


Malheur

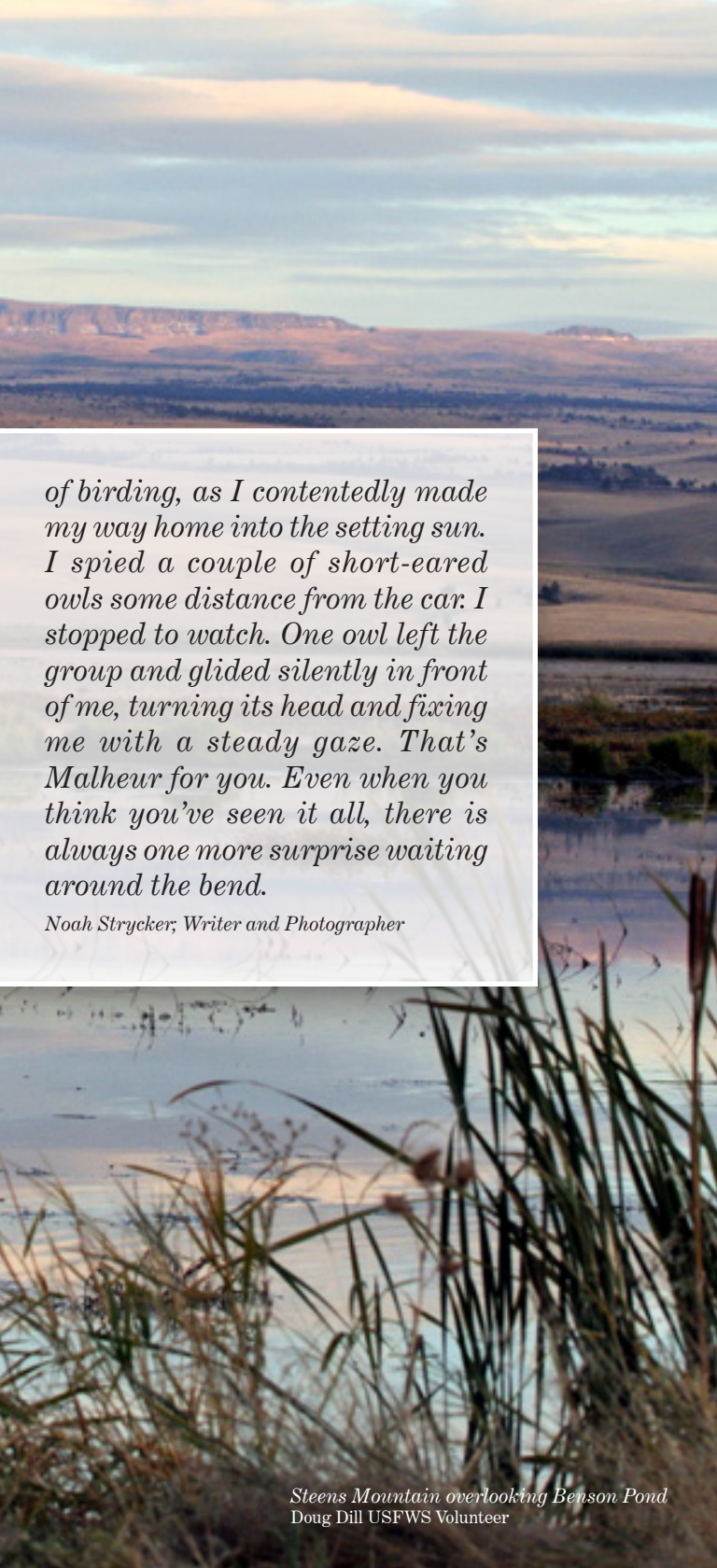
*National Wildlife
Refuge*





*A*lthough the birds bring me to Malheur, I am also drawn by the place itself, the crisp scent of sage on the air; the crack of a late summer lightning bolt, the golden beauty of slanting sun on rimrock. I have been delighted by chance encounters with a family of coyotes, a badger, a porcupine, and a scorpion. The birds are just one part of the magic.

