

Environmental Assessment for Expansion of Waterfowl Hunting Opportunities at Medicine Lake National Wildlife Refuge

Date: June 11, 2019

The U.S. Fish and Wildlife Service (Service) has prepared this Environmental Assessment (EA). In it the Service evaluates the effects associated with the proposed action and complies with the National Environmental Policy Act (NEPA) in accordance with Council on Environmental Quality regulations (40 CFR 1500-1509) and Department of the Interior (43 CFR 46; 516 DM 8) and Service (550 FW 3) regulations and policies. NEPA requires examination of the effects of proposed actions on the natural and human environment.

Proposed Action:

The Service is proposing to expand waterfowl hunting opportunities on the Medicine Lake National Wildlife Refuge (refuge). This expansion revises and updates the Comprehensive Conservation Plan (CCP) developed by the Service in 2007 by proposing to expand existing migratory bird hunting opportunities to include American coot, Sandhill crane, and tundra swan.

The proposed action may evolve or appear in different iterations as the Service refines its proposal and receives feedback from the public, tribes, and other agencies. Therefore, the final proposed action may be different from the original. The final decision on the proposed action will be made at the conclusion of the public comment period for the EA.

Background:

National Wildlife Refuges are guided by the mission and goals of the National Wildlife Refuge System (NWRS), the purposes of an individual refuge, Service policy, and laws and international treaties. Relevant guidance includes the National Wildlife Refuge System Administration Act of 1966 (Administration Act), as amended by the National Wildlife Refuge System Improvement Act (Improvement Act) of 1997 (16 U.S.C. 668dd et seq.), Refuge Recreation Act of 1962, and selected portions of the Code of Federal Regulations and Fish and Wildlife Service Manual.

Medicine Lake was established “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”

The mission of the NWRS, as outlined by the Administration Act, as amended by the Improvement Act, is to:

“... to administer a national network of lands and waters for the conservation, management and, where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans”

The Administration Act mandates the Secretary of the Interior in administering the System to:

- Provide for the conservation of fish, wildlife, and plants, and their habitats within the NWRS;
- Ensure that the biological integrity, diversity, and environmental health of the NWRS are maintained for the benefit of present and future generations of Americans;
- Ensure that the mission of the NWRS described at 16 U.S.C. 668dd(a)(2) and the purposes of each refuge are carried out;
- Ensure effective coordination, interaction, and cooperation with owners of land adjoining refuges and the fish and wildlife agency of the States in which the units of the NWRS are located;
- Assist in the maintenance of adequate water quantity and water quality to fulfill the mission of the NWRS and the purposes of each refuge;
- Recognize compatible wildlife-dependent recreational uses as the priority general public uses of the NWRS through which the American public can develop an appreciation for fish and wildlife;
- Ensure that opportunities are provided within the NWRS for compatible wildlife-dependent recreational uses; and
- Monitor the status and trends of fish, wildlife, and plants in each refuge.

Therefore, it is a priority of the Service to provide for wildlife-dependent recreation opportunities, including hunting and fishing, when those opportunities are compatible with the purposes for which the refuge was established and the mission of the NWRS.

Recreational public hunting is a historic wildlife dependent use of the Medicine Lake NWR, and is designated as one of the priority public uses as specified in the Improvement Act.

Purpose and Need for the Proposed Action:

The purpose of this proposed action is to provide compatible wildlife-dependent recreational opportunities on Medicine Lake NWR. The need of the proposed action is to meet the Service's priorities and mandates as outlined by the NWRSAA to "recognize compatible wildlife-dependent recreational uses as the priority general uses of the NWRS" and "ensure that opportunities are provided within the NWRS for compatible wildlife-dependent recreational uses." 16 U.S.C. 668dd(a)(4)). Additionally, the Medicine Lake NWR CCP objectives state that the refuge seeks to:

- Maintain 60% of the refuge as an "inviolate sanctuary" for migratory birds and closed to hunting.
- Facilitate hunting access for local and regional communities.
- Minimize conflicts with other wildlife-dependent recreation on the refuge.
- Minimize conflicts with refuge management and operations.
- Facilitate regulatory and public safety enforcement.
- Minimize disturbance to rest areas for migratory waterfowl.
- Protect breeding populations of migratory birds by providing migration and breeding habitat.

Alternatives Considered

Elements Common to All Alternatives

Under all the alternatives being considered, 67% of the refuge (21,184 acres) will be managed as inviolate sanctuary for migratory birds in accordance with the refuge's establishing legislation.

These areas provide key resting and feeding habitat for migratory birds and will remain closed to hunting under all alternatives.

Table 1. Refuge units that would remain closed to hunting under all alternatives.

Unit	Notes
Closed Area	Safety Concerns due to occupied structures or other use occurring in the vicinity. Includes recreation area.
Area 1	Key resting and feeding area for waterfowl
Area 3	Key resting and feeding area for waterfowl

Alternative A – Continue Implementing CCP completed in 2007 [No Action Alternative]

Presently the refuge is open to duck and goose hunting (in accordance with State seasons and regulations). Hunting of ducks and geese is allowed in the refuge’s Area 2 (Figure 1).

The EA that the refuge prepared simultaneously with the its draft CCP provides more detailed information on the environmental impacts of this expanded hunt plan’s Alternative A.

Alternative A meets most of the purposes and needs of the CCP’s proposed action. However, Alternative A does not meet the main purpose of the proposed action: expand waterfowl hunting opportunities on the refuge.

Alternative B – Maintain existing open-hunt units and expand take of allowable species to include American coot, Sandhill crane, and tundra swan.

Under Alternative B, the refuge would allow take of American coot, Sandhill crane, and tundra swan. Hunting Sandhill crane and tundra swan in the refuge will require a special State permit.

Under Alternative B, the refuge’s Area 2 (Figure 1) would remain as the open hunt area for waterfowl but would also include the take of American coot, Sandhill crane, and tundra swan.

