

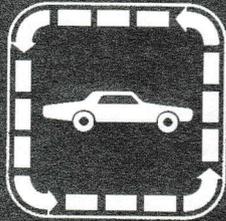
U.S. Fish & Wildlife Service

# Benton Lake

*National Wildlife  
Refuge*

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*Prairie Marsh  
Wildlife Drive*



*You are invited to enjoy the sights, sounds, and smells of a prairie marsh. Follow the 9-mile self-guided wildlife drive through the Refuge and*



*keep all your senses sharp. You never know what gifts nature will offer today.*

Canada goose with gosling.  
© Ron Ukrainetz

## Welcome



*This goose, designed by J.N. "Ding" Darling, has become the symbol of the National Wildlife Refuge System.*

Welcome to the Prairie Marsh Wildlife Drive, a winding gravel road that will bring you in close contact with wildlife and their habitats. Remember, success in seeing wildlife depends on observational skills, timing, the season, and just plain luck. The timing of your visit makes a difference; wildlife is most active in early morning or late afternoon. If you happen to visit during the spring and fall months, you will enjoy watching thousands of ducks, geese, swans, and shorebirds that have stopped here during their migration.

Ten numbered signs along the drive correspond to the map and numbered paragraphs in this leaflet. The information provided will increase your understanding of the Refuge and make your visit more enjoyable.

The drive begins at the information kiosk and has both one-way and two-way traffic, depending where you are along the route. Please drive slowly, being careful not to unduly disturb wildlife or fellow visitors. Wildlife will remain closer to the road if you remain in your car. Stopping is allowed where the road is wide enough for vehicles to pass. Stops 6, 8, and 10 provide opportunities to get out of the car and stretch.

Be advised that certain activities are not permitted because they are unsafe, are unlawful, or are not consistent with the Refuge goals. Prohibited activities include camping, littering, driving off roadways, and damaging or collecting plant or animal life.

## Auto Tour Route Specifics

Length: 9 Miles

Time: 1 - 1 1/2 Hours

Open: Year round (road may be closed by snow in winter)

Hours: Daylight hours only

### *Manipulating Nature*



Benton Lake National Wildlife Refuge was established in 1929 as a refuge and breeding ground for birds. To accomplish this mission, work has centered on the development of wetlands and relatively safe nesting areas. Eight wetland areas have been constructed by using an intricate diking system. A diversity of wetland habitats is available in each of the eight areas, providing ideal habitat for breeding ducks.

Because most ducks nest on the ground, eggs and hens are vulnerable to predation by skunks, raccoons, and foxes. To protect the eggs from the egg-eaters, several nesting islands have been built in the wetlands. The water surrounding these islands provides a barrier that prevents most predators from reaching the island-nesting birds. Some predator control is also done.

### *Birds of the Open Prairie*



The spring air is filled with calls of meadowlarks, chestnut-collared longspurs, and marbled godwits. These songsters share their prairie domain with upland sandpipers, horned larks, and prairie sparrows such as the vesper, lark, grasshopper, and an occasional Baird's sparrow. All of these species are dependent on the remaining stands of native shortgrass prairie protected on the Refuge.

