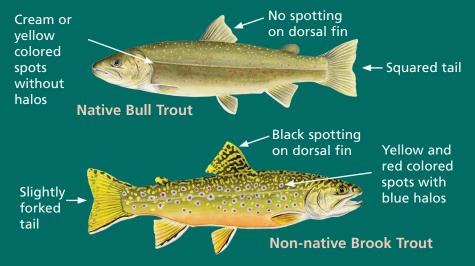
Quick Trout Identification Native Bull Trout vs. Non-native Brook Trout



Front cover illustrations top to bottom: bull trout, rainbow trout, coastal cutthroat trout, brook trout, kokanee salmon

More information on fishing in national parks and Mount Rainier's fisheries: https://www.nps.gov/subjects/fishing/index.htm https://www.nps.gov/mora/learn/nature/fish.htm https://www.nps.gov/mora/planyourvisit/fishing-and-boating.htm

For more information about statewide fish advisories and healthy fish choices, visit the Washington State Department of Health at *www.doh.wa.gov/fish.*

Direct questions regarding this guide to: Mount Rainier National Park Aquatics Program Longmire, WA 98397, (360) 569-6752

Written by Mount Rainier National Park Aquatics Program and Washington State Water Resources Division

Original design Yellowstone National Park

Illustrations p. 1, 9, 12, 13 © Angie Peace

Photos p. 3, Steve Redman; p. 4, NPS historical photo; p. 5, 8, NPS / Anthony Anderson; p. 6, 7, 10, 11, NPS / Matt DeAngelo; p 14, NPS; p. 15, Brittany Burnett

Printed on recycled paper with vegetable ink. April 2020

Mount Rainier National Park

Please see locally posted regulation changes and visit the park's website for the most current regulations.

> www.nps. gov/mora/ planyourvisit/ fishing-andboating.htm

National Park Service

Introduction

The Reason for Fishing Regulations

The National Park Service and Mount Rainier National Park are dedicated to the conservation of native fish species and healthy aquatic ecosystems while providing recreational opportunities for the public's enjoyment. Fishing within Mount Rainier National Park is permitted when consistent with the conservation and restoration objectives established in the Fisheries Management Plan (FMP). The FMP provides a guide for the recovery of native fish and aquatic biota through the following actions:

- 1. Restoring stream habitats and removing fish passage barriers;
- 2. Reducing the impact of non-native fishes on native biota; and
- 3. Protecting existing populations of native fishes.

By following the regulations, guidelines, and courtesies outlined in this brochure, anglers play a critical role in accomplishing the objectives of the FMP. These actions help to preserve our natural heritage and ensure the enjoyment of native fish species and healthy aquatic ecosystems by future generations.

Introduction3
History of Fish Stocking4
Aquatic Invasive Species5
General Regulations 6-8
Fishing Guidelines9
Map
Native Salmonid Identification
Non-Native Salmonid Identification13
Monitoring Fish Populations14
Frequently Asked Questions15

Angler-Assisted Conservation

Anglers play an important role in the conservation and recovery of native species and natural ecosystems. In many lakes and streams throughout Mount Rainier, anglers are essential for non-native species suppression. They assist in the suppression efforts by following the rules and regulations as established in this brochure.



Mount Rainier reflected on Bench Lake.

Mount Rainier and its Native Fish

Mount Rainier is the third highest and the most heavily glaciated peak in the contiguous United States, and its slopes feed the headwaters of nine major watersheds and 470 mapped streams. The diverse topography of the park contains approximately 382 lakes and ponds. These aquatic ecosystems support a variety of fish, amphibian, and macro invertebrate communities.

The park hosts at least eight native fish species (species that occur naturally within the park boundaries and have evolved alongside the dynamic physical and biological components of their unique environments). Native species play an integral role in maintaining the health and resilience of aquatic ecosystems. Native fishes within the park include both resident and

Mount Rainier National Park has...

