Harney Basin, Rest Stop with Food and Shelter Along the Pacific Flyway

A diverse group of stakeholders pulls together for the benefit of all.

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by Lauren Brown

Each April, Harney County hosts the Harney County Migratory Bird Festival during which avid birders visit to take in the diverse populations of waterfowl and other birds that pass through the Harney Basin during the spring migration. It's not unusual to see cars stopped along rural county roads as folks with cameras or binoculars try to get a closer look at flocks of snow geese and Ross' geese or greater sandhill cranes in the basin's irrigated flood meadows that are part of the Pacific Flyway.

Pictured: Snow geese in flight taken by rancher Susan Doverspike.

However, wetland habitat is disappearing across the west. Decreasing snow accumulation, drought and resulting decreased spring flows can greatly affect this critical migratory bird habitat. Fortunately, the Harney Basin Wetlands Collaborative, a collaborative of the High Desert Partnership, brings together a diverse group of partners working to ensure that Harney County's wetlands will continue to provide critical habitat for migratory birds for decades to come.

The Harney Basin Wetlands Collaborative formed in 2011 for the purpose of finding ways to improve the aquatic health and sustainability of Malheur Lake and the wild flood-irrigated wet meadows across the basin. Esther Lev, a wetland ecologist and a partner of the Harney Basin Wetlands Collaborative shares: "The Harney Basin consists of a rich mosaic of wetlands, wet meadows and irrigated pasture lands that provide critical migration and breeding habitat for a myriad of North American bird species.". These managed wetlands and pasture lands are also vitally important to the ranching community and support the rural economy of Harney County.

She noted that the Harney Basin is characterized by extremely high year-to-year weather variation. "Surface water arrival times, amounts and duration impact wetland plant community composition, diversity, and phenology and then ultimately both wildlife and agricultural uses and needs. Wildlife managers and agricultural producers are continually adapting their management goals and strategies to this variability," she said.

Melissa Petschauer, High Desert Partnership's Harney Basin Ecological Coordinator, highlighted the importance of the collaborative in a recent letter of support for a bill in the Oregon legislature that could provide funds to support Harney Basin Wetlands Collaborative's work. "This collaborative conducts research, restoration projects and monitoring that helps guide decisions toward restoring Malheur Lake and improving the flood irrigated wet meadows. It also supports landowners as they make changes in water management and infrastructure upgrades that not only benefit the landowner but also the millions of birds that use the Harney Basin as a rest stop along their migratory route," she wrote.

Such research and projects include studies on how the suspended sediments in Malheur Lake, caused by powerful winds, make it difficult for aquatic plants to grow, and that removal of the invasive carp in the lake uproot aquatic plants and create a muddy environment that keeps sunlight from penetrating the water. Figuring out how to bolster the aquatic plants in and around the lake will create a waterfowl habitat that will help fuel birds during the spring and fall migrations.

Pictured: An emergent vegetation plot at Malheur Lake. Emergent vegetation is important because the growth can provide both a windbreak, reducing wind when it's cold, and a cooler, shady spot as temperatures rise. The vegetation can also serve as a home for insects, which then helps to feed the bird population. An emergent vegetation study is working to gain information on how best to revive growth within the greater area of the lake itself.

Working collaboratively allows diverse interests to develop solutions that benefit both the environment and the community. Harney County recognizes and depends on important natural resources like Malheur Lake and the wet meadow systems that surround it to support both agriculture and wildlife. "It doesn't have to be one or the other," Petschauer said.

Harney County rancher and one of the founders of High Desert Partnership, Gary Marshall, reflected on the variability of the water from year to year and how that affects ranchers in the basin. "Native meadows and wetlands are a natural and magnificent result of mountain snowmelt waters spreading over the fertile basin soils during longer days and warming temperatures of springtime. The cycle repeats year after year to replenish the aquifer, provide waterfowl/wildlife habitat, enrich the soil and produce a crop for ranchers to use as winter livestock feed," he said.

