

Turnbull National Wildlife Refuge Turkey Hunting Plan

September 2022

**U.S. Fish and Wildlife Service
Inland Northwest National Wildlife Refuge Complex
Turnbull National Wildlife Refuge
26010 S. Smith Road
Cheney, WA 99004**

Submitted By:

KELLY MORONEY Digitally signed by KELLY MORONEY
Date: 2022.09.02 14:43:34 -07'00'

Project Leader Signature/Date

Concurrence:

CHARLES STENVALL Digitally signed by CHARLES STENVALL
Date: 2022.09.02 08:01:06 -07'00'

Refuge Supervisor Signature/Date

Approved:

CHRISTINE OGURA Digitally signed by CHRISTINE OGURA
Date: 2022.09.02 15:45:14 -07'00'

Regional Chief, National Wildlife Refuge System Signature/Date

Table of Contents

I.	Introduction	3
II.	Statement of Objectives	4
III.	Description of Hunting Program	5
	A. Areas to be Opened to Hunting.....	5
	B. Species to be Taken, Hunting Periods, Hunting Access	7
	C. Hunter Permit Requirements.....	8
	D. Consultation and Coordination with the State.....	8
	E. Law Enforcement	8
	F. Funding and Staffing Requirements	9
IV.	Conduct of the Hunt Program	9
	A. Hunter Permit Application, Selection, and/or Registration Procedures	9
	B. Refuge-Specific Regulations.....	9
	C. Relevant State Regulations	9
	D. Other Rules and Regulations for Hunters	10
V.	Public Engagement	11
	A. Outreach Plan for Announcing and Publicizing the Hunt	11
	B. Anticipated Public Reaction to the Hunting Program.....	11
	C. How Hunters will be Informed of Relevant Rules and Regulations.....	11
VI.	Compatibility Determination	12
	Map A. Turnbull NWR Current Hunt Areas and Hunting Access	6
	Map B. Turnbull NWR Proposed Turkey Hunt Area	7

I. Introduction

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

Turnbull NWR is one of three refuges in the Inland Northwest NWR Complex, located in eastern Washington and the Idaho panhandle. Turnbull NWR was established by President Franklin D. Roosevelt in 1937, through Executive Order 7681, as a refuge and breeding ground for migratory birds and other wildlife.

In March 2007 the U.S. Fish and Wildlife Service (Service) adopted a Comprehensive Conservation Plan for Turnbull National Wildlife Refuge (USFWS 2007). The CCP sets forth management guidance for the Refuges over the next 15 years, as required by the National Wildlife Refuge System Administration Act of 1966 ([16 U.S.C. 688dd -688ee](#)), as amended by the National Wildlife Refuge System Improvement Act of 1997).

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

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

The NWRSA (16 U.S.C. 668dd(a)(4)) mandates the Secretary of the Interior in administering the System to

- Provide for the conservation of fish, wildlife, and plants, and their habitats within the NWRS;
- Ensure that the biological integrity, diversity, and environmental health of the NWRS are maintained for the benefit of present and future generations of Americans;
- Ensure that the mission of the NWRS described at 16 U.S.C. 668dd(a)(2) and the purposes of each refuge are carried out;

- Ensure effective coordination, interaction, and cooperation with owners of land adjoining refuges and the fish and wildlife agency of the states in which the units of the NWRS are located;
- Assist in the maintenance of adequate water quantity and water quality to fulfill the mission of the NWRS and the purposes of each refuge;
- Recognize compatible wildlife-dependent recreational uses as the priority general public uses of the NWRS through which the American public can develop an appreciation for fish and wildlife;
- Ensure that opportunities are provided within the NWRS for compatible wildlife-dependent recreational uses; and
- Monitor the status and trends of fish, wildlife, and plants in each refuge.

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

As part of future management guidance, the CCP did not foresee the possibility of having turkey hunting at Turnbull NWR. A youth waterfowl hunt and a public elk hunt, to meet habitat objectives for aspen/riparian habitat, were established in 2009 (USFWS 2009). We propose to open a portion of the Refuge (1,883 acres) to turkey hunting to provide additional wildlife-dependent recreation opportunities, manage turkey populations in line with State management objectives, and potentially reduce competition between turkeys, which are not native to Washington) and native ground-feeding landbirds. This hunt plan has been prepared as a step-down plan to the CCP and Turnbull constitutes a minor amendment to CCP.

II. Statement of Objectives

The objectives of a turkey hunting program on Turnbull NWR are:

- To provide the public with a recreational experience on more refuge lands and increase opportunities for hunters, especially for youth, families, and the public hunting area community.
- To provide wildlife-dependent public recreation as mandated by and according to Service law and policy

Turkey hunting is consistent with the refuge's Comprehensive Conservation Plan's Goal 7: "Foster appreciation of and support for the Refuge and the channeled scablands ecosystem

through quality environmental education, interpretation, wildlife-dependent recreation, and outreach compatible with the Refuge purposes and mission” (USFWS 2007). Although turkey hunting was not specifically identified in CCP hunting objectives, increasing turkey populations on the Refuge has led us to propose this new use on the refuge.

III. Description of Hunting Program

A. Areas to be Opened to Hunting.

We propose to open 1,883 acres of Turnbull NWR to fall turkey hunting (all methods of take under State regulations). This proposed turkey hunt area includes ponderosa pine forest, wetland, steppe, and aspen riparian habitat located on the north side of the Refuge between the Columbia Plateau Trail and Mullinix Road. The area is currently closed to hunting (Map A). We would establish a new hunt unit, the Long Lake Unit, in this area (Map B).

B. Species to be Taken, Hunting Periods, Hunting Access

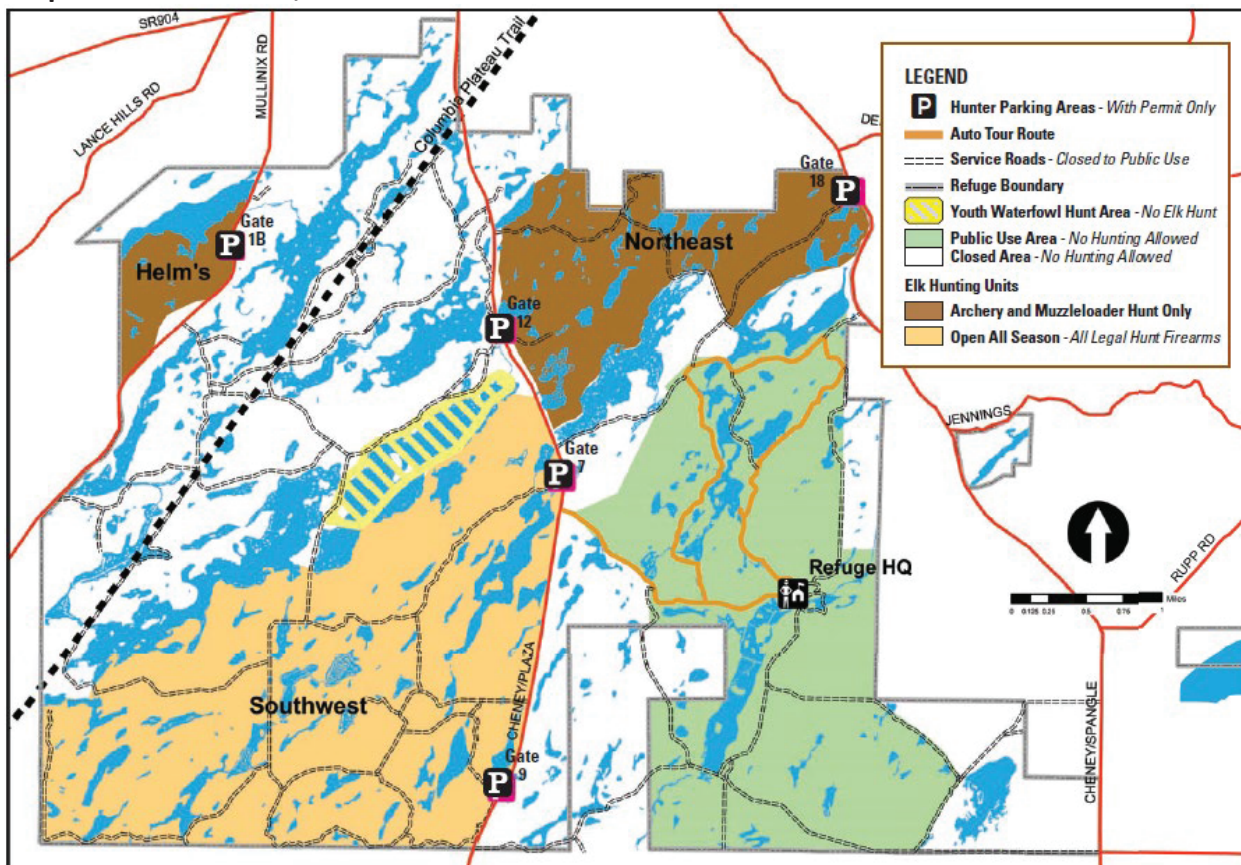
1. TURKEY HUNTING:

We propose to open Turnbull NWR to turkey hunting on 1,883 acres of the Refuge. A new hunt unit open to turkey hunting only (the Long Lake Unit) would be established (Map B). Turkey hunting would occur four days per week (for example: Saturdays, Sundays, Wednesdays, and Thursdays) during the Washington State general fall turkey season in WDFW Region 1, which runs from September 1 through December 31. Hunting within the Refuge will be consistent with Federal, Washington Department of Fish and Wildlife, and Refuge-specific hunting regulations. We have published Refuge-specific regulations requiring the use of non-toxic shot for turkey hunting.

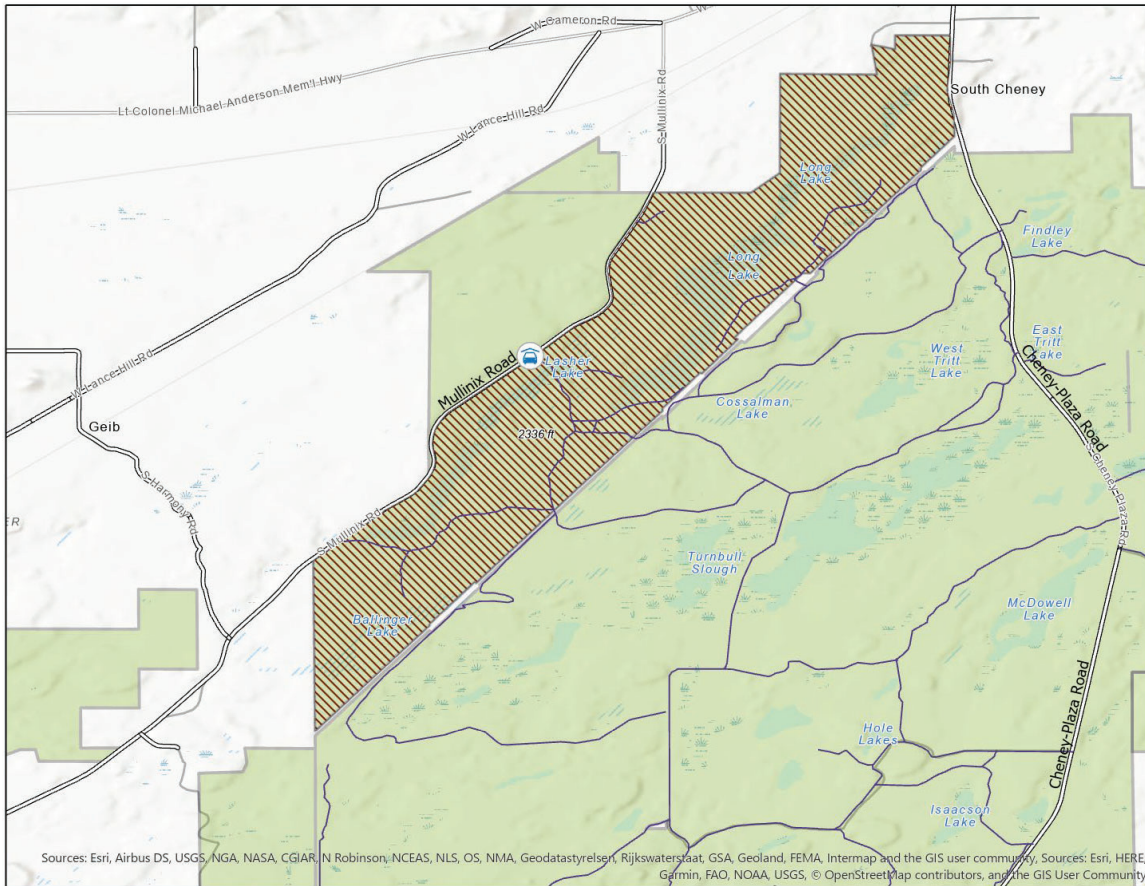
Turkey hunting would be by advance reservation only. WDFW would manage reservations under their Hunting By Reservation Only program, under a hunting access agreement with the Service. All hunting dates will be posted on WDFW’s online reservation program webpage prior to the start of the fall season. Reservations can be made beginning at 8:00am, 14 days prior to the actual hunting date. Hunters reserve dates on a first-come, first-serve basis. Up to two hunting parties of up to four hunters per party would be allowed to hunt during a two-day hunt period (for example: Saturday-Sunday or Wednesday-Thursday). Once hunters have made a reservation and prior to hunting, they must call a designated contact number to receive a safety briefing and have their questions answered by Refuge staff. Turkey hunters may enter the refuge no earlier than 2 hours before legal shooting hours and must exit the refuge no later than 1 hour after legal shooting hours.

The Long Lake Unit can be accessed from Mullinix Road. Free-ram hunting would be allowed on the unit. Parking is allowed in the designated Mullinix Road hunter parking area only. No overnight parking is allowed on the refuge. Turkey hunters, with the exception of disabled hunters, will only be allowed access to the Long Lake Unit by foot through the parking area gate on Mullinix Road. Turkey hunters with disabilities that obtain a reservation through the WDFW's "Hunting By Reservation Only" program must apply to the Refuge Manager for a Special Use Permit in advance of their hunt date that would allow them to use a vehicle or e-bike to access to the hunt area. The gate at the Mullinix Road parking lot would be opened by Refuge staff to allow access to the hunt area by hunters with disabilities. Only the vehicle or e-bike that is being used by a disabled hunter may drive into the refuge, and vehicles and e-bikes are restricted to existing/maintained roadways within the hunt unit.

Map A. Turnbull NWR, current hunt areas and access.



Map B. Turnbull NWR, proposed Long Lake Unit turkey hunting area (hatched).



C. Hunter Permit Requirements (if applicable)

Hunters must comply with all applicable WDFW regulations and must obtain all necessary state and federal licenses, tags, and stamps for each season. No Refuge permit is required, other than a Special Use Permit allowing vehicle or e-bike access by hunters with disabilities.

D. Consultation and Coordination with the State

Discussions with Washington Department of Fish and Wildlife (WDFW) staff regarding development of new hunting opportunities on NWRs have been ongoing for many years. More recently, on June 4, 2021, USFWS regional senior staff for Refuges had a coordination call with WDFW leadership, including WDFW Wildlife Program Director Eric Gardner. The Service and WDFW discussed and came to mutual agreement on priorities for hunting openings and

expansions in the 2022-23 season and beyond, including opening Turnbull NWR to turkey hunting.

Refuge staff consulted with the WDFW Spokane District staff regarding the proposal to open the Refuge to turkey hunting. Refuge Manager Lisa Wilson spoke with Mike Atamian (WDFW Spokane District Wildlife Biologist) and Carrie Lowe (WDFW Assistant District Wildlife Biologist) in June of 2021 to begin the conversation about potential turkey hunting by asking preliminary questions about hunting seasons, tools to manage access, and how best to achieve refuge goals for a quality hunt while meeting refuge purpose. Following meetings among refuge staff in October 2021, the Refuge Manager exchanged emails with Mike Atamian, Carrie Lowe, and Brian Gaston (WDFW Private Lands Biologist – Spokane & Whitman County) concerning further details about how the Private Lands Hunt By Reservation system operates and the best approach for managing the hunt. WDFW staff provided information on preferred hunt duration, numbers per hunt party, and feasibility of lead shot restrictions. WDFW's Region 1 office was given an advance copy of the Draft Turkey Hunting Plan and was invited to provide comments prior to issuance of the draft plan for public review and comment. We received comments from WDFW on March 1, 2022, which have been incorporated into this Plan.

E. Law Enforcement

Enforcement of refuge violations normally associated with management of a national wildlife refuge is the responsibility of commissioned Federal Wildlife Officers. Other officers, Special Agents, state game wardens, and the local Sheriff's Department and Washington State Police may assist the Inland Northwest NWRC full-time Federal Wildlife Officer.

The following methods are used to control and enforce hunting regulations:

- Refuge and hunt area boundaries will be clearly posted;
- The Refuge will provide a brochure that shows hunt areas;
- Turnbull NWR law enforcement staff will randomly check hunters for compliance with federal and state laws.

F. Funding and Staffing Requirements

Annual turkey hunt administration costs for Turnbull NWR, including salary, equipment, law enforcement, and brochure printing, would total approximately \$2,000. One-time (first year) costs, including posting of boundary signage, developing a new brochure, and constructing a small parking area, are estimated at \$13,000. Turnbull NWR funds are used to conduct all hunts. Funding specifically for hunts has not been allocated. It is anticipated that station

funding would continue to be sufficient to continue all hunting programs, including a turkey hunt at Turnbull NWR in the future.

IV. Conduct of the Hunting Program

A. Hunter Permit Application, Selection, and/or Registration Procedures

No special permission or permits are required from the U.S. Fish and Wildlife Service to hunt turkey. Hunters must be in possession of a valid state small game hunting license and a turkey transport tag. Turkey hunting would be by advance reservation only. WDFW would manage reservations under their Hunting By Reservation Only program, under a hunting access agreement with the Service. All hunting dates will be posted on WDFW's online reservation program webpage prior to the start of the fall season. Reservations can be made beginning at 8:00am, 14 days prior to the actual hunting date. Hunters reserve dates on a first-come, first-serve basis. Up to two hunting parties of up to four hunters per party would be allowed to hunt during a two-day hunt period (for example: Saturday-Sunday or Wednesday-Thursday). Once hunters have made a reservation and prior to hunting, they must call a designated contact number to receive a safety briefing and have their questions answered by Refuge staff.

B. Refuge-Specific Hunting Regulations

Listed below are proposed refuge-specific regulations (50 CFR Part 32) that would pertain to turkey hunting on Turnbull NWR as of the date of this draft plan. These regulations may be modified as conditions change or if refuge expansion occurs.

(I) *Turnbull National Wildlife Refuge*

(3) *Big game hunting.* We allow hunting of elk and turkey on designated areas of the refuge subject to the following conditions:

(iv) We allow turkey hunting during the fall season only.

(v) We prohibit the possession and/or use of toxic shot by hunters using shotguns (see § 32.2(k)) when hunting turkey.

(vi) For turkey hunting, the condition set forth at paragraph (I)(1)(iv) of this section applies.

C. Relevant State Regulations

WDFW: Turkey hunting is permitted in accordance with all state regulations found at: <https://wdfw.wa.gov/publications/02265> and <https://www.eregulations.com/washington/hunting/game-bird/wild-turkey-seasons>

- **Age:** Age requirements will be in accord with WDFW regulations.
- **Allowable equipment (dogs, vehicles, blinds, sporting arms, ammunition):** All methods of take permitted under WDFW regulations would be allowed. It is illegal to hunt turkeys with a weapon other than shotgun or muzzleloading shotgun shooting #4 or smaller shot (0.13 inches diameter or smaller), bow and arrow, or crossbow. It is unlawful to use dogs, electronic calls, or electronic decoys to hunt turkey or baiting methods for game birds.
- **License and permits:** Hunters must comply with all applicable WDFW regulations and must obtain all necessary state licenses, tags, or permits for each season. A small game license and turkey transport tag is required to hunt turkey in Washington. No Refuge permit is required. For more information see: <https://wdfw.wa.gov/licenses/hunting>
- **Reporting harvesting:** Hunters must fulfill all WDFW reporting requirements. Turkey hunters will owe hunting activity reports (Spring and/or Fall) for each turkey transport tag purchased.
- **Hunting Hours:** Hunting hours for turkey are one-half hour before sunrise to sunset.
- **Hunter Safety Training:** There is no minimum or maximum age to be eligible to hunt in Washington, but anyone purchasing a license who was born after Jan. 1, 1972 must show proof that they have completed a hunter education class. Information can be found at <https://wdfw.wa.gov/hunting/requirements/education>.

