

Introduction/Background

The Arapaho NWR Complex is located in the northwest corner of Colorado. The Complex includes the Arapaho National Wildlife Refuge (NWR) and the following four satellite refuges in Wyoming: Bamforth NWR, Hutton Lake NWR, Mortenson Lake NWR, and Pathfinder NWR (see Map 1 - Vicinity Map). On September 26, 1967, the Migratory Bird Conservation Commission, acting under the authority of the Migratory Bird Conservation Act, approved the established area known as the Arapaho NWR, which is currently is 23,243 acres in size and is located in Jackson County (see Map 2 - Base Map). Purchased acres total 18,451 while 4,792 acres have been withdrawn. The Arapaho Complex staff administers an additional 21,717 acres on the Wyoming satellite refuges for a total of 44,960 acres under Complex management.

The Refuge is located in an intermountain glacial basin just south of the town of Walden, the county seat of Jackson County, Colorado. The basin is approximately 30 miles wide and 45 miles long. Commonly known as “North Park” since it is the most northern of three such “parks” in Colorado. Jackson County is a high, isolated intermountain basin that lies in the northern tier of Colorado counties (see Map 3 - North Park).

Forming the headwaters of the North Platte River, the basin opens north into Wyoming and is rimmed on the west by the Park Range, on the south by the Rabbit Ears Range, and on the east by the Medicine Bow Range (see Map 4 - Physical Features of North Park, Colorado). Elevation ranges from 7,800 to 12,953 feet above sea level. The floor of the basin is interspersed with many slow meandering streams that come together in the north-central part of the county to form the North Platte River. Main tributary rivers are the Michigan, Illinois, Canadian, and Grizzly (Map 5 - Platte River Watershed).

A major portion of the bottom land along the streams is irrigated hay meadow and irrigated pasture while the low rises between streams are dry grassland and sagebrush grazing lands. The picture changes rapidly on the edges of the basin where the land pitches abruptly upward to the mountain tops, the slopes heavily clothed with aspen, spruce, pine, and fir up to timberline at about 11,000 feet, then tundra and rock up to the mountain summits.

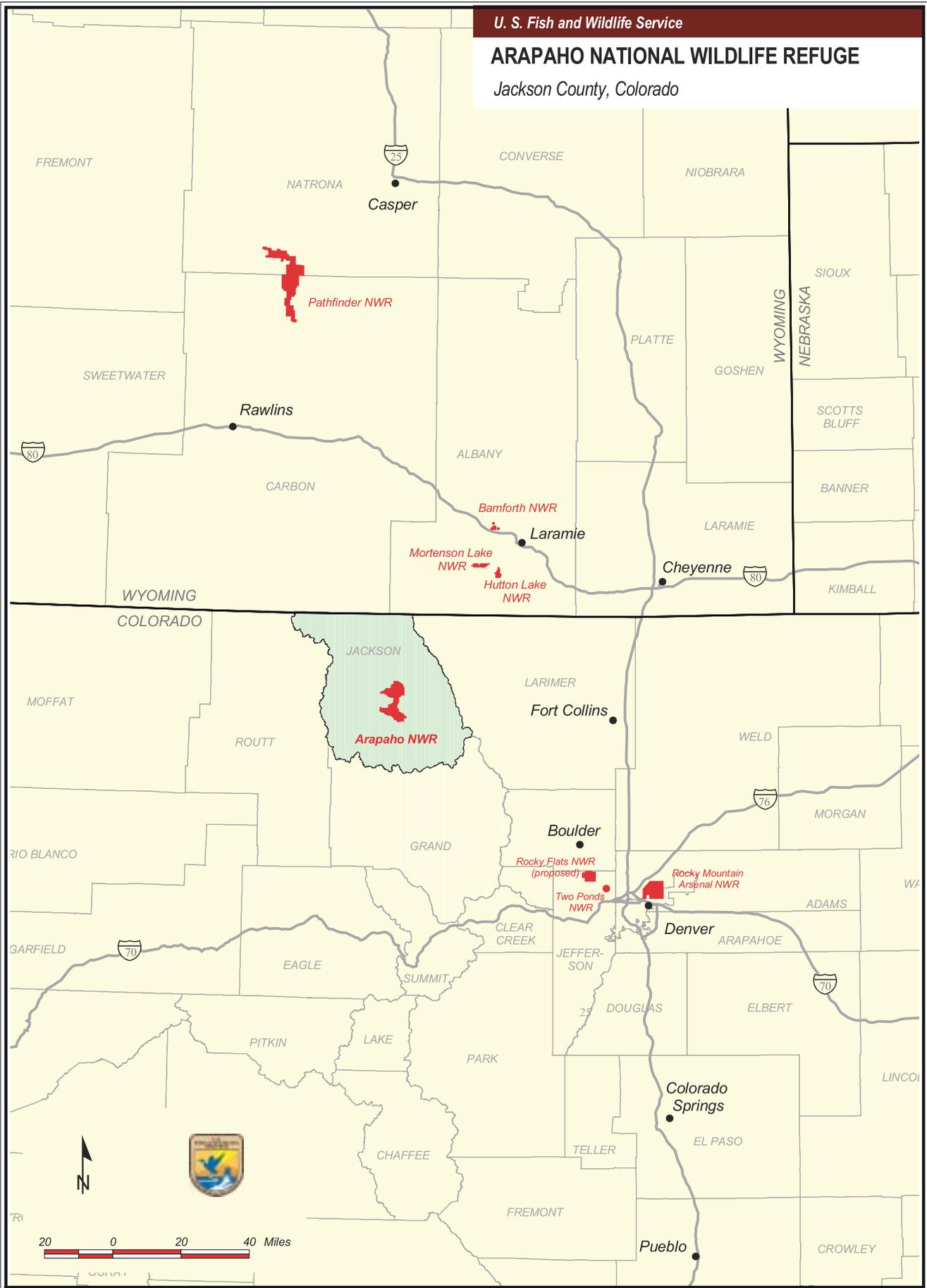
The ecosystems in the North Park area of Colorado have grown through hundreds of years in a fire-dependent system, with fire as an important, dominating influence. High elevations and a short season, with a cool, often moist, climate was part of the fire regime. Class 4 Fire Regime consist of combined crown fires and severe surface fires (25 to 100 year return interval). Most woody vegetation or stand elements were killed over large areas.