One of my most vivid experiences at Malheur came after a long day



of birding, as I contentedly made my way home into the setting sun. I spied a couple of short-eared owls some distance from the car. I stopped to watch. One owl left the group and glided silently in front of me, turning its head and fixing me with a steady gaze. That's Malheur for you. Even when you think you've seen it all, there is always one more surprise waiting around the bend.

Noah Strycker, Writer and Photographer



A Protected Oasis in Oregon's High Desert



One of the crown jewels of the National Wildlife Refuge System, Malheur National Wildlife Refuge protects a vast complex of habitat in Oregon's high desert. The Refuge is famous for its tremendous diversity and spectacular concentrations of wildlife. With more than 340 bird species and 67 mammal species, Malheur is a mecca for birdwatchers and wildlife enthusiasts.

People have been drawn to Malheur's abundant wildlife and natural resources for thousands of years. When unregulated market and plume hunting began to decimate populations of migratory birds, President Theodore Roosevelt stepped in to stop the slaughter. In 1908, he designated Malheur "as a preserve and breeding ground for native birds."

Today, Malheur National Wildlife Refuge consists of more than 187,000 acres, a tremendously important source of wildlife habitat. The Refuge represents a crucial stop along the Pacific Flyway as a resting, breeding and nesting area for hundreds of thousands of birds and other wildlife.

Malheur is a part of the National Wildlife Refuge System, a network of over 560 refuges set aside specifically for fish and wildlife. Managed by the U.S. Fish & Wildlife Service, the System is a living heritage, conserving fish, wildlife and their habitats for generations to come.



A Year of Wildlife



Yellow Warbler

Barbara Wheeler USFWS Volunteer

Spring

Spring is the most spectacular season at Malheur. Over 130 species of birds nest on the Refuge, while others stop to rest and refuel for their migration further north. The year begins in February when thawing ice heralds, the start of the northward migration.

Northern pintails and tundra swans begin to arrive, followed by sandhill cranes and large flocks of snow, Ross's, and white-fronted geese. These birds can be best observed on the flooded meadows along State Highway 205 near Burns. Waterfowl are most plentiful in March, while the majority of shorebird species arrive in April. Songbird numbers peak in late mid-May. Refuge headquarters, the P Ranch and Page Springs are considered some of the best areas in Oregon to observe the songbird migration. May and June are active months for breeding and nesting, and a time to see a variety and "rare" bird species. Pronghorn antelope and mule deer fawns are also born at this time.



American Avocets

Barbara Wheeler USFWS Volunteer

Summer

As the flurry of migration settles, wildlife focuses on raising their young. Marsh and meadow vegetation grows rapidly in June, making wildlife viewing difficult. Broods of trumpeter swans and other waterfowl can be seen on most Refuge

ponds throughout June and July. Migrant shorebirds return in early July, congregating on mud flats and alkali playas. Northern pintails and shoveler populations peak in mid-August as they initiate the fall waterfowl migration. The peak of the fall songbirds migration also occurs in August.



Mule Deer
Barbara Wheeler
USFWS Volunteer

Fall

Activity increases again as fall migration begins. One of the greatest wildlife attractions occurs in September and October, when greater sandhill cranes “stage”, or gather, in the Blitzen Valley before migrating to wintering grounds in California’s Central Valley. The fall waterfowl migration peaks in October when Canada geese, tundra swans, and flocks of ducks arrive. Large numbers of mule deer can also be seen and bucks are visible during their rut from late October through November. Cold weather in late November signals a major waterfowl exodus and most migrating birds have headed south.

Winter

Winter is the quietest season at the Refuge. Although most ponds freeze over, some remain open, providing food and water to wintering wildlife. Many mammals and a variety of raptors, including eagles and hawks, winter on the Refuge. During cold spells, mallards, Canada geese, and trumpeter swans congregate on the remaining open water. Most songbirds have moved south for the winter, but some sparrows remain. Careful observers may find sparrows and snow buntings among the horned larks. As migration initiates in spring, migratory birds begin to return starting with northern pintails, followed by sandhill cranes and other waterfowl.

