Where the Wild Lands Are: Oregon

THE IMPORTANCE OF ROADLESS AREAS TO OREGON'S FISH, WILDLIFE, HUNTING & ANGLING

TROUT UNLIMITED

A Report Produced by Trout Unlimited's Public Lands Initiative

Oregon is blessed with a remarkable array of native and wild coldwater fish.

Sunset, Little Blitzen River Wild and Scenic Area. *photo by Sandy Lonsdale*

Bull trout can be found in the more pristine rivers and streams throughout the state; steelhead and salmon return to waters up and down the coast from the Columbia to Rogue river basins, and populations of native redband and Lahontan cutthroat live in arid high desert streams. But in many regions, these native populations have either been lost or are in decline because of habitat degradation caused by road building, logging and urbanization. Oregon's undisturbed habitat protected by roadless areas often provides the last remaining refuges for native fish.

Roads can severely affect trout and salmon habitat. Poorly designed and maintained roads can deliver sediment into rivers and streams, increasing water temperatures and erosion while fragmenting habitat with road crossings. Roads and associated soil disturbing activities have resulted in the elimination of sensitive species such as bull trout from much of their historical habitat, as well as the decline of more disturbance-tolerant species such as redband trout. In the case of salmon and steelhead, degradation of spawning habitat has increased the dependency on hatchery production, and led to the weakening of many native stocks.

The remaining roadless lands carry a remarkable load, supporting the majority of Oregon's healthiest native trout and salmon despite their relatively small acreage. Roadless areas comprise the headwaters of many significant Oregon rivers, providing excellent spawning habitat and a steady flow of clean, cold water that is critical in the warm summer months. And fish are not the only direct beneficiaries—many Oregon communities, including Portland, Salem and Baker City, draw their drinking water from roadless watersheds.

As prime fish habitat continues to decline on more developed lands, the reliance on roadless areas grows. The Forest Service manages 1,965,000 acres of inventoried roadless areas in Oregon. Add in the roughly 2 million acres of congressionally protected wilderness, and 8,258,411 acres of roadless Bureau of Land Management (BLM) land, and roadless areas comprise about 20 percent of Oregon's total land base. Given the crucial role that roadless areas play in supporting native fish, Oregon cannot afford to lose any more roadless land to new development.

Roadless areas on public lands are owned by all Americans and managed in trust by the U.S. Forest Service and the BLM. These lands are threatened by unregulated, and sometimes illegal, off-road-vehicle use, noxious weeds and invasive species, road construction and timber harvest. This report will help to ensure that all who care about Oregon's native trout and salmon are armed with good information so they may positively influence efforts to protect roadless areas and conserve the last, best wild fish habitat.

The future of Oregon's, and the rest of the nation's, roadless public lands have been the source of political controversy and legal wrangling for decades. Trout Unlimited prepared this report because we believe it essential that the voices of anglers and hunters are considered in determining the future of Oregon's roadless public lands. As this report reveals, few interests are more affected by how the Forest Service and BLM manage our roadless areas than sportsmen and women. Our voices need to be heard.

Oregon Facts:

- Oregon contains 62,140,000 total acres
- 3.6 percent, or 2,102,606 total acres, of Oregon is protected in congressionally mandated wilderness
- Oregon possesses 15,658,000 acres of national forest land
- 1,965,000 acres of inventoried roadless areas remain in national forests
- 13 percent of Oregon's national forest land is protected by wilderness designation
- There are 8,258,411 acres of roadless BLM land in Oregon
- 20 percent of Oregon's total land base is comprised of Forest Service and BLM roadless land

Economic and Social Importance of Angling and Hunting in Oregon

Protecting Oregon's fish and wildlife habitat and associated fishing and hunting opportunities are important to Oregon's economy and its culture:

- Resident anglers: 513,000
- Resident hunters: 234,000
- Residents who annually participate in wildlife-watching activities: 1.2 million
- Non-resident anglers: 174,000
- Non-resident hunters: 15,000
- Non-residents who annually participate in wildlife-watching activities: 910,000
- Money annually spent in-state by anglers: $602 million
- Money annually spent in-state by hunters: $365 million
- Money annually spent in-state by participants of wildlife-watching activities: $769 million

coho salmon

As the map shows, coho salmon (*Onchorynchus kisutch*) do not migrate as far inland as other salmon. They tend to rely on smaller tributaries for spawning and rearing. Most of the coastal tributaries used by coho are not in roadless areas, and habitat degradation is the primary limiting factor in coho salmon productivity.[1] Ocean conditions and hatchery production lead to fluctuating salmon returns, but sustainable numbers can only grow as high as the spawning and rearing habitat will allow.

Southern Oregon coho are listed as threatened and Lower Columbia coho are proposed for listing under the federal Endangered Species Act (ESA). Because of a recent court ruling, the listing of Oregon coastal coho was set aside. Still, legal wrangling and pending policy decisions continue to affect these and many other listings.

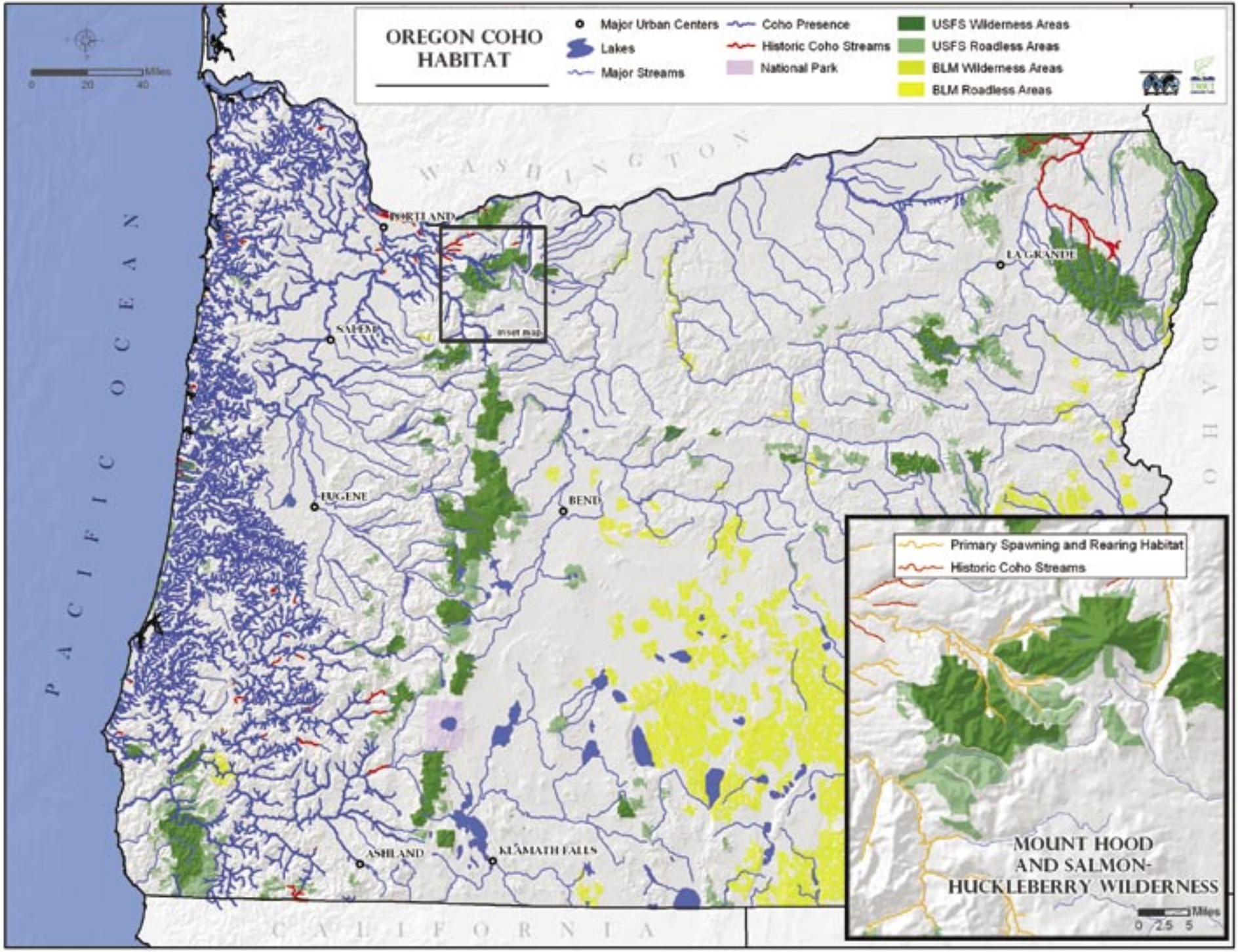
Quality spawning and rearing coho habitat is so limited that efforts have been made in the past to augment late-run (wild) coho productivity by transporting adults into areas where suitable spawning sites are believed to exist.[2] Moreover, the vast majority of Oregon coho are raised in hatcheries that may compromise the long-term genetic fitness of the species. Coho salmon rear for at least one full year before migrating to the ocean, usually in streams with a lot of structure (e.g. woody debris) that they use for protection during powerful winter floods, and shaded banks that keep temperatures cool during the summer. These complex stream characteristics abound in roadless areas, and are often lost when roads are built.

Studies suggest that the late-run Clackamas River coho (see inset map) is the last viable native coho population remaining in the Columbia River Basin.[3] A primary reason this native run has been able to persist in the upper Clackamas Basin is that the region possesses quality habitat associated with roadless areas. As the map shows, coho utilize wilderness tributaries for spawning and rearing, as well as streams that lie just outside roadless areas and benefit from the clean, cold water that flows from roadless headwaters. Despite its quality habitat, the Clackamas remains vulnerable to disturbance because of its small geographic range. Therefore, it is crucial to recognize the contributions of the system's roadless areas and ensure their protection in the future.

[1] Myers, J.M., R.G. Kope, G.J. Bryant, D. Teel, L.J. Lierheimer, T.C. Wainwright, W.S. Grand, F.W. Waknitz, K. Neely, S.T. Lindley, and R.S. Waples. 1998. *Status review of chinook salmon from Washington, Idaho, Oregon, and California.* U.S. Dept. Commer., NOAA Tech. Memo. NMFS-NWFSC-35, 443 p.

