

Draft Environmental Assessment
for Hunting Light Geese on
Cokeville Meadows National Wildlife Refuge

March 2020

Prepared by

Tom Koerner, Project Leader
Central Sage-Steppe Conservation Complex
P.O. Box 700 Green River, Wyoming 82935
Tom_Koerner@fws.gov 307-875-2187

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This Environmental Assessment (EA) is being prepared to evaluate the effects associated with this proposed action and complies with the National Environmental Policy Act (NEPA) in accordance with Council on Environmental Quality regulations (40 Code of Federal Regulations [CFR] 1500-1509) and Department of the Interior (43 CFR 46; 516 DM 8) and U.S. (United States) Fish and Wildlife Service (Service) (550 FW 3) regulations and policies. NEPA requires examination of the effects of proposed actions on the natural and human environment.

1.0 Introduction

1.1 Proposed Action

The Service is proposing to open hunting for Ross's and snow geese (light geese) on Cokeville Meadows National Wildlife Refuge (NWR) in accordance with the refuge's 2013 hunting plan (USFWS 2013a), the refuge's 2020 hunting plan (USFWS 2020a), and the 2014 comprehensive conservation plan (CCP) (USFWS 2014). This additional hunting would follow the same regulations and open and closed areas listed in the 2013 hunting plan for migratory game birds (Figure 1).

The proposed action is often iterative and evolves over time during the process as the agency refines its proposal and learns more from the public, tribes, and other agencies. Therefore, the final proposed action may be different from the proposed action. The final decision on the proposed action would be made at the conclusion of the public comment period for the EA and the 2020 refuge-specific hunting and sport fishing regulations. The Service cannot open a refuge to hunting and fishing until a final rule is published in the Federal Register formally opening the refuge to hunting and fishing.

1.2 Background

National wildlife refuges are guided by the mission and goals of the National Wildlife Refuge System (Refuge System), 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 (NWRSA), as amended by the National Wildlife Refuge System Improvement Act of 1997 (Improvement Act), Refuge Recreation Act of 1962, and selected portions of the Code of Federal Regulations and Fish and Wildlife Service Manual.

The refuge was established in 1993 “. . . to preserve and protect wetland riparian habitat for its migratory waterfowl and other migratory bird values; for resident big game, small game, furbearers and upland game birds; for public educational and interpretive values; and for public recreational values.”



U.S. Fish & Wildlife Service

Cokeville Meadows National Wildlife Refuge

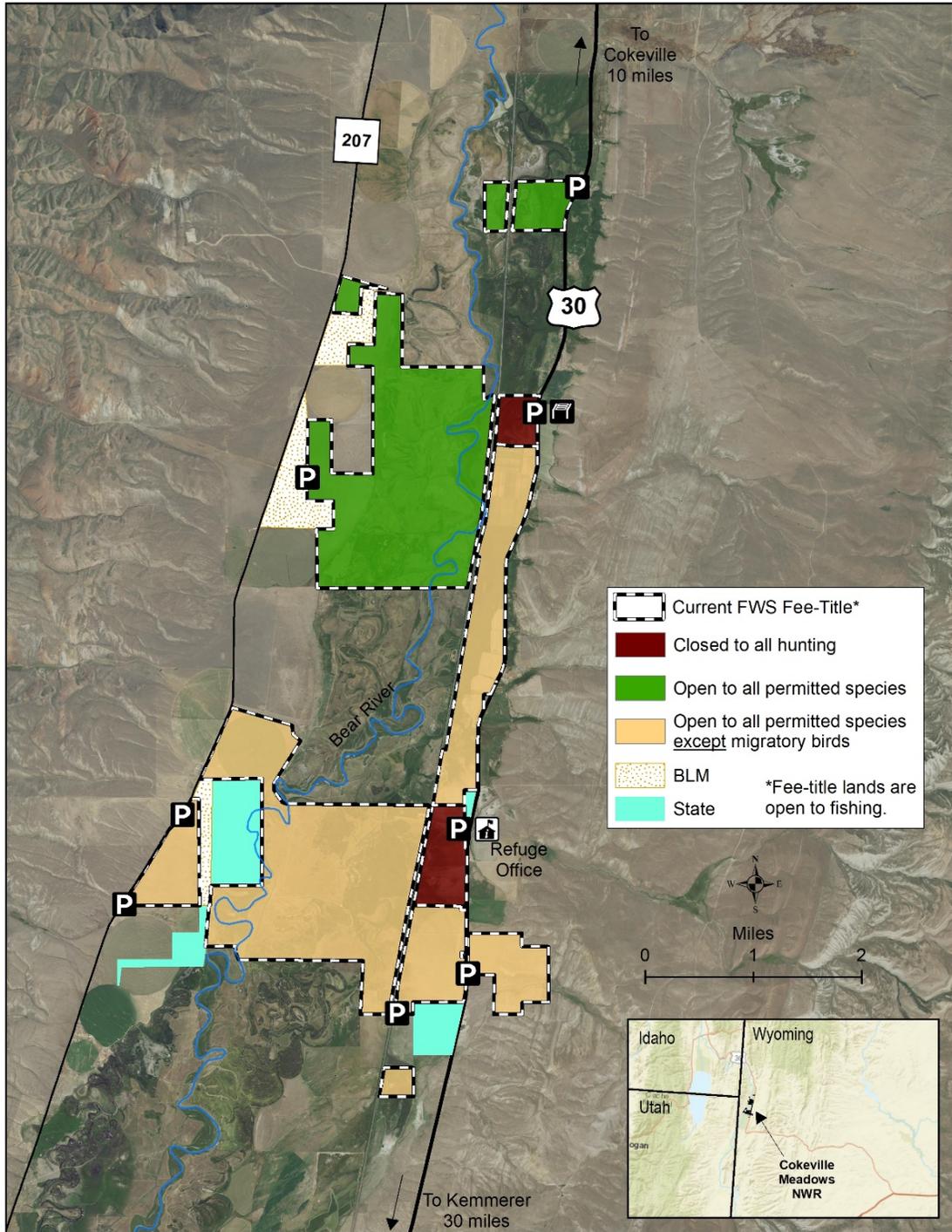


Figure 1. Hunting Opportunities on Cokeville Meadows National Wildlife Refuge.