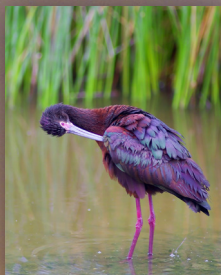


Golden Eagle
Barbara Wheeler
USFWS Volunteer

Land and Water for Wildlife

Birds and other wildlife need several types of habitat for food, shelter, and raising young. Some species use Malheur just for nesting, while others use it as a stopover during migration. Still others spend the winter here. Our managers understand the varying needs of wildlife and develop land use plans to manage Refuge habitats to meet these needs.

Lakes



White-faced Ibis
Jerry Smith

Malheur Lake is one of the largest inland marshes in the United States varying dramatically in size from 500 to 110,000 acres and rarely exceeds 8 feet even during the years of high water. It receives water from the Blitzen and Silvies Rivers, and is predominantly influenced by snowpack. During years of high water, the lake will flow to Mud Lake. Common emergent species in Malheur Lake include various sedges and rushes supporting mixed colonies of ibises, egrets, terns, pelicans, gulls, and grebes. There is little direct management of these lakes, including Harney Lake.

Harney Lake is deeper than Malheur Lake and ranges in size from 30,000 acres to completely dry. Water often enters through Silver Creek and a series of springs. When the lake is full it supports extensive stands of wigeongrass and high numbers of waterfowl. However, Harney Lake dries up completely during dry periods, shifting from a hypersaline lake to a dry salt flat. At higher salinities, it supports an abundance of brine shrimp and brine flies, an important food sources for many birds.

Wetlands

Water is the lifeblood of the Refuge. Ponds and marshes attract many species like waterfowl and colonial birds who rely on these wetlands for food and safe nesting habitat. We use a series of dams, canals, levees, and ditches to ensure a good supply of water while birds are rearing their broods. We also raise or lower water levels to improve marsh soils and stimulate growth of plants. Deep flooding drowns unwanted vegetation, creating areas of open water where broods forage and rest. Often ponds are dried to enable submergent plants to grow.

Irrigated Meadows and Grain Fields

Irrigated meadows are a type of wetland with soil that are saturated with water for part or all of the growing season to create wildlife habitat. Meadows provide foraging, resting, and nesting habitat for a

Open Water



Sandhill Crane
Roger Baker
USFWS Volunteer

variety of waterbirds, waterfowl, shorebirds, and nontropical migrants. In August, after flood irrigated meadows are drained, we mow, graze, hay, or burn meadows to remove old plants and stimulate new growth that creates nesting cover and feeding areas for the following years. In spring, the sun thaws frozen soil earlier, giving new plants a head start. Breeding waterfowl and other wildlife feed on early plant growth and invertebrates that live in the soil.

Uplands

Due to the location of the Refuge in the high desert most of the upland vegetation consists of sagebrush, salt desert scrub, and dunes. Common upland plants communities like sagebrush and greasewood have adapted to extreme temperature, poor soil conditions and dryness of the region. These plant communities provide forage for grazing animals (deer and antelope) and nesting sites for birds and a diverse variety of mammals.

Riparian Areas

A riparian zone is the habitat that borders a river or stream. Plants that grow in these areas depend on a steady supply of fresh water. These areas are among the most important for wildlife because this habitat provides food, water, nest sites, and shelter for a wide variety of wildlife especially in a desert environment.

Did You Know?



Great Blue Heron
USFWS

Malheur Lake was once capable of annually producing over 100,000 waterfowl species and ranked as one of the most productive waterfowl areas in North America. The lake also once played a much more significant role in the Pacific Flyway for migratory birds. In the early 1950s, the negative impacts of Common Carp, an invasive non-native species, became noticeable and the productivity of Malheur Lake has been far from optimal since.

