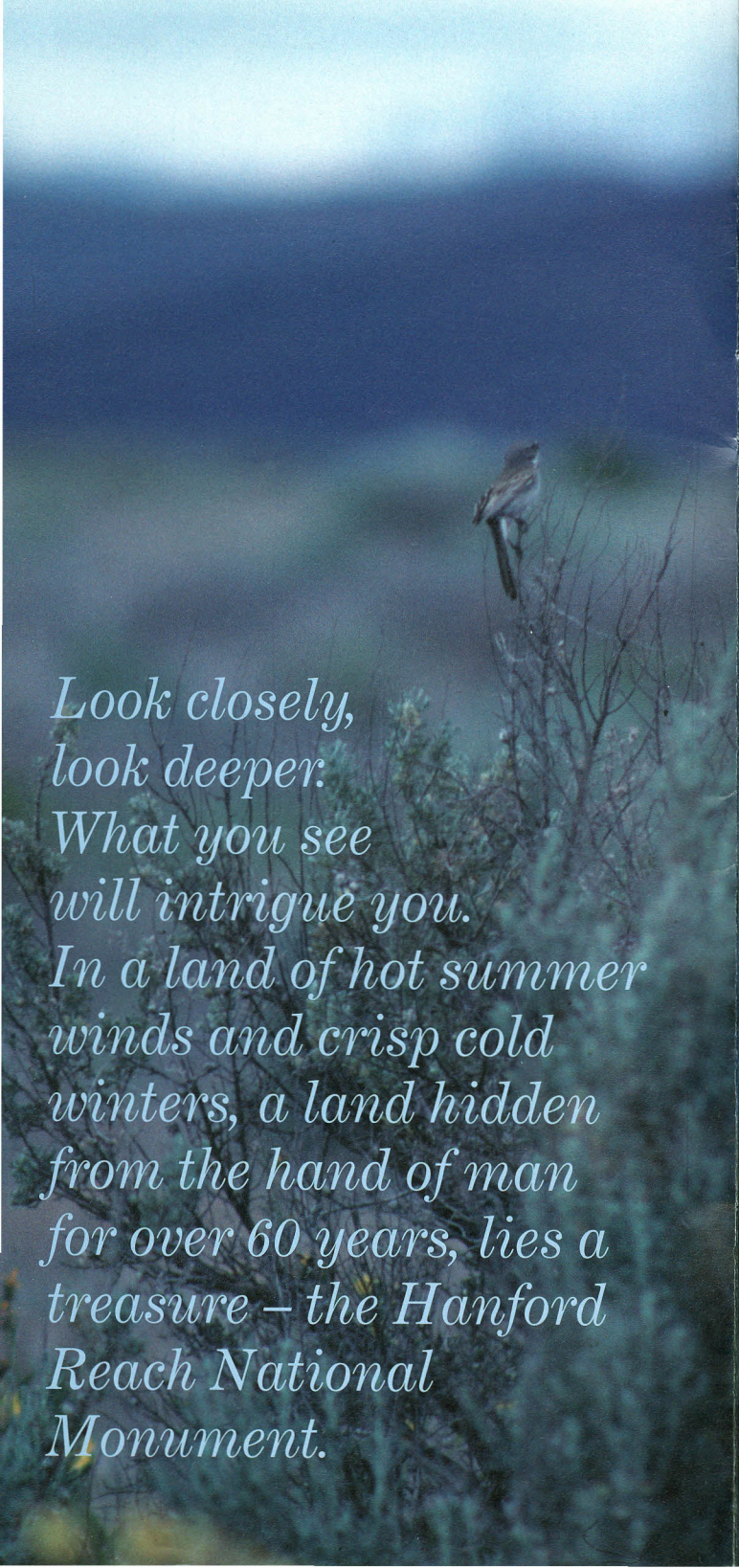


U.S. Fish & Wildlife Service

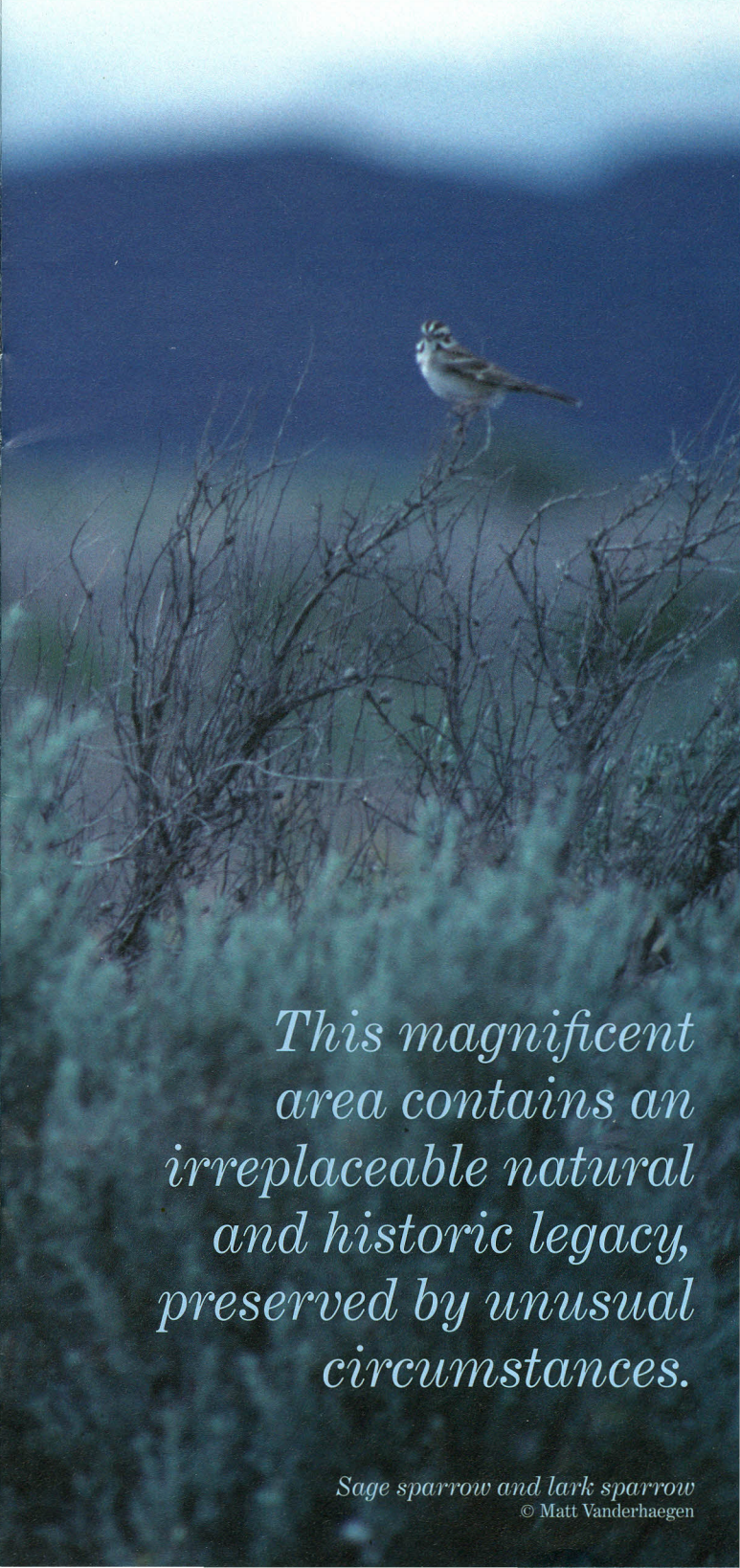
Hanford Reach

National Monument





*Look closely,
look deeper.
What you see
will intrigue you.
In a land of hot summer
winds and crisp cold
winters, a land hidden
from the hand of man
for over 60 years, lies a
treasure – the Hanford
Reach National
Monument.*



*This magnificent
area contains an
irreplaceable natural
and historic legacy,
preserved by unusual
circumstances.*

The Past and Future Preserved

The arid lands of south-central Washington harbor some of the last remaining shrub-steppe habitat in the state. Thousands of acres of this land, the Hanford Reach of the Columbia River and the Saddle Mountain National Wildlife Refuge, became the Hanford Reach National Monument, in 2000 to protect rare plants, wildlife, and remnants of human history.

Located near the Tri-Cities, the 196,000-acre Monument is open, treeless country punctuated by steep rolling hills and canyons. Sagebrush, bunchgrasses, wildflowers, and a thin microbiotic crust cover hills and plains. The Monument lies in the rain shadow of the Cascade Mountain Range in one of the hottest and driest places in Washington State.

Since 1943, what are now Monument lands have been a haven for important and increasingly scarce

Coyotes are great for keeping rodent populations in check. They are very adaptable and very intelligent. They sometimes team up with badgers to catch prey. Badgers dig in one entrance of a rodent burrow while a coyote will wait for prey to exit from a second entrance. If the rodent is caught, coyotes will share the meal...sometimes.



Coyote. USFWS

natural and cultural resources. The lands were allowed to remain wild because they served as a security buffer for the top-secret Manhattan Project during World War II, which produced plutonium for atomic weapons. With limited human development and livestock grazing, native plants and animals have thrived, and a diverse archaeological record has been preserved.

