Final Environmental Assessment

for Archery Black Bear Hunting on Swan River National Wildlife Refuge

July 2020

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Final Environmental Assessment for Archery Black Bear Hunting at Swan River National Wildlife Refuge

Date: July 2020

This environmental assessment (EA) was prepared to evaluate the effects associated with allowing fall, archery-only, black bear hunting on Swan River National Wildlife Refuge (NWR) and complies with the National Environmental Policy Act (NEPA) in accordance with Council on Environmental Quality regulations (40 Code of Federal Regulations [CFR] 1500-1508) 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 allow fall, archery-only, black bear hunting on Swan River NWR, Lake County, Montana in accordance with the Benton Lake NWR Complex Comprehensive Conservation Plan (CCP) (USFWS 2012) and the Final Benton Lake National Wildlife Refuge Complex Big Game, Waterfowl, and Upland Bird Hunting Plan (USFWS 2020a). Black bear hunting has never been allowed on the refuge and we, the Service, propose to allow archery-only hunting for black bear on all 1,960 acres owned by the Service (Figure 1). On the refuge, archery hunting for black bear would be limited to the fall in accordance with the State of Montana seasons. In addition, all state regulations would apply including the prohibition of baiting or using dogs. Also, trapping bears would be prohibited on the refuge.

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 and fishing until a final rule has been 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, federal laws, and international treaties. Relevant guidance includes the National Wildlife Refuge System Administration Act of 1966 (NWRSAA), as amended by the National Wildlife Refuge System Improvement Act of 1997 (Improvement Act), Refuge Recreation Act of 1962, selected portions of the Code of Federal Regulations and the U.S. Fish and Wildlife Service Manual.

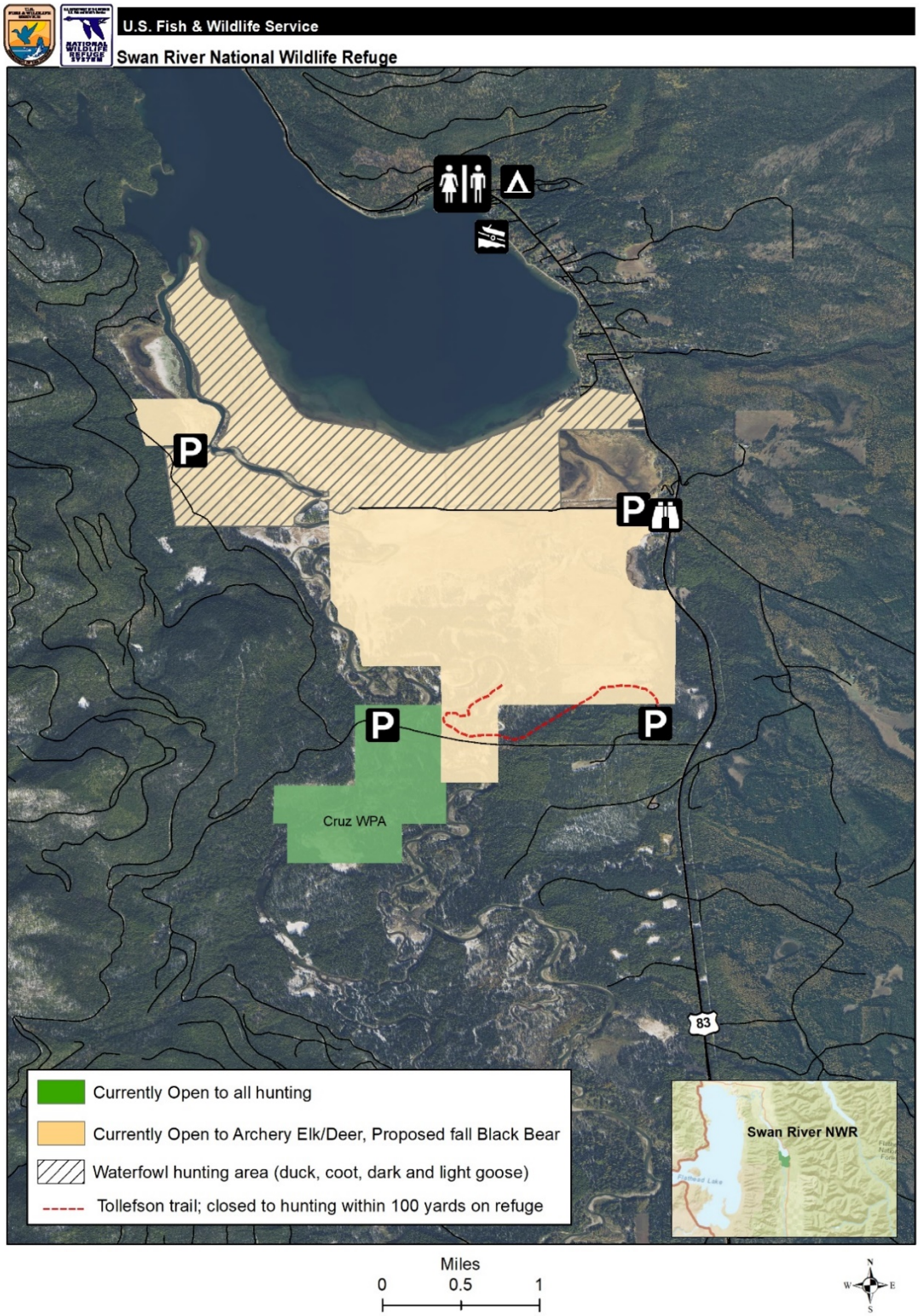

Figure 1. Map of Hunting Opportunities on Swan River National Wildlife Refuge.

The refuge was established pursuant to the Migratory Bird Conservation Act. The primary purpose of the refuge is for use as an inviolate sanctuary, or for any other management purpose, for migratory birds. Objectives of the refuge are to provide for waterfowl habitat and production and to provide for other migratory bird habitat. The refuge was established May 14, 1973, at the request of Montana Senator Lee Metcalf, who often hunted the area and desired to see it preserved.

The mission of the Refuge System, as outlined by the NWRSAA, 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 NWRSAA mandates the Secretary of the Interior in administering the Refuge System to (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; and
- monitor the status and trends of fish, wildlife, and plants in each refuge.

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

Currently, the refuge records 525 visitor use days per year. Visitors enjoy a variety of recreational activities related to the six wildlife-dependent recreational uses—hunting, fishing, wildlife observation, photography, interpretation, and environmental education. At present, the refuge is popular for waterfowl hunting and fishing with an estimated 60 hunt and 110 fishing visits annually.

1.3 Purpose and Need for the Proposed Action

The purpose of this proposed action is to provide compatible wildlife-dependent recreational opportunities on Swan River NWR. The need of the proposed action is to meet the Service's priorities and mandates as outlined by the NWRSAA to "recognize compatible wildlife-dependent recreational uses as the priority general use of the NWRS" and "ensure that opportunities are provided within the NWRS for compatible wildlife-dependent recreational uses" (16 U.S. Code 668dd[a][4]). Furthermore, this proposed action supports Secretarial Order 3356, which continues the Department's efforts to enhance conservation stewardship; increase outdoor recreation opportunities for all Americans, including opportunities to hunt and fish; and improve the management of game species and their habitats for this generation and beyond.

Conservation and outdoor recreation go together. As public land stewards, we face 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 are looking to maintain 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 wildlife and fisheries dependent recreation 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

<u>Alternative A – Allow Fall, Archery-Only Black Bear Hunting on Swan River National Wildlife Refuge – Proposed Action Alternative</u>

Pursuant to the Benton Lake NWR Complex CCP (USFWS 2012), the Final Benton Lake National Wildlife Refuge Complex Big Game, Waterfowl, and Upland Bird Hunting Plan (USFWS 2020a), and the associated Final Compatibility Determination for Big Game, Waterfowl, and Upland Bird Hunting on Benton Lake NWR Complex (USFWS 2020b) evaluated in this document, the refuge proposes to allow archery-only black bear hunting during the fall on Swan River NWR, in accordance with state regulations subject to the following conditions:

- We would allow fall, archery-only hunting of black bear within the boundary of the refuge.
- We would allow the use of portable blinds and stands, which could be installed no sooner than August 1, and removed by December 15 of each year. Stands or blinds must be placed a minimum of 100 yards from the Tollefson trail (Figure 1). Each hunter would be limited to one stand or blind and the hunter must have their automated licensing system number visibly marked on the stand.
- Game or trail cameras would be prohibited year-round.

- Baiting, the use of hounds, trapping and outfitting would be prohibited.

This alternative offers increased opportunities for public hunting and fulfills the Service's mandate under the Improvement Act. The Service has determined that this minor modification to the current hunting opportunity is compatible with the purposes of the Swan River NWR and the mission of the Refuge System (USFWS 2020b).

Alternative B – Continue Current Levels of Public Use on Swan River National Wildlife Refuge – No Action Alternative

Under the No Action Alternative, black bear hunting would not be allowed on Swan River NWR. Waterfowl hunting would continue on lands located north of Bog Road and recreational fishing would be allowed on the Swan River and Service-owned portions of Spring Creek as per state regulation. Archery deer and elk hunting would also continue refuge-wide. The refuge would continue to be open to wildlife observation and photography north of Bog Road and on recently acquired lands formerly owned by The Nature Conservancy (Oxbow Preserve) on the southern end of the refuge. Cross-country skiing and snowshoeing would continue to be allowed refuge-wide during applicable winter months.

2.2 Alternative Considered, But Dismissed from Further Consideration

Moose Hunting on Swan River National Wildlife Refuge

At Montana Fish, Wildlife, and Parks' (MFWP) request, we have excluded moose from this proposal. MFWP believes that the refuge offers one of the best opportunities for visitors to view moose in that portion of Lake County and want to carefully balance the needs of non-consumptive wildlife observers with additional opportunities for big game hunters.

3.0 Affected Environment and Environmental Consequences

3.1 Affected Environment

Swan River NWR is located in northwest Montana, 38 miles southeast of the town of Creston, in the serene and picturesque Swan Valley Mountain Range. The 1,960-acre refuge lies within the floodplain of the Swan River above Swan Lake and between the Swan Mountain Range to the east and the Mission Mountain Range to the west. In 2017, the refuge was refuge was expanded by 392 acres with the acquisition of The Nature Conservancy's Oxbow Preserve.

The Swan Valley was formed when glacial water poured down the steep slopes of the Mission Range into Flathead Lake. The valley floor is generally flat but rises steeply to adjacent forested mountain sides. Approximately 80 percent of the refuge lies within this valley flood plain, which is composed mainly of emergent marshes, wet meadows, and riparian forests. Reed canary grass has invaded many of the emergent marshes and meadows in recent decades and now dominates a large portion of the refuge. Deciduous and coniferous forests comprise the remaining 20 percent. Swan River, which once meandered through the flood plain, has been forced to the west side of the refuge by past earthquakes and deposits of silt. The result of these geologic events is a series of oxbow sloughs within the refuge flood plain.

For more information regarding the affected environment, please see Chapter 3 of the Benton Lake NWR Complex CCP (USFWS 2012), which can be found here: www.fws.gov/mountain-prairie/refuges/bnl.php.

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 will 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; and
- 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 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 future actions, regardless of what agency (federal or nonfederal) or person undertakes such other actions.

For more information on the environmental consequences of the proposed action, see Chapter 4 of the Benton Lake NWR Complex CCP (USFWS 2012). Therefore, this EA tiers from this document and provides additional specific analysis of the proposed action.

