



"A LAKE FROM A PIPE"

7

This is the number one marsh unit. Look to the northwest and you will see Lake Creek which supplies Benton Lake's water. At one time, the lake was maintained by natural runoff in the Lake Creek drainage. The change to wheat farming in the 1920's caused most of the moisture to soak into the ground, rather than drain into the creek. The lake was dry, except for rare occasions of above normal rain until 1962. At that time, a pipeline was built to bring water from Muddy Creek near the town of Power, into Lake Creek and onto the refuge.

"ISLANDS FOR NESTING"

5

Perhaps you have noticed the earth mounds scattered through the marsh. These islands were constructed to provide safe nesting places for both ducks and geese but were made especially to attract Canada Geese to the refuge. They are also favorite loafing and preening places for most of the water birds using the refuge. The first known nesting by Canada Geese occurred on the islands in this unit in the spring of 1967. Two pairs built their nests. Spring snowstorms that year forced one pair to abandon its nest. The remaining pair was successful in raising their brood of five young, and we hope they will return to nest again in future years.



"MULLAN TRAIL"

8

In 1859 Captain John Mullan began survey of Mullan Trail—the first wagon road between Fort Benton, head of navigation on the Missouri River, and Walla Walla, Washington, near navigable waters of the Columbia River. Discovery of this route had been the major purpose of the Lewis and Clark expedition fifty years earlier.

The 624 mile long road was completed at a cost of just under \$400.00 per mile and made it possible to travel between Fort Benton and Walla Walla by wagon in 47 days.

In the many years since the road was abandoned, nature has erased its scar from the land leaving little evidence of man's passage.

"BENTON LAKE OVERLOOK"

6

This hilltop is a good place to get an overall picture of Benton Lake. The marsh is approximately 6½ miles long and varies from 1 to 3½ miles wide.

When all management units are full, there are 5,614 acres of marsh divided into six easily controlled impoundments. The remainder of the refuge is grassland, a portion of which is used for food production and the corner shrub and tree plots you saw at your first stop.

The water areas are relatively shallow, averaging 18 inches to two feet in depth. This is an ideal depth for the "puddle" or dabbling ducks which tip up rather than dive for their food. There are deep borrow ditches along all of the dikes.

"CATTLE AND THE REFUGE"

9

Perhaps you have noticed cattle grazing on the refuge. It is our policy to make use of all the resources available on the refuge when such use does not conflict with our primary objective of waterfowl production.

Refuge rangelands have been intensively managed since the staff was first assigned here in 1961. Grasslands which were previously in poor condition have been improved through prudent management of grazing. Most refuge ranges are now in Good to Excellent condition and provide both good grazing and fine nesting cover for ducks.

Grazing privileges are distributed to private individuals on a Special Use Permit for a fee. A limited number of animals are allowed to graze for about 3½ months beginning July 15 each year. A portion of the revenue from this special use of the refuge is paid to the counties each year under the revenue sharing program.

This ends the tour. To exit, proceed straight ahead to the next intersection, turn left, and follow the road on which you entered. We hope you have enjoyed your visit.

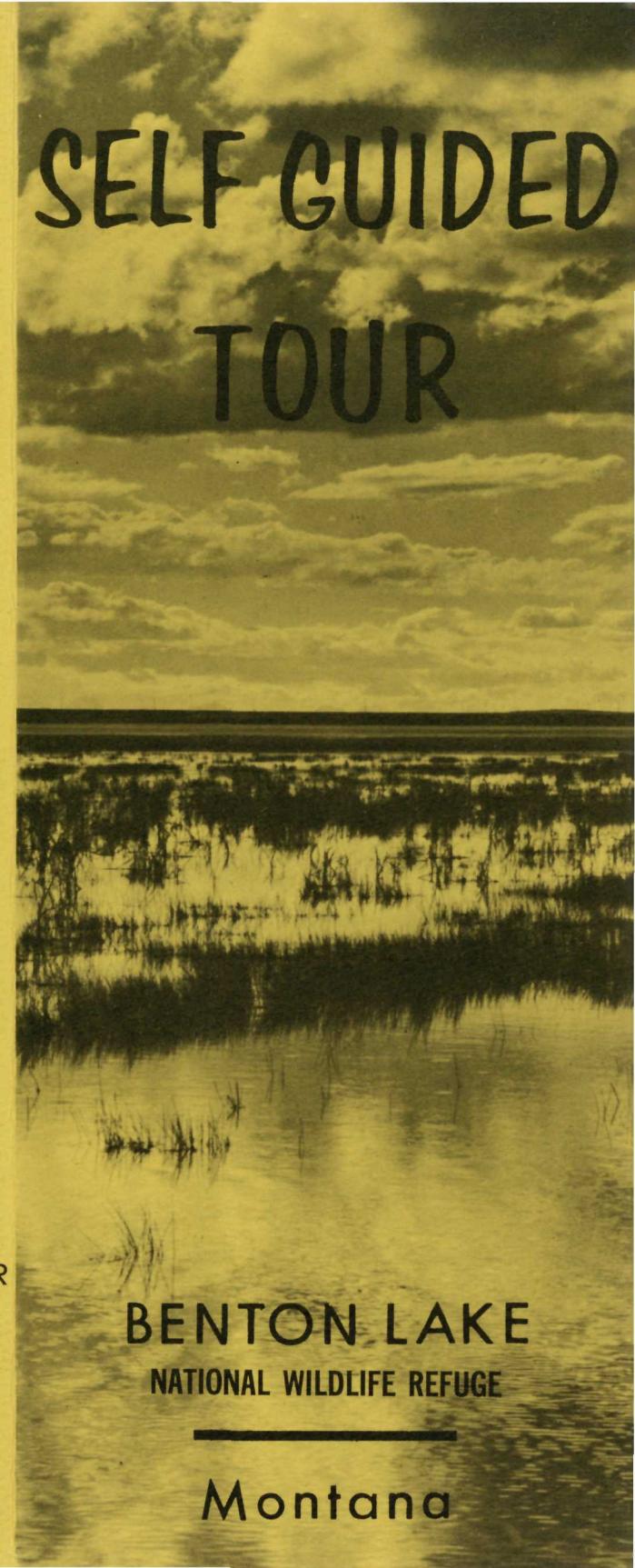
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UNITED STATES
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE
BUREAU OF SPORT FISHERIES AND WILDLIFE



