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For Refuge Information 1 800 / 344 WILD

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U.S. Fish & Wildlife Service

T 49.44/ :R 59/4/2011 **Rocky Mountain Arsenal**  *National Wildlife Refuge* UNIVERSITY OF NEW MEXICO-UNIVERSITY LIBRARIES

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Bison bull © Dave Showalter "The nation behaves well if it treats the natural resources as assets which it must turn over to the next generation increased and not impaired, in value."

President Theodore Roosevelt

Rocky Mountain Arsenal National Wildlife Refuge is one of the largest urban refuges in the country. © Michael Mauro

#### About the Refuge



This blue goose, designed by J.N. "Ding" Darling, is the symbol of the National Wildlife Refuge System. Located just northeast of Denver, the Rocky Mountain Arsenal National Wildlife Refuge, a 15,000-acre expanse of short-grass and mid-grass prairie, has experienced a rich and varied history as it transitioned from farmland to war-time and chemical manufacturing site to wildlife sanctuary. It may be one of the finest conservation success stories in history. It is a place where wildlife thrives. It is also a place where visitors reconnect with nature and experience the many opportunities the Refuge has to offer.

Nearly 200 families once lived on this land that is now the Refuge.





As the nation armed itself for World War II, the Rocky Mountain Arsenal was constructed in 1942 to support the war efforts.

**Refuge Wildlife** 

The Refuge supports more than 330 species of mammals, birds, reptiles, amphibians, and fish. An abundance of wildlife is available for visitors to view throughout each season of the year.

Spring

In the spring, the Refuge's woodlands are visited by Bullock's orioles.



Rocky Mountain Bee Plant warblers, finches, and other migrating songbirds. Among the open grasslands, western meadowlarks and kingbirds are plentiful, and mountain bluebirds race through on their way to the foothills west of Denver. Cinnamon-colored bison calves frolic around their mothers. Great blue herons, American avocets, and snowy egrets

wade in the shallows around ponds and lakes. Swainson's hawks, lark buntings, and yellow-headed blackbirds make their annual appearance. Prairie dog pups venture out of their burrows, fawns emerge from locust thickets, and loud begging calls of black-billed magpie chicks come from their enormous stick nests.

Summer

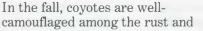
Summer brings fields of prairie grasses dotted with colorful



White pelicans

dotted with colorful wildflowers in full bloom. White pelicans coordinate their swimming to drive fish into shallow water for a quick group meal. Burrowing owls nest and raise their young in unoccupied prairie dog burrows. While bullsnakes are commonly seen on dry land, chorus frogs and painted turtles can be found around the wetlands.

Known for being one of the best warm-water fisheries in Colorado, Refuge lakes hold bluegill, largemouth bass, and lunker northern pike. Fall





Mule deer

golden-colored grasses as they hunt from the edges of prairie dog towns. Mule and white-tailed deer bucks display their impressive antlers as they compete for does. Refuge lakes provide a haven for migrating waterfowl such as northern pintails, northern shovelers,

redheads, and ring-necked ducks. Silhouettes of great horned owls may be seen perched close to tree trunks after the leaves have fallen. Sandhill cranes announce their brief visit on their migration to the south with their trumpeting rattling gar-oo-oo, audible for more than a mile.

Winter



Bald eagle

Winter brings a blanket of snow covering the prairie making prey

> highly visible to predators, including ferruginous hawks and other raptors, which are attracted to the Refuge's large population of cottontail rabbits and black-tailed prairie dogs. Numerous bald eagles migrating from the north seek nightly shelter in the massive cottonwood trees lining the lake edges. A nesting pair of bald eagles that reside at the Refuge

year-round begin tending to their nest in preparation of laying eggs that will hatch in late March. Snowfrosted faces of bison can be seen on blustery winter days. Small mammals, such as meadow voles, pocket gophers, thirteen-lined ground squirrels, and kangaroo rats are in hibernation underground.