- 9 major watershed headwaters;
- 470 mapped streams;
- ◆ 382 lakes and ponds;
- 8 documented native species;
- 3 fish species listed as threatened under the Endangered Species Act–bull trout, Puget Sound steelhead, and Chinook salmon;
- 2 fish species listed as species of concern–coastal cutthroat trout and coho salmon.

migratory populations. Resident fish reside in park waters year-round while migratory species utilize park streams for spawning and rearing before migrating downstream to forage and mature. Three native fish species within the park are listed as threatened under the Endangered Species Act (ESA) bull trout (Salvelinus confluentus), Puget Sound steelhead trout (Oncorhynchus mykiss), and Chinook salmon (Onchorynchus *tshawytscha*) – and two species are listed as species of concern coastal cutthroat trout (Onchorynchus clarkii clarkii) and coho salmon (*Onchorynchus* kisutch). Other native species found within the park include pink salmon (Onchorynchus gorbuscha), mountain whitefish (Prosopium williamsoni), and various sculpin species (Cottus spp).

A History of Fish Stocking

Aquatic Invasive Species

Like many national parks, the history of fisheries management at Mount Rainier National Park included stocking of non-native fish to enhance recreational fishing opportunities. Non-native fish include both species that are not naturally occurring within the watersheds as well as native species introduced into areas historically not occupied by that species.

Between 1915 and 1972, over nine million fish were stocked into park waters, the majority of which were stocked in lakes that historically were fishless. Commonly stocked species include non-native westslope cutthroat trout (*Oncorhynchus clarkii lewisi*), eastern brook trout (*Salvelinus fontinalis*), and kokanee salmon (*Oncorhynchus nerka*) as well as native rainbow trout (*Oncorhynchus mykiss*).

Though the last official fish stocking within the park occurred in 1972, the legacy of stocking continues through non-native fish presence and altered aquatic communities. Dozens of streams and 35 historically fishless lakes within the park continue to support breeding populations of non-native fish. Non-native fish species compete for limited food and habitat resources, prey on native fish and amphibians, and degrade the genetics of native fish through hybridization. These interactions are a cause for declines in native aquatic species in the park.

Of special concern, native threatened bull trout are susceptible to direct competition and hybridization with non-native eastern brook trout in streams throughout the park. Because of the threatened status of bull trout, the large amount of bull trout critical habitat within park boundaries and the extensive overlap between bull trout and brook trout habitat usage, the removal of non-native brook trout in sensitive areas is a priority for fisheries managers at Mount Rainier National Park.

A pack team hauls fish to stock Sunrise Lake.



Prevent the Spread of Aquatic Invasive Species to Preserve These Scenic and Protected Waterways!

Aquatic invasive species (AIS) are waterborne, non-native organisms that out-compete native organisms, introduce diseases or parasites, or adversely change the aquatic ecosystem. Humans unwittingly assist the spread of these organisms by transferring them from one body of water to another on footwear, waders, nets, watercraft, and other equipment. Some AIS concerns within the park include the following:

- Chytrid fungus (*Chytridiomycosis*) Present in some locations within the park, is a fungus implicated in rapid declines of amphibian populations worldwide,
- Whirling disease Not currently present in the park, is a parasitic infection that threatens native salmonid populations and park fisheries,
- Eurasian watermilfoil Not currently present in the park but present throughout Washington state, forms thick submerged vegetative mats

that choke out native aquatic fish and amphibians.

You can help prevent the spread of AIS by following these guidelines before fishing at Mount Rainier National Park:

- Remove ALL visible mud, plants, invertebrates, and fish from your watercraft, trailers, waders, boots, and gear.
- DO NOT dump any water from other sources into Mount Rainier Park waters.
- NEVER empty bait or release fish into a body of water unless they were caught in that body of water.
- Wash, disinfect, and dry EVERYTHING that comes into contact with water before entering any new water body.



All gear, including waders, boots, nets, and angling equipment, should be scrubbed, disinfected, and dried.