[2] *Status review of chinook salmon from Washington, Idaho, Oregon, and California.* U.S. Dept. Commer., NOAA Tech. Memo. NMFS-NWFSC-35, 443 p.

[3] *Status review of chinook salmon from Washington, Idaho, Oregon, and California.* U.S. Dept. Commer., NOAA Tech. Memo. NMFS-NWFSC-35, 443 p.


OREGON COHO HABITAT
Major Urban Centers
Lakes
Major Streams
Coho Presence
Historic Coho Streams
National Park
USFS Wilderness Areas
USFS Roadless Areas
BLM Wilderness Areas
BLM Roadless Areas
Miles
0 20 40
PACIFIC OCEAN
WASHINGTON
IDAHO
CALIFORNIA
PORTLAND
SALEM
EUGENE
BEND
LA GRANDE
ASHLAND
KLAMATH FALLS
Primary Spawning and Rearing Habitat
Historic Coho Streams
MOUNT HOOD AND SALMON-HUCKLEBERRY WILDERNESS
Miles
0 2.5 5

spring chinook

This map focuses on spring chinook (*O. tshawytscha*) in order to emphasize stream-type stocks. Many of the fall chinook stocks west of the Cascades are ocean-type, meaning juveniles migrate to the ocean 1-4 months after hatching.[1] Unlike spring chinook, they spawn in the mainstem of rivers, and are most affected by dams. Spring chinook typical of the Columbia and Snake rivers east of the Cascades depend on the habitat of streams for their well-being. They rear in freshwater for one or two years before their downstream migration.

Lower Columbia, Upper Willamette and Snake River spring chinook are listed as threatened under the ESA. Like coho, spring chinook salmon have been weakened by hatchery production and hybridization. In 2001, hatchery fish made up 75 percent of the Columbia Basin chinook run.[2] The river basins where natural chinook stocks remain (Deschutes, Grande Ronde, Imnaha, John Day) have sustained these wild stocks because of the quality habitat they possess. The Grande Ronde, Imnaha, and John Day basins all benefit from roadless headwaters.

The most evident case of a watershed benefiting from roadless areas is the John Day Basin, (see inset), which has the largest remaining wild chinook runs in northeast Oregon.[3] In 2002, ODFW counted the highest number of wild spawning fish in the John Day Basin since surveys began in 1959.[4] The John Day has maintained a healthy chinook run because it possesses the rare combination of unimpeded migration (it has no mainstem dams) and quality spawning and rearing habitat.

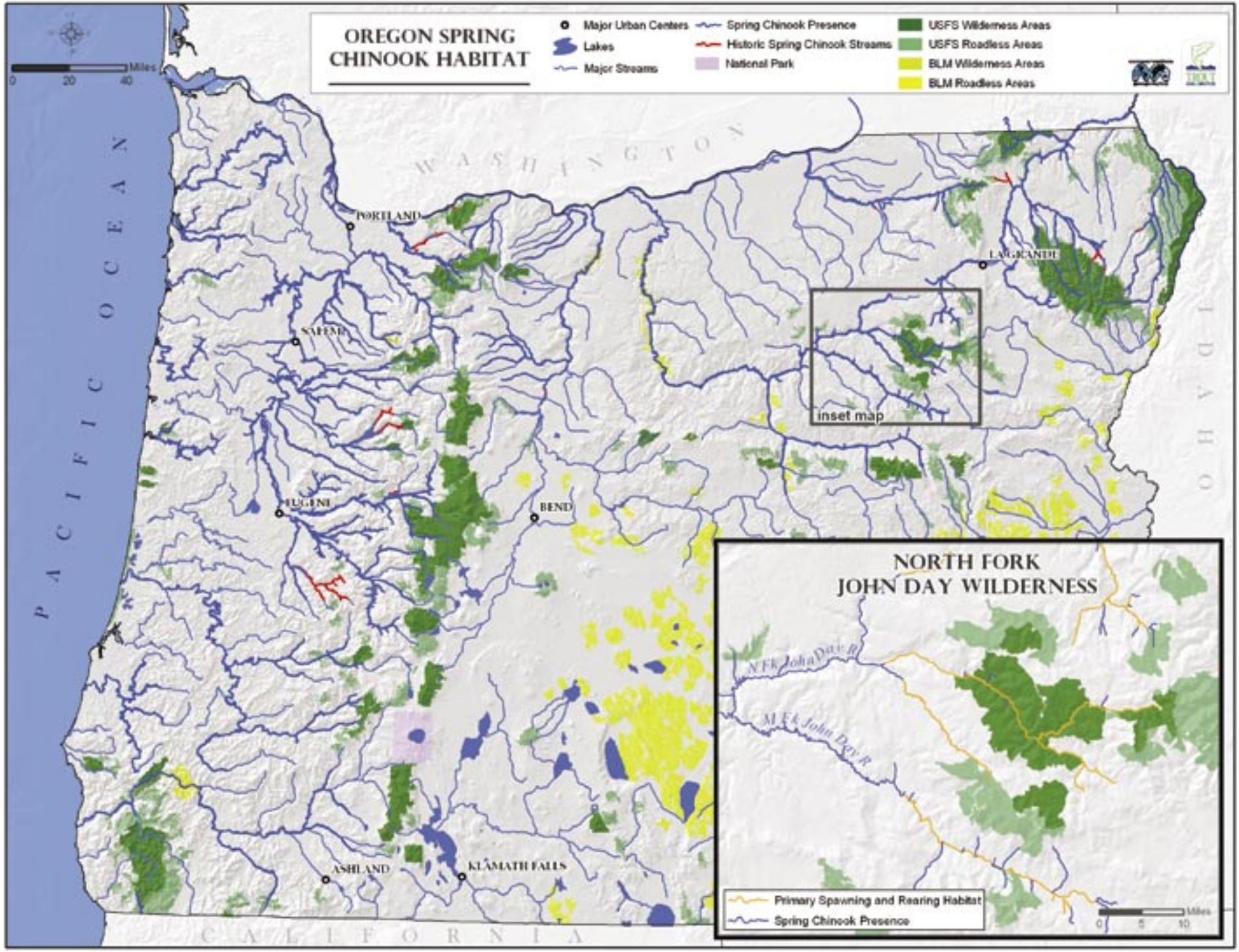
[1] Status review of chinook salmon from Washington, Idaho, Oregon, and California, 1998.

[2] Behnke, Robert J. *Trout and Salmon of North America.* The Free Press. New York, NY. 2002. p. 31.

[3] Status review of chinook salmon from Washington, Idaho, Oregon, and California, 1998.

[4] Oregon Department of Fish and Wildlife News Release. Record Number of Chinook Salmon Spawn in John Day Basin. November 15, 2002.

Lower John Day River. *photo by Sandy Lonsdale*


OREGON SPRING CHINOOK HABITAT
Major Urban Centers
Lakes
Major Streams
Spring Chinook Presence
Historic Spring Chinook Streams
National Park
USFS Wilderness Areas
USFS Roadless Areas
BLM Wilderness Areas
BLM Roadless Areas
Miles
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PACIFIC OCEAN
WASHINGTON
IDAHO
CALIFORNIA
PORTLAND
SALEM
EUGENE
BEND
LAGRANDE
ASHLAND
KLAMATH FALLS
inset map
NORTH FORK JOHN DAY WILDERNESS
NFk John Day R
MFk John Day R
Primary Spawning and Rearing Habitat
Spring Chinook Presence
Miles
0 5 10

winter steelhead

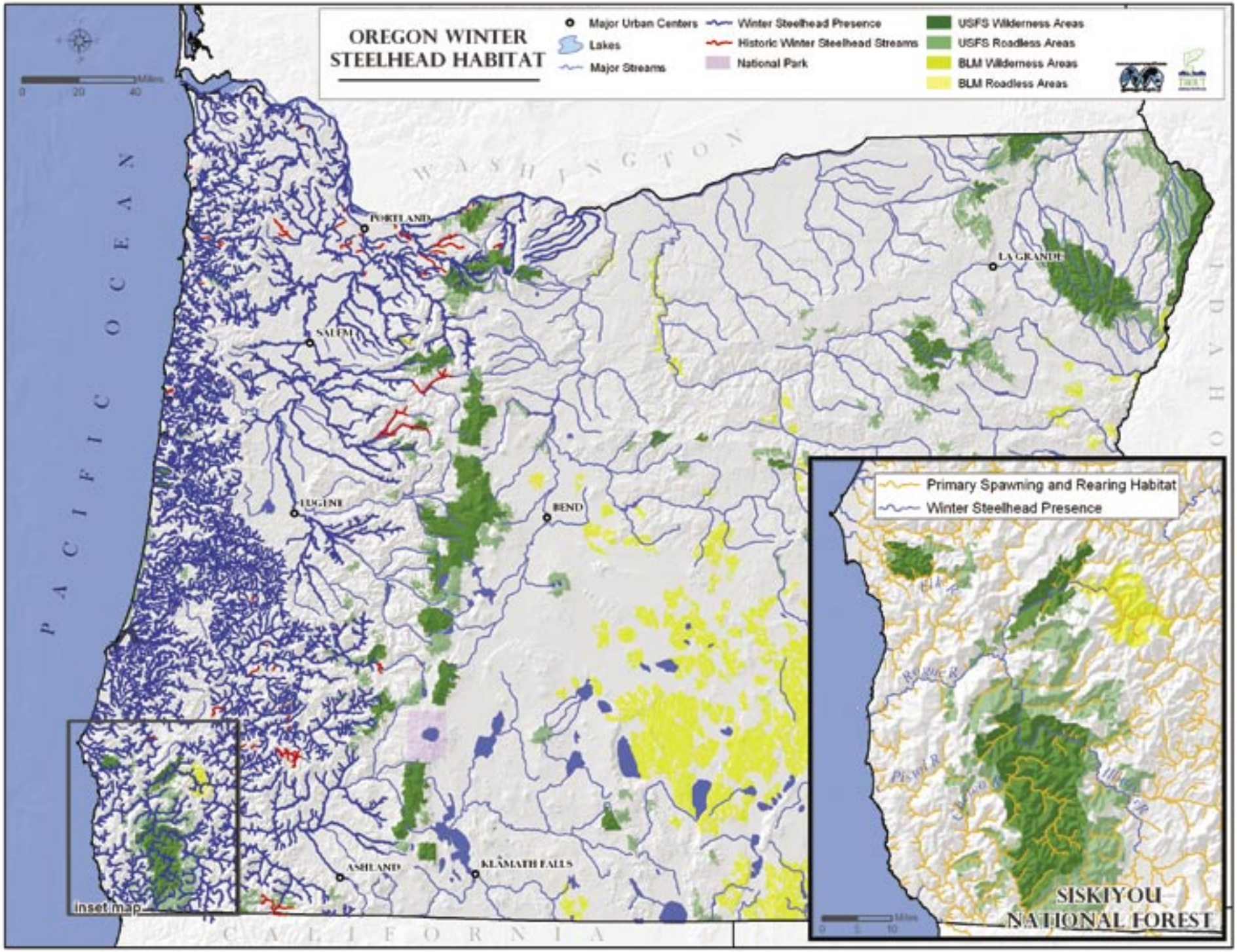
Winter-run steelhead (*O. mykiss irideus*) make up the majority of steelhead runs from the lower Columbia River Basin west of the Hood River down to the California coast. Extensive logging and development of the Oregon coast have caused declines in native steelhead populations. Juvenile winter steelhead rear in freshwater for one to four years–a time when they are particularly vulnerable to habitat degradation. Research shows that logging and road construction have had the most widespread impact on coastal steelhead, and have affected most populations.[1]