The Monument contains shrub-steppe, riparian, and aquatic habitats that no longer exist or are declining in other areas of the Columbia Basin. These areas and surrounding lands support 725 vascular plant species—at least 47 of which are species of conservation concern—42 species of mammals, more than 200 species of birds, 9 reptile and 4 amphibian species, 45 species of fish, and over 1,600 species of insects.

The U.S. Fish and Wildlife Service and U.S. Department of Energy serve as joint stewards of the Monument.



A Year of Wildlife and Plants

Each season brings new opportunities for visitors to enjoy wildlife, plants and the scenic beauty at the Hanford Reach National Monument.

Spring

Spring is one of the best times to visit the Monument. The sun is bright and the sky blue. In mid-March, the long-billed curlews begin arriving. The largest member of the sandpiper family, this species bears an unmistakable seven inch-long curved bill and cinnamon underwings. It is the largest member of the sandpiper family. Other migratory species, such as the loggerhead shrike, sage thrasher, sage sparrow and Brewer's sparrow, also return to the shrub-steppe. These birds winter as far south as Argentina. In April and May, native wildflowers begin their grand display, covering hills and plains with sunflower-like balsamroot, pink longleaf phlox, and purple-blue lupine.



Long-billed curlew

© Peter LaTourette

Summer

By June, the sun's increasing heat parches the soil, and many shrub-steppe plants cease to bloom. Along the river shore and islands, visitors likely will see flocks of American white pelicans, a state endangered species, as well as great blue herons, mule deer, coyotes, and beavers.

