

The
Plain Facts

*What's happening on
the Deschutes River*





The Deschutes River system is an Oregon icon, treasured for its scenic beauty, the life-giving water it brings to the high desert, and its world-class salmon, steelhead and trout fisheries. But the river and its tributaries are more than that: they're sacred to the people of the Confederated Tribes of Warm Springs and an integral part of the culture and economy of the region.

As co-owners of the Pelton Round Butte Hydroelectric Project, Portland General Electric and the Confederated Tribes of Warm Springs pay close attention to the health of the river. We know that apparent changes to the Deschutes — some good, some troubling — have raised questions among river users in the region, so we want to share what we know about what's happening on the Deschutes.

This pamphlet addresses some of the concerns and misconceptions we've heard. The information is based on robust and high quality scientific studies. You can find more at portlandgeneral.com/deschutes. We also welcome questions at deschutes.passage@pgn.com or 541-325-0960.

Management

You may have heard:

The Deschutes River is in a state of rapid decline.

The plain fact is...

The Deschutes River is not in decline.

- River temperatures have returned to their historic, seasonal patterns.
- Fall Chinook are migrating and returning more successfully than any time since the 1960s.
- Redband trout populations and their insect food sources remain robust.
- The latest Oregon Department of Fish and Wildlife angler surveys — from 2018 and previous years — have shown excellent catch rates.
- There have been some changes on the Deschutes — some driven by our project, others driven by external factors like climate change and agriculture — but we are confident that we're making progress toward our shared long-term goals for river health and fish recovery.

You may have heard:

PGE and the Tribes are acting on their own, making changes to the Deschutes River.

The plain fact is...

PGE and the Tribes simply can't — and don't — do that. The Pelton Round Butte Project is co-owned and co-managed by PGE and the Confederated Tribes of Warm Springs. We operate under the direction of multiple agencies and within the parameters of our license. Management decisions are built on collaboration, sound science and comprehensive regulation.

- The Pelton Round Butte Project is regulated by the Federal Energy Regulatory Commission (FERC), the Oregon Department of Environmental Quality (DEQ), the Warm Springs Water Control Board (WCB), U.S. Fish and Wildlife Service (USFWS), the Warm Springs Branch of Natural Resources, the National Oceanic and Atmospheric Administration (NOAA Fisheries) and Oregon Department of Fish and Wildlife (ODFW). These agencies review, approve and help inform the project co-owners' management decisions.
- Representatives from state, federal and tribal agencies and local conservation organizations come together to form the Fish Committee, a collaborative group that provides consultation and guidance and participates in all project management decisions that affect fish.



With support from the Pelton Round Butte Fund, the Upper Deschutes Watershed Council restored this stretch of floodplain along Whychus Creek in 2014. The restoration included dam removal, large wood installation, native planting and rechannelization to improve the area for water quality, fish and wildlife.

You may have heard:

PGE and the Tribes should do more to improve the Deschutes basin.

The plain fact is...

Although PGE is a utility, not a public management agency, we are deeply invested in the health of the entire Deschutes basin.

- PGE and the Tribes contribute significantly to habitat restoration efforts throughout the Deschutes watershed through the Pelton Round Butte Fund. We've supported more than 45 projects to date, with 13 million awarded so far. We are on track to award a total of \$21 million by 2020.
- We have earmarked \$10 million for projects that improve water quantity and quality.
- PGE does not have power or jurisdiction beyond the areas described in our license, so we collaborate with the Tribes and with dozens of agencies and non-governmental organizations to advance initiatives throughout the basin that complement our work at the Pelton Round Butte Project.

You may have heard:

It's time to "turn back the clock" to earlier river conditions that favored certain fish.

The plain fact is...

The Selective Water Withdrawal facility was put in place to solve two serious problems in the Deschutes basin: historic fish runs had been cut off for decades and seasonal river temperatures were being artificially disrupted. This was harmful to the river's natural ecosystem as well as the Tribes' heritage and culture.

- Like any living organism, the river has also evolved over time. To simply say "return it to what it was" ignores the effects of weather, climate change, river adaptation and other developments in the region.
- Our adaptive management process takes these changes into account, constantly adjusting as we perform studies and learn more.
- Abandoning our long-term, science-based strategy in the face of short-term fears would be a mistake. We continue to build on what we've learned over the years and make thoughtful decisions while keeping the health of the whole river basin in mind.
- We seek solutions and results that will benefit the overall health of the river for fish, the Tribes and all Oregonians, including anglers, for generations to come.

