



Harney Basin Wetlands

The high desert marshes and lush meadows of southeast Oregon have historically sustained a rich and abundant array of wildlife.

Today, this environmental treasure is teetering on collapse. But you can help.

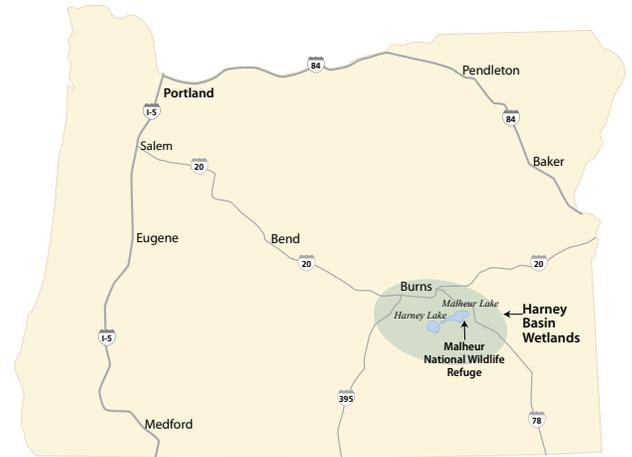


The Harney Basin wetlands, with Malheur National Wildlife Refuge at its center, is a complex mosaic of riparian and upland habitats providing critical migratory stopover and breeding habitat for a multitude of species.

For birds and bird-watchers, the Harney Basin is one of the great wonders of the West

Increasingly recognized as one of the most important places on the continent for migratory birds, the Harney Basin is the northern anchor of a string of wetlands that extends across the Southern Oregon/Northeast California (SONEC) region. During spring migration, more than five million ducks, a million geese and 100,000 swans pass through here, stopping to feed and gather strength for the long journey to their northern breeding grounds.

More than 320 species of birds can be found on Malheur National Wildlife Refuge, an Audubon-designated "Globally Important Bird Area," and surrounding private lands, making it a "must visit" for bird watchers from all over the world.



Bird counts in the basin in the recent past have found:

- the highest number of greater sandhill cranes of any refuge in the western U.S.
- more than 20,500 white-faced Ibises (20% of the world population)
- more than 4,000 breeding white pelicans
- more than 7,000 breeding western and Clark's grebes
- more than 20,000 migrating shorebirds, including snowy plover, long-billed curlew, American avocet and black-necked stilt
- up to half of the world's Ross's geese
- and hundreds of thousands of migrating waterfowl.

But today, migrating and breeding bird populations have plummeted 90 percent

Malheur National Wildlife Refuge, one of the great refuges of the West and the heart of one of the most important wetland complexes in North America, is in trouble.

Malheur Lake, the biological heart of the refuge and the largest freshwater marsh in the West, is sliding toward ecological collapse, victim of an exploding population of non-native common carp.

Introduced decades ago, these destructive invaders have decimated the lake's natural marshes, uprooting vegetation and creating a vast murky expanse of open water where hundreds of thousands of breeding waterbirds previously found abundant food and cover.

A lake that once annually produced more than 100,000 ducks and geese and sustained peaks of more than half a million migrating waterfowl, now supports less than 10 percent of those historic numbers.



Valuable habitat decimated by an invasive species – CARP

Already well established by the 1950s, Malheur Lake's carp population has exploded to levels that now exceed 7.2 million pounds of fish. Adult carp in the lake may weigh 15–30 pounds, and females can produce more than one million eggs per year.

Carp are bottom feeders and eat the same food as birds, uprooting vegetation in search of invertebrates and disturbing the lake's muddy bottom. Increased turbidity inhibits the regrowth of emergent vegetation, creating vast expanses of open water with little habitat value for migratory birds.



The Harney Basin faces an uncertain future

On the floodplains outside the Malheur Refuge boundaries, private lands still host hundreds of thousands of waterbirds every spring.

Traditional flood irrigation and annual haying and grazing create ideal spring conditions for migratory waterbirds on the Silvies River floodplain and other private lands. Floodwaters from melting snowpacks in the surrounding mountains are diverted into fields and pastures, creating shallow ponding among short

grasses with an abundance of seeds and invertebrates for waterbirds to feed on. Peak numbers of more than 300,000 snow geese join sandhill cranes, northern pintail, white-faced ibis and other birds in foraging across the Harney Basin's floodplains.