Fall

In late summer and early fall, large stands of rabbitbrush bloom yellow in upland areas of the Monument. The Hanford Reach supports some of the last remaining spawning habitat for fall chinook salmon, known as "upriver brights," in the Columbia River. The fall chinook salmon run is a premiere recreational fishery. By October, fall chinook salmon complete their upriver migration to the Hanford Reach from waters as far away as Alaska and the Bering Strait in Russia. They spawn in rocky nests, known as "redds," in late October to late November.



Young sac fry such as this stay within the relative safety of the redd until they develop into fingerlings.

© Chris Huss

Winter

The Hanford Reach and surrounding wetlands provide important wintering habitat for bald eagles and many species of waterfowl. Common species include mallard, green-winged teal, pintail, goldeneye, and bufflehead. Listen for the familiar honk of western Canada geese as they fly over the Reach in large "V" formations. Visitors may hunt waterfowl during winter in designated areas.



Horned lizard
USFWS

Prickly pear cactus
© William Radke



The Hanford Reach

The 51-mile-long Hanford Reach is the last free-flowing, non-tidally influenced stretch of the Columbia River in the United States. It extends from one mile downstream of Priest Rapids Dam to near the city of Richland, Washington.

Although dams exist above and below the Reach, the river channel here has never been dammed or dredged, creating the habitats characteristic of undammed rivers. These include gravel bars, riffles, oxbow ponds, and backwater sloughs, habitat now missing from much of the rest of the Columbia. As a result of its unique habitat diversity, the Reach supports about 80 percent of the total run of upper Columbia River fall chinook salmon, as well as 44 other species of fish, including steelhead and white sturgeon.

Much of the Reach borders the U.S. Department of Energy Hanford Site. It was closed to the public in 1943

when the Site was established to produce material for nuclear weapons during World War II and later the Cold War. Production of these materials required construction of nine nuclear reactors and support facilities. Visitors to the Hanford Reach will see these gray, concrete reactors or the bright "cocoon" within which the reactor cores are housed lining the river banks. Eight reactors were shut down by 1971; N Reactor continued operations until 1987. Reach waters were reopened for public use in 1978, although shoreline access along the Site remains restricted. The Site's current mission is environmental cleanup, restoration, science, and technological advancement.

The state of Washington has designated the waters of the Hanford Reach as Class A (Excellent), which means the water is suitable for all uses, including drinking water, recreation, and wildlife habitat. The primary uses of the water within the Reach include fishing and boating.

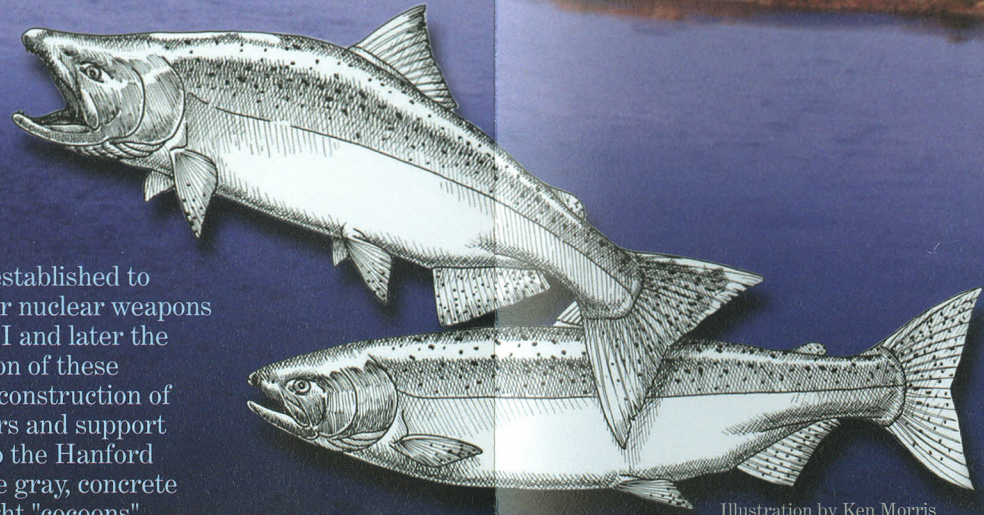


Illustration by Ken Morris

*The ancient and the modern —
the eight million year-old sediments
of the White Bluffs with plutonium
reactors in the background*

