

U.S. Fish & Wildlife Service

Little Pond Oreille

*National Wildlife
Refuge*



*Little Pend Oreille
National Wildlife Refuge
strives to be a secure
home for fish and wildlife,*

*an archive of historic
landscapes and a place
to enjoy our wildlife
heritage.*



McDowell Lake

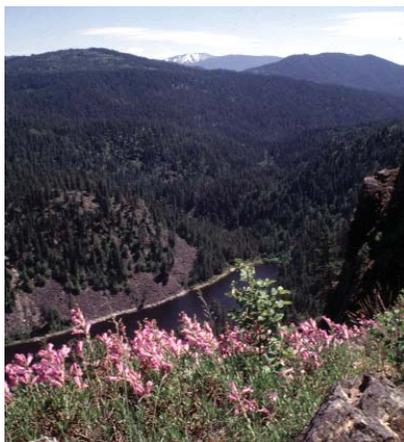
About the Refuge



Washington

Named for the river that flows through its northern expanse, Little Pend Oreille National Wildlife Refuge includes 40,200 acres on the west slope of the Selkirk Mountain Range in northeastern Washington. It is the only mountainous, mixed-conifer forest refuge in the National Wildlife Refuge System, outside of Alaska.

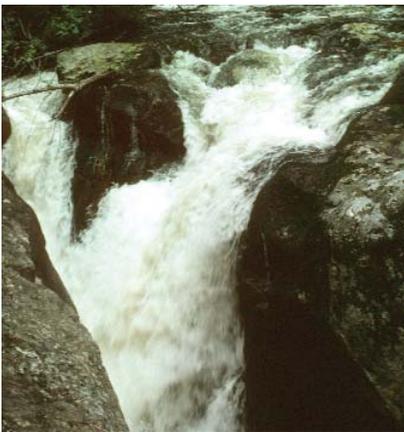
Elevations



Penstemons above Bayley Lake

Continental ice sheets from the north excavated and molded valleys and scoured lakes more than 10,000 years ago. Elevations range from 1,800 feet on the refuge's western lowlands to 5,610 feet on its eastern boundary at Olson Peak. Within this elevation range are six forest zones including ponderosa pine, Douglas fir, grand fir, western red cedar, western hemlock and subalpine fir.

Habitats



Trilbey Falls on Little Pend Oreille River

In addition to diverse rolling pine and fir forests, refuge habitats include scattered lakes, shallow marshes, ponds and springs, plus more than 80 miles of streams. Water rushes from narrow steep canyons with fast rocky flows, or meanders slowly through broad valleys.

NWR System



This blue goose, designed by J.N. "Ding" Darling, has become the symbol of the National Wildlife Refuge System.

Little Pend Oreille was established in May 1939 by Executive Order of President Franklin D. Roosevelt as a refuge and breeding ground for migratory birds and other wildlife. It is one of more than 535 refuges in America's National Wildlife Refuge System, the world's largest and most diverse network of lands and waters devoted specifically to wildlife.

The mission of the National Wildlife Refuge System is to administer a national network of lands and waters for the conservation, management



© Scott Price

Warbling vireos nest in refuge forests but winter in Mexico and Central America.

and, where appropriate, restoration of the fish, wildlife and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.

Pend Oreille, pronounced "pondoray," literally translates "hanging ears." This name was given to area Indians by French Canadians.

Long Lake



Habitats and Wildlife



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Above: Quaking aspen

The range of elevations, climate and soil types on the refuge combine to create diverse plant communities. Sandy loam soils, derived from deep glacial drift, underlay most of the area. Eighteen to 25 inches of moisture in the form of rain or snow falls in the valleys, and up to 40 inches at higher altitudes.

Diverse habitats and relatively unfragmented forests attract hundreds of bird, mammal, amphibian and reptile species.

In combination with adjacent public lands, the refuge also provides habitat for species that require large forest tracts.