Buena Vista Ponds
Doug Dill USFWS Volunteer

The Basin Through Time

9,800 Years Ago

Earliest Evidence of People

Since prehistoric time, Harney Basin has been a major nesting and migratory stop over for migratory birds. The extensive lakes, wetlands, meadows, and riparian areas, surrounded by hundreds of square miles of desert, attracted tremendous numbers of wildlife. People have been drawn to Malheur by the abundant natural resources found in its vast habitat.

Harney Basin contained a huge lake that covered 255,000 acres. The early inhabitants used plants and animals found along the edge of this vast lake and in the surrounding uplands. Hunters used spears to hunt large game animals, such as bison, and it was around this time that twined bags, mats, burden baskets, and trays began to appear in the archaeological records.

3,500 Years Ago

Early Villages



Small villages were built along the edges of lakes, marshes, and rivers. At one such village, people ate rabbit, fish, and large game animals. They harvested grass and juniper seeds and made fires using conifer and sagebrush. Unfortunately, the inhabitants of these villages were forced to abandon their homes when volcanic cinders from an eruption at Diamond Craters blanketed the landscape.

Following a dry period, moist conditions returned, bringing an abundance of resources to lakes, marshes, and uplands, and attracting many people. This may be the period of most intensive use of resources in the Harney Basin. Villages of mat-covered shelters called wickiups sprang up along virtually every pond and marsh. The descendants of these people, the Wada'tika – Northern Paiute of the Harney Basin – occupied the area when the first Europeans arrived.

1,400 Years Ago

Northern Paiute Indians

Burns Paiute elders recall the continuation of a seasonal round into historic times. They talk about gathering plants, hunting, and fishing as foods became abundant in lakes, marshes, uplands, and rivers. Spring was a time for gathering roots and fish, which they dried and stored away. Tui chub were harvested in Harney and Malheur Lakes, and salmon were procured from the Malheur River. In the summer

Double-O Sunset

Barbara Wheeler USFWS Volunteer



Pronghorn Antelope
Barbara Wheeler USFWS
Volunteer

they traveled around their territory, gathering seeds and berries and hunting game. Fall was a time for hunting waterfowl, jackrabbit, bighorn sheep, and antelope. Families came together in the fall for communal antelope and rabbit drives. Fall was also an important time for collection of plant materials to be used for manufacture of sandals, baskets, and clothing during the winter. During the winter they retrieved their supplies of dried food and erected houses of tule (bulrush) mats near springs in the wetlands around Harney and Malheur Lakes. While the rest of their territory lay frozen, the wetlands offered fresh plants, waterfowl, and mammals to supplement their stored food.

Did You Know?



The term Wada'tika refers to the Paiutes living in the Harney Basin and literally means "wadaeaters." In the autumn, they harvested the tiny black seeds of wada, a plant that grows along the shores of the lakes.

Many of these important resources are still harvested today by the Burns Paiute Tribe at a variety of locations in the Harney Basin. Members of the Tribe continue to harvest important plants on the Refuge as they seek to sustain and share their cultural traditions of basket weaving, and tule mat and duck decoy construction with tribal youth.

1826

*First Non-native
Contact*



River Otter

Barbara Wheeler USFWS
Volunteer

In 1826, French-Canadian fur trapper Peter Skene Ogden led a large expedition of trappers from the Hudson's Bay Company into the Harney Basin. The fur trappers were looking for beaver, river otter, and other fur-bearing animals. They encountered the Northern Paiute Indians camped along the shores of Harney and Malheur Lakes. The Hudson's Bay Company frequently expected local tribes to supply food for their large expedition groups. Unfortunately, the Paiutes were entering the winter season after a very unproductive summer and were unable to help the explorers with food.



1845 to 1853

Wagon Trains

The 1845 Meeks Wagon Train represented the next major entry of nonnatives into the area. Nearly 800 pioneers followed Stephen Meek across Oregon's high desert, who claimed that he knew a shorter route to the Willamette Valley. As the wagon train entered the Harney Basin, their primary concerns were finding water and feed for their livestock. They camped along Harney and Malheur Lakes, but found that the water, because of its alkaline nature, was not fit for humans or animals. The ill-fated wagon train eventually made their way to The Dalles, but not before suffering from the deprivations of the high desert.