D. Other Refuge Rules and Regulations for Turkey Hunting

- All shot used by, or in possession of, by turkey hunters must be federally approved non-toxic shot.
- Turkey hunting would be allowed four days per week (for example: Saturdays-Sundays, Wednesdays-Thursdays) during the State fall season.

- We require turkey hunters reserve hunt days in advance through the WDFW Hunt By Reservation Only online system.
- A maximum of two turkey hunting parties, with a limit of up to four hunters per party, would be allowed to hunt during each two-day hunt period.
- Turkey hunters, with the exception of disabled hunters, will only be allowed access to the Long Lake Unit by foot through the parking area gate on Mullinix Road.
- Turkey hunters with disabilities must apply to the Refuge Manager for a Special Use Permit in advance of their hunt date that would allow them to use a vehicle or e-bike to access the hunt area. Only the vehicle or e-bike that is being used by a disabled hunter may drive into the refuge, and vehicles and e-bikes are restricted to existing/maintained roadways within the hunt area.
- Camping, overnight parking, fishing, boating, horseback riding, fires, and on-ice activities are not permitted on the refuge. ATV, ORV and snowmobile use is prohibited on all areas of the refuge.
- Hunters must pack out used shotshells and other trash.

V. Public Engagement

A. Outreach for Announcing and Publicizing the Hunting Program

The Refuge maintains a mailing list of local newspapers, radio, and websites for news releases. Special announcements and articles may be released in conjunction with hunting seasons. In addition, information about the hunt will be available at Turnbull NWR headquarters and on the Turnbull NWR website.

B. Anticipated Public Reaction to the Hunting Program

Hunting has occurred on the Refuge for many years. Turnbull NWR opened to youth waterfowl and controlled-access elk hunting in 2009 (USFWS 2009). Both of these hunts are limited, either by limited seasons and hunter numbers (waterfowl) or a limited number of permits (elk), and cause little to no negative public reaction. The newly proposed turkey hunt may initially cause some public concern. However, in our outreach to the public, we will explain that hunting would occur outside of the main public use area, and that reducing turkey populations may be beneficial for native wildlife species. Therefore, little negative public reaction is expected.

In addition, turkey hunting is an important economic and recreational use of Washington's natural resources. Eastern Washington is known as a world-class destination for turkey hunting,

and the addition of this area is expected to receive a positive public reaction in the hunting community.

C. How Hunters Will Be Informed of Relevant Rules and Regulations

General information regarding hunting and other wildlife-dependent public uses can be obtained at Turnbull NWR headquarters, 26010 S. Smith Road, Cheney, WA 99004 or by calling (509) 235-4723, or by Email: Turnbull@fws.gov. Dates, hunting unit directions, and maps about the hunt will be available on the station website at <https://www.fws.gov/refuge/Turnbull/> and at the Refuge Office.

Information on turkey hunting in Washington is provided by WDFW is available at the WDFW main office located at the Natural Resources Building, 1111 Washington St. SE, Olympia, WA 98501 or by calling 360-902-2200. Dates, maps, and other information about game bird hunting are available on their website at <https://wdfw.wa.gov/hunting>

VI. Compatibility Determination

Hunting and all associated program activities proposed in this plan are compatible with the purposes of the refuge. See attached Compatibility Determination for Turkey Hunting.

VII. References

U.S. Fish and Wildlife Service. March 2007. Turnbull National Wildlife Refuge Comprehensive Conservation Plan. Available at: <https://ecos.fws.gov/ServCat/DownloadFile/164241>

U.S. Fish and Wildlife Service. 2009a. Turnbull National Wildlife Refuge Hunt Plan.

U.S. Fish and Wildlife Service. 2009b. Environmental assessment for an Elk and Youth Waterfowl Hunt on Turnbull National Wildlife Refuge.

Washington Department of Fish and Wildlife. 2021. Washington Game Bird and Small Game Hunting Regulations, 2021. Washington Department of Fish and Wildlife, Olympia, Washington, USA. Available at: <https://wdfw.wa.gov/publications/02265>

**FINDING OF NO SIGNIFICANT IMPACT
AND DECISION TO OPEN TO TURKEY HUNTING**

**TURNBULL NATIONAL WILDLIFE REFUGE
*Cheney, Washington***

The Service is opening hunting opportunities for turkey on the Turnbull NWR in accordance with the refuge's Turkey Hunting Plan. We propose to open 1,883 acres of the Refuge to fall turkey hunting in line with Washington State and Refuge-specific seasons and regulations.

Selected Action

Alternative B—Open the Refuge to Turkey Hunting [Proposed Action Alternative]

Under the Proposed Action Alternative, we would open 1,883 acres of the Refuge to turkey hunting during the State fall season (September 1-December 31). This would be a new hunt area (Long Lake Unit), open to turkey hunting only. Access to the hunt area would be by foot from a parking area on Mullinix Road, except that hunters with disabilities may obtain a Special Use Permit to allow them to use vehicles or e-bikes on existing and maintained roadways to access turkey hunting.

Turkey hunting would occur four days per week during the State's fall season. Hunters must comply with state and Refuge-specific regulations, season dates, bag limits, and shooting hours, and must carry a valid State hunting license and turkey tag. We have promulgated Refuge-specific regulations requiring the use of non-toxic shot for turkey hunting as part of the 2022-2023 Refuge-Specific Hunting and Sport Fishing Regulations. Turkey hunting is by advance reservation only. WDFW would manage reservations under their Hunting By Reservation Only program, under a hunting access agreement with the Service. Hunters reserve dates on a first-come, first-serve basis. Up to two hunting parties of up to four hunters per party would be allowed to hunt per two-day hunt period.

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

Other Alternatives Considered and Analyzed

Alternative A—Continue Current Management [No Action Alternative]

Under the No Action alternative, Turnbull NWR would remain closed to turkey hunting. Current public uses on the Refuge would continue, including wildlife observation and photography, environmental education, interpretation, a youth waterfowl hunt, a controlled-access elk hunt, hiking, and bicycling. Current management of the Refuge would continue, including prescribed

burning, tree thinning, noxious weed control, water management, wetland restoration, and riparian and grassland vegetation restoration. Administrative actions include cooperation with other public agencies and private landowners to protect the quantity and quality of water entering the refuge, and create or maintain habitat corridors for the region's wildlife.

This alternative was not selected because the Refuge would not come closer to aligning Refuge hunt regulations with state regulations, and would not provide additional hunting opportunities.

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 to 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 the Proposed Action and No Action alternatives. 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:

Alternative B would result in minor, long-term adverse impacts on Refuge turkey populations. Turkey would be subjected to harvest mortality and may be periodically displaced from feeding and resting areas as a result of hunting actions. However, these impacts, while adverse, would be minor given the low hunter numbers (no more than eight hunters per day over the 84 days per year that the Refuge would be open to turkey hunting). The estimated harvest of 70 turkeys annually would represent only a small percentage of turkeys taken regionally or Statewide. Further, the Refuge turkey hunt would be in line with State management plans for this species, which are designed to provide sustainable sport hunting opportunities.

Alternative B would result in negligible to minor long-term adverse impacts to native vegetation and other wildlife and aquatic species as a result of hunting activity. The footprint of any permanent vegetation disturbance would represent a small percentage of the total area of the Refuge. Disturbance to other wildlife would be of short duration and seasonal in nature and would not occur during the breeding life history stage for most species observed in and around the Refuge hunt area. Turkey hunting would not add to lead in the environment since only approved non-toxic shot may be used for turkey on the Refuge.

Finally, turkeys are not native to Washington State. A reduction in turkey populations on the Refuge may be beneficial to a variety of native ground-feeding land birds and small mammals, by reducing competition for food resources such as ponderosa pine seeds. However, this impact, while beneficial, would be negligible to minor due to the small number of turkeys that would be harvested on the Refuge.

Impacts to non-hunting users would be minor, due to the low numbers of turkey hunters on the Refuge at any given time, and the fact that most refuge visitation occurs in spring and summer, outside of the fall turkey season. On the other hand, turkey hunting may contribute to wildlife and habitat conservation and provide educational and sociological benefits by bringing hunters into contact with interpretive and educational programs and facilitating awareness of wildlife issues beyond hunting.

Implementation of the preferred alternative will have a positive, but locally and regionally insignificant impact on the economy resulting from a small increase in expenditures for both activity-related equipment purchases and travel-related goods and services. Refuge turkey hunters would be expected to spend approximately \$35,000 in trip-related expenses annually. This represents a minor increase in participation in turkey hunting and hunting-related expenditures (+0.3 percent) in Washington State.

Measures to mitigate and/or minimize adverse effects have been incorporated into the selected action. These measures include limiting the number of turkey hunters that can be on the Refuge at any given time, hunting only four days per week, spatially separating turkey hunting from other public uses, including elk and waterfowl hunting, and hunting turkey only in the fall, outside the season when most wildlife breed and raise their young.

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

- 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 will result in beneficial impacts to the wildlife-dependent recreational opportunities, with only negligible adverse impacts to the human environment as discussed above.
- The NWRS uses an adaptive management approach to all wildlife management on refuges, monitoring and re-evaluating the hunting opportunities on the refuge on an annual basis to ensure that the hunting programs continue to contribute to the biodiversity and ecosystem health of the refuge and these opportunities do not contribute to any cumulative impacts to habitat or wildlife from local, State, or regional wildlife management, or other factors.
- The action, along with refuge regulations and stipulations to ensure compatibility, will 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 will not impact any threatened or endangered species; or any Federally-designated critical habitat;
- The action will not impact any cultural or historical resources;
- The action will not impact any wilderness areas;

- There is no scientific controversy over the impacts of this action and the impacts of the proposed action are relatively certain.

Public Review

The proposal has been thoroughly coordinated with all interested and/or affected parties. Parties contacted include the Washington Department of Fish and Wildlife (WDFW), and the Spokane Tribe of Indians. We coordinated extensively with WDFW in designing the turkey hunting program, and incorporated their suggestions into the Hunt Plan.

On June 8, 2022, the Service put the Hunt Plan and EA out for a 60-day public review and comment period. The Service received four public comments on the EA. Commenters generally supported opening the Refuge to turkey hunting, but expressed concern over potential conflicts between fall turkey hunting and the Refuge's elk hunting program. These conflicts would be minimized by spatially separating turkey hunting from elk hunting. One commenter pointed out that the Hunt Plan did not describe how hunters with disabilities could access turkey hunting opportunities. We added information on hunting access for people with disabilities to the final Hunt Plan. Finally, we added information on impacts to listed and candidate species and eagles to the EA in response to internal review comments.

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 open Turnbull NWR to fall turkey hunting does not constitute a major Federal action significantly affecting the quality of the human environment under the meaning of section 102 (2) (c) of the National Environmental Policy Act of 1969 (as amended). As such, an environmental impact statement is not required.

Decision

The Service has decided to open the Refuge to fall turkey hunting. The hunt will be implemented starting in September of 2023.

This action is compatible with the purposed of the refuge and the mission of the National Wildlife Refuge System. See attached Compatibility Determination (Appendix D).

The action is consistent with applicable laws and policies.

CHRISTINE OGURA Digitally signed by CHRISTINE OGURA
Date: 2022.09.02 15:42:36 -07'00'

Acting Regional Chief, National Wildlife Refuge System

Date

**Turnbull National Wildlife Refuge
Spokane County, Washington**

Final Environmental Assessment

for the

Turkey Hunting Plan

Prepared by:

**U.S. Fish and Wildlife Service
Inland Northwest National Wildlife Refuge Complex
Turnbull National Wildlife Refuge
26010 S. Smith Road
Cheney, WA 99004**

September 2022

Contents

Proposed Action	4
Background.....	4
Purpose and Need for the Proposed Action.....	6
Alternatives.....	6
Alternative A – Continue Current Management – [No Action Alternative].....	6
Alternative B – Open the Refuge to Turkey Hunting – [Proposed Action Alternative].....	6
Alternative(s) Considered, But Dismissed From Further Consideration	7
Affected Environment and Environmental Consequences.....	7
Turkey	9
Non-Target Wildlife and Aquatic Species	10
Threatened and Endangered Species and Other Special Status Species	15
Habitat and Vegetation.....	17
Table 3. Visitor Use and Experiences	20
Table 4. Cultural Resources.....	21
Land Use on the Refuge	22
Administration	23
Local and Regional Economies.....	24
Environmental Justice.....	25
Cumulative Impacts	26
Monitoring.....	26
Summary of Analysis.....	26
Alternative A –Continue Current Management– [No Action Alternative]:.....	26
Alternative B – Open Turnbull NWR to Turkey Hunting – [Proposed Action Alternative]:.....	26
List of Sources, Agencies and Persons Consulted	27
List of Preparers.....	28
State Coordination.....	28
Tribal Consultation	28
Public Outreach	28
Determination	30
Signatures	30
References.....	31
Appendix A. Other Applicable Statutes, Executive Orders, and Regulations.....	29
Appendix B. ESA Section 7 Consultation	36

Appendix C. Response to Comments on the Draft Turkey Hunting Plan and Environmental Assessment

Appendix D. Finding of Appropriateness and Compatibility Determination for Turkey Hunting

Final Environmental Assessment for the Turnbull NWR Turkey Hunting Plan

Date: September 2022

This Environmental Assessment (EA) was prepared to evaluate the effects associated with this proposed action and to comply with the National Environmental Policy Act (NEPA) in accordance with Council on Environmental Quality regulations (40 CFR 1500-1509) and Department of the Interior (43 CFR 46; 516 DM 8) and U.S. Fish and Wildlife Service (550 FW 3) regulations and policies. NEPA requires examination of the effects of proposed actions on the natural and human environment. Appendix A outlines all law and executive orders evaluated through this Environmental Assessment.

Proposed Action

The U.S. Fish and Wildlife Service (Service) is proposing to open Turnbull National Wildlife Refuge (NWR, Refuge) to turkey hunting, in accordance with the refuge's Turkey Hunting Plan. We propose to open 1,883 acres of the Refuge to fall turkey hunting in line with Washington State and Refuge-specific seasons and regulations.

A proposed action may evolve during the NEPA process as the agency refines its proposal and gathers feedback from the public, tribes, and other agencies. Therefore, the final proposed action may be different from the original. The proposed action will be finalized at the conclusion of the public comment period for the EA.

Background

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

Turnbull NWR is one of three refuges in the Inland Northwest NWR Complex, located in eastern Washington and the Idaho panhandle. Turnbull NWR was established by President Franklin D. Roosevelt in 1937, through Executive Order 7681, as a refuge and breeding ground for migratory birds and other wildlife. The 19,000-acre Refuge is located on the eastern edge of the Columbia Basin in the Channeled Scablands region of Spokane County in eastern Washington. The City of Spokane, with a population of nearly 220,000 people, is located 20 miles northeast of the Refuge. The Refuge is located adjacent to the town of Cheney (population 12,000).

The Channeled Scablands are an area of regional and national conservation importance. Crossing several counties in eastern and central Washington State, the Scablands contain densities of wetland basins rivaling the Prairie Pothole region, and at intact sites, waterfowl production exceeds that of the Potholes region. Yet most of the larger wetland basins have been drained and very little of the original Channeled Scablands area is under any kind of public ownership or protected in any other fashion. The area is biologically significant, and is identified as an important site in the Partners in Flight Columbia Plateau Plan (Altman and Holmes 2000), the Nature Conservancy's Columbia Plateau Ecoregion Plan (Soper 1999), and the Intermountain West Waterbird Conservation Plan (Ivey and Herziger 2006). In addition, the Refuge is currently designated as an Important Bird

Area by the Audubon Society. The Channeled Scablands also host the majority of the last remnants of the Palouse steppe vegetation community, which is recognized both nationally and at the state level as a critically endangered ecosystem. Refuge habitats include permanent, semipermanent, and seasonal wetlands; and aspen/riparian, Palouse steppe, and ponderosa pine communities.

The Refuge supports more than 260 species of birds, mammals, fish, reptiles, and amphibians. 124 species of birds are known to nest on the Refuge, and 69 species of waterfowl, shorebirds, and waterbirds use the Refuge for breeding or migration. The Refuge is a regionally significant area for waterfowl production, particularly for redheads and cinnamon teal. The Refuge's aspen riparian communities, while small in area, are disproportionately important to wildlife. More than half of the Refuge's breeding bird species use aspen and deciduous shrub riparian plant communities for either reproduction or foraging. Several species of bats, including the big brown bat, hoary bat, and silver-haired bat, utilize either aspen foliage or cavities in aspen trees and snags for roosts.

In March 2007 the U.S. Fish and Wildlife Service (Service) adopted a Comprehensive Conservation Plan for Turnbull National Wildlife Refuge (USFWS 2007). The CCP sets forth management guidance for the Refuges over the next 15 years, as required by the National Wildlife Refuge System Administration Act of 1966 ([16 U.S.C. 688dd -688ee](#), as amended by the National Wildlife Refuge System Improvement Act of 1997).

The mission of the NWRS, as outlined by the National Wildlife Refuge System Administration Act (NWRSA), as amended by the National Wildlife Refuge System Improvement Act (16 U.S.C. 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"

Additionally, the NWRSA mandates the Secretary of the Interior in administering the NWRS (16 U.S.C. 668dd(a)(4)) to

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

Turnbull NWR provides a welcome recreational destination that showcases habitats of Washington's Channeled Scablands habitats in a relatively flat, accessible setting, only a 40-minute drive from Spokane. The Refuge is a popular destination for wildlife watchers and photographers, and has an active environmental education program. Waterfowl and elk hunting have been allowed on the Refuge since 2009.

Purpose and Need for the Proposed Action

The purpose of this proposed action is to provide wildlife-dependent recreation opportunities, specifically turkey hunting, on the Turnbull NWR. The need for the proposed action is to meet the Service's priorities and mandates as outlined by the NWRSA to "recognize compatible wildlife-dependent recreational uses as the priority general uses of the NWR" and "ensure that opportunities are provided within the NWR for compatible wildlife-dependent recreational uses" (16 U.S.C. 668dd(a)(4)).

Hunting is consistent with the Comprehensive Conservation Plan's Goal 7: "Foster appreciation of and support for the Refuge and the channeled scablands ecosystem through quality environmental education, interpretation, wildlife-dependent recreation, and outreach compatible with the Refuge purposes and mission" (USFWS 2007).

Alternatives

Alternative A – Continue Current Management – [No Action Alternative]

Under the No Action alternative, Turnbull NWR would remain closed to turkey hunting. Current public uses on the Refuge would continue, including wildlife observation and photography, environmental education, interpretation, a youth waterfowl hunt, a controlled-access elk hunt, hiking, and bicycling. Current management of the Refuge would continue, including prescribed burning, tree thinning, noxious weed control, water management, wetland restoration, and riparian and grassland vegetation restoration. Administrative actions include cooperation with other public agencies and private landowners to protect the quantity and quality of water entering the refuge, and create or maintain habitat corridors for the region's wildlife.

Alternative B – Open the Refuge to Turkey Hunting – [Proposed Action Alternative]

The refuge has prepared a Turkey Hunting Plan for Turnbull NWR, which is presented in this document as the Proposed Action Alternative. The proposed hunt is a minor amendment to the Refuge's CCP (USFWS 2007).

Under the Proposed Action Alternative, we would open 1,883 acres of the Refuge to turkey hunting during the State fall season (September 1-December 31). This would be a new hunt area (Long Lake Unit), open to turkey hunting only. Access to the hunt area would be by foot from a parking area on Mullinix Road, except that hunters with disabilities may enter the refuge using vehicles or e-bikes on existing and maintained roadways. Turkey hunters would be allowed to hunt throughout the unit.

Turkey hunting would occur four days per week (for example: Saturday-Sunday and Monday-Tuesday) during the State's fall season. Hunters must comply with state and Refuge-specific regulations, season dates, bag limits, and shooting hours, and must carry a valid State hunting license and turkey tag. We would promulgate Refuge-specific regulations requiring the use of non-toxic shot for turkey hunting. Turkey hunting is by advance reservation only. WDFW would manage reservations under their Hunting By Reservation Only program, under a hunting access agreement with the Service. All hunting dates will be posted on WDFW's online reservation program webpage prior to the start of the fall season. Reservations can be made beginning at 8:00am, 14 days prior to the actual hunting date. Hunters reserve dates on a first-come, first-serve basis. Up to two hunting parties of up to four hunters per party would be allowed to hunt per two-day hunt period (for example: Saturday-Sunday or Wednesday-Thursday). Once hunters have made a reservation and prior to hunting, they must call a designated contact number to receive a safety briefing and have their questions answered by Refuge staff. Hunters may enter

the refuge no earlier than 2 hours before legal shooting hours and must exit the refuge no later than 1 hour after legal shooting hours. Refuge-specific regulations will be published in the Federal Register as part of the 2022-2023 Refuge-Specific Hunting and Sport Fishing Regulations.