© Joel Rogers

Othello

Sagehill Road

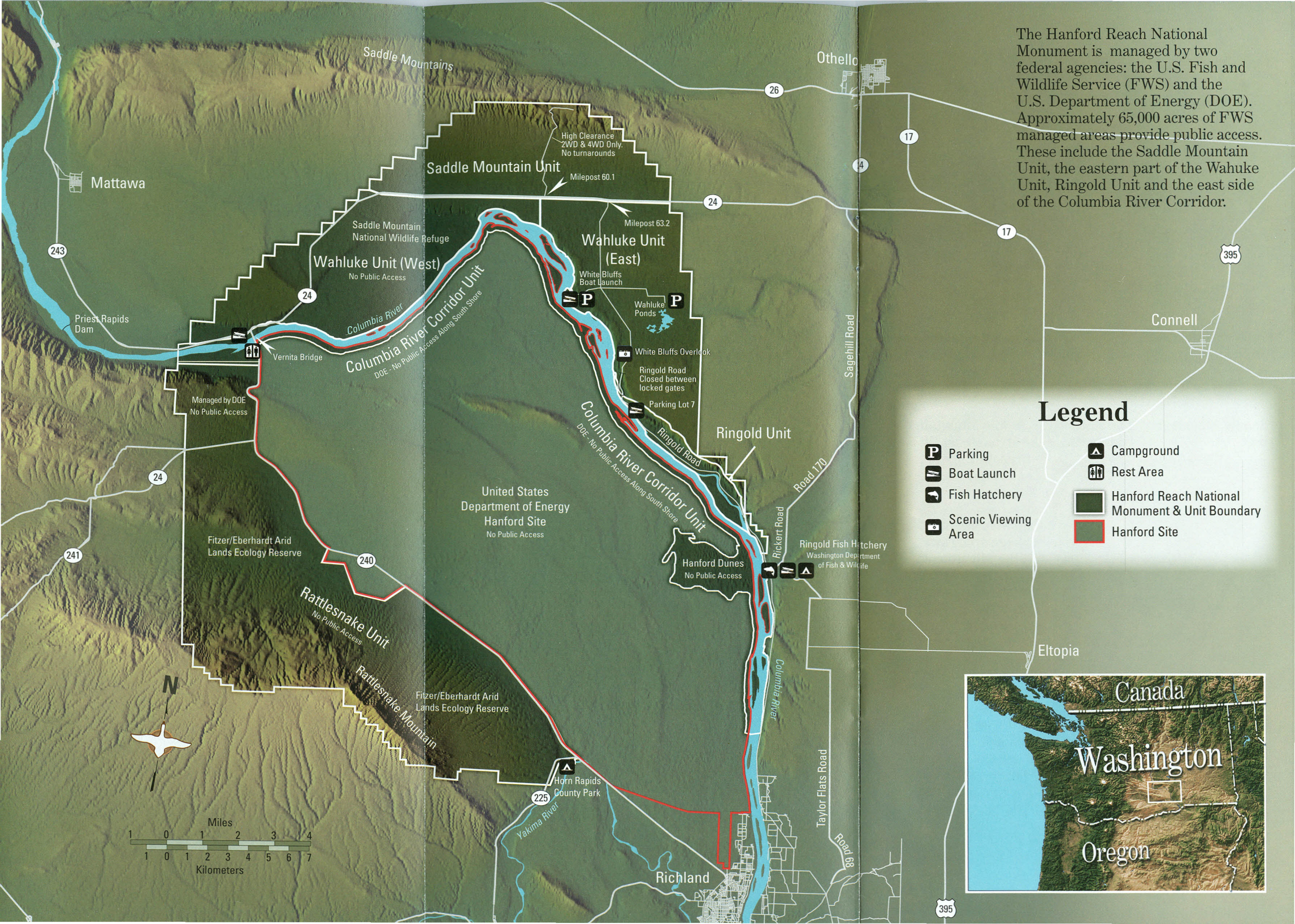
Road 170

Ringold Fish H
Washington Dep
of Fish & Wil

Taylor Flats Road

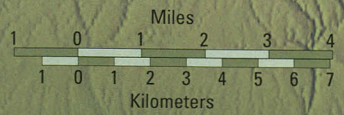
Road 08

The Hanford Reach National Monument is managed by two federal agencies: the U.S. Fish and Wildlife Service (FWS) and the U.S. Department of Energy (DOE). Approximately 65,000 acres of FWS managed areas provide public access. These include the Saddle Mountain Unit, the eastern part of the Wahluke Unit, Ringold Unit and the east side of the Columbia River Corridor.



Legend

- Parking
- Boat Launch
- Fish Hatchery
- Scenic Viewing Area
- Campground
- Rest Area
- Hanford Reach National Monument & Unit Boundary
- Hanford Site





What do camels have to do with the Hanford Reach National Monument?

According to paleontologists, camels began evolving in North America millions of years ago. As land masses separated and climates changed, camels moved to warmer regions, eventually dying out in North America. Fossil remains of camels and other prehistoric animals have been found on the Monument.

Camel
© Jaynee Levy

Saddle Mountain Unit



Shooting star
© Nancy LaFramboise

The 24,055 acre Saddle Mountain Unit includes the striated basalt outcroppings of the rugged Saddle Mountains. This area has one of the highest concentrations of sage sparrows on the Monument. Loggerhead shrikes are also frequently seen hunting along the roadside. During spring migration, sandhill cranes can be heard passing overhead. Near the top of the mountain listen for the familiar “chuk chuk” of the chukar partridge. The views from the ridge are spectacular and include the Columbia National Wildlife Refuge, to the north.

Public Use

Open to the Public

Saddle Mountain Unit

High Clearance
2WD & 4WD Only.
No turnarounds

Milepost 60.1

24

Saddle Mountain
National Wildlife Refuge

Milepost 63.2

Wahluke Unit

Sagebrush, an Exceptional Shrub

Sagebrush (*Artemisia* sp.) forms the structure of the shrub-steppe. However, sagebrush is not just one species of plant. There are 13 different species of sagebrush in Western North America and six of these exist at the Hanford site! Some wildlife species are critically dependent on sagebrush for nesting, hiding and thermal cover. The sage sparrow, sage grouse and black-tailed jackrabbits are examples of sagebrush dependent species.

Not all the shrubs at Hanford are sagebrush. Look closely to observe a wide diversity of shrubs in the shrub-steppe such as antelope bitterbrush, gray and green rabbitbrush, spiny hopsage, purple sage and black greasewood. Unfortunately, there is an introduced species, referred to as tumbleweed or Russian thistle that is also commonly observed. Tumbleweed is not a native shrub! None of our native shrubs break off or blow away in the wind.