The establishing and acquisition authorities set out the purposes for the refuge, as described below:

- “. . . for the conservation of the wetlands of the Nation in order to maintain the public benefits they provide and to help fulfill international obligations contained in various migratory bird treaties and conventions” 16 U.S. Code § 3901(b) (Emergency Wetlands Resources Act of 1986)
- “. . . for conservation purposes” 7 U.S. Code § 2002 (Consolidated Farm and Rural Development Act)
- “. . . for use as an inviolate sanctuary, or for any other management purpose, for migratory birds.” 16 U.S. Code § 715d (Migratory Bird Conservation Act).

The mission of the Refuge System, as outlined by the NWRSA, as amended by the National Improvement Act (16 U.S. Code 668dd et seq.), is:

“. . . 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 NWRSA mandates the Secretary of the Interior in administering the System to (16 U.S. Code 668dd[a][4]):

- provide for the conservation of fish, wildlife, and plants, and their habitats within the Refuge System;
- ensure that the biological integrity, diversity, and environmental health of the Refuge System are maintained for the benefit of present and future generations of Americans;
- ensure that the mission of the Refuge System described at 16 U.S. Code 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 Refuge System are located;
- assist in the maintenance of adequate water quantity and water quality to fulfill the mission of the Refuge System and the purposes of each refuge;
- recognize compatible wildlife-dependent recreational uses as the priority general public uses of the Refuge System through which the American public can develop an appreciation for fish and wildlife;
- ensure that opportunities are provided within the Refuge System for compatible wildlife-dependent recreational uses;
- 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 Refuge System.

1.3 Purpose and Need for the Proposed Action

The purpose of this proposed action is to provide compatible wildlife-dependent recreational opportunities on Cokeville Meadows NWR. The need of the proposed action is to meet the Service's priorities and mandates as outlined by the NWRSA to "recognize compatible wildlife-dependent recreational uses as the priority general uses of the NWR" and "ensure that opportunities are provided within the NWR for compatible wildlife-dependent recreational uses." (16 U.S. Code 668dd[a][4]). The CCP for the refuge was completed in 2014 (USFWS 2014). The proposed action would help meet goals and objectives listed in the CCP:

Visitor Services and Cultural Resources Goal: Provide appropriate public access to refuge lands where visitors can safely enjoy compatible, wildlife-dependent recreation, such as hunting, fishing, wildlife observation, photography, environmental education, and interpretation. The refuge would seek partnerships to help protect onsite cultural resources.

Hunting Objective 3: Upon hunting plan approval, work with WGFD to establish hunts that are consistent with WGFD commission regulations and that support population management objectives.

The objectives for a hunting program on the refuge are to:

- provide quality recreational hunting opportunities consistent with refuge goals and objectives;
- meet the refuge establishing purposes, which includes keeping at least 60 percent of the refuge closed to hunting to provide inviolate sanctuary for migratory birds;
- foster support from the general public, the Wyoming Game and Fish Department (WGFD) and other government and private agencies for professional management of wildlife and habitat by the Service and the refuge;
- to provide the general public with quality wildlife-oriented recreational experience and an opportunity to utilize a renewable resource;
- to provide participants with reasonable harvest opportunities, uncrowded conditions, minimal conflicts with other users, and an opportunity to use various hunting techniques;
- maintain wildlife populations at levels compatible with the refuge habitat.

A hunting plan and EA completed in 2013 allowed hunting on the refuge for migratory game birds, such as ducks, dark geese, coots, mergansers, snipe, Virginia and sora rails, sandhill crane, and mourning dove within established federally and state-approved regulations within the Pacific Flyway (USFWS 2013a). When the 2013 plan was completed, hunting of light geese was not allowed in the Pacific Flyway portion of Wyoming by WGFD regulations, so light geese were not included. Hunting for light geese is now authorized in the Pacific Flyway, according to WGFD regulations. This would provide an additional opportunity to hunt light geese on the refuge.

2.0 Alternatives

2.1 Alternatives Considered

Alternative A – Allow Hunting of Light Geese – Proposed Action Alternative

The refuge has prepared a hunting plan, which is presented in this document as the Proposed Action Alternative.

Under the Proposed Action Alternative, hunting of light geese (Ross's and snow geese) would be permitted in areas currently opened to migratory bird hunting (Figure 1). All other areas of the refuge would continue to be closed to migratory bird hunting, including light geese.

All WGFD regulations would apply to hunting light geese on the refuge, and all state and federal licenses, tags, permits, and stamps required to participate in hunting light geese would apply. All regulations and mitigation measures outlined in the 2013 Cokeville Meadows Hunting Plan would apply (USFWS 2013a). In addition, brochures would be available in designated parking areas that explain the key features for hunters to look for when identifying differences between light geese and swans.

This alternative would provide an additional recreational experience for the public while keeping sustainable populations of light geese. The estimated cost to run a hunting program that includes the addition of light geese would not increase the cost of administering the hunting program. Under this alternative, the refuge law enforcement officer and WGFD wardens would monitor the hunting program, and they would conduct license, possession limits, and gain access to compliance checks. Refuge staff would administer the hunting program by supporting parking areas, producing and updating the hunting and fishing brochure, answering the public's questions, and other associated activities. This alternative would offer an additional opportunity for hunting light geese and fulfills the Service's mandate under the Improvement Act. The Service has determined that hunting light geese would be compatible with the purposes of refuge and the mission of the Refuge System (USFWS 2020b).

