2 The Refuge Complex

This chapter explains the history, purpose, and special values of the Medicine Lake NWR Complex, as well as the CCP planning process, including the development of a vision and goals and a discussion of issues that were and were not addressed.

Every refuge has a purpose for which it was established. This purpose is the foundation upon which to build all refuge programs, from biology and public use, to maintenance and facilities. No action that the Service or public takes may conflict with this refuge purpose. The refuge purposes are found in the legislative acts or administrative orders, which provide for the authorities to either transfer or acquire a piece of land for a refuge. Over time an individual refuge may contain lands that have been acquired under a variety of transfer and acquisition authorities, giving a refuge more than one purpose. The goals, objectives, and strategies identified in the CCP are intended to support the individual purpose for which the refuge was established.

2.1 Establishment and History of Medicine Lake NWR

On August 19, 1935, President Franklin D. Roosevelt signed Executive Order No. 7148, authorizing the establishment of the Medicine Lake NWR. The order stated the purpose of the refuge was "to effectuate further the purposes of the Migratory Bird Conservation Act" (45 Stat. 1222) in Sheridan and Roosevelt counties, Montana. The land was "reserved and set apart … as a refuge and breeding ground for migratory birds and other wildlife."

Originally known as "Medicine Lake Migratory Waterfowl Refuge," it is located on the glaciated rolling plains of northeastern Montana and contains 31,660 acres. The major portion of the refuge (figure 6), with 19,953 acres, was acquired through emergency funds of the U.S. Resettlement Administration. The additional acreage was acquired by primary withdrawal from public domain, with Migratory Bird Hunting Stamp Act funds, and through donation. The "meandered lake" area (meaning the lake assumed a natural pattern within its floodplain) is 8,634 acres.

The refuge consists of two noncontiguous areas:

- the 28,396-acre Main Unit containing the 8,218-acre Medicine Lake, and 17 smaller bodies of water and adjacent grasslands.
- the 3,264-acre Homestead Unit, including 1,280 acres of wetlands in 5 water units and the rest in grassland habitat.

The refuge contains an 11,360-acre federal wilderness area that was established in 1976. The wilderness includes Medicine Lake with its natural islands and the 2,300-acre Sandhills Unit. Four natural areas encompassing 762 acres were designated in 1972 for research (figure 9).

The town of Medicine Lake is located near the northwest boundary of the Medicine Lake NWR. The Fort Peck Indian Reservation borders the west boundary. The towns of Plentywood and Culbertson are about 20 miles equidistant north and south, respectively, along Montana State Highway 16. Table 2 highlights significant dates and events in the refuge's history.

USFWS

Winter wetland environment at Medicine Lake

Table 2. Timeline of Significant Events for Medicine Lake NWR

Date	*Event*
1935	Medicine Lake NWR was established.
1936	The first refuge manager, Paul T. Kreager, reported for duty April 24.
	The lookout tower at headquarters was built.
1937	The refuge marked its first full year of operation.
	The Civilian Conservation Corps set up camp May 21, and 180 men began work. Medicine Lake was completely dry in June. Locals reported this year as the first since about 1900 that the lake was dry.
	Work began on constructing 42 nesting islands containing 220,000 cubic yards of earth, gravel, and rock.
1942	The refuge experienced a 208 percent increase in waterfowl due to the filling of all water areas.
	The refuge first documented nesting use by pelicans, cormorants, and great blue herons.
1942	Wartime travel restrictions reduced the number of visitors.
1943	Medicine Lake Canada-goose restoration project was initiated.

2.2 Establishment and History of Lamesteer NWR

Executive Order No. 9166, dated May 19, 1942, authorized the establishment of the Lamesteer NWR. Signed by President Franklin D. Roosevelt, the order stated the purpose for the 800 acres of land in Wibaux County, Montana, was "as a refuge and breeding ground for migratory birds and other wildlife."

Located 160 miles south of Medicine Lake NWR, and 20 miles southeast of Wibaux, Montana, Lamesteer NWR (figure 7) is managed as a "satellite refuge" through the Medicine Lake NWR Complex office, with no staff on site. Lamesteer NWR's 800 acres comprise a conservation easement area superimposed on privately owned lands. It is used primarily as a resting place for migrating wildlife. Waterfowl production both on the refuge and in the general area is very limited. The Service has no control of the uplands. Only water management and facilities maintenance rights are covered by the easement. Pumping for irrigation from the reservoir is allowed when surplus water is available (figure 7). Table 3 highlights significant dates and events in Lamesteer NWR's history.