Big sagebrush

© Joel W. Rogers



Wahluke Unit (West)

Along the north side of the Columbia River, dense stands of big sagebrush thrive on the 32,000-acre Wahluke Unit (West). Located along Highway 24, this unit encompasses the Saddle Mountain National Wildlife Refuge. It provides habitat to many migratory birds species, including orioles, kingbirds, warblers, and a wide variety of waterfowl.

Public Use

There is no public access to Wahluke Unit (West).

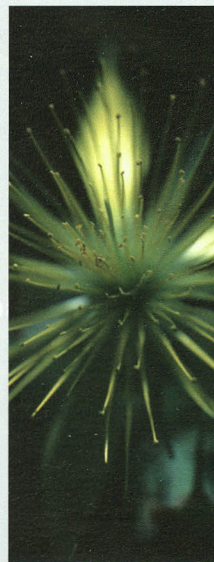
Wahluke Unit (East)

Located along the eastern side of the Columbia River, the shrub-steppe habitat edges the soft greens of pond-side reeds in riparian habitat, all on the 25,000 acres of the Wahluke Unit (East).

Hundreds of species of native plants are found here, including rare plants such as Geyer's milkvetch and desert dodder. The diminutive White Bluffs bladderpod is found nowhere else in the world. More common plants found near the unit's scenic overlook include snow buckwheat, Indian ricegrass and Cusick's sunflower.



White Bluffs Bladderpod
© Heidi Newsome



Blazing star
© Joel W. Rogers

A large wildfire swept through this area during the summer of 2007, which removed much of the sagebrush cover. The native vegetation is slowly recovering to pre-fire levels. The USFWS is actively managing the area for post-wildfire recovery by controlling non-native plant species and planting and monitoring native species' response to the fire.

Near the center of the unit lies Wahluke Ponds (WB-10 Ponds). These ponds are formed by water returning to the river from nearby irrigated lands. Dense stands of bulrush and cattail provide cover and nesting sites for red-winged blackbirds, yellow-headed blackbirds, marsh wrens, and northern harriers.

Public Use

Open to the public

Columbia River Corridor Unit

This unit includes 29,000 acres on the south and west banks of the Columbia River, Columbia River Islands, and Hanford Dunes. Sixteen islands exist in the main channel of the Reach. They provide resting and nesting habitat for waterfowl, shorebirds, small mammals, and mule deer.

Floating the river by canoe or kayak is a wonderful experience.

24

Vernita Bridge

Columbia River

Columbia River Corridor Unit
DOE - No Public Access Along South Shore

Public Use

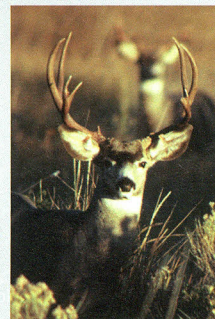
With the exception of the river itself, the area (including all islands) is closed for public use.

Ringold Unit

The 3,120-acre Ringold Unit, located in the eastern part of the Monument, is the smallest but most accessible area to the motorized public. Numerous parking areas provide access for fishermen, hunters and birders. Bank fishing for steelhead is popular. Naturalists will enjoy close access to riparian vegetation that attracts spring arrivals such as Bullock's orioles, yellow warblers and song sparrows. Backwater sloughs are good places to view waterfowl and waterbirds, such as the great egret and great blue heron. Loons and grebes can be seen along the river; and bald eagles migrate here in winter. The Ringold Unit is also popular with upland game bird hunters seeking pheasant and quail.

Public Use

The area is available for public recreation. For safety considerations, the access road is gated south of the White Bluffs overlook. It is closed to motorized vehicles but open to hiking, bicycling and horseback riding.



Mule deer
USFWS

Wahluke Unit (East)

White Bluffs Boat Launch

P

White Bluffs River

Ringold Road
Closed between
locked gates

Parking Lot 7

Columbia River Corridor Unit
DOE - No Public Access Along South Shore

Ringold Road

Ringold Unit

United States
Department of Energy
Hanford Site
No Public Access

Hanford Dunes
No Public Access

Rickert Road

Ringold

Was



Sometimes, on close observation, one may notice dew claw marks in mule deer tracks. These are usually caused when the hoof is flexed more than normal when the deer is jumping or fleeing from a predator.



© Scott McCorquedale
No Public Access

Rocky Mountain elk can be seen during winter months grazing in areas south of Highway 240. Elk on the Monument sometimes reach 1,000 pounds or more. During the fall rut, males spar to compete for possession of a harem.

Rattlesnake Unit



Western meadowlark
© Chuck Bartlett

Located south of the Columbia River Corridor, the Rattlesnake Unit extends from State Highway 240 west up the steep ridges of Rattlesnake Mountain, to its 3,660 ft. summit, the highest point in the area. The Fitzer/Eberhardt Arid Lands Ecology Reserve makes up the bulk of this Unit, with Umtanum Ridge encompassing it's northern zone. The Umtanum Ridge is a former pioneer ranch area, providing habitat for rare plants such as Umtanum desert buckwheat, Hoover's desert parsley, and Kittitas larkspur.