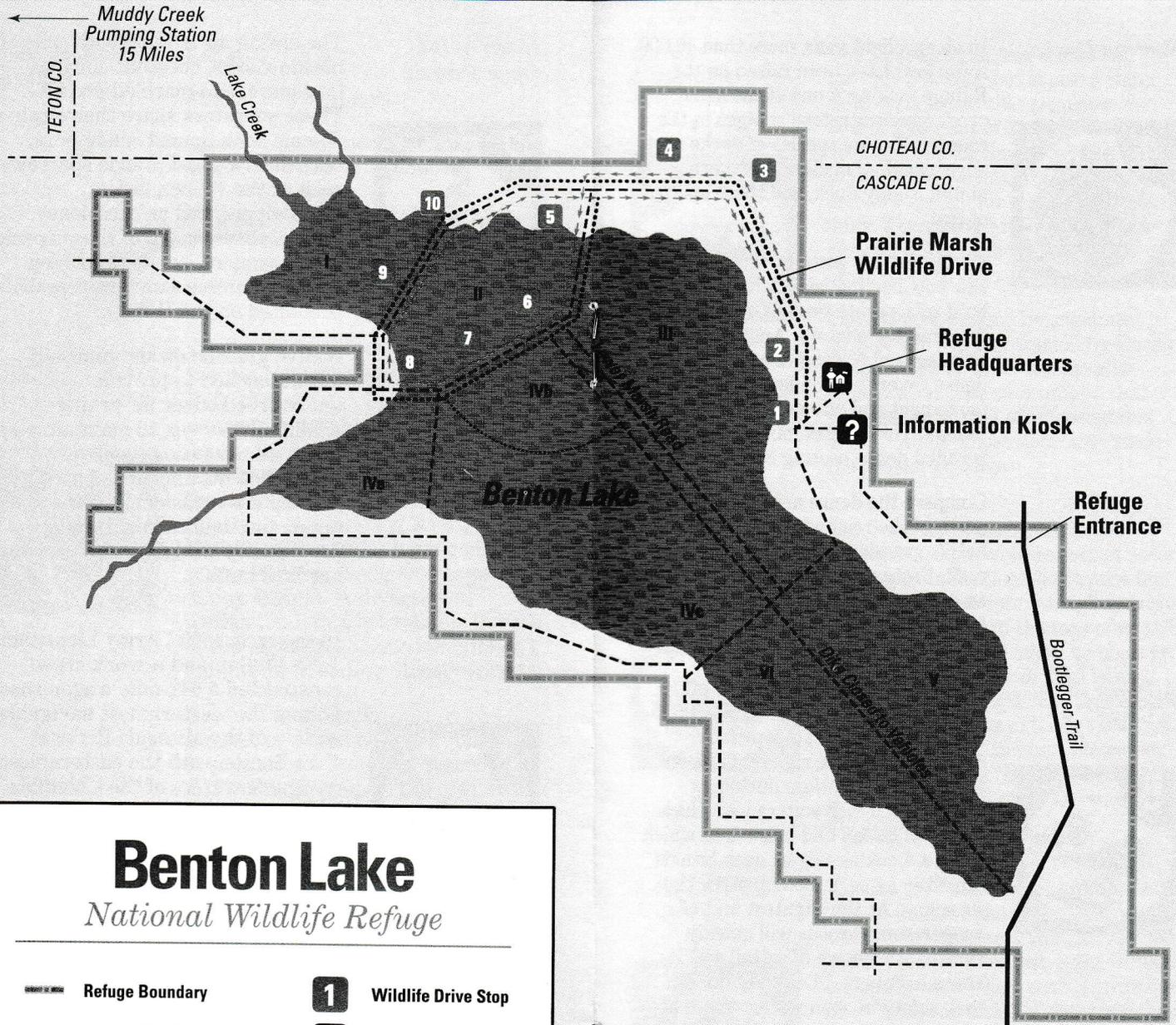
Native grasslands are generally left untouched to provide undisturbed cover for prairie wildlife. However, to maintain plant vigor, manipulations such as prescribed burning and controlled grazing are occasionally done to mimic the conditions formerly provided by wild fires and grazing herds of buffalo.

### *The Old Mullan Trail*



In the early 1860s, Army Lieutenant John Mullan and a work crew constructed a 642-mile wagon road linking the westernmost navigable waters of the Missouri River at Fort Benton with the easternmost navigable waters of the Columbia River at Walla Walla, Washington. Though no longer visible on the ground, traces of the old road can be seen from the air.

It has been more than 100 years since the shouts of bullwhackers and the crack of whips have been heard along this almost invisible trail. The freight wagons have long since departed and the sounds heard today are generated by more modern means of transportation. However, if you listen closely, you can hear the sounds of the native residents of the prairie - savannah sparrows, horned larks, upland sandpipers, and their fellow feathered friends.

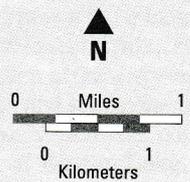


# Benton Lake

*National Wildlife Refuge*

- |  |                              |  |                     |
|--|------------------------------|--|---------------------|
|  | Refuge Boundary              |  | Wildlife Drive Stop |
|  | Prairie Marsh Wildlife Drive |  | Refuge Headquarters |
|  | Paved Roads                  |  | Information Kiosk   |
|  | Unpaved Roads                |  |                     |
|  | Trails                       |  |                     |
|  | Direction of Traffic Flow    |  |                     |

Great Falls  
6 Miles



## Nesting Ducks



In an excellent year, more than 40,000 waterfowl have been raised on the Refuge making it one of the most productive waterfowl refuges in the country. Twelve species of ducks nest here including mallard, northern pintail, ruddy duck, and three species of teal.

Earlier on this auto tour route, you saw how nesting islands have been built to separate ground nesting ducks from most predators. Another way to safeguard nesting hens is to grow dense cover that hinders predator movement and allows nesting birds to hide. This special mix of plants is called dense nesting cover.

Compare the dense nesting cover north of the road with the shorter native grassland cover south of the road. Pretend you are a duck sitting on a ground nest. Where would you feel safer nesting?