You may have heard:

PGE and the Tribes should simply "flip the switch" and stop using the Selective Water Withdrawal system.

The plain fact is...

Some Deschutes users have expressed nostalgia for the river's condition from 1964 to 2009, but these temperatures damaged native fish populations that had adapted to the river's natural rhythms. Instead of replicating these harmful temperatures, we use the SWW to create a water blend that more closely matches seasonal patterns we'd expect to see without the dams' presence.

- "Turning off" the SWW might sound like an easy way to address one concern, but it would resurface the original problems caused by dam construction in the 1960s: a lack of connectivity for migrating fish and unnatural temperatures.
- Before the SWW was built, juvenile fish development was stunted by artificially extended periods of cold temperature in the spring and early summer. These fish were smaller in size when migrating to the ocean, lowering their odds of survival.
- PGE and the Tribes cannot simply decide to "turn off" the SWW. The regulatory authorities who govern how we operate, including USFWS, NOAA Fisheries, DEQ and the WCB, mandate SWW operations in their requirements.

You may have heard:

The reintroduction effort on the Deschutes is taking too long, and changes are implemented too slowly.

The plain fact is...

While the measured pace of high-quality science can be frustrating at times, we are more confident in our decisions because we know they are informed by accurate data and a thorough review process.

- Our biologists monitor multiple sites and collect data year-round to help us understand river conditions and how several variables affect water quality and fish survival over time.
- Together with the Fish Committee and our regulators, we evaluate our progress and make thoughtful course corrections when the science supports them.
- For example, we now generate power at night during peak fish migration to attract salmon and steelhead to the SWW with greater efficiency. We have also begun releasing juvenile fish at night so they are less vulnerable to predators. These changes have shown positive results, and we hope to see more over time.
- Patience is essential when making and evaluating our decisions because anadromous fish life cycles last four to eight years. Consequently, it may take several years for us to see the results of our most recent management changes.
- Fish reintroduction programs are often long-term efforts. Restoring Okanagan sockeye in British Columbia took several decades of persistent, collaborative work by tribes, federal agencies, local businesses and nonprofits. The lengthy project was well worth the results, restoring fish populations from near-extinction to harvestable numbers.

You may have heard: **The plain fact is...**

PGE and the Tribes constructed the SWW to increase revenue.

The SWW's only function is to correct issues with water temperature and fish passage, neither of which increase the amount of electricity produced by the project or the revenue it generates.

- Construction of the tower in 2009 was required as part of our relicensing process.
- Operations at the SWW (including temperature blends, spill regimes, river and reservoir levels) are dictated by our license. Flow adjustments, in particular, are subject to strict limits under our license from FERC. When required, adjustments are determined based on weather, river flows and overall environmental benefit. Changing SWW operations has no effect on our energy output or revenue.
- In fact, some aspects of project operations, such as generating energy at night to aid juvenile fish migration, can reduce PGE's and the Tribes' potential revenue.
- The tower itself cost \$110 million to build, and PGE and the Tribes continue to spend more than \$2 million a year on Deschutes salmon reintroduction efforts. We firmly believe that the high cost of environmental responsibility is worth it.

You may have heard: **The plain fact is...**

PGE and the Tribes hide information from the public.

PGE and the Tribes are committed to transparency. Our studies, reports, fish counts and more are available to the public.

- Every summer, we host a fisheries workshop that is free and open to the public. Visit our website for the latest announcements about this event, and for more information about our reintroduction efforts: portlandgeneral.com/deschutes.
- We post announcements and featured studies on our "Updates and Events" page. You can also find fact sheets and reports about our research online.
- Our monthly e-newsletter features the latest fish counts, news and information. Subscribe by sending an email to deschutes.passage@pgn.com with the subject line "subscribe."
- Join our environmental community on Facebook for an inside look at our work on the river: facebook.com/groups/EnviroCommunityPGE
- For additional questions, contact us at: deschutes.passage@pgn.com or 541-325-0960.

Water quality

You may have heard:

PGE and the Tribes are ignoring water quality concerns on the Lower Deschutes.