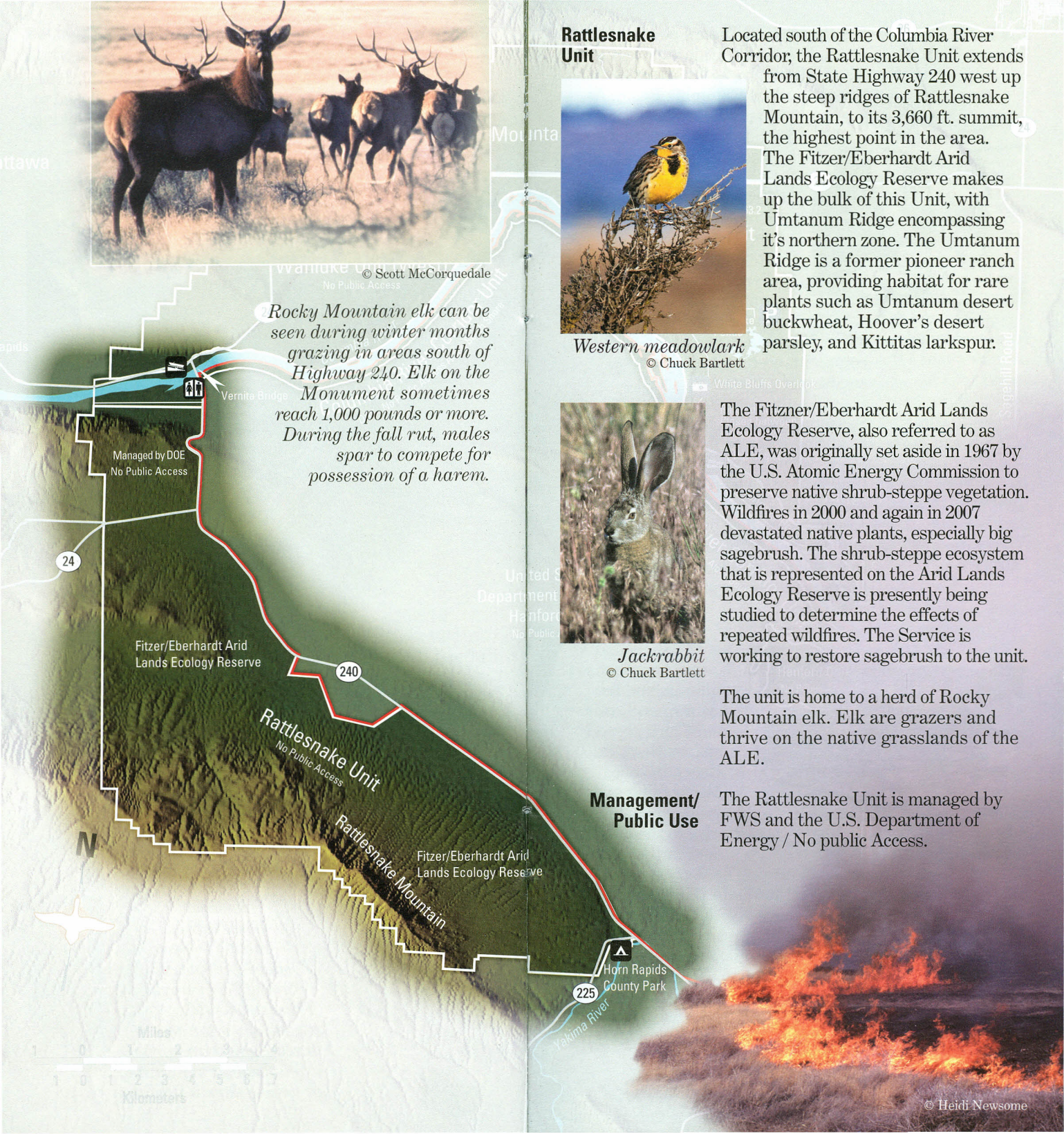
Jackrabbit
© Chuck Bartlett

The Fitzer/Eberhardt Arid Lands Ecology Reserve, also referred to as ALE, was originally set aside in 1967 by the U.S. Atomic Energy Commission to preserve native shrub-steppe vegetation. Wildfires in 2000 and again in 2007 devastated native plants, especially big sagebrush. The shrub-steppe ecosystem that is represented on the Arid Lands Ecology Reserve is presently being studied to determine the effects of repeated wildfires. The Service is working to restore sagebrush to the unit.

The unit is home to a herd of Rocky Mountain elk. Elk are grazers and thrive on the native grasslands of the ALE.

Management/ Public Use

The Rattlesnake Unit is managed by FWS and the U.S. Department of Energy / No public Access.



Horn Rapids County Park

Yakima River

225

The Basin Through Time



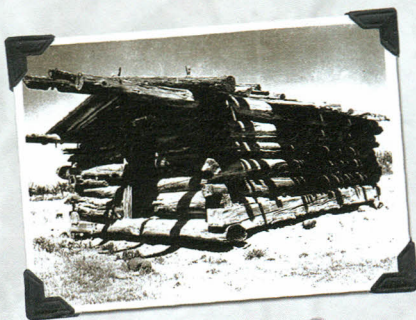
Historical photos provide some insight to the lifestyles found in fishing camps of the Wanapum and other tribes along the Columbia, Snake, and Yakima Rivers.

Krieger 1927

For thousands of years people have depended on the “Chiawana” (Big River) to survive in the desert environs of the Columbia Basin. As early as 10,000 years ago, the ancestors of today’s Wanapum, Yakama Nation, Confederated Tribes of the Colville, Confederated Tribes of the Umatilla Indian Reservation, and the Nez Perce fished, hunted, and collected a variety of natural resources in the

area. The abundant salmon were complemented by upland roots, seeds, and game.

Seasonal gathering of resources, such as spring roots or fall chinook salmon, often required moving “camps.” Tule (bulrush) mats were draped over willow poles for temporary shelter. In winter, shallow oval pits were dug and covered with poles draped with tulle, willow, or hides, making for more permanent “housepit” villages along the Reach.