The fire regime has been altered, changing the cultural activities, i.e., grazing patterns over a 100-year period, in the North Park area. Early explorers noted tallgrass found in the Park. Native Americans dubbed North Park the “Bullpen,” referring to the bison inhabiting the area. This gives an indication that the area may have been more dominated by grasses, and thus likely was more influenced by fire than the present condition dominated by sagebrush hills.

Records for North Park indicate little significant wildfire activity in the past 50 years.

ARAPAHO NATIONAL WILDLIFE REFUGE

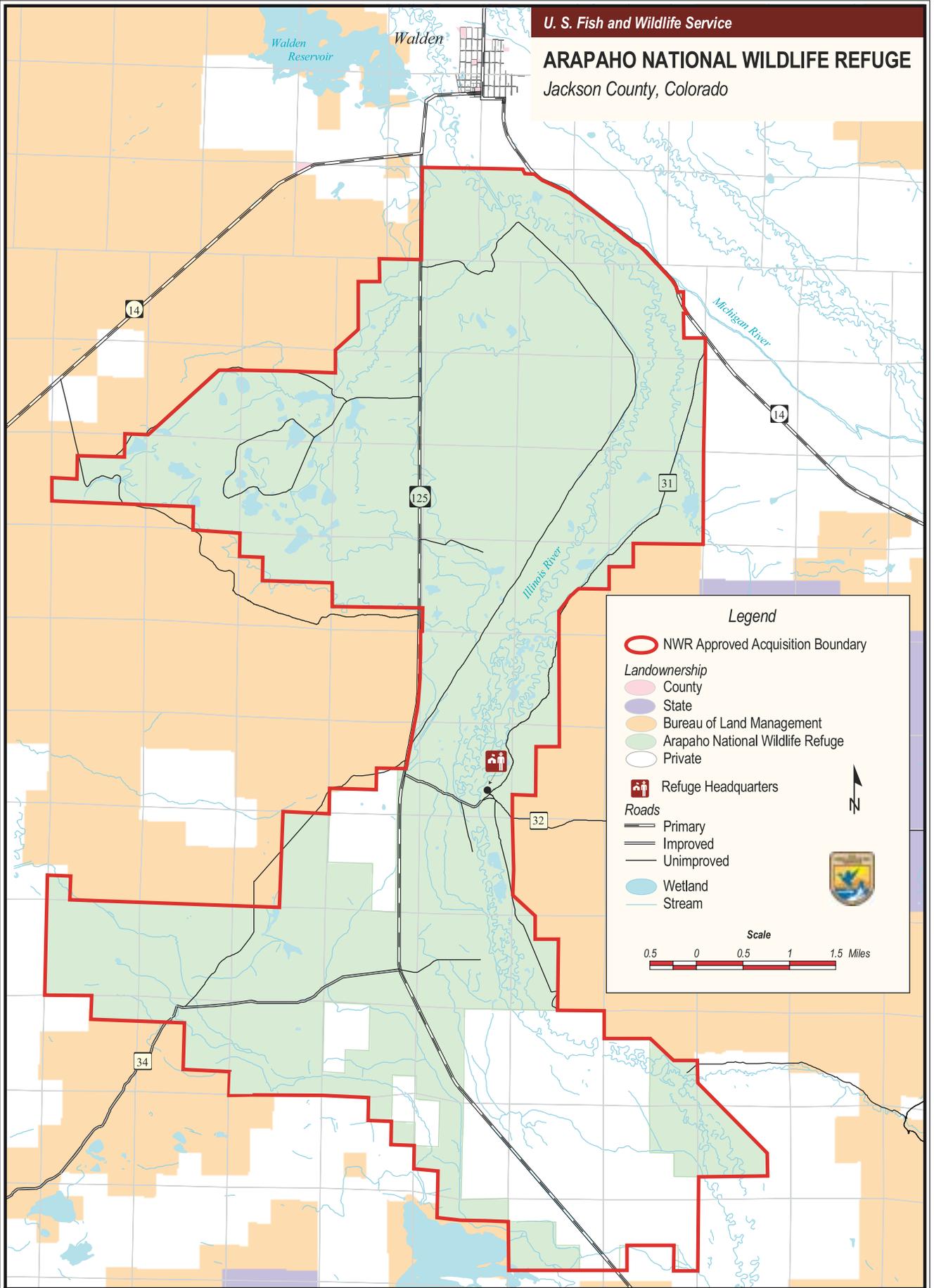
Jackson County, Colorado



Map 1- Vicinity Map

ARAPAHO NATIONAL WILDLIFE REFUGE