But this rich area is also at risk. Pressure is mounting for development, and conversion to more efficient irrigation poses a threat to these critical seasonal wetlands.



Collaborations builds broad consensus in response to threats ...



Larry Kuuckenberg

In 2010, the U.S. Fish and Wildlife Service began a collaborative process that engaged dozens of stakeholders in developing a new 15-year management plan for Malheur National Wildlife Refuge. Ranchers and wildlife advocates worked with federal, state, tribal and local government officials to set aside years of conflict and controversy and achieved a remarkable

consensus on the refuge's comprehensive conservation plan.

THE TOP PRIORITIES: an aggressive basin-wide carp control effort, coupled with science-based adaptive management using a broad range of strategies to improve the health of the refuge's wetlands.

... and a vehicle for action: The Harney Basin Wetlands Initiative

A plan is only as good as its implementation – too many good plans are quickly forgotten to gather dust on shelves. Buoyed by the success of the Malheur Refuge's planning effort, many stakeholders have committed to remaining actively involved over the life of this plan to ensure it achieves meaningful change on the ground. The High Desert Partnership, a community-based organization that fosters cooperation, communication and collaboration on natural resource stewardship in Eastern Oregon, worked with a coalition of stakeholders to create the Harney Basin Wetlands Initiative.

THE COALITION'S GOALS: 1) to implement basin-wide carp control strategies and 2) work with private landowners to maintain flood-irrigation and haying practices that sustain important bird habitats.

Harney Basin Wetlands Initiative Partners

Local ranchers and farmers
Audubon Society of Portland
Burns Paiute Tribe
Defenders of Wildlife
Ducks Unlimited
Harney County Court
Harney Soil and Water Conservation District
High Desert Partnership
Intermountain West Joint Venture
Malheur Wildlife Associates
Oregon Department of Fish and Wildlife
Oregon Habitat Joint Venture
Oregon Natural Desert Association
Oregon Watershed Enhancement Board
Oregon Wildlife
The Nature Conservancy
The Wetlands Conservancy
Trout Unlimited
USDA Natural Resources Conservation Service
U.S. Fish and Wildlife Service



Jim Gruce

This is one of the best conservation investments in Oregon with benefits for birds on a continental scale and a solid foundation of support by a diverse group of stakeholders.



Meeting the challenge

Complete eradication of carp from Malheur Lake and its tributaries may be impossible, but carp experts say populations can be reduced to levels that will allow the lake's marshes to recover and wildlife to rebound.

To be successful, scientists say, control efforts need to target carp across their lifespan to reduce the number of adults, limit reproduction and juvenile survival, and block reinvasion by carp from other areas. Strategies range from commercial fishing and high-tech radio-tracking of carp to physical barriers and increasing predation by birds and other native fish.

The costs of controlling carp are significant – involving one-time investments of \$10 million or more and annual costs estimated at \$200,000 per year. Research needed to further develop and refine control strategies will require additional funding in the next few years.

Maintaining important seasonal floodplain habitats on agricultural lands will also require significant investments. Funding will be needed for partnerships with private landowners to upgrade aging water management infrastructure and ensure that the floodplain remains undeveloped.

But the payoff will be immense – ensuring high quality habitat for millions of migratory birds and other native fish and wildlife for years to come.



