

Spring Creek National Fish Hatchery



Underwood, Washington

Hatchery Beginnings

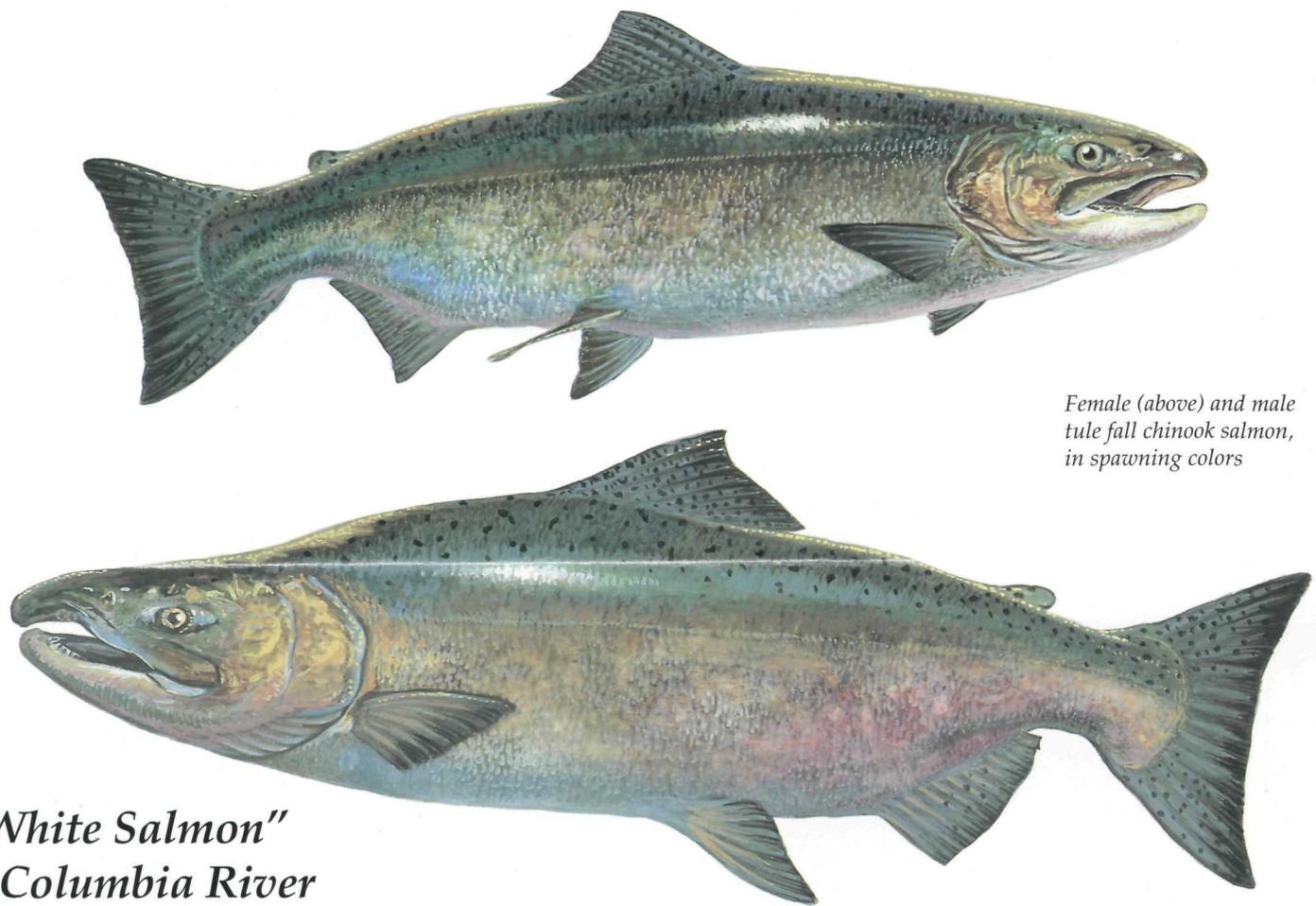
The Spring Creek National Fish Hatchery was established in 1901 as one of several egg collection stations for the Bureau of Commercial Fisheries Clackamas hatchery. As the human population of the Columbia River Gorge increased, heavy fishing pressure and destruction of habitat resulted in the U.S. government deciding to produce fish at the hatchery.

The original hatchery was flooded when the Bonneville Dam was built in 1938. After several modifications, the hatchery was redesigned and rebuilt by the U. S. Army Corps of Engineers in 1972. Expansion was undertaken to partially compensate for the loss of fall chinook spawning grounds due to dam construction along the Columbia River.

Salmon spawning operations at Spring Creek, 1950.



The Tule Fall Chinook Salmon



Female (above) and male tule fall chinook salmon, in spawning colors

The "White Salmon" of the Columbia River

Tule fall chinook salmon are native to this part of the Columbia River and have historically provided food for people living along the river. Columbia River Indians called them *mitúla*, or "white salmon," since the tule fall chinook's flesh is light-colored.