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

Affected Resources	Alternative A (Proposed Action) *The refuge would allow archery-only black bear hunting during the fall in accordance with state regulations.*	Alternative B (No Action) *Black bear hunting would not be allowed on Swan River NWR. There would be no change to current public use and wildlife management programs.*
Species to be Hunted		
Black Bear Black bears have been observed on the refuge, but typically in small numbers; any hunting would be opportunistic if black bears happened to be traveling through the refuge. The most likely scenario for harvesting a black bear would occur if an archery deer or elk hunter happened to encounter a black bear and had a black bear tag in his or her possession. Currently, MFWP Region 1, which includes the Swan River NWR, accounts for half of the black bear harvest in Montana. In 2017, the total black bear harvest in Region 1 (spring and fall) was 507 black bears. Region 1 has millions of acres of public land and hundreds of thousands of acres of corporate timberland. Outside of Swan Lake NWR, archery hunting would be allowed during the entire black bear season in MFWP Hunt Unit 106. Black bear hunting opportunities are almost unlimited.	It is anticipated that only 3–5 hunters would take advantage of this opportunity during the season, which would result in additional disturbance and direct mortality to the species being hunted. These impacts are considered to be negligible due to the small number of hunters and the limited number of days per year on which these impacts occur. Additionally, hunter success rates tend to be low for archery hunters. Black bears are regulated by the state based on annual survey data and it is assumed that the state would apply more restrictive regulations if harvest began to affect numbers.	Under this alternative, the refuge would remain closed to black bear hunting. Thus, no impacts on black bears would be expected. Waterfowl hunting would continue to occur on approximately 40 percent of the refuge located north of Bog Road. Limited fishing activity would still occur during the State designated season along areas of the Swan River currently closed to waterfowl hunting, and wildlife observation would still occur on the Tollefson Trail located on the south end of the refuge. Archery elk and white-tailed deer hunting would continue refuge-wide. Present impacts are considered to be negligible and would not affect hunted species in any discernible manner.

Affected Resources	**Alternative A (Proposed Action)** *The refuge would allow archery-only black bear hunting during the fall in accordance with state regulations.*	**Alternative B (No Action)** *Black bear hunting would not be allowed on Swan River NWR. There would be no change to current public use and wildlife management programs.*
Migratory Waterfowl and Other Birds		
Over 160 bird species are known to occur in the Swan River watershed with 110 breeding bird species documented. Wetland complexes in the Swan Valley provide important breeding habitat for 20 species of waterfowl, including mallard, lesser scaup, wood duck, redhead, ring-necked duck, canvasback, American wigeon, Canada goose, green-winged teal, blue-winged teal, cinnamon teal, northern shoveler, gadwall, common goldeneye, Barrow's goldeneye, harlequin duck, bufflehead, hooded merganser, common merganser, red-breasted merganser, and ruddy duck.	Fall, archery-only black bear hunting would occur refuge-wide, which may result in temporal disturbance in locations currently closed to public use. Most activity would occur in timbered areas where short term disturbance associated with hunter movement could temporarily displace some forest associated bird species. It is possible that archery black bear hunters could disturb waterfowl species in areas currently closed to waterfowl hunting. The silent nature of archery hunting and the absence of gun shots would minimize these possible impacts. Overall, these impacts would be negligible, and it is assumed that displaced bird species would reoccupy disturbed sites following hunter departure. Access would only occur during the fall hunting season; thus, there would be no anticipated impacts on birds during the nesting season, when they are most vulnerable to disturbance.	Under this alternative, the refuge would remain closed to black bear hunting. Thus, no additional impacts on migratory waterfowl and other birds would be expected.
Mammals		
A total of 69 species of mammals are known to inhabit the diverse habitats within the Swan Valley. This vast array of species includes large charismatic megafauna such as the grizzly bear, moose, and Canada lynx to species such as long-tailed voles and yellow-bellied marmots.	Archery-only black bear hunting would result in disturbance to mammal species beyond what occurs at present; however, these impacts are assumed to be negligible. There could be some temporary displacement, but it is assumed that resident and transitory mammals would immediately reoccupy sites where limited disturbance associated with hunting activity had occurred.	Under this alternative, the refuge would remain closed to black bear hunting. Thus, no additional impacts on refuge mammals would be expected.

Affected Resources	**Alternative A (Proposed Action)** *The refuge would allow archery-only black bear hunting during the fall in accordance with state regulations.*	**Alternative B (No Action)** *Black bear hunting would not be allowed on Swan River NWR. There would be no change to current public use and wildlife management programs.*
Common mammal species documented to occur within the valley include: northern pocket gopher, southern red-backed vole, long-tailed vole, montane vole, heather vole, northern grasshopper mouse, house mouse, Norway rat, northern bog lemming, yellow-bellied marmot, northern flying squirrel, coyote, red fox, striped skunk, long-tailed weasel, mink, badger, raccoon, white-tailed jackrabbit, mountain cottontail, and porcupine. See Species of Special Concern below for additional mammal species.		
Amphibians and Reptiles		
The Montana Natural Heritage Database documents ten species of amphibians and reptiles on record within the Swan Valley. Many of the species documented include S4 Status Species (apparently secure, though it may be quite rare in parts of its range or is suspected to be declining) such as common garter snake, painted turtle, rubber boa, Columbia spotted frog, long-toed salamander, and Rocky Mountain tailed frog. The northern alligator lizard is listed as a S3 Status Species and the western toad is listed as a S2 Status Species.	Archery black bear hunting would occur in timbered floodplain habitat where shallow, seasonal wetlands and moist habitat are located. While hunting would begin on the state-designated archery opening of September 1 when reptiles and amphibians would still be active, it is assumed that most would be inactive or in hibernation during the bulk of the open season. Any impacts would be negligible.	Under this alternative, the refuge would remain closed to black bear hunting. Thus, no additional impacts on refuge amphibians or reptiles would be expected.

Affected Resources	**Alternative A (Proposed Action)** *The refuge would allow archery-only black bear hunting during the fall in accordance with state regulations.*	**Alternative B (No Action)** *Black bear hunting would not be allowed on Swan River NWR. There would be no change to current public use and wildlife management programs.*
The northern leopard frog is listed as a S1 Status Species (at high risk because of extremely limited or rapidly declining population numbers, range, or habitat, making it highly vulnerable to global extinction or extirpation in Montana). Species not listed in the Natural Heritage Database but known to occur in the Swan Valley include Pacific tree frog, western skink, eastern racer, gopher snake, terrestrial garter snake, and western rattlesnake. A total of 16 species of amphibians and reptiles are known to inhabit the diverse habitats within the Swan Valley.		
Threatened and Endangered Species and Other Special Status Species		
Federally listed animal species found in the Swan Valley include the threatened bull trout, grizzly bear, yellow-billed cuckoo, water howellia, and Canada lynx. There is critical habitat for the bull trout and Canada lynx designated on or near the refuge. The wolverine, which is proposed for listing as threatened, also occurs in the watershed (USFWS 2019b).	While there would be no anticipated impacts on bull trout due to archery-only black bear hunting, there could be some temporary disturbance and or displacement of large carnivore species such as grizzly bears, wolverine, and Canada lynx. These species are transitory in nature and occasionally use the refuge as a migration corridor to move back and forth between the Bob Marshall Wilderness to the east and the Mission Wilderness to the west of the refuge. Considering that these occurrences are infrequent and archery hunting is minimally disturbing (both noise and visual) these impacts are believed to be negligible and thus, acceptable.	Under this alternative, the refuge would remain closed to black bear hunting. Thus, no additional impacts on refuge mammals would be expected.

Affected Resources	**Alternative A (Proposed Action)** *The refuge would allow archery-only black bear hunting during the fall in accordance with state regulations.*	**Alternative B (No Action)** *Black bear hunting would not be allowed on Swan River NWR. There would be no change to current public use and wildlife management programs.*
Water howellia is thought to be extinct in California and Oregon and is threatened in Washington, Idaho, and Montana. On Swan River NWR, water howellia in known from five small, vernal wetlands. Water howellia populations fluctuate with changes in the climate and it is estimated that the southern portion of the refuge supports approximately 5,000 plants, due in part to the variable drying regimes found across the refuge. Additional species of concern on the refuge include Townsend's bat, hoary bat, fringed myotis, fisher, and hoary marmot. Five rare plant populations and two rare lichens occur on the Swan River NWR. Round-leafed pondweed (*Potamogeton obtusifolious*) grows in the oxbow and adjacent ponds. Northern bastard toadflax (*Geocaulon lividum*) inhabits the wet spruce forest. Buchler fern (*Dryopteris cristata*) is found where carr vegetation and spruce forest intermingle. Small yellow lady's slipper (*Cyprepedium parviflorum*) grows on the refuge.	Grizzly bears are occasionally mistaken by hunters for black bears and accidentally killed. Grizzly bear mortality has been studied closely in the Northern Continental Divide ecosystem where the refuge is located (Costello et al. 2016; Mace et al. 2012; Mace and Chilton-Radant 2011; Northern Continental Divide Ecosystem [NCDE] Subcommittee 2020). Grizzly bear mortality due to mistaken identity by black bear hunters is not a common cause of death. In fact, based on decades of data on grizzly bear mortality in the NCDE, misidentification by hunters is one of the least common causes of grizzly bear mortalities (Costello et al. 2016; NCDE Subcommittee 2020). Rather than misidentification, the majority of human caused mortality that occurs during hunting is a result of shooting a grizzly bear in self-defense while hunting other species (NCDE Subcommittee 2020). Opening Swan River NWR to archery-only black bear hunting is not expected to contribute significantly to mortality of grizzly bears because the number of new users is expected to be less than 5 per year, and archery hunters are likely to be much closer to a bear when they decide to shoot, which reduces the likelihood of mistaken identity. Furthermore, the black bear hunt is not open in the spring, when grizzly bears are more likely to use riparian and open meadow habitats, such as those found on Swan River NWR. In the late summer and fall, when the hunt would occur, grizzly bears are often found more commonly in mid-to-upper elevation areas (Mace et al. 1999; McLellan and Hovey 2001).	

Affected Resources	**Alternative A (Proposed Action)** *The refuge would allow archery-only black bear hunting during the fall in accordance with state regulations.*	**Alternative B (No Action)** *Black bear hunting would not be allowed on Swan River NWR. There would be no change to current public use and wildlife management programs.*
	In addition, there are currently outreach programs in place that are targeted at hunters to emphasize patience, awareness, and correct identification of targets so that grizzly bear mortalities are reduced. In 2002, the State of Montana developed a computerized bear identification test, which hunters must pass prior to obtaining their black bear hunting license (see www.fwp.mt.gov/education/hunter/bearID/). Montana includes grizzly bear encounter management as a core subject in basic hunter education courses (Dood et al. 2006) and in all big game hunting regulations and encourages hunters to carry and know how to use bear spray (http://fwp.mt.gov/recreation/safety/wildlife/bears/bearCountry.html). Water howellia is an annual plant that germinates and survives in seasonal wetlands. At present, the Tollefson Trail passes through areas occupied by water howellia with no known impact on the species. Trail use occurs during the growing season and at a rate far higher than anticipated by black bear hunters, so no direct or indirect impacts would be anticipated beyond what might occur at present. It is unlikely that there would be any direct impacts associated with the proposed action, but any minimal impacts associated with hunter movement would be anticipated to be negligible. If present on the refuge, yellow-billed cuckoos would be expected to have migrated out of the area by the time fall archery season begins, so no impacts would occur. The other mammal species of concern may be present on the refuge and utilize the forested habitats. They may be displaced by archery bear hunters; however, we would expect these impacts to be temporary and create minimal disturbance.	