Dry Forests



Pines

Moist Forests

Low elevation, dry forests dominated by ponderosa pine and Douglas fir trees cover about 26 percent of the refuge. These forests thrive under hotter, drier conditions and frequent fire. Wildlife dependent on dry forests includes wintering white-tailed deer, white-headed woodpecker, pygmy nuthatch, flammulated owl, yellow-pine chipmunk and silver-haired bat.

Moist, mixed-conifer forest types comprise approximately 59% of refuge habitats. Douglas fir, grand fir, western larch and lodgepole pine, with western red cedar and hemlock in the moister areas, may dominate these complex forests. Mixed conifer forests provide homes for many wildlife species including black bear, pileated woodpecker, northern goshawk, brown creeper, winter wren, Williamson's sapsucker, Vaux's swift and pygmy shrew.



© Scott Price

White-tailed deer

Cold Forests



© Scott Price

Elk

The refuge's highest ridges support cold forests dominated by subalpine fir, Engelmann spruce, western larch and lodgepole pine. Wildlife species dependent on these higher elevation forests include moose, elk and spruce grouse. Historically, these habitats were also important for Canada lynx and marten.

Deciduous Trees

Pockets of aspen, alder and willow are scattered throughout refuge forests. These deciduous habitats are critically important to wildlife including ruffed grouse, Wilson's warbler, orange-crowned warbler, black bear, red-naped sapsucker, northern pygmy owl and western screech owl.

Field Openings



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Homestead meadow

Old agricultural fields, remnants from the homestead era, provide early spring forage for wintering white-tailed deer herds who nibble tender green shoots. During spring and summer, bluebirds, kestrels, meadowlarks and flycatchers relish the insect food these fields provide. Surrounding forests are reclaiming many of these open areas.

Water Habitats



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American dippers walk on the bottom of streams.

The refuge's streams, lakes, cattail marshes, beaver ponds and seeps are used by about 80 percent of wildlife living here. Lakes provide migratory stopover points for waterfowl and shorebirds, breeding areas for cavity-nesting ducks, and prey for winged anglers like bald eagle, osprey and great blue heron. Streamside habitats support willow flycatcher, McGillivray's warbler, American redstart, Columbia spotted frog, mink and beaver.

Spring



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Habitat and wildlife come alive after the cold of winter. Black bear, chipmunks, moose, migratory songbirds including bluebirds, thrushes and warblers, beaver, snipe, coyote pups, Columbian ground squirrels and tree frogs are some of the species that can be seen.

Top: Western bluebird pair

Right: Bull moose

Below: Common snipe



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The Columbian ground squirrel spends about 70 percent of the year under ground.



© Scott Price

Summer

Long warm summer days are great to spot Wild turkey, osprey, swallows, hummingbirds, painted turtles, deer fawns, garter snakes, common nighthawks, pileated woodpeckers or red-tailed hawks doing lazy circles overhead.

Right: Painted turtle

Below: White-tailed deer fawn

Bottom: Common goldeneyes



© Scott Price



© Scott Price



© Scott Price

Fall



© Scott Price

Above: Red crossbill

Right: Northern flicker



© Scott Price



© Milo Bureham

Right: Northern goshawk

Below: Northern shoveler



© Scott Price

Changing colors and a briskness to the air herald migration time, but many species like Ruffed grouse, golden-crowned kinglets, red crossbills, many waterfowl species, Northern flickers, common ravens and red squirrels may be seen scurrying as they get ready for winter.