More information on preventing the spread of aquatic invasive species: https://www.nps.gov/subjects/invasive/aquatic-invasive-species.htm

Fishing at Mount Rainier National Park

Fishing is defined as any activity using a rod or line for the purpose of attracting, catching, or possessing fish. There are three levels of regulations to be familiar with: parkwide, stream fishing, and lake fishing regulations.

Parkwide Fishing Regulations

To be followed while fishing anywhere within park boundaries:

- A state fishing license is not required; however, a Washington State catch record card is REQUIRED to fish for salmon and steelhead;
- Fishing is allowed from 1 hour before sunrise to 1 hour after sunset;
- Possession or use of live or dead bait fish, amphibians, non-preserved fish eggs, or roe is prohibited;
- Digging for bait is prohibited;
- Chumming is prohibited; and
- Fishing from a motor road bridge is prohibited.

6

Retention

When retaining fish, the skin needs to remain intact for species identification. See stream regulations and lake regulations for area specific retention regulations.

Legal Gear

- Lead fishing tackle is prohibited because lead is highly poisonous to aquatic biota and humans with long lasting environmental consequences.
- Fishing by any method other than hook or line (i.e. chemicals, explosives, electricity) is prohibited.

Non-native brook trout are found in many of Mount Rainier's lakes and streams.



Help Conserve Native Fish! Catch and release all native fish and keep all non-native fish.

Non-native fish include any fish caught in a lake and any eastern brook trout or kokanee salmon caught within the park.

Streams at Mount Rainier National Park

A stream is defined as any body of moving water (such as a river or creek).

Season

There are two fishing seasons within Mount Rainier National Park. The fishing season closes earlier in the year in watersheds with ESA listed species to protect them while they are spawning.

- White, Huckleberry, West Fork, Carbon, and Mowich (see map) are open from the first Saturday in June until Labor Day.
- The Puyallup, Nisqually, Cowlitz, and Ohanapecosh watersheds are open from the first Saturday in June until October 31.

Waters Closed to Fishing

The following streams are closed to fishing to protect water supplies:

- Klickitat Creek above Sunrise Road;
- Laughingwater Creek above the Ohanapecosh water supply intake; and
- Edith Creek above the Paradise water supply.

This stream is closed to fishing to protect ESA threatened bull trout:

- Fryingpan Creek above the confluence with the White River.
- A morning on Fryingpan Creek, which is closed to fishing to protect threatened bull trout.

Retention

These retention regulations are to be followed for all park streams:

- Catch and release of all native fish species (see Native Salmonid Identification);
- Retention permitted for kokanee and brook trout.

Legal Gear

- Artificial lures and flies only.
- Single-point barbless hooks only.
- Bait is prohibited, including any substance which attracts fish by scent or flavor.

Method

- Fishing for any spawning fish is prohibited.
- Snagging or attempting to snag any fish is prohibited.



Lakes at Mount Rainier National Park

A lake is defined as a standing body of water surrounded by land and distinct from its inlet or outlet streams.

Closed Waters

All lakes are open year-round except as listed below.

The following lakes are closed to protect sensitive riparian vegetation:

- Tipsoo Lake;
- Shadow Lake; and
- Reflection Lake.

The following lake is closed to protect water supplies:

Frozen Lake

Retention

There are no daily or annual catch limits for fish caught in lakes.

Legal Gear

- Use of multiple point hooks with barbs is allowed.
- Refer to Parkwide Fishing Regulations on page 6 for information on the use of bait.

Method

- Fishing for spawning fish is permitted.
- Snagging fish is permitted.



Guidelines For Fishing At Mount Rainier National Park

The following are not required, but are suggested guidelines intended to promote native species conservation, responsible angling practices, and the protection of sensitive areas.