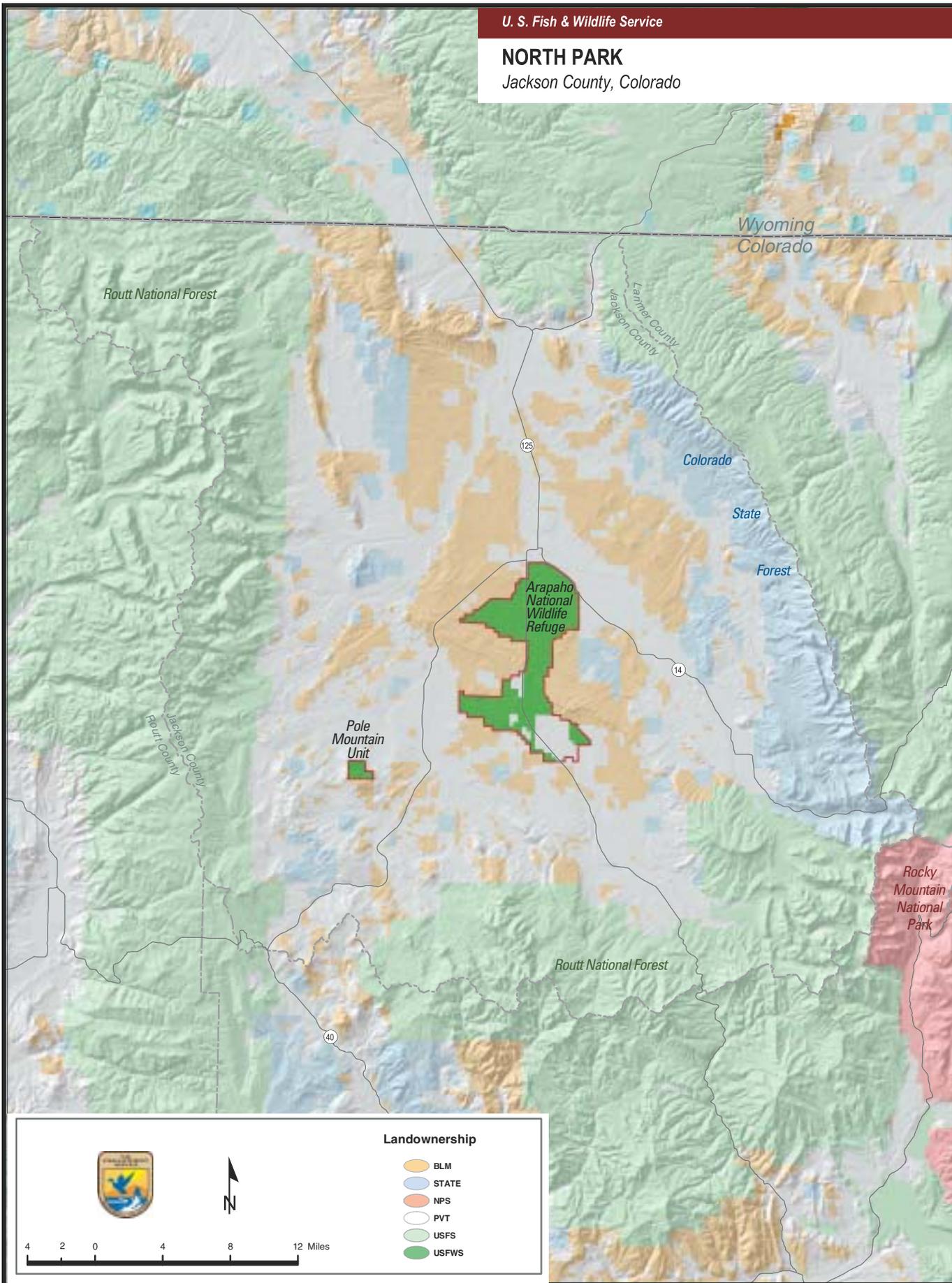
Jackson County, Colorado



Map 2 - Base Map

NORTH PARK

Jackson County, Colorado

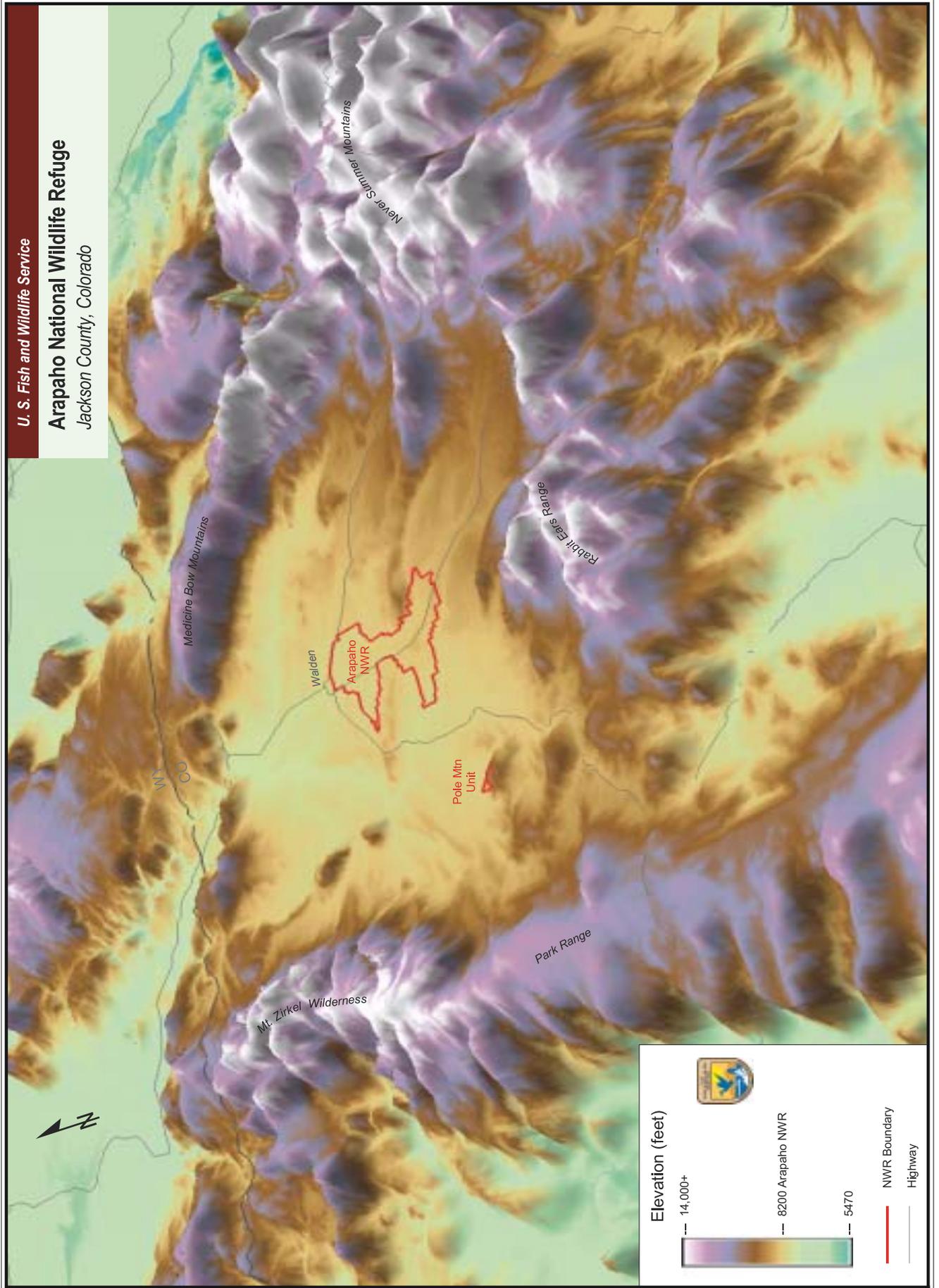


Map 3 - North Park, Jackson County, Colorado

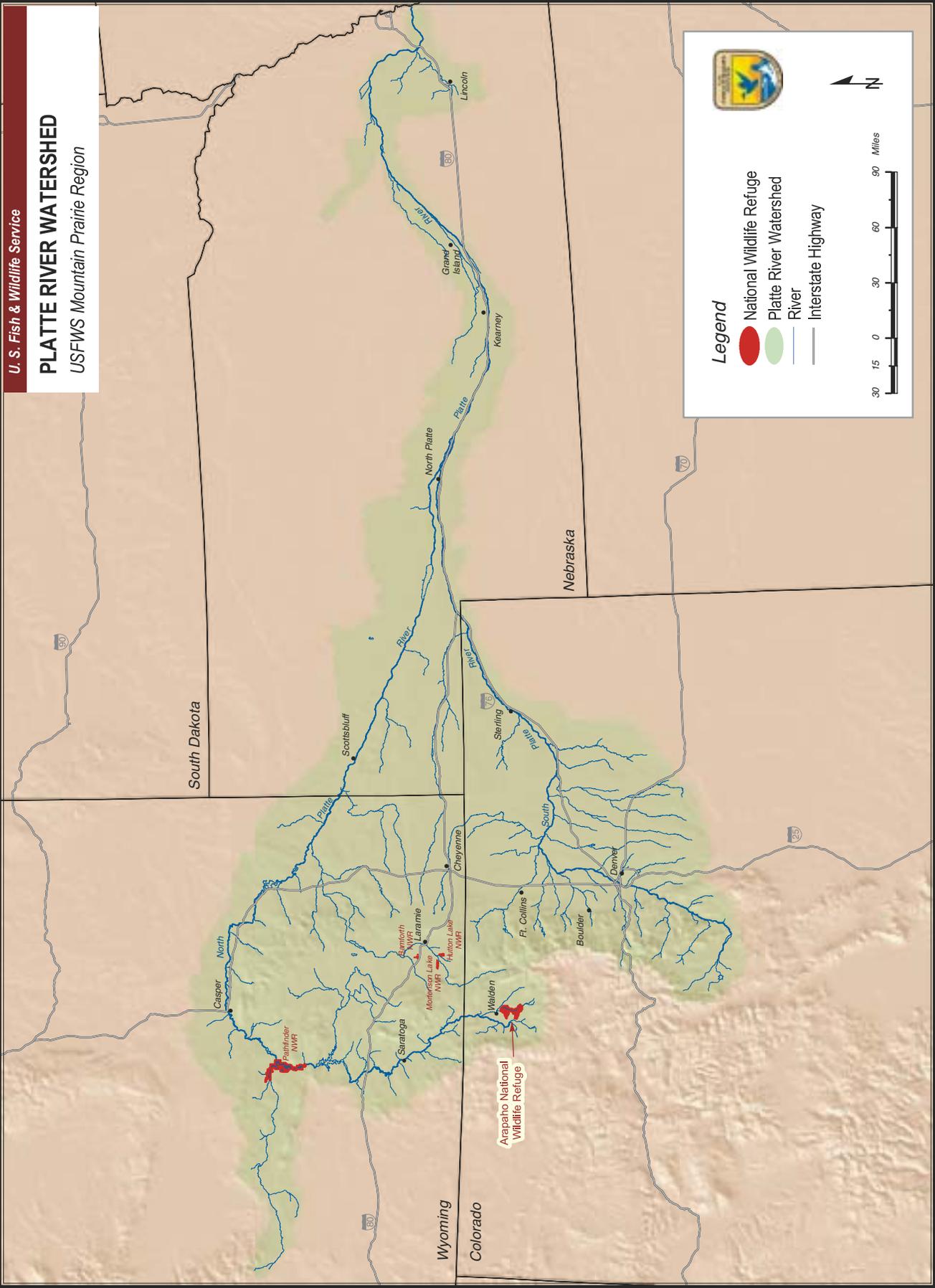
U. S. Fish and Wildlife Service

Arapaho National Wildlife Refuge

Jackson County, Colorado



Map 4 - Physical Features of North Park, Colorado



Map 5 - Platte River Watershed

Prior to 1820, the Ute Indians spent their summers in North Park, living on mule deer, buffalo, pronghorn antelope, and many other kinds of game. The severity of the winters forced both the Indians and the game down to lower altitudes in the fall.

The Arapaho Indians also made frequent hunting trips into North Park coming in from the southwest over a pass described by Lt. John F. Fremont, as one of the most beautiful he had ever seen. The Utes and Arapaho's were bitter enemies, and many battles occurred when they chanced to meet. Besides their well worn trails, other mute evidence of Indian life of pre-settlement time still exists in North Park. A band of Utes who participated in the Meeker, Colorado massacre in 1879 fled to North Park after the incident and spent the winter in the north end of the Park. Several large log tepees left by this band of Utes, still stand in a sheltered and secluded spot in the north end of Jackson County.

