

BIRDS FLOCK TO FERNHILL

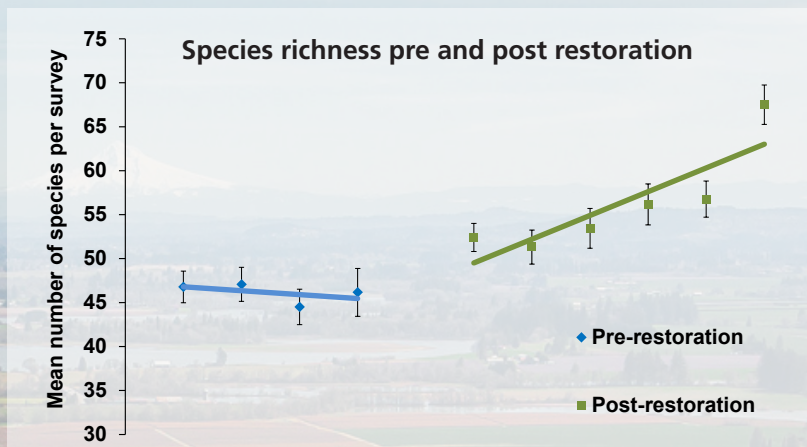
BEAUTIFUL CLEAN WATER RESTORES WETLAND HABITAT FOR WILDLIFE

Fernhill is a popular birding destination in the Portland Metro and is owned by Clean Water Services. In 2012, CWS began an ambitious habitat restoration project by transforming 90 acres of obsolete sewage ponds into a native wetland habitat designed to treat wastewater naturally. The site was reconfigured, and workers planted more than 750,000 native wetland plants and three billion seeds. More than 180 logs and snags created habitat and perches for birds and other wildlife.

In 2015, CWS partnered with the Portland Audubon to understand how birds are responding to the Fernhill habitat restoration, conducting formal bird surveys for five years from 2015-20, examining historic eBird data collected before restoration, and engaging local birders in community science to monitor bird activity. Here are some key findings:

Richness

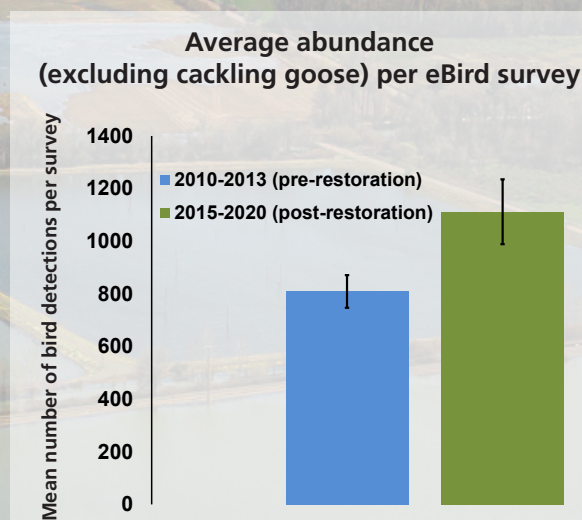
Overall, the number of different species (richness) has increased significantly post-restoration in each season. This is a good indication that the increased habitat complexity (diverse wetland plants and access to ponds) has enabled a wider assemblage of bird species to benefit during migration as well as during the spring and summer breeding season.



Abundance

Overall bird abundance increased significantly in the post-restoration period. This was particularly evident during the summer and fall seasons and suggests there may be more available habitat for breeding birds compared to conditions prior to restoration.

eBird data analysis indicated most bird groups in the spring and summer had significantly higher abundances post-restoration versus pre-restoration. This included dabbling ducks, grebes, rails, songbirds, and wading birds. Only one bird group (gulls and terns) had higher abundances prior to restoration.



Cinnamon Teal and other dabbling ducks have shown a positive response.



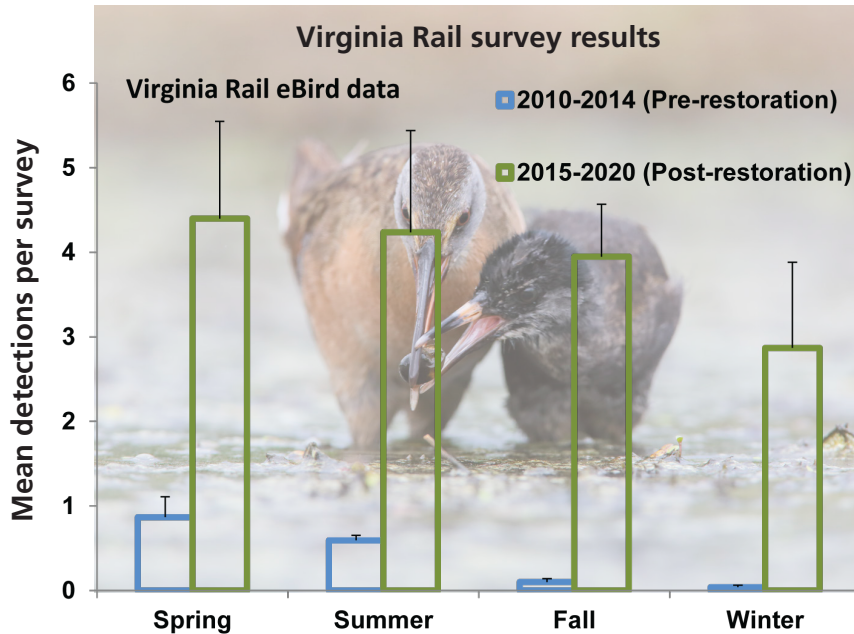
More wetland-dependent songbirds such as the Red-winged Blackbird and Common Yellowthroat are evident.

Species that depend on large water bodies (e.g. California Gull) are less common because there is less open water.



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Marsh birds like Virginia Rail and Sora have increased dramatically – quadrupling in the post-restoration period.

Portland Audubon has completed its 5-year monitoring effort at Fernhill. The overall increase in avian species richness, diversity and abundance at this site is an indication that the large-scale restoration effort has provided a net benefit to many bird species. At the same time it is clear that not all species have benefited, particularly those that depend on open water and more open habitat types in general.

This project is deepening understanding of the multiple benefits of using natural treatment strategies to manage water resources. We hope this effort will foster and inform similar projects at facilities across the nation. CWS will also use the monitoring data to maximize benefits for birds and wildlife at Fernhill.

Community scientists can conduct eBird surveys at Fernhill or at other sites in Washington County; visit audubonportland.org or fernhillnts.org to learn more.



While we documented some differences in eBird surveys conducted by community scientists in comparison to formal surveys conducted by professional biologists, the eBird findings do provide meaningful results to inform site management and in many ways confirm the formal survey results.

Community scientists gathering bird data

Photos by Haley Crews, Candace Larson, Gary Witt and Scott Carpenter