This log cabin, one of the oldest buildings in Franklin County, was part of the White Bluffs settlement.

1937 WPA photo, Louis Boeder

Several thousand Native Americans still occupied the basin when Lewis and Clark passed just south of the Reach in 1805. Fur trading and military posts gave rise to the initial settlement of the

area. The ferry crossing on the White Bluffs Road, likely once an Indian trail, was the hub of transportation for the region by 1860. Steam boats and wagons met here to transport supplies and gold between the coast and mines in British Columbia, Montana, and Idaho.

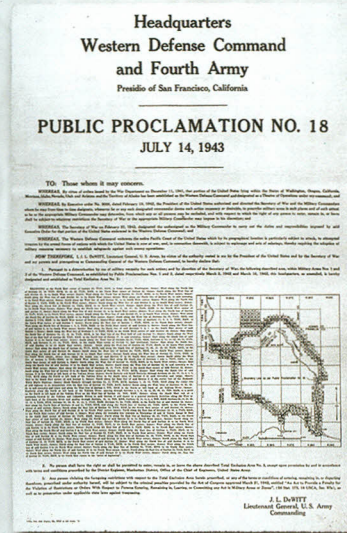
About 1890, scattered homesteads appeared along the river banks. Families struggled to farm and raise stock. Promises of irrigation just after 1900 spurred spirits and growth in the White Bluffs, Hanford, and Wauhlake settlements.

The Hanford Ditch, built in 1907, carried water from pumping stations along the river to anxious farmers. The arrival of a spur line of the Northern Pacific Railroad to Hanford in 1913 brought more families. Settlement continued through the Depression in the 1930s into the 1940s.

In 1943, the area was changed forever by World War II. The Hanford Engineer Works became a site for the top-secret Manhattan

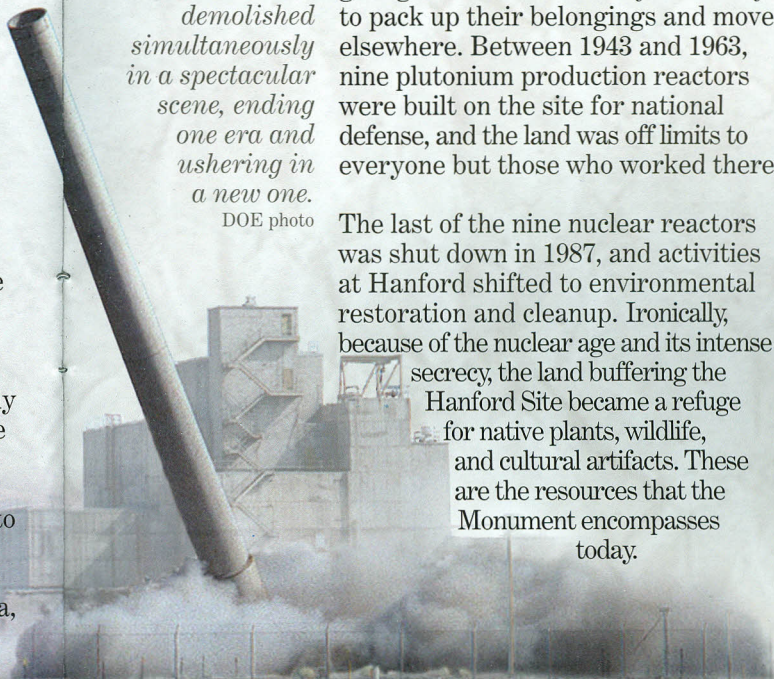
Project. The government distributed proclamations to property owners, giving some residents only three days to pack up their belongings and move elsewhere. Between 1943 and 1963, nine plutonium production reactors were built on the site for national defense, and the land was off limits to everyone but those who worked there.

The last of the nine nuclear reactors was shut down in 1987, and activities at Hanford shifted to environmental restoration and cleanup. Ironically, because of the nuclear age and its intense secrecy, the land buffering the Hanford Site became a refuge for native plants, wildlife, and cultural artifacts. These are the resources that the Monument encompasses today.



In 1999, the stacks of reactors D and DR were demolished simultaneously in a spectacular scene, ending one era and ushering in a new one.

DOE photo



From Plants to Prey

The most abundant large mammal on the Monument is the Rocky Mountain elk. Scurrying through the shrubs is the most abundant small mammal in the shrub-steppe, the Great Basin mouse. The mouse gets its water entirely from the food it eats - seeds, grains and insects. In turn, the Great Basin mouse serves as prey for owls, badgers and the most abundant predator, coyote.



An adult green darner dragonfly can consume one mosquito every three minutes and can reach speeds up to 35 miles per hour. The green darner is Washington's official state insect.

Darting over the shrub-steppe with a flash of iridescence are dragonflies and damselflies, the hawks of the insect world.

Other insect species include brightly colored blister beetles, darkling beetles, sand wasps, wild bees, and several species of butterfly.

The Monument's cold winters discourage the presence of heat-loving amphibians and reptiles. However, you may spot a side-blotched lizard or short-horned lizard, both of which have adapted to the area. In the morning hours, they sun themselves on rocks. The area's only poisonous snake, the western rattlesnake, prefers basalt outcrops for warmth and protection.

Darkling beetle
© Troy Barlet



Was that a prairie dog scurrying and barking before disappearing down its hole? Most likely not, as a surprising variety of ground dwelling squirrels live in the Pacific Northwest but prairie dogs do not occur here. Easily mistaken for prairie dogs, ground squirrels rely on the same grassland habitats and dig burrows underground.