Table 3. Timeline of Significant Events for Lamesteer NWR

Date	*Event*
1938	The dam and spillway were constructed by the Works Progress Administration.
1944	The dam was damaged by high water flows and ice.
1953	The dam spillway was rebuilt.
1981	The refuge was opened to hunting, with landowners controlling access to the site.

Place Holder for
Figure 6 MDL
11x17 map

Figure 7. Lamesteer National Wildlife Refuge map

2.3 Establishment and History of the Northeast Montana WMD

The Northeast Montana WMD, established in 1968, is located in Sheridan, Daniels, and Roosevelt counties. The WMD is bounded on the north by the Canadian province of Saskatchewan, on the east by North Dakota, on the west by the Fort Peck Indian Reservation, and on the south by the Missouri River. Refuge System lands within the WMD include:

- waterfowl production areas, which are acquired in fee title;
- wetland easements, which protect privately owned wetlands from being drained, filled, or leveled;
- grassland easements, which protect privately owned rangeland and hay land from conversion to cropland.

Early land acquisition efforts focused on purchasing waterfowl production areas and wetland easements. In recent years, more emphasis has been placed on obtaining grassland and wetland easements. In 2006, the WMD contained 44 waterfowl production areas (11,791 acres), 8,588 wetland acres protected by easements, and 10,968 grassland acres protected by easements (figure 8).

The purpose of these acquired areas and easements is to provide breeding habitat for migratory birds and other wildlife. Hunting is allowed on these areas.

Waterfowl production areas and easements are purchased from willing sellers under the provisions of the Migratory Bird Hunting and Conservation Stamp Act (16 USC 718) and are funded by the sale of federal "duck stamps" and loans against future duck stamp sales. Waterfowl production areas are managed to provide breeding waterfowl high-quality wetlands for courtship and brood rearing, and suitable grasslands for nesting. Habitats are managed using techniques such as prescribed grazing, haying, prescribed burning, farming, and reseeding (former croplands only), and rest from crop production. These areas are open for public hunting, fishing, and trapping according to state seasons. Every fall, hunting opportunities for upland game birds, deer, and waterfowl attract hunters from across the U.S. and Canada. Table 4 highlights significant events in the development of the Northeast Montana WMD.

2.4 Visions for the Refuge Complex

At the beginning of the planning process, the Service developed two visions, one for the refuge complex and another for the Northeast Montana WMD. A vision is a concept, including desired conditions for the future, that describes the essence of what the Service is trying to accomplish at the refuge. The vision for a refuge is a future-oriented statement designed to be achieved through refuge management by the end of the 15-year CCP planning horizon.

Medicine Lake National Wildlife Refuge Complex Vision Statement

Visitors to Medicine Lake NWR, on the western edge of the Missouri Coteau, experience wide-open grasslands, vast lakes and marshes, and one-of-a-kind sunsets. Diverse habitats for migratory

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Northern pintail is one of many breeding birds found in the refuge complex.