Measures to Avoid Conflicts:

- The turkey hunt area lies outside both the youth waterfowl hunt area, and the elk hunt areas. This prevents conflicts between turkey hunters and elk and waterfowl hunters. (See Hunt Plan, Maps A and B).
- The turkey hunt area lies outside the main Public Use Area, where most wildlife observation and photography, interpretation, and environmental education, and hiking occur.
- Hunters must access the hunt area on foot from the designated parking area.

Annual turkey hunt administration costs for Turnbull NWR, including salary, equipment, law enforcement, brochures, signage, etc., totals approximately \$15,000. Turnbull NWR funds are used to conduct Refuge hunts. Funding specifically for the turkey hunt has not been allocated. It is anticipated that station funding would continue to be sufficient to continue all hunting programs at Turnbull NWR in the future. Under this alternative the Refuge Law Enforcement Officer and/or WDFW wardens would conduct license and bag limit checks.

This alternative would satisfy the Purpose and Need (above) by offering new opportunities for public hunting that fulfill the Service's mandate under the NWRSA, while also helping to fulfill Secretarial Orders 3447 and 3356. The Service has determined that the hunt plan is compatible with the purposes of Turnbull NWR and the mission of the NWR.

Alternative(s) Considered, But Dismissed From Further Consideration

No alternatives were considered but dismissed from further consideration.

Affected Environment and Environmental Consequences

This section is organized by affected resource categories and for each affected resource discusses both (1) the existing environmental and socioeconomic baseline in the action area for each resource and (2) the effects and impacts of the proposed action and any alternatives on each resource. The effects and impacts of the proposed action considered here are changes to the human environment, whether adverse or beneficial, that are reasonably foreseeable and have a reasonably close causal relationship to the proposed action or alternatives. This EA includes the written analyses of the environmental consequences on a resource only when the impacts on that resource could be more than negligible and therefore considered an "affected resource." Any resources that will not be more than negligibly impacted by the action have been dismissed from further analyses.

Turnbull National Wildlife Refuge consists of approximately 19,214 acres adjacent to and south of the city of Cheney in Spokane County, Washington. The Refuge includes wetland, ponderosa pine forest, steppe, and aspen riparian habitats. The proposed action is located on 1,883 acres of the Refuge (See Hunt Plan, Map B).

For more information regarding and the general characteristics of the refuge's environment, please see Chapter 4 of the Refuge's Comprehensive Conservation Plan, which can be found here:

<https://ecos.fws.gov/ServCat/DownloadFile/164241>.

Table 1 below shows resources that (1) do not exist within the project area; (2) would either not be affected or only negligibly affected by the proposed action; and (3) do exist in the project area and where there are potentially more than negligible impacts to the resource as a result of the proposed action. Impacts to resources that do not

exist in the project area will not be considered further in this EA. Generally, we will not consider resources that would not be affected or only negligibly affected by the proposed action in this EA, but in some cases we will describe negligible impacts, e.g. to populations of harvested species where we anticipate low harvest.

TABLE 1. POTENTIAL FOR ADVERSE IMPACTS FROM PROPOSED ACTION AND ALTERNATIVES

Resources	Not Applicable: Resource does not exist in project area	No/Negligible Impacts: Exists but no or negligible impacts	Impacts analyzed in this EA
Species to Be Hunted/Fished	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Non-Target Wildlife and Aquatic Species	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Threatened and Endangered Species and Other Special Status Species	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Habitat and Vegetation (including vegetation of special management concern)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Geology and Soils	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Air Quality	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Water Quality	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floodplains	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Wilderness	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Visitor Use and Experience	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Cultural Resources	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Refuge Management and Operations	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Socioeconomics	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Tables 2-6 provide, for each resource of the refuge:

1. A brief description of the relevant general features of the affected environment;
2. A description of relevant environmental trends and planned actions;
3. A brief description of the affected resources in the proposed action area; and
4. Impacts of the proposed action and any alternatives on those resources.

TABLE 2. NATURAL RESOURCES

Turkey
<p data-bbox="203 388 649 420"><i>Affected Environment Description</i></p> <p data-bbox="203 468 1432 667">Wild turkeys are not native to Washington state, and were first introduced into Washington around the early 1900s. A second attempt was made in 1960, when the first wild-trapped turkeys were introduced into the state from Arizona, New Mexico, and Wyoming. Since then, turkeys have maintained naturally reproducing populations in much of Eastern and Southwestern Washington. Currently, three of the five subspecies of wild turkey (Merriam’s, Rio Grande, and eastern) can be found in Washington with some Merriam’s/Rio Grande crosses likely in some areas of Eastern Washington (WDFW 2005).</p> <p data-bbox="203 716 1432 915">Turkey populations across the state appear to be stable to increasing with the largest concentrations in eastern Washington. The statewide spring hunter success rate continues to increase, despite increases in fall harvest, indicating that the increased fall seasons are not adversely impacting populations. Turkey damage and complaints are being reported from eastern Washington, especially Spokane County. Additional hunting opportunities, including a long, liberal fall season, have been created in these areas to help address these complaints (WDFW 2020).</p> <p data-bbox="203 963 1416 1335">WDFW uses harvest and hunter effort data as an index to population trends. Standardizing harvest estimates by the amount of hunter effort expended to achieve that level of harvest can provide some indication of whether populations are increasing, decreasing, or stable. A stable number of hunters with increasing harvest creates an increasing trend in hunter success (harvests per hunter), indicating that the statewide turkey population is likely increasing. Since 2012, hunter success has averaged 42 percent during the spring season. In 2019, spring hunter success was 21 percent above this average, with 51 percent of hunters successful in harvesting a spring turkey. The fall season shows a similar increasing trend, though this could be influenced by the expanded opportunity (increasing season length) during those years. The number of days hunted per successful harvest is a similar metric for indexing population trend. Within each Population Management Unit (PMU), the number of days hunted per harvest is variable, but all units, including PMU 10, show a stable to decreasing trend, indicating that populations at the PMU level are stable to increasing (WDFW 2020).</p>
<p data-bbox="203 1375 925 1407"><i>Environmental Trends and Planned Actions Description</i></p> <p data-bbox="203 1434 1432 1738">Turkey Management in Washington State: Washington’s Turkey Management Plan (WDFW 2005) and the 2015-2021 Game Management Plan (WDFW 2014) provide management direction for turkeys in the state. In Washington state, turkeys are managed to provide sustainable sport hunting, wildlife observation, and photography opportunities, while responding to cases of landowner/turkey conflicts (damage and nuisance complaints). Turnbull NWR lies within WDFW’s Northeast Wild Turkey PMU (PMU 10), which includes Game Management Units (GMU) 101-136. Merriam’s and Rio Grande turkeys are abundant in this PMU, and northeastern Washington is known as a world-class turkey hunting destination. Collectively, the Northeast PMU accounts for approximately two-thirds of turkeys harvested in Washington state, and most fall turkey hunting occurs in this PMU due to long, liberal fall hunting seasons. Between 8,000 and 9,000 turkeys have been</p>

harvested in the state annually in recent years (WDFW 2021a).

Anticipated Impacts

Alternative A:

Estimated Turkey Hunter Numbers: 0

Estimated Take: 0

The Refuge, including the proposed hunt unit, is currently closed to turkey hunting. Therefore, there are no impacts to turkey caused by hunting. Turkey populations on the Refuge fluctuate in response, to food availability, weather patterns, and predation.

Alternative B:

Estimated Hunter Numbers: 280

Estimated Take: 70

Under Alternative B, hunting will result in mortality to turkeys. Based on the 2020 State turkey harvest statistics, the estimated number of turkey hunters in Washington was over 10,100 in the spring and 5,040 in the fall, with an estimated harvest of over 7,900 turkeys (WDFW 2020). In Washington state, most fall turkey hunting occurs in PMU 10, where the Refuge is located. In 2020, 3,759 hunters participated in the fall turkey hunt in PMU 10, harvesting 2,561 turkeys, for a success rate of 68 percent. Hunter use days were 21,044, or on average of 5.6 days per hunter. Average days per kill was 8. Total hunter use days on the Refuge would be 560, assuming that all available hunt days are reserved by the maximum number of hunters. Based of 2020 harvest statistics, we would expect 70 turkeys per year to be harvested on the Refuge. This estimated harvest represents a small fraction of the turkey population in the Northeast PMU, and turkey harvest statewide. Therefore, impacts to turkey populations under Alternative B would be minor, and would support a sustainable harvest.

Non-Target Wildlife and Aquatic Species

Affected Environment Description

Birds: Over 180 species of breeding, resident, and migratory birds have been documented at Turnbull National Wildlife Refuge, including 17 species of nesting waterfowl and eight additional waterfowl species that either winter on the refuge or stop over during fall and winter migration. Redheads are one of the most common nesting duck species, with an average of 500 breeding pairs on the Refuge annually. Redheads nest overwater in stands of emergent plant bed vegetation. Redheads prefer to build their nest within 10-12 feet of open water and in water depths greater than 18 inches. The large permanent wetlands that were restored on the refuge soon after acquisition are key breeding habitat for redheads.

Currently there is approximately 950 acres on average of fall wetlands that provide habitat for approximately 800,000 waterfowl use days with peak populations of ducks of nearly 25,000 and daily averages of near 10,000. Mallards are the most common species, representing more than two-thirds of ducks using Refuge wetlands. Gadwall, American wigeon, and pintail are other common species (USFWS 2009). Habitat is available until late

November when most wetlands freeze up, forcing birds in the area to either migrate south or move to deeper lakes and rivers in the area that may stay open through winter. Within the proposed turkey hunt area, Long Lake provides fall waterfowl habitat; however, most fall waterfowl habitat lies within the area of the Refuge that is closed to hunting or receives minimal hunting. The fall concentrations of waterfowl on the remaining flooded habitat also attract bald eagles in moderate numbers. These same wetlands currently provide important post-breeding foraging habitat for pied-billed grebes, great blue herons, American coots, sora, Virginia rails, American bittern, and red-winged and yellow-headed blackbirds.

As these same wetlands naturally draw down in late summer, they also provide important shallow foraging habitat along their shorelines for up to 25 species of migrating shorebirds such as the western, least, and Baird's sandpiper; greater and lesser yellowlegs; and long-billed dowitchers. The fall shorebird migration usually extends into the first two weeks of October.

The Refuge's Palouse steppe habitat supports several ground-nesting passerines including the western meadowlark, and grasshopper, savannah and vesper sparrows. Many of these species are experiencing declining population trends regionally and have been identified as species of concern. Most of these species are present on the Refuge through September. Other species that move through the area during the fall are mountain bluebirds, common redpoll, white-crowned sparrow, and northern shrikes. Abundant small mammals form the prey base for several raptor species (red-tailed hawks, rough-legged hawks, American kestrels, and northern harriers).

Ponderosa pine forest stands provide habitat for several-tree canopy nesting birds such as the chipping sparrow. In the fall and winter, ponderosa pine stands provide important foraging habitat for both migrant and resident bird species, including black-capped and mountain chickadees, red crossbills, pygmy nuthatches, hairy woodpeckers, and northern flickers. The Refuge has been engaged in restoring stands of ponderosa pine to more natural conditions that provide improved habitat for such species as the western bluebird and the Lewis' woodpecker, a state candidate species.

Aspen and riparian habitats support the highest diversity of wildlife species of all habitats within the Refuge. Sixty-five of the 124 species of breeding birds in this area frequent the aspen and deciduous shrub riparian plant communities for either reproduction or foraging. The aspen community type is the primary foraging and breeding habitat for ten of these species, including the willow flycatcher, yellow warbler, and red-naped sapsucker (all neotropical migrants). The substantial insect populations associated with the high structural diversity and vegetation density in these habitats also makes them a focal point for neotropical migratory landbirds.

Mammals: Forty-five species of mammals have been documented on the Refuge, including 11 species of bats, Rocky Mountain elk, moose, cougar, badgers, beaver and flying squirrels. Resident mammals that found in or near Refuge wetlands year round include moose, beaver, muskrats and river otters. Steppe habitats support large populations of small mammals including the Columbian ground squirrel, Great Basin pocket mouse, vagrant shrew, and northern pocket mouse, which in turn support larger predators such as coyotes and badgers. Large diameter ponderosa pine and snags support cavity-using species, including several bat species of concern. The substantial insect populations associated with aspen and riparian habitats also makes them an important foraging area for bats. In addition, several species of bats, including the big brown bat, hoary bat, and silver-haired bat, utilize either aspen foliage or cavities in aspen trees and snags for roosts. The dense cover of aspen/riparian habitats provides critical fawn rearing habitat for white-tailed deer and important winter browse for Rocky mountain elk and white-tailed deer.

Reptiles and Amphibians: Twelve reptile and amphibian species have been observed in refuge habitats including the rubber boa, long-toed salamanders, and blotched tiger salamanders. Reptiles and amphibians such as the

western-painted turtle, Columbia spotted frog, and blotched tiger salamander utilize these wetlands as critical overwintering habitat.

Fish: The speckled dace and redbside shiner, native species found in the Pine Creek wetlands of Turnbull NWR, now constitute less than one percent of the Refuge's fish population according to a study conducted by Eastern Washington University in 2002. Two exotic species, the brook stickleback and pumpkinseed, make up more than 95 percent of the fish population.

Invertebrates: The Refuge is currently compiling a list of invertebrate species. A recent butterfly inventory has identified 51 species on the refuge, including the monarch butterfly, a Candidate species for listing under the Endangered Species Act.

Environmental Trends and Planned Actions Description

Habitat Management and Restoration on the Refuge: Current management of the Refuge would continue, including prescribed burning, tree thinning, noxious weed control, water management, wetland restoration, and riparian and grassland vegetation restoration. Administrative actions include cooperation with other public agencies and private landowners to protect the quantity and quality of water entering the refuge, and create or maintain habitat corridors for the region's wildlife. The Refuge has been engaged in restoring stands of ponderosa pine to more natural conditions, with widely spaced, large diameter trees and snags that provide improved habitat for such species as the western bluebird and the Lewis' woodpecker, a state candidate species. Forest restoration techniques include prescribed burning, which may take place during the fall and winter to reduce hazardous accumulations of vegetation and forest debris and decrease the amount of unhealthy and overstocked stands of ponderosa pine seedlings and saplings. Selective thinning may also be used to reduce density of overstocked stands. Prescribed burning is also used to restore aspen riparian habitat and prevent encroachment of pine into this habitat.

Thinning and prescribed burns in pine forest and aspen riparian habitat reduce the likelihood of severe, stand-replacing wildfire in the long term. Overall, Refuge actions to restore wetlands, grasslands, ponderosa pine forests, and aspen riparian habitat enhance the Refuge's ability to support native wildlife species.

Elk and Waterfowl Hunting: A youth waterfowl hunt and a limited entry, permit only elk hunting program were established on the Refuge in 2009. Elk hunting allows up to 104 permitted hunters on 7,260 acres between September 8 and December 31. The Refuge's elk hunting program is designed to maintain aspen riparian habitat by reducing elk browsing impacts on aspen regeneration through reduction in the density of elk during fall and winter.

The use of lead ammunition by elk hunters is currently permitted. There is a concern about the bioavailability of spent lead ammunition (bullets) on the environment, endangered and threatened species, birds (especially raptors), mammals, and humans or other fish and wildlife susceptible to biomagnification. Lead shot and bullet fragments found in animal carcasses and gut piles are the most likely source of lead exposure (Kelly et al. 2011). Many hunters do not realize that the carcass or gut pile they leave in the field usually contains lead bullet fragments. Research continues on the effects of lead ammunition and the fragments it can deposit in killed game. Avian predators and scavengers can be susceptible to lead poisoning when they ingest lead fragments or pellets in the tissues of animals killed or wounded by lead ammunition. Lead poison may weaken raptors and increase mortality rate by leaving them unable to hunt or more susceptible to vehicles or power line accidents (Kramer and Redig 1997). There would be a small amount of residual lead due to elk hunting on the 7,260 acres open to

elk hunting, as a result of spent bullets from missed shots, or lead fragments in gut piles. While the amount of lead is difficult to quantify, it would be small because (a) Refuge elk hunting has only been permitted since 2009; and (b) elk hunting is limited to a maximum of 104 permitted hunters each season, and not all hunters will have the opportunity to take a shot.

Anticipated Impacts

Alternative A:

The no-action alternative would not cause any impacts to wildlife and aquatic species because it would maintain the status quo and not result in any actions that would disturb and/or displace wildlife, or cause wildlife mortality, over and above current levels of disturbance caused by elk and waterfowl hunting, wildlife observation, photography, environmental education, interpretation, and hiking.

Alternative B:

Disturbance to Waterfowl. Turkey hunting would result in some disturbance to fall-migrating waterfowl by hunters walking in close proximity to wetlands and gunfire, which generally results in a behavioral response by birds. Turkey hunting by its nature involves free roaming on foot throughout a hunting unit.

Numerous studies have confirmed that people on foot can cause a variety of disturbance reactions in wildlife, including flushing or displacement (Erwin 1989, Fraser et al. 1985, Freddy 1986), heart rate increases (MacArthur et al. 1982), altered foraging patterns (Burger and Gochfeld 1991), and even, in some cases, diminished reproductive success (Boyle and Samson 1985). These studies and others have shown that the severity of the effects depends upon the distance of the disturbance to the animal(s) and the disturbance's duration, frequency, predictability, and visibility to wildlife (Knight and Cole 1991).

The variables that were found to have the greatest influence on wildlife behavior were the distance from the animal to the disturbance and the duration of the disturbance. In a review of several studies of the reaction of waterfowl and other wetland birds to people on foot, distances greater than 328 feet (100 meters) generally did not result in a behavioral response (DeLong 2002). In most years, only the permanent and semi-permanent wetlands hold water and receive use by waterfowl in the fall, until freeze up in late November when they move to rivers and larger, deeper lakes off-Refuge.

The frequency of the disturbance by hunters during the fall season (September to November) is a function of hunter density, the size of the potential disturbance zone and the time period (in days) that hunters can potentially access these areas. The area of the Refuge we propose to open to turkey hunting does include wetlands that provide fall waterfowl habitat. The limited-entry turkey hunt would result in very low densities of hunters with a low probability that hunters would enter wetland disturbance zones on any given day. Generally, these wetlands freeze over by late November, so there would be no hunting disturbance to waterfowl during the last month of the turkey season. Furthermore, turkey hunting would be allowed only four days per week and would be limited to two parties of no more than four hunters each. Therefore, most waterfowl disturbance would occur on 48 days during September, October, and November, and would result in minor impacts to waterfowl through disturbance due to the small number and low density of hunters. In addition, those small numbers of waterfowl that may be disturbed could fly to wetlands in areas remaining closed to public use. No significant impacts to waterfowl from turkey hunting would occur under Alternative B. Turkey hunting would not add to lead in the environment since only approved non-toxic shot may be used for hunting this species on the Refuge.

Under Alternative B, there would be similar disturbance to wetland-associated species other than waterfowl with hunters walking in close proximity to wetlands and gunfire, which generally results in a behavioral response by

many animals. By the opening of the fall turkey season, many of the non-waterfowl bird species have migrated out of the area. There is the potential for fall-migrating shorebirds to be present in September through mid-October. The probability that a hunter will spend significant time within wetlands or in adjacent zones extremely low. Therefore, no significant impacts to wetland-associated species are expected to occur from turkey hunting on the Refuge.

Disturbance to Steppe-Associated Wildlife Species: Impacts to these species associated with the turkey hunting program would result from either the alteration of habitat, or disturbance of wildlife associated with foot travel. Numerous studies have found that bird abundance and species composition are affected by the presence of people on foot. In the mixed-grass prairie ecosystem in Colorado, Miller et al. (1998) found that specialist species (western meadowlark, vesper sparrows, and grasshopper sparrows) were less common near heavily used recreational trails. Generalist species such as the American robin, brown-headed cowbird, and black-billed magpie were less affected by trail use. They also found that birds were less likely to nest near trails within the grassland ecosystem and that nest predation was greater near trails. For the majority of species, they found impact was greatest within a 246-foot (75 meter) zone of influence. However, these impacts would be expected to be minimal because most steppe-dependent bird species have migrated by the time the turkey season begins; and hunter density would be very low.