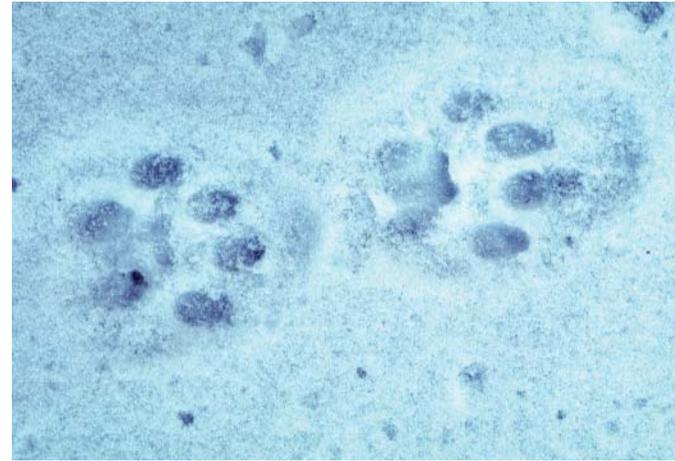
Winter

The snow arrives, refuge visitor roads are closed and wildlife like the White-tailed deer, bald and golden eagles, snowshoe hare, northern shrike, pygmy owls, black-capped chickadees and long-tailed weasels busy themselves with survival. Cougar and bobcat are on the hunt and their tracks may be seen in the snow.

The refuge's white-tailed deer population triples during winter months.

Below: Bobcat tracks

Bottom: Black-capped chickadee



© Scott Price



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A Brief History

Since the ice receded more than 10,000 years ago, this landscape has been traversed by Native Americans, fur trappers and traders, miners, loggers and homesteaders. The spirits of these people animate this land, linking their history to many place names.

Native Americans

Scarce information has been recorded about Native American use of the Little Pend Oreille region. A few trails, collectively called Calispel Trail, bisected portions of the refuge and were used by interior Salish-speaking Indians and others traveling between two culturally important areas - the salmon fishery at Kettle Falls on the Columbia River, and the camas gathering grounds in the Pend Oreille Valley.

Settlers

David Thompson, from the Canada-based North West Company, was the first European to record exploration of the Colville valley in the early 1800s. The Hudson Bay Company established a main trading depot in the Colville area in 1825. Missionaries, miners and merchants followed and Colville became an important economic center.

Logging on Starvation Flat



Homesteading

*Above:
Homestead on
Bear Creek*

The land reveals evidence of homesteading, logging, railroading and mining dating from the 1890s. Lilac bushes mark the spot where the Bear Creek School stood, one of two schools once located on refuge land. A short walk from the old school site lies the Biarly Post Office and home of the Christianson family. The Christiansons cleared enough land to raise a cash crop of potatoes or hay.

Between 1891 and 1925, more than 180 individual homestead claims were patented on the refuge. About one-third of these claims were sold to timber companies, with the rest going to homesteaders who worked hard to make a living in this harsh climate. Cleared fields, orchard trees, cabin remnants and place names are the legacies of the homesteading era.

