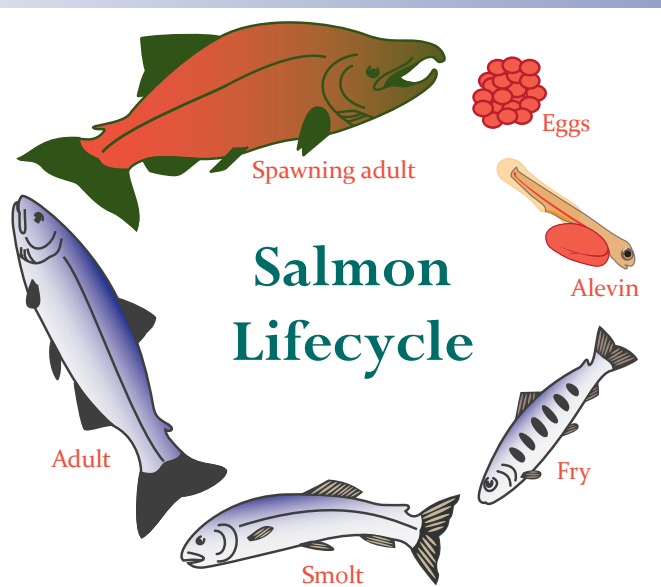




shade our streams

A CLACKAMAS RIVER BASIN COUNCIL PROJECT



To the Ocean & Back Again

Native salmon, steelhead, and Pacific lamprey are **anadromous**, which means they are born in fresh water streams and migrate to the ocean. There they spend up to 5 years before embarking on the long journey home to the stream of their birth. Driven by instincts, they overcome many obstacles along the way such as dams, waterfalls, culverts, low water flows, pollution, sediment, and predators. Once home, salmon create spawning beds known as **redds** in which they lay 2,000–10,000 eggs. Of those eggs, 1-5% are successful in producing juvenile fish, and 2% of those will survive to adulthood. It's tough out there for a salmon!

My Role as a Landowner: Creating Salmon Habitat

The benefits that your riparian trees and shrubs provide salmon are ever-evolving as they mature.

Clean Water – Roots and stems in the floodplain reduce erosion and catch soil before it ends up in the stream as runoff. Upon reaching the stream, dirt is referred to as **sediment** and is considered a pollutant. As it sinks to the bottom of the stream, sediment fills in the gravel where salmon lay their eggs and can suffocate hatching juveniles. Water with a lot of sediment suspended in the stream is cloudy, causing high stream temperatures, clogged fish gills, and limiting the ability of fish to locate food.

Food – Trees young and old contribute their much needed leaves and needles to the food web. Dead leaves are known as **leaf litter** and provide food for bugs, which in turn are eaten by salmon and other fish.

Cold Streams – As plants mature, they provide increasing shade over the stream, cooling the water to safe temperature levels for salmon.

Protection – As trees grow old and fall in the stream they provide further benefit to salmon. Fallen trees act as cover for salmon to hide from predators, collect gravel for spawning habitat, and create deep pools of cool water for them to rest in on their journey to and from the ocean.

Native Plants: Helpful at Any Age

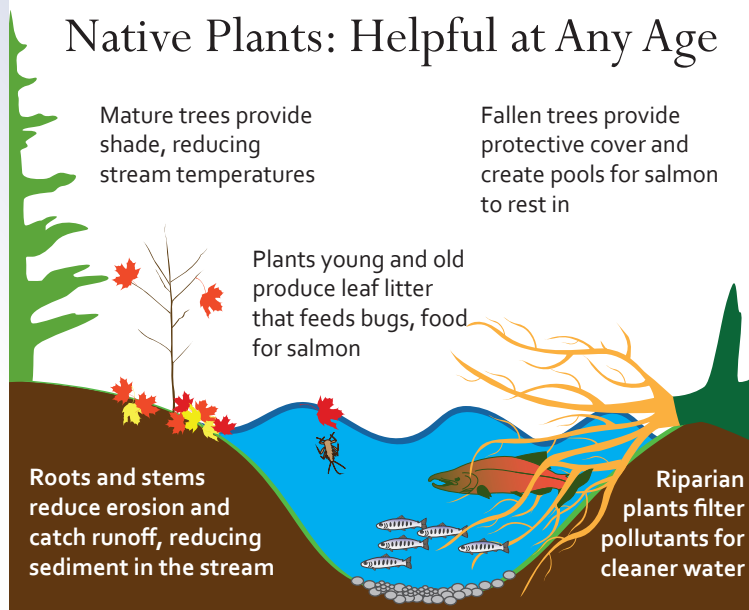
Mature trees provide shade, reducing stream temperatures

