

INTEGRATED WETLANDS MANAGEMENT IN HARNEY CLOSED LAKES BASIN



Photos credit: High Desert Partnership



Partnership Overview

The wetlands of Harney Basin represent critically important migratory and breeding habitat for birds on the Pacific Flyway. These wetlands face significant threats from invasive carp, invasive vegetation, and legacy infrastructure, and these threats are further exacerbated by climate change. In 2007, the High Desert Partnership initiated collaboration toward solutions that improve the ecology of the landscape and support the local economy. Partners now build upon more than 15 years of effort to restore and manage wetlands across the hydrologically connected landscape of Silver Creek floodplain, the floodplains of northeastern tributaries, the Silvies River Floodplain, the Blitzen River Floodplain and the wetlands of Malheur Lake. This initiative is focusing on project activities that will be sustainable and proactive as climate changes and corresponding water management decisions are made. Changing climate has significant consequences to maintain migratory and breeding bird habitats and to ensure the viability of the rural communities.

Goals by 2030:

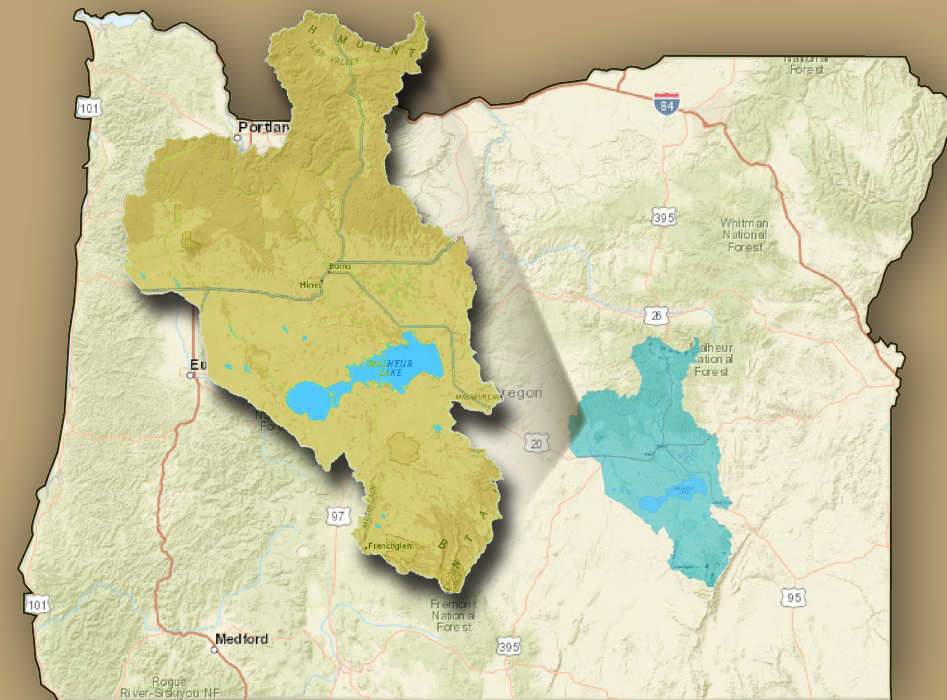
- Significantly increase the area of emergent vegetation in Malheur Lake, increase submergent aquatic vegetation, and provide essential habitat for breeding and migratory birds.
- Significantly increase the area of flood-irrigated wet meadow habitat managed to minimize and/or reduce invasive grass species, especially reed canary grass.
- Increase the nesting, resting, and feeding habitat for hundreds of thousands of migratory birds and millions of migratory waterfowl.

In April 2024, the High Desert Partnership was awarded funding through the Oregon Watershed Enhancement Board (OWEB) Focused Investment Partnership (FIP) grant program. A FIP is an OWEB investment that addresses a Board-identified priority of significance to the state; achieves clear and measurable ecological outcomes; uses integrated and results – oriented approaches as identified through a strategic action plan; and is implemented by a high-performing partnership. Initiatives are eligible for up to six years of OWEB funding. For the first biennium, OWEB awarded \$510,610 to the High Desert

Core Implementing Partners

- Bird Conservation Oregon
- Burns-Paiute Tribe
- Ducks Unlimited
- Eastern Oregon Agricultural Research Center
- Friends of Malheur National Wildlife Refuge
- Harney County Court
- Harney County Watershed Council
- Harney Soil and Water Conservation District
- Intermountain West Joint Venture Landowners
- Natural Resources Conservation Service
- Portland Audubon
- US Fish and Wildlife Service, Malheur National Wildlife Refuge
- US Geological Survey
- Wet Meadow Partners

Partnership. When combined with investments from 2024 to 2030, the anticipated total investment is approximately \$8,223,41.

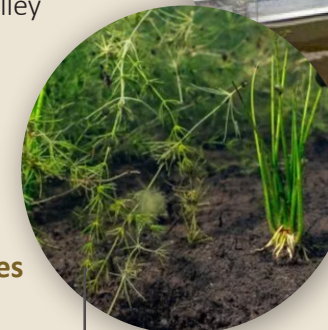


Ecological Outcomes

The goal of the Harney Basin Wetlands Collaborative is to work towards the ecological outcome of a sustainable wetland system in the Harney Basin with the maximum footprint of flood-irrigated wet meadows and healthy marsh conditions in a portion of Malheur Lake.



Water quality testing and aquatic vegetation surveying at Malheur Lake.



Strategies

1. Improved Management of Malheur Lake wetlands and Blitzen River Valley Stream, Floodplain and Riparian Restoration
2. Improved Management of Flood-Irrigated Wet Meadows on the floodplains of Silvies River, Silver Creek and other tributary streams
3. Build Knowledge for Management
4. Community Engagement

Conservation Actions

- Reduce common carp from Malheur Lake
- Restore emergent wetland vegetation throughout Malheur Lake
- Reduce invasive reed canary grass and other invasive plant species
- Provide private landowners with water management, wet meadow management information, and tools to optimally manage flood irrigation to benefit bird habitat
- Reduce the sediment input to Malheur Lake by evaluating sources and conditions that exacerbate sediment supply. Monitor sediment sources and ice effects on the wetlands of Malheur Lake. Target restoration to address sediment source(s)

Near-term Ecological Outcomes

- Reduced relative size of carp population
- Reduced turbidity at Malheur Lake, measured through water quality monitoring
- Increased area of emergent vegetation cover at Malheur Lake
- Reduced invasive plant species
- Increased area of bird habitat, bird numbers
- Increased number of landowners implementing reed canary grass management measures
- Increased area of improved water management
- Length of riparian restoration and reduced sediment delivery to Malheur Lake
- Increased relative abundance of breeding birds, shorebirds and migratory water birds

Longer-term Ecological Outcomes

- Sustainable wetland system throughout Harney Basin with the maximum footprint of flood-irrigated wet meadows and healthy marsh conditions in a portion of Malheur Lake
- Increased knowledge about the relationships between management actions, vegetation response and bird habitat use
- Resilient migratory and breeding bird habitats
- Viable rural communities