Affected Resources	**Alternative A (Proposed Action)** *The refuge would allow archery-only black bear hunting during the fall in accordance with state regulations.*	**Alternative B (No Action)** *Black bear hunting would not be allowed on Swan River NWR. There would be no change to current public use and wildlife management programs.*
Ecosystem Health		
Black bears can benefit the ecosystems where they occur and can positively affect soil health, vegetation and other wildlife populations. Black bears can have an impact on seed dispersal of fleshy-fruited plants by ingesting seeds and then depositing them over relatively long distances. The impact of ingestion by bears, and secondary dispersal by rodents, can have a further beneficial effect on seed germination (Auger et al. 2002; Enders and Vander Wall 2012; Harrer and Levi 2018). Bears can also affect forest ecosystems through damage to trees which can open the forest canopy and create foraging habitat for cavity-nesting birds and other taxa (Howe 1989; Mendia et al. 2019; Zysk-Gorczynska et al. 2015). Top predators in ecosystems can exert influence over herbivores through predation and other carnivores through competition (Ripple 2014) and thereby have a wide-ranging impact on the overall food web and ecosystem function (Brechte et al. 2019; Estes et al. 2011; Palomores et al. 1995). The impact of black bears on ecosystems is less well studied than some top predators, but black bears have been shown to have complementary effects for other top predators such as wolves in some instances and possibly additive effects in others (Ripple 2014). Although the American black bear is estimated to occupy only 59 percent of its historical range in North America, black bear populations are widespread and increasing (Garshelis et al. 2016; Ripple 2014).	The MFWP has studied black bear populations statewide, and in the Swan Valley specifically, as described in the "Black Bear Harvest Research & Management in Montana 2011, Final Report" (http://fwp.mt.gov/fishAndWildlife/management/blackBear/). This study was conducted to assess black bear harvest rates and population densities statewide. Specifically, this study summarized black bear harvest levels, hunter numbers, and harvest regulations; evaluated existing bear population management criteria; delineated black bear distribution in Montana; documented black bear harvest rates in Montana using three methods; developed estimates of black bear population size and density; estimated sustainable mortality levels for Montana black bears; and summarized the genetic structure of black bear populations. Using both DNA hair snagging and collaring methods, MFWP found that black bear populations in the Swan Valley were robust, and harvest rates were relatively low. Annual harvest rates in the Hunting District that includes Swan River Valley averaged approximately 10 percent for males and 4 percent for females. Overall, MFWP found that, ". . . Montana black bear hunter numbers and harvest levels have struck a balance with inherent black bear densities." Our proposal for black bear hunting is unlikely to alter this conclusion and have population-level effects on black bears on the Swan River refuge or beyond, in part because the refuge is a relatively small area, we expect few hunters, and because we are proceeding cautiously by limiting opportunity to archery only (personal communication, MFWP, T. Chilton-Radant). The average annual black bear harvest in Montana is just over 1,000 bears. If 1–2 bears are harvested on Swan River NWR, this is less than 0.2 percent of the statewide harvest.	Under this alternative, the refuge would remain closed to black bear hunting. Thus, no impacts on ecosystem health would be expected.

Affected Resources	**Alternative A (Proposed Action)** *The refuge would allow archery-only black bear hunting during the fall in accordance with state regulations.*	**Alternative B (No Action)** *Black bear hunting would not be allowed on Swan River NWR. There would be no change to current public use and wildlife management programs.*
	Therefore, there would not be a population level impact on black bears, nor would there be an extirpation of black bears as ecosystem drivers on the refuge. Consequently, the impact on ecosystem health would be a negligible.	
Vegetation		
Swan Valley is a biologically rich coniferous forest ecosystem located between the Bob Marshall and Mission Mountains wilderness complexes. The Swan Valley is unique among Montana's spectacular valleys in that it contains over 4,000 glacially derived wetlands. In fact, approximately 16 percent of the land in the Swan Valley is considered wetland habitat (lakes, rivers, ponds, marshes, wet meadows, peatlands, and riparian areas). By comparison, the remainder of Montana averages 1 percent wetland habitat. This fact, along with its diverse forest types, makes the Swan Valley ideal habitat for a diverse array of wildlife. Rare carnivores, threatened trout, and a high diversity of songbirds and waterfowl depend upon the Swan Valley's unique habitats.	Negligible impact is expected to vegetation from trampling of hunters, because of the low number of users and days of use expected. While it is possible that hunters could move invasive plant seed from infested areas of the refuge to areas where they currently do not occur it is unlikely that this would become a significant distribution vector. It is unlikely that additional visitation would increase risk.	Under this alternative, the refuge would remain closed to black bear hunting. Thus, no additional impacts on refuge vegetation would be expected.

Affected Resources	**Alternative A (Proposed Action)** *The refuge would allow archery-only black bear hunting during the fall in accordance with state regulations.*	**Alternative B (No Action)** *Black bear hunting would not be allowed on Swan River NWR. There would be no change to current public use and wildlife management programs.*
The Service recently contracted Swan Valley Connections, Condon, Montana, to conduct a baseline vegetation survey for the refuge. While it was previously assumed that moderately invasive species such as reed canarygrass (*Phalaris arundinaceae*) had become dominant in much of the wetland complex, Swan Valley Connections discovered that several desirable wetland alliances were still extant on the refuge. In total, the study revealed four upland, nine wetland, and ten riparian vegetation alliances on the refuge.		
Geology and Soils		
The Swan River Basin consists of a wide diversity of lakes, riparian areas, rivers, creeks, alpine and subalpine glacial lakes, and springs feed the basin. The Swan River forged from flows through the mountains, winds across the morainal foothills and through the valleys forming braided delta areas. The river travels over a dense forest floor composed of variously graded porous glacial till and alluvium, averaging 6.2 miles wide at an elevational range of 2,500 to 9,000 feet. Several large lakes (250 to 2,700 acres) occur along the course of the river and its main tributaries. These large lakes within the valley were carved by large alpine glaciers. Hundreds of kettle lakes, fens, bogs, and other lacustrine and palustrine wetlands, with many perched aquifers not directly connected to surface streams, lie scattered across the glacial and alluvial valley floors and foothills.	While there could be some minor soil compaction associated with the minimal amount of increased hunter activity, the proposed action would be anticipated to have no effect on the geology or soils of the Swan Valley or refuge.	Under this alternative, the refuge would remain closed to black bear hunting. Thus, no additional impacts on refuge geology or soils would be expected.

Affected Resources	**Alternative A (Proposed Action)** *The refuge would allow archery-only black bear hunting during the fall in accordance with state regulations.*	**Alternative B (No Action)** *Black bear hunting would not be allowed on Swan River NWR. There would be no change to current public use and wildlife management programs.*
Floodplains		
Forested riverine and palustrine wetlands fringe the river channel and dominate the extensive floodplain and relict oxbows interspersed throughout Swan River NWR. The refuge is situated in the Swan River delta as it enters Swan Lake on the north boundary of the refuge. A wide diversity of wetland habitat types exists throughout the delta, which is maintained by a combination of overland flow and shallow groundwater input.	The proposed action is anticipated to have no effect on refuge floodplains.	Same as the Proposed Action Alternative.

Key: MFWP = Montana Fish, Wildlife, and Parks; NCDE = Northern Continental Divide Ecosystem; NWR = National Wildlife Refuge

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

Affected Resources	Alternative A (Proposed Action) *The refuge would allow archery-only black bear hunting during the fall in accordance with state regulations.*	Alternative B (No Action) *Black bear hunting would not be allowed on Swan River NWR. There would be no change to current public use and wildlife management programs.*
Currently, Swan River NWR records approximately 525 visitor-use days per year. Visitors enjoy a variety of recreational activities related to the six wildlife-dependent recreational uses—hunting, fishing, wildlife observation, photography, interpretation, and environmental education—that are identified in the Improvement Act as the priority uses. Popular uses include waterfowl hunting, fishing, wildlife observation and photography. Winter activities such as cross-country skiing and snowshoeing are permitted refuge-wide when snow conditions allow. There are both spatial and temporal differences on when and where these uses occur and at present, there have been no conflicts among the various user groups. The Service recently acquired a 392-acre tract from The Nature Conservancy, which came with the 1.2-mile Tollefson Trail, which winds through riparian habitat at the southern end of the refuge. This habitat is used by black bears and is located in an easily accessible area for nature observers and archery hunters.	Various aspects of the proposed hunting program, including temporal and spatial restrictions, combined with the seasonal nature of wildlife dependent recreational activities on the refuges, would reduce the potential for conflict among refuge visitors. While hunting and other wildlife dependent public uses (e.g., wildlife observation and photography) would be available to the public in many of the same areas and times of year, the direct impacts on refuge visitors engaged in other priority public uses during the hunting season are expected to be minor. The hunting seasons occur when other public uses are at a minimum because they are outside the main tourist season. To ensure safety and minimize conflict between hunters and visitors engaged in wildlife photography or observation, the refuge would provide information about the hunting program's boundaries and seasons on the Complex's website, at refuge offices, and at parking areas. Because it is archery-only hunting, overlap impacts would be minimized because there would be no noise associated with the activity. In addition, law enforcement patrols would be conducted on a regular basis to contact the public and ensure compliance with state, federal, and refuge regulations. The refuge law enforcement staff would also monitor and collect information on the hunting program's participation and activities to ensure it does not interfere with other wildlife dependent public uses.	Visitor use is at such low levels that there currently are no conflicts among user groups. Under this alternative, the refuge would remain closed to black bear hunting. Thus, no additional impacts on visitor use would be expected.

Key: NWR = National Wildlife Refuge

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

Affected Resources	Alternative A (Proposed Action) *The refuge would allow archery-only black bear hunting during the fall in accordance with state regulations.*	Alternative B (No Action) *Black bear hunting would not be allowed on Swan River NWR. There would be no change to current public use and wildlife management programs.*
The Service has a trust responsibility to American Indian tribes that includes protection of the tribal sovereignty and preservation of tribal culture and other trust resources. Currently, the Service does not propose any project, activity, or program that would result in changes in the character of, or adversely affect, any historical cultural resource or archaeological site. When such undertakings are considered, the Service takes all necessary steps to comply with section 106 of the National Historic Preservation Act of 1966, as amended. The Service pursues compliance with Section 110 of the National Historic Preservation Act to survey, inventory, and evaluate cultural resources.	Implementation of an archery-only black bear hunt would have no anticipated effects on cultural resources.	Same as the Proposed Action Alternative.

Key: NWR = National Wildlife Refuge

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

Affected Resources	Alternative A (Proposed Action) *The refuge would allow archery-only black bear hunting during the fall in accordance with state regulations.*	Alternative B (No Action) *Black bear hunting would not be allowed on Swan River NWR. There would be no change to current public use and wildlife management programs.*
Land Use		
Swan River NWR is still under development but has a parking area with an interpretive kiosk and boardwalk, a fishing access site capable of supporting canoes and kayaks, a 1.2-mile walking trail at the southern end of the refuge, and several additional parking areas at strategic locations around the refuge boundary. Access to the west side is via a U.S. Forest Service road, which is very narrow and not designed to handle excessive traffic. The primary launch site for drift boats into the Swan River is also on a U.S. Forest Service road and adjacent to an antiquated bridge. The Service is in the process of evaluating methods to minimize past infrastructure impacts on refuge wetlands (River Design Group 2018). Historically, infrastructure has been developed for meadow hay removal and muskrat farming which have altered hydrologic characteristics of the Swan River floodplain. We have assembled baseline vegetation data, initiated shallow groundwater monitoring, and obtained LiDAR images to model bathymetry and project vegetation changes anticipated through restored hydrologic function. This analysis will provide the basis for future land management decisions such as development or removal of water management infrastructure while paving the way for cooperative farming and/or prescribed fire efforts to restore native habitat.	Archery-only black bear hunting is anticipated to result in an additional 3–5 visitors, which would seasonally result in additional vehicle traffic on refuge access routes and in limited parking areas. If popularity increases or the activity results in numerous visits by each hunter, it could exacerbate road and access point maintenance, particularly on the southern boundary. This could have a minor, negative impact.	Under this alternative, the refuge would remain closed to black bear hunting. Thus, no additional impacts on refuge land use would be expected.