Alternative B – Current Management No Light Goose Hunting Allowed – No Action Alternative

The refuge would remain closed to public hunting of light geese. No final hunting plan for light geese would be adopted. No coordination would occur with the WGFD for opening to light goose hunting at the refuge. This alternative would not offer an additional opportunity for hunting light geese and fulfilling the Service's mandate under the Improvement Act.

2.2 Alternative(s) Considered, But Dismissed from Further Consideration

Allow Hunting of Black Bear and Light Geese

This alternative was considered but dismissed from further consideration because black bears are extremely infrequent in the refuge area and have never been detected on fee title lands since refuge establishment.

Allow Hunting of Mountain Lion and Light Geese

This alternative was considered but dismissed from further consideration because mountain lions, which inhabit southwest Wyoming, have never been detected, since the establishment of the refuge.

Allow Hunting of American Crow and Light Geese

This alternative was considered but dismissed from further consideration because crows are uncommon in the area with only seven reported sightings since 2005 (<https://ebird.org/explore>). Common ravens, a species that cannot be legally hunted, are much more common in the western half of Wyoming, and easily confused in flight with the American crow.

3.0 Affected Environment and Environmental Consequences

3.1 Affected Environment

The refuge contains the most extensive wetland complex in Wyoming, with the highest-density of breeding ducks, geese and sandhill cranes in the state and with very high wildlife species diversity (Wyoming Statewide Comprehensive Outdoor Recreation Plan 2009–2013). The refuge consists of approximately 6,134 acres of fee title to date. The refuge is located entirely within Lincoln County, Wyoming. The refuge is composed of a mix of habitats, such as riverine, wet meadow, temporary, seasonal, and semipermanent wetland, and sage steppe. For more information regarding the affected environment, please see Chapter 3 of the refuge’s CCP, available at: <https://ecos.fws.gov/ServCat/DownloadFile/44654?Reference=43968> or https://www.fws.gov/mountain-prairie/refuges/planningPDFs/ckv_ccpfinal_080116.pdf

3.2 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 would not be more than negligibly affected by the action have been dismissed from further analyses.

Tables 1 through 5 provide:

- a brief description of the affected resources in the proposed action area;
- effects of the proposed action and any alternatives on those resources, including direct and indirect effects.

Table 6 provides a brief description of the cumulative impacts of the proposed action and any alternatives.

Impact Types:

- *Direct effects* are those that are caused by the action and occur at the same time and place.
- *Indirect effects* are those that are 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.

Table 1. Affected Natural Resources and Anticipated Direct and Indirect Impacts of the Proposed Action and Any Alternatives.

Affected Resources	<u>Alternative A (Proposed Action)</u> <i>Hunting of light geese (Ross’s and snow geese) would be permitted in areas currently opened to migratory bird hunting.</i>	<u>Alternative B (No Action)</u> <i>The refuge would remain closed to public hunting of light geese.</i>
Migratory Species		
<p>Waterfowl are present throughout the river, wet meadows, wetlands, and oxbows of the refuge. Light geese (Ross’s and snow geese) would only be present during migratory periods in the spring and fall. The presence of light geese is unpredictable, because primary migration routes are to the east and west of the refuge.</p> <p>The waterfowl and game bird population levels fluctuate with changes in vegetation and the water levels in the wet meadows and wetlands. Typically, the shallow wetlands freeze up by late October, causing an early migration of waterfowl, while the Bear River remains open a little later in the winter. This results in a relatively narrow window of opportunity to hunt migratory game birds in the area. The refuge currently supports a huntable population of waterfowl and other migratory game birds.</p>	<p>Hunting of light geese would cause direct mortality to these two species during hunting season. Hunter activities would also cause temporary disturbance to migratory birds and other wildlife. Harvest of light geese would be nearly entirely incidental from hunters pursuing ducks and dark geese. Most migratory game bird hunters on the refuge primarily pursue ducks and dark geese that are much more common and predictable than light geese, so additional disturbance over current levels would be negligible. Populations of light geese, along with all other migratory game birds, are managed at the state and Pacific Flyway levels. Harvest of light geese at the refuge is estimated to be less than 20 birds annually, which is a very small fraction of the 30,000 geese harvested in Wyoming in 2018 (WGFD 2019). Access to the site would be on foot from established parking areas, limiting activities. Hunting of light geese would be of a seasonal nature, during open seasons until freeze-up.</p>	<p>Under this alternative, there would be no additional temporary disturbance to migratory species. No additional direct mortality to light geese would occur. Currently, fewer than 30 waterfowl hunters use the refuge annually.</p>
Other Wildlife and Aquatic Species		
<p>White-tailed deer, elk, striped skunks, deer mice, meadow voles, muskrats, northern leopard frogs, and wandering garter snakes are among the more common non-bird wildlife species found on the refuge’s wet meadow and wetland habitats.</p>	<p>The effects would be the same as those for the No Action Alternative. Nearly all migratory game bird hunters would primarily be pursuing other species of ducks and geese that are much more common and predictable than light geese, so additional disturbance over what already occurs would be expected to be negligible.</p>	<p>Currently, hunting on the refuge has minor negative impacts on other wildlife species. Some disturbance of other animals is unavoidable when people are on the refuge and when they are using firearms.</p>

