

# **Draft Environmental Assessment**

## **for Hunting on Pathfinder National Wildlife Refuge**

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# Draft Environmental Assessment for Hunting on Pathfinder National Wildlife Refuge

**Date:** February 26, 2020

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 United States (U.S.) 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 Pathfinder National Wildlife Refuge (NWR) to mourning dove hunting. The refuge has four separate units—Sweetwater Arm, Goose Bay, Deweese Creek, and Sage Creek—totaling 16,806 acres (Figure 1). This EA and companion hunting plan (USFWS 2020a) is in accordance with the comprehensive conservation plan (CCP) completed by the Service in 2008.

### 1.2 Background

This 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 original. The final decision on the proposed action will be made at the conclusion of the public comment period for the EA and the Draft 2020–2021 Refuge-Specific Hunting and Sport Fishing Regulations. The Service cannot open a refuge to hunting or fishing until a final rule has been published in the Federal Register, formally opening the refuge to hunting or fishing.

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 U.S. Fish and Wildlife Service Manual.

The origins of the present-day refuge can be traced to June 17, 1902 when Congress authorized the Bureau of Reclamation to build the Pathfinder Dam and Reservoir in central Wyoming. When dam construction was completed in 1909, the refuge was established on the reservoir as an overlay refuge on Reclamation lands. As stated in Executive Order 7425, the purpose of the refuge is “as a refuge and breeding ground for birds and other wildlife” (Executive Order 7425, 1936). Wildlife management must be compatible with those uses for which Reclamation acquired the land. For more information on refuge establishment, acquisition, and management history, please see the refuge’s 2008 CCP: [https://www.fws.gov/mountain-prairie/refuges/completedPlanPDFs\\_M-S/ptf\\_2008\\_ccpfinal\\_all.pdf](https://www.fws.gov/mountain-prairie/refuges/completedPlanPDFs_M-S/ptf_2008_ccpfinal_all.pdf).