*Photos courtesy
of the Stevens
County
Historical
Society*

Logging

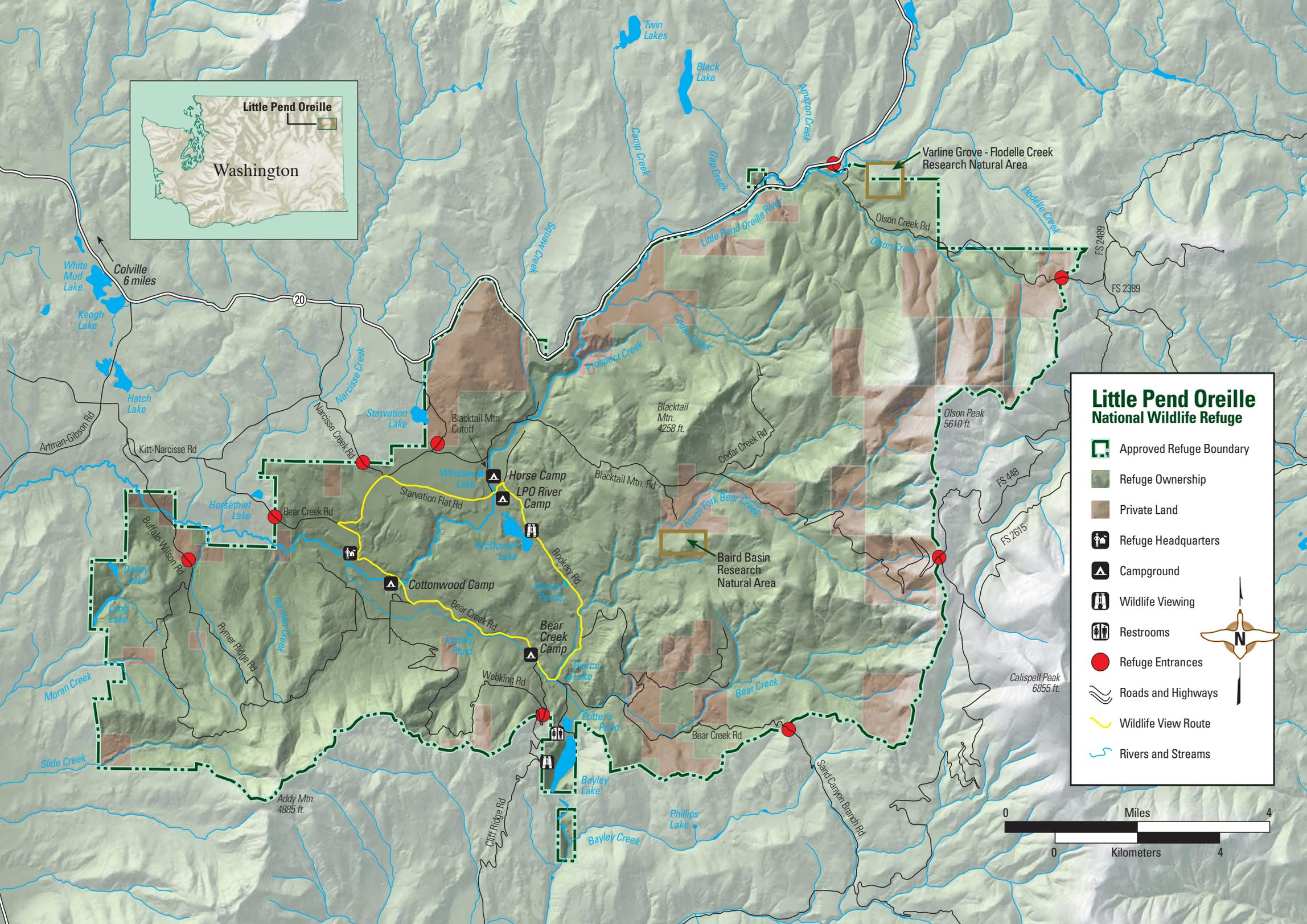
Winslow Logging Company began building a logging railroad into the Little Pend Oreille River Valley in 1909. About 16 miles of the old grade, as well as scattered ties and decaying trestles, can be traced through the western flank of the refuge. Several refuge campgrounds were originally logging camps for Winslow's crews, including Camp 1 (renamed River Camp), Camp 2 (renamed Cottonwood Camp) and Horse Camp. Horses were used extensively to log huge Ponderosa pine, fir and cedar trees.

Moving logs on Little Pend



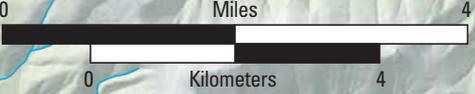
Depression and Resettlement

When the Great Depression hit in the 1930s many people gave up and left the area. Others sold or traded their land for more productive land. Under President Franklin D. Roosevelt's New Deal, the Federal government began programs to reduce the impact of the depression. One program involved the acquisition and retirement of marginal farmland through an agency called the Resettlement Administration. Approximately 27,000 acres of refuge lands originated from this resettlement effort.



Little Pend Oreille National Wildlife Refuge

- Approved Refuge Boundary
- Refuge Ownership
- Private Land
- Refuge Headquarters
- Campground
- Wildlife Viewing
- Restrooms
- Refuge Entrances
- Roads and Highways
- Wildlife View Route
- Rivers and Streams



Managing and Restoring

Mixed Forests

Fire, wind, ice, landslides, insects, disease and human activities are some of the forces influencing forest dynamics. Over time, these forces affect both forest development and succession. Because forests take many years to reach maturity, it is important to have a mixture of ages and stand structures at any given time. Some wildlife species can only survive in certain forest types, such as mature and old growth habitats.