Affected Resources	<u>Alternative A (Proposed Action)</u> <i>Hunting of light geese (Ross's and snow geese) would be permitted in areas currently opened to migratory bird hunting.</i>	<u>Alternative B (No Action)</u> <i>The refuge would remain closed to public hunting of light geese.</i>
Threatened and Endangered Species and Other Special Status Species		
<p><i>Black-Footed Ferret, Mustela nigripes (listed endangered)</i></p> <p>The refuge lies within the historical range of this listed species; however, it has never been documented. The refuge has very limited white-tailed prairie dog colonies, and it is highly unlikely that a large-enough population of prairie dogs exists to support black-footed ferrets.</p> <p><i>Ute Ladies'- Tresses Orchid, Spiranthes diluvialis (listed threatened)</i></p> <p>While the refuge lies in between areas known to have populations of this listed species (Colorado and Montana), there are no known populations of this species on the refuge. An orchid survey, within suitable orchid habitat, performed during the blooming period of this species in the refuge (2000), failed to locate this plant within the refuge. Refuge staff are also trained in identification of this species and have never detected it while on the refuge during the blooming period.</p> <p><i>Yellow-Billed Cuckoo, Coccyzus americanus (listed threatened)</i></p> <p>The yellow-billed cuckoo has not been documented on the refuge. The refuge lies within the potential historical range of this species; however, it has never been common in southwestern Wyoming since records have been kept (before refuge establishment).</p>	<p>The effects would be the same as those for the No Action Alternative. Nearly all migratory game bird hunters would primarily be pursuing other species of ducks and geese that are much more common and predictable than light geese, so there would be no additional impacts on threatened or endangered species from opening the refuge to light geese hunting over what is described under current management (No Action Alternative).</p>	<p><i>Black-Footed Ferret</i></p> <p>This species is considered endangered and is protected both federally and by the state. It requires occupied burrows of prairie dogs for shelter and prey. The refuge has very limited white-tailed prairie dog colonies and no hunting of prairie dogs is allowed.</p> <p>Implementation of the proposed action would not have negative effects on the habitats and/or prey species of this federally listed species.</p> <p><i>Ute Ladies'-Tresses Orchid</i></p> <p>This species has never been found on the refuge despite a relatively recent orchid-specific survey (2000) within suitable habitats. If this species were found on the refuge, the Service would establish and enforce measures to protect this listed plant and its habitats. Mitigation may include protection of sites susceptible to trampling by hunting activities.</p>

Affected Resources	<u>Alternative A (Proposed Action)</u> <i>Hunting of light geese (Ross's and snow geese) would be permitted in areas currently opened to migratory bird hunting.</i>	<u>Alternative B (No Action)</u> <i>The refuge would remain closed to public hunting of light geese.</i>
<p>The cuckoo relies on riparian habitat types of mature cottonwoods with an understory of dense shrubs for its life cycle needs. The dense shrubs supply secure nesting cover, and the shrubs and cottonwoods provide foraging sites, where the cuckoos search for primarily caterpillars along with other insects. The refuge has almost none of this habitat type available, although refuge staff have begun working on establishment.</p> <p>There is no federally designated critical habitat on the refuge. There is no proposed species or proposed critical habitat within the refuge area.</p>		<p><i>Yellow-Billed Cuckoo</i></p> <p>This species relies on riparian habitats that include stands of cottonwoods with a dense understory of shrubs, which the refuge currently has very few spots. These are located away from the riverbank and are not likely to be visited by hunters. Although it is believed that the refuge lies within potential historic range, it has never been detected on or near the refuge since records have been kept (before the refuge was established).</p>

Note: The effects on refuge soils, geology, air quality, wetlands, and floodplains are all considered to be nonexistent to negligible and have not been analyzed further.

Table 2. Affected Visitor Use and Experience and Anticipated Direct and Indirect Impacts of the Proposed Action and Any Alternatives.

<p>Affected Resources</p>	<p><u>Alternative A (Proposed Action)</u> <i>Hunting of light geese (Ross’s and snow geese) would be permitted in areas currently opened to migratory bird hunting.</i></p>	<p><u>Alternative B (No Action)</u> <i>The refuge would remain closed to public hunting of light geese.</i></p>
<p>In 2013, designated portions of the refuge were opened to big game, upland game and migratory bird hunting (USFWS 2013a). We are currently proposing to open the refuge to fishing (USFWS 2020b).</p> <p>Environmental education, interpretation, wildlife observation, and photography are compatible uses that are also allowed on the refuge.</p> <p>In 2006, the refuge constructed a visitor contact station, an information kiosk, and a walking trail at the Netherly Slough along U.S. Highway 30 for public use. Most of the estimated 5,000 annual visitors use this site to experience the refuge.</p>	<p>Under this alternative, compatible wildlife-dependent hunting for light geese would be allowed. No public-use conflicts of consequence are expected. Hunting for migratory game birds was opened in 2013. Nearly all migratory game bird hunters would primarily be pursuing other species of ducks and dark geese that are much more common and predictable than light geese. Harvest of light geese would be incidental to hunting other waterfowl species. More than half of the refuge would remain closed to migratory game bird hunting, including light geese. Prior to the establishment of the refuge, the area was used for hunting for many years.</p> <p>The demand for nonconsumptive wildlife-oriented use on the refuge continues to grow. Conflicts between hunters and non-consumptive users may occur as future uses are allowed. Providing nonconsumptive users access to wildlife viewing areas, notifications of when users are entering a hunting area and even closing a hunting area to nonconsumptive users, if appropriate, would reduce conflicts. Also, restrictions on hunting methods and restrictions on hunting near designated public-use facilities and trails should aid in reducing potential conflicts between hunters and nonconsumptive users. Should serious conflicts arise, considerations would be given to changes in time and space scheduling and/or zoning. Decisions would be based on reducing effects on various user groups, and best management practices for wildlife.</p> <p>This alternative would help achieve several goals in the refuge’s CCP and the goal of the Refuge System of providing compatible wildlife-dependent recreation opportunities.</p>	<p>Under this alternative, no light goose hunting would be allowed, so no additional public-use conflicts would occur as a result. The opportunity for hunting light geese would not occur; however, because light geese are usually an incidental opportunity for current hunting, visitors would still enjoy the many hunting opportunities on the refuge. Under current management, there have not been any conflicts between hunters and nonconsumptive users.</p>

Key: CCP = Comprehensive Conservation Plan

Table 3. Affected Cultural Resources and Anticipated Direct and Indirect Impacts of the Proposed Action and Any Alternatives.