INTERIOR--PORTLAND, OREGON



Montana

BENTON LAKE NATIONAL WILDLIFE REFUGE

Wildlife Tour Route

Welcome to Benton Lake National Wildlife Refuge. You are invited to get acquainted with the area by taking this self-guided auto tour.

Goose silhouette signposts have been placed along the tour route. These correspond to various explanatory paragraphs in this booklet. Look at the tour map in this guidebook to get oriented; then, as you reach the signposts, pull off to the side of the road and read about the features around you.

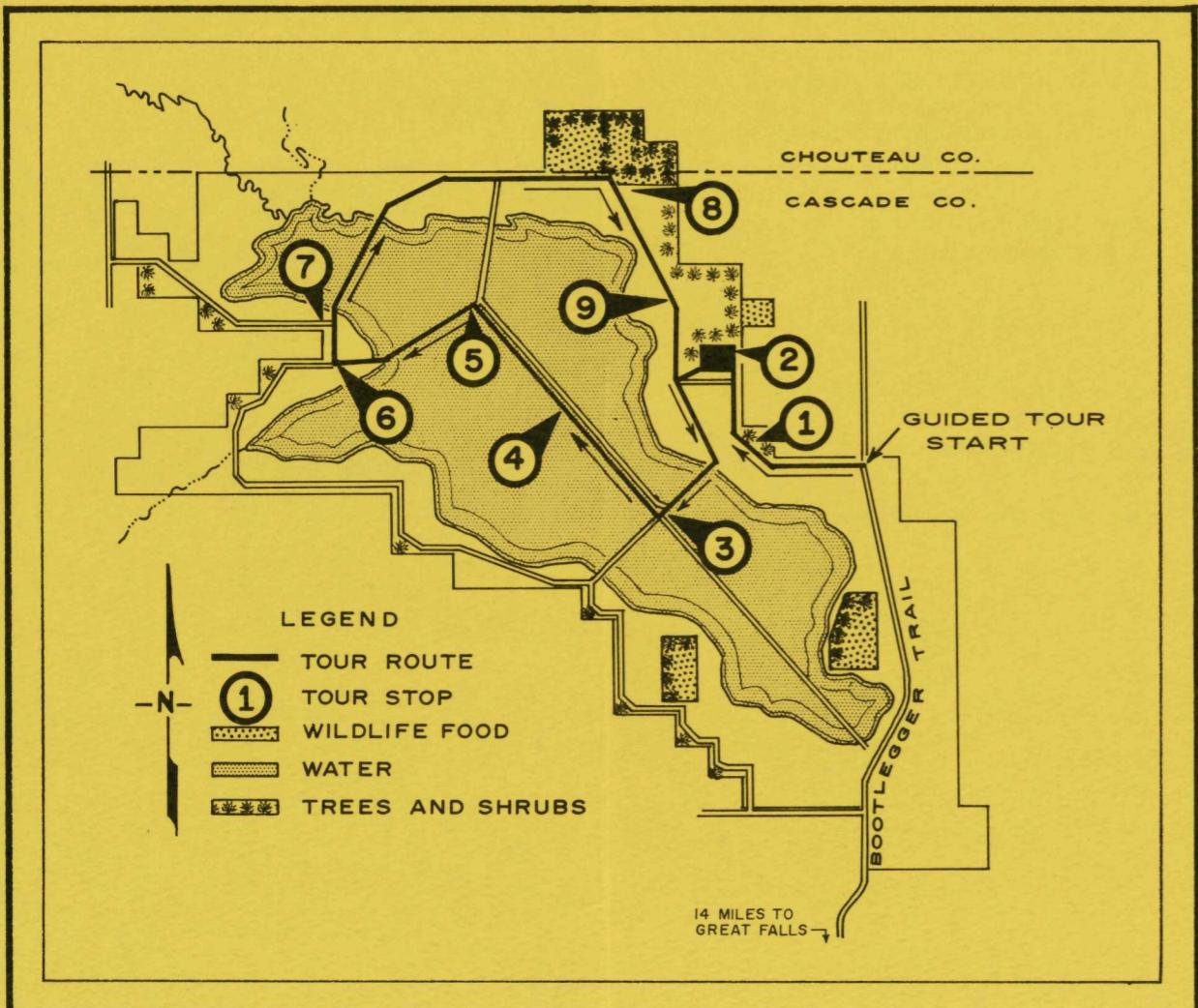
We hope, in this way, to make your visit more meaningful and enjoyable.