The plain fact is...

PGE and the Tribes are dedicated to improving water quality and enabling effective fish passage. Furthering these two objectives is challenging and there is no “silver bullet” solution. We are committed to making informed management decisions that optimize water quality and fish passage outcomes in this complex ecosystem. To learn more about how the river is changing, we recently conducted a comprehensive, multiyear water quality study, which will be finalized and released in 2019. The findings will help PGE and the Tribes, together with our partners and regulators, continue to make informed decisions and refine our fisheries and water quality initiatives.

You may have heard:

Information from outside sources shows that the Deschutes is in trouble.

The plain fact is...

Anecdotal reports and outside “studies” claiming to prove the river is in trouble typically have not gone through a rigorous, independent review process. Scientifically sound studies are reviewed by other independent scientists to ensure their integrity. PGE, the Tribes, ODFW and other partner agencies routinely submit their work for this kind of scrutiny. Most rigorous studies show that the Deschutes, like other Oregon rivers, is changing but continues to support a healthy ecosystem.

- PGE and the Tribes follow the science and operate with a high level of scrutiny and oversight.
- Our study designs are reviewed by the Fish Committee through a formal, recorded process prior to implementation. This transparent approach also extends to our water quality monitoring program.
- All of our completed studies and reviewer comments are publicly available on our website: portlandgeneral.com/deschutes

You may have heard:

PGE and the Tribes don't care about the Lower Deschutes River.

The plain fact is...

Fish need the whole river. Our long-term goals for sustainable, harvestable fish runs in the Deschutes basin can only be achieved by investing in the ecosystem both above and below the dams. Fish require favorable conditions in the lower river if they are to return safely to the Upper Deschutes.

- One example of our work below the project is Trout Creek — an historic homestead site on the lower river restored for the benefit of fish and wildlife. To improve spawning habitat, we planted native trees and restored the natural stream channel and floodplain. Summer steelhead were detected spawning in the area the year following construction.
- We believe that our efforts throughout the Deschutes basin will ultimately increase the availability of fish for communities along the entire river, both above and below the project.



PGE staff members collect extensive data at several sites along the Lower Deschutes, the reservoirs and their main tributaries as part of the multiyear water quality study. We anticipate the study's release in 2019.

Fish and wildlife

You may have heard:

Fish on the Deschutes are in trouble.

The plain fact is...

While there is still a long way to go, Deschutes basin fish are showing promising signs of recovery.

- Each year we collect between 45,000 and 450,000 smolts (juvenile fish) at the SWW. Changes to hatchery practices and operations have improved our ability to capture these smolts. In 2017 and 2018, we collected a higher percentage of migrating fish than ever before, allowing us to pass the juvenile fish downstream to continue their natural migration. As we adapt our strategies to the latest data, we expect these numbers to continue rising over time, although we know external factors like snow pack will cause natural variability from year to year.
- Chinook, sockeye and steelhead now have access to 250 miles of their historic habitat that were blocked for nearly 50 years. We are excited to see adult fish returning from the ocean and completing their natural life cycles upstream of the dams. We have located spawning fish near Bowman Dam on the Crooked River, in Whychus Creek at Camp Polk and upstream of Camp Sherman on the Metolius River.
- In 2016, more than 500 adult sockeye returned to the basin after migrating through the SWW as juveniles. Apart from this exceptional year, we acknowledge that adult return rates have been low. We believe several management strategies implemented in 2017 will have real potential to improve returns. We expect to see the benefits of these changes when these fish start returning, which could be as soon as in 2019.
- While we are proud of our achievements and optimistic about the future, we also recognize that Deschutes fish are affected by external factors beyond PGE's control. Weather, climate change and conditions in the Columbia River and Pacific Ocean all contribute to the success or decline of Deschutes fish runs in any given year and over time.



In 2016, 535 adult sockeye returned to the Pelton Round Butte Project after migrating through the SWW as juveniles.

You may have heard:

Toxic conditions in Lake Billy Chinook are negatively affecting fish migration.

The plain fact is...

Lake Billy Chinook supports thriving populations of juvenile and adult fish from several species.

