Okanogan Highlands Section

This is a mountainous area in which glacial lakes, rivers, and streams are prevalent. Rivers and streams are rapid–flowing, particularly during spring runoff. The Pend Oreille River, Pend Oreille Lake, and Priest Lake are major waterbodies. Creeks are prevalent, and many flow through glacial outwash and debris material within narrow valleys, and glacial lakes and wet meadows are also common. Rock strata are characterized by extreme metamorphism and deformation, and deposits of glacial till, outwash, and debris cover much of the landscape.

The climate is maritime–influenced. Precipitation occurs mostly as snow; the area receives 76 to 203 cm (30–80 in) of precipitation per year. Rain on snow is common at lower elevations. June and July are wet months, and the months of August through November are dry. Annual average temperature ranges from –1º–14ºC (30º–58ºF), with a mean temperature of 7ºC (44ºF). Warmest months are late July through August. The growing season varies with elevation, lasting 45 days at the highest elevations and up to 140 days in lower valleys.

Communities are mostly small and rural, but populations and development in some municipalities have been greatly increasing during recent years. Sandpoint, Bonners Ferry, and Post Falls are the largest population centers. Summer residences are common at lakes and large river systems. Forestry, livestock grazing, mining, and localized agriculture are principal land uses. Participation in outdoor recreation is rapidly increasing.

Table 1. Okanogan Highlands land use and land ownership.

Land use	Area (ha)	Area (ac)	Percent
Dryland Agriculture	185,013	457,176	28
Timberland	394,573	975,007	59
Rangeland	39,325	97,174	6
Urban	6847	16,920	1
Water	46,506	114,919	7
Total	672,265	1,661,195	100

Land ownership	Area (ha)	Area (ac)	Percent
USDI Bureau of Land Management	7250	17,915	1
USDA Forest Service	205,736	508,383	31
Open water	50,787	125,497	8
Private	299,410	739,854	45
State of Idaho	107,994	266,857	16
USDI Fish and Wildlife Service	1087	2685	<1
Total	672,263	1,661,192	100

Species of Greatest Conservation Need in the Okanogan Highlands

Fishes

White Sturgeon (Kootenai River system) *Acipenser transmontanus*[a]
Lake Chub *Couesius plumbeus*[a]
Westslope Cutthroat Trout *Oncorhynchus clarkii lewisi*[a]
Inland Redband Trout *Oncorhynchus mykiss gairdneri*
Kokanee *Oncorhynchus nerka*[a]
Pygmy Whitefish *Prosopium coulterii*[a]
Bull Trout *Salvelinus confluentus*[a]
Burbot *Lota lota*[a]

Amphibians

Northern Leopard Frog *Rana pipiens*
Wood Frog *Rana sylvatica*[a]
Coeur d'Alene Salamander *Plethodon idahoensis*