Affected Resources	<u>Alternative A (Proposed Action)</u> <i>Hunting of light geese (Ross's and snow geese) would be permitted in areas currently opened to migratory bird hunting.</i>	<u>Alternative B (No Action)</u> <i>The refuge would remain closed to public hunting of light geese.</i>
<p>Although many cultural resource sites have been recorded near Cokeville, Wyoming, few have actually been documented on the refuge. This lack of information reflects the relatively low potential for resources on most of the refuge because of its extensive wetlands and the lack of cultural resource surveys. Based on the U.S. Geological Survey topographic map, several unrecorded ditches, water control structures, transportation-related features, and ranch structures are on the refuge. Prehistoric sites, if present, are likely found in the upland areas of the refuge.</p>	<p>The impacts would be the same as those described in the No Action Alternative. Nearly all migratory game bird hunters would primarily be pursuing other species of ducks and geese that are much more common and predictable than light geese, so there would be no additional impacts on cultural resources from opening the refuge to light geese hunting over what is described below under current management (No Action Alternative).</p>	<p>Because of the temporary and superficial use of refuge habitats during hunting activities, there are no direct effects on cultural resources under this alternative from visitors engaged in hunting activities as delineated in the hunting plan.</p>

Table 4. Affected Refuge Management and Operations and Anticipated Direct and Indirect Impacts of the Proposed Action and Any Alternatives

Affected Resources	<u>Alternative A (Proposed Action)</u> <i>Hunting of light geese (Ross’s and snow geese) would be permitted in areas currently opened to migratory bird hunting.</i>	<u>Alternative B (No Action)</u> <i>The refuge would remain closed to public hunting of light geese.</i>
Land Use and Management		
Through cooperators, haying and rotational grazing of refuge habitats is conducted in the summer and fall every year.	Under this alternative, refuge management and operations would not be affected. Planning, public notification, and coordination with refuge haying, grazing, and farming cooperators would reduce potential issues such as the public’s leaving gates open and closures during prescribed burning. Unanticipated effects on operations would be dealt with through communication with the public and our partners.	There are no impacts on land use and refuge management with the current hunting program.
Administration		
<p>Cokeville Meadows NWR is not currently staffed. Since 1993, our staff headquartered at the Seedskadee NWR in Sweetwater County, Wyoming, has managed the refuge. The Seedskadee NWR Complex staff of five full-time equivalent positions and two to three seasonal employees are responsible for management activities at Seedskadee NWR and the refuge. The two refuges total 36,489 acres. Staff from Seedskadee NWR Complex travel approximately 83 miles to work at the Cokeville Meadows NWR.</p> <p>The Cokeville Meadows and Seedskadee NWRs are part of the Central Sage-Steppe NWR Complex. The Complex includes the Arapaho, Seedskadee, Cokeville Meadows, Bamforth, Hutton Lake, Mortensen Lake, and Pathfinder NWRs. Law enforcement would be provided by an officer stationed at Seedskadee NWR.</p>	Initial start-up funding is estimated to be \$500 to reprint the hunting and fishing brochure. Existing parking areas would be used, and no new signage would be needed. The refuge law enforcement officer and WGFD warden would conduct compliance checks. Participation is expected to be light and would not require significant time to conduct compliance checks. There would be no additional expense to add light geese to the hunting program, because there would be no additional cost over that which is done to manage the existing hunting program. While this could affect the administration of the refuge, it would not be additional or significant because the refuge would still be able to carry out its other priority actions and obligations in meeting the purpose of the refuge and the mission of the Refuge System, such as habitat restoration and management, environmental education programs, and other important activities.	Under this alternative, there would be no additional expenditure of funds. Currently, administering the hunting opportunities on the refuge requires less than 5 percent of the refuge budget.

Key: NWR = National Wildlife Refuge; WGFD = Wyoming Game and Fish Department

Table 5. Affected Socioeconomics and Anticipated Direct and Indirect Impacts of the Proposed Action and Any Alternatives.

Affected Resources	<u>Alternative A (Proposed Action)</u> <i>Hunting of light geese (Ross's and snow geese) would be permitted in areas currently opened to migratory bird hunting.</i>	<u>Alternative B (No Action)</u> <i>The refuge would remain closed to public hunting of light geese.</i>
Local and Regional Economics		
<p>Cokeville Meadows NFW is located in Lincoln County in the southwest corner of Wyoming. Lincoln County has grown by 24 percent since 2000 with an estimated total population of 17,961 persons in 2012 (U.S. Census Bureau 2013). From 2000 to 2010, Lincoln was the fastest-growing Wyoming county in the Bear River watershed.</p> <p>Forestry, fishing, hunting, agriculture, and mining accounted for roughly 19 percent of total jobs in Lincoln County (U.S. Census Bureau 2011). Employment in timber is a small fraction of total employment and has decreased since 1999 (U.S. Department of Commerce 2010).</p> <p>Following the national trend, wildlife viewing has become increasingly popular, while hunting and fishing have decreased or remained stable in popularity in and around Lincoln County. Statewide, for residents 16 years of age and older, 84 percent of individuals surveyed watched wildlife, 39 percent fished, and 19 percent hunted in Wyoming. (FWS 2008).</p>	<p>The local economy would benefit from an additional opportunity to hunt light geese. Hunters would spend dollars locally on lodging, food, gas, and miscellaneous purchasing in the town of Cokeville and the surrounding area. Although estimating an amount is difficult, it is anticipated to be very small, because participation is not expected to increase due to adding light geese to species that may be hunted. This alternative has the best opportunity to increase public satisfaction and opportunity to enjoy the refuge.</p>	<p>There would be no economic benefit to the local economy by not allowing light goose hunting on the refuge. Anticipated impacts of a continued closure to light goose hunting on the refuge, environment, and community were based on scoping, public meetings, and comments completed and received in conjunction with the CCP. The community supports allowing hunting for all legal species, including light geese. Western Wyoming has a strong outdoor recreation heritage that includes fishing, and many in the community are awaiting opportunities on the refuge. Community support for the refuge would decline with a continued closure to light geese and confusion of what migratory game birds may be hunted.</p>
Environmental Justice		
	<p>The Service has not identified any potential high and adverse environmental or human health effects from this proposed action or any of the alternatives. The Service has identified no minority or low-income communities within the impact area.</p>	<p>Same as the Proposed Action Alternative.</p>