Upper Willamette steelhead stocks are listed as threatened under ESA. The most depressed winter steelhead populations are found between the Umpqua and Nestucca rivers–an area with a long history of logging and development and almost no remaining roadless land.[2] But the Siskiyou region, with its large intact wilderness core and adjacent roadless areas, supports stable and relatively healthy steelhead runs. While regulations in other coastal regions mandate the release of all wild steelhead, anglers in much of the Siskiyou region are allowed to harvest wild fish.

[1] Biennial Report of the Status of Wild Fish in Oregon. Oregon Department of Fish and Wildlife. December 1995.

[2] Busby, P.J., T.C. Wainwright, G.J. Bryant, L.J. Lierheimer, R.S. Waples, F.W. Waknitz, and I.V. Lagomarsino. 1996. Status Review of West Coast Steelhead from Washington, Idaho, Oregon, and California. U.S. Dept. Commer., NOAA Tech. Memo. NMFS-NWFSC-27. p. 3.

Winter steelhead fishing in the Siskiyous. *photo by Ken Morrish*


OREGON WINTER STEELHEAD HABITAT
Major Urban Centers
Lakes
Major Streams
Winter Steelhead Presence
Historic Winter Steelhead Streams
National Park
USFS Wilderness Areas
USFS Roadless Areas
BLM Wilderness Areas
BLM Roadless Areas
PACIFIC OCEAN
WASHINGTON
OREGON
CALIFORNIA
PORTLAND
SALEM
EUGENE
BEND
LA GRANDE
ASHLAND
KLAMATH FALLS
inset map
Primary Spawning and Rearing Habitat
Winter Steelhead Presence
SISKIYOU NATIONAL FOREST

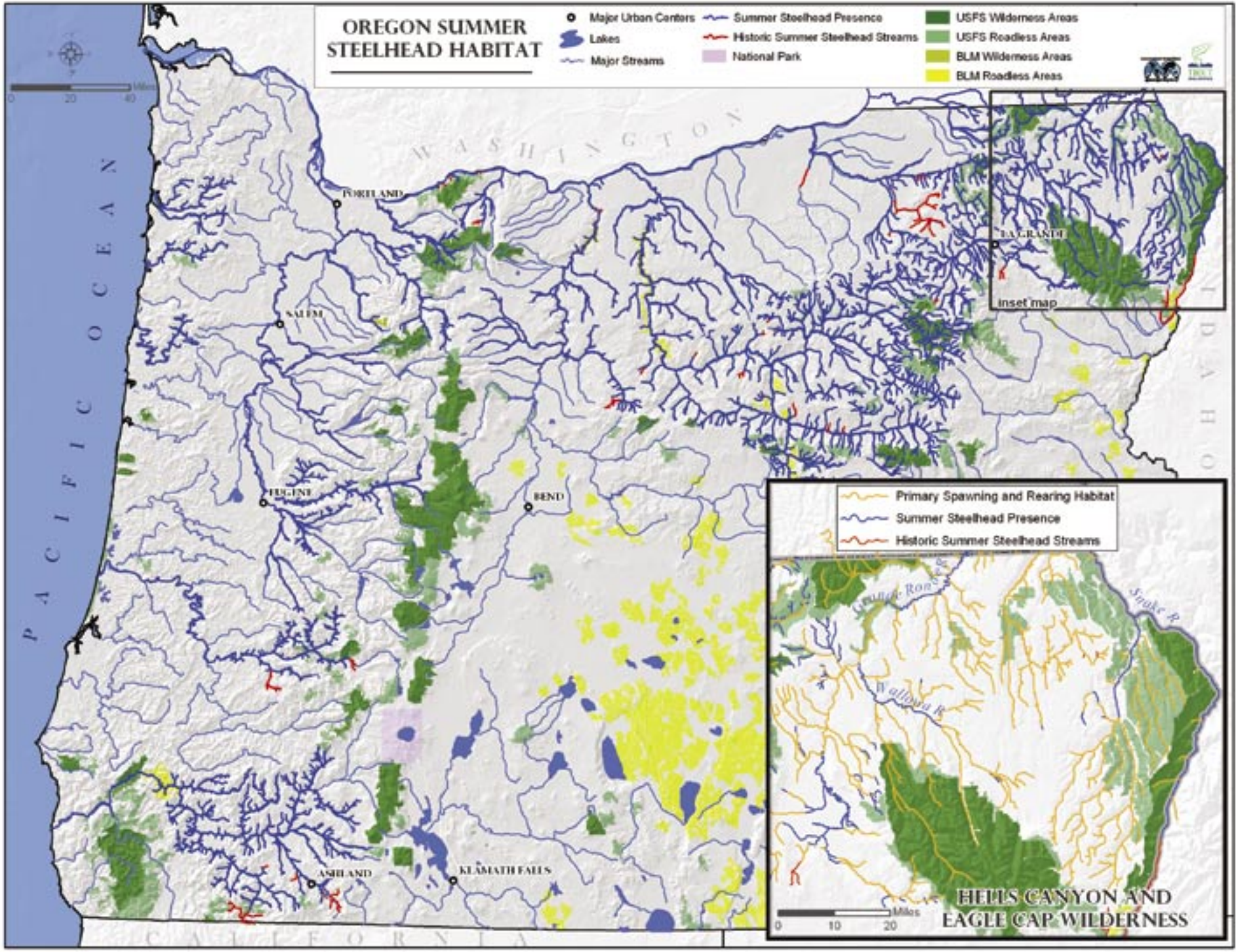
summer steelhead

The vast majority of summer-run steelhead spawning habitat is found east of the Cascades, and consists of the subspecies redband (*O. m. gairdneri*). Unlike the winter-run variety, summer-run steelhead are not sexually mature when they return to spawn, and so they must hold in freshwater for several months prior to spawning.[1] Juvenile summer steelhead spend one to three years rearing in freshwater. Because of the duration and critical nature of these two life stages, summer steelhead are very reliant on quality freshwater habitat.

Middle Columbia and Snake River Basin steelhead are listed as threatened under the ESA. Summer steelhead in northeast Oregon must pass up to eight dams on the Columbia and Snake rivers. These fish suffer numerous impacts from dam passage, including physical injury and stress, increased migration time, increased predation through reservoirs, and delayed effects of decreased condition that cause mortality during saltwater entry. These challenges are taxing enough without adding degraded freshwater habitat to the mix. Quality habitat is essential to maintaining populations of these remarkable fish.

[1] *Status Review of West Coast Steelhead from Washington, Idaho, Oregon, and California,* 1996.

Summer steelhead buck, lower Deschutes River. *photo by Sandy Lonsdale*


OREGON SUMMER STEELHEAD HABITAT
Major Urban Centers
Lakes
Major Streams
Summer Steelhead Presence
Historic Summer Steelhead Streams
National Park
USFS Wilderness Areas
USFS Roadless Areas
BLM Wilderness Areas
BLM Roadless Areas
PACIFIC OCEAN
WASHINGTON
IDAHO
CALIFORNIA
PORTLAND
SALEM
EUGENE
BEND
ASHLAND
KLAMATH FALLS
LA GRANDE
inset map
Primary Spawning and Rearing Habitat
Summer Steelhead Presence
Historic Summer Steelhead Streams
Grande Ronde R.
Snake R.
Wallowa R.
Miles
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HELLS CANYON AND EAGLE CAP WILDERNESS

Westslope Cutthroat

Westslope cutthroat trout (*O. clarki lewisi*) distribution in Oregon is naturally confined to the John Day Basin. Within this limited habitat range, westslope cutthroats have been reduced to just 41 percent of suspected historical habitat. Fish counts over the last 20 years suggest a serious decline in abundance.[1] The current range of westslope cutthroat trout in Oregon is found almost exclusively in roadless watersheds, as 18 of the 20 sub-watersheds where westslopes occur contain roadless areas.

Lahontan Cutthroat

Like westslope, Lahontan cutthroats (*O. clarki henshawi*) have a small historic distribution in Oregon. Listed as threatened under the ESA, they historically occurred in eight watersheds in the Whitehorse Basin (part of the Great Basin) near the Nevada border, and have been reduced to just two watersheds, both of which are predominantly roadless.

Native species such as the Lahontan cutthroat are extraordinarily unique because they have genetically evolved to thrive in the relatively warm water typical of southeastern Oregon's high-desert landscapes.[2] Lahontans have been introduced in two regional watersheds and have thrived, moving conservationists to push for a Lahontan cutthroat Area of Environmental Concern in Van Horn Creek.