Affected Resources	**Alternative A (Proposed Action)** *The refuge would allow archery-only black bear hunting during the fall in accordance with state regulations.*	**Alternative B (No Action)** *Black bear hunting would not be allowed on Swan River NWR. There would be no change to current public use and wildlife management programs.*
Administration		
Administering the hunting program would annually require staff time from the refuge managers, Complex biologist, maintenance workers, administrative assistant, and law enforcement officers to coordinate with MFWP staff, develop an informational brochure with regulations, produce news releases, respond to hunter inquiries, conduct hunter and visitor outreach, minimize conflicts among users, conduct law enforcement, maintain boundary posting and parking areas, monitor impacts on wildlife, habitat, and visitor use, and ensure public safety. The annual cost of the Complex's proposed hunting program is estimated to be $45,000 (3.5 percent) of the overall operating budget of $1,300,000. This cost includes staff and operating expenses for refuge law enforcement and hunter assistance prior to and during the hunting season. This estimate also includes refuge staff activities associated with evaluating resources available for hunting (e.g., biological assessment of target species) as well as preparing for (e.g., developing annual brochures, managing habitat conditions, and special signage and access) and monitoring hunting activities.	Opening Swan River NWR to archery black bear hunting would not require additional signage or infrastructure (such as road and parking area development). Signage and parking areas have been updated with the opening of archery deer and elk during the fall of 2018. The Cruz WPA, acquired in 2019 and located just south of the Swan River NWR, would provide rifle hunting opportunities for deer, elk, and black bears. Parking lot and sign maintenance would be done with existing staffing. This is expected to have a minimal impact on refuge administration.	The budget identified in the introductory section is adequate to administer the current public use opportunities on the refuge.

Key: MFWP = Montana Fish, Wildlife, and Parks; NWR = National Wildlife Refuge; WPA = Waterfowl Protection Area

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

Affected Resources	Alternative A (Proposed Action) *The refuge would allow archery-only black bear hunting during the fall in accordance with state regulations.*	Alternative B (No Action) *Black bear hunting would not be allowed on Swan River NWR. There would be no change to current public use and wildlife management programs.*
Local and Regional Economics		
The Swan Valley watershed consist of lands owned by the U.S. Forest Service, the Service, Montana Department of Natural Resources, The Nature Conservancy, and private citizens or companies (e.g., timber companies). Most of the middle and high elevation forested lands within the watershed are administered by the U.S. Forest Service. Private lands are concentrated in the low elevation portions of the watershed. The local economy is based on a combination of tourism, the timber industry, and government employment (state, local, and federal).	The proposed action would not have any effect on land ownership or on Swan Valley demographics or employment. The addition of the proposed archery-only black bear hunt would have the potential to bring an additional 3–5 visitors to the Swan Valley, thus increasing the potential for ecotourism profit. It is possible that this visitation, when combined with other opportunities both on and off refuge, that the cumulative effect could result in additional ecotourism jobs.	Under this alternative, the refuge would remain closed to black bear hunting. Thus, no additional impacts on the local and regional economies would be expected.
Tourism Industry		
The Swan Valley economy is largely based on the tourism industry and, as such, a proposed use on Swan River NWR that has the potential to increase visitation would have a positive effect for that segment of the local community.	The proposed archery-only black bear hunt would have the potential to bring an additional 3–5 visitors to the Swan Valley, thus increasing the potential for ecotourism profit.	Under this alternative, the Refuge would remain closed to black bear hunting. Thus, no additional impacts on the local tourism economy would be expected.
Environmental Justice		
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.	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.	Same as the Proposed Action Alternative.

Affected Resources	**Alternative A (Proposed Action)** *The refuge would allow archery-only black bear hunting during the fall in accordance with state regulations.*	**Alternative B (No Action)** *Black bear hunting would not be allowed on Swan River NWR. There would be no change to current public use and wildlife management programs.*
Indian Trust Resources		
There are no Indian Trust Resources on this refuge and this action would not impact any Indian Trust Resources.	Not Applicable.	Not Applicable.

Key: NWR = National Wildlife Refuge

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 nonfederal) or person undertakes such other actions" (40 CFR 1508.7).

The following is an assessment of cumulative effects associated with the proposed action:

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
Hunting	
Because the Swan Valley is predominately in state or federal ownership, there are abundant opportunities for black bear hunting. The state administers the overall hunting program through annual permitting in State Management Unit 106 and through setting seasons and harvest regulations. There are numerous access points for black bear hunters throughout the hunt unit. Recently, the Service has acquired the 320-acre Cruz WPA, which is adjacent to the refuge. The WPA is open for spring and fall black bear hunting.	Statewide in 2016, the black bear population was estimated at just over 12,000 bears. The population in the Black Bear Management Unit 106, where Swan River NWR is located, was estimated to be between 615–923 bears (MFWP 2016). If 1–2 bears are harvested on Swan River NWR in the fall each year, this would be less than 1 percent of the population in the Black Bear Management Unit 106 and an even smaller percentage of the total statewide population. Therefore, the impact of opening a fall archery hunt on black bears on Swan River NWR would be expected to have a negligible impact on overall bear populations within the local area and statewide.
Grizzly Bear Management in the Northern Continental Divide Ecosystem (NCDE)	
	In 2016, MFWP issued a report on "Grizzly Bear Demographics in the Northern Continental Divide Ecosystem 2204-2014: Research Results and Techniques for Management of Mortality" (Costello et al. 2016). The report integrates data on sustainable independent grizzly bear survival rates, estimated population size for the NCDE, and total estimated independent bear mortalities in order to determine the number of bear mortalities that are sustainable within the population. The NCDE population of grizzly bears has grown since the 1990s and is estimated to be nearly 1,000 bears. The population has essentially doubled its range. The recovery of grizzly bear populations has led to a shift in grizzly bear management from primarily population growth to increased emphasis on balancing multiple land uses, public safety, and grizzly bear needs (Costello et al. 2016; NCDE Subcommittee 2020). The NCDE population is considered to be demographically healthy and able to sustain some additional mortalities. Monitoring is also ongoing to track future changes in the population and detect any downward trajectory.

Other Past, Present, and Reasonably Foreseeable Activity Impacting Affected Environment	Descriptions of Anticipated Cumulative Impacts
(Grizzly Bear Management in the NCDE continued)	Opening Swan River NWR to archery-only black bear hunting is expected to have an insignificant effect on grizzly bears because the number of new users is expected to be less than 5 per year and the relatively small size of the refuge. There are about 30,000 black bear licenses sold in Montana each year, of which MFWP estimates about half, or 15,000, are active black bear hunters. An average of less than two grizzly bears are killed each year in each of the three grizzly bear recovery zones in the state due to mistaken identity by black bear hunters (Costello et al. 2016; Mace and Chilton-Radant 2011). If we assume 15,000 active black bear hunters and up to 6 grizzly bear deaths due to mistaken identity per year, that is 0.0004 grizzly bear mortalities per active black bear hunter. If there may be up to 5 black bear hunters on Swan River NWR each year, then the total number of grizzly bears that may be killed annually as a result of our proposed action is 0.0004 x 5 = 0.002 grizzly bears, which would amount to one additional grizzly bear mortality per 500 years, on average. Swan River NWR is also very small relative to the occupied area of the grizzly bear population. Swan River NWR is 1,960 acres, which is less than 0.015 percent of the approximately 13 million acres currently open to black bear hunting within the area occupied by grizzly bears in Montana.
Development and Population Increase	
The Swan Valley is very lightly populated, and few businesses are located in the largest population centers of Swan Lake (population of 143) and Condon (population of 343). A local nonprofit group, Swan Valley Connections, is trying to convince the community to develop for ecotourism as other communities in Montana have. It is unknown how successful this approach would be. There are many seasonal cabins along Swan Lake and the area could potentially build as there is more demand for recreational properties. The Service has established a Conservation Area in the Swan Valley and is authorized to acquire up to 10,000 acres of private conservation easements where new construction would not be allowed.	If the Swan Valley Connections approach is successful, it could draw more visitors to the refuge potentially creating further overlap between competing uses such as wildlife observation and hunting. If visitation increases, the Service would adopt adaptive management policies to modify uses to minimize conflict between user groups. Increased visitation would increase revenue brought into the community through ecotourism but could create additional disturbance issues for wildlife and conflict among user groups. The Service Easement Program could curtail development and reduce population expansion which would, similarly, minimize wildlife disturbance and user group conflict while reducing ecotourism revenue.

Other Past, Present, and Reasonably Foreseeable Activity Impacting Affected Environment	Descriptions of Anticipated Cumulative Impacts
Climate Change	
Warming and drying, 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 from climate change. 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 Swan Valley and potential to increase wildfire frequency and intensity could dramatically reduce the amount and quality of wildlife habitat in the Swan Valley. As a result, wildlife could be forced into smaller and smaller amounts of available habitat. Concentrating wildlife into smaller and smaller areas also has the potential to more readily allow disease to spread within wildlife populations such as cervids (deer and elk) and waterfowl.	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 hunting program as necessary to ensure that it does not contribute to the cumulative impacts of climate change on resident wildlife and migratory birds.

Key: MFWP = Montana Fish, Wildlife, and Parks; NCDE = Northern Continental Divide Ecosystem; NWR = National Wildlife Refuge; WPA = Waterfowl Protection Area

3.4 Monitoring

Black bear populations are monitored each year by MFWP and hunting regulations are adjusted accordingly (Mace and Chilton-Redant 2011; MFWP 2017).

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. The term "significantly" as used in NEPA requires consideration of both the context of the action and the intensity of effects. This section summarizes the findings and conclusions of the analyses above so that we may determine the significance of the effects.

Alternative A – Proposed Action Alternative

This alternative is the Service's proposed action because it offers the best opportunity for public hunting that would result in a minimal impact on physical and biological resources, while meeting the Service's mandates under the NWRSAA, as amended, and Secretarial Order 3356.

Considering the small number of hunters anticipated (3–5) to participate in fall, archery-only black bear hunting, impacts on most aspects of the human environment would be negligible to nonexistent. To an extent, there could be temporary disturbance or displacement, or both, effects on some wildlife species and potentially some additional vegetation trampling; however, the overall positive benefit of providing a new recreational opportunity and contribution to ecotourism provides a benefit to the Swan Valley community.

The addition of archery hunting in the fall for black bear would not have significant impact on local and regional black bear populations, or overall ecosystem health, because the percentage likely to be taken on the refuge, though possibly additive to existing hunting takes, would be a tiny fraction of the estimated populations. This hunting opportunity would not be expected to significantly affect grizzly bears in the NCDE because the population is larger than previous estimates and growing, demographically healthy and able to sustain some additional mortalities. Overall populations of black bears would continue to be monitored by MFWP biologists to determine if harvest levels should be adjusted. Additional hunting would not add more than slightly to the cumulative impacts on resident wildlife stemming from hunting at the local or regional level, and would only result in minor, negative impacts on their populations.

