



Wetlands Along the Pacific Flyway are Crucial

By Lauren Brown

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“One of the big signs of fall is the birds flying overhead,” said Bob Sallinger, Conservation Director for Portland Audubon and a participant of the Harney Basin Wetlands Collaborative.

Basin Wetlands Collaborative.

The Pacific Flyway famously runs right through the Harney Basin, and locals are treated to quite the air show during the fall migration and even more so in the spring.



The United States is split up into four flyways that run north and south. They are the Pacific, Central, Mississippi and Atlantic flyways. The Pacific Flyway stretches from the Arctic to the coast of Mexico and from the Rocky Mountains to the Pacific Ocean. From north to south it is more than 4,000 miles long, and in some places, it is more than 1,000 miles wide. About 70 percent of migratory birds — including over 6 million waterbirds — annually pass through the Southern Oregon Northeast California (SONEC) region of the flyway, which includes the Harney Basin wetlands where large concentrations of birds rest and refuel along the way.

Sallinger noted that some birds go short distances along the flyway while some don’t migrate at all. Others travel from the Arctic Circle clear down to South America. “Different birds use different habitats, so there’s not a fixed number of stopover sites per se, but birds will follow these patterns year after year,” he said. “Different birds have different needs, so some birds are going to be very dependent on wetland habitat, and we have this incredible network of wetlands that span the Oregon-California border.”

These wetlands include the Klamath refuges, Lake Abert, Goose Lake, Summer Lake and Malheur Lake among others. “It’s an incredible wetland complex that sits toward the center of the flyway and which is critically important for birds both for nesting and breeding but also for migration,” Sallinger said.

Many bird watchers come to the Harney Basin in the spring specifically to see the large flocks of Ross's geese that come through the region on their way north. Sallinger said that Malheur Lake is used by half the world's population of Ross's geese as well as 20 percent of the world's population of white ibises and one of the largest populations of sandhill cranes on refuges in the western United States.

Unfortunately, many of the wetlands along the flyway are shrinking, some quite drastically. Sallinger said that all these wetlands have different but related problems, and it all comes back to water. Oversubscribed and degraded wetland systems are also impacted by drought and climate change. "I look across the Southern Oregon-California border and I see this incredible array of wetlands that are just a fraction of what they were historically because of conversion, and I see them going dry," he said.

For example, Lake Abert in Lake County is an important migratory stop for shorebirds. It's also one of the biggest inland sites in the western U.S. for snowy plovers, which are considered a threatened species. The lake has been significantly decreasing in size and researchers are just beginning to collect data, convene people and obtain funding to work on issues contributing to the problem.

The Klamath Basin is another critical stop for migrating birds. According to the Klamath Basin Audubon Society, the wet meadows in the Wood River Valley and Upper Klamath and Klamath Marsh National Wildlife Refuges are home to Sora, Virginia Rail, and the elusive Yellow Rail, and Upper Klamath Lake provides nesting habitat for dancing Western and Clark's Grebes. However, the water crisis there is ongoing and complicated. According to Sallinger, very little progress has been made and as a result, Tule Lake and Lower Klamath Lake are going dry.



As these wetlands disappear, so does critical habitat for migrating birds. Sallinger said more than 1 billion birds migrate along the Pacific Flyway, and that is a much smaller number than birds that used the flyway a half century ago. "Across North America there are 3 billion less birds than we had 50 years ago. We see species under incredible threat, and it's not just the species that we list as in peril today, such as spotted owls, marbled murrelets. It's also common species that are imperiled, and the impacts are only getting

more and more significant," Sallinger said. What affects these migratory birds the most is habitat loss and fragmentation, and it seems to be accelerating at an unprecedented pace especially where wetlands are concerned.

Pictured: Harney Basin wet meadow spring 2022, photograph by Brandon McMullen.

"Malheur is one of the places that I see some faint hope because we have had this collaborative that has been working together for around 15 years now," Sallinger said. "The collaborative is trying to get a handle on the issues, doing the research, doing the projects and building the relationships that are going to be needed to address an incredibly difficult and complicated problem."

The Harney Basin Wetlands Collaborative, a High Desert Partnership collaborative, has been working to revitalize Malheur Lake, which sits on the Malheur National Wildlife Refuge, and ensure private ranch lands surrounding the refuge continue to function as wet meadows every spring so birds have this important Pacific Flyway hub. These private working lands are one of the cornerstones of Harney County, supporting families and feeding the local economy.

Revitalizing the lake involves projects that reduce the invasive carp population, a non-native fish that feeds on and uproots aquatic vegetation; projects that address wind wave action creating turbid water condition, and projects to minimize the degradation of the lake's emergent vegetation. The collaborative is also spearheading projects to help private landowners maintain the flood irrigation practices on ranchlands throughout the Silvies floodplain. Traditional flood irrigation practices spread shallow water across the Harney Basin's hay meadows every spring to create conditions that mimic historical flood regimes that support migrating and breeding birds.

"We're working together to do the research necessary to understand this complex system as well and to make sure that the efforts we're taking are effective and well targeted," Sallinger said. He noted that Audubon plays a key role in conducting research on and off the refuge working with the refuge and private landowners to make sure they understand the species composition and the timing of different behaviors whether it's nesting or migration species numbers and how they fluctuate relative to water levels. Sallinger said that more than 300 bird species use the refuge at some point in their lifecycle. "When you think about those kinds of numbers, a place like Malheur Lake drying out or being unproductive is really catastrophic, both at a species level but also to birds in general," he said.

Other wetland complexes throughout the Pacific Flyway are facing the same issues as the land is converted to other uses and drought and climate change take their toll. Increasingly, there are simply no other places for these birds to go. "There isn't really a plan B. We've got to make sure that these places function," Sallinger said.

While the challenges are many and varied, the Harney Basin's issues are not insurmountable because of the unified partnership working to address the impacts of climate change by building a more resilient basin for birds and all water users. The Harney Basin Wetlands Collaborative has built relationships with irrigators, and there is increasing momentum behind improving irrigation infrastructure. Along with increased community engagement, the understanding of the ecological science of both Malheur Lake and flood irrigated wetlands continues to grow. The Harney Basin has been and will continue to be a critical stop for migratory birds along the Pacific Flyway.

This article is provided by High Desert Partnership; a Harney County nonprofit convening and supporting six collaboratives including the Harney Basin Wetlands Initiative.