Pictured: The new Sweek Dam on the Silvies River completed fall of 2019 helps ensure efficient management of snowmelt waters reaching Harney Basin flood irrigated meadows. Photo by Jeremy Hill.

He noted that these meadows are in decline in much of the intermountain west as they are converted for agricultural use that bears higher economic value. "The conversions of these rich ecosystems to development for higher economic uses bring about loss to historical practices, groundwater and wildlife," he said. "The growing uncertainty of how much and when mountain snowmelt water reaches the valley makes it even more important to

have updated infrastructure in place to utilize water more efficiently and effectively." Chad Karges, another founder of the High Desert Partnership also emphasized the importance of water in a desert environment. "Most of the water in the basin is derived from snowpack. When the snowpack melts, the majority of the time there is either too much or not enough water in the system. This dynamic makes it critical that water be managed efficiently in low flow and flood events," he said.

Lessening snow accumulation, drought and increasing evapotranspiration all reduce the spring flows, which affects irrigation of the wet meadows. The Harney Basin Wetlands Collaborative seeks to better understand the hydrology of the basin so that management patterns and timing of water use can develop new techniques and timelines to support the long-term conservation of flood-irrigated wet meadow habitats.

Karges also notes that it is critically important that the diverse interests in the basin work together to address these water issues. In the past, water issues have led to costly and time intensive litigation. "Court derived solutions also limit the flexibility needed to effectively manage water in a dynamic system," he said. "The Harney Basin Wetlands Collaborative has been able to effectively address water issues without litigation. This has enabled the time and money associated with litigation to be redirected to on the ground solutions. This effort has also enhanced the social capital necessary to address the ever-evolving challenges of managing water to benefit both communities and wildlife."

Pictured above. Harney Basin Wetlands Collaborative partners on an April 2022 tour and discussion around the Harney Basin.

Portland Audubon has been invested in the Harney Basin since 1908 when it led efforts to establish the Malheur National Wildlife Refuge. Joe Liebezeit, Interim Statewide Conservation Director for Portland Audubon, noted that Malheur Lake, which once produced as many as 180,000 waterfowl annually, now produces less than 10,000. "Loss of this wetland habitat is catastrophic for wild birds on the Pacific Flyway and severely limits economic and recreational opportunities in southeast Oregon," he said. However, he said the Harney Basin Wetlands Collaborative is intent on restoring these wetlands to their former splendor and ecosystem functionality. "This group has been recognized as one of the most innovative collaborations in the western U.S.".

Wetlands along the Pacific Flyway are in need of attention all along the route. "Closed lake basins throughout the west are drying and losing habitat for migratory birds at an alarming rate. Lake Abert, Summer Lake and even the Great Salt Lake have either dried completely or are drying at a rapid rate," said Ken Bierly, a former Deputy Director of the Oregon Watershed Enhancement Board (OWEB) who has been involved with the High Desert Partnership for years.

He said that the work the Harney Basin Wetlands Collaborative has done over the last decade has vastly improved the understanding of what affects the hydrology in the basin and will help to direct what projects are most likely to improve migratory bird habitat. "The partners are poised to make significant advances that will materially benefit bird habitat critical to the Pacific Flyway while other stopover areas on the flyway are rapidly declining or have dried completely," he said. "The Harney Basin Wetlands Collaborative is ready to go. They have projects that can help understand and address

lake conditions. They have cooperative landowners using improved management measures for hay production and bird habitat benefit."

Visitors and Harney Basin residents alike will have a front row seat to view the diverse array of birds that migrate this spring during the annual Harney County Migratory Bird Festival April 13-16. There will be many opportunities to view thousands of birds resting and feeding throughout the basin thanks to a group of dedicated individuals working behind the scenes to ensure these birds continue to use the Pacific Flyway and exist as they have for previous centuries and for many years to come.

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

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