In September 1853, the "Lost Wagon Train" led by Elijah Elliot, seeking a shorter route to the Willamette Valley, followed the route of the Meeks Wagon Train into the Harney Basin. Upon entering Harney Basin, Elliot decided to detour around the south side of Malheur Lake and continued around Harney Lake until they reached the springs in the Double-O area. Many members of the wagon train believed they were hopelessly lost, but riders from Central Oregon eventually located the wagon train many miles west of the Double-O area and led them to safety.

Alvord Desert Cutoff

Marilyn Kircus USFWS
Volunteer

1872 to 1897

Peter French Era



In 1872, Peter French with 1,200 head of cattle, six Mexican vaqueros, and a cook headed to Oregon from California under the direction of Dr. Hugh Glenn to begin building a vast cattle empire. Once he entered the lush Blitzen Valley, French's search for land was over. French continued to acquire

land over the next 25 years using not only the Homestead Act, but also the Swamp Land and Desert Acts. French eventually managed a ranch that encompassed the Blitzen, Diamond, and Catlow Valleys. The valleys underwent a transformation from more natural conditions attributed to pre-European contact to the highly altered landscape of today with construction of roads, ditches, and impoundments. Land disputes between French and other settlers led to French's murder in 1897. The land was reorganized and sold through several companies before the ranch was sold to the U.S. Government.

Did You Know?



Malheur Lake

Barbara Wheeler USFWS
Volunteer

his maps of the area. From that time on, the area would be identified as Malheur Lake.

Many local landmarks received their names during military expeditions. Harney Lake received its name in 1859 in honor of General William S. Harney. Steens Mountain is named after Major Enoch Steen, who led an expedition to survey a military road through the area in 1860.

Many early bird observations were recorded in military journals from the expeditions in the late 1850s. This information would later attract feather hunters to the area and eventually bring about the establishment of the Refuge.

The lack of available food and a scarcity of fur-bearing animals around Harney and Malheur Lakes led Ogden to write the name "Malheur," the French word for misfortune, on

1900 to 1920s

From Ranch to Refuge



In the late 1880s, plume hunters were decimating North American bird populations in the name of fashion. The hunters were collecting breeding feathers for the hat industry. Shorebirds and colonial nesting birds suffered the most as hunters targeted large flocks, injuring birds indiscriminately and orphaning chicks. In an era when an ounce of breeding feathers was worth more than

an ounce of gold, it's not surprising that plume hunters sought to make a fortune by hunting birds on Malheur Lake.

On a trip to Harney County in 1908 to photograph nesting birds on Malheur Lake, wildlife photographers William L. Finley and Herman T. Bohlman learned that most of the birds had been killed in 1898 by plume hunters. After 10 years the bird population had still not recovered. Outraged by their observations, they presented the situation to fellow members of the Oregon Audubon Society and approached President Theodore Roosevelt with the proposal. The "Lake Malheur Reservation" was established on August 18, 1908. Roosevelt set aside unclaimed government lands encompassed by Malheur, Harney, and Mud Lakes "as a preserve and breeding ground for native birds."

1930 to Today

Wildlife First

The drought years of the 1930s had a profound effect on "Lake Malheur Reservation." The water levels on Harney, Malheur, and Mud Lakes shrank with the decrease in flows from the Blitzen River and creeks that fed the lakes. William L. Finley again played an integral part in the purchase of the Blitzen Valley which was added as an addition to the bird reservation in 1935 with funds designated for national unemployment relief (e.g., the Civilian Conservation Corps (CCC)). The purchase included acquiring the water rights for waters flowing from Steens Mountain. With the control of the Blitzen River allowed the bird reservation to restore water to Malheur Lake by releasing water held behind ranch dams.

The last major segment of the Refuge was purchased in 1941. With the deepening nationwide depression and the ongoing drought, forced reductions on the number of cattle the land could support and west of Harney Lake was purchased. Today, Malheur National Wildlife Refuge encompasses more than 187,000 acres of tremendously important sources of wildlife habitat all for the benefit for fish and wildlife.