The route is 14 miles long and will take about an hour to complete. If you have more time, you may drive some of the other roads or take walks off the established route.

There is always wildlife to be seen. March through November are best for observing migratory birds in large numbers. April and October usually bring the peak concentrations of waterfowl. August and September are best for seeing hawks. July is the best time to see broods of young ducks.

Drive carefully, at a leisurely pace, and please do not take your car off the graveled road.

NOW, LET'S GET STARTED!



"TREES FOR WILDLIFE"

1

This is one of several fence corner areas on the refuge which has been planted to trees and shrubs to provide food and shelter for upland game and song birds. Over 100,000 individual plants of 18 different kinds have been planted in these corner wildlife areas and field shelterbelts. These shrubs provide excellent food, in the form of fruits and seeds. They are well suited to the weather and soil conditions in this part of Montana.

This corner contains the following species: Caragana, Russian Olive, Chokecherry, American Plum, Buffaloberry, Nanking Cherry and Honeysuckle. Can you find them all?

While you try to identify the shrubs, watch for Gray Partridge (better known as Hungarians in this part of the country). They frequent this area in search of food and shelter. Take care that you do not disturb their nests during late spring. Also, watch for the smaller birds such as Horned Larks, Chestnut-collared Longspurs, Meadowlarks and Lark Buntings.

REFUGE HEADQUARTERS

2

The refuge office is open from 8:00 to 4:30, Monday through Friday. Come in and one of the staff will provide you with a list of the birds found on the area, a map, and refuge regulations. We will be happy to answer your questions. (Ask us about the identification of the trees you just looked at!)

The headquarters area has office, maintenance and storage facilities, as well as living quarters for the Refuge Manager and his assistant.

"WATER FOR WILDLIFE"

3

This double dike and channel arrangement is the heart of the water control system on Benton Lake. From this point, water can be diverted into any of our management units by changing stoplogs in the appropriate control structure.

Precise water control is essential for good waterfowl habitat management. Changes in

water level can create changes in the vegetation of the marsh. We control water to bring about a balance between emergent plants, such as bulrush and cattail, which are used for shelter and nesting; and deeper, open areas that grow submerged plants which are important for food. Periodically, it is good to dry the marsh and then reflood it. This will stimulate submerged plant growth and increase the amount of waterfowl food produced when the unit is reflooded. Drying is also used to control waterfowl diseases such as Botulism, should it break out in a certain portion of the refuge.

"THE MARSH"

4

There are six water management units in the refuge. Several contain a significant amount of emergent vegetation; hardstem bulrush, spikerush and cattail that is used heavily by most ducks and other water birds for rearing their young. Watch for Eared Grebes carrying young on their backs. The cattails are favored nesting places for the Blackheaded Franklin's Gulls (you can hear their noisy screams all over the refuge). The American Coot, often called Mud Hen, also nests here in large numbers.

Since the units are large, ducks that have become flightless during their annual molting period find it attractive. They are able to get away from the roads and disturbances of man and his automobiles.

Perhaps it will seem odd, but not all ducks and geese like this habitat for nesting. Species favored by the sportsman—such as the Mallard, Pintail and Teal—build their nests on dry ground. The dikes, on which you have been driving and the grasslands surrounding the marsh are the favored nesting places for these birds. After the eggs have hatched, the hen leads her brood to the marsh where they have protection and food.

Diving ducks, like Scaup, Redhead and Ruddy Duck, prefer to nest in cattails and bulrush, where they build platforms over the water. Careful water control is essential during the nesting season so that nests are not flooded and destroyed.