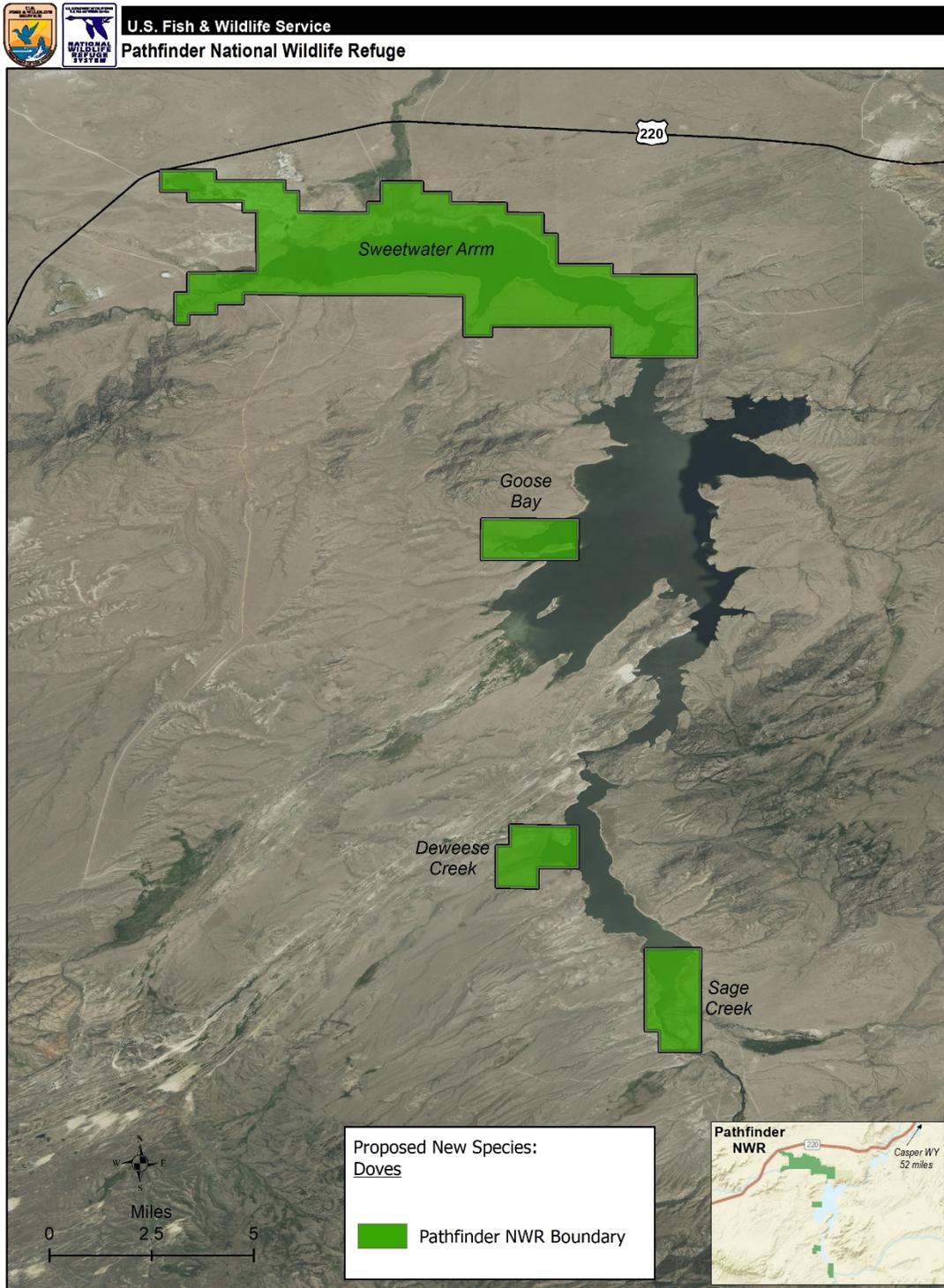


Figure 1. Map of Pathfinder Refuge and Proposed New Hunting Opportunity.

The mission of the Refuge System, as outlined in the NWRSA and as amended by the 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;
- 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.

The refuge is currently open to hunting ducks, coots, mergansers, deer, pronghorns, upland gamebirds, and small game. Most public use is believed to occur on the refuge’s largest unit, the Sweetwater Arm, due to its size and location close to a main highway and the city of Casper. The Sage Creek unit is fairly small and remote. Goose Bay and Dewese Creek are small, extremely remote units surrounded by Bureau of Land Management (BLM) lands that probably only see occasional use by hunters and jet skiers or boaters in high-water conditions.

### **1.3 Purpose and Need for the Proposed Action:**

The purpose of this proposed action is to provide compatible wildlife-dependent recreational opportunities on Pathfinder 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 Refuge System” and “ensure that opportunities are provided within the Refuge System for compatible wildlife-dependent recreational uses” (16 U.S.C. 668dd(a)(4)).

In the 2008 CCP for the refuge, the vision statement included language that states that the Service would “identify appropriate public use opportunities and provide where possible.” The plan also set an objective to enhance the hunting program and provide hunting opportunities while working with partners such as the Wyoming Game and Fish Department (WGFD).

Conservation and outdoor recreation go hand in hand. As public land stewards, the Service faces many challenges managing America’s natural resources for recreation. Luckily, hunters, anglers, and other outdoor enthusiasts have been major supporters of our work. But over the years, fewer people have been participating in traditional outdoor activities, making it harder to achieve our conservation missions. We, the Service, are looking to support current recreation participation while also attracting new audiences and providing new opportunities.

Through recruitment, retention, and reactivation, we are seeking to create new participants or increase participation rates of current or lapsed outdoor recreationists. Outdoor recreationists engage in outdoor recreation dependent on wildlife and fisheries, including, but not limited to, hunting, fishing, wildlife observation, photography, education, and interpretation. While the reasons for engaging in outdoor activities are more varied than in the past, connecting with nature and each other remains a driving factor for all recreationists.

## **2.0 Alternatives**

### **2.1 Alternatives Considered**

#### **Alternative A – Open Pathfinder Refuge to Dove Hunting – Proposed Action Alternative**

The refuge has prepared a hunting plan (USFWS 2020a), which is presented in this document as the Proposed Action Alternative.

Under the Proposed Action Alternative, we would open the refuge to mourning dove hunting in accordance with dates and regulations established by the WGFD. All refuge units—Sweetwater Arm, Goose Bay, Dewese Creek, and Sage Creek—totaling 16,806 acres, are covered in the proposed action (see Figure 1).

Nontoxic shot (steel or other federally approved nontoxic shot) would be required when taking or attempting to take migratory birds, upland gamebirds, or small game with a shotgun on the refuge.

This alternative offers increased opportunities for public hunting and fulfills the Service’s mandate under the Improvement Act. The Service has determined that the hunting plan is compatible with the purposes of the refuge and the mission of the Refuge System (USFWS 2020b). There is no added cost to administer the dove hunt beyond the costs associated with administering the current hunt program on the refuge. No more infrastructure would be added to the refuge as part of the proposed action.

#### **Alternative B – Current Management – No Action Alternative**

This alternative would be a continuation of the existing hunting program, which covers migratory gamebirds (geese, ducks, and coots), big game (white-tailed deer, mule deer, and pronghorns), and upland game (sage grouse and cottontail rabbits), in accordance with dates and regulations established by the WGFD. The use would be conducted over the entire refuge. Late-season upland gamebird hunting and small game hunting would open on the day following the

deer gun season. The upland gamebird hunting season would close when the state season closes. The small game hunting season would close on March 31 to reduce disturbance to waterfowl and other migratory birds.

A state-issued unit permit would be required to hunt deer. All hunters must follow state regulations for hunted species. The refuge is currently closed to all other hunting activities.

A developed campground and boat ramp are located at Bishops Point in the Sweetwater Arm unit and is administered by the Natrona County Roads, Bridges, and Parks Department. An interpretive overlook located along Highway 220 above Steamboat Lake interprets the refuge and likely receives several visits a day from the spring through the fall. Opportunities for wildlife observation and photography abound; however, they are self-guided and on foot.

### **3.0 Affected Environment and Environmental Consequences**

#### **3.1 Affected Environment**

This section describes the existing environmental and socioeconomic setting in the action area.