NATIONAL
WILDLIFE
REFUGE



Did You Know?



In an effort to revive America with the Great Depression in 1933, President Franklin Delano



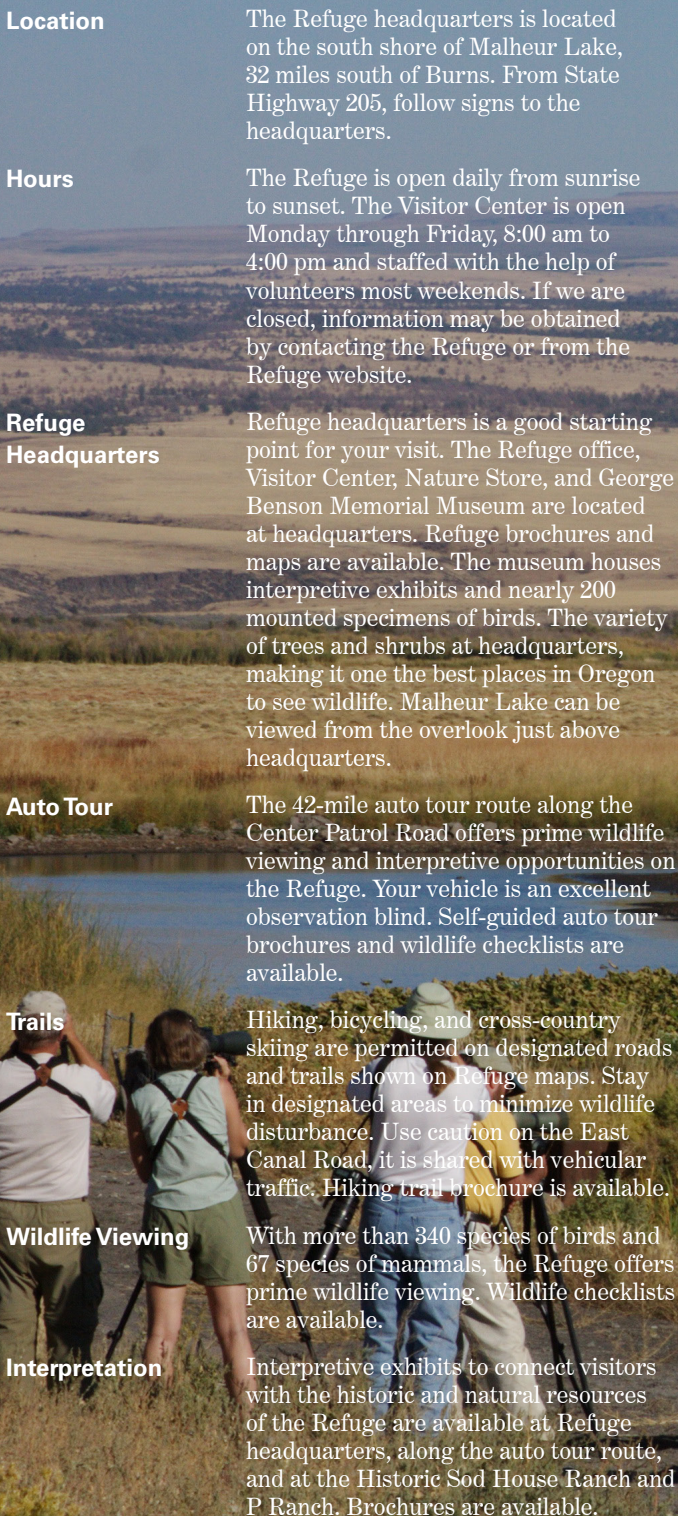
Roosevelt created the CCC. Three CCC camps were hosted on the Refuge and left behind an incredible legacy of infrastructure that remains today. Some projects undertaken that are

well recognized are the four stone buildings at Refuge headquarters, roads, dikes and pond impoundments.

