

**YOU'RE INVITED!**  
**Annual Salmon  
Celebration**

**11 a.m. to 4 p.m. Sunday  
September 24, 2017  
Westmoreland Park**

Come celebrate the return of salmon to Crystal Springs Creek. The celebration includes a Native American blessing, a salmon bake demonstration, games, crafts, and inter-tribal activities. The event is free and open to all.

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www.portlandoregon.gov/bes

The City of Portland complies with all non-discrimination laws including Title VI (Civil Rights) and Title II (ADA). To request a translation, accommodation or additional information, please call 503-823-7740, or use City TTY 503-823-6868, or Oregon Relay Service: 711.

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ENVIRONMENTAL SERVICES  
CITY OF PORTLAND  
working for clean rivers  
Nick Fish, Commissioner  
Michael Jordan, Director



The Bureau of Environmental Services works with Portland residents and businesses to protect water quality, public health, and the environment through wastewater collection and treatment, sewer construction and maintenance, stormwater management, and stream and watershed restoration.

## Creating Salmon Sanctuaries

**Portland has more Endangered Species Act-listed salmon than any other major west coast city.** In 2016, Portland achieved Salmon-Safe certification, making it the first city in the world to receive this honor for its systematic approach to restoring salmon habitat. To raise awareness and celebrate salmon recovery, Portland is also establishing a Salmon Sanctuary designation for certain local streams. Salmon Sanctuaries are locations that support salmon populations and where a substantial investment in their habitat has been made. Crystal Springs Creek is the first stream that may receive the designation.



# RiverViews

FALL 2017



Salmon spawning in Crystal Springs Creek.

## Salmon in Our City

*Environmental Services protects threatened and endangered species in our community, and this work is central to our mission of working for clean rivers.*



### See salmon in action!

Watch a video of salmon in Crystal Springs Creek and learn more about salmon in our city at [www.portlandoregon.gov/bes/RiverViews](http://www.portlandoregon.gov/bes/RiverViews)

Salmon are considered a keystone species, meaning that their presence (or absence) is a good indicator of the health of waterways. If salmon populations are healthy, it can generally be assumed that the water is clean and healthy. And if rivers and streams are clean enough for fish, they're clean enough for the people who live, work, and play near them.

The work that Environmental Services does in Portland directly contributes to the health and future success of salmon by ensuring that the streams and waterways in our community are cold, clean, and accessible. You may have heard about salmon swimming upstream, migrating from the Pacific Ocean to rivers and streams. But did you know that Portland's streams and waterways are important locations where salmon come to rest, grow, and even spawn?

**Learn more inside about the salmon's local stomping grounds, and our work to restore and protect the habitats they need.**

### HOW YOU HELP SALMON

Portlanders have an important role in making sure salmon habitat is clean and healthy. The sewer and stormwater rates you pay have a direct, positive impact on salmon. Additionally, you can take actions to help protect our rivers and streams, such as:

- **Ride your bike, take TriMet, or walk.** Driving less reduces automotive fluid leaks on roadways. When it rains, these pollutants are washed into streams.
- **Go green by planting native trees, shrubs, and ground covers.** They filter pollutants and reduce stormwater runoff, which can carry pollution into our rivers and streams.
- **Watch what you flush.** Your toilet is designed to handle human waste and toilet paper only. Many things—if flushed down toilets or poured down drains—can damage sewers and cause basement backups and sewage overflows to our rivers and streams.



# Where are the salmon?



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CITY OF PORTLAND

Native salmon and steelhead are found in more than 125 miles of Portland's 300 miles of waterways. To survive and thrive, fish need access to food, places to hide, and spots to rest. Salmon also need cool, clean water. Highlighted on the map are some of the projects by the Bureau of Environmental Services designed to support salmon and other fish.