Pathfinder NWR is located in central Wyoming near the city of Casper (Figure 1) in Carbon and Natrona Counties. The refuge comprises four separate units—Sweetwater Arm, Goose Bay, Deweese Creek, and Sage Creek—totaling 16,806 acres. Major habitat types on the refuge include open water wetlands, uplands consisting of shrub and grasslands, and alkali flats. Most public use is believed to occur on the refuge’s largest unit, the Sweetwater Arm, due to its size and location close to a main highway and the city of Casper. The Sage Creek unit is fairly small and remote. Goose Bay and Deweese Creek are small, extremely remote units surrounded by BLM lands that probably only see occasional use by hunters and jet skiers or boaters in high-water conditions.

Tables 1 through 6 provide brief descriptions of each resource affected by the proposed action.

For more information regarding the affected environment, please see Chapter 3 of the refuge’s CCP, which can be found here: [https://www.fws.gov/mountain-prairie/refuges/completedPlanPDFs\\_M-S/ptf\\_2008\\_ccpfinal\\_all.pdf](https://www.fws.gov/mountain-prairie/refuges/completedPlanPDFs_M-S/ptf_2008_ccpfinal_all.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 covers 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.

Tables 1 through 5 provide:

- a brief description of the affected resources in the proposed action area;
- impacts 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.**

<p><b>Affected Resources</b></p>	<p><b><u>Alternative A (Proposed Action)</u></b> <i>Pathfinder NWR would be open to mourning dove hunting in accordance with dates and regulations established by the WGFD. All refuge units—Sweetwater Arm, Goose Bay, Deweese Creek, and Sage Creek—totaling 16,806 acres, are covered in the proposed action.</i></p>	<p><b><u>Alternative B (No Action)</u></b> <i>This alternative would be a continuation of the existing hunting program, which covers migratory gamebirds, big game, and upland game, in accordance with dates and regulations established by the WGFD. The use would be conducted over the entire refuge.</i></p>
<p><b>Mourning Dove</b></p>		
<p>Mourning doves (doves) are present on the refuge. Regular sightings of doves on the refuge and the surrounding area have been recorded on ebird.org. However, there is no data on mourning dove use on the other units of the refuge.</p> <p>Weather conditions in late August and early September can greatly influence dove abundance and harvest in Wyoming. In many years, doves are present into mid-September and then migrate out of the area, although an early frost can lead to migration starting sooner.</p>	<p>The refuge lies within WGFD hunt area 6. In 2018, there were 324 dove hunters and 1,380 doves harvested across the entire unit (just under 5 doves per hunter) (WGFD 2018a). Most hunting is expected to occur in the Sweetwater Arm unit due to its size and accessibility compared to the other units. Doves will be most abundant at the beginning of the hunting season (early to mid-September), before migrating out of the area. During this period, there are no other hunting opportunities on the refuge. We estimate fewer than 20 total dove hunters each year and a harvest of five doves per hunter. For these reasons, we expect dove harvest on the refuge would be fewer than 100 and overall impact to doves on the refuge to be negligible.</p>	<p>Under this alternative, the refuge would remain closed to dove hunting. Thus, no impacts to dove populations would be expected.</p>
<p><b>Other Wildlife and Aquatic Species</b></p>		
<p>Wildlife use of the refuge covers pronghorn, mule deer, sage thrasher, horned lark, meadow lark, sage-grouse, rattlesnake, and white-tailed prairie dog. Steamboat Lake and Soda Lake are used by American avocet, Wilson’s phalarope, and other shorebirds for migration and breeding, as well as several duck species, Canada geese, coot, and eared grebe.</p>	<p>The number of dove hunters expected to use the refuge is unknown but is predicted to be less than 20 (see above).</p> <p>Gunfire, and associated hunter activity, would disrupt birds and other wildlife during legal (daylight) shooting hours and likely cause dispersal. This impact would be mostly limited to the first two weeks in September between the opening of dove season and mid-September when most doves migrate out of the area. Displaced birds and wildlife could move to undisturbed areas on the refuge or leave the refuge entirely. This negative impact is expected to be temporary and negligible.</p>	<p>Under this alternative, the refuge would remain closed to dove hunting. The uplands would continue to be used by common refuge species such as pronghorns, mule deer, sage thrashers, and meadowlarks.</p>