## A Place to Grow



Once ducklings hatch and dry off, the hen leads her brood to a wetland. The Refuge staff have carefully developed just the right habitat for these young flightless ducklings - shallow, food-rich waters with thick stands of cattail and bulrush in which to hide. Look closely as duck broods can often be seen feeding along the shoreline. At the slightest hint of danger, some broods will quickly vanish into a maze of cattail and bulrush. Others, like ruddy ducks, seek safety in open water, where they can see any approaching danger then quickly dive beneath the surface.

## Ducks Unlimited Project



The structure you just crossed is not only a bridge, but is also a water control structure that regulates the flow of water out of Marsh Unit II. The double dike and channel arrangement to the left is the heart of the water delivery system for the lower marsh units. Through the use of a pumping system, water in these lower units can be directed to where it is most needed.

The 330-acre wetland impoundment on your left was constructed by Ducks Unlimited, a national conservation organization. The monument that you see near this stop recognizes organizations whose donations made the project possible.

## Over-Water Nesting



Many species of birds nest in the wetlands using a wide variety of nests ranging from floating platforms a few inches above the water, to tightly woven nest cups secured in the tops of cattails. Some of these nests might be observed from the Prairie Marsh Trail located just ahead on the right. The Trail consists of a boardwalk that extends 1,000 feet across the prairie and into the marsh. Take a walk along the boardwalk and look for nests, and enjoy the sounds of the prairie wetland.

## A Hill With A View



This is a good place to get a mallard's-eye view of Benton Lake. From here, you can see how the old glacial lake bed has been subdivided by dikes into eight wetland impoundments. Water control structures allow for the diversion of water into these units. Benton Lake is about 6 1/2 miles long and varies from 1 to 3 1/2 miles wide.

During migration, up to 150,000 ducks, 5,000 tundra swans, 40,000 snow geese, and 2,500 Canada geese have been observed on these marsh units. These concentrations often attract species such as bald eagles and peregrine falcons, which feed primarily on ducks when they are hunting at Benton Lake.

## Marsh Unit I



The wetland on your left has all the elements of a classic duck marsh. Its shallow waters teem with microscopic animal life, and plant growth is profuse both above and below the water's surface. Graceful stands of bulrush and cattail are broken up in irregular fashion by expanses of open water. Ducks definitely like Marsh Unit I.

Hundreds of other wildlife species make this and other Refuge marsh units their home. Up to 25,000 pairs of Franklin's gulls, several black-crowned night-herons, and white-faced ibis nest in the heavy growths of cattail and bulrush. Colonial nesting eared grebes gather marsh plants to form floating nests. Muskrats, mink, waterfowl, great blue herons, marsh wrens, sora rails, and northern harriers are among those wild creatures that also inhabit Marsh Unit I.

## Precious Water



Lake Creek enters the Refuge just west of here. Prior to 1961, Benton Lake was dependent solely on natural runoff flowing down the Lake Creek drainage. Often too little water was received to last through the summer months, resulting in poor conditions for waterfowl during the critical periods of brood rearing and migration.

Return irrigation flows from the Greenfields Irrigation District west of Power, Montana, offered a supplemental water source to maintain good wetland conditions even in dry years. A Refuge pumping station and the associated delivery system were built by the U.S. Fish and Wildlife Service on Muddy Creek 15 miles west of the Refuge. This system transports the return irrigation flow water to Benton Lake annually.

The quality of Benton Lake's water is a continuing concern. Salts, nutrients, and a few toxic elements such as selenium and cadmium, pose a threat to the long-term productivity of the Refuge wetlands. The primary sources of these contaminants are saline seeps in the watershed. Saline seeps are low volume springs mainly caused by the agricultural practice of fallow-cropping (plowing land and leaving it unseeded) to increase soil moisture for future crops. The Refuge continues to monitor this situation and work on possible solutions to the problem.

We hope you enjoyed your drive. Please feel free to stop in at the Refuge headquarters where Refuge staff are available to answer any questions that may have come up during your visit. Two-way traffic resumes ahead, so be careful and come back to visit again.

Equal opportunity to participate in and benefit from programs and activities of the U.S. Fish and Wildlife Service is available to all individuals regardless of physical or mental ability. For visitors using TTY, use the Montana Relay Service at 1 800 / 253 4091 TTY or 1 800 / 253 4093 Voice.

For more information or to address accessibility needs, please contact the Refuge staff at 406 / 727 7400 or the U.S. Department of the Interior, Office of Equal Opportunity, 1849 C Street, NW, Washington, D.C. 20240.