Livestock grazing is the greatest threat to Lahontan cutthroat habitat in southeastern Oregon. Exclosures were created in the 1990's on Whitehorse and Willow creeks and were very successful in restoring riparian vegetation. With the improved habitat came increases in threatened Lahontan cutthroat populations, leading to the opening of Whitehorse Basin creeks to catch-and-release fishing in 2001.

Bull Trout

All trout require clean, cold water to survive, but none more than the bull trout (*Salvelinus confluentus*), a species protected as threatened under the Endangered Species Act. As a result, bull trout are an excellent indicator of habitat quality. Bull trout now occupy only 26 percent of their historic habitat in Oregon, and most of their present habitat is located in and around roadless areas. In fact, 83 percent of bull trout spawning and rearing habitat is found in watersheds containing roadless lands. This is especially important because juvenile bull trout typically spend two years in their rearing habitat.

Eighty-one percent of bull trout populations in Oregon are either extinct or at a moderate or high risk of extinction.[3] Roadless areas provide the necessary core areas to sustain bull trout until restoration of mainstem rivers and valley-bottoms can occur.

Columbia Basin Redband Trout

Unlike bull trout, Columbia Basin redband trout (*O. m. gairdneri*) are able to withstand some degree of habitat disturbance. As a result, they are still found in many

watersheds that have seen extensive road building. But presence alone does not indicate the overall well-being of the species. Many redband populations are in decline. The Interior Columbia Basin Ecosystem Management Project (ICBEMP) identified 60 percent of "depressed" redband populations in roaded watersheds. By contrast, roadless lands are present in 54 percent of the watersheds with "strong" populations of Columbia Basin redband trout.

Great Basin Redband

Like Oregon's native cutthroat species, Great Basin redband trout (*O. m. newberrii*) are genetically adapted to thrive in their endemic habitat. Because of their flexible life history and tolerance of high water temperatures, Great Basin redband trout are perfectly suited for the harsh, high desert habitat of southeastern Oregon.

Maps for each of these trout species begin on the next page.

[1] Biennial Report of the Status of Wild Fish in Oregon. Oregon Department of Fish and Wildlife. December 1995.

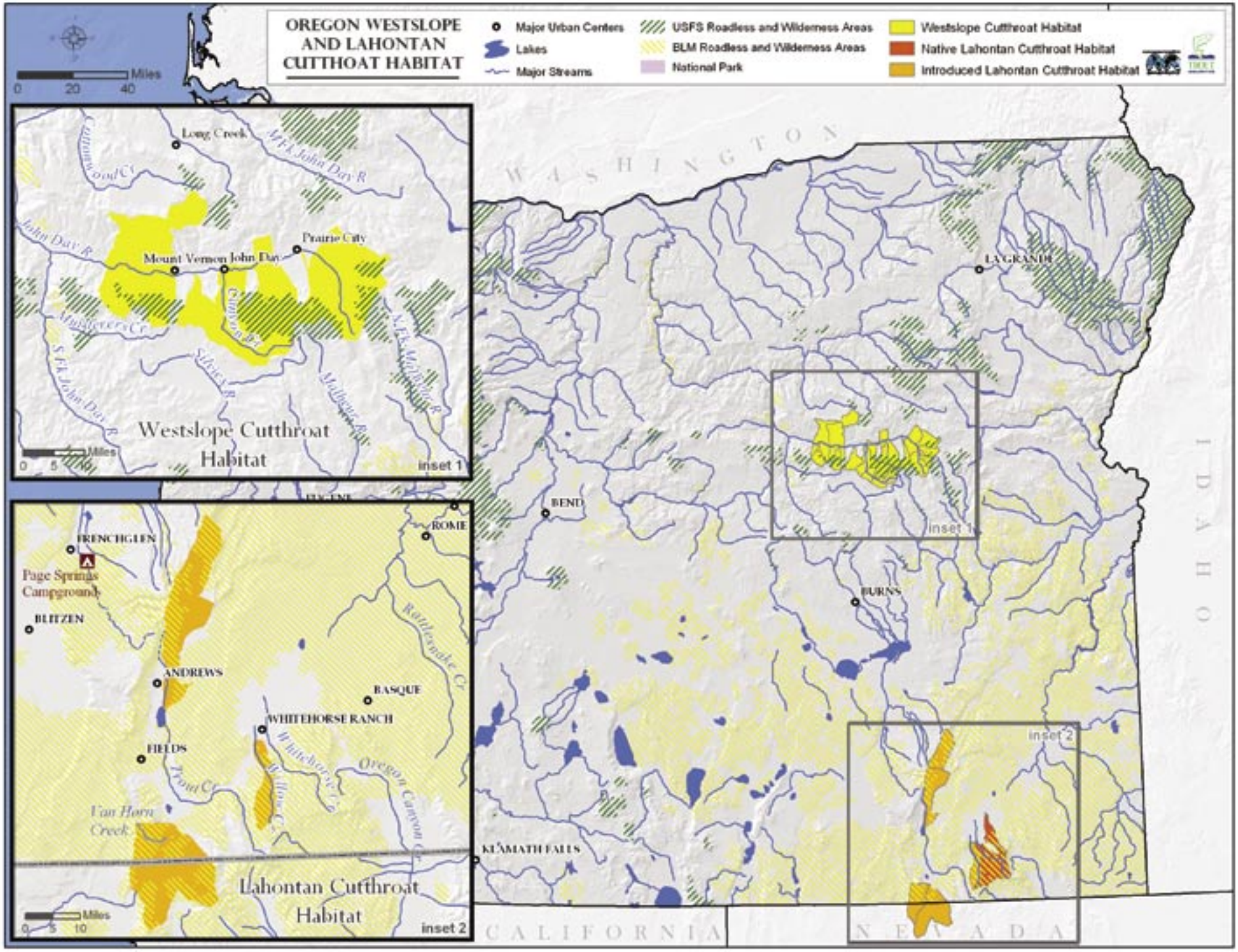
[2] Behnke, p. 212.

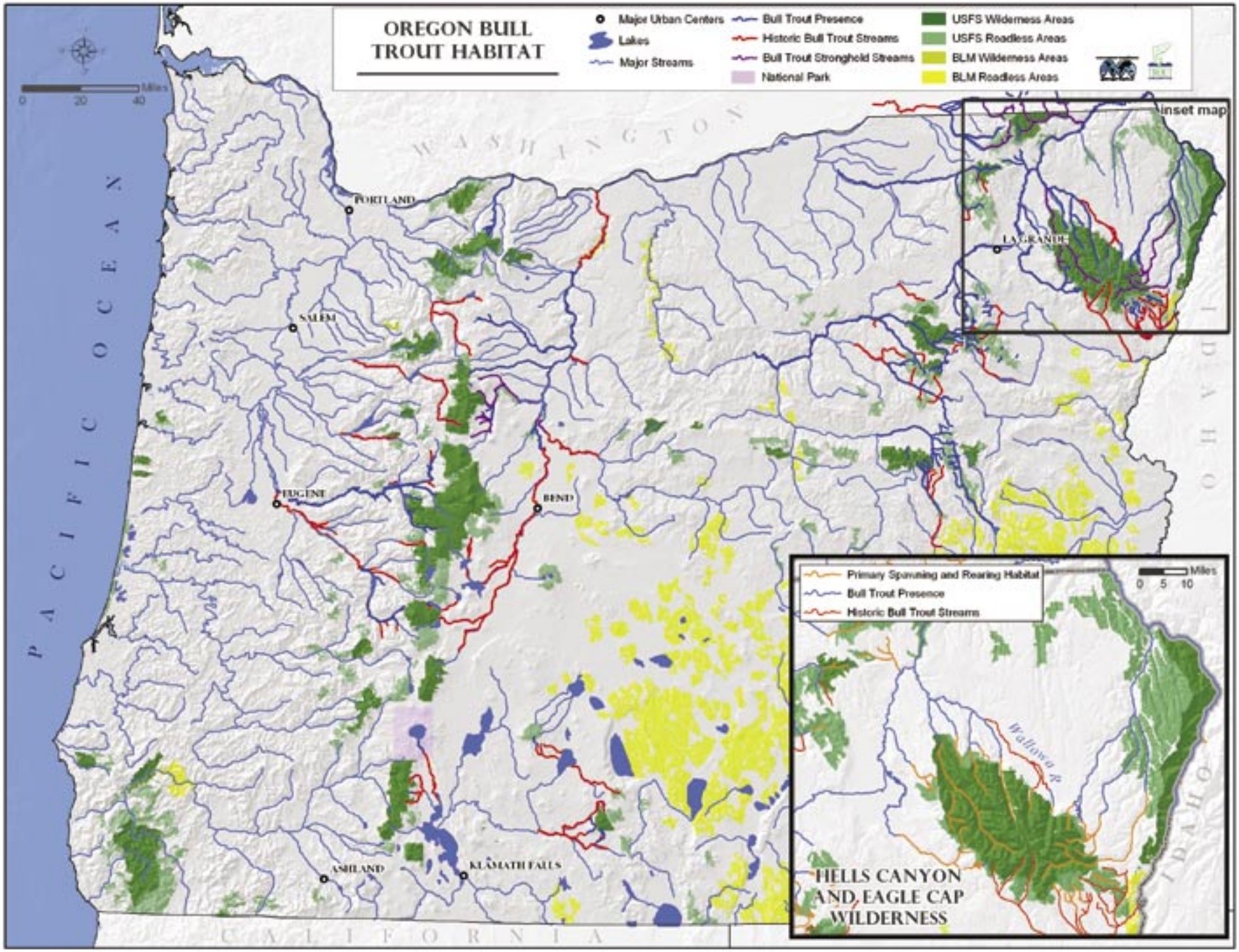
[3] Oregon Department of Fish and Wildlife. Buchanon, D.V., Hanson M.L., Hooton, R.M. 1995. Status of Oregon's Bull Trout. Executive Summary.

photo by Rich Grost

Roads can affect fisheries in many ways:

- Fragmentation and loss of available spawning and rearing habitat
- Alteration of streamflows and streambank and channel morphology
- Migration delays
- Degradation of water quality
- Alteration of ambient stream water temperatures
- Sedimentation
- Loss of spawning gravel
- Loss of pool habitat and large woody debris
- Removal of riparian vegetation
- Decline of habitat complexity