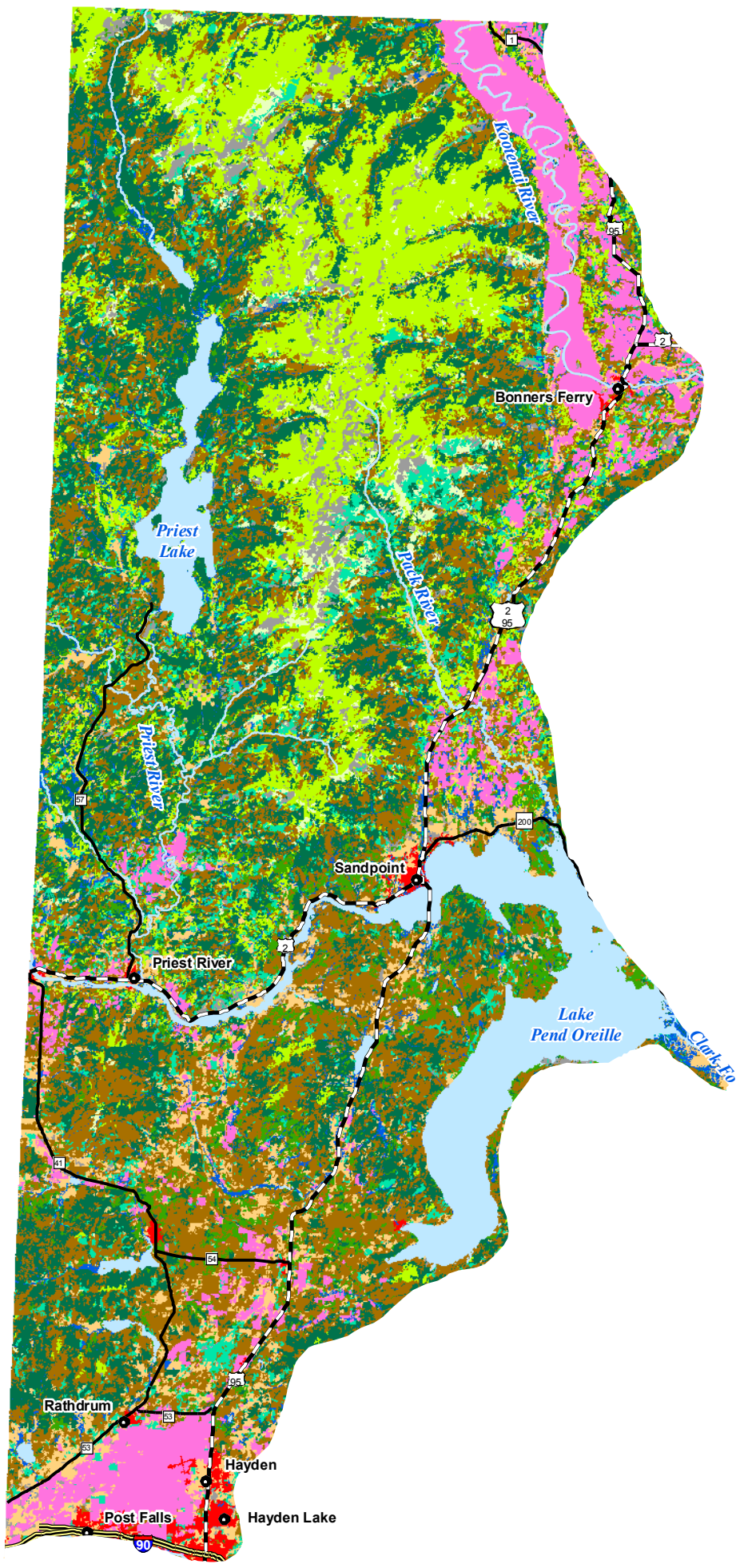
Reptiles

Northern Alligator Lizard *Elgaria coerulea*

Birds

Northern Pintail *Anas acuta*[a]
Lesser Scaup *Aythya affinis*
Harlequin Duck *Histrionicus histrionicus*[a]
Hooded Merganser *Lophodytes cucullatus*[a]
Common Loon *Gavia immer*[a]
Red–necked Grebe *Podiceps grisegena*[a]
Western Grebe *Aechmophorus occidentalis*[a]
Bald Eagle *Haliaeetus leucocephalus*
Merlin *Falco columbarius*
Peregrine Falcon *Falco peregrinus*
Upland Sandpiper *Bartramia longicauda*
Long–billed Curlew *Numenius americanus*
Wilson's Phalarope *Phalaropus tricolor*
Forster's Tern *Sterna forsteri*
Black Tern *Chlidonias niger*[a]
Flammulated Owl *Otus flammeolus*
Short–eared Owl *Asio flammeus*
Boreal Owl *Aegolius funereus*
Black Swift *Cypseloides niger*
Lewis's Woodpecker *Melanerpes lewis*
White–headed Woodpecker *Picoides albolarvatus*

Okanogan Highlands Ecological Section Habitats



Habitats

- Arableland
- Dry Conifer Forest
- Dry Grassland
- Dune, Canyon, and Rockland
- Mesic Deciduous Shrubland
- Northern Mesic Conifer Forest
- Open Water
- Riparian Woodland
- Southern Xeric Shrubland and Steppe
- Subalpine Forest
- Subalpine Grassland
- Upland Deciduous Forest
- Urban

Town Population

- 0 - 20,000
- 20,001 - 200,000

Highways

- Interstate
- U.S. Highway
- State Route

IDAHO

Area Enlarged

0 5 10 20 Kilometers

0 5 10 20 Miles

16 September 2005
Idaho Conservation Data Center, Idaho Department of Fish and Game.

Figure 11. Okanogan Highlands habitats.

American Three–toed Woodpecker *Picoides dorsalis*
Pygmy Nuthatch *Sitta pygmaea*
White–winged Crossbill *Loxia leucoptera*[a]

Mammals
Pygmy Shrew *Sorex hoyi*[a]
Merriam's Shrew *Sorex merriami*[a]
Fringed Myotis *Myotis thysanodes*
Townsend's Big–eared Bat *Corynorhinus townsendii*
Red–tailed Chipmunk *Neotamias ruficaudus*[a]
Northern Bog Lemming *Synaptomys borealis*[a]
Gray Wolf *Canis lupus*
Grizzly or Brown Bear *Ursus arctos*[a]
Fisher *Martes pennanti*[a]
Wolverine *Gulo gulo*
Canada Lynx *Lynx canadensis*
Caribou *Rangifer tarandus*[a]
Mountain Goat *Oreamnos americanus*

Gastropods
Sheathed Slug *Zacoleus idahoensis*

Insects
A Stonefly *Pictetiella expansa*[a]

[a] Species for which the Okanogan Highlands represents a significant portion of their Idaho range.

Habitats in the Okanogan Highlands

Table 2. Okanogan Highlands habitats.

