Lake Abert 2017 Update - Waterbirds Showing Some Recovery

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Lake Abert, in southcentral Oregon, is known as a shorebird hotspot, with tens to hundreds of thousands of avocets, phalaropes, sandpipers, and other shorebirds coming to the lake after breeding to fatten up on brine shrimp and alkali flies before migrating south. Since 2011, East Cascades Audubon Society (ECAS) members and other volunteers have counted birds there every summer. In 2014, that all changed, the lake nearly went dry and salinities reached lethal levels, and shrimp and flies were gone and few birds were seen, and the lake turned red from the abundance of red-pigmented, hypersaline-adapted bacteria (Figure 1).

Figure 1. Aerial view of Lake Abert during the 2014 extreme salinity event when bacteria turned the lake red. Photo by Ron Larson.

Little changed in 2015 and 2016, but finally in 2017, inflows increased and shrimp and flies started to rebound. However, numbers of birds were still relatively low but were higher than in 2014-2016 (Figure 2).

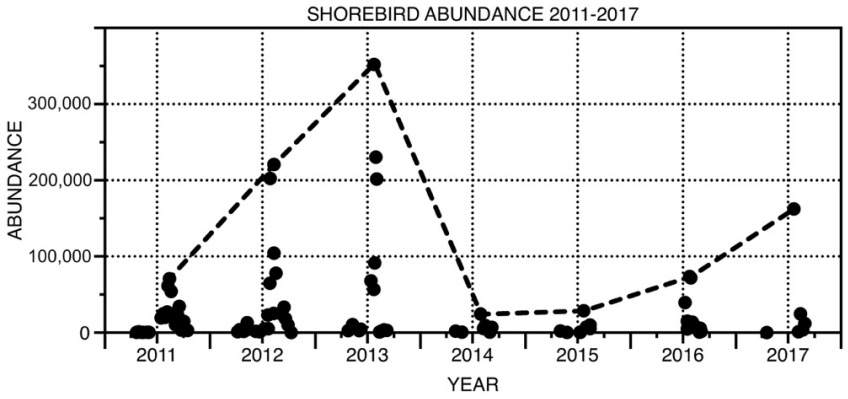

Figure 2. Graph showing Lake Abert shorebird abundances, with a dashed line going through the highest counts. Data from ECAS.

Two peer-reviewed reports (Larson et al. 2016, Moore 2016) found evidence that upstream water diversions and drought had caused the low inflows. Predictions of the effects of climate change include future droughts being more prolonged and intense, and that has serious implications for waterbirds using Lake Abert and other habitats in western North America. Combined with other threats, such as rising sea level flooding shorebird habitat in the Arctic, loss of Lake Abert and similar habitats could drive more shorebirds towards extinction.

Unfortunately, the State of Oregon is unprepared for dealing effectively with droughts, especially the adverse effects on wildlife. The Oregon Water Resources Department has responded to droughts by issuing more permits for groundwater extraction, which is known to adversely affect wetlands and streamflows, thus exacerbating ecosystem effects. Oregon needs to develop and implement a plan to sustainably deal with drought in the face of climate change that includes environmental water needs.

References

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Moore J. 2016. Recent desiccation of Western Great Basin Saline Lakes: Lessons from Lake Abert, Oregon. U.S.A. Science of the Total Environment 554-555:142-154. https://doi.org/10.1016/j.scitotenv.2016.02.161