The first Europeans to visit and explore North Park were probably trappers, who were in northwestern Colorado as early as 1819. Beaver were particularly abundant along North Park's streams. In 1820, Josephy Bijeau told of the good trapping he had experienced in North Park a few years prior, while with the Chateau and DeMunn Expedition. About the same time, 1820, Jacques Laramie trapped in the Park for the Northwest Fur Company. He was followed by a party of trappers headed by Alexander Sinclair and Robert Bean who trapped beaver in the Park in 1825. A number of trappers visited the Park into the 1840s including Peg Smith, John Gantt, Kit Carson, Henry Fraeb, Calvin Jones, Bill Williams, Jim Baker, Jim Bridger, Sublette, Gervais, and Vasquez. In 1855, the famous Irish hunter Sir George Gore made a spectacular hunting trip through North Park, killing thousands of mule deer, buffalo, and pronghorn antelope.

Miners and prospectors followed the trappers and hunters to North Park. James O. Pinkham was one of the first prospectors in North Park and began panning gold in the area in the early 1870s spending the long cold winters in Laramie, Wyoming, and the summers in North Park. He believed that North Park was the richest and finest country in the world, and built a home in the Park in 1874. Mr. Pinkham interested others in North Park through his tales of rich placer land, and by 1875, nearly 100 men were prospecting for placer gold around Rabbit Ears, Independence, and Owl Mountains.

During August and September 1879, George Bird Grinnell, naturalist, writer, and hunter entered the Park to collect museum specimens. Traveling by horse from the train station in Laramie, Wyoming, this 29-year-old Yale graduate entered the north end of the Park. "The country at this point had been burned over and was black and extremely desolate in appearance. I inquired the cause of the fire and learned from the owner of the ranch (Pinkham) that the burn had been made to clear off the sagebrush which takes up so much room that might be occupied by grass." Several days later, while camped on a meadow along the North Platte River, Grinnell writes: ". . . was perhaps a mile and a half wide, a superb level meadow, covered with fine grass, on which in the morning and evening from two to five hundred pronghorn antelope were in sight at one time. Sage and dusky grouse, ducks, and jack rabbits abounded here also It is only necessary to get back from the road to find both mule deer and elk."



Beaver © Cindie Brunner

The first settlers lived on wild game, and hunting was as much a business of the men as attending to their ranch work. North Park, in the late 1880s, was a paradise of game. Thousands of pronghorn antelope summered in the Park and migrated to the lower valleys in Wyoming during the winter. Also, hundreds of mule deer and elk were in the Park, but their numbers diminished after the arrival of settlers. Few buffalo were left in the Park when the first settlers came, but they soon disappeared. Many bears, mountain lions, mountain sheep, and beaver existed along with thousands of sage grouse, blue grouse, and ducks in the early days. No trout existed in any of the North Park streams when the first settlers came; however, in the 1880s, settlers stocked the streams with eastern brook trout and rainbow trout.

In 1880, cattle were introduced in large numbers, being driven down from the railroad lines in Laramie, Wyoming. However, the winter of 1883-84 was severe, and half of the stock died. As a result, most of the ranchers purchased mowers and rakes prior to the following summer's haying season in preparation for putting up the wild hay for winter feed. Hay has always been the main agricultural crop in Jackson County, with about 100,000 acres being in native mountain hay and only 370 acres in other crops. For years, all the hay was fed inside North Park, but in 1914, ranchers began to bale and sell the hay outside the Park.

By the early 1890s, North Park was fairly well settled in every direction, and a central point for securing supplies became necessary. As a result, the Town of Walden, elevation 8,100 feet, the present county seat, was established in the middle of North Park located in the vicinity of two wagon roads from Laramie to Teller City and from Albany to Granby. The town was named after Mark S. Walden who was postmaster of the nearby settlement, Sage Hen Springs.

The economy of Jackson County is based primarily on agriculture and recreation. Additionally, mining and logging have provided economic stimulus to the county. The economic base has been fairly stable throughout the history of Jackson County with some fluctuations caused by the instability of the mining and logging industry.

Recreation is becoming more and more of an economic importance to Jackson County. The county's many streams, lakes, uplands, timbered areas, and mountains, most with public access, offer unusual opportunities for outdoor recreational activities such as hunting, fishing, bird-watching, backpacking, camping, snowmobiling, cross-country skiing, bicycling, horseback riding, and many other activities.

Refuge Overview

History of Refuge Establishment, Acquisition, and Management

Since the 1890s, North Park (Jackson County) Colorado has been known for high waterfowl productivity. Historically, high spring river flows flooded meadows providing suitable nesting habitat for a host of nesting bird species, especially waterfowl. Today, North Park serves as the second most productive waterfowl area in the State of Colorado. On August 15, 1967, the Migratory Bird Conservation Commission approved the first land acquisition project for the establishment of Arapaho NWR. The Refuge purpose was “for use as an inviolate sanctuary, or for other management purposes, for migratory birds” 16 U.S.C. (Migratory Bird Conservation Act). The original land purchase was the Allard Ranch of 4,433.07 acres. Subsequently, nine additional land tracts were purchased, and land exchanges completed with the U.S. Bureau of Land Management and the State of Colorado, for a current Refuge size of 23,243 acres.

Since 1967 the Refuge has been managed primarily for waterfowl nesting and production. Utilizing existing irrigation ditches for the water delivery system, the Refuge staff constructed or enhanced 78 wetland impoundments in the Illinois River. These impoundments, and associated wet-meadow habitats, provide the habitat necessary to produce waterfowl. The Refuge provides high quality habitat for many other mammals and birds common to high mountain sagebrush steppe environments. The willow riparian area alone supports over 40 species of songbird (neotropical migrants) during part of their migration or nesting cycle. Sage grouse are common on the Refuge, and wet-meadow habitats provide critical feeding areas for sage grouse young. Moose, mule deer, elk, and pronghorn antelope are common Refuge wildlife species. These big game species migrate on and off the Refuge; however, it is not uncommon for 1,200 elk, 200 pronghorn antelope, and 20 moose to inhabit the Refuge at any one time.