Connecting
<b>People With</b>
Nature

Visitor Center

exhibits also pay tribute to the military and environmental legacy of the site. A teaching discovery room, an auditorium, and a nature book and gift shop are also located in this "green" visitor center. The visitor center was constructed using some recycled and renewable materials and is energy efficient.

Since the Refuge is located in

without making reservations

Tuesday through Sunday to participate in a variety of wildlife-

rich with plants and wildlife.

At the Refuge visitor center.

Denver's backyard, enjoying nature

can be a close-to-home experience.

Visitors can drop-in at the Refuge

dependent recreation opportunities.

closer look at this diverse sanctuary,

Use cameras and binoculars for a

interpretive exhibits and cultural artifacts illustrate the Refuge's history and diverse wildlife. The

Hiking Trails

More than 9 miles of hiking trails allow visitors to discover wildlife and plants up close and personal.

An extensive system of hiking trails are available seasonally and year-round for explorers to view and photograph wildlife, plants, and the scenery. This network of foot trails takes visitors along lake edges, and through prairie, shrubland, and woodland settings.

A perimeter trail around the Refuge connects to neighboring communities allowing visitors on foot or on bicycle to take a peek into the Refuge.



#### Fishing



Refuge lakes lure both beginning and expert anglers.

Wildlife Viewing Tours

Special Events

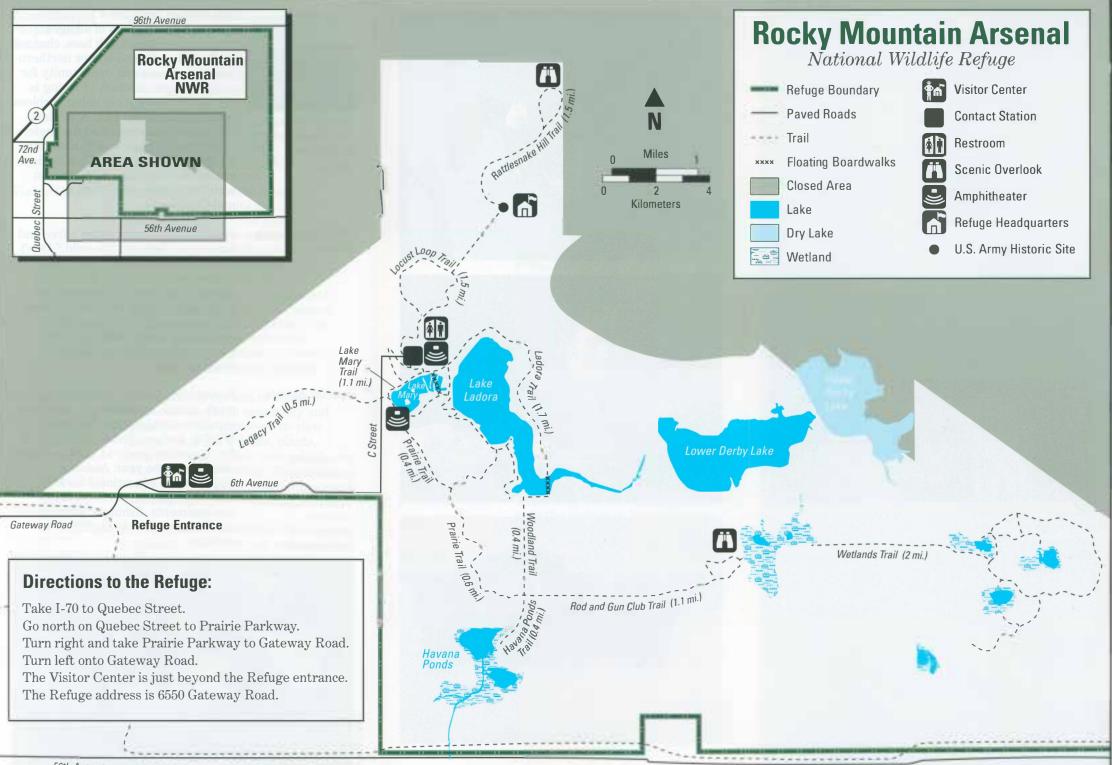
The quirky behavior of burrowing owls intrigues visitors throughout the summer.