Table 4. Timeline of Significant Events for the Northeast Montana WMD

Date	*Event*
1968	The Northeast Montana WMD was established.
1969	Some 38 waterfowl production area tracts totaling 4,464 acres were purchased, and 2,280 wetland acres were protected by wetland easement.
1974	Over 20 miles of waterfowl production area boundary fence was constructed to prevent trespass grazing during fall "open range."
1975	The WMD included 40 waterfowl production areas totaling 8,719 acres and 68 wetland easement contracts totaling 4,698 wet acres.
1980	Over 36 miles of waterfowl production area boundary fence was constructed by refuge complex staff and contractors.
1980–5	An oil boom hit Williston Basin, and permits were issued for 3 new wells.
1983	The WMD participated in the Central Flyway duck recruitment study.
1985	Refuge staff constructed waterfowl nesting islands in Big Slough (10), Goose Lake (12), and Rivers (3) waterfowl production areas.
1986	Piping plovers, designated as a federally threatened wildlife species, were first documented nesting in the WMD in the Dog Leg waterfowl production area.
1987	The WMD began using the standardized "4-square-mile" waterfowl breeding-pair survey.
1988	The WMD began comprehensive breeding population surveys for piping plovers.
1989	The WMD was identified as a Prairie Pothole Joint Venture (PPJV) focus area under the North American Waterfowl Management Plan.
1990	The Service's Partners for Fish and Wildlife (PFW) technician position was established, and 88 wetland restoration and creation projects were completed.
1991	The first grassland easement was acquired. The breeding piping plover population peaked at 181 adults. Ducks Unlimited, Inc. (DU) constructed waterfowl nesting islands in the Parry, Erickson, Dog Leg, and Northeast waterfowl production areas.
1994–5	The WMD participated in a study to evaluate the benefits of the USDA conservation reserve program (CRP) for nesting waterfowl across the Prairie Pothole Region.
1996	The WMD received $640,000 in a Northeast Montana II PPJV North American Wetlands Conservation Act (NAWCA) grant for continued habitat work on private, tribal, and Service lands. The WMD formed partnerships with Montana Fish, Wildlife, and Parks (MFWP), The Nature Conservancy (TNC), and private landowners to carry out a piping plover recovery project. A sustained period of oil exploration activity began.
1998	National Wetland Inventory (NWI) maps were finalized and digitized for the WMD. A nontoxic shot was required for upland game bird hunting on WPAs.
2000	Private-lands habitat accomplishments included: 800 wetland acres restored, 1,200 wetland acres created, cost sharing arranged to establish 48,000 acres of high-quality CRP stands, and 6,500 acres of grazing systems developed.
2001	The WMD became a partner in a $1 million Montana Hi-Line North American Wetlands Conservation Act grant that funded continued habitat work and the acquisition of conservation easements.

birds and native wildlife are managed to simulate natural processes that historically shaped the prairie landscape. The awe-inspiring spring and fall migrations are wonders to see against the big Montana sky. The refuge team works collaboratively with partners and the community to conserve, protect, and restore the wildness of the rolling prairie and its natural solitude.

Northeast Montana Wetland Management District Vision Statement

Waterfowl production areas and conservation easements within the Northeast Montana Wetland Management District, located in the glaciated Missouri Coteau, provide a network of wetlands and grasslands that preserve historic and vital waterfowl breeding grounds. Other migratory birds, threatened and endangered species, and resident wildlife also benefit from these prairie jewels of the Refuge System.

Our community and visitors value grasslands and marshes as a beneficial and important component of a diverse, healthy, and productive prairie landscape. Current and future generations enjoy wildlife-dependent uses of these lands, and partners actively support and encourage our habitat conservation programs.

2.5 Goals

The Service also developed a set of goals for the refuge complex based on the National Wildlife Refuge System Improvement Act, the complex's purpose, and information developed during project planning. The goals direct work toward achieving the vision and purpose of the refuge complex, and outline approaches for managing refuge resources. The Service established 8 goals for refuge complex management.

Habitat and Wildlife Management

Conserve, restore, and enhance the ecological diversity of grasslands and wetlands of the glaciated mixed-grass prairie to support healthy populations of native wildlife, with an emphasis on migratory birds.

Endangered, Threatened, and Rare Species

Contribute to the preservation and restoration of endangered, threatened, rare, and unique plants and wildlife that occur or have historically occurred in the refuge complex.

Wilderness

Conserve the wilderness quality and associated natural processes of the 11,360-acre Medicine Lake Wilderness.

Visitor Services

Provide opportunities for visitors to enjoy wildlife-dependent recreation and to help visitors understand and appreciate the value of the mixed-grass prairie and the National Wildlife Refuge System.

Refuge Operations

Use staff, partnerships, volunteers, and funding efficiently through effective communication and innovation, to support the Medicine Lake NWR Complex and the National Wildlife Refuge System.

Partnerships

Develop partnerships to support research, conserve habitat, and foster awareness and appreciation of the mixed-grass prairie.

Cultural Resources

Preserve and value the cultural resources and history of Medicine Lake NWR Complex to connect staff, visitors, and the community to the area's past.

Research

Conduct innovative natural resource management using sound science and applied research to advance understanding of natural resource function and management within the northern Great Plains.