The refuge would be open to duck, goose, American coot, Sandhill crane (requiring special State permit), and tundra swan (requiring special State permit). Hunting activities would be allowed in the refuge’s Area 2 (Figure 1) in compliance with State and Federal hunting regulations.

- Foot travel and non-motorized boats would be allowed in the refuge’s Area 2 (Figure 1).
- Motor vehicle travel is allowed on open refuge roads.
- Temporary blinds would be allowed. Permanent blinds and sunken boxes would be prohibited.
- Personal property may not be left unattended and must be removed daily.
- No cleaning of harvested animals in parking areas. Dispose of all waste properly- including casings and cartridges.
- Off-road vehicles, open fires, and camping on the refuge would continue to be prohibited.
- Hunters are allowed to enter and return from hunting areas one hour before and one hour after legal shooting hours, to access and return from hunting areas.

- Season dates, hours, bag and possession limits would conform to current State and Federal regulations.

Alternative B meets the purposes and needs of the CCP's proposed action, as well as the purpose and need of this EA's proposed action, which is to expand hunting opportunities on the refuge.

Alternative C – Maintain existing open-hunt units and expand take of allowable species to include American coot and Sandhill crane.

Under this alternative, the refuge would allow the take of American coot and Sandhill crane. Hunting Sandhill cranes will still require a special State permit.

Under Alternative C, the refuge's Area 2 (Figure 1) would remain as the open-hunt area for waterfowl hunting but would also include the take of American coot and Sandhill crane.

The refuge would be open to duck, goose, American coot, and Sandhill crane (requiring special State permit). The refuge would allow hunting in Area 2, in compliance with State and Federal regulations.

- Foot travel and non-motorized boats would be allowed in the refuge's Area 2 (Figure 1).
- Motor vehicle travel is allowed on open refuge roads.
- Temporary blinds would be allowed. Permanent blinds and sunken boxes would be prohibited.
- Personal property may not be left unattended and must be removed daily.
- No cleaning of harvested animals in parking areas. Dispose of all waste properly- including casings and cartridges.
- Off-road vehicles, open fires, and camping on the refuge would continue to be prohibited.
- Hunters are allowed to enter and return from hunting areas one hour before and one hour after legal shooting hours, to access and return from hunting areas.
- Season dates, hours, bag and possession limits would conform to current State and Federal regulations.

Alternative C meets the purpose and need of the CCP's proposed action and most purposes and need of the proposed action (to expand hunting opportunities on the refuge) with the exception of allowing hunting of tundra swans.

Alternative(s) Considered, But Dismissed From Further Consideration

No other alternatives were considered.

Affected Environment

The refuge is situated in Sheridan County (northeast Montana) in the heavily glaciated rolling plains of the Prairie Pothole Region, between the Canadian border and the Missouri River. The areas immediately surrounding the refuge are rural with small towns such as Medicine Lake and Froid (pop. 200 each). Plentywood (pop. 2,000) has grocery, hardware, hospital, and other amenities, and is 22 miles north of the refuge. To the South 26 miles is Culbertson (pop. 800), 62 miles to Sidney (pop. 7,000), and 67 miles to Williston, ND (pop. 26,000).

Medicine Lake NWR is one of Audubon's Globally Important Bird Areas with over 283 documented bird species and 1000,000 migrating waterfowl visiting each year. The refuge is also home to the largest pelican rookery in Montana and third largest in the nation.

The primary role of the refuge is to conserve its diverse wetlands and grasslands as "refuge and breeding ground for migratory birds and other wildlife". The refuge consists of two noncontiguous tracts of land totaling 31,702 acres. The north tract includes the 8,218 acre Medicine Lake, five smaller lakes, and numerous potholes. The south tract is located near Homestead, MT and consists of 3,264 total acres with 1,280 acres of wetlands. Within the main tract of the refuge, Congress established a Wilderness Area in 1976, including the 2,320-acre Sandhills Unit. The Sandhills area is quite unique with rolling hills, native grass, and brush patches.

Table 2 provides additional, brief descriptions of each resource affected by the proposed action.

Environmental Consequences of the Action

This section analyzes the environmental consequences of the action on each affected resource, including direct and indirect effects. This EA only includes the written analyses of the environmental consequences on a resource when the impacts on that resource could be more than negligible and therefore considered an "affected resource". Any resources that will not be more than negligibly impacted by the action have been dismissed from further analyses.

Table 2 provides:

1. A brief description of the affected resources in the proposed action area;
2. Impacts of the proposed action and any alternatives on those resources, including direct and indirect effects.

Table 3 provides brief description of the cumulative impacts of the proposed action and any alternatives.

Impact Types:

- *Direct effects* are those caused by the action and occur at the same time and place.
- *Indirect effects* are those caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable.
- *Cumulative impacts* result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-federal) or person undertakes such other actions.

