



Deschutes Water Quality Study, 2021 Correction

While preparing an article about water quality on the Lower Deschutes River for submission to a peer-reviewed scientific journal, our lead water quality consultant shared his draft with the lab that analyzed periphyton samples for our multi-year water quality study. In reviewing the draft, the lab discovered it had incorrectly calculated the prevalence of four periphyton taxa (out of over 400 total taxa).

This laboratory error affected the report's discussion and interpretations of algae dynamics in the Lower Deschutes River. In light of this discovery, our consultant corrected the report.

Which parts of the study were corrected or changed?

- The study's analysis of the periphyton community composition in the Lower Deschutes River (section 6.2.8) was corrected, as well as the conclusions drawn from this data (sections 4.1, 4.2, 6.1, 6.2, 8.4 and 12.2).
- The study's author also added additional discussion on the phytoplankton communities in Lake Billy Chinook and Lake Simtustus. This additional information does not fundamentally change any of the study's conclusions and has been added to the report in Appendix E for reference purposes.
- Minor edits to punctuation, spelling, and grammar were made throughout the report to improve clarity.
- Other parameters studied, including temperature, dissolved oxygen, pH, zooplankton, and chlorophyll, were unaffected by the laboratory error and unaltered in the revised report.

Why weren't the modeling sections of the report revised?

- The models used in the study rely on chlorophyll concentrations to represent periphyton. The river model is robust but is not sophisticated enough to interpret complex algae dynamics. Therefore, the periphyton laboratory error had no effect on the modeling.

Do the corrections change our understanding of water quality in the Deschutes?

- The corrections help us better understand the composition of algae in the Lower Deschutes River. The incorrect data depicted an abundance of cyanobacteria, also known as blue-green algae, during the study period (2015-2017), while the corrected study accurately reflects the dominance of green algae in the Lower River in 2015 and 2016.
- The revised data also help us understand the influence of variable spring flows and nutrient chemistry on the Lower Deschutes periphyton community.



What actions have PGE and the Tribes taken to address water quality since the 2019 study was initially released?

- Shortly after the study's release, the Pelton Round Butte Fish Committee formed a smaller working group to discuss the study, explore options and propose next steps to the larger committee. The subgroup includes representatives from PGE, the Confederated Tribes of Warm Springs Branch of Natural Resources, U.S. Forest Service, Oregon Department of Fish & Wildlife, Oregon Department of Environmental Quality, Native Fish Society and Trout Unlimited.
- The subgroup has met regularly since the study's release and has identified several actions that will likely benefit water quality in the Deschutes Basin, including the reduction of phosphorous and nitrogen in the Crooked River. The group is exploring how best to support this ongoing, collaborative work, led by stakeholders in the Crooked River Basin.
- PGE and the Tribes have already taken steps to support these Crooked River efforts by launching a special round of grants from the [Pelton Fund](#) focused specifically on projects in this high-impact river basin. This funding cycle will help us support both improved water quality and our long-term goals for anadromous fish reintroduction.
- PGE and the Tribes also provided funding to the Crooked River Water Quality Partnership to support their development of a strategic action plan addressing water quality improvement in the Crooked River Basin.
- The subgroup also recommends further study in the reservoirs regarding nutrient reduction, as well as investigation into the potential benefits of a "flushing flow."
- In 2020, we also began performing additional monitoring at three sites in the Lower Deschutes River to learn more about water quality changes over time and the effect of variable spring flows on periphyton community composition. This monitoring is ongoing.

Please visit portlandgeneral.com/waterquality for the complete corrected study, data files, resources and additional information. Email deschutes.passage@pgn.com with any questions.