago major</i>	Plantaginaceae
common sow thistle	<i>Sonchus oleraceus</i>	Asteraceae
common touch-me-not	<i>Impatiens noli-tangere</i>	Balsaminaceae
coontail	<i>Ceratophyllum demersum</i>	Certophyllaceae
creeping buttercup	<i>Ranunculus repens</i>	Ranunculaceae
curly dock	<i>Rumex crispus</i>	Polygonaceae
dame's rocket	<i>Hesperis matronalis</i>	Brassicaceae
douglas-fir	<i>Pseudostuga menziesii</i>	Pinaceae
elderberry	<i>Sambucus racemosa</i>	Caprifoliaceae
elegant clarkia	<i>Clarkia unguiculata</i>	Onagraceae
enchanter's nightshade	<i>Circaea alpina</i>	Onagraceae
English holly	<i>Ilex aquifolium</i>	Aquifoliaceae

English ivy	<i>H. helix ssp. Hibernica</i>	Araliaceae
European mountain ash	<i>Sorbus aucuparia</i>	Rosaceae
fan colombine	<i>Aquilegia flabellata</i>	Ranunculaceae
field pepperweed	<i>Lepidium campestre</i>	Brassicaceae
foamflower	<i>Tiarella trifoliata</i>	Saxifragaceae
forget-me-not	<i>Myosotis scorpioides</i>	Boraginaceae
fowl bluegrass	<i>Poa palustris</i>	Poaceae
fowl mannagrass	<i>Glyceria elata</i>	Poaceae
foxglove	<i>Digitalis purpurea</i>	Scrophulariaceae
garden yellowrocket	<i>Barbarea vulgaris</i>	Brassicaceae
greater creeping spearwort	<i>Ranunculus flammula</i>	Ranunculaceae
hairy cat's ear	<i>Hypochaeris radicata</i>	Asteraceae
hazelnut	<i>Corylus cornuta</i>	Betulaceae
Himalayan blackberry	<i>Rubus discolor</i>	Rosaceae
hoary yellowcress	<i>Rorippa islandica</i>	Brassicaceae
Hooker's fairy bells	<i>Disporum hookeri</i>	Liliaceae
horse tail	<i>Equisetum arvense</i>	Equisetaceae

Indian plum	<i>Oemlaria cerasiforma</i>	Rosaceae
indian pond lily	<i>Nuphar polysepalum</i>	Nymphaeaceae
Kentucky bluegrass	<i>Poa pratensis</i>	Poaceae
lady fern	<i>Athyrium felix-femina</i>	Polypodiaceae
lady's tresses	<i>Spiranthes romanzoffiana</i>	Orchidaceae
largeleaf avens	<i>Geum macrophyllum</i>	Rosaceae
lawn daisy	<i>Bellis perennis</i>	Asteraceae
leafy pondweed	<i>Potamogeton foliosus</i>	Potamogetonaceae
Lewiston cornsalad	<i>Valerianella locusta</i>	Valerianaceae
licorice fern	<i>Polypodium glycyrrhiza</i>	Polypodiaceae
little western bittercress	<i>Cardamine oligosperma</i>	Brassicaceae
man root	<i>Marah oreganus</i>	Cucurbitaceae
marsh cudweed	<i>Gnaphalium uliginosum</i>	Asteraceae
miner's lettuce	<i>Claytonia perfoliata</i>	Portulacaceae
mock orange	<i>Philadelphus lewesii</i>	Hydrangeaceae
monkey flower	<i>Mimulus guttatus</i>	Scrophulariaceae
mouse ear chickweed	<i>Cerastium glomeratum</i>	Carophyllaceae

narrow leaved plantain	<i>Plantago lanceolata</i>	Plantaginaceae
ninebark	<i>Physocarpus capitatus</i>	Rosaceae
nutka rose	<i>Rosa nutkana</i>	Rosaceae
oceanspray	<i>Holodiscus discolor</i>	Rosaceae
orange honeysuckle	<i>Lonicera ciliosa</i>	Caprifoliaceae
orchard grass	<i>Dactylis glomerata</i>	Poaceae
Oregon ash	<i>Fraxinus latifolia</i>	Oleaceae
Oregon grape	<i>Berberis aquifolium</i>	Ericaceae
Oregon white oak	<i>Quercus garryana</i>	Fagaceae
ox eye daisy	<i>Leucanthemum vulgare</i>	Asteraceae
pacific madrone	<i>Arbutus menziesii</i>	Ericaceae
Pacific willow	<i>Salix lasiandra</i>	Salicaceae
Pacific yew	<i>Taxus brevifolia</i>	Taxaceae
pathfinder	<i>Adenocaulon bicolor</i>	Asteraceae
pearly everlasting	<i>Anaphalis margaritacea</i>	Asteraceae
perennial rye grass	<i>Lolium perenne</i>	Poaceae
pineapple weed	<i>Matricaria discoidea</i>	Asteraceae

