

This tour was designed and the brochure was written by the 5th and 6th grade enrichment program at Mount Carbon Elementary School with the assistance of the U.S. Fish and Wildlife Service, November and December 1999.

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Two Ponds

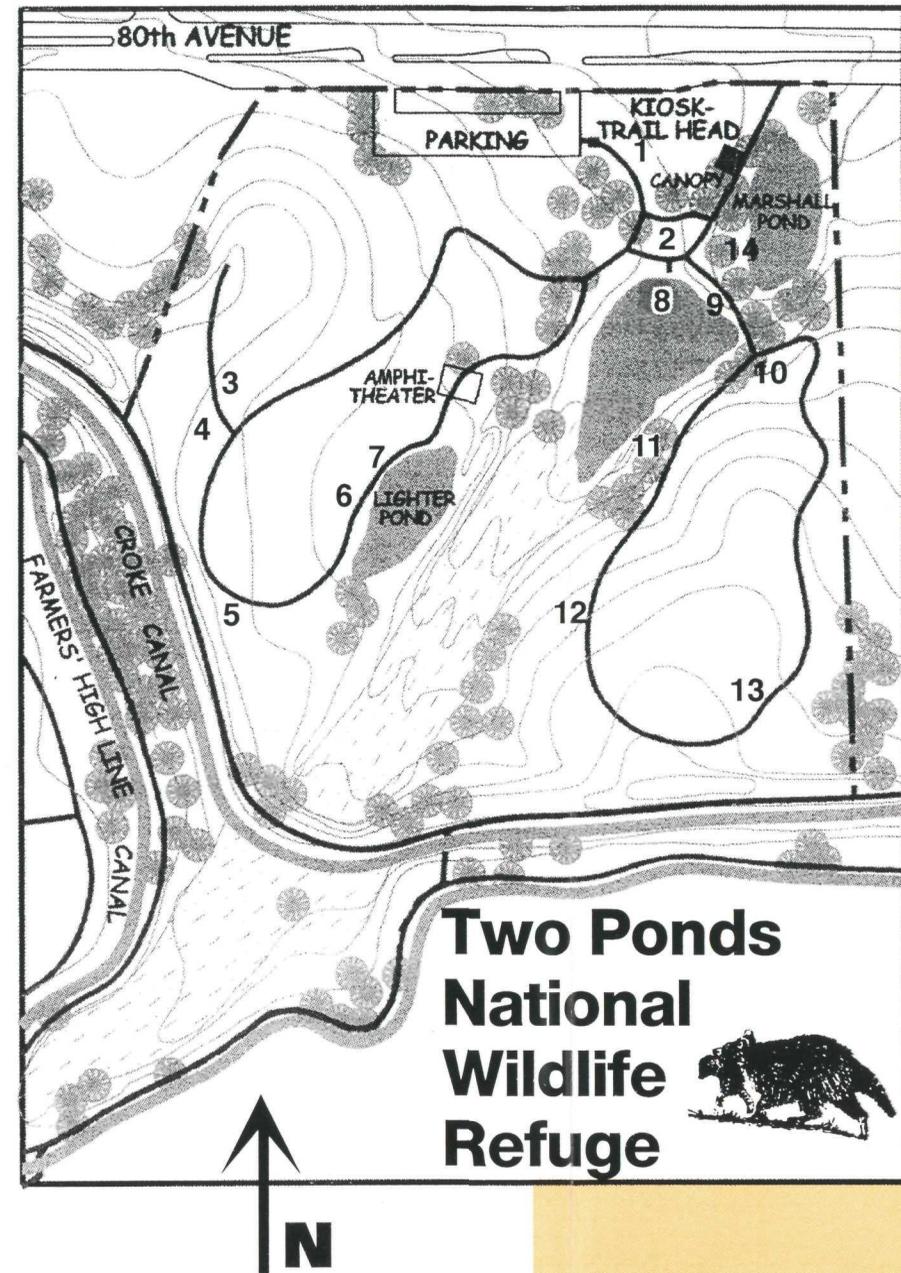
National Wildlife Refuge Self-Guided Tour

Two Ponds National Wildlife Refuge is a community of habitats that are linked together and provide the essential components of life (food, shelter, and water) for a variety of plants and animals



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Use this map as your guide to the hidden stories of the Refuge



Welcome to Two Ponds National Wildlife Refuge

Use the numbered map as your guide.

Can you find the apple orchard? (Stop 1)

Sixty years ago the straight rows of apple trees in this orchard were easy to see. Over the years the orchard was not taken care of, and, as a result, a variety of plants, commonly known as weeds, have grown around the apple trees. This thick cover of vegetation now provides food and shelter for birds and small mammals. These animals hunt for food in the open meadow areas next to the orchard and then quickly return to the safety of the shelter provided by the vegetation cover.



What is that ball of sticks? (Stop 2)

Do you see that ball of sticks in the tree? It's a magpie's home. Their home is made from mud, sticks, and thorns. But did you know its nest has two openings? It also has a roof. You will often find the magpie eating animals that have died. Another interesting fact is that the magpie's tail is longer than its body. They stay at the Refuge all year long. They can be seen in cities and rural areas.

Irrigation's Impact on the prairie (Stop 3)

Irrigation made it possible for farmers along the Front Range to convert dry prairie land to fertile farmland. Prior to the introduction of irrigation, only dryland crops like wheat could be grown here. After canals like the Farmer's High Line were built in the 1800's, other water dependent crops like sugar beets and peas could thrive. Water from this canal is released onto the Refuge through shallow 12" to 18" deep ditches called laterals. Water is allowed to overflow and flood the field below the lateral. Notice that the vegetation below the lateral is different from that on the hilltop.