Fallen trees provide protective cover and create pools for salmon to rest in

Plants young and old produce leaf litter that feeds bugs, food for salmon

Roots and stems reduce erosion and catch runoff, reducing sediment in the stream

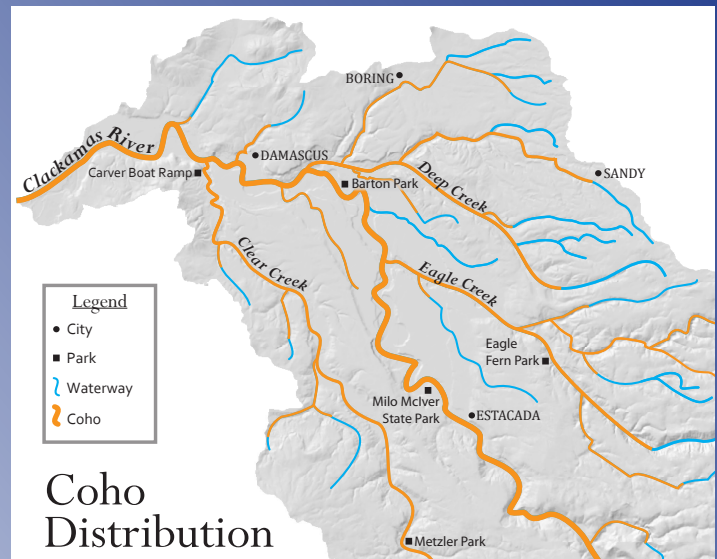
Riparian plants filter pollutants for cleaner water



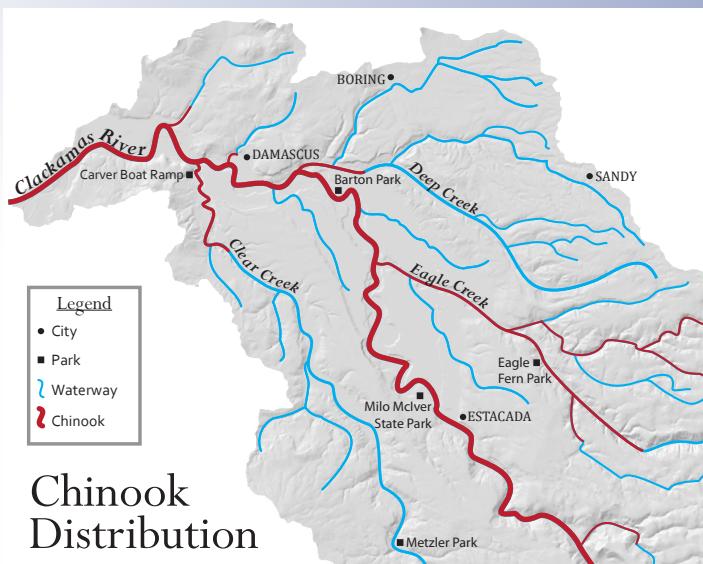
Clackamas Salmon

The Clackamas watershed is salmon country, home to Chinook and coho as well as other migrating species such as steelhead and Pacific lamprey. In addition to their important role in our native ecosystem, local art, food, and culture, salmon are a key player in Oregon's economy. In 2011, anglers spent over \$640 million on fishing trips and fishing equipment in Oregon*. And that's just sport fishing. The commercial fishing industry is another can of worms altogether.

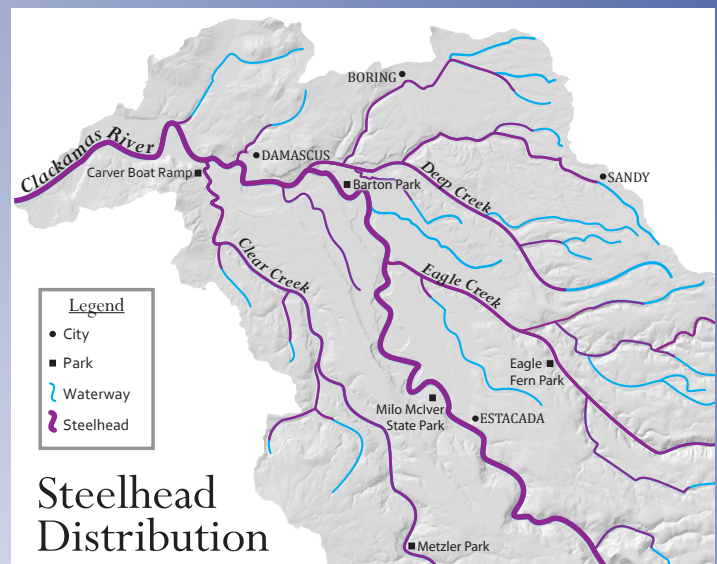
Maps show salmon distribution where Shade Our Streams is active, but native runs continue far into the upper reaches of the basin. *www.census.gov/prod/www/fishing.html



Coho Distribution



Chinook Distribution



Steelhead Distribution

Species	Time in Freshwater	Time in Ocean	Adult Size	Preferred Spawning Habitat
Chinook	3-12+ months	2-5 years	10-40 lbs.	Mainstem, large, and small rivers
Coho	over 12 months	2 years	5-20 lbs.	Tributaries, slack water, and side channels
Steelhead	over 12 months	1-4 years	5-30 lbs.	Tributaries, small streams, and rivers

What Happens Next? Preparing to Take the Reins

As your time in the Shade Our Streams program draws to a close, your role in managing your planting area will begin to ramp up. You can prepare for this transition by learning how to identify the weeds on your property and how to distinguish them from native plants. Contact us for a free weed identification guide, native identification guide, and any other information you may find helpful throughout this transition process.

Contact us

Clackamas River Basin Council
PO Box 1869
Clackamas, OR
www.ClackamasRiver.org
503-303-4372
info@ClackamasRiver.org



We will be in touch with landowners as they near program completion to discuss goals for the future of their property. Together we will establish a management plan for the streamside area based on landowner goals and capacity.