poison oak	<i>Toxicodendron diversilobium</i>	Anacardiaceae
poverty brome	<i>Bromus sterilis</i>	Poaceae
purple loosestrife	<i>Lythrum salicaria</i>	Lythraceae
purple peavine	<i>Lathyrus nevadensis</i>	Fabaceae
purple-leaved willowherb	<i>Epilobium ciliatum</i>	Onagraceae
red alder	<i>Alnus rubra</i>	Betulaceae
red clover	<i>Trifolium pratense</i>	Fabaceae
red osier dogwood	<i>Cornus stolonifera</i>	Cornaceae
red-flowering currant	<i>Ribes sanguineum</i>	Grossulariaceae
salal	<i>Gaultheria shallon</i>	Ericaceae
scot's broom	<i>Cytisus scoparius</i>	Fabaceae
sheep sorrel	<i>Rumex acetosella</i>	Polygonaceae
shortscale sedge	<i>Carex leptopoda</i>	Cyperaceae
Siberian miner's lettuce	<i>Claytonia sibirica</i>	Portulacaceae
silver hairgrass	<i>Aira caryophyllea</i>	Poaceae
sitka willow	<i>Salix sitchensis</i>	Salicaceae
skunkbush	<i>Naverretia squarrosa</i>	Polemoniaceae

slough sedge	<i>Carex obnupta</i>	Cyperaceae
small flowered crane's bill	<i>Geranium molle</i>	Geraniaceae
smallflower nemophila	<i>Nemophila parviflora</i>	Hydrophyllaceae
smooth hawksbeard	<i>Crepis capillaris</i>	Asteraceae
snowberry	<i>Symphoricarpus albus</i>	Caprifoliaceae
spiraea	<i>Spiraea douglasii</i>	Rosaceae
spotted knapweed	<i>Centaurea biebersteinii</i>	Asteraceae
spotted ladythumb	<i>Polygonum persicaria</i>	Polygonaceae
star flowered soloman's seal	<i>Smilacina stellata</i>	Liliaceae
starflower	<i>Trientalis latifolia</i>	Primulaceae
stinging nettle	<i>Urtica dioica</i>	Urticaceae
suckling clover	<i>Trifolium dubium</i>	Fabaceae
sweet cherry	<i>Prunus avium</i>	Rosaceae
sweet mountain cicely	<i>Osmorhiza chilensis</i>	Apiaceae
sword fern	<i>Polystichum munitum</i>	Polypodiaceae
tall oatgrass	<i>Arrhenatherum elatius</i>	Poaceae
tansy ragwort	<i>Senecio jacobeanus</i>	Asteraceae

thimbleberry	<i>Rubus parviflora</i>	Rosaceae
toad rush	<i>Juncus bufonius</i>	Juncaceae
trailing blackberry	<i>Rubus ursinus</i>	Rosaceae
trillium	<i>Trillium ovatum</i>	Liliaceae
tule	<i>Scirpus acutus</i>	Cyperaceae
velvet grass	<i>Holcus lanatus</i>	Poaceae
violet	<i>Viola sp.</i>	Violaceae
water foxtail	<i>Alopecurus geniculatus</i>	Poaceae
western red cedar	<i>Thuja plicata</i>	Pinaceae
white clover	<i>Trifolium repens</i>	Fabaceae
white flowered hawkweed	<i>Hieracium albiflorum</i>	Asteraceae
white sweet clover	<i>Melilotus alba</i>	Fabaceae
wild mint	<i>Mentha arvensis</i>	Labiatae
yarrow	<i>Achillea millefolium</i>	Asteraceae
yellow flag iris	<i>Iris pseudacorus</i>	Iridaceae

Source: Turnstone 2006a

Table 3. State or Federally listed plant species that may be present on Camp Murray

Common Name	Scientific Name	State Status	Federal Status	Habitat	Habitat Present?	Timing	Surveyed?
Bog clubmoss	<i>Lycopodiella inundata</i>	Sensitive		Wet, open, usually peaty ground, typically flooded in winter.	No	May-Aug	No
Branching montia	<i>Montia diffusa</i>	Sensitive		Moist forests in the lower and montane zones. Associate species include Doug fir, oceanspray, and miner's lettuce.	Yes	Apr-July	Yes, 5/26/05
Bristly sedge	<i>Carex comosa</i>	Sensitive		Marshes, lakeshores, and wet meadows.	No	May-Aug	No
California sword fern	<i>Polystichum californicum</i>	Sensitive		Extremely verastile species, occurring at elevations 244-305'.	Yes	year-round	Yes, 5/26/05
Chain-fern	<i>Woodwardia fimbriata</i>	Sensitive		Moist streambanks and moist bluffs near salt water.	No	year-round	No
Clustered lady's slipper	<i>Cypripedium fasciculatum</i>	Sensitive		Mid-late seral Douglas fir or Ponderosa forest with a closed herbaceous layer and variable shrub layer, mostly northerly aspect. Elevations 1200-5000'.	No	early May-mid June	No