<b>Affected Resources</b>	<b><u>Alternative A (Proposed Action)</u></b> <i>Pathfinder NWR would be open to mourning dove hunting in accordance with dates and regulations established by the WGFD. All refuge units—Sweetwater Arm, Goose Bay, Deweese Creek, and Sage Creek—totaling 16,806 acres, are covered in the proposed action.</i>	<b><u>Alternative B (No Action)</u></b> <i>This alternative would be a continuation of the existing hunting program, which covers migratory gamebirds, big game, and upland game, in accordance with dates and regulations established by the WGFD. The use would be conducted over the entire refuge.</i>
<p>The smaller lakes can be dry much of the time, but under the right conditions with snowmelt and/or big rain runoff, they can attract large numbers of waterbirds.</p> <p>Use of the reservoir by waterbirds is minimal, likely due to poor water conditions resulting in poor food production, along with disturbance on the water and shorelines from boating, fishing, camping, and all-terrain vehicle (ATV) use.</p>		<p>Smaller lakes that periodically go dry would continue to support waterbirds when conditions allow. Human-caused disturbance and poor food production in the reservoir would likely continue to have a negative impact on waterbird use.</p>
<b>Threatened and Endangered Species and Other Special Status Species</b>		
<p>We reviewed seven species for possible impacts for the proposed action: blowout penstemon, Ute ladies'-tresses, least tern, piping plover, whooping crane, pallid sturgeon, and western prairie fringed orchid (USFWS IPAC database, 2019). Except for blowout penstemon and Ute ladies'-tresses, the remaining species are within a broader "Platte River System" species group. The refuge does fall within the North Platte drainage of the Platte River System. Since these species can be affected by water depletions in the Platte River System, they are covered even though they may or may not occur on or in vicinity of the refuge.</p>	<p>The proposed action (opening the refuge to dove hunting) does not affect or alter the way the refuge uses water during the spring and summer. Nothing in the proposed action would change the amount of water in the North Platte River System. Therefore, for any water related-effects to the Platte River species (least tern, piping plover, whooping crane, pallid sturgeon, western prairie fringed orchid), we expect no effect.</p> <p>Blowout penstemon has been documented in the area around the refuge. Most of the current distribution covers the Sage Creek, Goose Bay, and Deweese Creek units, which are small, extremely remote units surrounded by BLM lands that probably only see occasional use by hunters and jet skiers or boaters in high-water conditions. Only a small portion of the larger, more accessible Sweetwater Arm unit is in the blowout penstemon range map (WYNDD 2019).</p>	<p>Under this alternative, the refuge would remain closed to dove hunting; thus, no impacts to threatened or endangered species would be expected beyond what already exists with current public uses. Although no threatened or endangered species are currently known to occur on the refuge, if located, they would be protected from intentional or unintended impacts by altering activities where these species occur.</p>

<p style="text-align: center;"><b>Affected Resources</b></p>	<p style="text-align: center;"><b><u>Alternative A (Proposed Action)</u></b></p> <p><i>Pathfinder NWR would be open to mourning dove hunting in accordance with dates and regulations established by the WGFD. All refuge units—Sweetwater Arm, Goose Bay, Deweese Creek, and Sage Creek—totaling 16,806 acres, are covered in the proposed action.</i></p>	<p style="text-align: center;"><b><u>Alternative B (No Action)</u></b></p> <p><i>This alternative would be a continuation of the existing hunting program, which covers migratory gamebirds, big game, and upland game, in accordance with dates and regulations established by the WGFD. The use would be conducted over the entire refuge.</i></p>
<p>The current known range of blowout penstemon in Wyoming consists of the Ferris Dunes area in northwest Carbon County, where the plant is restricted to two habitat types: steep, northwest facing slopes of active sand dunes with less than 5 percent vegetative cover; and north-facing sandy slopes on the lee side of active blowouts with 25 to 40 percent vegetative cover.</p> <p>Ute ladies'-tresses is endemic to moist soils near wetland meadows, springs, lakes, and perennial streams where it colonizes early successional point bars or sandy edges. The elevation range of known occurrences is 4,200 to 7,000 feet (although no known populations in Wyoming occur above 5,500 feet). Soils where Ute ladies'-tresses have been found typically range from fine silt/sand to gravels and cobbles, as well as to highly organic and peaty soil types. Ute ladies'-tresses is not found in heavy or tight clay soils or in extremely saline or alkaline soils. Ute ladies'-tresses typically occurs in small, scattered groups found primarily in areas where vegetation is relatively open (USFWS 2019).</p>	<p>Suitable habitat, such as active sand dunes and blowouts, are not known to occur on the refuge. The refuge is within the area of influence for the Ute ladies'-tresses but is not known to occur on the refuge or in the surrounding area. For both blowout penstemon and Ute ladies'-tresses, any direct effects to the plants or substrates caused by hunter activity would be minimal and short-term in nature.</p>	