Management Challenges

Past human activity, including fire suppression, land clearing and planting for agricultural uses, and removal of mature and old forests, has compromised refuge forests. Excessive fuels from downed trees, branches, needles and dead grasses, conversion of stands to shade-tolerant, fire-sensitive tree species, and more trees per acre than normal have made refuge forests vulnerable to stand-replacing fires.

Forest Restoration

Restoring forest habitats and creating more stands of large and old trees, currently rare on the forest landscape, requires active forest management. Thinning and prescribed fire are the main tools used to manage refuge forests. These tools mimic natural processes under which these forests evolved.

Prescribed burn in ponderosa pine forest



© Scott Price

Above: Red-necked grebe

Right: Virginia rail

Thinning reduces tree densities and competition, allowing the remaining trees to grow more rapidly. Prescribed fire, when used properly, can reduce dangerous fuels, recycle nutrients and open up space for new plant growth, providing better cover and food for wildlife.



© Scott Price

Riparian

Restoring riparian or streamside habitats degraded by past land uses is another management priority. Reducing erosion, stabilizing streambanks, providing buffers for some activities and planting shrubs and trees are some techniques used to repair these damaged habitats.

Exotic Plants

Exotic plants or weeds are serious threats to native wildlife habitats. Controlling their spread is necessary to maintain refuge habitat integrity. Tools used to reduce the extent and spread of weeds include mechanical, chemical and biological treatments.

Mechanical treatments are hand pulling, mowing or removing weed flowers and seeds. Chemicals, carefully applied by licensed applicators, are effective in managing some weed species. Biological treatments include use of insects that inhibit growth of undesirable plants.

Wildlife Viewing Tips



© Scott Price

Northern saw-whet owl

Viewing wildlife in a forest environment requires patience and silence. The forests' many plant layers, including grasses, shrubs and small and large trees, offer many places for wildlife to dwell.

For closer views, use binoculars or spotting scopes. Move slowly and casually, not directly toward wildlife.



© Scott Price

Spotted sandpiper nest

Leave pets at home to increase your chances of seeing wildlife.

Your vehicle can be an excellent blind for viewing or photographing animals.

Early morning or evening hours are best for observing wildlife. During the heat of summer days, wildlife is not active and rarely visible.

Beware!



© Scott Price

Black bear

The refuge is home to several species of large mammals, including moose, elk, deer, cougar and black bear. These animals usually avoid people but when surprised, their size, strength and speed make them a potential danger. Bears and cougars are most active at dawn and dusk. Be sure to keep small children close to you when hiking.

Family birdwatching



© Scott Price

Wildlife Viewing Route

Viewing route is closed to motorized vehicles January 1 through April 14. Portions of the route may be closed at other times due to road conditions or wildlife protection. Check at headquarters for road status.

Evidence of wildlife is all around you. Using all your senses can increase your enjoyment.

Look For



Above: Beavers cut this tree

Above Right: Woodpecker excavations



- Shredded fir cone from a squirrel's meal
- Peeled bark from antler rubs
- Oval holes in tree trunks made by pileated woodpeckers

- Heart-shaped tracks of deer
- Gnawed tree trunk from a beaver building a dam
- Cup-shaped nest of a yellow warbler
- Bear scat

Listen For

Right: Mountain bluebird

Below: Bayley Lake



© Scott Price



- Song of the thrush
- Turkey gobble
- Tree frog chorus
- Coyote howl
- Deer snort
- Rustle of aspen leaves
- Cracking and heaving of lake ice
- Beaver tail slap
- Wails and chattering trills of red-necked grebe
- Soft churs of mountain bluebird



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Refuge Recreation

Entrances

Refuge entrances are shown on the map. Three of the 9 entrances are open year-round to vehicle access: Bear Creek, Narcisse Creek and Buffalo-Wilson. All other entrances open on April 14 or when snow melt allows safe vehicle travel conditions.