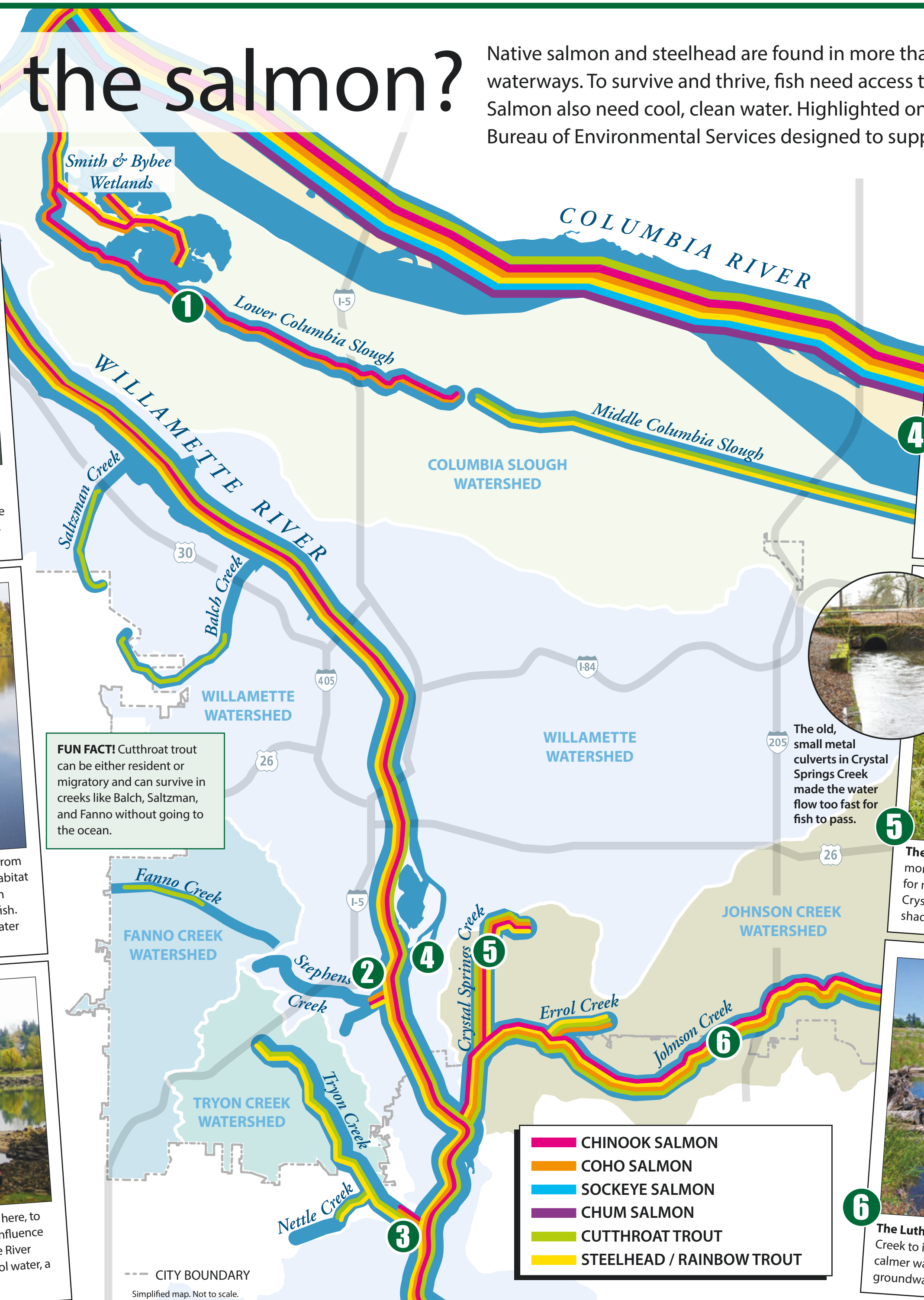
**1** The **Lower Columbia Slough Refugia** project added engineered log jams in the lower Columbia Slough. The log jam shown here will be partially underwater when the Slough is high and give young fish a place to hide from predators. The wood also attracts insects and other sources of food for the fish.



**2** Root wads, the tree stumps with roots attached seen in this picture from the **Stephens Creek Confluence Project**, play an essential role in habitat restoration projects. Root wads redirect flow and reshape the stream bed to create pools and provide shelter for migrating and resident fish. Streams like Stephens Creek are also an important source of cold water to the Willamette River.



**3** The **Tryon Creek Confluence Project** also used log jams, shown here, to redirect the flow of water to create deep, shady pools for fish. Confluence projects are important for fish swimming through the Willamette River because the smaller creeks and streams can provide fish with cool water, a place to rest, food, and protection during their migration.



The 170-acre Oaks Bottom Wildlife Refuge is the largest remaining natural area in the lower Willamette River floodplain. The **Oaks Bottom Habitat Enhancement Project** will improve 75 acres of wetland habitat and help make the refuge a better resting spot for salmon during their migration. The project also will benefit other wildlife dependent on the refuge, including migratory birds, bats, and amphibians.



The old, small metal culverts in Crystal Springs Creek made the water flow too fast for fish to pass.

**5** The new **Crystal Springs Creek culverts**, as shown here, are wider and more open like natural stream beds. The new culverts make it possible for more salmon to swim to nearly three miles of prime habitat that Crystal Springs Creek provides. New plants along the creek banks help shade the water to keep it cooler.



**6** The **Luther Road Habitat Enhancement Project** reconnected Johnson Creek to its floodplain, as shown here. This helps fish by providing calmer water when the creek is running high and fast. It also replenishes groundwater, which feeds into the creek to keep the water cooler.

CHINOOK SALMON  
COHO SALMON  
SOCKEYE SALMON  
CHUM SALMON  
CUTTHROAT TROUT  
STEELHEAD / RAINBOW TROUT

--- CITY BOUNDARY  
Simplified map. Not to scale.