- The reservoir supports a healthy population of resident kokanee and one of the strongest populations of bull trout in the nation. It is one of the only locations where anglers can catch and keep bull trout, which are listed as threatened under the Endangered Species Act.
- High summer pH levels in the reservoir are not keeping fish from entering the juvenile migrant collection system at the SWW. Our monitoring shows no indication that migrating fish change their behavior as pH levels increase through the spring. Additionally, most of the out-migrating juvenile salmon have already left the reservoir by the time pH rises in the summer.
- Adult fish released into Lake Billy Chinook successfully navigate the reservoir and return to various tributaries to spawn.



Lake Billy Chinook supports a healthy population of Bull Trout — a species whose populations are vulnerable in other parts of Oregon and the United States.

You may have heard:

Since the changes to the system, “black spot” has appeared in Deschutes River fish.

The plain fact is...

Black spot disease is a parasitic infestation found in freshwater fish across the United States and Canada. It has been documented in many Oregon rivers for years, including the Metolius, the John Day and the Deschutes (upstream and downstream of the dams).

- Black spot is caused by trematodes that involve three host species: snails, fish and birds.
- The parasite has not been found to affect the survival of fish.
- Fish with this condition are safe for human consumption.
- Black spot appears to be on the rise throughout Oregon, not just in the Deschutes.

You may have heard: **The plain fact is...**

Steelhead in the Deschutes River are in trouble.

Much of the change in steelhead returns can be traced to hatchery operations and poor conditions in the Columbia River and Pacific Ocean — not changes implemented by PGE and the Tribes on the Deschutes.

- The size of the Deschutes summer steelhead run is highly variable, as it is in all Oregon rivers.
- Run sizes are often influenced by ocean conditions in addition to freshwater conditions.
- In recent years, there has been a reduction in out-of-basin stray steelhead entering the Deschutes due to changes in hatchery practices in other basins. Native Deschutes steelhead are about six pounds on average — smaller than the out-of-basin strays that sport fishermen may have enjoyed catching in the past. The fact that fewer of these strays are showing up in the Deschutes is good for our native population of wild, Deschutes River steelhead, which are more likely to thrive without the influence of hatchery fish.

You may have heard: **The plain fact is...**

The Lower Deschutes River is turning into a “smallmouth bass pond.”

Smallmouth bass have been documented in the Lower Deschutes since 1996 — well before the SWW system. However, their populations do appear to be increasing.

- ODFW is keeping a close eye on smallmouth bass. The agency has determined that there is no evidence of successful spawning by smallmouth bass in the Deschutes River; they appear to drop back into the Columbia River in the winter.

You may have heard:

The insects that redband trout depend upon are in decline.

The plain fact is...

The timing of the salmon fly hatch in the Lower Deschutes River has shifted — this was an expected outcome of the change in temperature patterns caused by the SWW — but evidence suggests that the size of the hatch is still strong.

- This hatch occurs approximately two weeks earlier now in response to warmer spring water temperatures. The hatch continues to support an impressive trout fishery, as measured by ODFW every year since 2015.
- ODFW electrofishing surveys in 2017 and 2018 indicate that the abundance, growth, diet and condition of redband trout is comparable to pre-SWW samples.

You may have heard:

Birds, bats and other mammals living near the Deschutes are in decline.

The plain fact is...

There is currently no scientific data suggesting a decline in bird, bat or other mammal populations on the Deschutes.

- PGE and the Tribes do not perform large-scale wildlife surveys in the greater Deschutes basin, but we do monitor eagles, waterfowl and bats within our project areas and deer on the Warm Springs reservation. These surveys indicate healthy populations, and our biologists frequently encounter wildlife out on the river.
- Birds that live in the Deschutes basin are migratory and have complex life histories. It would be unlikely for any decline in bird population to be directly related to dam operations.
- Aside from monitoring one colony that roosts within our project area, we do not know much at this time about bat populations local to the Deschutes. Bat numbers are in decline regionally, however, due to causes unrelated to the project.
- Overall, surveys suggest that the Deschutes is a highly productive river, supporting healthy populations of insects and fish.



PGE biologists track golden eagles near the Pelton Round Butte Project to learn more about how the birds use habitat in the area. (Photo by Rick Gerhardt)



Visit portlandgeneral.com/deschutes for more information.

We welcome questions at
deschutes.passage@pgn.com and 541-325-0960.