OREGON WESTSLOPE AND LAHONTAN CUTTHOAT HABITAT
Major Urban Centers
Lakes
Major Streams
USFS Roadless and Wilderness Areas
BLM Roadless and Wilderness Areas
National Park
Westslope Cutthroat Habitat
Native Lahontan Cutthroat Habitat
Introduced Lahontan Cutthroat Habitat
Miles
0 20 40
WASHINGTON
IDAHO
CALIFORNIA
NEVADA
LA GRANDE
BEND
BURNS
KLAMATH FALLS
Long Creek
Prairie City
Mount Vernon
John Day
Westslope Cutthroat Habitat
inset 1
FRENCHGLEN
Page Springs Campground
BLITZEN
ROME
ANDREWS
BASQUE
WHITEHORSE RANCH
FIELDS
Lahontan Cutthroat Habitat
inset 2


OREGON BULL TROUT HABITAT
Major Urban Centers
Lakes
Major Streams
Bull Trout Presence
Historic Bull Trout Streams
Bull Trout Stronghold Streams
National Park
USFS Wilderness Areas
USFS Roadless Areas
BLM Wilderness Areas
BLM Roadless Areas
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WASHINGTON
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CALIFORNIA
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SALEM
EUGENE
BEND
ASHLAND
KLAMATH FALLS
LA GRANDE
inset map
Primary Spawning and Rearing Habitat
Bull Trout Presence
Historic Bull Trout Streams
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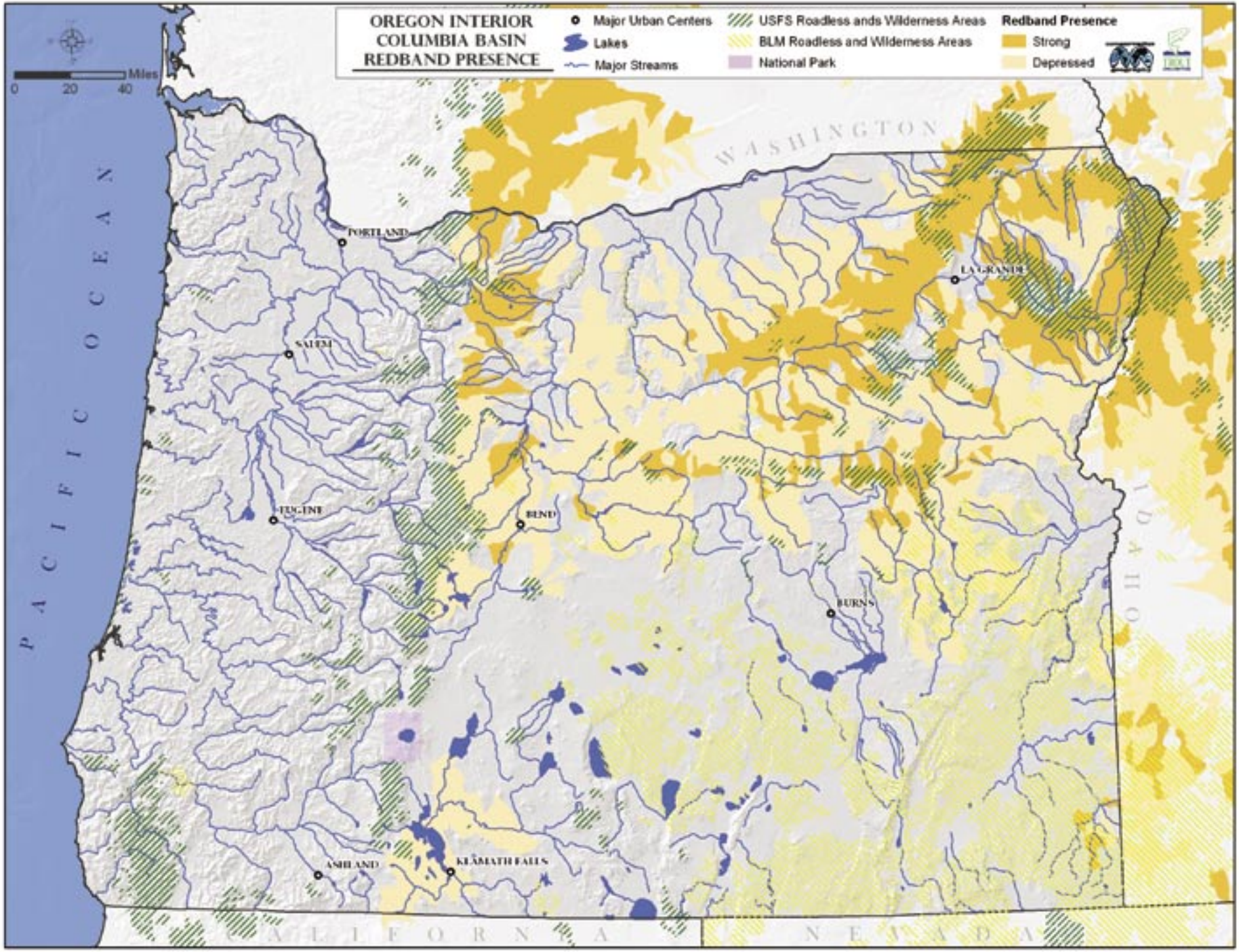
Wallowa R.
HELLS CANYON AND EAGLE CAP WILDERNESS


OREGON INTERIOR
COLUMBIA BASIN
REDBAND PRESENCE
Major Urban Centers
Lakes
Major Streams
USFS Roadless ands Wilderness Areas
BLM Roadless and Wilderness Areas
National Park
Redband Presence
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Depressed
Miles
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PACIFIC OCEAN
WASHINGTON
IDAHO
CALIFORNIA
NEVADA
PORTLAND
SALEM
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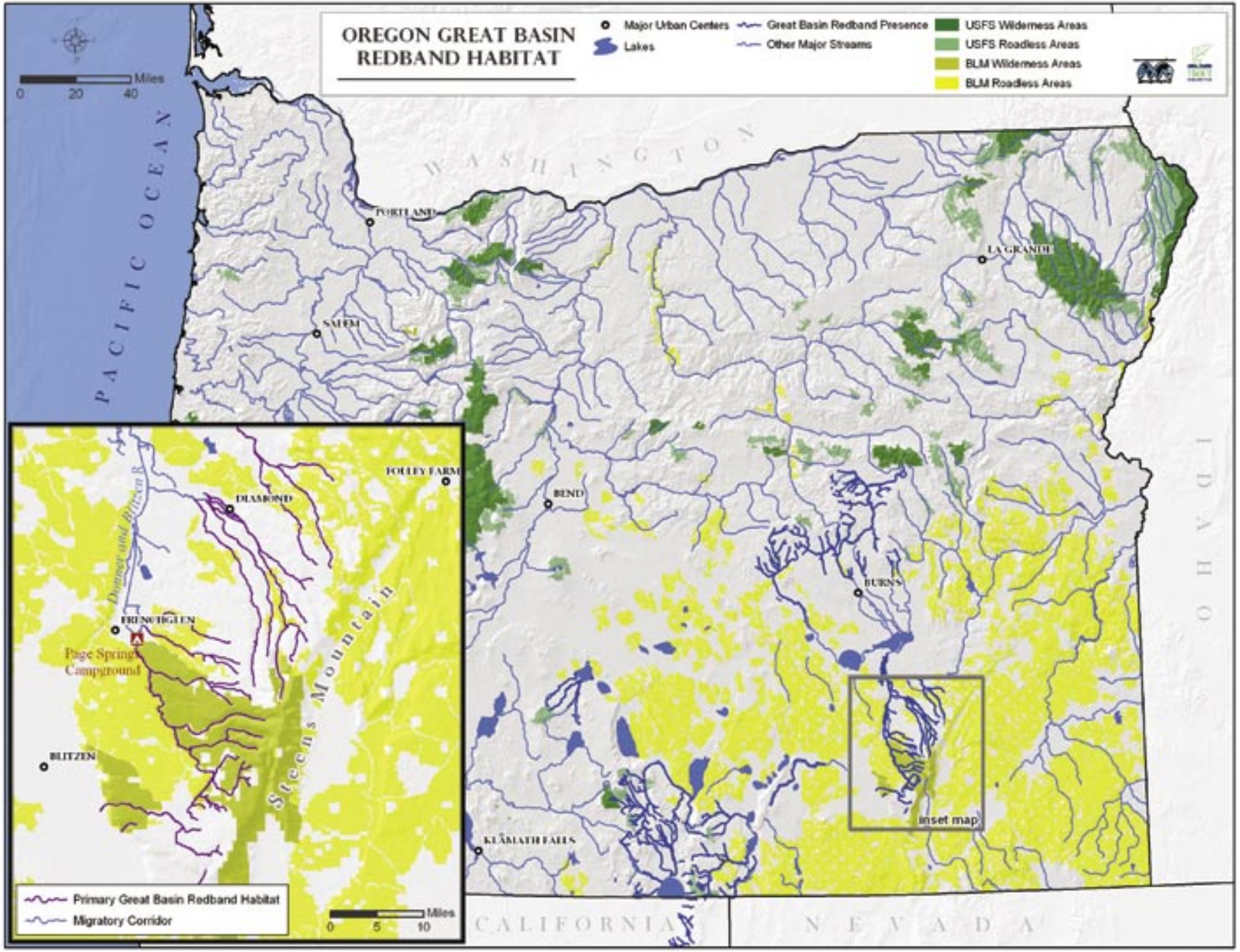
BURNS
ASHLAND
KLAMATH FALLS



great basin redband trout

Oregon's Inventoried Roadless Lands

In the absence of the federal Roadless Area Conservation Rule, Forest Service roadless areas are managed by individual forest plans. Local forest supervisors and district rangers face the difficult task of balancing the exceptional ecological values of roadless areas against local development demands. Without lasting protection, and despite the best efforts of local managers, Oregon's roadless areas will face the death of a thousand cuts by forest plans that cumulatively erode Oregon's roadless base.