Alternative B – No Action Alternative

There would be no additional costs to the refuge under this alternative. There would be no change to current public use and wildlife management programs on the refuge under this alternative. The refuge would not increase its impact on the economy and would not provide new hunting and access opportunities. This alternative has the least direct impacts of physical and biological resources. In addition, it would minimize our mandates under the NWRSAA, as amended, and Secretarial Order 3356.

Conclusion

The Service proposes to allow fall archery-only black bear hunting opportunities on Swan River NWR as analyzed above under the Proposed Action Alternative, which would not have any significant impacts on the human environment.

3.6 List of Sources, Agencies and Persons Consulted

- MFWP (Neil Anderson, Jessy Colrane, Tonya Chilton-Radant)
- Lake County Commission
- Swan Valley Connections (Luke Lamar, Rebecca Ramsey, Maria Mantes)
- Swan Lands Coordinating Committee (various agencies and local community members)

3.7 List of Preparers

Name	Position	Work Unit
Benjamin Gilles	Project Leader	Western Montana NWR Complex
Rob Bundy	Refuge Manager (former)	Benton Lake NWR Complex
Bob Johnson	Refuge Manager	Western Montana NWR Complex
Vanessa Fields	Wildlife Biologist	Mountain-Prairie Regional Office
Nicole Prescott	Fish and Wildlife Officer (former)	Benton Lake NWR Complex

3.8 State Coordination

During acquisition of the Oxbow Preserve, we worked with Neil Anderson, MFWP Assistant Regional Supervisor, to acquire funds from the Migratory Bird Commission (commission). Serving as our state ex officio, Neil went to the commission meeting where we committed to evaluating the archery-only big game hunt on Swan River NWR. Following successful acquisition, we worked closely with Neil and regional biologist Jessy Coltrane to develop the hunting strategy and to put a proposal before the MFWP to include the new hunting for the fiscal years 2018 and 2019 hunting season. The commission approved of the hunting on February 15, 2018. The refuge was open for archery deer and elk hunting for the first time in the fall of 2018.

After the public comment period on the proposal in this EA, we consulted with MFWP about comments we received on black bear hunting (see Section 3.10, Public Outreach). MFWP continues to support the opportunity for fall archery hunting of black bear on Swan River NWR. MFWP also provided additional information for the Service to consider in our analysis, which we have incorporated in our responses to comments. 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 affected by initiating an EA to open Swan River NWR to fall black bear archery hunting. The Service extended an invitation to engage in government-to-government consultation in accordance with Executive Order 13175. We did not receive a request for consultation or comments from any tribes.

3.10 Public Outreach

Pursuant to acquisition of the Oxbow Preserve from The Nature Conservancy in 2017, the Service attended a Lake County Commission Meeting and briefed the Lake County Commissioners on the possibility of providing archery-only big game hunting. We also attended a meeting of the Swan Lands Coordinating Committee, sponsored by Swan Valley Connections, and publicly described our intent.

On April 1, 2020, the Service put the draft EA, hunting plan, and compatibility determination out for 30-day public review and comment. The refuge announced the availability of the draft EA and hunting plan via public notices on the refuge's website, through local newspapers, and in the refuge's headquarters office. During a 30-day public comment period, the Service accepted comments in writing, in person, electronically, or in any other form the public wished to present comments or information. In response to a request from the public, we extended the comment period for 14 days until May 15, 2020. Upon close of the comment period, all comments and information were reviewed and considered. The Service received comments from four organizations and 32 individuals. We received comments generally opposed to opening black bear hunting on the refuge and comments generally supportive of the proposal.

Comment (1): We received several comments expressing concern that the proposed action could increase human caused mortality of the federally threatened grizzly bear.

Response: Opening Swan River NWR to archery-only black bear hunting is expected to have an insignificant effect on grizzly bears because the number of new users is expected to be less than five per year and the relatively small size of the refuge. In addition, the population of grizzly bears in the Northern Continental Divide Ecosystem population has grown since the 1990s and is estimated to be nearly 1,000 bears (Costello et al. 2016). The population has essentially doubled its range. The recovery of grizzly bear populations has led to a shift in grizzly bear management from primarily population growth to increased emphasis on balancing multiple land uses, public safety, and grizzly bear needs (Costello et al. 2016; NCDE Subcommittee 2020). The NCDE population is considered to be demographically healthy and able to sustain some additional mortalities. Monitoring is also ongoing to track future changes in the population and detect any downward trajectory.

To address specific concerns raised in these comments, we revised and expanded our analysis of direct and indirect impacts (see Table 1), the cumulative impacts (see Table 6), and the intra-Service consultation under section 7 of the Endangered Species Act (ESA) (Appendix C).

Comment (2): We received a comment that we had not completed a formal consultation in compliance with the ESA.

Response: An initial Section 7 consultation was completed for Swan River NWR prior to the local public comment period on the draft EA and hunting plans that started April 1, 2020. After the comment period, we revised the Section 7 with additional analysis (Appendix C). In both

cases, the determination of impacts on the species considered were either "No Effect" or a "May Affect but Not Likely to Adversely Affect." The evaluation provided in the environmental assessment demonstrates no significant impacts as defined by NEPA, which is corroborated by the completed Intra-Service Section 7 consultation.

We did not make any changes to the EA as a result of this comment.

Comment (3): We received comments asking us to consider the impacts on ecosystem health due to opening an opportunity for fall, archery-only black bear hunting on the refuge.

Response: We agree that black bears benefit the ecosystems where they occur and can positively affect soil health, vegetation, and other wildlife populations. Our proposal for black bear hunting is unlikely to have population-level effects on black bears on the Swan River NWR or beyond, in part because the refuge is a relatively small area, we expect few hunters, and because we are proceeding cautiously by limiting opportunity to archery only. The average annual black bear harvest in Montana is just over 1,000 bears. If 1–2 bears are harvested on Swan River NWR, this is less than 0.2 percent of the statewide harvest. Therefore, there would not be a population level impact on black bears nor would there be an extirpation of black bears as ecosystem drivers on the refuge. Consequently, the impact on ecosystem health would be negligible.

We revised the direct and indirect impacts (see Table 1) to include ecosystem health.

Comment (4): We received comments that wildlife refuges should not allow hunting.

Response: The word "refuge" includes the idea of providing a haven of safety for wildlife, and as such, hunting might seem an inconsistent use of the Refuge System. However, the NWRSAA stipulates that hunting, if found compatible, is a legitimate and priority general public use of a refuge. In this case, archery hunting of black bears in the fall has been found to be compatible on Swan River NWR (please see the final compatibility determination, USFWS 2020b). We also recognize that in Montana there are hunting opportunities on other public lands, such as Bureau of Land Management, U.S. Forest Service, and State of Montana. However, facilitating hunting opportunities is an important aspect of the Service's roles and responsibilities as outlined in the legislation establishing the Refuge System, and the Service will continue to facilitate these opportunities, where compatible with the purpose of the specific refuge and the mission of the Refuge System.

We did not make any changes to the EA as a result of this comment.

Comment (5): We also received comments that we did not consider the impacts of trophy hunting.

Response: The Service does not attempt to define or authorize "trophy hunting" in any of our laws, regulations, or policies concerning hunting. We follow state hunting and fishing regulations, except for where we are more restrictive on individual stations, including state regulations concerning responsible hunting, or prohibitions on wanton waste (defined as "to intentionally waste something negligently or inappropriately"). We only allow hunting on refuges and hatcheries when we have determined that the opportunity is sustainable and compatible.

We did not make any changes to the EA as a result of this comment.

Comment (6): We also received comments that other forms of public use on the refuge are important and the increase in hunting opportunities would cause additional conflicts.

Response: Congress, through the NWRSAA, as amended, envisioned that hunting, fishing, wildlife observation and photography, and environmental education and interpretation would all be treated as priority public uses of the Refuge System. Therefore, the Service facilitates all of these uses on refuges, as long as they are found compatible with the purposes of the specific refuge and the mission of the Refuge System. As described in Table 2 of the EA, there are several other compatible public uses enjoyed by the public on Swan River NWR, and the Service attempts to minimize conflicts between user groups.

We did not make any changes to the EA as a result of this comment.

Comment (7): We received a comment concerned about the structures, blinds, and/or tree stands left behind by hunters.

Response: Hunters may install stands and blinds no sooner than August 1 and must remove them by December 15 of each year. We limit each hunter to one stand or blind. The hunter must have their automated licensing system number visibly marked on the stand. Such identification would enable the Service to contact any hunter who leaves their stand or blind on the refuge beyond the required date. We have considered the factors involved in this opening and find we have adequate staff coverage and funding for this use.

We did not make any changes to the EA as a result of this comment.

In addition, on April 9, 2020, the Service published the Draft 2020–2021 Refuge-Specific Hunting and Sport Fishing Regulations in the Federal Register (see 85 FR 20030). The Service received three public comments on the refuge-specific regulations proposed in conjunction with the refuge's hunting plan and EA. One letter was also submitted directly to the refuge and those comments are addressed above.

Comment (8): We received a comment that the threatened grizzly bear may be adversely affected at Swan River NWR.

Response: In both the EA (see Table 1 and Table 6) and the Intra-Service Section 7 review (see Appendix C), the Service determined that opening the refuge to fall, archery-only black bear hunting would result in insignificant or discountable effects on grizzly bears.

We did not make any changes to the EA as a result of this comment.

Comment (9): We received a comment that the Service should consider the impacts on grizzly bears cumulatively at Lee Metcalf NWR and Swan River NWR as a result of proposed new hunting and fishing opportunities.

Response: In the EAs and Intra-Service Section 7 consultations for each of these refuges, the Service determined that the proposed actions would result in insignificant or discountable effects on grizzly bears (Appendix C, USFWS 2020c). Opening Swan River NWR to archery-only black bear hunting is expected to have an insignificant effect on grizzly bears because the number of new users on the refuge is expected to be fewer than five per year, and because of the relatively small size of the refuge. On Lee Metcalf NWR, the impacts on grizzly bears are discussed in Table 1 and in Appendix C (USFWS 2020c). Grizzly bears are wide-ranging species that could possibly move through the refuge, but thus far, only one record of a grizzly bear has been documented on the refuge. In addition, Lee Metcalf NWR is not located in a designated recovery zone for grizzly bears in the lower 48 states. Given these insignificant and discountable impacts at each refuge, the cumulative impact would also be expected to be negligible.

We did not make any changes to the EA as a result of this comment.

Comment (10): We received a comment that grizzly bears could be mistakenly killed by black bear hunters due to misidentification.

Response: Grizzly bears are occasionally mistaken by hunters for black bears and accidentally killed. Grizzly bear mortality has been studied closely in the Northern Continental Divide ecosystem where Swan River NWR is located (Costello et al. 2016; Mace et al. 2012; Mace and Chilton-Radant 2011; NCDE Subcommittee 2020). Grizzly bear mortality due to mistaken identity by black bear hunters is not a common cause of death. In fact, based on decades of data on grizzly bear mortality in the NCDE, misidentification by hunters is one of the least common cause of grizzly bear mortalities (Costello et al. 2016; NCDE Subcommittee 2020).