Habitat	Area (km²)	Area (ac)	Percent
Urban	61	14,994	1
Arableland	483	119,467	7
Upland Deciduous Forest	304	75,197	5
Dry Conifer Forest	1648	407,175	25
Northern Mesic Conifer Forest	1410	348,217	21
Subalpine Forest	1009	249,450	15
Mesic Deciduous Shrubland	358	88,425	5
Dry Grassland	416	102,788	6
Subalpine Grassland	117	28,815	2
Open Water	514	127,023	8

Riparian Woodland	204	50,392	3
Dune, Canyon, and Rockland	199	49,259	3
Total	6723	1,661,202	100

Priority Habitats and Associated Vertebrate Species in the Okanogan Highlands

Arableland

Fishes

White Sturgeon (Kootenai River system) *Acipenser transmontanus*
Westslope Cutthroat Trout *Oncorhynchus clarkii lewisi*
Burbot *Lota lota*

Birds

Northern Pintail *Anas acuta*
Merlin *Falco columbarius*
Long–billed Curlew *Numenius americanus*

Dry Conifer Forest

Fishes

White Sturgeon (Kootenai River system) *Acipenser transmontanus*
Lake Chub *Couesius plumbeus*
Kokanee *Oncorhynchus nerka*
Pygmy Whitefish *Prosopium coulterii*
Bull Trout *Salvelinus confluentus*

Amphibians

Northern Leopard Frog *Rana pipiens*
Wood Frog *Rana sylvatica*
Coeur d'Alene Salamander *Plethodon idahoensis*

Birds

Harlequin Duck *Histrionicus histrionicus*
Bald Eagle *Haliaeetus leucocephalus*
Merlin *Falco columbarius*
Peregrine Falcon *Falco peregrinus*
Boreal Owl *Aegolius funereus*
White–headed Woodpecker *Picoides albolarvatus*
American Three–toed Woodpecker *Picoides dorsalis*
Pygmy Nuthatch *Sitta pygmaea*
Grasshopper Sparrow *Ammodramus savannarum*

Mammals

Fringed Myotis *Myotis thysanodes*
Townsend's Big–eared Bat *Corynorhinus townsendii*
Red–tailed Chipmunk *Neotamias ruficaudus*
Grizzly or Brown Bear *Ursus arctos*
Fisher *Martes pennanti*
Wolverine *Gulo gulo*
Canada Lynx *Lynx canadensis*
Caribou *Rangifer tarandus*
Mountain Goat *Oreamnos americanus*

Northern Mesic Conifer Forest

Fishes

White Sturgeon (Kootenai River system) *Acipenser transmontanus*
Lake Chub *Couesius plumbeus*
Kokanee *Oncorhynchus nerka*
Pygmy Whitefish *Prosopium coulterii*
Bull Trout *Salvelinus confluentus*
Burbot *Lota lota*

Amphibians

Northern Leopard Frog *Rana pipiens*
Wood Frog *Rana sylvatica*
Coeur d'Alene Salamander *Plethodon idahoensis*

Birds

Harlequin Duck *Histrionicus histrionicus*
Bald Eagle *Haliaeetus leucocephalus*
Peregrine Falcon *Falco peregrinus*
Boreal Owl *Aegolius funereus*
Black Swift *Cypseloides niger*
Pygmy Nuthatch *Sitta pygmaea*
White–winged Crossbill *Loxia leucoptera*

Mammals

Pygmy Shrew *Sorex hoyi*
Fringed Myotis *Myotis thysanodes*
Townsend's Big–eared Bat *Corynorhinus townsendii*
Red–tailed Chipmunk *Neotamias ruficaudus*
Northern Bog Lemming *Synaptomys borealis*
Grizzly or Brown Bear *Ursus arctos*
Fisher *Martes pennanti*
Wolverine *Gulo gulo*
Canada Lynx *Lynx canadensis*
Caribou *Rangifer tarandus*

Subalpine Forest

Fishes

Lake Chub *Couesius plumbeus*
Burbot *Lota lota*

Amphibians

Wood Frog *Rana sylvatica*

Birds

Bald Eagle *Haliaeetus leucocephalus*
Boreal Owl *Aegolius funereus*
White–headed Woodpecker *Picoides albolarvatus*
American Three–toed Woodpecker *Picoides dorsalis*
White–winged Crossbill *Loxia leucoptera*

Mammals

Pygmy Shrew *Sorex hoyi*
Northern Bog Lemming *Synaptomys borealis*
Grizzly or Brown Bear *Ursus arctos*
Fisher *Martes pennanti*
Wolverine *Gulo gulo*
Canada Lynx *Lynx canadensis*
Caribou *Rangifer tarandus*
Mountain Goat *Oreamnos americanus*

Open Water

Fishes

Kokanee *Oncorhynchus nerka*
Pygmy Whitefish *Prosopium coulterii*
Bull Trout *Salvelinus confluentus*

Birds

Northern Pintail *Anas acuta*
Hooded Merganser *Lophodytes cucullatus*
Common Loon *Gavia immer*
Red–necked Grebe *Podiceps grisegena*
Western Grebe *Aechmophorus occidentalis*
Wilson’s Phalarope *Phalaropus tricolor*
California Gull *Larus californicus*
Forster’s Tern *Sterna forsteri*

Mammals

Townsend's Big–eared Bat *Corynorhinus townsendii*