Refuge Waters in Peril

Common carp have negatively impacted the aquatic health of Malheur National Wildlife Refuge – we need your help to bring the birds back.

Malheur National Wildlife Refuge is one of the jewels of the National Wildlife Refuge System. It is a premier site for birds and birding as it provides invaluable migratory stopover and breeding habitat along the Pacific Flyway. Over the last 60 years, these habitats have been significantly altered by a non-native species, the common carp. As a result, refuge waters can produce only a fraction of the waterfowl and waterbirds they once did.

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Malheur National Wildlife Refuge supports a good number of migratory ruddy ducks on the Pacific Flyway. Ruddy and other diving ducks rely on sago pondweed – an abundant submerged aquatic plant found on healthy lakes.

U.S. Fish & Wildlife Service / Dave Menke

Malheur, Mud and Harney Lakes are magnets for colonial nesting waterbirds, or birds that gather in large assemblages during nesting season. Refuge waters support white-faced ibis, as well as grebes, pelicans and egrets.

A Disastrous Invasion

The common carp is a member of the minnow family with resilient characteristics: it can resist wide temperature ranges, low water clarity and high water turbidity, and has a wide-ranging diet and breeds prolifically. In the Harney basin, common carp eat all the same foods as birds and native fish.

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Common carp were introduced in the 1920s as a desirable sustenance fish in many places across North America, and in the 1950s carp became established in Malheur National Wildlife Refuge waters. Since then, carp have severely depleted migratory bird food resources and diminished water quality. With over 7.2 million pounds of carp currently in refuge waters, bird productions numbers will remain dramatically decreased.

Why are Carp a Problem?

The greatest impact of carp is their bottom feeding behavior: carp eat invertebrates, uproot vegetation and disturb the muddy bottom. As carp populations explode, food staples for waterfowl and waterbirds disappear. The damaging impacts of common carp have seriously handicapped the refuge and its ability to fulfill its mission to provide feeding, nesting and rearing habitat for migratory birds. Currently, the ecological collapse caused by carp has reduced waterfowl production to about 2-7% of its former capability.

Malheur is one of the largest lake systems west of the Rockies. It is a very dynamic system with water levels changing every year. The interconnectivity of the lakes and waterways makes carp control an on-going battle.

For the Birds

Historically, Malheur Lake was home to large colonies of nesting waterbirds, host to tens of thousands of nesting waterfowl and a resting stop for migratory shorebirds.

In 1908, President Theodore Roosevelt established the Lake Malheur Reservation "as a preserve and breeding ground for native birds." The reservation encompassed over 80,000 acres around Malheur, Mud and Harney Lakes for migratory waterfowl. Today, it is known as Malheur National Wildlife Refuge, and protects over 187,000 acres of habitat, including wetlands, riparian areas, meadows and uplands.

Historically, about 35% of the Pacific Flyway's canvasback duck population used Malheur Lake. In fact, the lake produced approximately 400,000 ducks, 75,000 geese and 3,500 swans, and ranked as one of the most productive waterfowl areas in North America.

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In 1908, William Finley photographed a white pelican breeding colony on Malheur Lake. Finley – and his photos – were instrumental in early recognition of the importance of the lakes, riparian streams and marshes in the Harney basin to shorebirds, waterbirds and waterfowl.

Audubon Society of Portland

U.S. Fish & Wildlife Service

A refuge fish biologist and a University of Minnesota researcher place a radio telemetry tag in a carp specimen. With tagging, scientists can develop population estimates as well as locate carp wintering and spawning areas.

A Goal for the Future

The challenge of carp control is not insurmountable. Malheur National Wildlife Refuge is working to restore the basin's aquatic health in order to fulfill its mission of providing feeding, nesting, and rearing habitat for migratory birds. This will be accomplished by working with partners to develop an efficient and sustainable carp control program for the entire basin using the best available science.

Current Carp Control Techniques

Refuge staff have been conducting carp control treatments since 1955. Since then, ongoing efforts to improve aquatic health on Malheur National Wildlife Refuge have included the use of chemicals, fishscreens, traps and barriers, and water draw downs. While all of these treatments have been effective, carp populations rebound within a few years without a basin-wide solution.

In order for carp control to be a success, continuing studies on carp populations and their effect on aquatic food supplies will need to be completed. Complete eradication of common carp will not be possible in all waterways, but huge strides can be made in control.

Techniques of the Future

The refuge is working on a basin-wide adaptive management strategy to lay the foundation for carp control and aquatic health improvement. What does this mean? Many partners in the basin can work together to develop evolving solutions and effective technologies. As a part of this approach, the refuge and its partners are developing approaches on the cutting edge of science. These techniques and technologies – including the use of telemetry tags and robotic boats for tracking fish, commercial harvest, system segmentation, and deterring carp passage at the dams – will all add to a sustainable carp control effort.

U.S. Fish & Wildlife Service

The improvement of aquatic health will not only support waterfowl, waterbirds and shorebirds, it will support native fish like the redband trout

U.S. Fish and Wildlife Service/Lee Karney

The U.S. Army Corps of Engineers constructed a rock fill island in Malheur Lake. The island will be used as a nesting location by Caspian terns, and other birds, which predate on carp.

Beyond Boundaries: A Basin-Wide Solution

Common carp live in the wetlands and river systems of Malheur National Wildlife Refuge and nearby waterways such as the Silvies River. During higher water conditions, the interconnected waterways serve as highways for carp to re-infest controlled areas. Coordination and partnerships will be critical for basin-wide carp control efforts to be successful.

We Need Your Help

Malheur National Wildlife Refuge has support for their Aquatic Health Improvement Plan from numerous federal, state and county entities, nonprofit organizations, universities, businesses, and individuals. However, the fight is far from over, Malheur National Wildlife Refuge is reaching out to all interested parties to help improve its aquatic health.

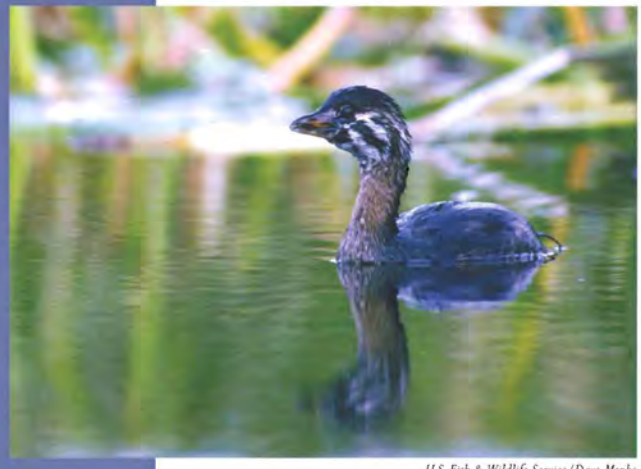
Your help is needed to assist with our aquatic health-related citizen science opportunities such as inventory/monitoring, fish collection/tagging, and other fisheries related work. We also need strong support from advocates willing to share our story and help find solutions.

Be part of the solution!

Contact:
Malheur National Wildlife Refuge
36391 Sodhouse Lane
Princeton, OR 97721
541-493-2612
Or visit our website at:
www.fws.gov/malheur

U.S. Fish & Wildlife Service / George Gentry

Let's work together to get rid of carp and bring back a world class birding hot spot.



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A juvenile pied-billed grebe swims alone on a wetland. Grebes feed heavily on insects, small fish and crustaceans by diving below the surface.