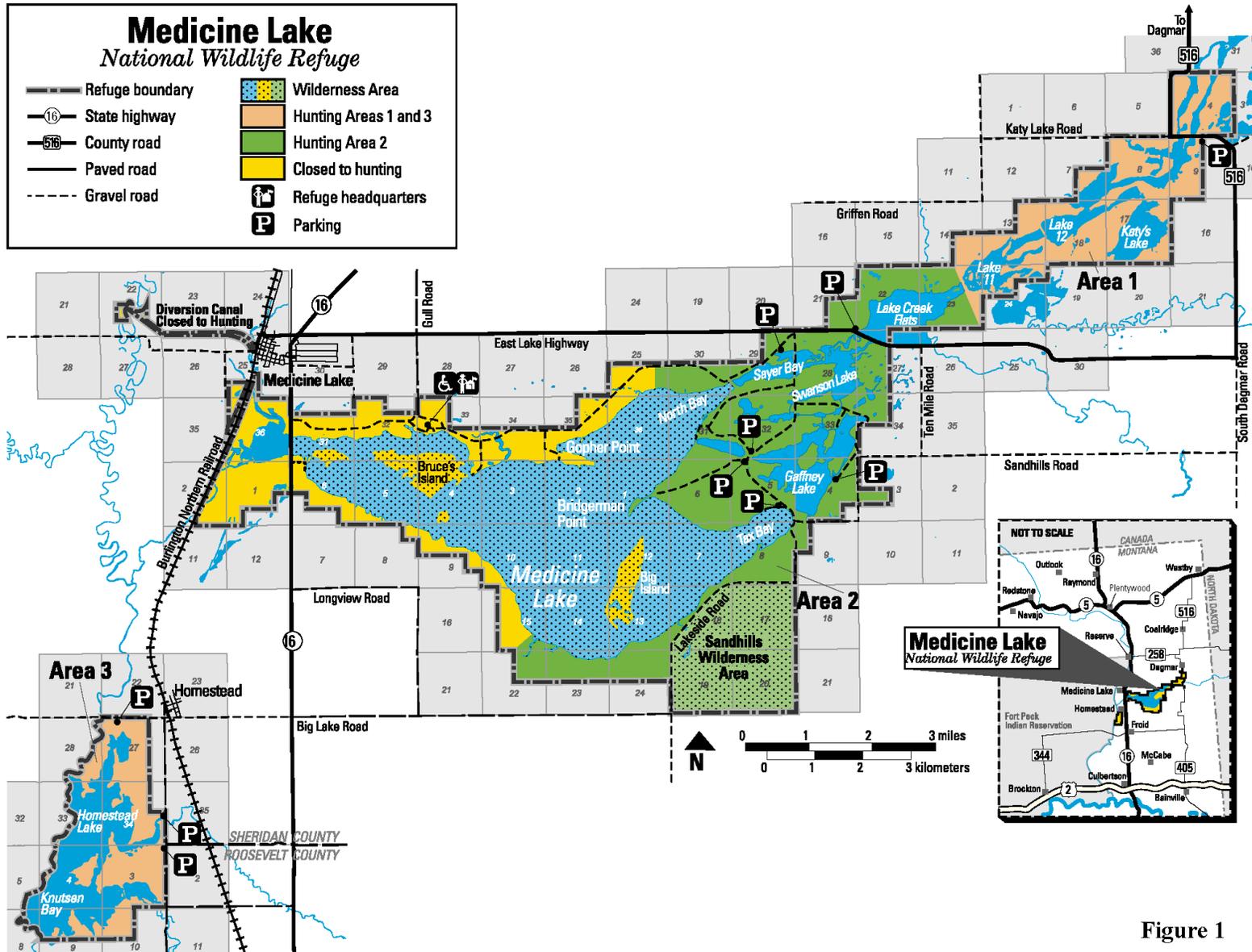


Figure 1

Figure 1. Existing Hunting Units

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Table 2. Affected Resources and Anticipated Impacts of the Proposed Action and Alternatives

Affected Resources	Anticipated Direct and Indirect Impacts		
	Alternative A (No Action)	Alternative B	Alternative C
	<p><i>Continue providing hunting opportunities as described in the 2007 CCP – only Area 2 (Figure 1) will remain open to hunting for ducks and geese.</i></p>	<p><i>Expand Waterfowl Hunting - Expand take of allowable species, exclusively within Area 2 (Figure 1) to include American coot, Sandhill crane, and tundra swan.</i></p>	<p><i>Expand Waterfowl Hunting - Expand take of allowable species, exclusively within Area 2 (Figure 1) to include American coot and Sandhill crane.</i></p>
Natural Resources			
Migratory Birds			
<p>The refuge contains extensive areas of emergent marsh, mudflats and open water that annually support thousands of ducks, geese, coots, cranes, and swans during fall and springs migrations.</p> <p>Common waterfowl species include: mallard, northern pintail, northern shoveler, gadwall, green-winged teal, blue-winged teal, American wigeon, common goldeneye, redhead, canvasback, common merganser, red-breasted merganser, bufflehead, ruddy duck, lesser scaup, Canada geese, snow geese, tundra swan, and on very rare occasions, whooping crane.</p> <p>The refuge is located in the Central Flyway. Band returns show that waterfowl stopping at the refuge are likely returning to, or originating, from breeding grounds stretching from the western edge of MN to the western prairie provinces of Canada.</p> <p>All crane-hunting seasons are regulated by Federal and State wildlife agencies and require a special State permit. Hunting seasons are limited to specific areas, time periods, and bag limits.</p>	<p>Feeding and resting habitat for waterfowl would be compromised in all open hunt areas during daylight (shooting) hours. Concentrating hunting a large block and keeping 67% of refuge acreage closed to hunting may minimize overall disturbance.</p> <p>Hatch year and late hatching birds may be vulnerable to early season hunting mortality (Nelson 1966).</p> <p>Keeping 67% of the refuge closed as an inviolate sanctuary protects hatch year birds and provides vulnerable species the opportunity for population stabilization and recovery on the refuge.</p> <p>Under this Alternative, hunters are not allowed to hunt American coot, Sandhill crane, or tundra swan on the refuge.</p>	<p>Migratory bird hunting would remain concentrated in a large block of the refuge, ensuring that important habitat areas of the refuge remain an “inviolate sanctuary” for migratory birds.</p> <p>Hunters must have State issued permits to hunt Sandhill cranes and tundra swans on the refuge. Average harvest of the Mid-continent population of Sandhill cranes in Montana from 2010-2017 was 82 animals. The average harvest of the Eastern Montana tundra swan population from 2010-2017 was 73 animals. Opening additional areas for hunting will increase opportunities for permitted hunters. The number of available crane and swan permits, however, is regulated by the State and not directly correlated by refuge hunt unit acreage, so limited increase in harvest for both species will occur under this alternative.</p>	<p>Same as Alternative B, except under this alternative there would be no hunting of tundra swans.</p>