Affected Resources	<u>Alternative A (Proposed Action)</u>	<u>Alternative B (No Action)</u>
<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 minorities and low-income populations and communities.</p>	<p><i>Hunting of light geese (Ross's and snow geese) would be permitted in areas currently opened to migratory bird hunting.</i></p> <p>Minority or low-income communities would not be disproportionately affected by any impacts from this proposed action or any of the alternatives.</p>	<p><i>The refuge would remain closed to public hunting of light geese.</i></p>

Key: CCP = Comprehensive Conservation Plan

3.3 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). Cumulative impacts are the overall, net effects on a resource that arise from multiple actions. Impacts can “accumulate” spatially when different actions affect different areas of the same resource. They can also accumulate over the course of time from actions in the past, the present, and the future. Occasionally, different actions counterbalance one another, partially cancelling out each other’s effects on a resource. But more typically, multiple effects add up, with each additional action contributing an incremental impact on the resource.

Table 6. Anticipated Cumulative Impacts of the Proposed Action and Any Alternatives.

Other Past, Present, and Reasonably Foreseeable Activity Impacting Affected Environment	Descriptions of Anticipated Cumulative Impacts
<p>Hunting</p>	<p>Hunting for select species on the refuge began in 2014. Since opening, participation in hunting activities has remained light for a number of reasons. Land ownership patterns include a number of separate parcels, with limited vehicle access. Waterfowl often migrate from the valley early in the waterfowl seasons with the first winter storms. The ability to re-flood wetlands for fall migratory bird hunting seasons is limited by Wyoming water rights law. An abundance of public hunting opportunities are available on surrounding Bureau of Land Management, U.S. Forest Service, state, and private lands in the immediate area. All this combined has limited negative effects resulting from public hunting. Adding light geese to the species that can be hunted on the refuge is anticipated to produce negligible effects as a result of this public use for the reasons discussed above.</p> <p>(1) The proportion of the national waterfowl harvest that occurs on national wildlife refuges is only 6 percent (USFWS 2013b).</p> <p>(2) There are no populations that exist wholly and exclusively on national wildlife refuges.</p> <p>(3) Annual hunting regulations within the United States are established at levels consistent with the current population status.</p> <p>(4) Refuges cannot permit more liberal seasons than provided for in federal frameworks.</p> <p>(5) Refuges purchased with funds derived from the federal duck stamp must limit hunting to 40 percent of the available area.</p> <p>As a result, changes or additions to hunting on the refuge would have minor effects on light geese in Wyoming. Although the Proposed Action Alternative would increase hunting opportunities compared to the No Action Alternative, the slight increase in hunter activity would not rise to a significant level.</p>

Other Past, Present, and Reasonably Foreseeable Activity Impacting Affected Environment	Descriptions of Anticipated Cumulative Impacts
Other Wildlife-Dependent Recreation	
	Existing designated parking areas are on the perimeter of the refuge units. No additional roads or trails are proposed to support hunting and fishing or other wildlife-dependent recreation due to land ownership patterns and a high probability of flooding within the extensive floodplain. No additional cumulative impacts would result.
Lead Ammunition	
	Federal and state waterfowl hunting regulations, which include light geese, do not allow possession and/or use of other than nontoxic shot. This regulation would remain and be enforced for light goose hunting on the refuge.
Climate Change	
Climate change, whether it results from anthropogenic or natural sources, is expected to affect a variety of natural processes and associated resources. However, the complexity of ecological systems means that there is a tremendous amount of uncertainty about the impact climate change would actually have. In particular, the localized effects of climate change are still a matter of much debate. That said, the combination of increased frequency and severity of drought in the basin could dramatically reduce the amount water and therefore quality of fisheries habitat in the drainage. As a result, available fisheries habitat may decline.	While the impacts of climate change on refuge wildlife and habitats are not certain, allowing hunting on the refuge would not add to the cumulative impacts of climate change. The refuge uses an adaptive management approach for its hunting program, annually monitoring (through direct feedback from state and local user groups) and reviewing the hunting program, and revising it if necessary. The Service would adjust the hunting program, as necessary, to ensure that it would not contribute to the cumulative impacts of climate change on resident wildlife and migratory birds.

3.4 Monitoring

Coordination with WGFD law enforcement and wildlife management staff would continue. Refuge and WGFD staff would complete compliance checks to ensure that hunters comply with state and federal regulations. Wildlife surveys would continue in coordination with the WGFD. Results from research completed on the refuge would be included and considered for any future management decisions for hunting.