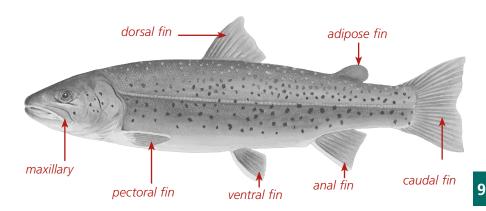
Fish handling – Native Fish

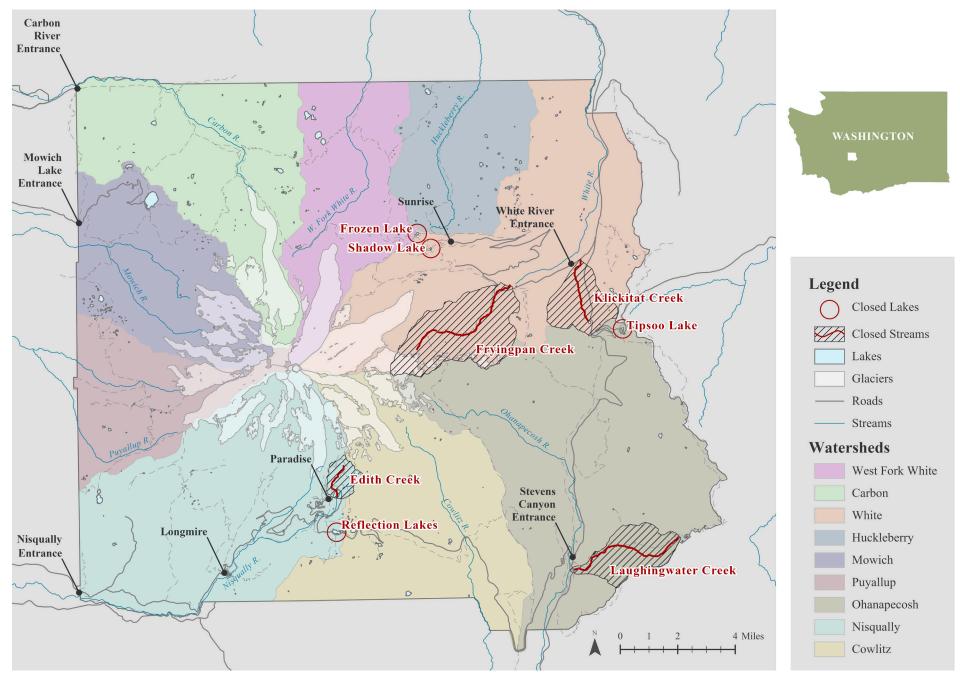
- Avoid 'playing' fish to exhaustion and release quickly.
- Land fish using a knotless or rubber fishing net.
- Use wet hands or gloves to gently handle fish.
- Keep the fish wet, calm and properly supported, never hold a fish by its gills.
- Remove the hook without injuring the fish. If the fish is hooked deeply, cut the line and leave the hook.
- Release fish unharmed and fully recovered into the water it was caught in.

Fish Handling and Disposal – Non-Native Fish

- Non-native fish include any fish caught in a lake and any eastern brook trout or kokanee salmon caught within the park. Retention or humane euthanization of non-native fish is encouraged to reduce competition and likelihood of hybridization with native fish, as well as to restore ecosystems for other native aquatic species. Euthanize fish as humanely as possible (i.e. a blow to the head followed by pithing or decapitation)
- Dispose of fish and entrails into fast moving or deep water habitats where they were caught.

Key Features for Identifying Salmon and Trout





Map of waters closed to fishing and major watersheds.

Native Salmonid Identification

Coastal Cutthroat Trout (Oncorhynchus clarkii clarkii)

Description:

Light body with dark spots, distinguished from rainbow trout by prominent orange to red slash under the jaw, and maxillary extending beyond the eye.

Distribution: Present in all park watersheds and many mountain lakes.

Rainbow Trout (Steelhead) (Oncorhynchus mykiss)

Description:

Light body with dark spots, distinguished from cutthroat trout by no orange to red



slash under the jaw, and maxillary extending to middle of the eye.

Distribution: Present in all park watersheds and many mountain lakes. Steelhead (the migratory form of rainbow trout) may be encountered in the White, West Fork, Carbon, and Mowich watersheds.