Forest Service inventoried roadless areas (IRAs) are divided into the following three categories:

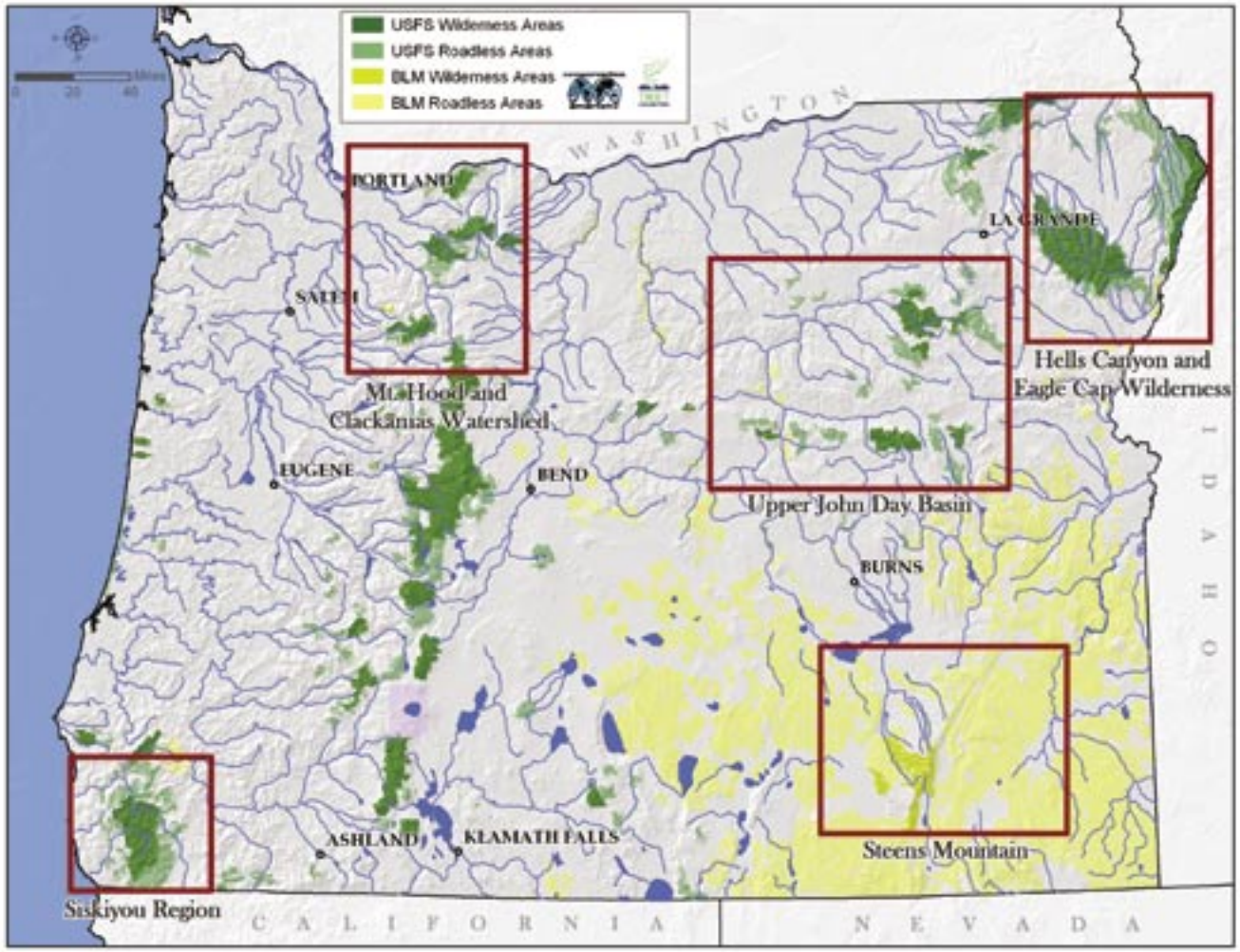
1B: IRAs allocated to a forest plan prescription that does not allow road construction and reconstruction.

1B-1: IRAs allocated to a prescription that does not allow road construction and reconstruction, recommended in the forest plan as wilderness.

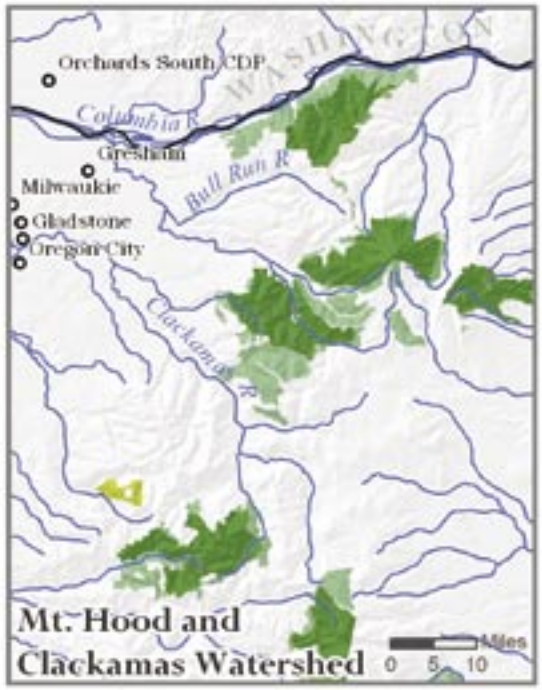
1C: IRAs allocated to a prescription that allows road construction and reconstruction.

Oregon's national forests contain 1,965,000 acres of IRAs, nearly 13 percent of all national forest land in the state. Currently, management plans all road construction and reconstruction on 1,168,000 acres of Oregon's IRAs, a little over 59 percent of the state's inventoried roadless lands. Road-building is prohibited on the remaining 797,000 acres, about 41 percent of IRA lands.

The Roadless Areas Conservation Rule does not apply to lands managed by the Bureau of Land Management (BLM). 8,258,411 acres of roadless lands are managed by the BLM in Oregon, with 2,686,445 acres managed as wilderness study areas and 185,421 acres designated wilderness.



The following maps highlight specific roadless area complexes in Oregon of particular importance to fish and wildlife and hunting and angling opportunities. Mount Hood/Clackamas, John Day, Hells Canyon-Eagle Caps, Siskiyous and Steens Mountain all reflect both the diversity of Oregon's fish and wildlife resources, as well as its spectacular landscapes.


Orchards South CDP
Columbia R
Gresham
Milwaukie
Bull Run R
Gladstone
Oregon City
Clackamas R
Mt. Hood and
Clackamas Watershed
Miles
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Rogue R
Gold Beach
Illinois R
Pistol R
Chetco R
Cave Junction
Brookings
Harbor CDP
Siskiyou
Region
Miles
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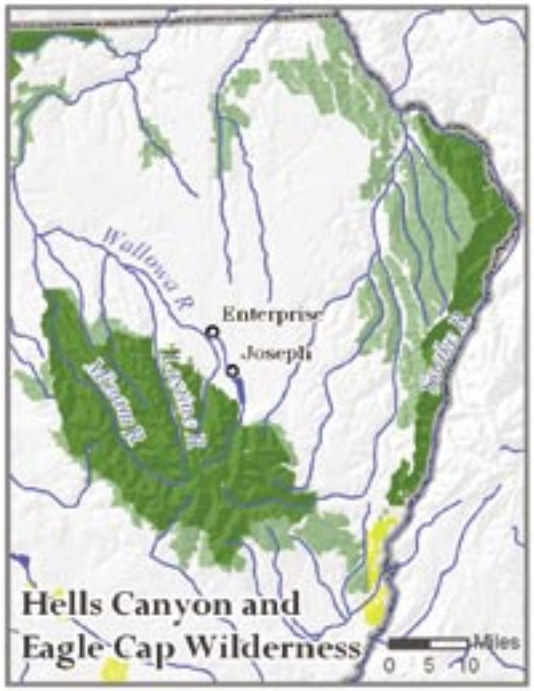
Wallowa R
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Hells Canyon and
Eagle Cap Wilderness
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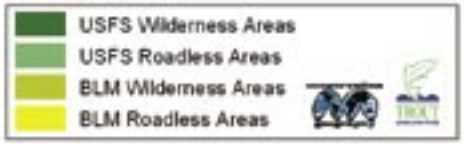
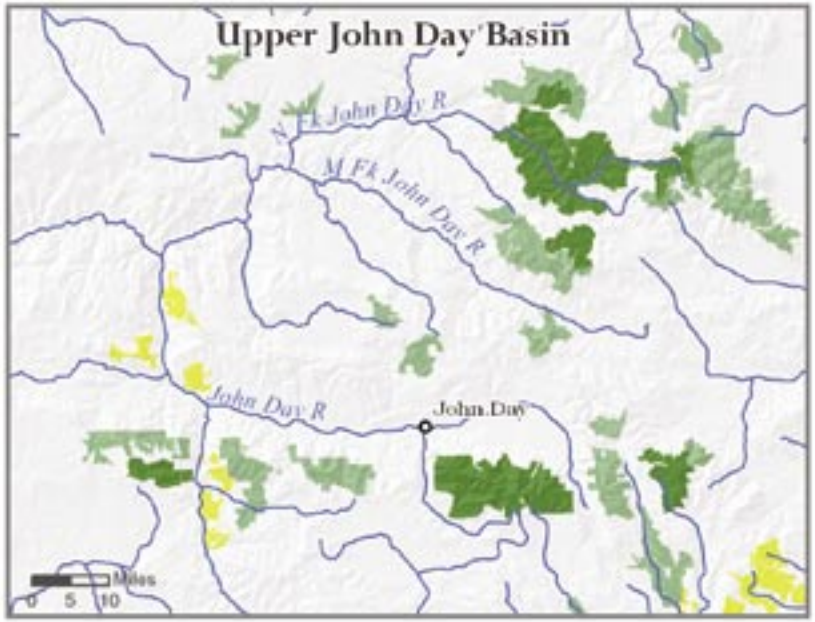
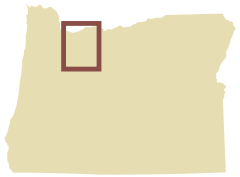

USFS Wilderness Areas
USFS Roadless Areas
BLM Wilderness Areas
BLM Roadless Areas


Upper John Day Basin
N Fk John Day R
M Fk John Day R
John Day R
John Day
Miles
0 5 10


Steens
Mountain
Riddle Cr
McCoy Cr
Steens Mountain
FRENCHGLEN
Page Springs
Campground
Mud Cr
BLITZEN
Miles
0 5 10

Mount Hood



Mount Hood is an Oregon icon, an emblem of the natural amenities found within driving distance of the Portland metropolitan area. The waters of several spectacular rivers flow from its flanks, including the Sandy, Salmon, Mount Hood and Zigzag rivers, as well as key tributaries of the Clackamas River.