Affected Resources	Anticipated Direct and Indirect Impacts		
	Alternative A (No Action)	Alternative B	Alternative C
	<p><i>Continue providing hunting opportunities as described in the 2007 CCP – only Area 2 (Figure 1) will remain open to hunting for ducks and geese.</i></p>	<p><i>Expand Waterfowl Hunting - Expand take of allowable species, exclusively within Area 2 (Figure 1) to include American coot, Sandhill crane, and tundra swan.</i></p>	<p><i>Expand Waterfowl Hunting - Expand take of allowable species, exclusively within Area 2 (Figure 1) to include American coot and Sandhill crane.</i></p>
<p>Swan-hunting seasons are regulated and monitored by Federal and State wildlife agencies in accordance with Tundra Swan Hunt Plans. Hunt seasons are limited to specific areas, time periods, and numbers of hunters. Hunters must get a permit for each swan, and are required to report whether a swan was harvested. In recent years, approximately 4,400 tundra swans have been harvested annually in the U.S. during hunting seasons.</p> <p>Trumpeter swans are occasionally erroneously shot by tundra swan hunters as the two species are difficult to distinguish from one another in the field. There have been no trumpeter swan sightings on or around the refuge in the past two years.</p>	<p>Areas of the refuge open to hunting would not be increased. Under this alternative, approximately 33% of the refuge would be open to hunting with 67% of the refuge closed to hunting, which will provide 21,184 acres of the refuge where migratory waterfowl will continue to be protected from any hunting disturbance. This complies with provisions of the refuge’s establishing legislation.</p>		
Wildlife and Habitat			
<p>Collectively, refuge lands support a number of diverse plant and animal species in a mosaic of fresh and brackish marshes, remnant river channels, alkali salt flats, wet meadows, and uplands, including a series of scattered knolls and drainages that support a bunchgrass and shrub plant community.</p> <p>The refuge serves a vital Prairie Pothole ecosystem by protecting freshwater wetlands, alkali mudflats, and grasslands. Waterfowl, shorebirds, and other migratory birds, use the refuge for breeding, nesting, and migratory resting area. The Prairie</p>	<p>Sixty seven percent of the refuge is closed to public hunting. The refuge’s enabling legislation requires 60% of the refuge remain as an “inviolate sanctuary” for migratory waterfowl—thus prohibiting hunting and all other public uses. The amount of closed areas offsets the impacts to all other wildlife and aquatic species on the refuge, because it protects large areas of the refuge from disturbance. Some resident</p>	<p>Similar to Alternative A as there would be no expected increase in overall disturbance to wildlife and habitat on the refuge, because the area impacted by hunters is the same area already open for hunting as described in the CCP’s Management Direction.</p> <p>The likelihood of disturbance to non-target wildlife (due to increased human presence and noise associated with hunting) would be</p>	<p>Same as Alternative B.</p>

Affected Resources	Anticipated Direct and Indirect Impacts		
	Alternative A (No Action)	Alternative B	Alternative C
	<i>Continue providing hunting opportunities as described in the 2007 CCP – only Area 2 (Figure 1) will remain open to hunting for ducks and geese.</i>	<i>Expand Waterfowl Hunting - Expand take of allowable species, exclusively within Area 2 (Figure 1) to include American coot, Sandhill crane, and tundra swan.</i>	<i>Expand Waterfowl Hunting - Expand take of allowable species, exclusively within Area 2 (Figure 1) to include American coot and Sandhill crane.</i>
<p>Potholes are unmatched for diversity and productivity of migratory birds. Over 280 species of birds visit the refuge every year.</p> <p>The distribution and area of these communities have changed significantly from historic conditions due to changes in ecological processes driven by numerous stressors, including land-use change.</p>	<p>mammal and bird species may be displaced from hunt areas, but find refuge in adjacent closed areas. Reptiles and amphibians would not be impacted.</p> <p>A diversity of habitats would be protected from disturbance, and species diversity would not be impacted, because the 67% of the refuge closed to hunting includes a range of diverse habitats and species of the refuge.</p>	<p>similar to that generated under Alternative A.</p> <p>The active breeding season for most birds (with the exception of winter breeding raptors) is within April-July. Hunting would not occur within this period therefore no conflict is expected.</p>	
Federally Listed and Other Special Status Species			
<p>Three federally listed species may utilize the refuge: piping plover, least tern, and whooping crane. Piping plovers breed on alkali lakes in the refuge. Least terns have not been documented on the refuge, but rather on island and gravel river bars of the Missouri River. The refuge’s wetlands and adjacent grain fields are within the migration corridor of the whooping crane. There are historical records that whooping cranes have visited the refuge in years past, but no records of use of the refuge by this species in recent years.</p> <p>The impacts to piping plovers, least terns, and whooping cranes were described and analyzed in the CCP and in the 2019 Intra Service Section 7 consultations associated with this action. Section 7 consultation determined that implementation of the</p>	<p>Per Intra-Service Section 7 consultations, it has been determined that least terns, piping plovers, and whooping cranes would not be affected by hunting activities carried out in accordance with Federal and State regulations, as well as the habitat protections and refuge programs as described in the 2007 CCP and the 1995 Hunt Plan.</p>	<p>Same as Alternative A for piping plovers and least terns.</p> <p>The refuge’s CCP mentions and the Hunt Plan specifies that tundra swans are not hunted in the refuge in order to protect whooping cranes. However, whooping cranes have not been documented within the refuge boundary in many years. This is likely because, despite the refuge lying within the Central Flyway and being adjacent to the whooping cranes’ Aransas/Wood Buffalo Population Migration Route, the whooping crane’s core intensity migration corridor lies dozens of</p>	<p>Same as Alternative B</p>