Bull trout (Salvelinus confluentus)

Description:

Dark body with light spots; white leading edges on fins; distinguished from brook trout by lack of pigmentation or spotting on dorsal fin.



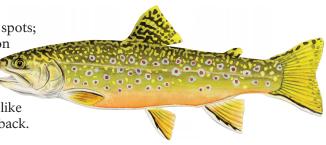
Distribution: Often encountered in the White and Carbon river watersheds; possible encounters in Puyallup, West Fork, and Mowich watersheds.

Infrequently encountered native salmonids include Chinook salmon, coho salmon, pink salmon, and mountain whitefish.

Eastern Brook Trout (Salvelinus fontinalis)

Description:

Dark body with light spots; white leading edges on fins; distinguished from bull trout by dark markings on dorsal fin and worm-like patterning along the back.



Distribution: Present in all park watersheds and many mountain lakes.

Kokanee (Sockeye) Salmon (Oncorhynchus nerka)

Non-spawning colors

Description:

Non-spawning colors greenish blue back with faint speckling and few if any spots; sides and belly silvery. Spawning colors back and sides red to dirty red gray, olive head, and may have dark spots on back and tail.



Distribution: Present in the Nisqually watershed and Mowich Lake and its tributaries.

Other potentially encountered non-native salmonids include westslope cutthroat trout and Yellowstone cutthroat trout, although distinguishing these species from native coastal cutthroat trout is difficult. Any suspected cutthroat caught in park streams should be treated as a native trout.

Monitoring Fish Populations

Frequently Asked Questions

Fish biologists within Mount Rainier have been studying native fish communities, the role they play in glacial watersheds, and their relationship to non-native species since 1999. Prior to this time, little was known about fish population dynamics and how these dynamics relate to overall watershed health. This monitoring helps biologists to understand trends in the park's fish populations and informs management decisions for Mount Rainier's fishes and aquatic ecosystems.

Redd Surveys

Biologists walk along streams identifying and counting bull trout and salmon nests (redds) to gauge the numbers of returning spawners.

Snorkel Surveys

Biologists snorkel streams identifying species and counting number of individuals seen.

eDNA

Biologists collect and analyze water samples for the presence of environmental DNA (eDNA), or trace amounts of genetic material left behind by organisms. The data is used to determine the distribution of fish species within the park.

Life History Studies

Biologists use a variety of methods to capture fish and implant passive integrated transponder (PIT) tags to track how fish move and utilize habitats both within and downstream of park boundaries

Genetic Research

Biologists collect and analyze fin tissue to determine population dynamics, genetic health and hybridization between native and nonnative species.

Citizen Science

Citizen anglers can help monitor fish populations by documenting and reporting their catch.

Biologists use electrofishing equipment to safely capture, measure, and tag fish.



Do I need a state fishing license in Mount Rainier National Park?

No, a state license is not required. How can I help the park's fisheries?

- Learn to identify fish species;
- Retain or humanely euthanize all brook trout;
- Follow the regulations outlined in this pamphlet; and
- Take action to stop the spread of Aquatic Invasive Species.

Why are barbless hooks required in park streams?

Barbless hooks reduce the likelihood of injury and the amount of time needed to handle a fish.

How does fish DNA make it into the environment?

As fish lose scales, defecate or decompose their DNA becomes part of their environment (the water). Biologist are then able to collect water samples and isolate target species DNA if it is present in the water sample.

A Note on Mercury and Fish Consumption

Past studies have found elevated levels of mercury exceeding health thresholds for fish, birds, and humans in some fish sampled from select lakes in Mount Rainier National Park. However, the majority of fish sampled in the park had concentrations below established human health thresholds. As of 2019, the Washington State Department of Health has not recommended a fish consumption advisory for Mount Rainier National Park. The possibility of catching highly contaminated fish in the park is likely low, but each person should make their own decision about eating fish that were caught in Mount Rainier National Park.

Additional information on mercury in the national parks and effects on human health can be found at: https://www.nps.gov/subjects/air/nature-toxics.htm

Fishing on the shore of Mowich Lake.