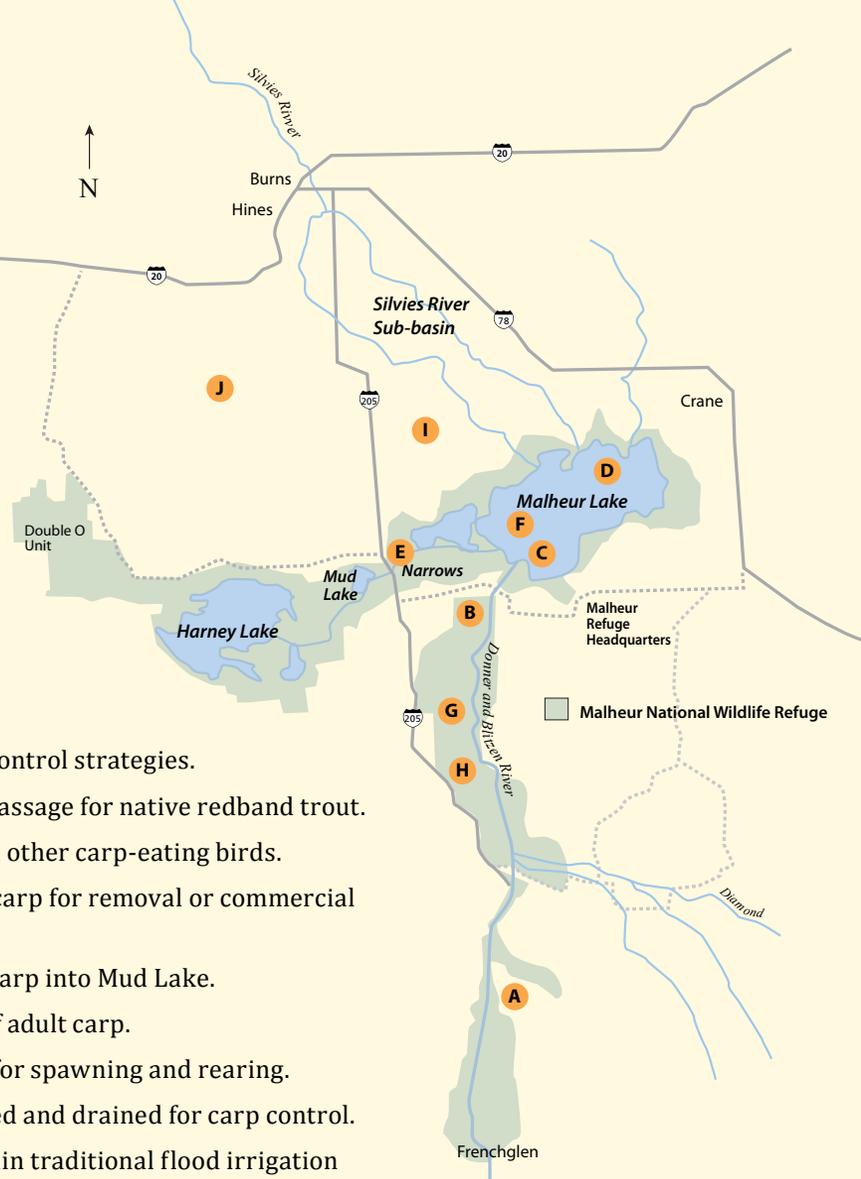
Refuge biologists monitor carp population at Crane Pond.



Jim Cruise

A basin-wide action agenda

- A. Boca Lake, a mini-Malheur, tests innovative carp control strategies.
- B. Fish-sorting facility allows trapping of carp, free passage for native redband trout.
- C. Nesting island attracts Caspian terns, pelicans and other carp-eating birds.
- D. Radio-tagging targets seasonal concentrations of carp for removal or commercial harvest.
- E. Barrier at the Narrows blocks movement of adult carp into Mud Lake.
- F. Commercial fishing could remove large numbers of adult carp.
- G. Fish screens block carp access into wetlands used for spawning and rearing.
- H. Improved water control allows wetlands to be filled and drained for carp control.
- I. Partnerships with private landowners help maintain traditional flood irrigation and haying, providing critical bird habitat during spring migration.
- J. Inventory and monitoring allow managers to track the effectiveness of actions and adapt control strategies.



We need your help to save one of the West's most important bird habitats!



Jim Cruce

Restore Malheur and the Harney Basin Wetlands

Here's what you can do

DONATE: Make a tax-deductible charitable gift to support the restoration of the Harney Basin wetlands and the Malheur National Wildlife Refuge. You can donate online at www.owhf.org/restoremalheur or by completing and mailing in the attached pledge envelope.

ADVOCATE: Contact your local and national representatives and urge them to support and fund the Harney Basin Initiative.

CONNECT: Check out the **Restore Malheur** page on Facebook and join our growing coalition of supporters.



PARTICIPATE: Follow us on Facebook for news about opportunities to get involved with on-the-ground activities and other efforts to control carp and improve the health of the Harney Basin wetlands.

FOR MORE INFORMATION: High Desert Partnership, 113 W. Washington Street, Burns, OR 97720 or email highdesertpartnership@gmail.com.



Jim Cruce



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