Affected Resources	Anticipated Direct and Indirect Impacts		
	Alternative A (No Action)	Alternative B	Alternative C
	<p><i>Continue providing hunting opportunities as described in the 2007 CCP – only Area 2 (Figure 1) will remain open to hunting for ducks and geese.</i></p>	<p><i>Expand Waterfowl Hunting - Expand take of allowable species, exclusively within Area 2 (Figure 1) to include American coot, Sandhill crane, and tundra swan.</i></p>	<p><i>Expand Waterfowl Hunting - Expand take of allowable species, exclusively within Area 2 (Figure 1) to include American coot and Sandhill crane.</i></p>
<p>CCP and this hunt plan amendment would have no adverse effect on these listed species. Additionally, the refuge’s CCP Appendix C mentions that hunting for Sandhill cranes and swans is currently prohibited in some areas in order to protect an endangered whooping crane that extremely rarely may use the refuge.</p> <p>A compatibility determination (CD), reviewed during the draft CCP/EA public review process, and signed in 2007, found recreational hunting to be a public use for this refuge. The CD describes the temporary nature of the disturbance caused to wildlife from hunting activities and its impacts to the overall wildlife populations of the refuge. It also states that closes areas provide sanctuary for game and nongame species, and that special regulations are in place to minimize negative impacts to the refuges and associated wildlife. The CD also provides justification for the legitimacy of hunting activities used to manage wildlife populations due to the renewable resource nature of wildlife.</p>	<p>miles east of the refuge boundary. Whooping crane stopover site use intensity in and adjacent to the refuge boundary is extremely low. Thus, it is expected that the expansion of waterfowl hunting opportunities to include tundra swans and Sandhill cranes will not adversely affect whooping cranes as individuals of this species very rarely use the refuge.</p>		
Visitor Use And Experience			
<p>Approximately 16,000 people visit the refuge each year (2011 Refuge Annual Performance Plan measures).</p> <p>Visitors participate in hunting, fishing, wildlife observation, photography, environmental education, and view an abundance of wildlife</p>	<p>Currently, the refuge has approximately 7,200 hunt visits every year.</p> <p>Conflicts can occur between hunting and other uses such as bird watching, photography and</p>	<p>Same as Alternative A.</p>	<p>Same as Alternative A.</p>

Affected Resources	Anticipated Direct and Indirect Impacts		
	Alternative A (No Action)	Alternative B	Alternative C
	<i>Continue providing hunting opportunities as described in the 2007 CCP – only Area 2 (Figure 1) will remain open to hunting for ducks and geese.</i>	<i>Expand Waterfowl Hunting - Expand take of allowable species, exclusively within Area 2 (Figure 1) to include American coot, Sandhill crane, and tundra swan.</i>	<i>Expand Waterfowl Hunting - Expand take of allowable species, exclusively within Area 2 (Figure 1) to include American coot and Sandhill crane.</i>
along the refuge’s 14-mile auto tour route. The auto tour route is most popular among non-hunting visitors.	wildlife viewing. For safety reasons, access by the non-hunting public is restricted during the hunting season. Shooting, especially during the early morning and late evening, affects the serenity and aesthetics of the tour loop. Hunting reduces the use of migratory waterfowl and other wildlife in areas open to hunting, reducing opportunities for wildlife viewing.		
Cultural Resources			
<p>According to the CCP, archaeological sites and surface finds provide evidence that people inhabited the landscape that now comprises the refuge for thousands of years prior to Euro-American contact. Multiple campsites with stone tool scatters, stone circles or tipi rings, and bison bones have been documented on the refuge.</p> <p>A particularly significant pre-contact site recorded by Service staff on the refuge includes at least 15 stone circles; this site (Tipi Hills/24SH1008) is listed on the National Register of Historic Places (NRHP). Other recorded pre-contact sites consist of isolated or small groupings of tipi rings or stone cairns; many of these sites have not been evaluated for listing on the National Register. Additionally, Refuge staff believe that the potential exists for the occurrence of many more sites, possibly representing habitation by early plains hunters and</p>	Because of the temporary and superficial use of refuge habitats during hunting activities, and because there would be no ground disturbance or changes to access, infrastructure, or other existing environmental conditions, there should be no direct impacts to cultural resources under this alternative from visitors engaged in hunting activities as delineated in the Hunt Plan and the CCP.	Same as Alternative A.	Same as Alternative A.

Affected Resources	Anticipated Direct and Indirect Impacts		
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	<p><i>Continue providing hunting opportunities as described in the 2007 CCP – only Area 2 (Figure 1) will remain open to hunting for ducks and geese.</i></p>	<p><i>Expand Waterfowl Hunting - Expand take of allowable species, exclusively within Area 2 (Figure 1) to include American coot, Sandhill crane, and tundra swan.</i></p>	<p><i>Expand Waterfowl Hunting - Expand take of allowable species, exclusively within Area 2 (Figure 1) to include American coot and Sandhill crane.</i></p>
<p>predating the use of tipis. Historic resources, including those associated with the Depression-era development of refuge infrastructure by the Civilian Conservation Corps (CCC) and Works Progress Administration (WPA), have also been documented.</p> <p>At least 18 sites (including both pre-contact and historic resources) have been formally documented on the refuge. One of these sites (Tipi Hills/24SH1008) is listed on the NRHP. Additionally, at least two sites have been recommended or determined eligible for the NRHP, while at least seven sites remain unevaluated, undetermined, or unresolved with regard to National Register eligibility.</p> <p>Section 106 compliance was completed in association with the proposed action and alternatives presented in this document.</p>			
Refuge Management And Operations			
Administration			
<p>Administering hunting on the refuge includes the following costs: law enforcement, education, maintenance of boundaries, roads, and access points, and search and rescue efforts.</p>	<p>Control and enforcement of the hunt program is currently accomplished primarily with refuge officers on staff. Currently there is no refuge officer.</p>	<p>Same as Alternative A.</p>	<p>Same as Alternative A.</p>