Disturbance to Ponderosa Pine-Associated Wildlife Species: The open nature of ponderosa pine forest and the lack of a well-developed shrub layer in most stands, places most tree and snag foraging species well above public use activities on the ground. Most however, are still susceptible to human disturbance. Larger bird species that nest and roost in pine stands, including red-tailed hawks, great-horned owls, and osprey, are especially intolerant of individuals on foot within their territories. Ponderosa pine forest also supports wildlife species that dwell near or on the ground.

Turkey hunting would have minimal impacts on ponderosa pine-associated species because the hunting program would involve a small number of individuals and take place outside the breeding season, the time period when disturbance has the greatest potential to affect birds and other animals. No additional facilities are planned to facilitate the turkey hunt other than a small parking area on Mullinix Road. There will be no significant impacts to ponderosa pine and associated wildlife from implementation of Alternative B.

Disturbance to Riparian-Associated Wildlife Species: Potential impacts of turkey hunting on aspen habitat and associated wildlife include increased disturbance to wildlife from activities occurring in close proximity to riparian areas. Songbirds, woodpeckers, and deer are the primary species groups potentially affected by public use activities in aspen riparian zones. Disturbance to birds by visitors, particularly those on foot, can result in behavioral responses and habitat impacts as previously described for wetland, steppe, and pine forests. As with wildlife that use ponderosa pine forests, native ground-foraging species that use riparian areas may be negatively impacted by competition for food resources with wild turkeys, and therefore reducing turkey populations may have beneficial effects to these species.

Effects of Turkey Harvest to Native Wildlife Species: Wild turkeys eat a variety of plants, seeds and fruits, and invertebrates (insects, spiders, snails), usually focusing on the food items that are most available. In general, the diet of an adult turkey is made up of 75% plants and 25% insects while the diet of a poult ranges from 75% to 90% insect matter. During the winter, turkeys in eastern Washington gather into large flocks, sometimes of 100 or more birds, and are commonly found around a source of artificial feed like oat hay or other grain (WDFW 2005). Therefore the diets of turkeys overlap with the diets of many species of native ground-foraging landbirds. The native species whose diets overlap with wild turkey depends on season, since turkeys consume more green vegetation and animal matter in spring and summer, and more seeds and nuts in fall and winter. In Washington, Merriam's turkeys (the most common subspecies in eastern Washington) eat grass leaves and seeds, ponderosa

pine seeds, acorns, grasshoppers, forbs, and fruits such as wild strawberry (WDFW 2005). As noted above, ponderosa pine stands provide important foraging habitat for both migrant and resident bird species, including black-capped and mountain chickadees, red crossbills, pygmy nuthatches, hairy woodpeckers, northern flickers, Lewis' woodpecker, and western bluebird. In northeastern Washington, Merriam's turkeys are known to feed on ponderosa pine seed in the fall (WDFW 2005). Ponderosa pine seed are an important food source for some resident native bird species, as well as small mammals. It is possible that wild turkey compete with native species for food resources; however, little research has been done on the topic to date. It is therefore possible that reducing Refuge turkey populations may have beneficial effects for native wildlife species that depend on this food source, but such effects would be minor due to the small number of turkeys that would be harvested.

Threatened and Endangered Species and Other Special Status Species

Affected Environment Description

Federally Listed and Candidate Species: There are three federally ESA-listed (Threatened) species where the current species ranges overlap with Turnbull NWR: bull trout, yellow-billed cuckoo, and Spalding's silene. A Federal Candidate species, monarch butterfly, also occurs on the Refuge. Yellow-billed cuckoo and bull trout have never been observed on the Refuge, and suitable habitat for these species does not exist on the Refuge; therefore, there are no anticipated impacts on these species. There are nine known populations of Spalding's silene on the Refuge in remnant high-quality steppe habitat, seven of which are in the southeast portion of the Refuge. No occurrences of this species have been documented in the proposed turkey hunting area.

Bald and Golden Eagles: While not listed under the ESA, bald and golden eagles are Federally protected under the Bald and Golden Eagle Protection Act, as amended (16 U.S.C. 668-668c). The Refuge's large permanent wetlands provide fall migration and wintering habitat for bald eagles until freezeup in late November. Eagle use of the Refuge tracks waterfowl use, which is variable from year to year. Most fall waterfowl use, and therefore eagle use, occurs in years with above average precipitation. Golden eagles are an occasional summer visitor to the Refuge. Neither species breeds on the Refuge.

Environmental Trends and Planned Actions Description

Refuge actions to maintain and restore Palouse steppe, meadow, and riparian habitat would increase the Refuge's resilience to climate change, and its ability to support listed and candidate species, such as Spalding's silene and monarch butterfly; and bald and golden eagles.

Elk and waterfowl hunting: The Refuge currently has a youth waterfowl hunt, limited to designated blind locations on the north shore of Upper Turnbull Slough (140 acres) and a limited entry, permit only elk hunt on 7,260 acres of the Refuge. As noted above, lead ammunition is permitted for elk hunting, and there is a concern about the bioavailability of spent lead ammunition (bullets) on birds (especially raptors) that may ingest bullet fragments found in animal carcasses and gut piles (Kelly et al. 2011). In a study of bald eagles and golden eagles admitted to the Raptor Rehabilitation Program, College of Veterinary Medicine, at Washington State University from 1991 to 2008 it was found that 48% of bald eagles and 62% of golden eagles tested had blood lead levels considered toxic by current standards. Of the bald and golden eagles with toxic lead levels, 91% (bald) and 58% (golden) respectively, were admitted to the rehabilitation facility after the end of the general deer and elk hunting seasons in December (Stauber 2010).

Anticipated Impacts

Alternative A:

Under Alternative A, the Refuge would not be opened to turkey hunting, and therefore there would be neutral impacts to listed species and eagles. The amount of lead in the environment would not increase over current levels.

Alternative B:

Impacts to Listed Species: Although there could be some impacts to Spalding's silene, including possible trampling of vegetation by foot travel and potential introduction of exotic species, Spalding's silene is not known to occur in the proposed turkey hunting area. Even if Spalding's silene were to occur within the hunt area, the probability that a hunter will trample a plant of this species is very low and considered discountable, due to the low density of hunters in steppe habitat. The hunting season also takes place during the period of plant dormancy, so any potential impacts are also expected to be insignificant. Therefore, we have determined that the proposed turkey hunting may affect, but is not likely to adversely affect, Spalding's silene.

The host plant for monarch butterfly, showy milkweed, occurs on the Refuge, and monarch butterflies have been documented on the Refuge. However, by the fall hunting season (September 1 through December 31), showy milkweed has senesced and monarch butterflies would not likely be present on the refuge. Therefore, we have determined that turkey hunting may jeopardize, but is unlikely to jeopardize, monarch butterfly.

Impacts to Eagles: Short-term disturbance impacts to the bald eagle would be expected to increase inside the Long Lake unit. Some short-term effects to bald eagle use within the hunt unit would also be expected. Wintering populations of bald eagles have shown susceptibility to disturbance resulting in disrupted foraging behavior and changes in social dynamics between other species in the avian scavenger guild (Skagen 1991) and avoidance of areas with high disturbance (Stalmaster and Newman 1978). Stalmaster and Newman (1978) also found that recreational activities occurring within 250 meters of roosting and foraging areas resulted in changes in distribution patterns by displacement to areas of lower human activity. With regards to hunting, Stalmaster and Newman (1978) found that gunshots were the only noises that elicited overt escape behavior by eagles in their study. Edwards (1969) also found that gunshots could be used to flush eagles from their roost (cited in Stalmaster and Newman 1978). The Long Lake Unit includes one large permanent wetland that may be utilized by bald eagles for foraging in fall and winter, until freezeup in late November. Hunters would potentially be within 250 meters of this habitat.

The frequency of the disturbance by hunters during the fall turkey season (September 1-December 31) is a function of hunter density, the size of the potential disturbance zone, and the time period (in days) that hunters can potentially access these areas. The area of the Refuge we propose to open to turkey hunting does include wetlands that provide fall waterfowl habitat until freeze-up in late November, and therefore may be used as foraging habitat by bald eagles. Golden eagles are a transient summer visitor to the Refuge, and would be expected to occur rarely during the early part of the turkey hunt season. The limited-entry turkey hunt would result in very low densities of hunters (under the reservation system, a maximum of 8 hunters can be present on the hunt unit on any given day) with a low probability that hunters would enter wetland disturbance zones on any given day. Generally, these wetlands freeze over by late November, so there would be no hunting disturbance to eagles during the last month of the turkey season. Furthermore, turkey hunting would be allowed only four days per week and would be limited to two parties of no more than four hunters each. Therefore, hunting disturbance

would occur on 48 days during September, October, and November, and would result in minor short-term impacts to eagles through disturbance due to the small number and low density of hunters. In addition, any eagles that may be disturbed could fly to wetlands in areas remaining closed to public use. Therefore, no significant impacts to either bald or golden eagles from turkey hunting would occur under Alternative B. Turkey hunting would not add to lead in the environment since only approved non-toxic shot may be used for turkey on the Refuge.

Habitat and Vegetation

Affected Environment Description

Wetlands: Approximately 3,900 acres of wetland habitat are located in the Refuge, comprising approximately 20 percent of the Refuge area. The nearly 200 bodies of water range size from tiny ephemeral wetlands (vernal pools) to large permanent wetlands more than 400 acres in size. One of these wetlands, Long Lake, lies within the proposed turkey hunt area. There is a great diversity of plant species found in refuge wetlands. These plants occur in different vegetation zones that are dictated by water depth and the length of time a portion of a wetland basin is flooded. The four major wetland zones are wet meadow, seasonal shallow marsh, semi-permanent emergent marsh, and permanent open water. In most years only the lower one-third of the semi-permanent marshes and the permanent open water areas still hold water for wetland-dependent species in the fall.

Steppe: Approximately 6,000 acres of open steppe occur within the Refuge (32 percent of the Refuge area). The open steppe habitats of The Refuge fall into a broad category of plant associations referred to as Palouse steppe, also known as "meadow steppe" (Daubenmire 1970). Palouse steppe plant associations form a chain around the north and eastern periphery of the Columbia Basin Ecoregion between areas of extensive forests and the drier shrub--steppe of the lower Columbia Basin. These plant associations occur on two distinct landforms, the rolling Palouse Prairie hills and the unique "biscuit and swale" patterned ground of the Channeled Scablands. The Idaho fescue/common snowberry (*Festuca idahoensis* and *Symphoricarpos albus*) association is common to both landforms, and together with other plant associations found in the grasslands, can support a diverse community of native plant species including some that are endemic to the northern Columbia Basin. One of these species, Spalding's silene, is a federally listed threatened species (USFWS 2009).

Ponderosa pine forest: The abundance of wetlands and the shallow water table of the scabland flood channels provide an avenue for a narrow extension of the Ponderosa Pine Zone from the northeast into the more arid steppe habitats of the Columbia Basin. The Refuge is situated within this six-mile-wide peninsula of forest. Approximately 6,500 acres of ponderosa pine forests occur within the Refuge (34 percent of the Refuge area). The two pine associations found in the Refuge are ponderosa pine (*Pinus ponderosa*) /Idaho fescue and ponderosa pine/snowberry (Daubenmire 1952, Franklin and Dyrness 1973). The distribution of these associations is influenced primarily by soil moisture regime. Ponderosa pine/fescue occurs on drier sites with shallow rocky soils. These stands are often found on flat to gently sloping terrain and the low ridges between wetland drainages. The ponderosa/snowberry association is found mostly in shallow depressions, at the bottom of slopes near wetlands, and on the north aspects of basalt bluffs. Soils are deeper, less well drained and consist primarily of silt loams.

Riparian habitat: Approximately 219 acres of aspen forests occur within the Refuge. Aspen communities, including water birch, alder, and hawthorn, occur mostly as narrow bands along the edge of meadows and large sloughs, and around the margins of pothole wetlands. Aspen dominated stands are a critical resource for wildlife species requiring both cavities and deciduous foliage in tree and shrub canopies for breeding and foraging. This

habitat has been significantly reduced in the Refuge vicinity by competition from encroaching ponderosa pine and the suppression of aspen and shrub regeneration by grazing livestock. In recent years, a growing Rocky Mountain elk population contributed to this problem. Many of the existing stands are dominated by overmature trees with little regeneration. In the past, periodic fire removed encroaching pines and encouraged regeneration of aspen and understory shrubs. Ongoing Refuge management to restore aspen habitat includes initiation of an elk hunting program in 2009; and controlled burning.

Environmental Trends and Planned Actions Description

The effects of the Refuge's current waterfowl and elk hunting programs on Refuge habitat and vegetation is related to physical alteration of plant communities through trampling of vegetation or soil disturbance by hunters in pursuit of elk. There is also the possibility for the introduction of non-native, invasive plant species either from the clothing of hunters or equipment used during the hunt. However, elk and waterfowl hunters may pose no greater risk of vectoring non-native plants than other potential vectors such as wildlife. With the very low density of elk hunters (a maximum of 104 permit hunters are allowed over the course of the season, September 8-December 31), the low number of waterfowl hunters, and the fact that the activity will take place outside the growing season for most plants, or during the period of plant dormancy, impacts associated with either trampling or disturbance would likely be inconsequential. Soil disturbance would be minimal since only foot access is allowed; hunters would avoid wetland areas; and ground in upland areas would be frozen or snow-covered later in the hunt season. Restrictions on the use of motorized equipment greatly reduces the potential for the introduction of seeds or propagules of exotic species. Some potential may exist at the small parking areas used to access the hunt units. The areas are closely monitored for new introductions, and any new infestations would be quickly controlled. On the other hand, the Refuge's elk hunting program was established in 2009 to address damage to habitat, particularly aspen riparian habitat, caused by the Refuge's growing elk population. Therefore, elk hunting provides a net benefit to Refuge vegetation and habitats.

Anticipated Impacts

Alternative A:

The Refuge is currently closed to turkey hunting. Therefore, there are no impacts to habitat or vegetation caused by turkey hunting. The Refuge is open to wildlife observation and photography, environmental education, interpretation, elk hunting, waterfowl hunting, bicycling, and hiking.

Alternative B:

Impacts to Refuge Habitat and Vegetation: Effects of turkey hunting on Refuge habitat and vegetation is related to physical alteration of plant communities through trampling of vegetation or soil disturbance by hunters in pursuit of turkeys. There is also the possibility for the introduction of non-native, invasive plant species either from the clothing of hunters or equipment used during the hunt. However, turkey hunters may pose no greater risk of vectoring non-native plants than other potential vectors such as wildlife. With the very low density of hunters in Alternative B and the fact that the activity will take place outside the growing season for most plants, or during the period of plant dormancy, impacts associated with either trampling or disturbance would likely be inconsequential. Soil disturbance would be minimal since only foot access is allowed; hunters would avoid wetland areas; and ground in upland areas would be frozen or snow-covered later in the hunt season. Restrictions on the use of motorized equipment would greatly reduce the potential for the introduction of seeds

or propagules of exotic species. Some potential may exist at the small parking area used to access the hunt unit. The area will be closely monitored for new introductions. Any new infestations will be quickly controlled.

Table 3. Visitor Use and Experiences

Affected Environment Description

All non-hunting recreational activities on the Refuge are currently restricted to a public use area and the Columbia Plateau Trail. Visitors coming to the Refuge utilize the Public Use Area drive or ride bikes on the auto tour route, and hike trails to observe and photograph the variety of wildlife inhabiting this relatively undisturbed area of the Channeled Scablands. Notably, the Refuge is identified in Washington's Watchable Wildlife Viewing Guide. The generally short trails are designed especially for the educational benefit of the casual or new Refuge visitor. The Refuge also has a large Environmental Education program. No fishing or boating occur on the Refuge, and the current elk and youth waterfowl hunt areas are spatially separated from the main Public Use Area.

Environmental Trends and Planned Actions Description

No other known trends and planned actions that are relevant to hunting would affect visitation or quality of visitor experience on the Refuge.

Anticipated Impacts

Alternative A:

The Refuge is currently closed to turkey hunting. The Refuge is open to wildlife observation and photography, environmental education, interpretation, elk hunting, waterfowl hunting, bicycling, and hiking. Therefore, there are no impacts to visitor use and experience caused by turkey hunting.

Alternative B:

Hunting (especially gunshot noise) has the potential to disturb Refuge visitors engaged in other wildlife-dependent recreational uses. To minimize this potential conflict, the proposed turkey hunting area would be separated spatially from the Public Use Area. In addition, hunter access to the hunt unit would be separate from access provided for other public uses. The turkey hunt area is bordered by the Columbia Plateau Trail to the south. There is a possibility that the non-hunting public using the Trail will encounter hunters. The addition of hunters to the Refuge will also increase the number of gunshots heard by the visiting public. However, impacts to non-hunting users would be minor, due to the low numbers of turkey hunters on the Refuge at any given time, and the fact that most refuge visitation occurs in spring and summer, outside of the fall turkey season.

There could be some beneficial impacts from implementing a hunting program on the refuge. Refuge hunting can contribute to wildlife and habitat conservation and provide educational and sociological benefits. The hunting community in general remains the largest support base for funding land acquisitions in the Refuge System through the purchase of Federal Duck Stamps. Additionally, Refuges provide an opportunity for a high-quality hunting experience to all citizens regardless of economic standing. Many individual refuges have developed extensive public information and education programs bringing hunters into contact with refuge activities and facilitating awareness of wildlife issues beyond hunting.

Table 4. Cultural Resources

Affected Environment Description

Turnbull NWR’s archaeological record shows a record of human occupation dating back more than 2,000 years. Recorded prehistoric sites on the Refuge include three rockshelters, naturally formed by flood-eroded basalt faces. These are large enough to provide shelter, but their most important use was probably food storage. At least nine rock pits in four different locations have been found on the Refuge. These pits probably held caches of either dried meat or plant foods, particularly roots. Foods were commonly stored near collection areas and extracted in late winter/early spring when food supplies were low. These storage pits were probably used within the past 200 years, since these types of structures are destroyed over time due to rock creep/movement (Holstine et al. 1992). Evidence of a roasting oven probably used for camas and dating back as much as 1,000 years has been found on the Refuge (Lyon 1993). Small lithic debris scatters that are estimated to be between 2,000 and 3,000 years old have been found. These are presumed to represent temporary food gathering camps. These sites, combined with information collected in other areas of eastern Washington, support the theory that during prehistoric times Refuge lands were used primarily on a seasonal basis for hunting and gathering (Holstine et al. 1992).

In the early 20th century there was an influx of Euro-American settlers who established farms that were the beginning of the agriculturally dominated landscape we see today. There are many 20th century historic sites on the Refuge including 38 recorded farmsteads and several others known but not located. These sites include house foundations, fence jacks, and domestic detritus (e.g. cans and glass bottles) from the first quarter of the twentieth century. For detailed information about the cultural resources of the Refuge area, please refer to the Turnbull NWR Comprehensive Conservation Plan (USFWS 2007).

Environmental Trends and Planned Actions Description

No other known trends and planned actions that are relevant to hunting would affect cultural resources on the Refuge.

Anticipated Impacts

Alternative A:

The no-action alternative would have no effect on Cultural Resources because it would maintain the status quo and not result in actions that would disturb any existing cultural resources.

Alternative B:

The Service has determined that opening hunting opportunities for turkey is the type of undertaking that does not have the potential to cause effects on historic properties (36CFR800.3.a.1., the implementing regulations of Section 106 of the National Historic Preservation Act – NHPA). No ground-disturbing activities are proposed and opening the area would not alter, directly or indirectly, any characteristic of a historic property. The undertaking may proceed without further consideration of NHPA Section 106.

