March 7, 2019

PGE Clackamas River Fisheries Newsletter — Winter 2018-2019

Here on the Clackamas it's been a cold winter characterized by below average temperatures and stream flows. While environmental conditions have slowed adult fish returns, juvenile fish counts have been extremely strong (even record breaking). Adult fish returns are still impressive when compared to regional trends. As we head into the busy spring season, our team is feeling optimistic. Ocean conditions are taking a turn for the better, and recently-completed lower river habitat projects will help improve conditions for fish throughout the basin.

Learn more about our work on the Clackamas throughout this newsletter, and please forward this email to any friends or family members who share your interest in the Clackamas basin.

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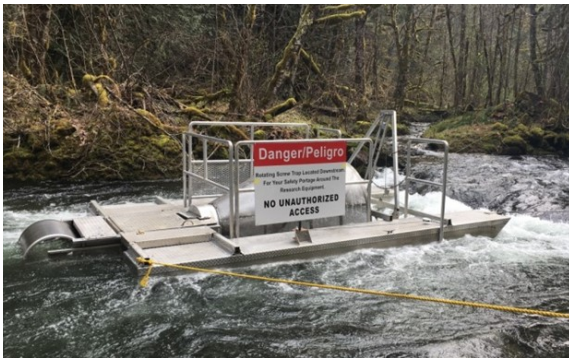
Featured Study: Smolt Trapping at Oak Grove Fork



For 88 years, spring Chinook were absent from the lower Oak Grove Fork — extremely low flows in the summer caused by historic dam diversions meant that fish couldn't enter this Clackamas tributary. In 2013, that all changed. Thanks to several major habitat and flow projects, spring Chinook are now returning to Oak Grove Fork, where PGE biologists monitor their populations.

How does the study work?

- Every other year, biologists snorkel the lower Oak Grove Fork, swimming upstream to observe and record numbers of spring Chinook. This survey provides information on the various life stages of fish present in the stream.
- A rotary screw trap is installed each year in the same location. The trap collects a sample of out-migrating juvenile fish; this data is compared to samples from previous years, allowing us to evaluate the effect of recent changes.
- Improvements to the lower Oak Grove Fork include habitat alterations (large wood installation, gravel augmentation, and restoration of side channels) as well as enhanced flows from Lake Harriet Dam.

What have we learned?

- Early indications suggest that fish populations have responded quickly and positively to the habitat changes in the lower Oak Grove Fork.
- ODFW spawning data obtained in 2018 suggest that this area is responsible for 7.5% of all spring Chinook redds in the Clackamas basin.
- Collection of fry, smolts and other juveniles at the screw trap indicates that successful spawning is taking place in the area.
- Despite their extended absence from 1924-2012, spring Chinook now represent the second most abundant fish species produced in the lower Oak Grove Fork.

What's next?

- Spring outmigrant sampling will continue for three more seasons, followed by a five year break, then another five years of sampling.

Discover PGE Parks!

- Visit our **website** to reserve a campsite at your favorite PGE park. Don't wait too long — summer reservations fill up quickly!
- Vehicle access to **Timothy Lake** is closed for the winter, but those with snowmobiles, skis or snowshoes are welcome to explore the snowy, icy wonderland.
- Many PGE Parks are open year round, including Timber Park and the boater access sites on the Clackamas. Find the full list on our **parks page**.
- The last day of fishing at Faraday Lake will be March 15, 2019. Access to the bridge, lake and surrounding trails will be closed for construction beginning March 16. Faraday Road and its trailhead parking will remain open for recreational users. The area will reopen in the spring of 2021. More information on our **website**.

Juvenile Fish Update

Juvenile Species	2019 Run Year To Date (Oct. 2018—Feb. 2019)	Run Relative to 10-Year Total Average
Spring Chinook	211,852	335% (n=63,238)
Coho	128,805	107% (n=120,565)
Pacific Lamprey	46,787	393% (n=11,910)

***Numbers in this chart represent total outmigration for all facilities combined, and 10 year averages represent the total run-year.**

- Juvenile Chinook passage during the first five months of the 2019 run year has been nothing short of record setting. A combined 211,852 juvenile Chinook were passed downstream, with seven months still to go in the run year.
- 46,787 juvenile lamprey have been passed downstream during the first five months of the run year — another modern day record.
- Passage of juvenile coho in the fall, which has historically been minimal, exceeded 128,000 fish. These fish will likely utilize recently completed habitat projects in the lower river.