All of these rivers benefit from designated wilderness areas and unprotected roadless areas that help high -quality water and habitat to sustain thriving fisheries. Coho and chinook salmon and steelhead use many of the streams for spawning and rearing habitat. Coastal cutthroat trout, bull trout, and native redband trout are all found in the forested waters that flow from Mount Hood. The Clackamas, Sandy and Hood rivers support popular and lucrative recreational fisheries.

Elk and other wildlife also depend on Mount Hood roadless lands for habitat. Elk hunting generates over $800,000 annually for nearby communities. In addition to fish and wildlife habitat and recreation opportunities, Mount Hood's roadless watersheds provide superb drinking water for several towns and cities including Portland.

Key Roadless Areas

Roaring River

The largest unprotected roadless area on the Mount Hood National Forest, this pristine watershed encompasses 27,000 acres and abuts the popular Salmon-Huckleberry wilderness southwest of Mount Hood. The crystal-clear waters of the Roaring River tumble steeply down to the Clackamas River, one of the Northwest's most popular steelhead rivers. The lower three miles of the Roaring River provide spawning habitat for late winter and summer steelhead, as well as late-run winter coho and spring chinook. This coho population has been identified as the last self-sustaining wild run left in the Columbia River Basin. The upper watershed supports redband trout. Excellent remote fishing is found by those willing to descend the steep canyon.

Salmon River Meadows

The headwaters of the popular Salmon River flow from this high-elevation 8,000-acre roadless area which flanks the eastern edge of the Salmon-Huckleberry Wilderness Area. The upper Salmon River holds resident coastal cutthroat and native redband trout.

Mount Hood above Salmon-Huckleberry Wilderness. *photo by Sandy Lonsdale*

"The roadless areas around Mount Hood provide some of the last remaining undisturbed habitat for wild native trout and salmon. In particular, the Roaring River is a pristine oasis next to the metropolitan area of Portland. To hike down the steep canyon and cast a fly into these waters is to feel transported back 200 years to the time of Lewis and Clark. It is a rare and precious gem which deserves to be protected for all future generations."

Tom Wolf, sixth-generation Oregonian and President of Trout Unlimited's Oregon Council

Big Bottom: The Case for Protecting Small Roadless Areas

Efforts to protect roadless lands have focused on inventoried federal roadless areas 5,000 acres or larger. For example, the federal Roadless Area Conservation Rule does not apply to smaller roadless areas, many of which remain open to logging, roading and other development. Yet many of these small wild areas possess fish and wildlife resources worthy of protecting.

Smaller roadless areas can provide critical refuges to fish and wildlife in otherwise logged and roaded watersheds. They may also be contiguous to larger roadless areas and designated wilderness, separated by only a road or limited development. In these cases, smaller roadless areas help form larger complexes of areas with high ecological integrity. In addition, some smaller roadless areas include lower elevation habitats that possess important fish and wildlife values.

One such place is the Big Bottom Roadless Area along the Clackamas River on the Mount Hood National Forest. Encompassing only 1,153 acres, Big Bottom is an incredibly biologically productive flat forested valley where the Clackamas slows to a meander. Slated for an old growth timber sale in the late 1980s, it was spared by a court injunction that halted logging in northern spotted owl habitat.

At 2500' elevation, the Clackamas River splits into low-gradient braided streams in the Big Bottom, providing immensely productive salmon and steelhead rearing habitat. Big Bottom produces more coho salmon smolts than any other area in the Clackamas River system. The Forest Service has plans to restore bull trout populations in Big Bottom as well.

In addition, Big Bottom is an important wintering area for elk and deer. Immense old growth Douglas firs, grand firs and western red cedars—including the largest cedar in Oregon with a circumference of 36 feet—tower hundreds of feet above the ground, providing layered wildlife protection during winter snows.

Though hemmed in by a highway on one side and roaded logged areas on the other, Big Bottom's wilderness characteristics are important to those who have walked among the 1,000 year old cedars or crossed a fallen log bridging the Clackamas.

photo by Erin Barnholdt

Hells Canyon-Eagle Caps

Known for their biological diversity, Hells Canyon and the nearby Wallowa Mountains provide habitat for species traveling between central Idaho's wilderness complex, the Blue Mountains of Oregon and Washington, and the Northern Great Basin of southeast Oregon.

This region's lakes and rivers contain 41 species of fish, including chinook salmon, wild steelhead and native redband trout. Many of Oregon's last healthy populations of bull trout are found in streams originating from the Eagle Caps as well as those flowing into the Imnaha and Snake rivers of Hells Canyon. Sportsmen cherish this remote corner of Oregon for its superb fishing and unparalleled elk, deer, bighorn sheep and upland bird hunting.

The Hells Canyon and Wallowa Mountain wildlands suffer from over-grazing, logging and abuse by off-road vehicles. These activities, especially the proliferation of ATVs, threaten the area's ecological integrity and its fishing and hunting opportunities.

On a positive note, the Forest Service recently adopted a Comprehensive Management Plan (CMP) for the Hells Canyon National Recreation Area that directs that the area be managed as "a healthy ecosystem that is an integral component of a larger biological region." The plan calls for reducing grazing, removing unnecessary roads, addressing impacts from invasive non-native weeds and pursuing much-needed stream restoration projects.

Key Roadless Areas

Lord Flat Roadless Area

Adjacent to the Hells Canyon Wilderness Area, the 110,000-acre Lord Flat Roadless Area is one of the largest contiguous tracts of unprotected wild country left in Oregon. When adjoining smaller roadless areas are included, this wildlands complex totals 135,000 acres.

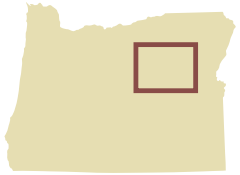
Lord Flat is a spectacular landscape, stretching from the rim of Hells Canyon–the deepest river-carved gorge in North America–across to the precipitous rimrock canyons of Cow, Lightning and Horse creeks, which empty into the Imnaha River. Lord Flat provides habitat for bighorn sheep and the largest free-roaming elk herd in North America. Its streams still support spawning populations of endangered spring chinook that travel hundreds of miles past the gauntlet of large dams on the Columbia and Snake rivers.

Lake Fork Roadless Area

Bordering the southeast side of the Eagle Cap Wilderness, the 20,500-acre Lake Fork Roadless Area includes biologically productive lower-elevation lands that are in short supply in the currently designated wilderness area. Lake Fork serves as an important corridor providing passage for elk and other migratory species between summer range in the high Wallowas and winter range in Hells Canyon. Bull trout and redband trout are found in several streams.

Lake Fork Roadless Area. *photo by Ric Bailey*

John Day



A combination of freeflowing river habitat and large upstream roadless areas make the John Day River Basin home to the healthiest anadromous fish runs left in eastern Oregon.

The second longest undammed river in the Lower 48, the John Day River flows 280 miles, starting in the mountains surrounding the town of John Day and flowing north through cattle and farm country until meeting the Columbia River. Including the John Day's prolific tributaries there are over 500 miles of freeflowing river habitat.

The John Day Basin's diversity of fish species is unsurpassed in Oregon. It supports threatened summer steelhead and the healthiest population of spring chinook left in Oregon's Columbia River Basin. The upstream habitat holds bull and redband trout, as well as Oregon's only populations of westslope cutthroat trout.

Its large intact roadless headwaters give a critical boost to water quality that suffers severe impacts further downstream from extensive grazing, water withdrawals and other activities.

South Fork John Day River. *photo by Sandy Lonsdale*

"It is amazing to me that the John Day country is such a stronghold for wild fish. It has been logged, mined and grazed, but it still has the resilience to allow us to help bring back some of its aquatic jewels. In addition to chinook, the streams contain native steelhead, redbands, bull trout, a few cutthroat, and a fair number of introduced brook trout."

John Dadoly, Blue Mountain Chapter of Trout Unlimited, Pendleton, Oregon

Key Roadless Areas

North Fork John Day

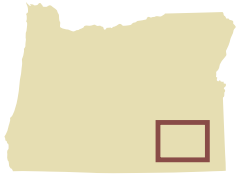
Covering a diverse landscape from benchlands to the high peaks of the Elkhorn Mountains, the roadless lands of the North Fork John Day provide some of the healthiest fish habitat left in eastern Oregon. The North Fork John Day Wilderness encompasses 121,800 acres, 85,000 acres of which are within the North Fork John Day drainage and include the headwaters. The protected wilderness includes 40 miles of spawning habitat for steelhead and chinook. Several thousand acres of roadless lands remain unprotected within the watershed. The John Day also is home to one of the largest herds of free-ranging Rocky Mountain elk in the Northwest.

Murderer's Creek

Murderer's Creek is a key roadless tributary to the South Fork of the John Day. It flows through varied and rugged landscape south of Dayville, Oregon, ranging from mountains blanketed with Douglas fir and ponderosa pine, to lower elevation sagebrush desert. More than 36,000 acres of roadless lands surround Murderer's Creek. Redband trout and westslope cutthroat are found in its tributaries, and spawning and rearing habitat for steelhead is abundant. The clean, cold water flowing from this watershed helps support downstream salmon and steelhead populations.

Steens Mountain

The largest fault-block mountain in North America, Steens Mountain rises nearly 10,000 feet above sea level and stretches 30 miles in length. Resplendent with glacier-carved valleys, it is a high desert home to bighorn sheep, pronghorn antelope, mule deer and sage grouse.