3.5 Summary of Analysis

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

Alternative A – Proposed Action Alternative

Under this alternative, hunting of light geese would be allowed. Confusion would be cleared up for the public of what species were open to hunting, because all other species of ducks and geese are currently open to hunting. The general public, would be allowed an additional opportunity to harvest light geese, benefitting health and providing healthy food. Direct mortality to light geese would occur during open seasons. Disturbance to other species of wildlife could occur but is expected to be infrequent and seasonal. Most migratory game bird hunters would primarily be pursuing other species of ducks and geese that are much more common and predictable than light geese, so all additional negative impacts over what would already be expected would be negligible.

The reasonably foreseeable future actions would include acquisition of additional lands within the approved refuge boundary and implementation of other wildlife-dependent recreational activities such as wildlife observation and photography, and wildlife interpretation and education. As additional lands are acquired, they would be considered for inclusion in areas open to migratory game bird hunting. Wildlife observation and photography as well as wildlife interpretation and education would be established to reduce conflicts with hunters, anglers, and other refuge visitors. Combining hunting of light geese with other public uses and refuge management activities, and the reasonably foreseeable future actions, cumulative impacts would not rise to the level of materially detracting from or interfering with refuge purposes and the Refuge System mission, and would not be considered significant for this EA. The refuge would meet one of the goals of the Refuge System of providing compatible, wildlife-dependent recreation.

Alternative B – No Action Alternative

Under this alternative, no hunting of light geese would be allowed. Confusion for the public would remain concerning which species is open to hunting. There would be no potential disturbance to wildlife from light goose hunting. There would be no direct mortality to light geese from hunting. The refuge would not meet one of the goals of the Refuge System of providing compatible wildlife-dependent recreation.

3.6 List of Sources, Agencies and Persons Consulted

Individuals and agencies listed below were consulted during preparation of the 2014 Cokeville Meadows NWR CCP, which included opening to hunting (Proposed Action Alternative):

Federal Officials

- U.S. Representative Cynthia Lummis, Washington, DC
- U.S. Senator John Barrasso, Washington, DC
- U.S. Senator Mike Enzi, Washington, DC

Federal Agencies

- Bureau of Land Management, Kemmerer, Wyoming Bureau of Land Management, Rock Springs, Wyoming
- National Park Service, Fossil Butte National Monument, Kemmerer, Wyoming

- U.S. Department of Agriculture National Resources Conservation Service, Cokeville, Wyoming
- U.S. Department of Agriculture, Forest Service, Kemmerer, Wyoming USGS, Bozeman, Montana

Tribes

- Assiniboine and Sioux Tribes of Fort Peck, Poplar, Montana
- Cheyenne River Sioux Tribe, Eagle Butte, South Dakota
- Crow Creek Sioux Tribal Council, Fort Thompson, South Dakota
- Eastern Shoshone Business Council, Fort Washakie, South Dakota
- Lower Brule Sioux Tribal Council, Lower Brule, South Dakota
- Northern Arapaho Business Committee, Fort Washakie, Wyoming
- Northern Cheyenne Tribal Council, Lame Deer, Montana
- Northwestern Band of Shoshoni Nation of Utah, Brigham City, Utah
- Oglala Sioux Tribal Council, Pine Ridge, South Dakota
- Rosebud Sioux Tribal Council, Rosebud, South Dakota
- Santee Sioux Tribal Council, Niobrara, Nebraska
- Standing Rock Sioux Tribal Council, Fort Yates, North Dakota

State Officials

- Governor Dave Freudenthal, Cheyenne, Wyoming
- Representative Kathy Davison, Kemmerer, Wyoming
- Representative Allen M. Jaggi, Lyman, Wyoming
- Representative Robert M. McKim, Afton, Wyoming
- Representative Owen Petersen, Mountain View, Wyoming
- Representative Jim Roscoe, Wilson, Wyoming
- Wyoming State Senator Stan Cooper, Kemmerer, Wyoming
- Wyoming State Senator Dan Dockstader, Afton, Wyoming

State Agencies

- Idaho Department of Fish and Game, Boise, Idaho
- State Historic Preservation Office, Cheyenne, Wyoming
- State Historic Preservation Office, Laramie, Wyoming
- Utah Division of Wildlife Resources, Ogden, Utah

- WGFD, Cheyenne, Wyoming WGFD, Cokeville, Wyoming WGFD, Green River, Wyoming WGFD, Jackson, Wyoming WGFD, Lander, Wyoming WGFD, Pinedale, Wyoming

Local Governments

- Board of County Commissioners, Lincoln County, Kemmerer, Wyoming
- City of Afton, Wyoming
- City of Cokeville, Wyoming
- City of Evanston, Wyoming
- City of Kemmerer, Wyoming
- City of Montpelier, Idaho
- Green River Chamber of Commerce, Green River, Wyoming
- Lincoln County Planning Office, Kemmerer, Wyoming
- Lincoln County Weed and Pest District, Afton, Wyoming
- Randolph City Office, Randolph, Utah

Local Businesses

- Hideout Motel, Cokeville, Wyoming

Organizations

- American Bird Conservancy, Mountain Green, Utah
- Audubon Public Policy Office, Washington, DC
- Audubon Wyoming, Laramie, Wyoming
- The Conservation Fund, Jackson, Wyoming
- Defenders of Wildlife, Washington, DC
- Ducks Unlimited, Fort Collins, Colorado
- Hawkwatch International, Salt Lake City, Utah
- International Crane Foundation, Baraboo, Wisconsin
- Mule Deer Foundation, Salt Lake City,
- Utah National Trappers Association, Bedford, Indiana
- National Wildlife Refuge Association, Washington, DC
- The Nature Conservancy, Evanston, Wyoming
- North American Pronghorn Foundation, Rawlins, Wyoming
- Rocky Mountain Elk Foundation, Missoula, Montana
- Trout Unlimited, Logan, Utah