Chinook, or King, salmon are the largest of the Pacific salmon. Adults average 23 pounds and fish 50 to 80 pounds are not uncommon. All Pacific salmon are anadromous, meaning they spend their adult lives feeding in the ocean but return to their natal rivers to spawn. Both male and female salmon die after spawning.

Unlike other chinook, which spend weeks or months in fresh water before spawning, tule fall chinook spawn quickly after reaching their home rivers. Their strategy is to convert as much of their fat and muscle as possible into eggs or milt. Thus, they typically appear darker and in worse condition when they arrive at the spawning grounds than other types of chinook.

Because of the migration pattern of the adult fish, this stock is still a major contributor to the commercial and recreational salmon harvest along the Washington coast as well as in the Columbia River.

The Hatchery Today

Spring Creek National Fish Hatchery raises over 15 million tule fall chinook salmon annually. Water temperature and diet are carefully controlled to help the young fish grow as large as possible before release. This gives them a better chance of surviving the 167-mile swim to the ocean. All young fish are released directly into the Columbia River at the hatchery. Surplus eggs may be shipped to other hatcheries.

The Spring Creek hatchery was built on this site to take advantage of the pure water available from springs that emerge at the base of cliffs just north of the hatchery. To conserve water and reduce pollution, the present-day hatchery recycles its water through oyster shell filtration beds. Ninety percent of the water used in the hatchery's rearing ponds is recycled.



The hatchery welcomes visitors to tour the information center and hatchery. Special group tours and educational programs can be arranged in advance.





Rearing Ponds

Spring Creek NFH produces 15.1 million smolts yearly in its 44 rearing ponds. Water in the ponds, like that in the incubators, is warmed to 52°F, which helps the young fish grow faster and reach a larger size before release. Fish hatched the previous fall are released in March, April, and May, when they are 3.3 to 4.5 inches long. Smolts move quickly towards the ocean, generally reaching the estuary within 10 to 14 days.

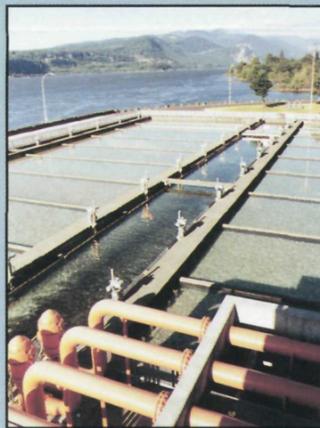
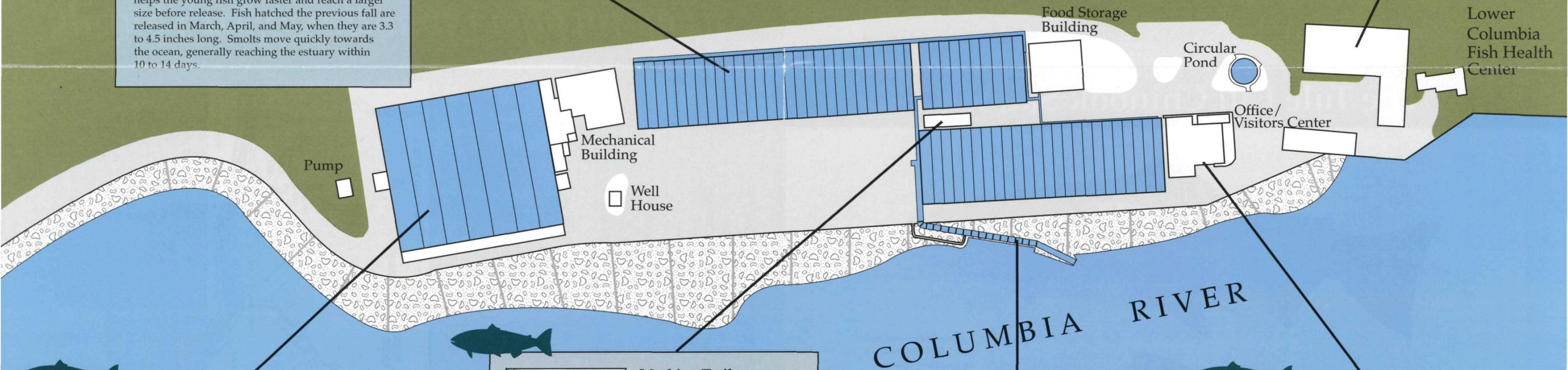


Incubation Building

Fertilized eggs are moved to the incubation building. The incubators here can hold nearly 60 million salmon eggs. To speed up egg development, water in the incubators is warmed to 52°F by mixing warm well water with colder spring water. The eggs hatch in 6 to 7 weeks. After the hatchlings absorb their yolk sacs, they are moved into rearing ponds.

