

As misty winter mornings on the Clackamas River make way for sunny spring days, PGE staff at our West Side hydroproject are gearing up for their busy season. Unfortunately, our busy season will look a little different this year as a result of COVID-19. Many of our field operations, like passing fish around our dams and conducting fisheries studies, are essential to maintaining the health of our rivers and fish. Our staff are taking the right precautions as they maintain this vital work. They are working in staggered shifts and smaller groups. In spite of the tough times, plans are still in place to launch a new study in the North Fork Reservoir using a complex acoustic tagging method (learn more below). We're thrilled about this year's phenomenal late-run coho return, and excited to see winter steelhead making their journey upstream. Stay safe and healthy out there!

## Acoustic Telemetry Study: Listening to fish in North Fork Reservoir

This spring, PGE will use a unique tracking method known as acoustic telemetry to study the movements of juvenile Chinook in North Fork Reservoir. This process will help us better understand the safety and effectiveness of our downstream passage facilities.

### What is acoustic telemetry?

Our study involves using acoustic tags and receivers to remotely track fish movement in multiple dimensions with a high degree of accuracy. Acoustic tags implanted into fish transmit sounds underwater that are "heard" by a network of hydrophones. By determining the sounds' arrival time at multiple receiving locations, the 3D position of fish can be accurately estimated. Each tag emits a slightly different sound, which means that the location of many individual fish can be recorded simultaneously.

### What questions are we trying to answer?

We're trying to gain a better understanding of how juvenile Chinook behave in North Fork Reservoir, helping us refine our estimates of fish collection efficiency at North Fork Dam. Fish collection efficiency is a metric biologists use to gauge how well a fish collector is performing, and refers to the percentage of passage-seeking smolts that are captured and passed safely downstream. The higher the collection efficiency, the better the passage system is working.

### When will the study take place?

PGE biologists have been developing detailed plans and securing equipment since last fall. The hydrophone array will be set up in North Fork Reservoir in mid-March. Releases of tagged fish will occur from mid-April through mid-May, with tracking occurring through late June. Final results of the study should be available in the first quarter of 2021.

### What is the study process?

Starting in mid-April, juvenile Chinook will be captured in our bypass facilities, tagged and then hauled to North Fork Reservoir for release. Acoustic tags are tiny – three millimeters wide and 15 millimeters long – and emit a sound pulse every three seconds. Over the course of a month, around 200 Chinook smolts will be tagged.



During the monitoring period, we will visit each of the 26 hydrophones in our array at least once a week to download data and check that hydrophones are working properly. Data will be processed throughout the study as a quality control measure, to help flag irregularities that may indicate a malfunction.

Once all of the tagged fish have left the reservoir, the data will be analyzed, using sophisticated software to determine fish positions every few seconds over the entire duration of the study. Those positions are used to create "fish tracks" that can show us exactly when and where individual fish were in the reservoir.

## Steelhead Ahead Sweepstakes

Winter on the Clackamas is prime time for steelhead fishing. We want to see the best photos of your steelhead fishing experiences from earlier this season or from years past. Send us a photo of your catch or views from the bank/boat between now and April 17 for a chance to win our **Steelhead Ahead Sweepstakes**.

### Here's how to enter the competition:

1. Join us on [Facebook](#)
2. Post your photo to the group, using the hashtag **#ClackOnTrack**
3. Like and comment on the other submissions

Prizes include gift cards to Sportsman's Warehouse, free camping at Promontory Park and PGE outdoor gear perfect for a day on the water. Learn more about prizes and read the full contest rules on our [Clackamas Updates webpage](#).

*P.S. Photos should indicate proper fish handling (e.g. wild fish still in the water). Please also continue to maintain social distancing to help slow the spread of COVID-19 – we want to see photos you've already taken!*



@John Harrison

## Juvenile & Adult Fish Passage Updates

- Downstream passage of juveniles has recently increased, as we approach the spring migration season.
- Chinook, steelhead and coho are all exceeding their respective 10-year averages. Juvenile lamprey passage has already set a modern day record, with seven months still to go in the run year.

Juvenile Species	Run Year To-Date (Oct. 2019 - Feb. 2020)	Run Relative to 10-year Average
Spring Chinook	87,337	163% (n=53,667)
Coho	42,331	109% (n=38,703)
Steelhead	3,923	110% (n=3,581)
Pacific Lamprey	65,105	266% (n=24,478)

Adult Species	Run Total (to date)	Run Relative to 10-year Average
Winter Steelhead	79	72% (n=109)
Early-Run Coho	2,388	87% (n=2,754)
Late-Run Coho	1,383	241% (n=574)

- This year's late-run coho return (241% of the 10-year average) is the second largest run since the early and late populations were first differentiated in our database in 1998. Their parent brood was only 493 fish.
- [Online fish counts](#) may be delayed as a result of COVID-19 work-safety measures.

## Restoration Report: Paradise Island



In late February (prior to social distancing measures), the Clackamas River Basin Council planted a few thousand native shrubs on Paradise Island upstream of the North Fork Reservoir. These plantings will enhance shade, habitat and riparian complexity in the area, as part of a larger restoration project supported by the [Clackamas Habitat Fund](#). In 2015, the U.S. Forest Service implemented a nearby habitat improvement project that involved the placement of large wooden structures. Biologists have since observed an increase in spawning activity by salmon and steelhead in this area. The Oregon Wildlife Foundation will construct more of these structures immediately upstream of the 2015 project area. We hope that these restoration efforts from our partners will collectively improve conditions for fish in the reservoir.



## Discover PGE Parks

The safety of park visitors, employees, volunteers and partners is very important to us. To ensure their safety, we have temporarily closed the 14 parks and recreation areas we operate. Parks will be closed until at least May 8th to support social distancing, but we will continue to make preparations for parks to open in time for the summer recreation season. Find the latest updates on our [website](#).



PGE is creating a safe and accessible overlook at the scenic Carter Falls, to open this summer.

PGE's Junior Ranger program is now online, so young Oregonians can explore the outdoors and earn awards from their own home. Download the activity books from our [Junior Rangers page](#).

**We are monitoring government guidelines and will work with event organizers to determine whether summer events will go forward as planned.**

- June 6-7 is a [free fishing weekend](#) throughout the state of Oregon. Stop by Small Fry Lake at Promontory Park for a kid-friendly free fishing clinic.
- Up for something a little more strenuous? The [Timberline Marathon](#) takes place that same weekend (June 6-7). Get ready to lace up your shoes and race around beautiful Timothy Lake.

## Announcements & News



**A large cutthroat trout (11 inches long) was recently captured at our North Fork juvenile facility.** Once abundant in the lower river, cutthroat trout are less common these days. We pass between 100 and 500 through our facilities each year, and tend to see more in the fall and winter, when flows are highest.

1. Read more about the history of Willamette Falls and long-term plans for its development.  
→ [West Linn Tidings](#)
2. Could wake sports have an effect on Willamette River salmon and steelhead? Learn more.  
→ [Portland Tribune](#)
3. The Willamette Falls Paper Company, which operates a mill adjacent to PGE's Sullivan plant, is now making paper from recycled agricultural waste.  
→ [Business Tribune](#)

**Thanks for reading our fall newsletter!**

Visit our [website](#) • [Subscribe](#) to the newsletter • [Email us](#) with questions or to unsubscribe