The Refuge headquarters is located 8 miles south of Walden on Highway 125. A full-time staff of six employees and three summer temporaries work to manage the Refuge wetlands and irrigation system, the wildlife habitats, and maintain visitor facilities. Grazing is the primary management tool used to manage meadow and upland habitats. Currently seven grazing cooperators are used to maintain and enhance Refuge grassland habitats. Water level manipulation, irrigation, fire, mowing, harrowing, and discing are additional tools used to improve grassland and wetland habitats on the Refuge.

The Refuge accommodates approximately 8,000 visitors annually. The 6-mile auto tour route, the walking trail, and Brocker Overlook account for the majority of visitor use. Approximately 500 recreation days are provided to hunters and anglers. The Refuge is currently open to limited small game, waterfowl, sage grouse, and pronghorn antelope hunting opportunities. The lower one-third of the Refuge provides brown and rainbow trout fishing opportunities to anglers.

Jackson County is rural and sparsely populated with only 1,577 individuals (2000 census data) residing there. Walden is the county seat, and approximately 900 individuals live within its city limits. At 8,200 feet in elevation, North Park is an intermountain glacial basin approximately 30 miles across and 45 miles long. Ranching, including both hay production and cattle, continues to be the dominant land use of North Park. Hunting, fishing, snowmobiling, and other outdoor recreational activities also promote the economy of the area. Fortunately, the traditional ranching history of North Park has not only produced hay and cattle, it has preserved and protected thousands of acres of wildlife habitat.

Purpose of and Need for Comprehensive Conservation Plan

Initiated by the National Wildlife Refuge System Improvement Act of 1997, Comprehensive Conservation Plans (CCP) will be developed for all units of the National Wildlife Refuge System. Plans must include public involvement in their development, and must set forth strategies to fulfill the Refuge System mission, as well as the purposes for which the Refuge was established.

Wildlife has first priority in the management of Refuges. Recreation or other uses are allowed if they are compatible with wildlife conservation. Wildlife-dependent recreation activities such as hunting, fishing, wildlife observation, wildlife photography, environmental education, and interpretation will be emphasized.

This Comprehensive Conservation Plan provides a 15-year guidance for the management of Arapaho National Wildlife Refuge. Management goals and objectives developed for Arapaho National Wildlife Refuge are presented in the Management Direction Section. Based on the life requirements of selected wildlife species, these goals and objectives provide specific “targets” for Refuge staff to manage toward. Future management efforts will focus on achieving these goals and objectives for the benefit of wildlife and the American people.

To fulfill the U.S. Fish & Wildlife Service mission, Congress has charged the Service with conserving and managing migratory birds, endangered species, anadromous and inter-jurisdictional fish, and certain marine mammals. The Service operates more than 540 national wildlife refuges, 70 national fish hatcheries, 64 fishery resource offices, and 78 ecological services field stations. The agency enforces Federal wildlife laws, manages migratory bird populations, restores nationally significant fisheries, conserves and restores wildlife habitat such as wetlands, administers the Endangered Species Act, and helps foreign governments with their conservation efforts. It also oversees the Federal Aid Program which distributes hundreds of millions of dollars in excise taxes on hunting and fishing equipment to state wildlife agencies.

The National Wildlife Refuge System is the world’s largest collection of lands set-aside specifically for the protection of wildlife. The first unit of the Refuge System was created in 1903, when president Theodore Roosevelt designated 3-acre Pelican Island, a pelican and heron rookery in Florida, as a bird sanctuary. Today, the Refuge System consists of 540 national wildlife refuges and waterfowl production areas, encompassing more than 95-million acres and located in all 50 States and a number of U.S. Territories.

The Refuge System provides habitat for native mammals, birds, reptiles, amphibians, fishes, invertebrates, and plants “trust resources” for which the Federal government is ultimately responsible. It plays a vital role in preserving endangered and threatened species, preventing species from becoming endangered, and offers wildlife-dependent recreation for over 34 million visitors annually.

U.S. Fish & Wildlife Service Mission

“To work with others to conserve, protect and enhance fish and wildlife and plants and their habitats for the continuing benefit of the American people.”

National Wildlife Refuge System Mission

“To administer a network of lands and waters for the conservation, management, and where appropriate, restoration of fish and wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans” (National Wildlife Refuge System Improvement Act of 1997, Public Law 105-57).

National Wildlife Refuge System Goals

- 1) To fulfill our statutory duty to achieve Refuge purpose(s) and further the System mission;
- 2) Conserve, restore where appropriate, and enhance all species of fish, wildlife, and plants that are endangered or threatened with becoming endangered;
- 3) Perpetuate migratory bird, inter-jurisdictional fish and marine mammal populations;
- 4) Conserve a diversity of fish, wildlife, and plants;
- 5) Conserve and restore, where appropriate, representative ecosystems of the United States, including the ecological processes characteristic of those ecosystems;
- 6) To foster understanding and instill appreciation of fish, wildlife and plants and their conservation, by providing the public with safe, high-quality, and compatible wildlife-dependent public use. Such use includes hunting, fishing, wildlife observation, and photography, and environmental education and interpretation.

Ecosystem Goals

Platte/Kansas Rivers Ecosystem Vision

The vision of the Platte/Kansas Rivers ecoteam is to provide partnership based, landscape level conservation for the diversity and abundance of natural resources within the ecosystem. The team envisions landscapes which exhibit natural, healthy, ecological processes; ongoing protection of threatened, endangered and endemic species; protecting and promoting native prairie vegetation; involving all stakeholders in decision-making processes; and recognizes that partnerships are the key to success.