<p style="text-align: center;"><b>Affected Resources</b></p>	<p style="text-align: center;"><b><u>Alternative A (Proposed Action)</u></b></p> <p><i>Pathfinder NWR would be open to mourning dove hunting in accordance with dates and regulations established by the WGFD. All refuge units—Sweetwater Arm, Goose Bay, Deweese Creek, and Sage Creek—totaling 16,806 acres, are covered in the proposed action.</i></p>	<p style="text-align: center;"><b><u>Alternative B (No Action)</u></b></p> <p><i>This alternative would be a continuation of the existing hunting program, which covers migratory gamebirds, big game, and upland game, in accordance with dates and regulations established by the WGFD. The use would be conducted over the entire refuge.</i></p>
<p><b>Vegetation</b></p>		
<p>Pathfinder Reservoir is part of a system of dams and reservoirs run by the Bureau of Reclamation. Major habitat types include open water wetlands, uplands consisting of shrub and grasslands, and alkali flats.</p> <p>Fluctuations in reservoir water levels create cutbank and sandy shorelines, resulting in the establishment of little emergent vegetation (i.e., cattails and rushes). The biological consequences of these variable water levels include a lack of reliable emergent or submergent vegetative growth; shorelines that are primarily sandy, varying from bare sand and rock to partially or fully vegetated with annuals; potentially significant weed issues in low-water years (tamarisk is currently scattered around the reservoir below the high-water line); Most of the lands above the high-water line of Pathfinder Reservoir consists of shrub-dominated uplands and rock outcrops. The upland vegetation is primarily dominated by sagebrush of various species and heights.</p> <p>Alkali flats are predominately flat lands and seasonally dried-up wetland basins with strongly saline soils.</p>	<p>The number of dove hunters using the refuge is unknown but is predicted to be low due to the remote access to most of the refuge (see above). Dove hunting would also be limited in most years to the first two weeks in September from the start of the hunting season until birds migrate out in mid-September. Minimal disturbance or trampling of individual shrubs or grasses is expected as hunters navigate the landscape to hunting areas. However, the overall impact to refuge vegetation from dove hunters is expected to be negligible.</p>	<p>Under this alternative, the refuge would remain closed to dove hunting; thus, no impacts to vegetation would be expected beyond what already exists with current public uses. The Sweetwater Arm unit is the most accessible and most likely to experience impacts to vegetation. The other units of the refuge are small and remote and likely only see occasional use by hunters.</p>

Key: BLM = Bureau of Land Management; NWR = National Wildlife Refuge; WGFD = Wyoming Game and Fish Department;

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

<p style="text-align: center;"><b>Affected Resources</b></p>	<p style="text-align: center;"><b><u>Alternative A (Proposed Action)</u></b></p> <p><i>Pathfinder NWR would be open to mourning dove hunting in accordance with dates and regulations established by the WGFD. All refuge units—Sweetwater Arm, Goose Bay, Deweese Creek, and Sage Creek—totaling 16,806 acres, are covered in the proposed action.</i></p>	<p style="text-align: center;"><b><u>Alternative B (No Action)</u></b></p> <p><i>This alternative would be a continuation of the existing hunting program, which covers migratory gamebirds, big game, and upland game, in accordance with dates and regulations established by the WGFD. The use would be conducted over the entire refuge.</i></p>
<p>A developed campground and boat ramp are located at Bishops Point in the Sweetwater Arm unit and is administered by the Natrona County Roads, Bridges, and Parks Department. Hunting of ducks, coots, geese, mergansers, deer, and pronghorns is permitted throughout the refuge in accordance with state seasons.</p> <p>An interpretive overlook located along Highway 220 above Steamboat Lake interprets the refuge and likely receives several visits a day from the spring through the fall. Opportunities specific to wildlife observation and photography are minimal, as there are no formal tour routes, hiking trails, or signs.</p> <p>Refuge staff believe that most public use occurs on the refuge’s largest unit, the Sweetwater Arm, due to its size and location close to a main highway and the city of Casper. The Sage Creek unit is fairly small and remote. Goose Bay and Deweese Creek are small, extremely remote units surrounded by BLM lands that probably only see occasional use by hunters and jet skiers or boaters in high-water conditions.</p> <p>Hunting is allowed per state seasons. The number of hunters using the refuge is unknown but is predicted to be low due to the remote access to most of the refuge.</p> <p>Fishing will continue to be allowed on the main reservoir and in stream areas leading to it. Fishing is allowed per state seasons. The Service does not have control over fishing limits or seasonal closures.</p> <p>Although wildlife viewing and photography probably occur on other areas of the refuge, the only known uses occur at the Steamboat Lake area, which offers the best opportunities for these activities.</p>	<p>Dove season opens earlier than other current hunting opportunities on the refuge, which could lead to conflicts between users such as birders, anglers, or campers who might use the refuge in the early fall. However, the number of dove hunters during this period is expected to be low (less than 20). Dove hunting, which occurs in the uplands, would not be expected to result in conflicts with public use of the reservoir for water skiing, jet skiing, or pleasure boating. The overall impact of dove hunting on other public uses is expected to be negligible.</p>	<p>Under this alternative, the refuge would remain closed to dove hunting; thus, no added impacts to public uses would be expected. Current hunting activity is low, and we have not received complaints or detected or identified conflicts with other refuge public uses.</p>

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

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

<b>Affected Resources</b>	<b><u>Alternative A (Proposed Action)</u></b>	<b><u>Alternative B (No Action)</u></b>
<p>The likelihood of archaeological sites near the reservoir shoreline is high. Reservoir water levels fluctuate an average of 20 feet per year, and shoreline erosion may expose archaeological materials. During low-water periods, the collecting of artifacts likely occurs without the Service’s knowledge.</p>	<p><i>Pathfinder NWR would be open to mourning dove hunting in accordance with dates and regulations established by the WGFD. All refuge units—Sweetwater Arm, Goose Bay, Dewese Creek, and Sage Creek—totaling 16,806 acres, are covered in the proposed action.</i></p> <p>Due to the temporary and superficial use of refuge habitats during hunting activities, there should be no direct impacts to cultural resources under this alternative from visitors engaged in hunting activities as delineated in the hunting plan.</p>	<p><i>This alternative would be a continuation of the existing hunting program, which covers migratory gamebirds, big game, and upland game, in accordance with dates and regulations established by the WGFD. The use would be conducted over the entire refuge.</i></p> <p>Under this alternative, the refuge would remain closed to dove hunting and there would be no change to existing environmental conditions; subsequently, no direct or indirect impacts to cultural resources are anticipated under this alternative.</p>