Steens Mountain is also home to the Great Basin redband, a native trout uniquely suited to the challenging desert climate of southeastern Oregon. Redband trout have adapted to high water temperatures and fluctuating water availability. In part this adaptability is attributable to the presence of both resident and migratory fish populations that travel between headwater spawning habitat and downstream lakes. Grazing, drought and interbreeding with non-native fish have taken a significant toll on Great Basin redbands, increasing the importance of protecting their remaining undisturbed habitat.

In 2000 the Steens Mountain Cooperative Management and Protection Act was passed by Congress and signed by President Clinton. The legislation protected 1.1 million acres from mining and geothermal development, prohibited off-road vehicles and new roads on over 496,000 acres, added 29 miles of rivers and streams to the federal Wild and Scenic River system and designated 170,000 acres of new federal wilderness. In addition, the Act designated the nation's first Redband Trout Reserves to protect key fish habitat.

Important Roadless Areas

Donner and Blitzen River

Its name meaning "thunder and lightning" in German, the Donner and Blitzen River carves a beautiful basalt desert canyon as it flows down the west side of Steens Mountain. Its upper reaches include a reserve managed for the protection of Great Basin redbands, while downstream the river flows through the Malheur Wildlife Refuge and into Malheur Lake, creating a world-class bird sanctuary. Roadless areas within the watershed include the 31,872 acre Blitzen River Wilderness Study Area and an adjacent 3,822 roadless acres. The south fork of the Blitzen flows through another 6,432 acres of roadless lands.

photo by Scott Stouder

"Oregon's hunters and anglers have learned what the Paiute Indians knew for hundreds of years before white settlers arrived, that Steens Mountain offers extraordinary hunting and fishing. Simply put, the Steens Mountain is the heart of Oregon. In a state full of outdoor jewels, it is our high desert diamond."

Pat Wray, outdoor writer and hunter, Corvallis, Oregon

Siskiyous

Southern Oregon's Siskiyou region is renowned for unparalleled biological diversity, its spectacular wild rivers and its prolific salmon and steelhead runs. Because of its unique geological history, this rugged landscape functions as an ecological bridge for several Northwest ecosystems and supports one of the most diverse plant communities in the world.

The region is carved by numerous free-flowing rivers and streams, several designated as wild and scenic. Oregon's Rogue River and key tributaries including the Illinois River and Rough and Ready Creek cut through the Siskiyous' rugged mountains, supporting some of the most productive salmon and steelhead fisheries left in the lower 48. Additional federally designated wild and scenic rivers include the Chetco, Elk and North Fork Smith rivers. Spring and fall chinook, coho, steelhead as well as both sea-run and resident coastal cutthroat are found in the mainstem rivers. Native rainbow trout reside in upper tributaries.

In 2000, the Biscuit Fire swept through 500,000 acres of the Siskiyous, much of it burning at low intensity and in designated wilderness and roadless lands. Controversy has erupted over a proposal by the U.S. Forest Service to log 5 percent of the burned area, including several thousand acres of inventoried roadless areas. Many scientists and conservationists are concerned that logging the sensitive landscape will do irreparable harm to the fisheries, botanical and wilderness values of the area (see sidebar).

Key Roadless Areas

North and South Kalmiopsis

Adjacent to the 179,000-acre Kalmiopsis Wilderness lie 196,000 acres of unprotected roadless lands known as the North and South Kalmiopsis roadless areas. Several smaller roadless areas also surround these wildlands, creating a roadless complex of over 400,000 acres. The Kalmiopsis provides cold clean water for important tributaries of the famed Rogue River such as the Illinois River and its tributaries including the Silver, Indigo and Lawson creeks. Fall and spring chinook, coho, steelhead, cutthroat and native rainbow trout are all found in the rivers that flow through and from the Kalmiopsis. Unfortunately the Forest Service has proposed salvage logging 3,676 acres of roadless lands in the Kalmiopsis, potentially putting water quality and fish habitat at risk.

Illinois River, Kalmiopsis Wilderness. *photo by Sandy Lonsdale*

Copper Salmon

Northwest of the Kalmiopsis and adjoining the Grassy Knob Wilderness, the 11,000 acre Copper Salmon takes in 9,000 acres of the Elk River watershed as well as portions of the Sixes and South Fork Coquille rivers. Towering rainforests of Douglas fir, western hemlock and Port Orford cedar help produce clean cold water for a wide array of fish including chinook, coho, chum, steelhead, coastal cutthroat and native rainbows. The Elk River is believed by many fish biologists to have the most productive salmon fishery left in the Lower 48. Because of its spectacular ecological values, conservationists, local elected officials and local businesses strongly advocate for wilderness designation for Copper Salmon.

Zane Grey

Named after the famous author of western novels who owned a fishing cabin in the area, the Zane Grey's steep forested slopes surround the Rogue River for 26 miles. At 46,464 acres, it is the largest roadless area managed by the BLM in the Northwest. The Zane Grey helps protect the bounty of steelhead, chinook and other native salmonids that have made the Rogue famous among anglers nationwide. Unfortunately, logging is planned in this steep country and may deleteriously affect water quality and fisheries in the area.

Fish and Fire

Despite the considerable attention fire management on public lands has received over the last decade, the impacts of fire on native and wild fish and the effects that thinning, salvage logging and prescribed fire have had on aquatic species has been largely understudied.

Biscuit fire. *photo: USFS*

Recently, aquatic scientists have begun to expand our knowledge of how best to manage for native fish in the fire-prone landscapes of the American West. Research findings support a common-sense approach based on the fact that western native fish have not only survived fire for thousands of years, they evolved with it.

Trout and salmon benefit from natural fire regimes if their home watersheds are healthy. Fire can regenerate riparian vegetation, contribute needed woody debris to stream systems and provide nutrients that aid insects and other fish food sources. While fires can trigger landslides and large sediment loads into streams, the negative effects on fish are often short-term with water quality returning to normal after a few years. The larger question remains whether salvage logging a sensitive area that has already burned actually poses a greater risk than allowing the area to heal on its own. In some cases, fish recovery is more readily achievable from large natural fires by leaving a sensitive area alone than it is from repeated disturbances associated with logging and road building.

Fire poses a threat to native fish when populations are isolated and struggling to overcome other habitat problems, including chronic sediment from roads, logging and grazing. Fire can also pose a serious threat to fish when natural fire regimes have been altered by fire suppression or past logging. In such cases, judicious cutting of small-diameter trees and brush can help restore forest ecosystem health. However, given their remote location and relative health, roadless areas should rarely be a priority for "fuels treatment" management involving roads or aggressive logging.

Biscuit Fire

In the summer of 2002, lightning started a fast-moving fire in the Siskiyou Mountains of southern Oregon. As hundreds of firefighters battled the blaze to little avail, the Biscuit Fire became one of the most high-profile fires in recent memory, making the national news and becoming the subject of speeches on Capitol Hill.

Despite the hype, the Biscuit Fire was a relatively normal fire event for the Klamath-Siskiyou region. While the fire covered 500,000 acres, 60 percent of the area burned at low intensity or not all. Most of the fire burned in the backcountry with 99 percent of the burn occurring on public land.

When fish and wildlife biologists surveyed the area post-fire, they found an ecosystem quickly rebounding. "We don't anticipate any (long-term) adverse effects out there on the fish and wildlife and flora," concluded Greg Clevenger, Wildlife Biologist and Resource Staff Officer for the Siskiyou and Rogue River National Forests.

The Forest Service has proposed to salvage log more than 370 million board feet over about 19,500 acres. Included are 3,676 acres in the North and South Kalmopsis inventoried roadless areas that will effectively disqualify a total of 40,394 acres from wilderness eligibility. Anglers and river advocates are concerned about the potential effects this logging will have on water quality and fisheries.

The Biscuit Fire provides an excellent example of a backcountry area that may be best served by allowing it to naturally recover. The lesson of history and scientific research is that habitat degradation from logging and roading may pose a far greater threat to water and fishery resources than fire.

New growth in the Biscuit Fire area. *photo by Erin Barnholdt*

Trout Unlimited's Public Lands Initiative

Protecting The Places We Hunt and Fish

All of our actions on the land are ultimately reflected in the quality of fish and wildlife habitat. More than 50 million Americans hunt and fish. Too often, their voices and interests are lost in the din of controversy that has come to define public land management. The intent of TU's Public Lands Initiative is to cut through the noise and:

- Develop sound scientific and technical information demonstrating the importance of public lands to coldwater fisheries, wildlife and fishing/hunting opportunities;
- Build an alliance of TU members, wildlife and fisheries conservation groups, hunting and angling clubs, and fish and wildlife professionals to advocate for management policies on public lands that protect the long term health of coldwater fisheries as well as wildlife; and
- Inform the broader public on how incredibly important public lands are to protecting and restoring coldwater fisheries and wildlife habitat, and the tremendous fishing, hunting and other outdoor opportunities public lands provide.

Under this Initiative Trout Unlimited has established specific field programs to address three major management issues affecting fish and wildlife habitat on public lands:

- Restoring lands degraded by abandoned hard rock mines;
- Oil, gas and coal bed methane development in the Interior West; and

* Roadless and wilderness area protection.

Trout Unlimited staff Keith Curley, Sam Mace and Scott Stouder produced this report.

To learn more, please visit our website at http://publiclands.tu.org

Join Trout Unlimited on-line at http://www.tu.org or call (800) 834-2419

Cover photo credits (clockwise, from upper left):
Pronghorn antelope, photo by Bill Thomas; Coho salmon, photo by Rich Grost;
View from Siskiyous, photo by Ken Morrish

Illinois River Trail. *photo by Rolf Skar*

"…I could already begin to see and appreciate the bigness and ruggedness of this Oregon wilderness. It was a mountain stronghold such as I had never before looked into…the ragged country of sharp peaks, black timbered ridges, green range on range, blue canyons, staggered me with its wildness and vastness…"

Zane Grey, Tales of Fresh-Water Fishing, *1928*

Keiger Gorge in the Steens Mountains. *photo by Ken Morrish*

Trout Unlimited
PUBLIC LANDS INITIATIVE
PUBLICLANDS.TU.ORG

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