The newly established "Lake Malheur Reservation" was the nineteenth of 51 wildlife refuges created by Roosevelt during his tenure as President. At the time, Malheur was the third refuge in Oregon and one of only six refuges west of the Mississippi.



George M. Benson served as the Refuge game warden, and later agent, beginning in 1918. Preferring the title of "Refuge protector," Benson not only enforced hunting and trapping laws at Malheur, but he also banded many waterfowl, often with the help of local children. With his wife Ethel, Benson eventually moved into the old ranch house that once stood in the large cottonwood grove at Benson Pond and the Refuge decided to honor Benson by building a little museum named George Benson Memorial Museum located at Refuge headquarters in 1953.



Location	The Refuge headquarters is located on the south shore of Malheur Lake, 32 miles south of Burns. From State Highway 205, follow signs to the headquarters.
Hours	The Refuge is open daily from sunrise to sunset. The Visitor Center is open Monday through Friday, 8:00 am to 4:00 pm and staffed with the help of volunteers most weekends. If we are closed, information may be obtained by contacting the Refuge or from the Refuge website.
Refuge Headquarters	Refuge headquarters is a good starting point for your visit. The Refuge office, Visitor Center, Nature Store, and George Benson Memorial Museum are located at headquarters. Refuge brochures and maps are available. The museum houses interpretive exhibits and nearly 200 mounted specimens of birds. The variety of trees and shrubs at headquarters, making it one of the best places in Oregon to see wildlife. Malheur Lake can be viewed from the overlook just above headquarters.
Auto Tour	The 42-mile auto tour route along the Center Patrol Road offers prime wildlife viewing and interpretive opportunities on the Refuge. Your vehicle is an excellent observation blind. Self-guided auto tour brochures and wildlife checklists are available.
Trails	Hiking, bicycling, and cross-country skiing are permitted on designated roads and trails shown on Refuge maps. Stay in designated areas to minimize wildlife disturbance. Use caution on the East Canal Road, it is shared with vehicular traffic. Hiking trail brochure is available.
Wildlife Viewing	With more than 340 species of birds and 67 species of mammals, the Refuge offers prime wildlife viewing. Wildlife checklists are available.
Interpretation	Interpretive exhibits to connect visitors with the historic and natural resources of the Refuge are available at Refuge headquarters, along the auto tour route, and at the Historic Sod House Ranch and P Ranch. Brochures are available.



Environmental Education

The Refuge offers educational programming for schools and other educational groups for outdoor classroom activities. It is open to schools and other educational groups by reservation. Call for more information.

Fishing and Hunting

Fishing and hunting are permitted on Refuge at certain times of the year. Fishing and hunting brochure is available and lists the designated fishing and hunting areas.

Vehicles

Motorized vehicles and horseback riding are permitted on all roads as identified on the map below, except horseback riding is not permitted on East Canal Road. All other Refuge roads and dike tops not shown on the Refuge map are closed to the public.

Boating

Non-motorized or electric boats are permitted on Krumbo Reservoir for recreational boating and fishing year round, and on Malheur Lake during the hunting season. All other Refuge waters are closed to boating.

Pets

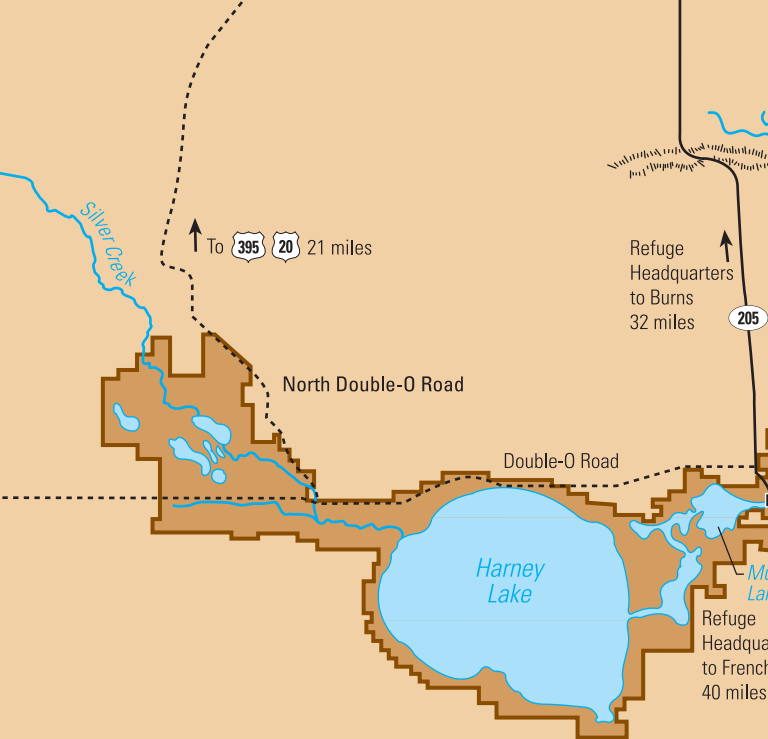
Pets must be kept on leash while on the Refuge. Please pick up after your pets.