Wild dryland foods (Stop 4)

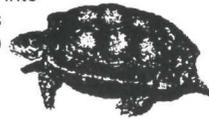
Yucca, prickly pear cactus, common mullein, asparagus and milkweed grow wild on the side of this hilltop. They are also commonly found along roadsides and disturbed areas. These plants help keep soils in place, provide shelter for wildlife and food for both animals and humans. Depending upon the time of year they are picked and the way they are prepared, each of these plants can be consumed and can be quite tasty.

Cottonwood rest stop (Stop 5)

Occasionally, mule deer make an appearance on the Refuge, resting in the shade of the trees such as those between the two canals. Just beneath these trees are a patch of coyote willow and a variety of shrubs that the deer will graze on. Deer and other mammals use these canals to move from one open space to another throughout the city. Before you move on, scan the high branches of these trees and look for a bird that's creamy vanilla and dark brown and has the wingspan the size of a small kitchen table. It might be the Swainson's hawk that returns every spring from Argentina to nest on the Refuge. The Swainson's hawk, like other hawks that use the Refuge, are called raptors because they kill their food with their powerful feet.

Sights and sounds from the pond (Stop 6)

This pond is man-made. Guess why? To raise frogs, that's why. The landowner wanted to raise frogs to sell for food. Wetland plants provide shelter for insects that are eaten by fish, amphibians and birds. Red-winged blackbirds, as well as numerous other songbirds and a variety of ducks and geese, can be heard at anytime of the day through the spring and summer. In the fall and winter, these sounds are replaced by the occasional chirp of the magpie and the screech of the red-tailed or marsh hawk, as they hover over the edges of the pond looking for food. What was that splash? It was a mud turtle dropping into the pond. This is the only turtle species on the Refuge, the only one of 200 species world-wide.



Fast-food restaurant of the Refuge (Stop 7)

These familiar plants with corn dog shaped flowers are found only in wetland areas throughout the United States. Stands of cattails provide excellent shelter for waterfowl and songbirds. Turtles and frogs can frequently be seen hiding among the stalks of the plant. The muskrat not only finds shelter in the cattails, but also enjoys feeding on their shoots in the spring, leaves in the summer, and roots during the fall and winter.



Invisible wildlife (Stop 8)

This quiet pond may seem void of any wildlife when you first approach. However, on closer examination you might discover fish and a wide variety of minute wildlife seeking shelter and food just below the water surface or in the murky, muddy bottom. Look carefully and you might catch a glimpse of a largemouth bass, a catfish, or crappie. Turn over a rock or dead branch in the water and watch as a crayfish flips his tail and propels himself into the mud a few feet away. Water striders skate quickly across the water without breaking the thin film that separates life beneath from the air above. A variety of insect larvae creep about the water surface while others lay in wait in the decaying vegetation on the muddy pond floor.

Corridor of life (Stop 9)

This narrow tree-covered corridor is alive with vegetation and wildlife. The vegetation on both sides of the path provides food and shelter. Birds, squirrels, foxes and raccoons feed on the plums and berries and find shelter in the heavy cover of these trees and shrubs. Muskrats munch on the green sprouts of cattails that line the bank. Look carefully and you might see a frog hiding just beneath the water in the young green grass waiting for an unsuspecting dragonfly. Watch where you step or you might crush a spider web at the base of the cattails or bushes.



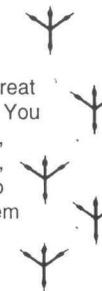
Where is that fox? (Stop 10)

At Two Ponds National Wildlife Refuge, foxes are hard to find because foxes are very shy around people. You may not see them. One way to tell that they are here is by the trails in the tall grass. Early in the morning or evening, you might find a fox trying to catch a mouse near the pond, but you may not see him during the afternoon.



Heron towers (Stop 11)

The two largest birds on the refuge are the great blue heron and the black-crowned night-heron. You can find them in the willows next to the ponds, or wading in shallow water by the cattails, looking for crawdads, small fish and frogs to eat. When they aren't hunting, you can see them resting or sunning themselves in the trees.



Why do they call it rabbitbrush? (Stop 12)

Commonly found in dry disturbed areas, this native plant grows throughout Colorado's Front Range. Local legend has it that when pioneers to the area would pass large stands of this plant, jackrabbits would always come scurrying from beneath its yellow flowered branches. This happened so often that the plant became known as rabbitbrush. In this same location, you may see small furry mammals running beneath the grass. It might be a deer mouse or a prairie vole. Voles don't live underground, but chew through the grass creating aboveground tunnels. Both come out after dusk looking for a meal of insects or seeds. Mice and voles must be careful looking for food, because at the same time, they are being hunted by predators such as owls.

More than just a view (Stop 13)

Do you see the gorgeous view of the mountains? Did you know that you are looking at three different life zones? The alpine zone is where the land touches the sky, the sub-alpine zone is where the trees begin, and the montane zone is located in the foothills. The alpine zone has very cold weather and does not support any major life forms. There are small plants that are so small that you may need to use a magnifying glass to see them. In the sub-alpine zone, there are more trees and fewer meadows. In the montane zone, there is a variety of habitats such as woodlands, grasslands and wetlands.

Tree of life (Stop 14)



Under the sagging branches of this willow tree one can find more than shade from the hot Colorado sun. Look closer and find numerous cavities that provide homes for flickers and a family of raccoons.

Blue jays and magpies construct nests in the tree's sturdy branches. Listen for the "oo-ah, coo,coo,coo" of the male morning dove as he calls for his mate, and watch as this light brown-gray bird bobs its head as it walks along a branch. Perhaps you can catch a glimpse of a belted kingfisher waiting to dive into the pond below to catch a fish. Can you find any black-crowned night-herons camouflaged by the swaying branches of the tree?