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

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

<b>Affected Resources</b>	<b><u>Alternative A (Proposed Action)</u></b> <i>Pathfinder NWR would be open to mourning dove hunting in accordance with dates and regulations established by the WGFD. All refuge units—Sweetwater Arm, Goose Bay, Deweese Creek, and Sage Creek—totaling 16,806 acres, are covered in the proposed action.</i>	<b><u>Alternative B (No Action)</u></b> <i>This alternative would be a continuation of the existing hunting program, which covers migratory gamebirds, big game, and upland game, in accordance with dates and regulations established by the WGFD. The use would be conducted over the entire refuge.</i>
<b>Administration</b>		
<p>Since 1967, the refuge has been managed by Service staff headquartered at the Arapaho Refuge in Walden, Colorado. Refuge staff travel approximately 240 miles to conduct management activities at the refuge. Arapaho Refuge is part of the Central Sage-Steppe Refuge Complex. The complex has the Arapaho, Seedskaelee, Cokeville Meadows, Bamforth, Hutton Lake, Mortensen Lake, and Pathfinder NWRs. Law enforcement would be provided by an officer stationed at Seedskaelee NWR</p>	<p>The proposed mourning dove hunting opportunity would not have added costs for infrastructure, such as new parking lots, signs, or fencing. Annual mourning dove hunt administration costs for the refuge, covering salary, equipment, law enforcement, and brochures, would be approximately \$1,000. The proposed action would not require any more time for the refuge’s law enforcement officer to enforce hunting regulations on the refuge or from the refuge manager for overseeing and implementing the hunt program on the refuge. The proposed action would not impact the administration of the complex or affect the staff’s ability 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 and environmental education programs.</p>	<p>Under this alternative, the refuge would remain closed to dove hunting. Refuge staff would continue to provide limited management of the refuge to support the interpretive overlook, work with partners, and conduct law enforcement of refuge regulations and the current hunting program.</p>

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.**

<p><b>Affected Resources</b></p>	<p><b><u>Alternative A (Proposed Action)</u></b>  <i>Pathfinder NWR would be open to mourning dove hunting in accordance with dates and regulations established by the WGFD. All refuge units—Sweetwater Arm, Goose Bay, Deweese Creek, and Sage Creek—totaling 16,806 acres, are covered in the proposed action.</i></p>	<p><b><u>Alternative B (No Action)</u></b>  <i>This alternative would be a continuation of the existing hunting program, which covers migratory gamebirds, big game, and upland game, in accordance with dates and regulations established by the WGFD. The use would be conducted over the entire refuge.</i></p>
<p><b>Local and Regional Economics</b></p>		
<p>The refuge is located in central Wyoming between the cities of Casper, Rawlins, and Medicine Bow. A wide range of occupations are represented in the area; sales and office occupations are the largest sectors at 26 percent. Professional and related occupations employ 19 percent, while farming, fishing, and forestry occupations employ 1 percent of the population.</p> <p>Although very little data exists on actual visitation to the refuge, the Service estimates that more than half of the visitors to Pathfinder Reservoir visit the refuge, due to the Sweetwater Arm unit’s accessible location along the primary road entering the reservoir area. We also estimate that a high percentage of those who visit the refuge are locals, with most residing in nearby Casper. Off-site spending by visitors helps support local lodging and retail establishments in surrounding towns such as Casper and Medicine Bow.</p> <p>Approximately 10 percent of refuge visitor days are estimated to be from nonlocal visitors (Carver and Caudill 2007).</p>	<p>We expect the number of hunters that use the refuge exclusively for dove hunting to be small. Most of these hunters are also likely to be from the local commuting area. Overall, we expect the impact on the local and regional economy to be negligible.</p>	<p>Under this alternative, the refuge would remain closed to dove hunting; thus, there would be no added hunter activity. The current visitation would likely continue to be primarily from the nearby city of Casper. Hunters would continue to be a small percentage of the overall visitation and thus have a negligible impact on the local or regional economy.</p>

<p style="text-align: center;"><b>Affected Resources</b></p>	<p style="text-align: center;"><b><u>Alternative A (Proposed Action)</u></b></p> <p><i>Pathfinder NWR would be open to mourning dove hunting in accordance with dates and regulations established by the WGFD. All refuge units— Sweetwater Arm, Goose Bay, Deweese Creek, and Sage Creek—totaling 16,806 acres, are covered in the proposed action.</i></p>	<p style="text-align: center;"><b><u>Alternative B (No Action)</u></b></p> <p><i>This alternative would be a continuation of the existing hunting program, which covers migratory gamebirds, big game, and upland game, in accordance with dates and regulations established by the WGFD. The use would be conducted over the entire refuge.</i></p>
<p><b>Environmental Justice</b></p>		
<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>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 would not be disproportionately affected by any impacts from this proposed action or any of the alternatives.</p>	