Weapons

Persons possessing, transporting, or carrying firearms on National Wildlife Refuge System lands must comply with all provisions of State and local law. Persons may only use (discharge) firearms in accordance with refuge regulations (50 CFR 27.42 and specific refuge regulations in 50 CFR Part 32). Discharge of weapons outside of the hunting seasons are prohibited.












Prohibited Activities

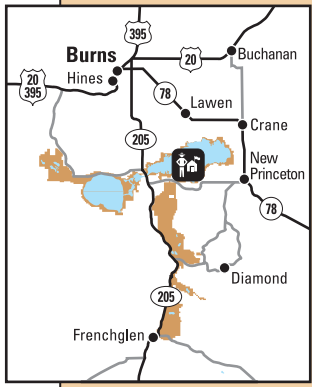
ATVs/UTVs, camping or overnight parking, campfires, swimming, ice fishing, target shooting, and collecting natural objects such as plants, animals, minerals, antlers, objects of antiquity (including Indian artifacts) are prohibited.



Malheur

National Wildlife Refuge

-  Refuge Boundary
-  Outstanding Natural Area
-  Refuge Headquarters
-  Restrooms located at Refuge Headquarters, Buena Vista, Krumbo Reservoir, Historic P Ranch
-  Center Patrol Road
Auto Tour Route (gravel)
-  Paved Roads
-  Gravel Roads
-  Hiking
-  Trails Open to Fishing
(see fishing brochure for description)
-  Campground
-  Area Landmarks



-  Historic P Ranch
-  Frenchglen
- To Hart Mountain Refuge Headquarters 36 miles



To Burns
16 miles

Lawen

78

To Buchanan
19 miles

20

Crane

Saddle Butte

78

New Princeton

To Lava Bed Road
13 miles

To Burns
Junction
54 miles

78

Historic Sod House Ranch
Open August 15-October 1

Malheur Field Station

Donner Und
Blitzen River

Rattlesnake
Butte

Diamond
Craters
Outstanding
Natural Area

Lava Bed Road

**Peter French
Round Barn**

Diamond Lane

Diamond

**Buena Vista
Ponds and
Overlook**



Krumbo Lane



Krumbo Reservoir



anson Pond



Knox Ponds



anch

Bridge Creek

chglen

East Canal Road



Mud Creek

Page Springs
Campground



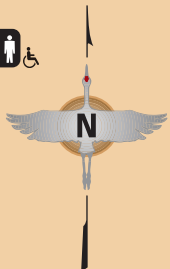
Steens Mountain
Loop Road

To Fish Lake Campground
18 miles



To Fields
60 miles

205



Malheur National Wildlife Refuge
36391 Sodhouse Lane
Princeton, Oregon 97721

541/493 2612

www.fws.gov/malheur/

U.S. Fish & Wildlife Service
1-800-344-WILD

**Visitors with disabilities may be reasonably
accommodated upon request, and/or receive
an alternative format publication.**

Oregon Relay Service
TTY 1 800/735 2900
Voice 1 800/735 1232

August 2022