TABLE 5. REFUGE MANAGEMENT AND OPERATIONS

Land Use on the Refuge
<p><i>Affected Environment Description</i></p> <p>The Refuge contains infrastructure to facilitate recreational opportunities such as hunting, wildlife observation, photography, environmental education, and interpretation, including an environmental education center, auto tour route, improved-surface trails, wildlife viewing areas, information kiosks, and interpretive signage.</p>
<p><i>Environmental Trends and Planned Actions Description</i></p> <p>Current roads, trails, and other public use facilities would be maintained. Other than ongoing habitat restoration and management described above, no other known trends and planned actions that are relevant to turkey hunting would affect land use on the Refuge.</p>
<p><i>Anticipated Impacts</i></p> <p>Alternative A:</p> <p>Under Alternative A, the Refuge would remain closed to turkey hunting. Current use of the Refuge for elk and waterfowl hunting, wildlife observation, photography, environmental education, interpretation, hiking, and bicycling would continue at current levels.</p> <p>Alternative B:</p> <p>Under Alternative B, the Refuge would be opened to turkey hunting during the State fall season, which generally runs approximately four months, from September 1 through December 31. The turkey hunt area would be open four days per week (for example, Saturday-Sunday and Wednesday-Thursday). Only two parties containing a maximum of four hunters would be allowed to hunt turkey during each two-day period. Numbers of turkey hunters would be relatively low, no more than 8 hunters per day over the 84 days per year that the Refuge would be open to turkey hunting (280 hunters and 560 hunter use days). Moreover the turkey hunt area lies outside of the main public use area, and no facilities would be developed to facilitate turkey hunting other than a small parking area on Mullinix Road. Therefore, there would be only slight increases to use of trails, parking areas, and other public use facilities. Hunting would not conflict with habitat management and restoration projects since these projects are generally done outside of the hunting season. However, controlled burns may be conducted during the hunt season. The hunt area would be closed to hunting on days when controlled burns are planned. Current use of the Refuge for elk and waterfowl hunting, wildlife observation, photography, environmental education, interpretation, hiking, and bicycling would continue at current levels.</p>

Administration

Affected Environment Description

Turnbull National Wildlife Refuge is managed as part of the Inland Northwest National Wildlife Refuge Complex. The current hunt program requires administrative staff time from a visitor services manager, maintenance staff, and a law enforcement officer. Enforcement of refuge violations normally associated with management of a national wildlife refuge is the responsibility of commissioned Federal Wildlife Officers. Other officers, Special Agents, state game wardens, and the local Sheriff's Department and Washington State Police may assist the Complex's full-time Federal Wildlife Officer.

Environmental Trends and Planned Actions Description

The Refuge coordinates with the State of Washington to plan and administer its hunting program. No other known trends and planned actions that are relevant to hunting on the refuge would affect refuge administration.

Anticipated Impacts

Alternative A:

Currently, staff of Turnbull NWR manage youth waterfowl and elk hunting programs. The no-action alternative would have no effect on the administration of the Refuge because it would maintain the status quo and not result in any actions that would affect the budget or employee time.

Alternative B:

Annual turkey hunt administration costs for Turnbull NWR, including salary, equipment, law enforcement, and brochures, totals approximately \$2,000. One-time (first year) costs for the parking area, signage, and new brochures, would be approximately \$13,000. Turnbull NWR funds would be used to conduct waterfowl hunts on the Refuge. Funding specifically for the turkey hunt has not been allocated. It is anticipated that station funding would continue to be sufficient to continue all hunting programs at Turnbull in the future. Under this alternative the Refuge Law Enforcement Officer and/or WDFW wardens would conduct license and bag limit checks.

It is expected that Refuge employees would spend only a small percentage of their time overseeing and implementing the turkey hunt. While this would impact the administration of the Refuge, it would not be significant because the Refuge would still be able to carry out its other priority actions and obligations in meeting the purpose of the Refuge and the mission of the NWRS, such as habitat restoration and management, visitor services, etc. None of the proposed hunter activities would result in an irreversible and irretrievable commitments of resources. No additional infrastructure is proposed. Any impacts from hunters would only be temporary in nature. The limited staff time and Refuge budget used to implement this hunt program would be irretrievable.

TABLE 6. SOCIOECONOMICS

Local and Regional Economies
<p><i>Affected Environment Description</i></p> <p>The Refuge lies in Spokane County, Washington. The largest town near the Refuge is Cheney, Washington (population 12,000). The largest city in the county is Spokane (population 200,000), 20 miles to the north. The population of Spokane County has increased about 26% in the past decade, from 396,106 in 2010 to 505,505 in 2020, a higher growth trend than the state average. More than two-thirds of this growth was attributed to net migration into the county (Headwaters Economics 2022).</p> <p>Other than the town of Cheney to the north, the Refuge is primarily surrounded by private agricultural land. Primary crops are wheat, hay, and livestock/pasture. Service-related jobs account for most employment in the county (73.1%), while non-service jobs (farming, forestry, construction, manufacturing) provide 13.4% of jobs, and government provides 13.5% of jobs (Headwaters Economics 2022).</p> <p>In 2006, the Fish and Wildlife Service evaluated the economic effects of Turnbull visitation on the regional economy (USFWS, 2007). The report, titled <i>Banking on Nature 2006: The Economic Benefits to Local Communities of National Wildlife Refuge Visitation</i>, was compiled by Service economists. In 2006 more than 66,000 people visited Turnbull to hike the nature trails and drive the auto tour to observe birds and other wildlife. The study looked at money spent on food, lodging, and transportation as well as contribution to the local economy from Refuge visitation. The Refuge was responsible for the creation of 18 private sector jobs, generating about \$500,000 in job income and additional revenue of \$168,700. For every dollar in refuge budget expenditures, the Refuge returned \$1.15 to the community.</p>
<p><i>Environmental Trends and Planned Actions Description</i></p> <p>No known trends and planned actions that are relevant to hunting on the refuge would affect local and regional economies. Although population growth would continue, the economy of the area surrounding the Refuge expected to remain dominated by the service sector.</p>
<p><i>Anticipated Impacts</i></p> <p>Alternative A:</p> <p>The no action alternative would result in a neutral impact on local and regional economies.</p> <p>Alternative B:</p> <p>Implementation of the preferred alternative will have a positive, but locally and regionally insignificant impact on the economy resulting from a small increase of visitors patronizing local businesses for the duration of the turkey hunt season. Turkey hunting on Turnbull NWR would result in expenditures for both activity-related equipment purchases and travel-related goods and services. There were 15,140 turkey hunters in Washington State in 2020 (WDFW 2021). Data is not available on hunter-related expenditures, however the 2011 National Survey of Hunting, Fishing, and Wildlife-Dependent Recreation (DOI, USFWS, and U.S. Census Bureau 2011)</p>

indicates that hunters in the State hunted 12 days and spent \$1,421 annually, including \$64 in trip-related expenses per day. This would translate to up to \$21.5M spent by turkey hunters in Washington annually, of which \$11.6M would be trip-related expenses.

In 2011 hunters in Washington spent about \$64.00 per day on lodging, food, transportation and other items (DOI, USFWS, and US Census Bureau 2011). In 2020, 15,183 people hunted turkeys in Washington state (WDFW 2021). The estimated 336 turkey hunters who would hunt 672 days per year on the Refuge would be expected to spend approximately \$35,000 in trip-related expenses. This represents a minor increase in participation in turkey hunting and hunting-related expenditures (+0.3 percent) in Washington state.

Environmental Justice

Affected Environment Description

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.

Spokane County does not have a disproportionate minority population (87.8% white in 2020) that would likely be affected by the proposed additional hunting action. In 2020, 8.4% of families within Spokane County were in poverty, slightly below the national average, and there was an 8.8% unemployment rate which was similar to the national unemployment rate (8.1%) (Headwaters Economics 2022). The proposed hunting actions will not disproportionately affect these low-income populations.

Environmental Trends and Planned Actions Description

No known adverse environmental trends or planned actions that are relevant to hunting on the refuge would affect minority and low-income populations.

Anticipated Impacts

Alternative A:

Under the No Action Alternative, no turkey hunting would occur on the Refuge. The Service has not identified any potential high and adverse environmental or human health impacts from this alternative. Minority or low-income communities will not be disproportionately affected by any impacts from the no action alternative.

Alternative B:

The Service has not identified any potential high and adverse environmental or human health impacts from the proposed action (opening the Refuge to turkey hunting). Minority or low-income communities will not be disproportionately affected by any impacts from turkey hunting.

Cumulative Impacts

Cumulative impacts are defined as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions” (40 CFR 1508.7). Past, present, and reasonably foreseeable actions that would impact Turnbull NWR are described in detail above and include climate change, local population increases, and associated development. In eastern Washington, the effects of climate change include decreased snowpack, decreased summer stream flows, increased water temperatures, increased frequency and severity of drought, and increased frequency and severity of wildfires. These changes would affect the composition of fish, wildlife, and plant communities over time.

The Refuge adjusts type, timing, duration, and intensity of habitat management strategies based on habitat conditions and data from biological monitoring programs. Habitat management strategies are therefore continually adapted to changes in habitat conditions, and at least partially mitigate the impacts of climate change on migratory birds, resident wildlife, and their habitats. Elk hunting is part of the Refuge’s habitat management program, and provides benefits to species that depend on aspen riparian habitat. Likewise, turkey hunting potentially could benefit native wildlife by reducing competition for food resources such as ponderosa pine seeds. However, the beneficial effect of turkey hunting to native wildlife would be negligible, either locally or regionally.

Monitoring

The Service would maintain compliance with hunting regulations through Service law enforcement officers. The Refuge would continue biological monitoring on the Refuge in accordance with the Refuge’s approved Inventory and Monitoring Plan.

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 (EIS) or a Finding of No Significant Impact (FONSI).

Alternative A –Continue Current Management– [No Action Alternative]:

As described above, under Alternative A, the Refuge’s current public uses and access would remain unchanged. Existing elk and youth waterfowl hunting would continue. No turkey hunting would occur on the Refuge. The Refuge would not come closer to aligning Refuge hunt regulations with state regulations, and would not provide additional hunting opportunities.

Alternative A would result in neutral impacts to the Refuge’s wildlife and wetland, steppe, riparian, and ponderosa pine habitats.

Alternative B – Open Turnbull NWR to Turkey Hunting – [Proposed Action Alternative]:

As described above, Alternative B would result in minor, long-term adverse impacts on turkey. Turkey would be subjected to harvest mortality and may be periodically displaced from feeding and resting areas as a result of

hunting actions. However, these impacts, while adverse, would be minor given the low hunter numbers (no more than eight hunters per day over the 84 days per year that the Refuge would be open to turkey hunting). The estimated harvest of 70 turkeys annually would represent only a small percentage of turkeys taken in the Northeast Region or Statewide. Further, the Refuge turkey hunt would be in line with State management plans for this species, which are designed to provide sustainable sport hunting opportunities.

Alternative B would result in negligible to minor long-term adverse impacts to native vegetation and other wildlife and aquatic species as a result of hunting activity. The footprint of any permanent vegetation disturbance would represent a small percentage of the total area of the Refuge. Disturbance to other wildlife would be of short duration and seasonal in nature and would not occur during the breeding life history stage for most species observed in and around the Refuge hunt area. Turkey hunting would not add to lead in the environment since only approved non-toxic shot may be used for turkey on the Refuge.

Finally, turkeys are not native to Washington state. A reduction in turkey populations on the Refuge may be beneficial to a variety of native ground-feeding landbirds and small mammals, by reducing competition for food resources such as ponderosa pine seeds. However, this impact, while beneficial, would be negligible to minor due to the small number of turkeys that would be harvested on the Refuge.

While Alternative B would result in minor, short-term increases in wildlife-dependent recreation opportunities on the Refuge, as summarized above, none of the impacts, even when accumulated, would be significant on the human environment.

As described above, this alternative is the Service's proposed action because it offers the best opportunity for public hunting that would result in minimal impacts on physical and biological resources, while meeting the Service's mandates under the NWRSAA and Secretarial Order 3356. The Service believes that, although the proposed action would be additive to existing hunting programs at Turnbull NWR, it will not have any significant direct or indirect impacts on local or regional wildlife populations, and will not significantly add to any cumulative effects. This alternative best meets the purpose and need stated earlier. The Service has determined that the proposed action is compatible with the purposes of Turnbull NWR and the mission of the NWRS. (See the Compatibility Determination for Turkey Hunting.)

List of Sources, Agencies and Persons Consulted

Washington Department of Fish and Wildlife:

Mike Atamian, Spokane District Wildlife Biologist
Carrie Lowe, Assistant District Wildlife Biologist
Brian Gaston, Private Lands Biologist – Spokane & Whitman County

U.S. Fish and Wildlife Service, Pacific Region:

Alice Hanley, Project Leader, Inland Northwest NWR Complex (Retired)
Kelly Moroney, Project Leader, Inland Northwest NWR Complex
Lisa Wilson, Refuge Manager, Turnbull NWR
Mike Rule, Wildlife Biologist, Turnbull NWR (Retired)
Sandra Rancourt, Visitor Services Manager, Inland Northwest NWR Complex (Retired)
Brian Czulinski, Federal Wildlife Officer, Inland Northwest NWR Complex

List of Preparers

Ken Morris, Conservation Planner, USFWS Pacific Region

State Coordination

Discussions with Washington Department of Fish and Wildlife (WDFW) staff regarding development of new hunting opportunities on NWRs have been ongoing for many years. More recently, on June 4, 2021, USFWS regional senior staff for Refuges had a coordination call with WDFW leadership, including WDFW Wildlife Program Director Eric Gardner. The Service and WDFW discussed and came to mutual agreement on priorities for hunting openings and expansions in the 2022-23 season and beyond, including opening Turnbull NWR to turkey hunting.

Refuge staff consulted with the WDFW Spokane District staff regarding the proposal to open the Refuge to turkey hunting. Refuge Manager Lisa Wilson spoke with Mike Atamian (WDFW Spokane District Wildlife Biologist) and Carrie Lowe (WDFW Assistant District Wildlife Biologist) in June of 2021 to begin the conversation about potential turkey hunting by asking preliminary questions about hunting seasons, tools to manage access, and how best to achieve refuge goals for a quality hunt while meeting refuge purpose. Following meetings among refuge staff in October 2021, Lisa exchanged emails with Mike Atamian, Carrie Lowe, and Brian Gaston (WDFW Private Lands Biologist – Spokane & Whitman County) concerning further details about how the Private Lands Hunt By Reservation system operates and the best approach for managing the hunt. WDFW staff provided information on preferred hunt duration, numbers per hunt party, and feasibility of lead shot restrictions. WDFW's Region 1 office was given an advance copy of the Draft Turkey Hunting Plan and EA and was invited to provide comments prior to issuance of the draft plan for public review and comment. WDFW provided written comments on March 1, 2022, which were incorporated into the Draft and Final Plan and EA.

Tribal Consultation

Tribal interests are an integral part of the management of the Inland Northwest National Wildlife Refuges. The Refuge staff will continue to coordinate and collaborate with the local Tribes. We provided the Spokane Tribe of Indians with a copy of this Draft EA and Hunt Plan and invited them to provide comments, prior to issuance of the Draft EA and Hunt Plan for public comment. No comments were received from the Tribe.

Public Outreach

The Refuge maintains a mailing list of local newspapers, radio, and websites for news releases. Special announcements and articles may be released in conjunction with hunting seasons. In addition, information about the hunt will be available at Turnbull NWR headquarters, 26010 S. Smith Road, Cheney, WA 99004 and on the Turnbull NWR website, <https://www.fws.gov/refuge/Turnbull/>.

The Draft Hunt Plan and Environmental Assessment was posted for a 60-day public review and comment period (June 8-August 8, 2022) in conjunction with the comment period for the 2022-23 Sport Hunting and Fishing Rule. The public was informed that they could submit comments or requests for additional information through any of the following methods:

Email: HuntFishRuleComments@fws.gov Include "Turnbull Turkey Hunt" in the subject line of the message.

Fax: Attn: Turnbull Hunt Plan (509) 235-4723.

U.S. Mail: U.S. Fish and Wildlife Service, Attn: Refuge Manager, Turnbull NWR, 26010 S. Smith Road, Cheney, WA 99004.

The following notice appeared in the Refuge's announcement of the public comment period:

"All comments received from individuals become part of the official public record. All requests for such comments are handled in accordance with the Freedom of Information Act and the CEQ's NEPA regulations in 40 CFR 1506.6(f). The Service's practice is to make comments, including names and home addresses of respondents, available for public review during regular business hours. Individual respondents can request that we withhold their home address from the record, which we will honor to the extent allowable by law. If you wish us to withhold your name and/or address, you must state this prominently at the beginning of your comments."

We received four public comment letters during the 60-day comment period. Minor changes were made to the Plan and EA in response to comments.


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.

Signatures

Submitted By:

KELLY MORONEY  Digitally signed by KELLY MORONEY
Date: 2022.09.02 12:06:36 -07'00'

Project Leader Signature/Date

Concurrence:

CHARLES STENVALL  Digitally signed by CHARLES STENVALL
Date: 2022.09.02 07:58:21 -07'00'

Refuge Supervisor Signature/Date

Approved:

CHRISTINE OGURA  Digitally signed by CHRISTINE OGURA
Date: 2022.09.02 15:47:20 -07'00'

Regional Chief, National Wildlife Refuge System Signature/Date

References

- Altman, B. and A. Holmes. 2000. Conservation strategy for landbirds in the Columbia Plateau of Eastern Oregon and Washington. Version 1.0. Oregon-Washington Partners in Flight, 97 pp.
- Boyle, S. A. and F. B. Samson. 1985. Effects of nonconsumptive recreation on wildlife: a review. *Wildl. Soc. Bull.* 13: 110-116.
- Burger, J. and Gochfeld, M. 1991. Human activity influence and diurnal and nocturnal foraging of sanderlings (*Calidris alba*). *Condor* 93: 259-265.
- Cole, D.N. and R.L. Knight. 1990. Impacts of recreation on biodiversity in wilderness. Utah State University. Logan, UT.
- Daubenmire, R. 1952. Forest vegetation of northern Idaho and adjacent Washington, and its bearing on concepts of vegetation classification. *Ecological Monographs* 22: 301-330
- Daubenmire, R. 1970. Steppe vegetation of Washington. Washington Agricultural Experiment Station, Pullman, Washington. Technical Bulletin 62. 131 pp.
- Delong, A. K. 2002. Managing visitor use and disturbance of waterbirds: a literature review of impacts and mitigation measures. Prepared for Stillwater National Wildlife Refuge. Appendix L In: Stillwater National Wildlife Refuge Complex final environmental impact statement for the comprehensive conservation plan and boundary revision (Vol. II). Dept. of the Interior, U.S. Fish and Wildlife Service, Region 1, Portland, OR.
- Edwards, C. C. 1969. Winter behavior and population dynamics of American eagles in western Utah. Ph.D. Thesis. Brigham Young Univ., Provo. 157pp.
- Erwin, R, M. 1989. Responses to human intruders by birds nesting in colonies: Experimental results and management guidelines. *Colon. Waterbirds* 12: 104-108.
- Franklin, J. F. and C. T. Dyrness. 1973. The natural vegetation of Oregon and Washington. Oregon State University Press, Corvallis.
- Fraser, James D., L.D. Frenzel, and John E. Mathisen. 1985. The impact of human activities on breeding bald eagles in north-central Minnesota. *J. Wildl. Manage.* 49: 585-592.
- Freddy, D. J. 1986. Responses of adult mule deer to human harassment during winter. Pages 286 In Comer, R.D., Baumann, T. G., Davis, P., Monarch, J.W., Todd, J., VanGytenbeek, S., Wills, D., and Woodling, J., eds. *Proceedings II. Issues and technology in the management of impacted western wildlife: proceedings of a national symposium.* Thorne Ecol. Inst., Boulder, Colorado.
- Headwaters Economics 2022. Socioeconomic Profile Tool. Available at: <https://headwaterseconomics.org/tools/usfws-indicators/>
- Holstine, Craig, J. Galm, and R. Bruce. 1992. A study of cultural resources on Turnbull National Wildlife Refuge, Spokane County, Washington. Eastern Washington University, Reports in Archaeology and History 100-71. Archaeological and Historical Services, 145 pp.
- Ivey, G.L., and C.P. Herziger. 2006. Intermountain West Waterbird Conservation Plan, Version 1.2. A plan associated with the Waterbird Conservation for the Americas Initiative. Published by U.S. Fish and Wildlife Service Pacific Region, Portland, Oregon.