Colombia brome	<i>Bromus vulgaris</i> var. <i>eximius</i>	Review		Open or forested sites from sea level to lower subalpine mountain habitat. Elevation in WA: 1815-6140'.	No	June-Aug	No
Common blue cup	<i>Githopsis speculariodes</i>	Sensitive		Open places at lower elevations. Open habitats within an otherwise forested landscape, or transition habitats.	Yes	mid April-mid June	Yes, 5/26/05
Curved woodrush	<i>Luzula arcuata</i>	Sensitive		Rocky gravelly soil above timberline.	No	May-Aug	No
Floating water pennywort	<i>Hydrocotyle ranunculoides</i>	Sensitive		Marshes, ponds, lake margins.	Yes	summer	Yes, 7/29/05
Golden paintbrush	<i>Castilleja levisecta</i>	Endangered		Open grasslands in the Puget Trough, associated with Idahoe fescue.	No	Apr-July	No
Howellia	<i>Howellia aquatilis</i>	Threatened		Low elevation minerotrophic wetlands. Small, vernal ponds.	No	May	No
Leafy pondweed	<i>Potamogeton foliosus</i> ssp. <i>fibrillosus</i>	Review		Marshes, ponds, lake margins.	Yes	May-Aug	Yes, 5/26/05
Moss	<i>Brotherella roelli</i>	Threatened		Rotten logs, stumps, usually in floodplains at the base of red alder.	Yes	year-round	Yes, 3/30/05
Moss	<i>Encalypta brevicolla</i> var	Endangered		Exposed rocky outcrops at	Yes	year-round	Yes,

	<i>cruminana</i>			middle elevations.			3/30/05
Mountain buttercup	<i>Ranunculus populago</i>	Sensitive		Wet meadows, bogs, and lakes. 1300-2000' elevation.	No	Apr-Aug	No
Mt. Rainier lousewort	<i>Pedicularis rainerensis</i>	Sensitive		Moist alpine meadows, open coniferous forests, rocky slopes.	No	July-Aug	No
Northern microseris	<i>Microseris borealis</i>	Sensitive		Subalpine-alpine meadows.	No	July-Aug	No
Obscure Indian paintbrush	<i>Castilleja cryptantha</i>	Sensitive		Grassy, sub-alpine meadows, endemic to Mt Rainier National Park.	No	July-Aug	No
Pygmy saxifrage	<i>Saxifraga rivularis</i>	Sensitive		Damp cliffs, rock talus, near snowbanks.	No	July-Aug	No
Rush aster	<i>Aster borealis</i>	Threatened		Marshes, bogs, fens, and lakesides from lowlands to subalpine elevations.	Yes	July-Aug	Yes, 8/2/05
Small-flowered trillium	<i>Trillium parviflorum</i>	Sensitive		Moist areas dominated by hardwoods like Oregon Ash. Substrate generally a moist alluvial soil often covered by humus.	Yes	late Mar-mid May	Yes, 3/30/05
Tall agoseris	<i>Agoseris elata</i>	Sensitive		Meadows, open woods, and exposed rocky ridges. Elevation 2900-5000.	No	June-Aug	No

Tall bugbane	<i>Cimicfuga elata</i>	Sensitive		In or along the margins of mature, mesic, mixed coniferous forest.	Yes	late May-early Aug	Yes, 5/19/05
Thompson's chaenactis	<i>Chaenactis thompsonii</i>	Sensitive		Dry rocky slopes at elevations of 4900-8000' in serpentine soils.	No	June-Aug	No
Torrey's peavine	<i>Lathyrus torreyi</i>	Threatened		Somewhat open areas within douglas fir dominated forest.	Yes	May-July	Yes, 7/28/05
Triangular-leaved moonwort	<i>Botrychium ascendens</i>	Sensitive		Mesic meadows and sandy sites.	No	June-July	No
White-top aster	<i>Aster curtus</i>	Sensitive		Grassland habitats in the Willamette Valley and the Puget Trough. Generally dominated by Idaho fescue. Douglas fir and Oregon white oak generally present.	Yes	July-Aug	Yes, 8/2/05

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