Opening Swan River NWR to archery-only black bear hunting is expected to have an insignificant effect on grizzly bears because the number of new users is expected to be less than five per year and the relatively small size of the refuge. There are about 30,000 black bear licenses sold in Montana each year, of which MFWP estimates about half, or 15,000, are active black bear hunters. An average of less than two grizzly bears are killed each year in each of the three grizzly bear recovery zones in the state due to mistaken identity by black bear hunters (Costello et al. 2016; Mace and Chilton-Radant 2011). If we assume 15,000 active black bear hunters and up to six grizzly bear deaths due to mistaken identity per year, that is 0.0004 grizzly bear mortalities per active black bear hunter. If there may be up to five black bear hunters on Swan River NWR each year, then the total number of grizzly bears that may be killed annually as a result of our proposed action is 0.0004 x 5 = 0.002 grizzly bears. This would amount to one additional grizzly bear mortality per 500 years, on average. Please also see our response to *Comment (1)* on the overall effects of the proposed action on grizzly bear populations.

To address this comment, we revised and expanded our analysis of direct and indirect impacts (see Table 1), the cumulative impacts (see Table 6) and the Intra-Service consultation under Section 7 of the ESA (Appendix C).

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: BENJAMIN GILLES Digitally signed by BENJAMIN GILLES Date: 2020.07.23 12:54:08 -06'00' Date:_____

Name/Title/Organization: Benjamin Gilles, Project Leader, Western Montana NWR Complex

Reviewer Signature: MATTHEW HOGAN Digitally signed by MATTHEW HOGAN Date: 2020.07.30 11:57:21 -06'00' Date:_____

Name/Title: Noreen Walsh, Regional Director, Interior Regions 5 and 7, Lakewood, CO

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APPENDIX A OTHER APPLICABLE STATUTES, EXECUTIVE ORDERS, AND REGULATIONS

Statutes, Executive Orders, and Regulations
Cultural Resources
American Indian Religious Freedom Act, as amended, 42 U.S.C. 1996 – 1996a; 43 CFR Part 7
Antiquities Act of 1906, 16 U.S.C. 431-433; 43 CFR Part 3
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
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
Paleontological Resources Protection Act, 16 U.S.C. 470aaa – 470aaa-11
Native American Graves Protection and Repatriation Act, 25 U.S.C. 3001–3013; 43 CFR Part 10
Executive Order 11593 – Protection and Enhancement of the Cultural Environment, 36 Fed. Reg. 8921 (1971)
Executive Order 13007 – Indian Sacred Sites, 61 Fed. Reg. 26771 (1996)
Fish and Wildlife
Bald and Golden Eagle Protection Act, as amended, 16 U.S.C. 668-668c, 50 CFR 22
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
Fish and Wildlife Act of 1956, 16 U.S.C. 742 a–m
Lacey Act, as amended, 16 U.S.C. 3371 et seq.; 15 CFR Parts 10, 11, 12, 14, 300, and 904
Migratory Bird Treaty Act, as amended, 16 U.S.C. 703–712; 50 CFR Parts 10, 12, 20, and 21
Executive Order 13186 – Responsibilities of Federal Agencies to Protect Migratory Birds, 66 Fed. Reg. 3853 (2001)
Natural Resources
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
Wilderness Act, 16 U.S.C. 1131 et seq.
Wild and Scenic Rivers Act, 16 U.S.C. 1271 et seq.
Executive Order 13112 – Invasive Species, 64 Fed. Reg. 6183 (1999)
Water Resources
Coastal Zone Management Act of 1972, 16 U.S.C.
1451 et seq.; 15 CFR Parts 923, 930, 933
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
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
Safe Drinking Water Act of 1974, 42 U.S.C. 300f et seq.; 40 CFR Parts 141–148
Executive Order 11988 – Floodplain Management, 42 Fed. Reg. 26951 (1977)
Executive Order 11990 – Protection of Wetlands, 42 Fed. Reg. 26961 (1977)

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

APPENDIX B FINDING OF NO SIGNIFICANT IMPACT

FINDING OF NO SIGNIFICANT IMPACT
AND DECISION TO OPEN ARCHERY BLACK BEAR HUNTING

SWAN RIVER NATIONAL WILDLIFE REFUGE
Lake County, Montana

The United States (U.S.) Fish and Wildlife Service (Service) is opening fall, archery-only, black bear hunting on Swan River National Wildlife Refuge (NWR), Lake County, Montana, in accordance with the Benton Lake National Wildlife Refuge Complex Comprehensive Conservation Plan (CCP) (USFWS 2012) and the Benton Lake National Wildlife Refuge Complex Big Game, Waterfowl, and Upland Bird Hunting Plan (USFWS 2020a).

Selected Action

Alternative A – Proposed Action Alternative: The Service proposes to allow archery-only black bear hunting during the fall on Swan River NWR, in accordance with state regulations subject to the following conditions:

- We would allow fall, archery-only hunting of black bear within the boundary of the refuge.
- We would allow the use of portable blinds and stands, which could be installed no sooner than August 1, and removed by December 15 of each year. Stands or blinds must be placed a minimum of 100 yards from the Tollefson trail (Figure 1). Each hunter would be limited to one stand or blind, and the hunter must have their automated licensing system number visibly marked on the stand.
- Game or trail cameras would be prohibited year-round.
- Baiting, the use of hounds, trapping, and outfitting would be prohibited.

This alternative offers increased opportunities for public hunting and fulfills the Service's mandate under the National Wildlife Refuge System Administration Act of 1966 (NWRSAA), as amended by the National Wildlife Refuge System Improvement Act of 1997 (Improvement Act), and Secretarial Order 3356. The Service has determined that this minor modification to the current hunting opportunity is compatible with the purposes of the Swan River NWR and the mission of the National Wildlife Refuge System (Refuge System) (USFWS 2020b).

Other Alternatives Considered and Analyzed

Alternative A – No Action Alternative: Under the No Action Alternative, black bear hunting would not be allowed on Swan River NWR. Waterfowl hunting would continue on lands located north of Bog Road and recreational fishing would be allowed on the Swan River and Service-owned portions of Spring Creek as per state regulation. Archery deer and elk hunting would also

continue refuge-wide. The refuge would continue to be open to wildlife observation and photography north of Bog Road and on recently acquired lands formerly owned by The Nature Conservancy (Oxbow Preserve) on the southern end of the refuge. Cross-country skiing and snowshoeing would continue to be allowed refuge-wide during applicable winter months.

This alternative was not selected, because it does not meet the purpose and needs of the Service and it would not provide hunting opportunities. Although this alternative has the least direct effects on physical and biological resources, it would not support our mandates under the NWRSAA, as amended, and Secretarial Order 3356.

Summary of Effects of the Selected Action

An environmental assessment (EA) was prepared in compliance with the National Environmental Policy Act (NEPA) to provide decision-making framework that (1) explored a reasonable range of alternatives to meet project objectives, (2) evaluated potential issues and impacts on the refuge, resources and values, and (3) identified mitigation measures to lessen the degree or extent of these impacts. The EA evaluated the effects associated with opening an archery black bear hunt in the fall on Swan River NWR. It is incorporated as part of this finding.

Implementation of the agency's decision would be expected to result in the following environmental, social, and economic effects:

Considering the small number of hunters anticipated (3–5) to participate in fall, archery-only black bear hunting, impacts on most aspects of the human environment would be negligible to nonexistent. To an extent, there could be temporary disturbance or displacement, or both, effects on some wildlife species and potentially some additional vegetation trampling; however, the overall positive benefit of providing a new recreational opportunity and contribution to ecotourism provides a benefit to the Swan Valley community.

The addition of archery hunting in the fall for black bear would not have significant impact on local and regional black bear populations, or overall ecosystem health, because the percentage likely to be taken on the refuge, though possibly additive to existing hunting takes, would be a tiny fraction of the estimated populations. This hunting opportunity would not be expected to significantly affect grizzly bears in the Northern Continental Divide Ecosystem (NCDE) because the population is larger than previous estimates and growing, demographically healthy, and able to sustain some additional mortalities. Overall populations of black bears would continue to be monitored by Montana Fish, Wildlife and Parks (MFWP) biologists to determine if harvest levels should be adjusted. Additional hunting would not add more than slightly to the cumulative impacts on resident wildlife stemming from hunting at the local or regional level, and would only result in minor, negative impacts on their populations.

Measures to mitigate and/or minimize adverse effects have been incorporated into the selected action.

There are currently outreach programs in place that are targeted at hunters to emphasize patience, awareness, and correct identification of targets so that grizzly bear mortalities are reduced. In 2002, the State of Montana developed a computerized bear identification test, which hunters must pass prior to obtaining their black bear hunting license (see www.fwp.mt.gov/education/hunter/bearID/). Montana includes grizzly bear encounter management as a core subject in basic hunter education courses (Dood et al. 2006) and in all big

game hunting regulations, and encourages hunters to carry and know how to use bear spray (www.fwp.mt.gov/recreation/safety/wildlife/bears/bearCountry.html).

To ensure safety and minimize conflict between hunters and visitors engaged in wildlife photography or observation, the refuge would provide information about the hunting program's boundaries and seasons on the complex's website, at refuge offices, and at parking areas. In addition, law enforcement patrols would be conducted on a regular basis to contact the public and ensure compliance with state, federal, and refuge regulations. The refuge law enforcement staff would also monitor and collect information on the hunting program's participation and activities to ensure that it does not interfere with other wildlife dependent public uses.

While refuges, by their nature, are unique areas protected for conservation of fish, wildlife, and habitat, the proposed action would not have a significant impact on refuge resources and uses for several reasons:

- In the context of state hunting programs, the proposed action would only result in less than 1 percent of the black bear harvest in the local Black Bear Management Unit and an even smaller percentage of the total statewide population. The Service works closely with the state to ensure that additional species harvested on a refuge are within the limits set by the state to ensure healthy populations of the species for present and future generations of Americans.
- The action would result in beneficial impacts on the human environment, including wildlife-dependent recreational opportunities and socioeconomics of the local economy.
- The adverse direct and indirect effects of the proposed action on air, water, soil, habitat, wildlife, threatened and endangered species, ecosystem health, aesthetic/visual resources, and wilderness values are expected to be minor and short-term.
- The Refuge System uses an adaptive management approach to all wildlife management on refuges, monitoring and reevaluating the hunting and fishing opportunities on the refuge on an annual basis to ensure that the hunting and fishing programs continue to contribute to the biodiversity and ecosystem health of the refuge and these opportunities do not contribute to any cumulative impacts on habitat or wildlife from climate change, population growth and development, or local, state, or regional wildlife management.
- The action, along with proposed mitigation measures, would ensure that there is low danger to the health and safety of refuge staff, visitors, and the hunters themselves.
- The action is not in an ecologically sensitive area.
- The action would not adversely affect any threatened or endangered species, including grizzly bears; or any federally designated critical habitat.
- The action would not affect any cultural or historical resources.
- The action would not affect any wilderness areas.
- There is no scientific controversy over the impacts of this action, and the impacts of the proposed action are relatively certain.
- The proposal is not expected to have any significant adverse effects on wetlands and floodplains, pursuant to Executive Orders 11990 and 11988, because the action of

opening the refuge to archery black bear hunting would not cause any destruction or degradation of wetlands or result in any floodplain development.