- Kelly, T.R., P.H. Bloom, S.G. Torres, Y.Z. Hernandez, R.H. Poppenga, W.M. Boyce, C.K. Johnson. 2011. Impact of the California lead ammunition ban on reducing lead exposure in golden eagles and turkey vultures. *PLoS ONE*. 6(4): e17656. doi:10.1371/journal.pone.0017656.
- Knight, R. L. and D. N. Cole. 1991. Effects of recreational activity on wildlife in wildlands. In: *Transactions of the North American Wildlife and Natural Resources Conference* 56: 238-247.
- Kramer, J.L., P.T. Redig. 1997. Sixteen years of lead poisoning in eagles, 1980-95: An epizootiological view. *Journal of Raptor Research*. 31(4): 327-332.
- MacArthur, R.A., Geist, V., and Johnston, R. H. 1982. Cardiac and behavioral responses of mountain sheep to human disturbance. *J. Wildl. Manage.* 46: 351-358.
- Miller, S. G., R. L. Knight, and C. K. Miller. 1998. Influence of recreational trails on breeding bird communities. *Ecological Applications* 8: 762-769.
- Skagen, S. K., R. L. Knight, and G. H. Orians. 1991. Human disturbance of an avian scavenging guild. *Ecological Applic.* 1:215-225.
- Soper, C. 1999. Columbia Plateau Ecoregional Plan. Unpublished draft. The Nature Conservancy. Seattle, Washington.
- Stalmaster, M. V. and J. R. Newman. 1978. Behavioral responses of wintering bald eagles to human activity. *J. Wildl. Manage.* 42:506-513.
- Stauber, E., N. Finch, P.A. Talcott, and J.M. Gay. 2010. Lead poisoning of bald (*Haliaeetus leucocephalus*) and golden (*Aquila chrysaetos*) eagles in the US inland Pacific Northwest- An 18-year retrospective study: 1991-2008. *Journal of Avian Medicine and Surgery* 24:279-287. doi: <http://dx.doi.org/10.1647/2009-006>.
- U.S. Department of the Interior, U.S. Fish and Wildlife Service, and U.S. Department of Commerce, U.S. Census Bureau. 2011 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation.
- USFWS. 2022. Turnbull National Wildlife Refuge Draft Turkey Hunting Plan. Cheney, WA and Portland, OR.
- U.S. Fish and Wildlife Service. 2009. Environmental Assessment for an Elk and Youth Waterfowl Step-down Hunt Plan on the Turnbull National Wildlife Refuge.
- U.S. Fish and Wildlife Service. March 2007a. Turnbull National Wildlife Refuge Comprehensive Conservation Plan. Available at: <https://ecos.fws.gov/ServCat/DownloadFile/164241>
- USFWS. 2007b. Banking on Nature 2006: The economic benefits to local communities of National Wildlife Refuge visitation. Carver, E. and J. Caudill, authors. Department of Interior.
- Washington Department of Fish and Wildlife. 2021a. 2020 Statewide turkey harvest statistics. Available at: <https://wdfw.wa.gov/hunting/management/game-harvest/2020/turkey-statewide>
- Washington Department of Fish and Wildlife. 2021b. Turkey Takeover. Hunting Highlights, February 12, 2021. Available at: <https://www.mywdfw.com/hunting-highlights-tt-ch1-2021/>
- Washington Department of Fish and Wildlife. 2020a. 2020 Game status and trend report. Wildlife Program, Washington Department of Fish and Wildlife, Olympia, Washington, USA. Available at: <https://wdfw.wa.gov/publications/02217>
- Washington Department of Fish and Wildlife. 2020b. 2020 Statewide turkey harvest statistics. Available at: <https://wdfw.wa.gov/hunting/management/game-harvest/2020/turkey-statewide>

Washington Department of Fish and Wildlife. 2014. Game Management Plan, July 2015-June 2021. Wildlife Program, Washington Department of Fish and Wildlife, Olympia, Washington, USA. Available at: <https://wdfw.wa.gov/sites/default/files/publications/01676/wdfw01676.pdf>

Washington Department of Fish and Wildlife. 2005. Wild Turkey Management Plan. Wildlife Program, Washington Department of Fish and Wildlife, Olympia, Washington, USA. Available at: <https://wdfw.wa.gov/publications/00425>

Appendix A: OTHER APPLICABLE STATUTES, EXECUTIVE ORDERS & 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)

The proposed action includes no ground-disturbing activities, or other activities that might disturb undocumented paleontological, archaeological, or historic sites. The Service has determined that opening Turnbull NWR to turkey hunting is the type of undertaking that does not have the potential to cause effects on historic properties (36CFR800.3.a.1. the implementing regulations of Section 106 of the National Historic Preservation Act - NHPA). No ground disturbing activities are proposed and opening the area would not alter, directly or indirectly, any characteristic of a historic property.

Fish and Wildlife

Bald and Golden Eagle Protection Act, as amended, 16 U.S.C. 668-668c, 50 CFR 22

The Preferred Alternative is consistent with Bald and Golden Eagle Protection Act because the Environmental Assessment for the Hunt Plan evaluates the effects of agency actions on eagles.

Fish and Wildlife Act of 1956, 16 U.S.C. 742a-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

The Preferred Alternative is consistent with the Migratory Bird Treaty Act, because no new areas would be opened to migratory bird hunting, and current areas open to migratory bird hunting do not exceed 40% of the total Refuge acres.

Executive Order 13186 – Responsibilities of Federal Agencies to Protect Migratory Birds, 66 Fed. Reg. 3853 (2001)

The Preferred Alternative is consistent with the Lacey Act, the Migratory Bird Treaty Act, and Executive Order 13186 because the Environmental Assessment for the Hunt Plan evaluates the effects of agency actions, including proposed changes to hunting regulations, on migratory birds.

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, 450

Spalding's silene may occur in the Refuge area designated for turkey hunting, Hunters would be subject to State hunting regulations, which are designed to prevent adverse effects to listed species. An ESA Section 7 Consultation has been completed.

Natural Resources

Wilderness Act, 16 U.S.C. 1131 et seq.

The Service has evaluated the suitability of the Turnbull NWR for wilderness designation and concluded that the Refuge does not meet the basic criteria for inclusion into the National Wilderness Preservation System.

Wild and Scenic Rivers Act, 16 U.S.C. 1271 et seq.

The Service has evaluated the eligibility of streams on the Turnbull NWR for wild and scenic river designation and concluded no streams meet the basic criteria for inclusion into the National Wild and Scenic Rivers System.

Executive Order 13112 – Invasive Species, 64 Fed. Reg. 6183 (1999)

The proposed action is consistent with Executive Order 13112 because stipulations in permits would be designed to prevent the introduction of invasive species.

Water Resources

Coastal Zone Management Act of 1972, 16 U.S.C.1451 et seq.; 15 CFR Parts 923, 930, 933

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

The Refuge does not lie in a coastal zone, and contains no rivers, harbors, or navigable waters.

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

There would be negligible impacts of the proposed action on water quality or water resources.

Safe Drinking Water Act of 1974, 42 U.S.C. 300f et seq.; 40 CFR Parts 141-148

The Refuge contains no drinking water sources and does not supply drinking water to any community.

Executive Order 11988 – Floodplain Management, 42 Fed. Reg. 26951 (1977)

The proposed action is consistent with Executive Order 11988, because implementation of the Hunt Plan would not result in the modification or destruction of floodplains.

Executive Order 11990 – Protection of Wetlands, 42 Fed. Reg. 26961 (1977)

The proposed action is consistent with Executive Order 11990 because implementation of the Hunt Plan would protect existing wetlands.

Appendix B.
ESA Section 7 Consultation

U.S. Fish and Wildlife
Endangered Species Act Section 7 Consultation Form
for
Turnbull NWR 2022 Hunt Expansion (Turkey Hunting)

Refuge Name: Turnbull National Wildlife Refuge
Address: 26010 S. Smith Road, Cheney, WA 99004
Phone: 509-559-3021

Refuge Action: Open 1,883 acres of the Refuge to turkey hunting during the State fall season, Turnbull National Wildlife Refuge; Spokane County, WA.

Part 1

I. Project Overview

1. Project Location

The proposed turkey hunt would occur on 1,883 acres between the Columbia Plateau Trail and Mullinix Road. This area consists of permanent and semipermanent wetlands (including Long Lake), ponderosa pine forest, steppe, and aspen riparian habitat.

2. Description of the Proposed Action

The U.S. Fish and Wildlife Service (Service) is undergoing a cooperative effort with the Washington Department of Fish and Wildlife (WDFW) to open a portion of the Refuge to fall turkey hunting in line with State and Refuge-specific regulations. 1,883 acres, or 10 percent of the Refuge would be open to free-roam turkey hunting. 17,331 acres would remain closed to turkey hunting, and 11,421 acres, or 40 percent of the Refuge, would remain closed to all hunting. Turkey hunting would be allowed in line with the State fall season (September 1-December 31), bag limits, and regulations for the WDFW Northeast Region. The proposed hunt would provide visitors with recreational opportunities to pursue turkey in an area where there are limited opportunities to hunt on public lands. Non-toxic shot would be required for turkey hunting.

The proposed hunt is an expansion of hunting that currently occurs on the Refuge. Turnbull NWR was opened to youth waterfowl and elk hunting in 2009. A Turkey Hunting Plan, Environmental Assessment, and Compatibility Determination have been prepared.

3. Project Timeline

Turnbull NWR would be opened to turkey hunting in the Fall of 2023 and would remain open until closed.

4. Federally Listed Species and Critical Habitat

Turnbull NWR uses the IPaC database (Information for Planning and Conservation) to identify threatened and endangered species, including for purposes of this Biological Evaluation. This is done because the IPaC database contains the best available information on species presence for Turnbull NWR. Nevertheless, in order to ensure a thorough review, this Biological Evaluation considers all threatened and endangered species identified by both the IPaC and ECOS (Environmental Conservation Online) databases. Note, however, that these databases are updated regularly, approximately every 90 days, and, thus, it is possible that the specific threatened and endangered species identified as present on or near the refuge may change between the finalization of this Biological Evaluation and its publication and/or between finalization and your reading of this document.

Refuge staff have the best available information about the presence of fish and wildlife species. Thus, where species are identified by either database, but the refuge has information that the species is not actually present within the “action area,” we have explained that as the basis for our determination that any hunting and fishing activities will have no effect on the species.

We understand that reinitiation of consultation is required when discretionary Federal agency involvement or control over the action has been retained (or is authorized by law), and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affected listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion; or (4) a new species is listed or critical habitat designate that may be affected by the action.

A. Listed species and/or their critical habitat:

Yellow-billed cuckoo (*Coccyzus americanus*), Threatened, no critical habitat on the Refuge

Bull trout (*Salvelinus confluentus*), Threatened, no critical habitat on the Refuge

Spalding’s catchfly (*Silene spaldingi*), Threatened, no critical habitat on the Refuge

B. Proposed species and/or proposed critical habitat:

None

C. Candidate species¹:

Monarch butterfly (*Danaus plexippus*)

II. Effects Determination and Response Requested:

Determination

A. no effect to species/critical habitat

Species:

¹ Include state-listed species here if they are to be evaluated through the Section 7 consultation.

Bull trout (*Salvelinus confluentus*): The bull trout was listed as threatened throughout the coterminous United States in 1999 (USFWS 1999). Bull trout are native throughout the Pacific Northwest. In Washington, bull trout were historically found in major tributaries to the Columbia River on the eastside of the Cascades. They require cold water, and are seldom found in waters where temperatures are warmer than 59° to 64° F. Besides very cold water, bull trout require stable stream channels, clean spawning gravel, complex and diverse cover, and unblocked migration routes. The Refuge contains no suitable habitat for bull trout, and bull trout have not been documented on the refuge. Accordingly, turkey hunting on the refuge would have no effect on bull trout.

Critical Habitat: No critical habitat present.

Yellow-billed cuckoo (*Coccyzus americanus*): The yellow-billed cuckoo was listed as threatened in 2014 (USFWS 2014). Historically, the species range included most North American riparian habitats containing willows and cottonwoods. The current range of the yellow-billed cuckoo has become limited to some remaining riparian habitats in states west of the Rockies. Yellow-billed cuckoos require large blocks of riparian habitat composed of cottonwood and willow trees for nesting and foraging. The Refuge contains no suitable habitat for yellow-billed cuckoo, and yellow-billed cuckoo have not been documented on the refuge. Accordingly, turkey hunting on the refuge would have no effect on yellow-billed cuckoo.

Critical Habitat: No critical habitat present.

B. may affect, but is not likely to adversely affect species/critical habitat; or may affect, but is unlikely to jeopardize candidate species

Species:

Spalding's silene (*Silene spaldingii*). The Spalding's silene, or catchfly, was listed as a threatened species under the ESA in 2001. Spalding's catchfly occurs in mesic uplands dominated by native bunchgrasses, primarily bluebunch wheatgrass (*Pseudoroegneria spicata*) and Idaho fescue (*Festuca idahoensis*), and occasionally open pine forests.

Increased human activity has the potential to affect Spalding's catchfly through trampling of plants and soil disturbance. However, Spalding's catchfly is not known to occur within the area we propose to open to turkey hunting. Even if Spalding's silene were to occur within the hunt area, the probability that a hunter would trample a plant of this species or disturb its habitat is very low due to the low density of hunters in steppe habitat, and the fact that the hunting season takes place during the period of plant dormancy (September 1 through December 31). Special Use Permits issued to disabled hunters would include speed and vehicle use limitations in areas of the Refuge that are typically closed to public vehicles and e-bikes. Vehicle and e-bike access by disabled hunters would be limited to existing maintained roadways and would be similar or less frequent than vehicular access frequency of Refuge staff, representing no new impact to Spalding's silene. Accordingly, turkey hunting may affect, but is not likely to adversely affect, Spalding's silene.

Critical Habitat: No critical habitat present.

Monarch butterfly (*Danaus plexippus*): On December 15, 2020, the U.S. Fish and Wildlife Service announced that listing the monarch butterfly as endangered or threatened under the Endangered Species Act is warranted, but precluded by higher priority listing actions (USFWS 2020). The decision was the result of an extensive status review of the monarch that compiled and assessed the monarch's current and future status. The monarch is now a candidate under the Endangered Species Act. The Service will review its status annually until a listing decision is made. The host plant for monarch butterfly, showy milkweed, occurs on the Refuge, and monarch butterflies have been documented on the Refuge. However, during the fall turkey hunting season (September 1 through December 31) showy milkweed will have senesced and monarch butterflies will have migrated and would not be present on the refuge. Accordingly, hunting may affect, but is not likely to jeopardize the monarch butterfly.

Effects of Ammunition: Turkey hunters would be required to use non-toxic shot when hunting turkeys on the Refuge; therefore, there would be no effects from lead associated with the proposed activity to listed or candidate species.

C. may affect, and is likely to adversely affect species/critical habitat
N/A

D. may affect, and is likely to adversely affect species/critical habitat
N/A

KENDAL MORRIS Digitally signed by KENDAL MORRIS
Date: 2022.09.02 11:40:41 -07'00' 9/2/2022
Signature of Preparer **Date**

Evaluation by Project Leader:

1. *For A & B above*: Concurrence X Non-concurrence _____
2. *For C above*: Formal consultation required _____
3. *For D above*: Conference required _____

KELLY MORONEY Digitally signed by KELLY MORONEY
Date: 2022.09.02 12:00:39 -07'00' 9/2/2022
Signature of Project Leader **Date**

References

U.S. Fish and Wildlife Service. 2020. Endangered and Threatened Wildlife and Plants: 12-Month Finding for the Monarch Butterfly. 85 FR 81813 81823. Available at: <https://www.govinfo.gov/content/pkg/FR-2020-12-17/pdf/2020-27523.pdf>

U.S. Fish and Wildlife Service. 1999. Endangered and Threatened Wildlife and Plants; Determination of Threatened Status for Bull Trout in the Coterminous United States. 64 FR 58910-58933.

- U.S. Fish and Wildlife Service. 2014. Determination of Threatened Status for the Western Distinct Population Segment of the Yellow-billed Cuckoo (*Coccyzus americanus*). 79 FR 59991 60038.
- U.S. Fish and Wildlife Service (USFWS). 2007. Turnbull National Wildlife Refuge Final Comprehensive Conservation Plan and Environmental Impact Statement. U.S. Fish and Wildlife Service, Turnbull National Wildlife Refuge, Cheney, Washington.
- U.S. Fish and Wildlife Service (USFWS). 2022 Turnbull National Wildlife Refuge Draft Turkey Hunting Plan and Environmental Assessment.
- U.S. Fish and Wildlife Service (USFWS). 2022. Draft Compatibility Determination for Turkey Hunting at Turnbull National Wildlife Refuge.

Appendix C: Response to Comments on the Draft Hunt Plan and Environmental Assessment

APPENDIX C. RESPONSE TO PUBLIC COMMENTS ON THE DRAFT TURKEY HUNTING PLAN AND ENVIRONMENTAL ASSESSMENT, TURNBULL NATIONAL WILDLIFE REFUGE

Three comment emails and one comment letter (four comment letters or emails total) were received on Turnbull NWR's Draft Turkey Hunting Plan and Environmental Assessment and the Draft Compatibility Determination for turkey hunting during the national comment period on the Draft 2022-23 Sport Hunting and Fishing Rule (June 8-August 8, 2022). A summary of comments received and Service responses follows.

Comment: Three of the commenters expressed support for the proposed fall turkey hunt on Turnbull NWR.

Response: Thank you for your comments. In passing the Improvement Act, Congress reaffirmed that the Refuge System was created to conserve fish, wildlife, plants, and their habitats, and would facilitate opportunities for Americans to participate in compatible wildlife-dependent recreation, including hunting and fishing on Refuge System lands.

Comment: Two commenters supported opening the Refuge to turkey hunting but were concerned about conflicts between turkey and elk hunters. One commenter opposed opening Turnbull NWR to a fall turkey season. The commenter noted that the Refuge elk hunt is a highly sought-after opportunity with long wait periods to draw a tag, and was concerned that fall turkey hunting would disrupt the elk herd and push them out of the Refuge and into areas outside the Refuge where they may be hunted, and therefore disrupt Refuge elk hunters' ability to harvest elk on the Refuge. The commenter preferred that the Refuge be opened to spring turkey hunting, since this would not conflict with elk hunting.

Another commenter supported a fall turkey hunt, but suggested closing the Refuge to turkey hunting when there was overlap with the permit-only elk season, to reduce conflicts.

Response: The Refuge coordinated extensively with the Washington Department of Fish and Wildlife WDFW in developing the Turkey Hunting Plan for Turnbull NWR. WDFW supported the Refuge's proposal to open fall turkey hunting. The Refuge similarly coordinated with WDFW in developing its 2009 Elk Hunting Plans. Under the Turkey Hunting Plan, fall turkey and elk hunting seasons would overlap, but the hunts would occur in separate hunt areas, minimizing conflicts between turkey and elk hunters. Finally, the relatively small number of turkey hunters on the Refuge at any given time would further minimize disturbance to elk. The Refuge decided not to open to spring turkey hunting because spring hunting would cause more disturbance to non-hunted wildlife species, since such a hunt would occur when animals are breeding, nesting, and rearing young.

Comment: One commenter supported opening the Refuge to turkey hunting, but expressed concern that hunters with disabilities would be unable to access turkey hunting opportunities on the Refuge since the Draft Plan indicated that foot access only would be allowed in the turkey hunt area.

Response: Turkey hunting would be managed similarly to the current Turnbull NWR elk hunt in terms of access for hunters with disabilities. As with the elk hunt, turkey hunters with disabilities that are selected through the Washington Department of Fish and Wildlife's "Hunting By Reservation Only" program should apply to the Refuge Manager for a Special Use Permit that would allow vehicle or e-bike access to the hunt area in advance of their hunt date. Only the vehicle or e-bike disabled hunters are riding in may drive into the refuge. The gate at the Mullinix Road parking lot will be opened by Refuge

staff to allow access to the hunt area by hunters with disabilities. We have amended the Hunt Plan and Compatibility Determination to include this information, and amended the statement on foot access as follows: "Turkey hunters, with the exception of disabled hunters, will only be allowed access to the Long Lake Unit by foot through the parking area gate on Mullinix Road."

Appendix D: Finding of Appropriateness and Compatibility Determination for Turkey Hunting, Turnbull NWR

FINDING OF APPROPRIATENESS OF A REFUGE USE

Use of this form is required for documenting all appropriate use findings (603 FW 1)

Refuge Name: Turnbull National Wildlife Refuge

Use: Hunting (Upland Game)

This is a: New Use

Existing Use

A. Does this use qualify for an appropriateness review exemption?

(Please Check One)

Some refuge uses are exempted from an appropriateness review [603 FW 1.2; 603 FW 1.2(A)]. Appropriate use finding exemptions are documented through the use of this form.

This use is "protected," "conditioned," or otherwise provided for under law or regulation.

Examples include the use of snow machines, airplanes, or motorboats on Alaska refuges under certain conditions per the ANILCA. Provide a written justification as to how this use qualifies for this particular exemption.