Townsend's ground squirrel
© Jane Abel

The Hanford Reach National Monument provides habitat for two species of ground squirrels. The Townsend's ground squirrel lives on the Rattlesnake Unit, while the Washington ground squirrel can be found on the Saddle Mountain Unit. The Washington ground squirrel is a rare and declining species that is a candidate for listing as a threatened or endangered species.

Ground squirrels are very important components of ecosystems. They serve as prey for predators, reduce soil compaction, loosen and aerate soils, and increase the rate of water infiltration into soil. By bringing nutrients and buried seeds from deep soil layers to the surface, they increase soil fertility, plant diversity and productivity. Also, their burrows, and the holes dug by badgers pursuing them in their burrows, are reused by many species including snakes, lizards, insects, and burrowing owls.



Recreation Activities

The following activities, as appropriate, are permitted in the areas open to the public.

Just south of Highway 24, within the Wahluke Unit (East), visitors will find scenic views of the White Bluffs and the site of the old White Bluffs Ferry Landing where the improved White Bluffs Boat Launch is now located. North of Highway 24, a narrow unpaved road leads to the crest of the Saddle Mountains for spectacular views of the Monument. This primitive road is not suitable for motor homes or trailers.

Boating

The White Bluffs Boat Launch within the Monument provides a concrete boat ramp suitable for motorboats. Unimproved gravel and earthen ramps within the Monument exist at Vernita Bridge, area managed by Washington Department of Fish and Wildlife, and the old Hanford town site ferry crossing at parking area 7. The Ringold Fish Hatchery, immediately adjacent to the east side of the Monument, provides an unimproved launching area.

Camping

Although camping is not permitted on the Monument, camping is available at the Washington Department of Fish and Wildlife Ringold area and also in Benton County at Horn Rapids County Park near the Yakima River.

Fishing and Hunting

Fishing and hunting are permitted in public use areas during seasons regulated by the Washington Department of Fish and Wildlife and the U.S. Fish and Wildlife Service. For boat launching at the White Bluffs Boat Ramp, access is allowed two hours before sunrise to two hours after sunset. All other fishing access is from sunrise to sunset. For hunting, please consult Monument hunting regulations.

Hiking

The Monument has no designated hiking trails. Where hiking is permitted, it is not confined to trails. Carry plenty of water, be prepared for drastic weather changes, and be aware that port-a-potties exist only at the White Bluffs Boat Launch.

Please pack out your trash. Be aware that no restroom facilities or potable water exists.

Bicycling

Bicycles are permitted on roads that are open to motorized vehicles, and also between the locked gates, just south of the White Bluffs Overlook, on the Ringold Road.

Volunteer Opportunities

Wildlife and plant surveys, invasive weed eradication, collecting and releasing biological controls and maintenance are among the many volunteer opportunities.

Observation and Photography

Wildlife observation and photography in open areas are encouraged. Please stay out of closed areas to minimize disturbance to plants and animals.

Visiting Hours

The public use areas of the Monument are open year-round for day use from sunrise to sunset.

Regulations

Open fires; camping or parking a vehicle overnight; off-road driving or bicycling; and collecting plants, animals, minerals, rocks, and fossils are prohibited. Dogs are permitted only on leash in parking lots or when working as retrieving dogs during the hunting season.

Archaeological, historical, and cultural resources are federally protected. It is illegal and punishable by law to disturb or remove these resources from the Monument.

Persons possessing, transporting, or carrying firearms on National Wildlife Refuges must comply with all provisions of state and local law. Persons may only use (discharge) firearms in accordance with refuge regulations.

Wildfire

In case of wildfire, dial 911.

Sirens

Portions of the Wahluke Unit and the Columbia River are part of an emergency planning zone for the Hanford Site. In the event of a siren, tune a radio to the Emergency Broadcast Station (KONA, 610 AM or 105.3 FM) or marine band radio to channel 22. Personnel from the U.S. Department of Energy, U.S. Fish and Wildlife Service, and Benton and Franklin County Sheriffs' Offices also may warn people to evacuate the area.

Climate Change

The most significant changes witnessed in the northwest United States during the past 50 years — and most notably the past 15 years — are higher summer temperatures and earlier spring snowmelt. Scientists are finding that these trends are continuing and virtually all future climate scenarios predict increases in wildfire in western North America, especially here in Washington, east of the Cascades. Other impacts could be changes to water availability and in how plants, birds, fish and other wildlife use and survive in the area. The Hanford Reach National Monument is joining a nationwide effort to monitor and manage for such changes.

River otters are sometimes seen along the Columbia River; however, their tracks in wet sand are more likely to be seen than the animals themselves. Their hind feet are webbed, giving them greater speed when swimming after fish. Webbed feet are not as great a hindrance on land as one might think. Otters are capable of reaching speeds of 15 miles per hour on land.

© William Radke

Hanford Reach National Monument
64 Maple Street
Burbank, WA 99323
509-546-8300
hanfordreach@fws.gov
<http://www.fws.gov/hanfordreach/>

For National Wildlife Refuge System Information:
1 800/344-WILD
<http://www.fws.gov>

U.S. Department of Energy
825 Jadwin, A2-15
Richland, WA 99352
509/372-1261
<http://www.hanford.gov>

Reprint August 2014



Equal opportunity to participate in and benefit from programs and activities of the U.S. Fish & Wildlife Service is available to all individuals regardless of physical or mental disability. For more information please contact the U.S. Department of the Interior, Office of Equal Opportunity, 1849 C Street, NW, Washington, D.C. 20210