Affected Resources	Anticipated Direct and Indirect Impacts		
	Alternative A (No Action)	Alternative B	Alternative C
	<p><i>Continue providing hunting opportunities as described in the 2007 CCP – only Area 2 (Figure 1) will remain open to hunting for ducks and geese.</i></p>	<p><i>Expand Waterfowl Hunting - Expand take of allowable species, exclusively within Area 2 (Figure 1) to include American coot, Sandhill crane, and tundra swan.</i></p>	<p><i>Expand Waterfowl Hunting - Expand take of allowable species, exclusively within Area 2 (Figure 1) to include American coot and Sandhill crane.</i></p>
<p>From time to time, assistance is received from Montana Fish, Wildlife, and Parks wardens.</p>			
Socioeconomics			
Local and Regional Economics			
<p>Maintaining a variety of public uses, including hunting, on the refuge stimulates the local economy. Hunting, in particular, provides an economic boost to local businesses. Tourists usually buy a wide range of goods and services while visiting an area. Major expenditure categories include lodging, food, supplies, and gasoline. Spending associated with refuge visitation can generate considerable economic benefits for the local communities near a refuge. For example, more than 34.8 million visits were made to refuges in fiscal year 2006; these visits generated \$1.7 billion in sales, almost 27,000 jobs, and \$542.8 million in employment income in regional economies (Carver and Caudill 2007).</p>	<p>Annual waterfowl hunting use on the refuge is currently 7,200 hunt visits, while many are by local and regional hunters, the majority hunters are coming from out of State. Each visit representing approximately \$31 in expenditures (Carver and Caudill 2007). Total expenditures associated with 7,200 hunt visits would total approximately \$223,200.</p>	<p>It is expected that annual waterfowl hunting use on the refuge would increase from current levels if the refuge expands the number of waterfowl species that may be harvested. This would result in increased hunting-related visits to the refuge and surrounding communities, as well as increased expenditures into the local economy.</p>	<p>Same as Alternative B.</p>
Environmental Justice			
<p>Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low- Income Populations, requires all Federal agencies to incorporate environmental justice into their missions by identifying and addressing disproportionately high or adverse human health or environmental effects of their programs and policies on</p>	<p>The Service has not identified any potential high and adverse environmental or human health impacts from this proposed action or any of the alternatives. The Service has identified no minority or low income communities within the impact area. Minority or low income communities will</p>	<p>Same as Alternative A.</p>	<p>Same as Alternative A.</p>

Affected Resources	Anticipated Direct and Indirect Impacts		
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Minorities and low-income populations and communities.	not be disproportionately affected by any impacts from this proposed action or any of the alternatives.		
Indian Trust Resources			
There are no Indian Trust Resources on the refuge.	This action would not impact any Indian Trust Resources.	Same as Alternative A.	Same as Alternative A.

Cumulative Impact Analysis:

Cumulative impacts are defined as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions” (40 CFR 1508.7).

For more information on the national cumulative impacts of the Service’s hunting and fishing program on the NWRs, see “Cumulative Impacts Report 2018-2019 National Wildlife Refuge Proposed Hunting and Sport Fishing Openings” (Appendix C).

Table 3. Anticipated Cumulative Impacts of the Proposed Action and Any Alternatives.

Past, Present, and Reasonably Foreseeable Activity in Area of Analysis	Descriptions of Anticipated Cumulative Impacts
<p>Hunting</p> <p>Total duck and goose harvest in the United States from 2016-2017 was estimated at 12,115,800 (±4%) ducks and 3,602,500 (±5%) geese (U.S. Fish and Wildlife Service 2018).</p> <p>For the period of 2016-2017, annual duck harvests for the Central Flyway averaged 2,429,000 (±14%) ducks and during the same period, annual goose harvests for the Central Flyway averaged 1,061,500 (±11%) geese (Raftovich et al. 2018).</p> <p>Public hunting areas near the refuge include:</p> <p>The Montana Fish, Wildlife, and Parks region 6 manages 1.3 million acres in Block Management Areas (acreages vary annually).</p> <p>Montana State school trust lands are also available for hunting in the area.</p>	<p>Migratory Birds</p> <p>Migratory bird populations throughout the country are managed through an administrative process known as flyways. The refuge is located in the Central Flyway. In North America, the process for establishing hunting regulations is conducted annually. In the U.S., the process involves a number of scheduled meetings (Flyway Study Committees, Flyway Councils, Service Regulations Committee, etc.) where information on the status of migratory bird populations and their habitats is shared with individuals of agencies responsible for setting hunting regulations. In addition, public hearings are held and the proposed regulations are published in the Federal Register to allow public comment.</p> <p>Annual waterfowl assessments are based upon the distribution, abundance, and flight corridors of migratory birds. An Annual Waterfowl Population Status Report is produced each year and includes the most current breeding population and production information available for waterfowl in North America (USFWS 2018b). The Report is a cooperative effort by the Service, the Canadian Wildlife Service, various State and provincial conservation agencies, and private conservation organizations. An Annual Adaptive Harvest Management Report provides the most current data, analyses, and decision making protocols (USFWS 2017a). These reports are intended to aid the development of waterfowl harvest regulations in the U.S. for each hunting season. Coot, moorhen and rail species are also counted and analyzed.</p> <p>Each State selects season dates, bag limits, shooting hours, and other options using guidance in these reports. The refuge follows the regulations set by the State of Montana and published in the yearly proclamation.</p>