Adult Fish Update

Adult Species	Run Total (to date)	Run Relative to 10-Year Average
Winter Steelhead	49	35% (n=140)
Coho	2,882	92% (n=3,132)

- The late run coho return recently finished, with a total of 260 fish.
- While this may not seem like very many, it is impressive compared to the previous generation, of which only 134 fish returned in 2015. The suggests that positive changes are taking place despite some of the worst ocean conditions on record.
- In total, 2,882 wild coho returned during the 2018-2019 run — about 92% of the 10-year average. Meanwhile, their regional counterparts in the lower Columbia returned at about 50% of their respective 10-year average.
- This is the second year in a row Clackamas-bound coho have outperformed their regional counterparts. It is also the second return comprised of fish that benefited from our improved fish passage infrastructure as juveniles.
- Improved Clackamas coho returns despite poor regional conditions are a strong indicator that recovery is moving in the right direction for one of our most imperiled species.

Complete daily fish counts can be **found online**.

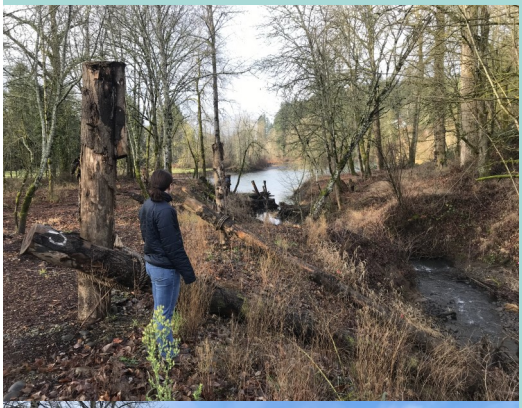
Announcements, News, and Resources

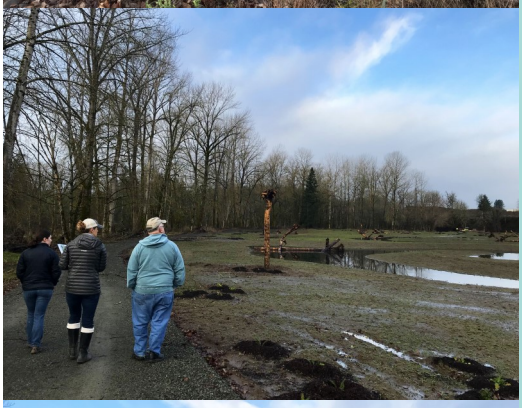
- PGE biologists recently partnered with scientists to conduct a **study on Clackamas River steelhead**, published by the American Fisheries Society. The study found that the main drivers influencing wild winter steelhead productivity in the Clackamas are environmental factors (such as ocean conditions) and fish passage infrastructure.
- The work of many collaborative partners throughout the Clackamas basin is having a positive impact on fish, according to an **editorial in the Oregonian** by Bill Monroe.
- The Oregon Watershed Enhancement Board recently selected the Clackamas Partnership to receive a $3.4 million grant for fish habitat restoration efforts. Read more in the **Columbia Basin Bulletin**.

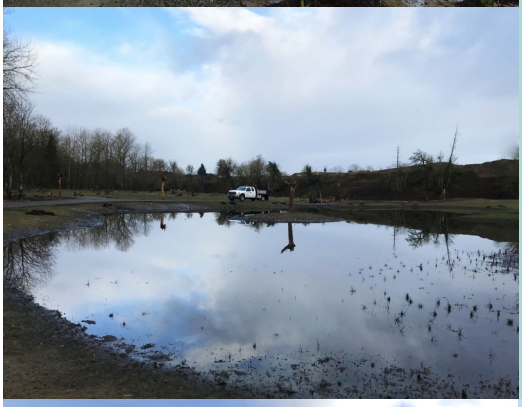
- **Coho returns** to the Columbia basin are expected to be far above average, while **spring Chinook returns** are predicted to be low. Read about both in the Columbia Basin Bulletin.
- ODFW's Recreation Report for the Willamette Zone, including the Clackamas River, can be found on **their website**.
- Fish counts and other information about the Eagle Creek National Fish Hatchery can be found on the **USFWS website**.