Public Review

The proposal has been thoroughly coordinated with all interested and/or affected parties. Parties contacted include:

Coordination with Montana Fish, Wildlife and Parks

During acquisition of the Oxbow Preserve, we worked with Neil Anderson, MFWP assistant regional supervisor, to acquire funds from the Migratory Bird Commission (commission). Serving as our state ex officio, Neil went to the commission meeting where we committed to evaluating the archery-only big game hunt on Swan River NWR. Following successful acquisition, we worked closely with Neil and regional biologist Jessy Coltrane to develop the hunting strategy and to put a proposal before MFWP to include the new hunting for the fiscal years 2018 and 2019 hunting season. The commission approved of the hunting on February 15, 2018. The refuge was open for archery deer and elk hunting for the first time in the fall of 2018.

After the public comment period on the proposal in this EA, we consulted with Montana Fish, Wildlife and Parks (MFWP) about comments we received on black bear hunting (see below). MFWP continues to support the opportunity for fall archery hunting of black bear on Swan River NWR. MFWP also provided additional information for the Service to consider in our analysis, which we have incorporated in our responses to comments. We will continue to consult and coordinate on specific aspects of the hunting plan to ensure safe and enjoyable recreational hunting opportunities.

Tribal Coordination

The Service mailed an invitation for comments to all tribes potentially affected by initiating an EA to open the refuge to a fall archery black bear hunt. The Service extended an invitation to engage in government-to-government consultation in accordance with Executive Order 13175. We did not receive a request for consultation or comments from any tribes.

Public Comment

On April 1, 2020, the Service put the hunting plan and EA out for 30-day public review and comment. In response to a request from the public, we extended the comment period for 14 days until May 15, 2020. The Service received comments from four organizations and 32 individuals. We received comments generally opposed to opening black bear hunting on the refuge and comments generally supportive of the proposal.

Comment (1): We received several comments expressing concern that the proposed action could increase human caused mortality of the federally threatened grizzly bear.

Response: Opening Swan River NWR to archery-only black bear hunting is expected to have an insignificant effect on grizzly bears because the number of new users is expected to be less than five per year and the relatively small size of the refuge. In addition, the population of grizzly bears in the Northern Continental Divide Ecosystem population has grown since the 1990s and is estimated to be nearly 1,000 bears (Costello et al. 2016). The population has essentially doubled its range. The recovery of grizzly bear populations has led to a shift in grizzly bear management from primarily population growth to increased emphasis on balancing multiple land uses, public

safety, and grizzly bear needs (Costello et al. 2016; NCDE Subcommittee 2020). The NCDE population is considered to be demographically healthy and able to sustain some additional mortalities. Monitoring is also ongoing to track future changes in the population and detect any downward trajectory.

To address specific concerns raised in these comments, we revised and expanded our analysis of direct and indirect impacts (see Table 1), the cumulative impacts (see Table 6), and the intra-Service consultation under section 7 of the Endangered Species Act (ESA) (Appendix C).

Comment (2): We received a comment that we had not completed a formal consultation in compliance with the ESA.

Response: An initial Section 7 consultation was completed for Swan River NWR prior to the local public comment period on the draft EA and hunting plans that started April 1, 2020. After the comment period, we revised the Section 7 with additional analysis (Appendix C). In both cases, the determination of impacts on the species considered were either "No Effect" or a "May Affect but Not Likely to Adversely Affect." The evaluation provided in the environmental assessment demonstrates no significant impacts as defined by NEPA, which is corroborated by the completed Intra-Service Section 7 consultation.

We did not make any changes to the EA as a result of this comment.

Comment (3): We received comments asking us to consider the impacts on ecosystem health due to opening an opportunity for fall, archery-only black bear hunting on the refuge.

Response: We agree that black bears benefit the ecosystems where they occur and can positively affect soil health, vegetation, and other wildlife populations. Our proposal for black bear hunting is unlikely to have population-level effects on black bears on the Swan River NWR or beyond, in part because the refuge is a relatively small area, we expect few hunters, and because we are proceeding cautiously by limiting opportunity to archery only. The average annual black bear harvest in Montana is just over 1,000 bears. If 1–2 bears are harvested on Swan River NWR, this is less than 0.2 percent of the statewide harvest. Therefore, there would not be a population level impact on black bears nor would there be an extirpation of black bears as ecosystem drivers on the refuge. Consequently, the impact on ecosystem health would be negligible.

We revised the direct and indirect impacts (see Table 1) to include ecosystem health.

Comment (4): We received comments that wildlife refuges should not allow hunting.

Response: The word "refuge" includes the idea of providing a haven of safety for wildlife, and as such, hunting might seem an inconsistent use of the Refuge System. However, the NWRSAA stipulates that hunting, if found compatible, is a legitimate and priority general public use of a refuge. In this case, archery hunting of black bears in the fall has been found to be compatible on Swan River NWR (please see the final compatibility determination, USFWS 2020b). We also recognize that in Montana there are hunting opportunities on other public lands, such as Bureau of Land Management, U.S. Forest Service, and State of Montana. However, facilitating hunting opportunities is an important aspect of the Service's roles and responsibilities as outlined in the legislation establishing the Refuge System, and the Service will continue to facilitate these opportunities, where compatible with the purpose of the specific refuge and the mission of the Refuge System.

We did not make any changes to the EA as a result of this comment.

Comment (5): We also received comments that we did not consider the impacts of trophy hunting.

Response: The Service does not attempt to define or authorize "trophy hunting" in any of our laws, regulations, or policies concerning hunting. We follow state hunting and fishing regulations, except for where we are more restrictive on individual stations, including state regulations concerning responsible hunting, or prohibitions on wanton waste (defined as "to intentionally waste something negligently or inappropriately"). We only allow hunting on refuges and hatcheries when we have determined that the opportunity is sustainable and compatible.

We did not make any changes to the EA as a result of this comment.

Comment (6): We also received comments that other forms of public use on the refuge are important and the increase in hunting opportunities would cause additional conflicts.

Response: Congress, through the NWRSAA, as amended, envisioned that hunting, fishing, wildlife observation and photography, and environmental education and interpretation would all be treated as priority public uses of the Refuge System. Therefore, the Service facilitates all of these uses on refuges, as long as they are found compatible with the purposes of the specific refuge and the mission of the Refuge System. As described in Table 2 of the EA, there are several other compatible public uses enjoyed by the public on Swan River NWR, and the Service attempts to minimize conflicts between user groups.

We did not make any changes to the EA as a result of this comment.

Comment (7): We received a comment concerned about the structures, blinds, and/or tree stands left behind by hunters.

Response: Hunters may install stands and blinds no sooner than August 1 and must remove them by December 15 of each year. We limit each hunter to one stand or blind. The hunter must have their automated licensing system number visibly marked on the stand. Such identification would enable the Service to contact any hunter who leaves their stand or blind on the refuge beyond the required date. We have considered the factors involved in this opening and find we have adequate staff coverage and funding for this use.

We did not make any changes to the EA as a result of this comment.

In addition, on April 9, 2020, the Service published the Draft 2020–2021 Refuge-Specific Hunting and Sport Fishing Regulations in the Federal Register (see 85 FR 20030). The Service received three public comments on the refuge-specific regulations proposed in conjunction with the refuge's hunting plan and EA. One letter was also submitted directly to the refuge and those comments are addressed above.

Comment (8): We received a comment that the threatened grizzly bear may be adversely affected at Swan River NWR.

Response: In both the EA (see Table 1 and Table 6) and the Intra-Service Section 7 review (see Appendix C), the Service determined that opening the refuge to fall, archery-only black bear hunting would result in insignificant or discountable effects on grizzly bears.

We did not make any changes to the EA as a result of this comment.

Comment (9): We received a comment that the Service should consider the impacts on grizzly bears cumulatively at Lee Metcalf NWR and Swan River NWR as a result of proposed new hunting and fishing opportunities.

Response: In the EAs and Intra-Service Section 7 consultations for each of these refuges, the Service determined that the proposed actions would result in insignificant or discountable effects on grizzly bears (Appendix C, USFWS 2020c). Opening Swan River NWR to archery-only black bear hunting is expected to have an insignificant effect on grizzly bears because the number of new users on the refuge is expected to be fewer than five per year, and because of the relatively small size of the refuge. On Lee Metcalf NWR, the impacts on grizzly bears are discussed in Table 1 and in Appendix C (USFWS 2020c). Grizzly bears are wide-ranging species that could possibly move through the refuge, but thus far, only one record of a grizzly bear has been documented on the refuge. In addition, Lee Metcalf NWR is not located in a designated recovery zone for grizzly bears in the lower 48 states. Given these insignificant and discountable impacts at each refuge, the cumulative impact would also be expected to be negligible.

We did not make any changes to the EA as a result of this comment.

Comment (10): We received a comment that grizzly bears could be mistakenly killed by black bear hunters due to misidentification.

Response: Grizzly bears are occasionally mistaken by hunters for black bears and accidentally killed. Grizzly bear mortality has been studied closely in the Northern Continental Divide ecosystem where Swan River NWR is located (Costello et al. 2016; Mace et al. 2012; Mace and Chilton-Radant 2011; NCDE Subcommittee 2020). Grizzly bear mortality due to mistaken identity by black bear hunters is not a common cause of death. In fact, based on decades of data on grizzly bear mortality in the NCDE, misidentification by hunters is one of the least common cause of grizzly bear mortalities (Costello et al. 2016; NCDE Subcommittee 2020).

Opening Swan River NWR to archery-only black bear hunting is expected to have an insignificant effect on grizzly bears because the number of new users is expected to be less than five per year and the relatively small size of the refuge. There are about 30,000 black bear licenses sold in Montana each year, of which MFWP estimates about half, or 15,000, are active black bear hunters. An average of less than two grizzly bears are killed each year in each of the three grizzly bear recovery zones in the state due to mistaken identity by black bear hunters (Costello et al. 2016; Mace and Chilton-Radant 2011). If we assume 15,000 active black bear hunters and up to six grizzly bear deaths due to mistaken identity per year, that is 0.0004 grizzly bear mortalities per active black bear hunter. If there may be up to five black bear hunters on Swan River NWR each year, then the total number of grizzly bears that may be killed annually as a result of our proposed action is 0.0004 x 5 = 0.002 grizzly bears. This would amount to one additional grizzly bear mortality per 500 years, on average. Please also see our response to *Comment (1)* on the overall effects of the proposed action on grizzly bear populations.

To address this comment, we revised and expanded our analysis of direct and indirect impacts (see Table 1), the cumulative impacts (see Table 6) and the Intra-Service consultation under Section 7 of the ESA (Appendix C).

Finding of No Significant Impact

Based upon a review and evaluation of the information contained in the EA as well as other documents and actions of record affiliated with this proposal, the Service has determined that the proposal to implement fall, archery hunting for black bear on the Swan River NWR does not constitute a major federal action significantly affecting the quality of the human environment under the meaning of Section 102 (2) (c) of NEPA (as amended). As such, an environmental impact statement is not required.

Decision

The Service has decided to opening fall, archery-only, black bear hunting on Swan River NWR, Lake County, Montana, starting in 2020.

This action is compatible with the purpose of the refuge and the mission of the Refuge System (see the final compatibility determination, USFWS 2020b).

The action is consistent with applicable laws and policies regarding the establishment of hunting on national wildlife refuges. Refuge-specific regulations promulgated in conjunction with this action are in the process of being finalized (see 85 FR 20030). This action will not be implemented until the regulations are finalized.