Past, Present, and Reasonably Foreseeable Activity in Area of Analysis	Descriptions of Anticipated Cumulative Impacts
	<p>The Service believes that hunting on the refuge will not add significantly to the cumulative impacts of migratory bird management on local, regional, or Central Flyway populations because the percentage likely to be taken on the refuge, though possibly additive to existing hunting takes, would be a very small fraction of the estimated populations. In addition, overall populations will continue to be monitored and future harvests will be adjusted as needed under the existing flyway and State regulatory processes. Several points support this conclusion:</p> <ol style="list-style-type: none"> 1) The proportion of the national waterfowl harvest that occurs on national wildlife refuges is only 6 percent (USFWS 2013c). 2) There are no populations that exist wholly and exclusively on national wildlife refuges. 3) Annual hunting regulations within the U.S. are established at levels consistent with the current population status. 4) Refuges cannot permit more liberal seasons than provided for in Federal frameworks. 5) Refuges purchased with funds derived from the Federal Duck Stamp must limit hunting to 40 percent of the available area. <p>As a result, changes or additions to hunting on the refuge will have minor effects on wildlife species in Montana. Although the Proposed Action Alternative will increase hunting opportunities compared to the No Action Alternative, the slight increase in hunter activity will not rise to a significant cumulative effect locally, regionally, or nationally.</p>
Climate Change	
<p>Ecological stressors are expected to affect a variety of natural processes and associated resources into the future. Precipitation availability may have a large impact on the number of potholes available to breeding waterfowl. These habitat changes may dramatically reduce the amount and quality of both grassland and wetland for migratory birds that are hunted. As a result, wildlife would be displaced into other areas of available habitat.</p>	<p>While the impacts from climate change on the refuge wildlife and habitats are not certain, expanding hunting on the refuge will not add to the cumulative impacts of climate change because the refuge uses an adaptive management approach for its hunt program, consistently monitoring and reviewing the hunt program annually and revising annually (if necessary). The Service’s hunt program will adjust the hunt program as necessary to ensure that it does not contribute further to the cumulative impacts of climate change on resident wildlife and migratory birds.</p>

Monitoring

Each year, monitoring activities provide information on harvest levels, population size, and

habitat conditions for migratory birds in the U.S. The Service's Division of Migratory Bird Management is responsible for conducting migratory bird surveys for all of the flyways, collecting and compiling much of the relevant biological data, and coordinating the regulatory effort with States and the public. Data collected from these activities are analyzed each year, and proposals for duck hunting regulations are developed by the Flyway Councils, States, and the Service. After extensive public review, the Service announces a regulatory framework within which States may set their hunting seasons. The refuge works with the State to ensure that all of its proposed hunting activities are in alignment with the results of these monitoring efforts and regulatory frameworks, using an adaptive management process to adjust hunting activities as necessary to ensure no adverse impacts to migratory bird populations. For more information on the extensive monitoring efforts for migratory bird populations in the U.S., see the *Issuance of Annual Regulations Permitting the Hunting of Migratory Birds: Final Supplemental Environmental Impact Statement* (USFWS 2013c) (<https://www.fws.gov/migratorybirds/pdf/policies-and-regulations/FSEISIssuanceofAnnualRegulations.pdf>).

Summary of Analysis

The purpose of this EA is to provide sufficient evidence and brief analysis to determine whether to issue a Finding of No Significant Impact or prepare an Environmental Impact Statement.

Alternative A – No Action Alternative

This alternative does not meet the purpose and needs of the Service as described above, because it would not provide additional hunting opportunities.

There would be no additional costs to the refuge under this alternative. There would be no change to current public use and wildlife management programs on the refuge under this alternative. The refuge would not increase its impact on the economy and would not provide new hunting and access opportunities. Although this alternative has the least direct impacts of physical and biological resources, it would minimize our mandates under the Administration Act and Secretarial Order 3356 - Hunting, Fishing, Recreational Shooting, and Wildlife Conservation Opportunities and Coordination with States, Tribes, and Territories.

Alternative B – Preferred Alternative

This alternative meets the purpose and needs of the Service as described above, as it provides additional hunting opportunities on the refuge and meets the refuge establishing purposes. The Service has the resources necessary to carry out this alternative, and has determined that the proposed action described in this alternative is compatible with the purposes of the Medicine Lake NWR and the mission of the NWRS (Appendix B).

Alternative C – Preferred Alternative

This alternative partially meets the purpose and needs of the Service as described above, as it provides additional hunting opportunities on the refuge and meets the refuge establishing purposes. The Service has the resources necessary to carry out this alternative, and has

determined that the proposed action described in this alternative is compatible with the purposes of the Medicine Lake NWR and the mission of the NWRS (Appendix B).

List of Sources, Agencies and Persons Consulted:

The following agencies and organizations were consulted during the development of this EA.

- Montana Fish, Wildlife, and Parks, Glasgow, Montana

References:

Carver, E., and Caudill, J. 2006. Banking on Nature—The economic benefits to local communities of National Wildlife Refuge visitation: Washington, D.C., U.S. Fish and Wildlife Service, Division of Economics, 372 p. http://www.fws.gov/refuges/about/msWord/BankingonNature_2006_11-23.doc. Accessed on September 30, 2011.

Raftovich, R.V., S. C. Chandler, and K.K. Fleming. 2017. Migratory bird hunting activity and harvest during the 2015-16 and 2016-17 hunting seasons. U.S. Fish and Wildlife Service, Laurel, Maryland, USA.

U.S. Fish and Wildlife Service. 2013a. Banking on Nature, The economic benefits to local communities of national wildlife refuge visitation. USFWS, Division of Economics, Washington, DC. 365pp.

U.S. Fish and Wildlife Service. 2013c. Issuance of Annual Regulations Permitting the Hunting of Migratory Birds, Final Supplemental Environmental Impact Statement. USFWS, Division of Migratory Birds and Management, Laurel, MD. 418pp.

U.S. Fish and Wildlife Service. 2017a. Adaptive Harvest Management Report, 2018 Hunting Season. USFWS, Division of Migratory Birds and Management, Laurel, MD. 69pp.