The Refuge lakes are a popular attraction for anglers of all ages. Trophy-size largemouth bass, channel catfish, bluegill, and lunker northern pike provide a great opportunity for anglers to get "hooked." Fishing is catch-and-release only using barbless hooks and artificial bait. A minimal recreation fee is collected for anglers 16 years and older to help maintain the fishery. Several free fishing days are offered throughout the season which runs from mid-April to mid-October.

Wildlife viewing tours are a free and fun way to "get into the wild." Don't forget to bring your cameras and binoculars to see what the Refuge has to offer. Wildlife sightings and landscape changes with the seasons, so repeat visits are a must! Tours are offered year-round. Be sure to reserve your space by calling the visitor center.

Several free public events that mark special occasions and celebrate significant dates of the National Wildlife Refuge System are offered for the entire family at various times throughout the year. Assorted activites and educational booths, crafts and games, performances, re-enactments, fishing opportunities, and Refuge mascots highlight the events!





56th Avenue

Perimeter Trail (22 mi.)

#### **Environmental Education and** Interpretation

Teachers and educators can bring students to the Refuge for a unique curriculum-based field experience. Students become wildlife biologists for a day as they learn about the interconnectedness of all living things through various experiments and activities.

These programs instill a sense of wonder and encourage the investigative nature of children. A variety of programs are also offered for families, adults, and children on specific wildlife and plant topics that provide a more detailed look into the Refuge.



Young naturalists discover the secrets of a prairie.









### Wildlife Conservation

Left top: In 1988. a bald eagle study was initiated to monitor the affects of Arsenal cleanup and the development of the Denver metro area transportation system.

Left middle: Black-tailed prairie dogs

Left bottom: Bison were historically an integral component of the North American prairie ecosystem and now play a key role on the Refuge in grassland management.

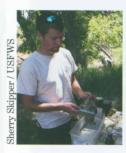
The Service's discovery of wintering bald eagles utilizing the Arsenal in the late 1980s shaped the vision for establishing this land as a Refuge. Eagles visiting the Arsenal benefited from the abundant prey, shelter, and seclusion. Today, the Refuge has both migrant and resident nesting eagles, providing visitors the opportunity to encounter these beautiful raptors in a natural setting throughout the vear.

Eagles are attracted to the Refuge because of its abundant supply of accessible prey - the black-tailed prairie dog. Except for the center of the Refuge, prairie dog colonies are located throughout the site. Some species of birds and mammals rely heavily on prairie dogs and the habitat they create. These co-dependent species include the mountain plover, burrowing owl, ferruginous hawk, and grasshopper mouse. Of these species, those that are visible at the Refuge in the summer is the burrowing owl; in the winter, the ferruginous hawk.

Another, much larger species that helps maintain a healthy, diverse grassland is the wild American bison. These long-lost inhabitants stampeded onto the Refuge in March 2007 as part of a larger effort to conserve and expand the species throughout the National Wildlife Refuge System.

These and other key species provide for spectacular wildlife viewing, environmental education, and photography opportunities.

## Wildlife Research



Biological research provides invaluable scientific knowledge about the numerous resident and migrant wildlife species found on the Refuge. Researchers from universities and other agencies, along with Refuge staff, study the health of wildlife, habitat restoration, wildlife populations, and ecology. The data gathered provide important information to help maintain and manage the natural resources and ensure the continued conservation and protection of wildlife.