Roads



Refuge roads are gravel or dirt. Some require high clearance and/or four-wheel drive vehicles. Most roads are closed to vehicle travel between January 1 and April 14. Some roads are closed seasonally for wildlife protection, habitat rehabilitation, road maintenance or hazardous conditions.

Off-road Vehicles



Off-road vehicles, including all-terrain vehicles and dirt bikes, are prohibited. Snowmobile use is only allowed on Olson Creek Road on the northeastern edge of the refuge.

Bicycles



Bicycle riding is permitted on maintained roads and trails.

Horses



Horseback riding is permitted on maintained roads and trails. Cross-country travel is prohibited. Camping with horses is allowed in Bear Creek Camp and Horse Camp. Use of pelletized food or weed-free hay is encouraged.

Hiking



The entire refuge is open to hiking unless posted as closed.



*Wildlife
photographer*

Wildlife Observation and Photography



With almost 200 bird, 58 mammals, 6 amphibian, and 8 reptiles species, there are many opportunities for viewing wildlife. Wildlife lists are available at refuge headquarters.

Disabled Visitors



Please contact the refuge for suggestions. Potter's Pond fishing dock and a nearby restroom are wheelchair-accessible.

Fishing



Fishing is allowed on Potter's Pond, Bayley Lake, McDowell Lake and Little Pend Oreille River and its tributaries in accordance with Federal and State regulations. Lakes open for fishing the last Saturday in April through October. Streams and beaver ponds open from June 1 through October. Special regulations apply to Bayley Lake, McDowell Lake and the Little Pend Oreille



© Scott Price

*Above: Male
bufflehead*

River. Most anglers pursue rainbow, brook, brown and cutthroat trout.

*Below: Angler
at Potter's Pond*



© Scott Price

Refuge Recreation

Hunting



Cliff Ridge

Hunting is allowed in accordance with Federal and State regulations. The refuge is open to State seasons starting on September 1 and closes for all pursuit and hunting of game and discharge of firearms after December 31. The refuge is also open to spring turkey hunting seasons. Dogs may be used for upland bird and migratory bird hunting only. There are No Hunting Zones within one-quarter mile of refuge buildings and campgrounds.

Weapons



Weapons possessed for purposes other than legal hunting activity must be unloaded and dismantled or cased.

Camping



Camping is permitted in campgrounds April 14 through December 31 and in designated dispersed sites from October 1 through December 31. Campgrounds are primitive with pit toilets and no potable water.

Firewood



Firewood cutting is strictly prohibited except for daily camp use or with a special use permit, normally available between July and October, depending on fire danger. Use only downed wood.

Pets



Pets must be under control at all times and are not allowed to roam freely.



Calypso orchid

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Lodging



Lodging is available in Colville, approximately 13 miles northwest of headquarters. Listings are available through the Colville Chamber of Commerce, 509-684-5973.



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Prohibited Activities



Off-road driving, trapping, baiting, permanent tree stands or blinds, spotlighting, shooting from or across roadways, target shooting, swimming, fireworks, collecting natural objects such as plants, animals, minerals, and objects of antiquity are all prohibited on the refuge.

Headquarters



The refuge headquarters is open Monday through Friday from 7:30 a.m. to 4:00 p.m., excluding Federal holidays.

Above: Canada geese with brood

Right: Arrow-leaved balsamroot

Below: Snowshoe tracks



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**Little Pend Oreille
National Wildlife Refuge
1310 Bear Creek Road
Colville, WA. 99114
(509) 684-8384**

www.fws.gov/littlependoreille

**Refuge bird checklist
<http://www.npwrc.usgs.gov>**

**Information:
1 800/344 WILD
<http://www.fws.gov>**

**Visitors with disabilities may
be reasonably accomodated
upon request, and/or receive an
alternative format publication.**

December 2008



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*Pileated woodpecker
excavations*

Cover photo: Pileated woodpecker © Milo Burcham