2.6 Planning Issues

The significant planning issues identified by the refuge staff and the public (chapter 1, "The Planning Process," and appendix C), and a review of the requirements of the Improvement Act and NEPA are identified below. These key issues were considered during the formulation of the alternatives for future management.

Habitat and Wildlife Management

The refuge complex has outstanding ecological features, particularly the unique landforms such as the prairie potholes and sandhills that should be preserved. While there are different viewpoints expressed by the public as to how the refuge complex should be managed (treatment prescriptions), specific management practices—prescribed grazing, native plant restoration, preferences for specific wildlife and plant species, invasive species management, and prescribed burning—have ecologic and economic impacts that affect the refuge, the local community, and the region. At the same time, adjacent land practices, including increased oil and gas production and use of fertilizers for large-scale crop production, could have major implications for protecting the grasslands, lakes, and marshes on the refuge in the future. Lamesteer NWR possesses minimal habitat value and does not meet the mission and goals of the

Refuge System. The Service has no control over the uplands. Upkeep of the dam structure could be costly for the refuge in the future, and could drain limited resources.

Visitor Services

The refuge complex has phenomenal bird watching opportunities and is considered a hidden jewel for hunting and for wildlife-oriented experiences that draw visitors from many states and Canada. There is a general lack of understanding about what the refuge complex and system are about. For example, pheasant hunting is popular, and some people want the refuge to manage far more pheasants, but pheasants are a nonnative species. Many people would like to see hunting, fishing, and education opportunities expanded and enhanced for the community and the region, including providing universal access (access for people of all abilities), and are concerned about how the wilderness designation affects those opportunities.

Water Management

Medicine Lake NWR is part of a bigger ecosystem, and the management of the refuge complex impacts the quality and quantity of water on and off the refuge, which has implications for the refuge and areas downstream. Adjacent farming practices, including increased use of fertilizers, ethanol conversion, more crop production, use of center pivots, extraction of groundwater, and improper disposal of oil field exploration and production wastes could have significant environmental impacts to water quality on the refuge in the future. At the same time, the refuge complex has senior water rights, which during periods of long drought can affect the quantity and quality of water downstream.

Land Acquisition and Conservation

The Service's policy and intent for future land acquisition is of interest and concern to the local community. Some people would like to see the refuge complex pursue more conservation easements on Prairie Pothole wetlands, with priority given to wetlands surrounded by native prairie (figure 9).

Communication and Partnerships

Communication was a common issue raised during scoping. The community as a whole expressed concerns that, while the refuge staff has reached out more, the community would like to be kept better informed. Effective communication and partnerships are important for the refuge complex to be able to meet habitat and conservation goals and objectives.

Wilderness Management

Medicine Lake is a designated wilderness area, and some types of uses, particularly motorized access or tools, are prohibited on Medicine Lake. The community is concerned about the types of public access and uses that can be accommodated within

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Redwing blackbird

the wilderness and the latitude the refuge has in allowing motorized and other access on Medicine Lake. Some people feel the Service should adopt a strong nondegradation policy for wilderness, with few, if any, signs or other structures. They want the Service to adhere closely to the "minimum tool" philosophy (prohibiting mechanized tools or equipment) in its management practices in the wilderness area. How and why the Service manages the wilderness area as it does needs to be communicated to the community.

Refuge Operations

The refuge staff remains below minimum staffing levels prescribed in 2000, and restoring funding levels is critical for implementing habitat management projects. The local community and visitors want to be informed about how the refuge complex allocates resources. How the refuge conducts daily operations and how the refuge manager engages with the community will affect the refuge complex's ability to achieve habitat and wildlife objectives.

2.7 Issues Not Addressed or Resolved During the CCP Process

Some issues cannot be addressed or resolved in the CCP and EA because the authority to address them does not lie with the Service or with this public process. These issues are described below.

Use of Motorized Equipment on Medicine Lake for Recreation

Medicine Lake was designated as wilderness by public law on October 19, 1976. The text of the law does not contain any special provision for use of motorized equipment for recreation. To remove wilderness designation would take an act of Congress, which is beyond the scope of the CCP. Prohibiting motorized boats and power augers for recreational use protects the wilderness resource of the lake.

Place Holder for
Figure 8 WMD

Northeast
Montana Wetland
Management District
map.

11x17 map

Place Holder for
Figure 9 WMD

Land Status and
Acquisition Priorities
map.

11x17 map