The Service does not have jurisdiction over the use

This could be as a result of treaty rights, court orders, consent decrees, pre-existing rights (such as subsurface Non-Federal oil and gas or mineral rights, grandfathered easements, etc.). Provide a written justification as to how this use qualifies for this particular exemption.

This is a Right-of-Way Permit request

Right-of-way requests are subject to 340 FW 3 and compatibility determinations (603 FW 2). Attach a brief explanation as to how this use qualifies for this particular exemption.

This use DOES NOT qualify for an appropriateness review exemption.

Proceed to evaluate the use under Part B.

If the use meets one of the three qualifying exemptions above, then it is exempt from an appropriate use determination. Skip Parts B, C, D and E and complete Parts F and G, sign and date, and submit a copy to the Refuge Supervisor.

B. Is the use administratively determined as appropriate in law or policy?

(Please Check One)

The following refuge uses are appropriate because they have been administratively determined as appropriate uses by statute or policy [603 FW 1.11(A)(1); 603 FW 1.6(A)(3)].

This use is a wildlife-dependent recreational use.

Hunting, Fishing, Wildlife Observation, Wildlife Photography, Environmental Education, or Interpretation.

This use involves the take of fish and wildlife under state/territorial regulations.

Including other forms of state-regulated take beyond hunting and fishing.

This use HAS NOT been administratively determined as appropriate by statute or policy.

Proceed to evaluate the use under Part C.

If the use meets one of the two qualifying definitions above, then it is appropriate. Complete Parts E, F, and G, sign and date, and submit a copy to the Refuge Supervisor.

C. Is the use appropriate because it contributes to the refuge's purpose(s), goals, or objectives or Refuge System mission?

(Please check one.)

Refuge managers, in their sound professional judgement, may determine a refuge use to be appropriate if it contributes to fulfilling the refuge purpose(s), goals, or objectives described in the refuge's comprehensive conservation plan, or the Refuge System mission [603 FW 1.11 (A)(2)]. Urban wildlife refuges have the additional goal of fostering environmental awareness through outreach programs and activities that develop an informed and involved populace that supports fish and wildlife conservation [110 FW 1.5].

This use contributes to the refuge purpose(s), goals, or objectives, or Refuge System mission.

Provide a written justification of how the use contributes to the qualifying purpose(s), goals, or objectives or Refuge System mission. Complete Parts E, F, and G, sign and date, and submit a copy to the Refuge Supervisor.

This use DOES NOT contribute to refuge purpose(s), goals, objectives, or Refuge System mission.

Proceed to evaluate the use under Part D.

D. Is this use appropriate?

Decision Criteria:	YES	NO
(1) Does the use comply with applicable laws and regulations (Federal, State/Territorial, tribal, and local)?	<input type="checkbox"/>	<input type="checkbox"/>
(2) Is the use consistent with applicable Executive orders and Department and Service policies?	<input type="checkbox"/>	<input type="checkbox"/>
(3) Is the use consistent with public safety?	<input type="checkbox"/>	<input type="checkbox"/>
(4) Is the use consistent with the goals and objectives of approved management plans or other management document?	<input type="checkbox"/>	<input type="checkbox"/>
(5) If this is the first time the use has been proposed or if it was previously found appropriate, check Yes. If the use was previously analyzed but denied, check No.	<input type="checkbox"/>	<input type="checkbox"/>
(6) Is the use manageable within available budget and staff?	<input type="checkbox"/>	<input type="checkbox"/>
(7) Will the use be manageable in the future with existing resources? [603 FW 1.11 (A)(3)(h)].	<input type="checkbox"/>	<input type="checkbox"/>
(8) Does the use contribute to the public's understanding and appreciation of the refuge's natural and cultural resources?	<input type="checkbox"/>	<input type="checkbox"/>
(9) Can the use be accommodated without impairing existing wildlife-dependent recreational uses or reducing the potential to provide quality [603 FW 1.6 (D)], compatible, wildlife-dependent recreation into the future?	<input type="checkbox"/>	<input type="checkbox"/>
(10) Is the use on an urban wildlife refuge [110 FW 1.15] and/or will it help new audiences become familiar and comfortable with fish, wildlife and their habitats?	<input type="checkbox"/>	<input type="checkbox"/>

If the answer is "NO" to (1), (2), or (3), mark the use as "Not Appropriate" under Part G. If the answer is "NO" to any of (4) through (10), the use will generally be "Not Appropriate." Refuge managers may, however, check one or more of boxes (4) through (10) and still find the use "Appropriate" by providing a written justification of the finding and how the factor(s) are mitigated or of minimal effect.

Complete Parts E, F, and G, sign and date, and submit a copy to the Refuge Supervisor.

E. Consultation with State/Territorial Fish and Wildlife Agency

(Please check one.)

Refuge managers must consult with the applicable State/Territorial fish and wildlife agency when a request for a use could affect fish, wildlife, or other resources that are of concern to a State fish and wildlife agency [603 FW 1.7E(3) and 1.12].

Consultation WAS required.

Proceed to Part F. Consultation took place on: 10/1/21
(Month/Date/Year)

Consultation WAS NOT required.
Proceed to Part F.

F. Is the use significantly complex or potentially controversial?

(Please check one.)

Yes

If Yes, date the Regional Chief was briefed: _____
(Month/Date/Year)

No
Proceed to Part G.

G. Finding

Based on my review of all relevant factors, I find the refuge use identified above:

Exempted Not Appropriate Appropriate*

[* Includes findings that a use is administratively determined as appropriate (Section B and C) or is found appropriate through the use of the decision tool (Section D).]

Refuge Manager* **KELLY MORONEY** Digitally signed by KELLY MORONEY
Date: 2022.09.02 12:04:55 -07'00' Date 9/2/22

*Upon signature, all fields except date, Refuge Supervisor signature and date, will be locked as "read only".

H. Concurrence

The Refuge Supervisor MUST concur and sign a finding of "Not Appropriate" for an EXISTING use if the designation is made OUTSIDE of the Comprehensive Conservation Plan process. The Refuge Supervisor MUST concur and sign a finding of "Appropriate" for any proposed NEW use. Signature from the Refuge Supervisor WILL NOT be necessary for a finding of "Not Appropriate" with a proposed NEW use.

Refuge Supervisor* **CHARLES STENVALL** Digitally signed by CHARLES STENVALL
Date: 2022.09.02 08:02:17 -07'00' Date 9/2/22

*Upon signature, all fields except date will be locked as "read only".

Any use found to be "Appropriate" will require the development of a compatibility determination before the use may be allowed on Refuge lands.

JUSTIFICATION FOR FINDING OF APPROPRIATENESS OF A REFUGE USE

Refuge Name: _____

Use: _____

NARRATIVE:

Note: Include in the Justification narrative:

- *Your reason for checking a box in Section A to exempt the use from appropriateness review.*
- *Your reason for determining in Section C that the use contributes to the refuge's purpose, goals and objectives, or the Refuge System mission.*
- *Your reason for checking each of the boxes in Section D. Include a concise, substantive explanation as to why boxes were checked, either "YES" or "NO", for each decision criteria. Also, for boxes (4) through (10), if any are checked "NO", be sure to describe how the factor(s) are mitigated, or of minimal effect, if use is determined to be "Appropriate."*

Compatibility Determination

Title

Compatibility Determination for Turkey Hunting, Turnbull National Wildlife Refuge

Refuge Use Category

Hunting

Refuge Use Type(s)

Hunting (upland game)

Refuge

Turnbull National Wildlife Refuge

Refuge Purpose(s) and Establishing and Acquisition Authority(ies)

“... as a Refuge and breeding ground for migratory birds and other wildlife...”
(Executive Order 7681, dated July 30, 1937)

“ ... for use as an inviolate sanctuary, or for any other management purpose, for migratory birds.” (16 U.S.C. 715d [Migratory Bird Conservation Act])

“... suitable for (1) incidental fish and wildlife-oriented recreational development, (2) the protection of natural resources, (3) the conservation of endangered species or threatened species ...” (16 U.S.C. 460k-1)

“... the Secretary ... may accept and use ... real ... property. Such acceptance may be accomplished under the terms and conditions of restrictive covenants imposed by donors ...” 16 U.S.C. 460k-2 (Refuge Recreation Act (16 U.S.C. 460k-460k-4), as amended).

“... for the development, advancement, management, conservation, and protection of fish and wildlife resources ...” (16 U.S.C. 742f(a)(4))

“ ... for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude ...” 16 U.S.C. 99 742f(b)(1) (Fish and Wildlife Act of 1956)].

National Wildlife Refuge System Mission

The mission of the National Wildlife Refuge System, otherwise known as Refuge System, 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 (Pub. L. 105-57; 111 Stat. 1252).

Description of Use

Is this an existing use?

No.

What is the use?

We propose to allow fall turkey hunting on the Refuge to provide an additional wildlife-dependent recreation opportunity, while managing turkey populations to reduce conflicts with native species.

Is the use a priority public use?

Yes

Where would the use be conducted?

Turnbull NWR lies within WDFW's Northeast Wild Turkey PMU Population Management Unit (PMU 10). Turkey hunting would be allowed on a new hunt unit, the Long Lake Unit (1,883 acres) between Mullinix Road and the Columbia Plateau Trail (see map). Only turkey hunting would be allowed on this unit. Turkey hunters, with the exception of disabled hunters, will only be allowed access to the Long Lake Unit by foot through the parking area gate on Mullinix Road..

When would the use be conducted?

Turkey hunting would occur four days per week (for example: Saturdays, Sundays, Wednesdays, and Thursdays) during the Washington State general fall turkey season in WDFW Region 1, which runs from September 1 through December 31. Therefore, the Refuge would be open to turkey hunting for 70 days annually.

How would the use be conducted?

Hunting within the Refuge will be consistent with Federal, Washington Department of Fish and Wildlife, and Refuge-specific hunting regulations. We would publish Refuge-specific regulations requiring the use of non-toxic shot for turkey hunting.

No special permission or permits are required from the U.S. Fish and Wildlife Service to hunt turkey, other than a Special User Permit to allow use of vehicles and e-bikes by disabled hunters (see below). Hunters must be in possession of a valid state small game hunting license and a turkey transport tag. Turkey hunting is by advance online reservation only. WDFW would manage reservations under their Hunting By Reservation Only program, under a hunting access agreement with the Service. All

hunting dates will be posted on WDFW's online reservation program webpage prior to the start of the fall season. Reservations can be made beginning at 8:00am, 14 days prior to the actual hunting date. Hunters reserve dates on a first-come, first-serve basis. Up to two hunting parties of up to four hunters per party would be allowed to hunt during a two-day hunt period (for example: Saturday-Sunday or Wednesday-Thursday). Once hunters have made a reservation and prior to hunting, they must call a designated contact number to receive a safety briefing and have their questions answered by Refuge staff.

Turkey hunters with disabilities that obtain a reservation through the WDFW's "Hunting By Reservation Only" program must apply to the Refuge Manager for a Special Use Permit in advance of their hunt date that would allow them to use a vehicle or e-bike to access the hunt area. The gate at the Mullinix Road parking lot would be opened by Refuge staff to allow access to the hunt area by hunters with disabilities. Only the vehicle or e-bike that is being used by a disabled hunter may drive into the refuge, and vehicles and e-bikes are restricted to existing/maintained roadways within the hunt unit.

Free-roam hunting would be allowed throughout the 1,883 acres open to fall turkey hunting. Hunters would be informed of no hunt zones and regulations via posted signs, brochures, and online resources. Facilities that would be used for the hunt include the hunter parking area on Mullinix Road, and various existing service roads, vehicle pull-outs, and trails. Up to 560 hunter use days per year are expected to accrue in this use annually.

Why is this use being proposed or reevaluated?

In accordance with the National Wildlife Refuge System Administration Act of 1966, as amended, hunting is a priority wildlife-dependent public use. Public land for hunting is in limited supply, especially near large metropolitan areas (U.S. Department of the Interior [USDOI] et al. 2007) such as Spokane. In general, there has been a static or declining trend in hunting participation relative to population growth in the United States since 1985 (USFWS 2004). The trend also indicates a declining number of young hunters. From 1991 to 2001, the number of Americans 16 years of age and older who hunted declined by 7 percent. Opportunities to hunt in the greater Spokane area are increasingly scarce due to an ever-growing population, urbanization, and a relative lack of public lands open to these uses.

Availability of Resources

The analysis of cost for administering and managing each use will only include the incremental increase above general operational costs that we can show as being directly caused by the proposed use. Estimated costs for operating the turkey hunting program displayed in the following table. Recurring expenses include estimated annual salaries for recreation and maintenance personnel involved in administering program.

Table 1: Costs associated with the Proposed Turkey Hunt

Proposed Activity or Project	One Time Expense (\$)	Recurring Expenses (\$/year)
Develop hunt opening package	\$5,000	N/A
Administer hunt	\$2,000	\$1,000
Develop new publications, signage associated with new hunt	\$6,000	\$1,000
Total One Time Expenses (\$)		\$13,000
Total Recurring Expenses (\$/year)		\$2,000

Anticipated Impacts of the Use

This CD includes the written analyses of the environmental consequences on a resource only when the impacts on that resource could be more than negligible and therefore considered an “affected resource.” Soils, air, water, wilderness, cultural resources, and socioeconomic resources will not be more than negligibly impacted by the action and have been dismissed from further analyses.

Potential impacts of a proposed use on the refuge's purpose(s) and the Refuge System mission

Turnbull National Wildlife Refuge was established “... as a Refuge and breeding ground for migratory birds and other wildlife...” (Executive Order 7681, July 30, 1937). Additional lands were acquired under the authority of, or to fulfill the purpose of, the Migratory Bird Conservation Act (16 U.S.C. §715a-715r), or through approval of the Migratory Bird Conservation Committee, as an “inviolable sanctuary for migratory birds, or for any other management purpose, for migratory birds.” The Refuge is both an important migration stopover in the Columbia Basin, and an important breeding area for migratory waterfowl. The proposed turkey hunt would have minimal impacts to Refuge purposes, for several reasons. The proposed turkey hunt area lies outside major use areas for fall-migrating waterfowl. Disturbance to migratory birds within the hunt area would be low, due to the small number of hunters using the area at any given time, and because hunting is allowed only four days per week. Finally, the fall turkey hunt is outside the breeding season for migratory birds.

Short-term impacts

Direct mortality to target species stemming from Refuge hunts: The proposed turkey hunt would be conducted in line with Washington’s Turkey Management Plan (WDFW 2005), which provides management direction for turkeys in the state, and the 2015-2021 Game Management Plan (WDFW 2014). In Washington state, turkeys are managed to provide sustainable sport hunting opportunities, while responding to cases of

landowner/turkey conflicts (damage and nuisance complaints). Turnbull NWR lies within WDFW's Northeast Wild Turkey PMU Population Management Unit (PMU 10), which includes Game Management Units (GMU) 101-136. Merriam's and Rio Grande turkeys are abundant in this PMU, and northeastern Washington is known as a world class turkey hunting destination. Collectively, the Northeast PMU accounts for approximately two-thirds of turkeys harvested in Washington state, in the spring and fall seasons. Between 8,000 and 9,000 turkeys have been harvested in the state annually in recent years (WDFW 2021a).

The estimated refuge turkey harvest from the proposed fall hunt would be 70 birds. This estimated harvest represents a small fraction of the turkey population in the Northeast PMU, and turkey harvest statewide.

Effects to Nonhunted Wildlife: Non-hunted wildlife would include any non-target birds; small and medium-sized mammals; reptiles, amphibians, and invertebrates. Occasionally, nontarget species are illegally killed by hunters by accident or intentionally. Refuge regulations further mitigate possible disturbance or mortality to non-hunted wildlife. Vehicles would be restricted to roads and the harassment or taking of any wildlife other than the game species legal for the season would not be permitted. The primary effect of turkey hunting to non-hunted species is disturbance. Disturbance effects are described in detail below.

Disturbance to Waterfowl. Turkey hunting would result in some disturbance to fall-migrating waterfowl by hunters walking in close proximity to wetlands and gunfire, which generally results in a behavioral response by birds. Turkey hunting by its nature involves free roaming on foot throughout a hunting unit.

Numerous studies have confirmed that people on foot can cause a variety of disturbance reactions in wildlife, including flushing or displacement (Erwin 1989, Fraser et al. 1985, Freddy 1986), heart rate increases (MacArthur et al. 1982), altered foraging patterns (Burger and Gochfeld 1991), and even, in some cases, diminished reproductive success (Boyle and Samson 1985). These studies and others have shown that the severity of the effects depends upon the distance of the disturbance to the animal(s) and the disturbance's duration, frequency, predictability, and visibility to wildlife (Knight and Cole 1991).

The variables that were found to have the greatest influence on wildlife behavior were the distance from the animal to the disturbance and the duration of the disturbance. In a review of several studies of the reaction of waterfowl and other wetland birds to people on foot, distances greater than 328 feet (100 meters) generally did not result in a behavioral response (DeLong 2002). In most years, only the permanent and semi-permanent wetlands hold water and receive use by waterfowl in the fall, until freeze up in late November when they move to rivers and larger, deeper lakes off-Refuge.

The frequency of the disturbance by hunters during the fall season (September to November) is a function of hunter density, the size of the potential disturbance zone and the time period in days that hunters can potentially access these areas. The area of the Refuge we propose to open to turkey hunting does include wetlands that provide fall waterfowl habitat. The limited-entry turkey hunt would result in very low densities of hunters with a low probability that hunters would enter wetland disturbance zones on any given day. Generally, these wetlands freeze over by late November, so there would be no hunting disturbance to waterfowl during the last month of the turkey season. Furthermore, turkey hunting would be allowed only four days per week and would be limited to two parties of no more than four hunters each. Therefore, most waterfowl disturbance would occur on 48 days during September, October, and November, and would result in minor impacts to waterfowl through disturbance due to the small number and low density of hunters. In addition, those small numbers of waterfowl that may be disturbed could fly to wetlands in areas remaining closed to public use. No significant impacts to waterfowl from turkey hunting would occur. Turkey hunting would not add to lead in the environment since only approved non-toxic shot may be used on the Refuge.

Turkey hunting would cause similar disturbance to wetland-associated species other than waterfowl due to hunters walking in close proximity to wetlands and gunfire, which generally results in a behavioral response by many animals. By the opening of the fall turkey season, many of the non-waterfowl bird species have migrated out of the area. There is the potential for fall-migrating shorebirds to be present in September through mid-October. The probability that a hunter will spend significant time within wetlands or in adjacent zones extremely low. In summary, disturbance impacts to wetland-associated wildlife as a result of turkey hunting would be negligible to minor.

Disturbance to Bald and Golden Eagles. Bald and golden eagles are Federally protected under the Bald and Golden Eagle Protection Act, as amended (16 U.S.C. 668-668c). The Refuge's large permanent wetlands provide fall migration and wintering habitat for bald eagles until freezeup in late November. Eagle use of the Refuge tracks waterfowl use, which is variable from year to year. Most fall waterfowl use, and therefore eagle use, occurs in years with above average precipitation. Golden eagles are an occasional summer visitor to the Refuge. Neither species breeds on the Refuge. Short-term disturbance impacts to the bald eagle would be expected to increase inside the Long Lake unit. Some short-term effects to bald eagle use within the hunt unit would also be expected. Wintering populations of bald eagles have shown susceptibility to disturbance resulting in disrupted foraging behavior and changes in social dynamics between other species in the avian scavenger guild (Skagen 1991) and avoidance of areas with high disturbance (Stalmaster and Newman 1978). Stalmaster and Newman (1978) also found that recreational activities occurring within 250 meters of roosting and foraging areas resulted in changes in distribution

patterns by displacement to areas of lower human activity. With regards to hunting, Stalmaster and Newman (1978) found that gunshots were the only noises that elicited overt escape behavior by eagles in their study. Edwards (1969) also found that gunshots could be used to flush eagles from their roost (cited in Stalmaster and Newman 1978). The Long Lake Unit includes one large permanent wetland that may be utilized by bald eagles for foraging in fall and winter, until freezeup in late November. Hunters would potentially be within 250 meters of this habitat.