- Water for Wildlife Foundation, Lander, Wyoming
- The Wildlife Society, Bethesda, Maryland
- Wyoming Native Plant Society, Laramie, Wyoming
- Wyoming Outdoor Council, Lander, Wyoming
- Wyoming Stock Growers Association, Cheyenne, Wyoming
- Wyoming Wildlife Federation, Cheyenne, Wyoming
- Wyoming Wildlife Federation, Lander, Wyoming

Contacting Either by Phone or in Person

- Wyoming Game and Fish Department Staff from Cokeville, Pinedale, Green River, and Cheyenne, Wyoming.
- Wyoming Game and Fish Department light goose hunting regulations

3.7 List of Preparers

Name	Position	Work Unit
Tom Koerner	Project Leader	Central Sage-Steppe National Wildlife Refuge Complex (Green River, WY)
Katie Thule	Refuge Manager	Seedskadee/Cokeville Meadows NWRs
Vanessa Fields	Wildlife Biologist	Mountain-Prairie Regional Office (Lakewood, CO)
Kelly Hogan	Program Chief	Mountain-Prairie Regional Office (Lakewood, CO)

3.8 State Coordination

Numerous conversations concerning public hunting and fishing at Cokeville Meadows NWR have been held with the WGFD, including locally, regionally, and with their State leadership, starting with planning to establish the refuge more than three decades ago. The WGFD was well represented in the development of the refuge’s CCP completed in 2014, which included much discussion on hunting and fishing. Within the last six months, one on one conversations have also taken place locally, regionally, and with state leadership. The WGFD has consistently supported opening refuge to hunting, including light geese, according to applicable state regulations. In October and November of 2019, conversations with both the Green River Regional Office and the State Office of the WGFD occurred, where support to open the refuge to hunting, including light geese, according to the WGFD regulations, was again expressed.

3.9 Tribal Coordination

The Service mailed an invitation for comments to all tribes potentially affected by initiating an Environmental Assessment to open the refuge to light goose hunting. The Service extended an invitation to engage in government-to-government consultation in accordance with Executive Order 13175.

3.10 Public Outreach

Public outreach was conducted during the preparation and completion of Cokeville Meadows CCP, in which hunting of migratory game birds was considered. Scoping meetings, public meetings, and a public comment period were also held.

In addition, the refuge would make the public aware of the availability of the draft EA and light geese hunting plan via public notices on the refuge's website, through local newspapers, and in Seedskafee NWR's headquarters office. During a 30-day public comment period, the Service would accept comments in writing, in person, electronically, or in any other form the public wishes to present comments or information. Upon close of the comment period, all comments and information would be reviewed and considered. The final EA would address the comments submitted.

3.11 Determination

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

- The Service's action would not result in a significant impact on the quality of the human environment. See the attached "**Finding of No Significant Impact.**"
- The Service's action **may significantly affect** the quality of the human environment and the Service would prepare an Environmental Impact Statement.

Preparer Signature: _____ Date: _____

Name/Title/Organization: _____

Reviewer Signature: _____ Date: _____

Name/Title: _____

3.12 References

U.S. Census Bureau. 2013. State and county quickfacts.

<http://quickfacts.census.gov/qfd/index.html>

_____. 2011, American factfinder: Washington, DC, U.S. Census Bureau.

<http://factfinder2.census.gov/main.html> accessed online November 14, 2011.

U.S. Department of Commerce. 2010. County business patterns. Compiled using Headwaters Economics Economic profile system-human dimensions. Washington, DC: Census Bureau. [Pages unknown].

[USFWS] U.S. Fish and Wildlife Service. 2008. 2006 national survey of fishing, hunting, and wildlife—associated recreation. Washington, DC, U.S. Fish and Wildlife Service and U.S. Census Bureau. 164 p.

_____. 2013a. Hunting Plan and environmental assessment for Cokeville Meadows National Wildlife Refuge. Green River, Wyoming: U.S. Department of the Interior, Fish and Wildlife Service. Refuge files.106 p.

_____. 2013b. Issuance of annual regulations permitting the hunting of migratory birds, final supplemental environmental impact statement. USFWS, Division of Migratory Birds and Management, Laurel, MD. 418 p.

_____. 2014. Comprehensive conservation plan—Cokeville Meadows National Wildlife Refuge. Wyoming. Lakewood, CO: U.S. Department of the Interior, Fish and Wildlife Service. 162 p.

_____. 2019. Waterfowl population status, 2019. U.S. Department of the Interior, Washington, D.C. <https://www.fws.gov/migratorybirds/pdf/surveys-and-data/Population-status/Waterfowl/WaterfowlPopulationStatusReport19.pdf>

_____. 2020a. Draft light goose hunting plan. Cokeville Meadows National Wildlife Refuge, Green River, Wyoming. 21 p. <https://www.fws.gov/mountain-prairie/huntfish.php#>

_____. 2020b. Draft compatibility determination for hunting of light geese (snow and Ross geese). Cokeville Meadows National Wildlife Refuge, Green River, Wyoming. 6 p.

[WGFD] Wyoming Game and Fish Department. 2019. Annual report of small game, upland game birds, migratory game birds, furbearer, wild turkey and falconry harvest. 106 p.

https://wgfd.wyo.gov/WGFD/media/content/PDF/Hunting/Harvest%20Reports/HR2018_SMUGReport.pdf

Wyoming Statewide Comprehensive Outdoor Recreation Plan 2009–2013.

<http://www.wyoparks.state.wy.us/>

APPENDIX A OTHER APPLICABLE STATUTES, EXECUTIVE ORDERS, AND REGULATIONS

Statutes, Executive Orders, and Regulations
Cultural Resources
<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>
Fish and Wildlife
<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>
Natural Resources
<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>
Water Resources
<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>

Key: CFR = Code of Federal Regulations; U.S.C. = U.S. Code