Spring Creek National Fish Hatchery

S.R. 14



Water Reuse System

About 10 percent of the water used in the rearing ponds comes from springs. The remainder is recycled through an 18-bed oystershell filtration system. Water from the ponds goes through biological filters, where naturally-occurring bacteria convert wastes to harmless nitrates. The water is pumped through an aeration tower to add oxygen to it before returning to the ponds. About 10 percent of the water is diverted into settling ponds before finally draining into the Columbia River.



Marking Trailers

Where do our fish go after they leave the hatchery, and how many are being harvested? To answer these questions, up to 1 million fingerlings each year are marked with tiny coded wire tags. Workers insert the hair-thin wire into the fish's nose, and clip the adipose fin to show that the fish carries a tag. Biologists recover tags from adult salmon caught in ocean and river fisheries. Coded notches on the wire tell where and when the fish was raised and if it was part of an experimental study.



U.S. Army Corps of Engineers



Fish Ladder

Each fall, tule fall chinook salmon migrate from their ocean feeding grounds to the river—or the hatchery—where they began their lives. Guided by the unique chemical "fingerprint" of the hatchery's spring water supply, the adult salmon locate the hatchery and swim up the fish ladder into the holding ponds.



Spawning Building

Returning adult fish are moved into the spawning building, where the eggs are taken from the female fish and fertilized by milt (sperm) from the males. Each female produces nearly 5,000 eggs. Since the fish are chemically anesthetized, people cannot eat them. Instead, the carcasses go to a rendering plant where they are made into fertilizer, fish oil, and other products.



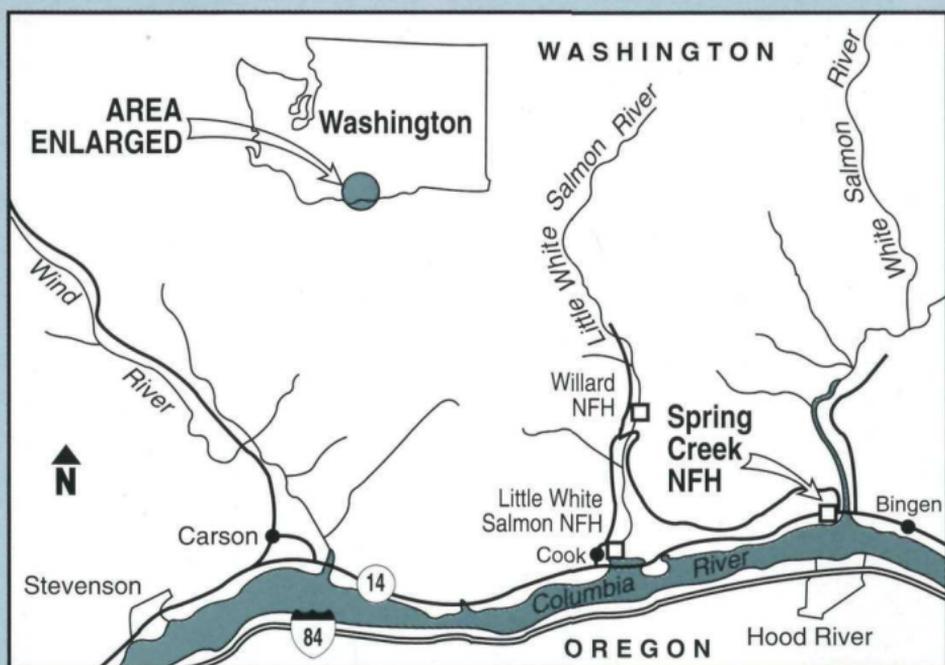
Walking Tour Stops
(Marking Trailers February, March and April only)

Visiting the Hatchery

The Spring Creek National Fish Hatchery is located 2 miles west of the Hood River/White Salmon bridge on State Highway 14. Visitors are welcome at the hatchery from 7:30 a.m. to 4:00 p.m. daily, September through May, and weekdays mid-May through August. Visitors' Weekend is an annual event, held the second or third weekend of September, during which visitors can tour the hatchery and watch spawning of adult salmon. Call ahead for spawning dates or group tours, (509) 493-1730, or write:

Spring Creek National Fish Hatchery
61552 S.R. 14
Underwood, Washington 98651

If you would like more information about the U.S. Fish and Wildlife Service and our activities in the Columbia River Gorge, call the Information and Education Office at (509) 538-2242. Group tours and educational programs can be arranged.



The U. S. Fish and Wildlife Service manages National Fish Hatcheries and National Wildlife Refuges throughout the country for the continued conservation, protection, and enhancement of our fish and wildlife resources and their habitats.

No person shall, on the basis of race, color, sex, age, national origin, religion, physical or mental restrictions, be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in any program or activity of the Department of the Interior.



U.S. Department of the Interior
Fish and Wildlife Service



August 1995

NFH 13255

Cover Photo: ©Elizabeth Fery/Environmental Images