Key: WGFD = Wyoming Game and Fish Department

### 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).

**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
<b>Hunting</b>	
<p>Mourning doves typically nest within shelterbelts, riparian zones, sagebrush habitats, and urban areas throughout Wyoming, but they are most abundant near irrigated, small grain fields. Breeding populations of most migratory gamebirds in Wyoming were stable or increasing through 2003, based on 5- and 10-year data sets (WGFD 2007). Based on call count records, the mourning dove population declined slightly, but the decline was nonsignificant.</p>	<p>Maintenance of mourning dove populations nationwide in a healthy, productive state is a primary management goal. Management activities cover population assessment, harvest regulation, and habitat management. Each year, tens of thousands of doves are banded and thousands of wings from harvested doves are analyzed to estimate annual survival, harvest rates, recruitment, and abundance. The resulting information is used by wildlife managers in setting annual hunting regulations (USFWS 2017). The most recent estimates show that there were 243 million mourning doves in the U.S. immediately prior to the 2017 hunting season.</p> <p>Compared to 2016, abundance remained about the same in 2017 in the Eastern and Western Management Units, but declined in the Central Management Unit, which includes Wyoming (Seamus 2018). Total abundance in the Central Management Unit was 133 million birds. Estimates for mourning dove total harvest, active hunters, and total days afield in the U.S. in 2017 were 11,561,100 birds, 709,000 hunters, and 2,052,400 days afield. Harvest and hunter participation in the Central Management Unit is 5,462,800 birds, 332,200 hunters, and 1,058,800 days afield.</p> <p>In Wyoming in 2018, dove harvest statewide was 20,420 birds (WGFD 2018a). In 2017, dove harvest, harvest success, and effort all decreased and were below the long-term average. WGFD bands mourning doves annually to help observe populations. In 2017, 772 doves were banded. (WGFD 2018b). In Wyoming, USFWS estimates a harvest of 11 doves per hunter in 2018 (Raftovich et al. 2018).</p> <p>The total number of dove hunters on the refuge each year is expected to be less than 20. The harvest per hunter on the refuge is estimated to be five doves or less. If each hunter harvests five doves each, that would be approximately 0.5 percent of the total dove harvest in Wyoming. This total is a negligible harvest compared with an estimated population of 243 million birds nationwide.</p>

Other Past, Present, and Reasonably Foreseeable Activity Impacting Affected Environment	Descriptions of Anticipated Cumulative Impacts
<b>Hunting Opportunities</b>	
<p>Besides the proposal in this document, in south-central Wyoming, the Service is also proposing to open the refuge and Hutton Lake to big game and upland game hunting.</p>	<p>Collectively, if all these proposals are implemented, this would add 19,620 acres of new hunting opportunities in south-central Wyoming. More hunting opportunities may help to support current recreation participation while also attracting new audiences and providing new opportunities. Increased participation in the outdoors can lead to greater support for wildlife conservation and the Service's mission.</p> <p>WGFD and the Service would continue to manage populations of big game, upland game, and migratory birds that are hunted on these refuges. Seasonal regulations and bag limits would be adjusted based on species' populations and hunter harvest. Collectively, the harvest on these refuges would be a small percentage of the overall harvest in Wyoming and nationwide. No long-term impact to these species is expected.</p>
<b>Climate Change</b>	
<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 availability of wetlands and grasslands across the primary breeding grounds in the United States and Canada. These habitat changes, if realized in the future, may 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 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 hunt program, annually monitoring (through direct feedback from state and local user groups) and reviewing the hunt program annually and revising annually (if necessary). The Service would adjust the hunt program as necessary to ensure that it does not contribute to the cumulative impacts of climate change on resident wildlife and migratory birds.</p>

Key: WGFD = Wyoming Game and Fish Department

### 3.4 Monitoring

Each year, monitoring activities provide information on harvest levels, population size, and habitat conditions for migratory birds in the United States. The Service's Division of Migratory Bird Management is responsible for conducting migratory bird surveys, 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 dove-hunting regulations are developed by the 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).

### **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**

The proposed action alternative would open 16,806 acres on the refuge for mourning dove hunting in accordance with State of Wyoming seasons and regulations. We do not expect the direct impacts of mourning dove harvest on the refuge to have any population level effects. Opening the refuge to hunting would result in short-term disturbance to wildlife. This covers temporary displacement of birds and other resident wildlife from foot traffic moving through the area and gunshots. This impact would be mostly limited to the first two weeks in September between the opening of dove season and mid-September when most doves migrate out of the area. Dove season opens earlier than other current hunting opportunities on the refuge. This could cause more conflict with other public uses on the refuge. However, the number of dove hunters during this period is expected to be low (less than 20) and the impacts negligible.

This alternative meets the purpose and needs of the Service as described above because it provides 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 Hutton Lake Refuge and the mission of the Refuge System (USFWS 2020b).