Platte/Kansas Rivers Ecosystem Description

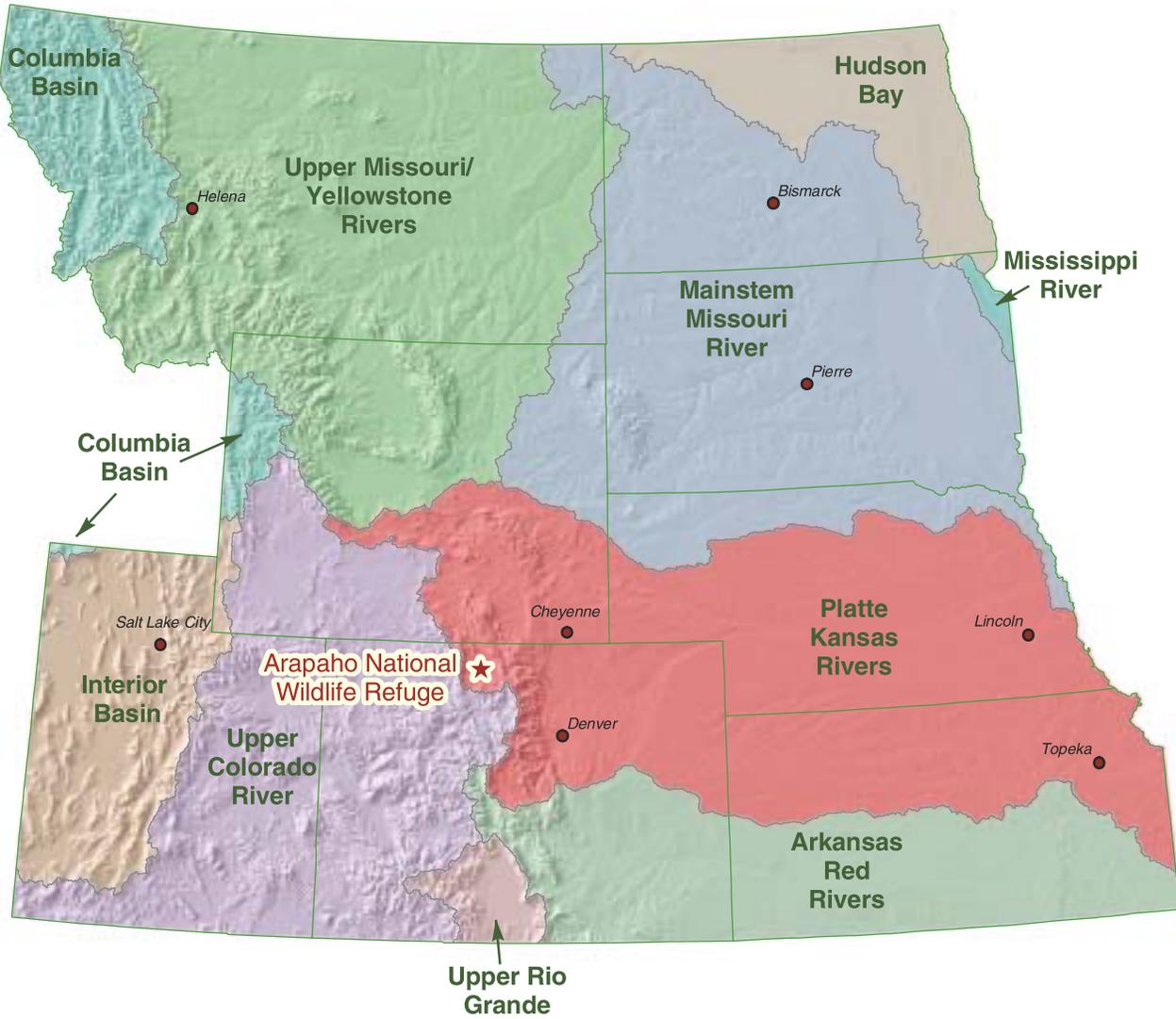
The U.S. Fish & Wildlife Service has divided the country into 53 watershed-based ecosystem management units. The Platte/Kansas Rivers ecosystem unit encompasses approximately 182,000 square miles of the central Great Plains of the United States (see Map 6 - Ecosystem Map). The Platte/Kansas Rivers Ecoregion includes the States of Colorado, Kansas, Nebraska, and Wyoming. The area is diverse, beginning at the headwaters of the North and South Platte River systems high in the Rocky Mountains, moving into sagebrush uplands of north-central Colorado and southeastern Wyoming, traversing across the shortgrass prairie regions of eastern Colorado, and the mixed-grass prairie regions of Nebraska and Kansas. The primary ecological processes affecting this system are climate, cultivation, grazing, and fire. The ecosystem is considered arid with an average annual precipitation between 8 and 16 inches per year. Approximately 85 percent of the Platte/Kansas Rivers Ecoregion is privately owned. The remainder is primarily owned and managed by State and Federal agencies.

The Platte/Kansas Rivers Ecosystem Planning Team, with input from current partners and field stations, identified and prioritized three primary geographic sub-units: mixed-grass prairie, mountain, and shortgrass prairie. Within each geographic sub-unit, priorities were established based on significance in the ecosystem, species diversity, risk/threat to the entire ecosystem area, public benefits, and trust resources. Also considered were legal mandates, opportunity for partnerships, likelihood of success, and cost effectiveness. Arapaho National Wildlife Refuge falls within the Mountain Sub-Unit of the Ecosystem Plan and plays a vital role in uplands management and protection.



PLATTE/KANSAS RIVERS ECOSYSTEM

USFWS Mountain Prairie Region



Map 6 - Ecosystem Map

Refuge Purposes

National wildlife refuges are established for a particular purpose. Formal establishment is generally based upon a statute or executive order that specifies a purpose for that Refuge. However, refuges can also be established by the U.S. Fish & Wildlife Service using the authorization found within laws such as the Endangered Species Act, Migratory Bird Conservation Act, and the Fish and Wildlife Act of 1956. Arapaho National Wildlife Refuge was established on September 26, 1967, for the following purposes:

“ . . . for uses as an inviolate sanctuary, or for any other management purpose, for migratory birds.” 16 U.S.C. § 715d (Migratory Bird Conservation Act).