U.S. Fish and Wildlife Service. 2017b. Waterfowl: Population Status, 2017. USFWS, Division of Migratory Birds and Management, Laurel, MD. 74pp.

List of Preparers:

Name	Position	Work Unit
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Ella Wagener	Natural Resource Policy Advisor	FWS, Headquarters, Conservation Planning and Policy Branch

State Coordination:

Refuge staff met with Montana Fish, Wildlife, and Parks representatives on February 6, 2018, to discuss the current hunting program and recommendations for the future.

Tribal Consultation:

Refuge staff informed 19 individuals from nine separate tribal councils or governments including the respective Tribal Historic Preservation Officer that the Service is initiating an Environmental Assessment to expand waterfowl hunting to include tundra swans, Sandhill cranes, and American coot on Medicine Lake NWR. The Service extended an invitation to engage in government-to-government consultation in accordance with Executive Order 13175.

Public Outreach:

Initial scoping targeted representatives from the local county sportsmen groups and other organizations. They were informed that all members and the general public would have the opportunity to provide comments later in the process. The EA and CD will be distributed to the public for comment via the refuge’s website, social media accounts, and press releases.

Determination:

This section will be filled out upon completion of any public comment period and at the time of finalization of the Environmental Assessment.

- The Service’s action will not result in a significant impact on the quality of the human environment. See the attached “**Finding of No Significant Impact**” (Appendix D).
- The Service’s action **may significantly affect** the quality of the human environment and the Service will prepare an Environmental Impact Statement.

Preparer Signature: _____ Date: _____

Name/Title/Organization: _____

Reviewer Signature: _____ Date: _____

Name/Title: _____

APPENDIX A
OTHER APPLICABLE STATUTES, EXECUTIVE ORDERS & REGULATIONS

STATUTES, EXECUTIVE ORDERS, AND REGULATIONS
<p>Cultural Resources</p> <p>American Indian Religious Freedom Act, as amended, 42 U.S.C. 1996 – 1996a; 43 CFR Part 7</p> <p>Antiquities Act of 1906, 16 U.S.C. 431-433; 43 CFR Part 3</p> <p>Archaeological Resources Protection Act of 1979, 16 U.S.C. 470aa – 470mm; 18 CFR Part 1312; 32 CFR Part 229; 36 CFR Part 296; 43 CFR Part 7</p> <p>National Historic Preservation Act of 1966, as amended, 16 U.S.C. 470-470x-6; 36 CFR Parts 60, 63, 78, 79, 800, 801, and 810</p> <p>Paleontological Resources Protection Act, 16 U.S.C. 470aaa – 470aaa-11</p> <p>Native American Graves Protection and Repatriation Act, 25 U.S.C. 3001-3013; 43 CFR Part 10</p> <p>Executive Order 11593 – Protection and Enhancement of the Cultural Environment, 36 Fed. Reg. 8921 (1971)</p> <p>Executive Order 13007 – Indian Sacred Sites, 61 Fed. Reg. 26771 (1996)</p>
<p>Fish & Wildlife</p> <p>Bald and Golden Eagle Protection Act, as amended, 16 U.S.C. 668-668c, 50 CFR 22</p> <p>Endangered Species Act of 1973, as amended, 16 U.S.C. 1531-1544; 36 CFR Part 13; 50 CFR Parts 10, 17, 23, 81, 217, 222, 225, 402, and 450</p> <p>Fish and Wildlife Act of 1956, 16 U.S.C. 742 a-m</p> <p>Lacey Act, as amended, 16 U.S.C. 3371 et seq.; 15 CFR Parts 10, 11, 12, 14, 300, and 904</p> <p>Migratory Bird Treaty Act, as amended, 16 U.S.C. 703-712; 50 CFR Parts 10, 12, 20, and 21</p> <p>Executive Order 13186 – Responsibilities of Federal Agencies to Protect Migratory Birds, 66 Fed. Reg. 3853 (2001)</p>
<p>Natural Resources</p> <p>Clean Air Act, as amended, 42 U.S.C. 7401-7671q; 40 CFR Parts 23, 50, 51, 52, 58, 60, 61, 82, and 93; 48 CFR Part 23</p> <p>Wilderness Act, 16 U.S.C. 1131 et seq.</p> <p>Wild and Scenic Rivers Act, 16 U.S.C. 1271 et seq.</p> <p>Executive Order 13112 – Invasive Species, 64 Fed. Reg. 6183 (1999)</p>
<p>Water Resources</p> <p>1451 et seq.; 15 CFR Parts 923, 930, 933</p> <p>Federal Water Pollution Control Act of 1972 (commonly referred to as Clean Water Act), 33 U.S.C. 1251 et seq.; 33 CFR Parts 320-330; 40 CFR Parts 110, 112, 116, 117, 230-232, 323, and 328</p> <p>Rivers and Harbors Act of 1899, as amended, 33 U.S.C. 401 et seq.; 33 CFR Parts 114, 115, 116, 321, 322, and 333</p> <p>Safe Drinking Water Act of 1974, 42 U.S.C. 300f et seq.; 40 CFR Parts 141-148</p> <p>Executive Order 11988 – Floodplain Management, 42 Fed. Reg. 26951 (1977)</p> <p>Executive Order 11990 – Protection of Wetlands, 42 Fed. Reg. 26961 (1977)</p>

APPENDIX B
COMPATIBILITY DETERMINATION
MEDICINE LAKE NATIONAL WILDLIFE REFUGE

APPENDIX C
CUMULATIVE IMPACTS REPORT
2018-2019 NATIONAL WILDLIFE REFUGE
PROPOSED HUNTING AND SPORT FISHING OPENINGS
U.S. FISH AND WILDLIFE SERVICE

APPENDIX D
FINDING OF NO SIGNIFICANT IMPACT