Restoration Powered by Partnership: Carli Creek Water Quality Project

Guest Column by Gail Shaloum, Clackamas County Water Environment Services







It is late summer in the lower Clackamas River basin. A small tributary trickles through a farm field, making its contribution to the river's low flow while draining 438 industrial acres along the way. Later in the year, both stream and river will swell and accelerate, but for now the confluence is hardly noticeable. This is the time when salmon stay put, before the migration. This is the time to enter the creek with the least amount of damage to aquatic life.

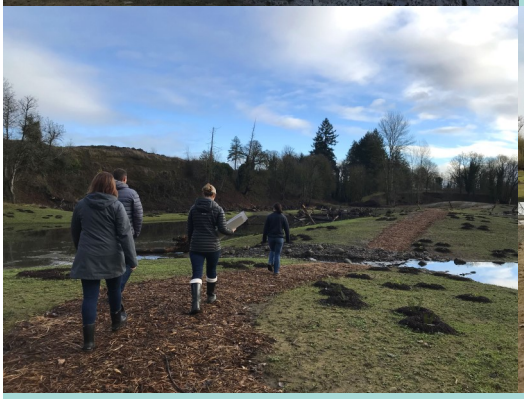
Before construction of the Carli Creek Water Quality Project began, ODFW biologists arrived on site to move fish out of harm's way. With the pulse of an electrofisher, hundreds of fish were brought to the surface: sculpin, dace, and minnows, but also—surprise!—Coho and Chinook salmon, cutthroat trout and even winter steelhead. To find such a rich assemblage of fish species in an industrial tributary underscores the importance of stormwater treatment and habitat enhancement in Carli Creek.

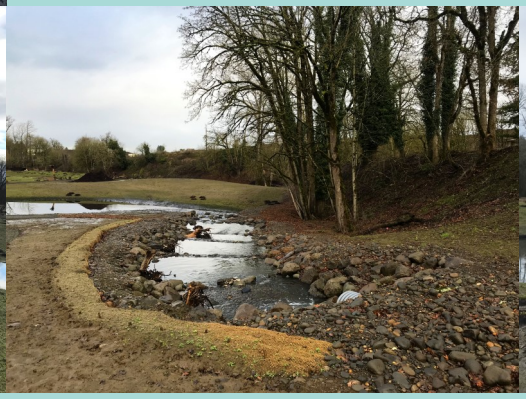
Clackamas County Water Environment Services (WES) is building the 15-acre site to treat surface water runoff from the nearby industrial area while improving the creek's habitat for fish and wildlife. Portland General Electric's Clackamas River Mitigation and Enhancement Fund is helping support the restoration.

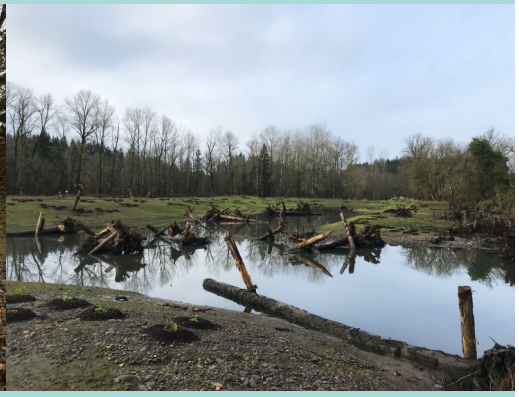
Excavators have scooped soil and reshaped the contours of the field (formerly farmland), creating meandering, connecting basins. The equipment operator moved huge logs with jumbled roots while the engineer directed their placement just so, with a vision in mind for improved stream hydraulics. Carli Creek will be gradually re-shaped over time; storm flows will hit the obstacles and whirl around, scouring deep pools and forming point bars as sediment settles out. This diversity of space will allow fish, insects, and other creatures to find their niche in Carli Creek.

By fall of 2018, contractors have removed or re-shaped 37,000 cubic yards of soil, placed 28 log structures and installed two new pipes that will funnel stormwater when it rains, carrying runoff through a step pool and a series of wetland basins. Emergent wetland plants, including sedges and rushes, will work together with soil to capture and treat pollutants from stormwater runoff before it reaches the stream.

Cleaner water and more diverse habitat in this lower Clackamas tributary will benefit migrating fish and rearing salmonids. Thanks to PGE for partnering with WES to make this project happen! Visit the **WES website** to watch a video and learn more.







Thank you for reading our Winter 2018-2019 newsletter!

Visit our **website** to find more information about the Clackamas, including informative videos, fact sheets, and reports. News, updates and past issues of this newsletter can be found **here**.

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