“ . . . for the development, advancement, management, conservation, and protection of fish and wildlife resources . . . ” 16 U.S.C. § 742f (a)(4) “ . . . for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude . . . ” (Fish and Wildlife Act of 1956)

These two broad statements provide the “side-boards” to guide future management of Arapaho National Wildlife Refuge.

As part of the planning process, the Refuge staff and planning team reviewed past national, regional, and complex planning documents and current planning guidance. Using the legislation and plans, the planning team developed the following vision statement for the Refuge.

Refuge Vision Statement

Arapaho National Wildlife Refuge is managed to benefit the diversity of plants and wildlife found in this high mountain valley of the southern Rocky Mountains. The Refuge and its resources are also managed for the benefit of the citizens of the United States.

The Refuge includes wetland, meadow, sagebrush uplands, and riparian communities that provide habitat for large animals, neotropical migratory birds, nesting waterfowl, fishes, and species of concern from national and regional conservation plans. In particular, efforts by Refuge staff to restore the Illinois River channel hydrology, riparian areas, sagebrush uplands, and to effectively manage wetlands and meadows, contribute to the ecological integrity of the Refuge, North Park, and the overall North Platte River system.

Through wildlife-dependent recreation and education, people have opportunities to learn of the wonder and significance of North Park’s fauna and flora. Firsthand experiences with the Refuge encourage people to participate as stewards, not only of the Refuge, but also of the natural resources in their own communities.

Working in collaboration with the local community and other agencies and organizations helps the U.S. Fish & Wildlife Service manage the Refuge as a contributing ecological, cultural, and economic component of the unique mountain valley within which it sits.

Legal and Policy Guidance

National wildlife refuges are guided by: The mission and goals of the U.S. Fish & Wildlife Service and National Wildlife Refuge System; the legal purpose of the Refuge unit as described in the enabling legislation or executive orders; international treaties; Federal laws and regulations; and Service Policies (Appendix C).

The National Wildlife Refuge System Administration Act of 1966, as amended, provided guidelines and directives for administration of the National Wildlife Refuge System. Use of any area within the Refuge System was permitted, provided that such uses were compatible with the major purposes for which such areas were established.

The National Wildlife Refuge System Improvement Act of 1997 amends the Refuges System Administration Act by including a unifying mission for the Refuge System, a formal process for determining compatible uses on Refuges, and a requirement that each Refuge will be managed under a Comprehensive Conservation Plan. This Act states that wildlife conservation is the priority of Refuge System lands and that the Secretary of the Interior shall ensure that the biological integrity, diversity, and environmental health of the refuge lands are maintained. Each refuge must be managed to fulfill both the specific purposes for which it was established and the mission of the Refuge System.

Further, the Refuge Improvement Act defines the wildlife-dependent recreational uses as: hunting and fishing, wildlife observation and photography, environmental education and interpretation. (Specific details regarding additional amendments are available through the Refuge or Regional Fish and Wildlife Service offices).

Lands within the Refuge System are different from other public lands in that they are closed to all public uses unless specifically and legally opened. Unlike other Federal lands that are managed under a multiple use mandate (i.e. national forests administered by the U.S. Forest Service and public lands administered by the U.S. Bureau of Land Management), the Refuge System is managed specifically for the benefit of fish and wildlife resources.

Compatibility is a legal requirement of all refuge uses. By Federal law, all uses of national wildlife refuges, including wildlife-dependent recreational activities, must be formally determined to be compatible. A compatible use is defined as “a use that, in the sound professional judgement of the refuge manager, will not materially interfere with or detract from the fulfillment of the mission of the Refuge System or the purposes of the Refuge.” Sound professional judgement is further defined as “a finding, determination, or decision that is consistent with the principles of sound fish and wildlife management and administration, available science and resources (funding, personnel, facilities, and other infrastructure), and adherence with applicable laws.” No use of a National Wildlife Refuge may be allowed unless determined to be compatible.

Uses that have been determined to be compatible for Arapaho National Wildlife Refuge include: hunting, fishing, environmental education and interpretation, wildlife observation and photography. Additionally, habitat management tools, including but not limited to, are fire, mowing, grazing, noxious weed control (chemical, mechanical, and physical methods), Dixie harrow, fencing, water management, routine Refuge maintenance activities, and public use related structures (Appendix F).

Existing Partnerships

Arapaho National Wildlife Refuge currently promotes partnership opportunities to accomplish natural resource related goals both on and off the Refuge. Existing partnerships include the following groups and agencies:

Colorado Division of Wildlife - Wildlife and fishery habitat improvement, resource sharing, law enforcement.

Colorado Scenic Byways - Overlooks and roads development and interpretation.

Colorado State Forest - Natural resources improvement projects, forest management plans, fire management.

Colorado State University - Assist with planning, wildlife research, and habitat management.

Habitat Partnership Program - Reducing cattle and big game conflicts throughout North Park (Colorado Division of Wildlife (CDOW)).

Jackson County - Noxious weed management and fire support.

Natural Resource Conservation Service - Soils and vegetative management assistance.

Owl Mountain Partnership - Land health improvement projects on public and private lands. Includes developing grazing management plans, wildlife watering areas, and sagebrush management projects.

Platte/Kansas Rivers Ecoteam - Assist with funding and planning natural resource projects.

National Center for Atmospheric Research - Research snowpack characteristics to create reliable snowpack models.

Sage Grouse Working Group - Sage grouse habitat protection and enhancement.

U.S. Bureau of Land Management - Partner in several programs, equipment sharing, resource sharing.

U.S. Forest Service - Partner in several programs, equipment sharing, fire management, resource sharing.

U.S. Geological Survey - Cooperative wildlife research, planning, and water monitoring projects.