



The Lake Washington Ship Canal

Fish Ladder

U.S. Army Corps of Engineers
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Our Valuable Resource

The fisheries of the Pacific Northwest are one of our most valuable resources, both for commercial and sport fishing.

Of the millions of young fish that begin life, only a relative few survive to adulthood. The obstacles during their life cycle are many, including natural predators, commercial and sports fishing, disease, low stream flows, poor water quality, and concentrated development along streams and lakes.



Ocean Phase



Male - Freshwater Phase

Chinook (king) Salmon—*Oncorhynchus tshawytscha*

The average size of this fish is about 36 inches, and it weighs from 10 to 50 pounds. The teeth are well-developed, and the jaws are strongly hooked in breeding males. Prior to spawning time, when you see them passing through the fish ladder, they are blue-black on the back with silvery sides. Look for spotting on the back and tail. The flesh along the base of the teeth of the lower jaw is also black. The chinook will appear at the ladder in July, August and September and will spawn in

fresh water in October and November. After three to four months in fresh water, the smolts migrate to sea to grow to maturity in three to five years. The chinook is a valuable resource, both commercially and as a sport fish. They range along the Pacific Coast from California to Alaska. Occasionally, 12- to 14-inch jacks (2-year-old males not ready to spawn) will return through the ladder.



Ocean Phase



Male - Freshwater Phase

Coho (silver) Salmon—*Oncorhynchus kisutch*

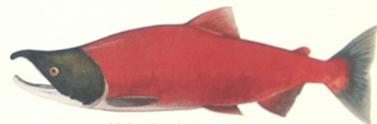
Adult coho average 6 to 12 pounds, but individuals up to 30 pounds and 39 inches long have been taken. You can identify this salmon by the fine spots confined to the upper tail lobe and the pale flesh along the base of the teeth of the lower jaw. As in the chinook, the spawning male coho's jaws are hooked and the teeth are well-developed. As they pass through the fish ladder, usually between August and December, they are identified by their bluish green back and head and silvery sides the latter part of the season. Young

coho migrate to sea at the beginning of their second year. They are full grown when they are three years old and return to fresh water to spawn and die. Some 2-year-old male cohos also return as jacks (too young to spawn) at about 12 inches in length. In the commercial fishery coho salmon rank next to sockeye in total value. The sports fisherman regard coho as a favorite, along with chinook salmon. Coho are found along the Pacific Coast from San Francisco to Alaska.

Federal, state, and local agencies and Indian Tribes work together to protect and enhance these fisheries. Research, hatchery propagation, and regulatory actions combine to ensure the continuance of a healthy fishery. This fish ladder was constructed and is dedicated to improving and enhancing the Lake Washington and Cedar River watersheds fisheries. The four major species of fish that use the ladder are described below. As adult fish in the ladder, they are headed for their spawning grounds to begin another cycle. In the spring, you may see smolts going out to the ocean to mature.



Ocean Phase



Male - Freshwater Phase

Sockeye (red) Salmon—*Oncorhynchus nerka*

These highly-prized Pacific salmon range up to 33 inches long and usually weigh about 8 pounds. As they pass through the ladder, generally between June and September, you can identify this salmon by the absence of black spots. At breeding time the males are red on their back and sides with a whitish belly, and a dark green head. They also develop a distinct hump behind their head. Breeding females are darker on the sides. As with the coho and chinook, the male sockeye salmon have well-developed teeth and hooked jaws. The

mature adult sockeye heading up the ladder are four or five years old. Juvenile sockeye leave the tributary spawning area and spend one or two years in Lake Washington before heading to sea. The sockeye run that uses the fish ladder was introduced into Lake Washington in the 1930s, and the run has remained steady over the years. They are found along the Pacific Coast from California to Alaska and westward to Japan and are highly prized for eating because of the high oil content of their flesh.



Ocean Phase



Male - Freshwater Phase

Steelhead—*Oncorhynchus mykiss*

This fish commonly averages 26 inches long and weighs up to 20 pounds. You can recognize the steelhead by spots on the dorsal (back) fin and the square shape of the tail. Spawning runs pass through the Lake Washington Ship Canal fish ladder between December and May. Adult steelhead spawn in fresh water, and unlike other salmon, a small number may return to spawn a second or sometimes even a third time. Most of the

young fish remain in fresh water for one or two years before migrating in the spring to the sea. After two or three years in the ocean they head for fresh water to spawn. Steelhead are found from the California-Mexico border to Alaska. This is the game fish that sportsmen go to great lengths to catch -- a joy to hook and good to eat!