#### Habitat Management



One of the primary objectives of the Refuge is to restore the short-grass prairie to provide quality wildlife habitat. Previous land uses, including past military and industrial operations and farming, resulted in the loss of native species and establishment of non-native invasive plants. A massive revegetation effort by the U.S. Army, Shell, and the U.S. Fish and Wildlife Service (Service) is reclaiming more than 9,000 acres of land back to native prairie grasses, wildflowers, and shrubs.

## Prescribed Burning



Fire is one way to keep native prairie healthy. Prescribed burning helps reduce the risk of wildfires and is a valuable tool used to sustain a diverse and healthy grassland habitat. Refuge staff carefully plans for and controls prescribed burns. Weather conditions, humidity, smoke dispersal, and the moisture level in the vegetation are evaluated prior to each planned burn. When conditions are suitable, prescribed burns are usually conducted in the spring and fall, but may occur at other times during the year.

# Accessibility

Refuge

Regulations

CAUTION

Wildlife may

roadways

near

SFWS

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. Dial 711 for a free connection to the State relay service for TTY and voice calls to and from the speech and hearing impaired. For more information or to address accessibility needs, please contact the staff at the Refuge headquarters at 303 / 289 0232, or the U.S. Department of the Interior, Office of Equal Opportunity, 1849 C Street, NW, Washington, D.C. 20240.

Visitor safety and wildlife conservation are top priorities at the Refuge. At times, sections of the Refuge may be closed on short notice due to wildlife needs, weather, or special projects. To help make your visit safe and enjoyable, please call or check our website for current hours of operation before visiting.

Please remember:

- Obey posted speed limits wildlife is sometimes near or on roads.
- Protect habitat by parking in designated areas only.
- Take your litter off the Refuge, and dispose of it properly.
- Stay on designated trails.
- Keep a safe distance from wildlife, and do not feed them.
- Leave only footprints; take only photographs.
- Only assistance animals are allowed on the Refuge.

#### Historical Overview

During the war, more than 70 percent of the workforce was women.



More than a century ago, the Colorado landscape east of the Rocky Mountains was gentle, rolling swells of short-grass prairie. Over time, people altered and used the land for different purposes. Plains Indians followed large herds of bison and lived off the land. Later, as settlers moved west to start a new life, they began growing crops and grazing cattle. Following the attack on Pearl Harbor, the U.S. Army transformed the area in 1942 into a chemical weapons manufacturing facility called the Rocky Mountain Arsenal to support the war effort. As production declined at war's end, a portion of the idle facilities were leased to Shell Chemical Company for the production of agricultural chemicals. The Arsenal was later used for Cold War weapons

production and demilitarization.





#### Environmental Success Story



As cleanup was completed, native prairie grasses, wildlflowers, and shrubs were planted providing habitat for a variety of wildlife species.

Left middle: Like many homesteaders, the Anger family grew and harvested crops.

Left bottom: Hues of orange and yellow present a spectacular backdrop setting along the edges of Lake Ladora.

In the 1980s, the U.S. Army and Shell began an extensive environmental cleanup under the oversight of Federal. State, and local regulatory agencies with input from the community. A roost of bald eagles was discovered in 1986, prompting the Service to become involved in managing wildlife at the site. The discovery also led Congress to designate the site as a future national wildlife refuge. In the mid-1990s, a unique public-private partnership was formed among the U.S. Army, Shell, and the Service. As cleanup progressed and projects met Federal and State regulatory requirements, the U.S. Army transferred sections of land to the Service to establish and manage as a Refuge.

The Arsenal's cleanup projects were successfully completed in 2010, 1 year ahead of schedule and on budget. The U.S. Army retains approximately 1,000 acres to maintain its landfills and consolidation areas, and also will continue operating its groundwater treatment facilities until groundwater meets Federal and State standards.

Today, the Refuge encompasses more than 15,000 acres, making it one of the largest urban wildlife refuges in the country. After more than a century, the land has come full circle and has been returned to its natural state, becoming a community asset for generations to enjoy. It has become a place like no other. One visit will not be enough!

© Courtesy of the Anger family