#### **Alternative B – No Action Alternative**

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

There would be no added 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 more hunting opportunities. Although this alternative has the least direct impacts of physical and biological resources, it would not support our mandates under the NWRSA and Secretarial Order 3356.

### **3.6 List of Sources, Agencies, and Persons Consulted**

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

- Wyoming Game and Fish Department

### 3.7 List of Preparers

Name	Position	Work Unit
Tom Koerner	Project Leader	Central Sage-Steppe National Wildlife Refuge Complex (Green River, WY)
Vanessa Fields	Wildlife Biologist	Mountain-Prairie Regional Office (Lakewood, CO)
Tara Wertz	Refuge Manager	Arapaho Refuge/Laramie Plains Refuge (Walden, CO)
Allison Parrish	Zone Archeologist (MT/UT/WY)	Arapaho Refuge/Laramie Plains Refuge (Walden, CO)

### 3.8 State Coordination

The refuge reviewed the operations and regulations for neighboring state wildlife management areas and refuges to find consistency where possible. WGFD leadership expressed interest in having the Service evaluate opening the refuge for dove hunting. This interest was congruent with the Department of Interior Secretarial Order 3356, "Hunting, Fishing, Recreational Shooting, and Wildlife Conservation Opportunities and Coordination with States, Tribes, and Territories."

Soon, we will send a letter and the draft EA to the state asking to coordinate with them to adjust the hunting plan to align, where possible, with state management goals. We will continue to consult and coordinate on specific aspects of the hunting plan to ensure safe and enjoyable recreational hunting opportunities.

### 3.9 Tribal Consultation

The Service mailed an invitation for comments to all Tribes potentially impacted by initiating an EA to open the refuge to mourning dove hunting. The Service extended an invitation to engage in government-to-government consultation in accordance with Executive Order 13175.

### 3.10 Public Outreach

The refuge will make the public aware of the availability of the draft EA and hunting plan via public notices on the refuge's website, through local newspapers, and in Arapaho NWR's and Seedskaadee NWR's headquarters offices. During a 30-day public comment period, the Service will 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 will be reviewed and considered. The final EA will address the comments submitted.

### 3.11 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.**"
- 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: \_\_\_\_\_

### 3.12 References

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- Seamans, M. E. 2018. Mourning dove population status, 2018. Washington, DC: U.S. Department of the Interior, U.S. Fish and Wildlife Service, Division of Migratory Bird Management.
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- . 2019. Ute Ladies’-tresses, Wyoming Ecological Services. [Internet]. <<https://www.fws.gov/wyominges/Species/ULT.php>> accessed December 11, 2019.
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- . 2020b. Draft Compatibility Determination for Recreational Hunting on Pathfinder National Wildlife Refuge. Great Falls, Montana. <<https://www.fws.gov/mountain-prairie/huntfish.php#>>
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- Wyoming Natural Diversity Database. 2019. <[https://wyndd.org/data\\_explorer](https://wyndd.org/data_explorer)> accessed December 2019.

**APPENDIX A      OTHER APPLICABLE STATUTES, EXECUTIVE ORDERS, AND REGULATIONS**

<b>Statutes, Executive Orders, and Regulations</b>
<b>Cultural Resources</b>
<p>American Indian Religious Freedom Act, as amended, 42 U.S.C. 1996 – 1996a; 43 CFR 7</p> <p>Antiquities Act of 1906, 16 U.S.C. 431-433; 43 CFR 3</p> <p>Archaeological Resources Protection Act of 1979, 16 U.S.C. 470aa – 470mm; 18 CFR 1312; 32 CFR 229; 36 CFR 296; 43 CFR 7</p> <p>National Historic Preservation Act of 1966, as amended, 16 U.S.C. 470–470x-6; 36 CFR 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 10</p> <p>Executive Order 11593 – Protection and Enhancement of the Cultural Environment, 36 Federal Register 8921 (1971)</p> <p>Executive Order 13007 – Indian Sacred Sites, 61 Federal Register 26771 (1996)</p>
<b>Fish and Wildlife</b>
<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 13; 50 CFR 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 10, 11, 12, 14, 300, and 904</p> <p>Migratory Bird Treaty Act, as amended, 16 U.S.C. 703–712; 50 CFR 10, 12, 20, and 21</p> <p>Executive Order 13186 – Responsibilities of Federal Agencies to Protect Migratory Birds, 66 Federal Register 3853 (2001)</p>
<b>Natural Resources</b>
<p>Clean Air Act, as amended, 42 U.S.C. 7401–7671q; 40 CFR 23, 50, 51, 52, 58, 60, 61, 82, and 93; 48 CFR 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 Federal Register 6183 (1999)</p>
<b>Water Resources</b>
<p>Coastal Zone Management Act of 1972, 16 U.S.C. 1451 et seq.; 15 CFR 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 320–330; 40 CFR 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 114, 115, 116, 321, 322, and 333</p> <p>Safe Drinking Water Act of 1974, 42 U.S.C. 300f et seq.; 40 CFR 141–148</p> <p>Executive Order 11988 – Floodplain Management, 42 Federal Register 26951 (1977)</p> <p>Executive Order 11990 – Protection of Wetlands, 42 Federal Register 26961 (1977)</p>

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