MATTHEW HOGAN Digitally signed by MATTHEW HOGAN
Date: 2020.07.30 11:58:09 -06'00'

Noreen Walsh Date

Regional Director, Interior Regions 5 and 7

U.S. Fish and Wildlife Service

Lakewood, CO

APPENDIX C INTRA-SERVICE SECTION 7 BIOLOGICAL EVALUATION FORM – REGION 6

Intra-Service Section 7 Biological Evaluation Form - Region 6

Originating Person: Vanessa Fields Date Submitted: 06/17/20

Telephone Number: 406-217-6473

I. Service Program and Geographic Area or Station Name: Swan River NWR

II. Flexible Funding Program (e.g. Joint Venture, etc) if applicable:

III. Location:
Swan River NWR is a 1,961 acre Refuge, located in Lake County, one mile south of the town of Swan Lake. The Refuge is located in parts of Sections 21, 22, 23, 25, 26 and 28, T25N RI8W.

IV. Species/Critical Habitat:

(A) Threatened:
- Grizzly Bear
- Water howellia
- Canada lynx
- Bull trout
- Yellow-billed cuckoo

(B) Proposed threatened
- Wolverine

(C) Critical Habitat
- Canada lynx
- Bull Trout

V. Project Description:
The Service proposes to open the entire Refuge for fall black bear archery hunting. The Refuge was opened in the fall of 2018 for archery deer and elk hunting. We anticipate that any bear harvest will be opportunistic by archery deer and elk hunters who happen to have a bear tag and see a bear while they are elk or deer hunting on the Refuge. Actual estimates of the number of bears that may be harvested are difficult to predict, but FWP staff estimated one or two bears per year may be killed on the Refuge if it is opened to black bear hunting.

The Swan River NWR is located in Montana's FWP Region I which accounts for approximately half of the black bear harvest for the entire state. There are millions of acres of public land in Region I and black bear rifle hunting opportunities are unlimited.

VI. Biological Justification:

The purpose of this proposed action is to provide compatible wildlife dependent recreational opportunities on the Swan River NWR. The need of the proposed action is to meet the Service's priorities and mandates as outlined by the NWRSAA to "recognize compatible wildlife dependent recreational uses as the priority general use of the NWRS" and "ensure that opportunities are provided within the NWRS for compatible wildlife dependent recreational uses" (16 U.S.C. 668dd(a)(4)).

The NWRSAA mandates the Secretary of the Interior in administering the National Wildlife Refuge

System to (16 U.S.C. 668dd(a)(4)):

- Ensure that the mission of the NWRS described at 16 U.S.C. 668dd(a)(2) and the purposes of each refuge are carried out;
- Recognize compatible wildlife-dependent recreational uses as the priority general public uses of the NWRS through which the American public can develop an appreciation for fish and wildlife;
- Ensure that opportunities are provided within the NWRS for compatible wildlife-dependent recreational uses;

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

VII. Determination of Effects:

(A) Description of Effects:

Grizzly bear: Although black bear hunters are required to pass a bear ID course before they are able to purchase a black bear license in Montana, and are encouraged to carry bear spray, grizzly bears are occasionally mistaken for black bears and killed during the bear season. This possibility exists on the Swan River NWR as grizzly bears are common in the Swan Valley. Grizzly bear mortality has been studied closely in the Northern Continental Divide Ecosystem (NCDE) where Swan River refuge is located (NCDE Subcommittee 2020, Costello et al 2016, Mace et al 2012, Mace and Chilton-Radant 2011). Grizzly bear mortality due to mistaken identity by black bear hunters is not a common cause of death. In fact, based on decades of data on grizzly bear mortality in the NCDE, misidentification by hunters is one of the least common cause of grizzly bear mortalities (NCDE Subcommittee 2020, Costello et al 2016). Rather than misidentification, the majority of human caused mortality that occurs during hunting is a result of shooting a grizzly bear in self-defense while hunting other species (NCDE Subcommittee 2020).

The NCDE population of grizzly bears has grown since the 1990s and is estimated to be nearly 1,000 bears (Costello et al 2016). The population has essentially doubled its range. The recovery of grizzly bear populations has led to a shift in grizzly bear management from primarily population growth to increased emphasis on balancing multiple land uses, public safety and grizzly bear needs (Costello et al 2016, NCDE Subcommittee 2020). The NCDE population is considered to be demographically healthy and able to sustain some additional mortalities. Monitoring is also on-going to track future changes in the population and detect any downward trajectory.

Opening Swan River NWR to archery only black bear hunting is expected to have an insignificant effect on grizzly bears because the number of new users is expected to be less than 5 per year and the relatively small size of the refuge. There are about 30,000 black bear licenses sold in Montana each year, of which MFWP estimates about half, or 15,000, are active black bear hunters. An average of <2 grizzly bears are killed each year in each of the three grizzly bear recovery zones in the state due to mistaken identity by black bear hunters (Mace and Chilton-Radant 2011, Costello et al 2016). If we assume 15,000 active black bear hunters and up to 6 grizzly bear deaths due to mistaken identity per year, that is 0.0004 grizzly bear mortalities per active black bear hunter. If there may be up to 5 black bear hunters on Swan River NWR each year, then the total number of grizzly bears that may be killed annually as a result of our proposed action is 0.0004 x 5 = 0.002 grizzly bears. Which would amount to one additional grizzly bear mortality per 500 years, on average. Swan River NWR is also very small relative to the occupied area of the grizzly bear population. Swan River NWR is 1,960 acres which is less than 0.015% of the approximately 13 million acres currently open to black bear hunting within the area occupied by grizzly bears in Montana. Furthermore, the black bear hunt is not open in the spring

when grizzly bears are more likely to use riparian and open meadow habitats, such as those found on Swan River NWR. In the late summer/fall, when the hunt would occur, grizzly bears are often found more commonly in mid-to-upper elevation areas (Mace et al 1999, McLellan and Hovey 2001). In addition, archery hunters are likely to be much closer to a bear when they decide to shoot, which reduces the likelihood of mistaken identity. There are currently outreach programs in place that are targeted at hunters to emphasize patience, awareness, and correct identification of targets so that grizzly bear mortalities are reduced.

Water howellia: Water howellia is an annual plant that germinates and survives in seasonal wetlands. At present, the Tollefson Trail passes through areas occupied by water howellia on the refuge with no known impact to the species. Trail use occurs during the growing season and at a rate far higher than anticipated by black bear hunters so no direct or indirect impacts would be anticipated beyond what might occur at present. It is unlikely that there would be any direct impacts associated with the proposed action, but any minimal impacts associated with hunter movement would be anticipated to be negligible.

Bull trout: Fall, archery black bear hunting would occur in the uplands, thus no impacts would be expected to bull trout or bull trout critical habitat.

Canada lynx: There could be some temporary disturbance and or displacement of large carnivore species such as Canada lynx. Use of the refuge by lynx is transitory in nature as lynx occasionally use the refuge as a migration corridor to move back and forth between the Bob Marshall Wilderness to the east and the Mission Wilderness to the west of the refuge. Considering that these occurrences are infrequent and archery hunting is minimally disturbing (both noise and visual) these impacts are believed to be negligible. Critical habitat is outside of the refuge boundary, and thus the action would have no impact on this.

Wolverine: There could be some temporary disturbance and or displacement of large carnivore species such as wolverine. Use of the refuge by wolverine is transitory in nature as wolverine occasionally use the refuge as a migration corridor to move back and forth between the Bob Marshall Wilderness to the east and the Mission Wilderness to the west of the refuge. Considering that these occurrences are infrequent and archery hunting is minimally disturbing (both noise and visual) these impacts are believed to be negligible.

Yellow billed cuckoo: Yellow-billed cuckoo have not be documented on the refuge, but potential habitat does exist. If present on the refuge, yellow-billed cuckoos would be expected to have migrated out of the area by the time fall archery season begins, so no impacts would occur.

References cited:

Costello, C.M., Mace, R.D.; Roberts, L. 2016. Grizzly bear demographics in the Northern Continental Divide Ecosystem, Montana: research results (2004-2014) and suggested techniques for management of mortality. Montana Department of Fish, Wildlife and Parks, Helena.

Mace, RD, Carney, DW, Chilton-Radant, T, Courville, SA, Haroldson, MA, Harris, RB, Jonkel, J, McLellan, B, Madel, M, Manley, TL, Schwartz, CC, Servheen, C, Stenhouse, G, Waller, JS and E Wenum. 2012. Grizzly Bear Population Vital Rates and Trend in the Northern Continental Divide Ecosystem, Montana. Journal of Wildlife Management 76(1):119-128.

Mace, R. D. Chilton-Radandt, T. 2011. Black bear harvest research and management in Montana: Final Report. Montana Department of Fish, Wildlife & Parks, Wildlife Division, Helena, Montana, USA. 82pgs.

McLellan, BN and FW Hovey. 2001. Habitats Selected by Grizzly Bears in a Multiple Use Landscape. Journal of Wildlife Management 65(1):92-99.

NCDE Subcommittee. 2020. Conservation strategy for the grizzly bear in the Northern Continental Divide Ecosystem. (170 pages + appendices) http://igbconline.org/wp-content/uploads/2020/04/NCDEConservationStrategy.3.25.20.pdf

(B) Determination: Determine the anticipated effects of the proposed project on species and critical habitats listed in item IV. Check all applicable boxes and list the species (or attach a list) associated with each determination.

	Determination
No Effect: This determination is appropriate when the proposed project will not directly or indirectly affect (neither negatively nor beneficially) individuals of listed/proposed/candidate species or designated/proposed critical habitat of such species. **No concurrence from ESFO required.**	X
Applies to: Water howellia, bull trout, Canada lynx, yellow-billed cuckoo and wolverine.	
May Affect but Not Likely to Adversely Affect: This determination is appropriate when the proposed project is likely to cause insignificant, discountable, or wholly beneficial effects to individuals of listed species and/or designated critical habitat. **Concurrence from ESFO required.**	X
Applies to: Grizzly bear	
May Affect and Likely to Adversely Affect: This determination is appropriate when the proposed project is likely to adversely impact individuals of listed species and/or designated critical habitat. **Formal consultation with ESFO required.**	
May Affect and Likely to Adversely Affect but the proposed action is for the purpose of endangered or threatened species recovery and falls under Region 6's Programmatic Consultation on Service-initiated Recovery Actions: This determination is appropriate when adverse effects are likely but the project is designed to assist with recovery of listed species and/or designated critical habitat. **Concurrence from the ESFO that the project is covered by the programmatic consultation is required.**	
May affect but Not Likely to Jeopardize candidate or proposed species/critical habitat: This determination is appropriate when the proposed project may affect, but is not expected to jeopardize the continued existence of a species proposed for listing or a candidate species, or adversely modify an area proposed for designation as critical habitat. **Concurrence from ESFO optional.**	
Likely to Jeopardize candidate or proposed species/critical habitat: This determination is appropriate when the proposed project is reasonably expected to jeopardize the continued existence of a species proposed for listing or a candidate species, or adversely modify an area proposed for designation as critical habitat. **Conferencing with ESFO required.**	

Signature BENJAMIN GILLES Digitally signed by BENJAMIN GILLES Date: 2020.06.18 13:04:46 -06'00' Date 6/18/2020

Reviewing Ecological Services Office Evaluation (check all that apply):

A. Concurrence X **Nonconcurrence** ____

Explanation for nonconcurrence:

B. Formal consultation required ____
List species or critical habitat unit

C. Effects are addressed in the Programmatic Consultation on R6's Recovery Program – no further consultation needed ____

D. Conference required ____
List species or critical habitat unit

Name of Reviewing ES Office MONTANA E.S. OFFICE

Signature Ben Conard Date 06/19/2020
BEN CONARD, DEPUTY OFFICE SUPERVISOR

Revised 1/2012