The frequency of the disturbance by hunters during the fall turkey season (September 1–December 31) is a function of hunter density, the size of the potential disturbance zone, and the time period (in days) that hunters can potentially access these areas. The area of the Refuge we propose to open to turkey hunting does include wetlands that provide fall waterfowl habitat until freeze-up in late November, and therefore may be used as foraging habitat by bald eagles. Golden eagles are a transient summer visitor to the Refuge, and would be expected to occur rarely during the early part of the turkey hunt season. The limited-entry turkey hunt would result in very low densities of hunters (under the reservation system, a maximum of 8 hunters can be present on the hunt unit on any given day) with a low probability that hunters would enter wetland disturbance zones on any given day. Generally, these wetlands freeze over by late November, so there would be no hunting disturbance to eagles during the last month of the turkey season. Furthermore, turkey hunting would be allowed only four days per week and would be limited to two parties of no more than four hunters each. Therefore, hunting disturbance would occur on 48 days during September, October, and November, and would result in minor short-term impacts to eagles through disturbance due to the small number and low density of hunters. In addition, any eagles that may be disturbed could fly to wetlands in areas remaining closed to public use. Therefore, there would be no significant impacts to either bald or golden eagles resulting from turkey hunting. In addition turkey hunting would not add to lead in the environment since only approved non-toxic shot may be used for turkey on the Refuge.

Disturbance to Steppe-Associated Wildlife Species: Impacts to these species associated with the turkey hunting program would result from either the alteration of habitat, or disturbance of wildlife associated with foot travel. Numerous studies have found that bird abundance and species composition are affected by the presence of people on foot. In the mixed-grass prairie ecosystem in Colorado, Miller et al. (1998) found that specialist species (western meadowlark, vesper sparrows, and grasshopper sparrows) were less common near heavily used recreational trails. Generalist species such as the American robin, brown-headed cowbird, and black-billed magpie were less affected by trail use. They also found that birds were less likely to nest near trails within the grassland ecosystem and that nest predation was greater near trails. For the majority of species, they found impact was greatest within a 246-foot (75 meter) zone of influence. However, these impacts would be expected to be negligible

because most steppe-dependent bird species have migrated by the time the turkey season begins; and hunter density would be very low.

Disturbance to Ponderosa Pine-Associated Wildlife Species: The open nature of ponderosa pine forest and the lack of a well-developed shrub layer in most stands, places most tree and snag foraging species well above public use activities on the ground. Most however, are still susceptible to human disturbance. Larger bird species that nest and roost in pine stands, including red-tailed hawks, great-horned owls, and osprey, are especially intolerant of individuals on foot within their territories. Ponderosa pine forest also supports wildlife species that dwell near or on the ground. Turkey hunting would have minimal impacts on ponderosa pine-associated species because the hunting program would involve a small number of individuals and take place outside the breeding season, the time period when disturbance has the greatest potential to affect birds and other animals. No additional facilities are planned to facilitate the turkey hunt other than a small parking area on Mullinix Road. In summary, disturbance impacts to ponderosa pine-associated wildlife as a result of turkey hunting would be negligible to minor.

Disturbance to Riparian-Associated Wildlife Species: Potential impacts of turkey hunting on aspen habitat and associated wildlife include increased disturbance to wildlife from activities occurring in close proximity to riparian areas. Songbirds, woodpeckers, and deer are the primary species groups potentially affected by public use activities in aspen riparian zones. Disturbance to birds by visitors, particularly those on foot, can result in behavioral responses and habitat impacts as previously described for wetland, steppe, and pine forests. In summary, disturbance impacts to riparian-associated wildlife as a result of turkey hunting would be negligible to minor.

Effects of Turkey Harvest to Native Wildlife Species: Wild turkeys eat many different kinds of plants, seeds and fruits, and invertebrates (insects, spiders, snails), usually focusing their diets on the food items that are most available. In general, the diet of an adult turkey is made up of 75% plants and 25% insects while the diet of a poulter ranges from 75% to 90% insect matter. During the winter, turkeys in eastern Washington gather into large flocks, sometimes of 100 or more birds, and are commonly found around a source of artificial feed like oat hay or other grain (WDFW 2005). Therefore the diets of turkeys overlap with the diets of many species of native ground-foraging landbirds. The native species whose diets overlap with wild turkey depends on season, since turkeys consume more green vegetation and animal matter in spring and summer, and more seeds and nuts in fall and winter. In Washington, Merriam's turkeys (the most common subspecies in eastern Washington) eat grass leaves and seeds, ponderosa pine seeds, acorns, grasshoppers, forbs, and fruits such as wild strawberry (WDFW 2005). As noted above, ponderosa pine stands provide important foraging habitat for both migrant and resident bird species, including black-capped and mountain chickadees, red crossbills, pygmy nuthatches, hairy

woodpeckers, northern flickers, Lewis' woodpecker, and western bluebird. In northeastern Washington, Merriam's turkeys are known to feed on ponderosa pine seed in the fall (WDFW 2005). Ponderosa pine seed are an important food source for some resident native bird species, as well as small mammals. It is possible that wild turkey compete with native species for food resources; however, little research has been done on the topic to date. It is therefore possible that reducing Refuge turkey populations may have beneficial effects for native wildlife species that depend on this food source, but such effects would be minor due to the small number of turkeys that would be harvested.

Habitat and Vegetation: No facilities will be constructed expressly for the turkey hunting program other than a small parking area on Mullinix Road in an already disturbed area; therefore there would be no direct loss of habitat. Minor impacts to vegetation would occur through minor trampling and the potential of hunters spreading invasive species. The small number of hunters and hunt days per year would result in a negligible impact to vegetation.

Impacts to listed species: There are three federally ESA-listed (Threatened) species where the current species ranges overlap with Turnbull NWR: bull trout, yellow-billed cuckoo, and a plant species, Spalding's silene. A Federal Candidate species, monarch butterfly, also occurs on the Refuge. An ESA Section 7 Consultation has been completed (USFWS 2022). Yellow-billed cuckoo and bull trout have never been observed on the Refuge, and suitable habitat for these species does not exist on the Refuge. Therefore, turkey hunting would have no effect to these species.

Spalding's silene occurs in the southeast corner of the Refuge, which lies outside the proposed turkey hunt area. Even if Spalding's silene were to occur within the hunt area, the probability that a hunter will trample a plant of this species is very low and considered discountable, due to of the low density of hunters in steppe habitat. The hunting season also takes place during the period of plant dormancy, so any potential impacts are also expected to be insignificant. Therefore, turkey hunting may affect, but is not likely to adversely affect, Spalding's silene.

The host plant for monarch butterfly, showy milkweed, occurs on the Refuge, and monarch butterflies have been documented on the Refuge. However, by the fall hunting season (September 1 through December 31), showy milkweed has senesced and monarch butterflies would not likely be present on the refuge. Therefore, we have determined that turkey hunting may jeopardize, but is unlikely to jeopardize, monarch butterfly.

Impacts to other priority public uses: Hunting has the potential to disturb Refuge visitors engaged in other priority public uses. To minimize this potential conflict, turkey hunting would be conducted outside of the main public use area. The main

public use area would remain closed to all hunting. Because of this spatial separation, and the fact that relatively few turkey hunters would be on the Refuge at a given time (2 parties of up to 4 hunters each), direct impacts to other users are expected to be minor.

No significant effects to roads, trails, or other infrastructure from the hunting program are foreseen. Normal road, trail, and facility maintenance will continue to be necessary. Additional facility construction or upgrade, if needed, is addressed in the Availability of Resources section.

Long-term impacts

Long-term impacts to Refuge wildlife populations as a result of turkey hunting are expected to be negligible. There would be indirect beneficial impacts of Refuge hunting over the long term. Hunting can contribute to wildlife and habitat conservation and provide educational and sociological benefits. The hunting community in general remains the largest support base for funding land acquisitions in the Refuge System through the purchase of Duck Stamps. Refuges provide an opportunity for a high quality waterfowl hunting experience to all citizens regardless of economic standing. Many Refuges have developed extensive public information and education programs bringing hunters into contact with Refuge activities and facilitating awareness of wildlife issues beyond hunting.

Public Review and Comment

This Compatibility Determination was prepared in conjunction with a Hunt Plan and Environmental Assessment. This Draft Compatibility Determination was released for a 60-day public review and comment period (June 8, 2022-August 8, 2022) in conjunction with the release of the 2022-2023 Sport Hunting and Fishing Regulations (Proposed Rule) and the Draft Turkey Hunting Plan for Turnbull NWR (USFWS 2022) in order to comply with the National Environmental Policy Act and with Service policy, before implementing the turkey hunting program. A hard copy of this document was posted at the Refuge Headquarters. It was made available electronically on the refuge website: <https://www.fws.gov/refuge/Turnbull/> and in the Federal Register as part of the 2022-2023 Sport Hunting and Fishing Regulations (Proposed Rule). Concerns expressed during the public comment period have been addressed in this final Compatibility Determination.

Determination

Yes

Stipulations Necessary to Ensure Compatibility

1. Hunting will be conducted in accordance with all federal, state, and refuge-specific regulations.
2. All shot used by, or in possession of, turkey hunters must be federally approved non-toxic shot.
3. Turkey hunting would be allowed four days per week (for example: Saturdays-Sundays, Wednesdays-Thursdays) during the State fall season.
4. We require turkey hunters reserve hunt days in advance through the WDFW Hunt By Reservation Only online system.
5. A maximum of two turkey hunting parties, with a limit of up to four hunters per party, would be allowed to hunt during each two-day hunt period.
6. Turkey hunters, with the exception of disabled hunters, will only be allowed access to the Long Lake Unit by foot through the parking area gate on Mullinix Road.
7. Turkey hunters with disabilities must apply to the Refuge Manager for a Special Use Permit in advance of their hunt date that would allow them to use a vehicle or e-bike to access the hunt area. Only the vehicle or e-bike that is being used by a disabled hunter may drive into the refuge, and vehicles and e-bikes are restricted to existing/maintained roadways within the hunt area.
8. Camping, overnight parking, fishing, boating, horseback riding, fires, and on-ice activities are not permitted on the refuge. ATV, ORV and snowmobile use is prohibited on all areas of the refuge.
9. Hunters must pack out used shotshells and other trash.
10. Hunt areas and no hunting zones will be well posted.
11. Refuge staff will conduct law enforcement, maintain hunting facilities, and monitor wildlife impacts. The refuge will ensure safety and minimize conflict with other priority public uses by providing information about hunting boundaries and seasons to the general public and those engaging in other refuge programs.

Justification

The stipulations outlined above would help ensure that the use is compatible at Turnbull National Wildlife Refuge. Turkey hunting, as outlined in this compatibility determination, would not conflict with the national policy to maintain the biological diversity, integrity, and environmental health of the refuge. Based on available science and best professional judgement, the Service has determined that the turkey hunting at Turnbull National Wildlife Refuge, in accordance with the stipulations provided here, would not materially interfere with or detract from the fulfillment of the

National Wildlife Refuge System mission or the purpose of the Turnbull National Wildlife Refuge. Rather, appropriate and compatible turkey hunting would be the use of the Refuge through which the public can develop an appreciation for wildlife and wild lands.

Signature of Determination

KELLY MORONEY Digitally signed by KELLY MORONEY
Date: 2022.09.02 12:03:23 -07'00'

Refuge Manager Signature and Date

Signature of Concurrence

CHRISTINE OGURA Digitally signed by CHRISTINE OGURA
Date: 2022.09.02 15:40:22 -07'00'

Assistant Regional Director Signature and Date

Mandatory Reevaluation Date

2037

Literature Cited/References

Altman, B. and A. Holmes. 2000. Conservation strategy for landbirds in the Columbia Plateau of Eastern Oregon and Washington. Version 1.0. Oregon-Washington Partners in Flight, 97 pp.

Boyle, S. A. and F. B. Samson. 1985. Effects of nonconsumptive recreation on wildlife: a review. Wildl. Soc. Bull. 13: 110-116.

Burger, J. and Gochfeld, M. 1991. Human activity influence and diurnal and nocturnal foraging of sanderlings (*Calidris alba*). Condor 93: 259-265.

Climate Impacts Group. 2009. The Washington Climate Change Impacts Assessment. M. McGuire Elsner, J. Littell, and L. Whitely Binder (eds). Center for Science in the Earth System, Joint Institute for the Study of the Atmosphere and Oceans, University of Washington, Seattle, Washington. Available at: <https://cig.uw.edu/wp-content/uploads/sites/2/2020/12/wacciareport681-3.pdf>

Cole, D.N. and R.L. Knight. 1990. Impacts of recreation on biodiversity in wilderness.

Utah State University. Logan, UT.

Daubenmire, R. 1952. Forest vegetation of northern Idaho and adjacent Washington, and its bearing on concepts of vegetation classification. *Ecological Monographs* 22: 301-330

Daubenmire, R. 1970. Steppe vegetation of Washington. Washington Agricultural Experiment Station, Pullman, Washington. Technical Bulletin 62. 131 pp.

DeLong, A. K. 2002. Managing visitor use and disturbance of waterbirds: a literature review of impacts and mitigation measures. Prepared for Stillwater National Wildlife Refuge. Appendix L In: Stillwater National Wildlife Refuge Complex final environmental impact statement for the comprehensive conservation plan and boundary revision (Vol. II). Dept. of the Interior, U.S. Fish and Wildlife Service, Region 1, Portland, OR.

Edwards, C. C. 1969. Winter behavior and population dynamics of American eagles in western Utah. Ph.D. Thesis. Brigham Young Univ., Provo. 157pp.

Erwin, R. M. 1989. Responses to human intruders by birds nesting in colonies: Experimental results and management guidelines. *Colon. Waterbirds* 12: 104-108.

Franklin, J. F. and C. T. Dyrness. 1973. The natural vegetation of Oregon and Washington. Oregon State University Press, Corvallis.

Fraser, James D., L.D. Frenzel, and John E. Mathisen. 1985. The impact of human activities on breeding bald eagles in north-central Minnesota. *J. Wildl. Manage.* 49: 585-592.

Freddy, D. J. 1986. Responses of adult mule deer to human harassment during winter. Pages 286 In Comer, R.D., Baumann, T. G., Davis, P., Monarch, J.W., Todd, J., VanGytenbeek, S., Wills, D., and Woodling, J., eds. *Proceedings II. Issues and technology in the management of impacted western wildlife: proceedings of a national symposium.* Thorne Ecol. Inst., Boulder, Colorado.

Headwaters Economics 2022. Socioeconomic Profile Tool. Available at: <https://headwaterseconomics.org/tools/usfws-indicators/>

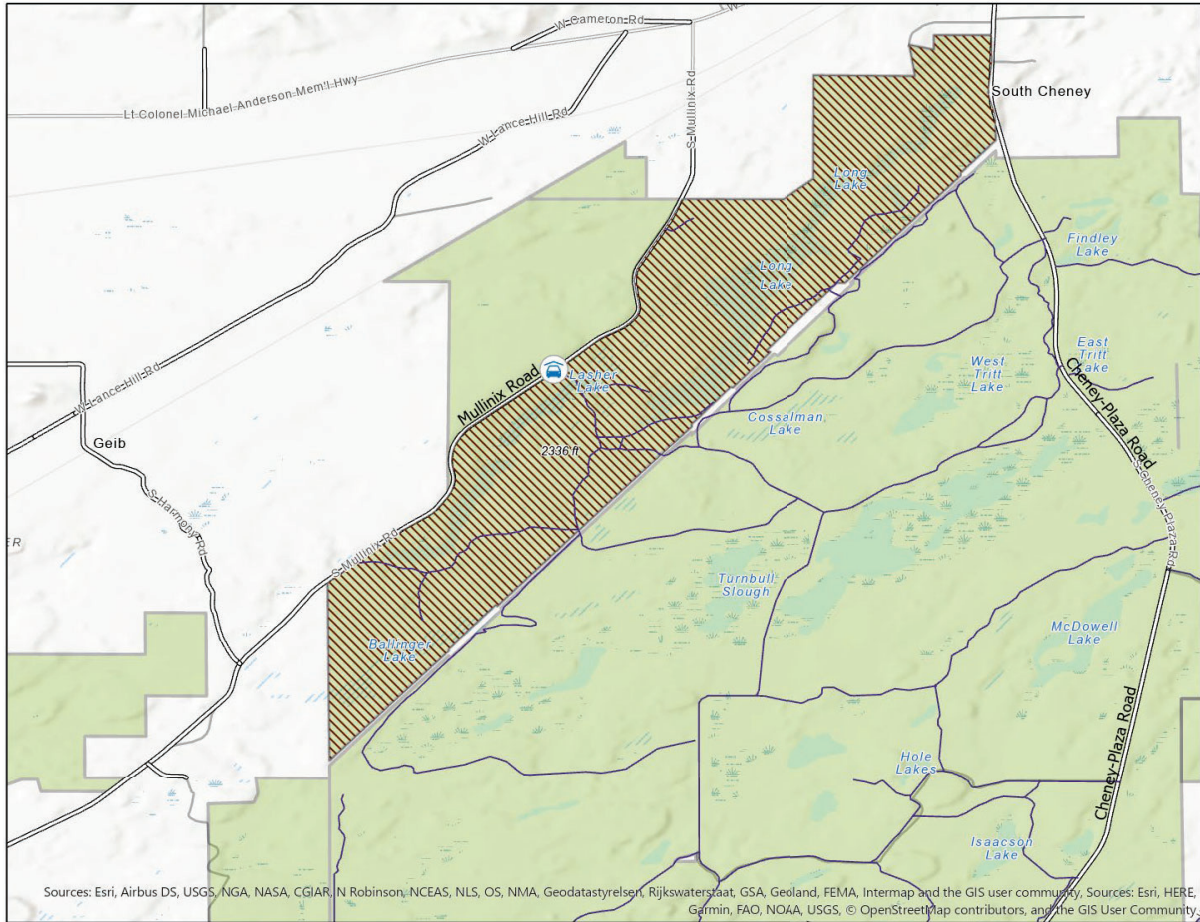
Holstine, Craig, J. Galm, and R. Bruce. 1992. A study of cultural resources on Turnbull National Wildlife Refuge, Spokane County, Washington. Eastern Washington University, Reports in Archaeology and History 100-71. Archaeological and Historical Services, 145 pp.

Ivey, G.L., and C.P. Herziger. 2006. Intermountain West Waterbird Conservation Plan, Version 1.2. A plan associated with the Waterbird Conservation for the Americas Initiative. Published by U.S. Fish and Wildlife Service Pacific Region, Portland, Oregon.

Kelly, T.R., P.H. Bloom, S.G. Torres, Y.Z. Hernandez, R.H. Poppenga, W.M. Boyce, C.K. Johnson. 2011. Impact of the California lead ammunition ban on reducing lead exposure in golden eagles and turkey vultures. *PLoS ONE*. 6(4): e17656. doi:10.1371/journal.pone.0017656.

- Knight, R. L. and D. N. Cole. 1991. Effects of recreational activity on wildlife in wildlands. In: Transactions of the North American Wildlife and Natural Resources Conference 56: 238-247.
- Kramer, J.L., P.T. Redig. 1997. Sixteen years of lead poisoning in eagles, 1980-95: An epizootiological view. *Journal of Raptor Research*. 31(4): 327-332.
- MacArthur, R.A., Geist, V., and Johnston, R. H. 1982. Cardiac and behavioral responses of mountain sheep to human disturbance. *J. Wildl. Manage.* 46: 351-358.
- Miller, S. G., R. L. Knight, and C. K. Miller. 1998. Influence of recreational trails on breeding bird communities. *Ecological Applications* 8: 762-769.
- Skagen, S. K., R. L. Knight, and G. H. Orians. 1991. Human disturbance of an avian scavenging guild. *Ecological Applic.* 1:215-225
- Soper, C. 1999. Columbia Plateau Ecoregional Plan. Unpublished draft. The Nature Conservancy. Seattle, Washington.
- Stalmaster, M. V. and J. R. Newman. 1978. Behavioral responses of wintering bald eagles to human activity. *J. Wildl. Manage.* 42:506-513.
- Stauber, E., N. Finch, P.A. Talcott, and J.M. Gay. 2010. Lead poisoning of bald (*Haliaeetus leucocephalus*) and golden (*Aquila chrysaetos*) eagles in the US inland Pacific Northwest- An 18-year retrospective study: 1991-2008. *Journal of Avian Medicine and Surgery* 24:279-287. doi: <http://dx.doi.org/10.1647/2009-006>.
- USFWS. 2022. Turnbull National Wildlife Refuge Draft Turkey Hunting Plan. Cheney, WA and Portland, OR.
- U.S. Fish and Wildlife Service. 2009. Environmental Assessment for an Elk and Youth Waterfowl Step-down Hunt Plan on the Turnbull National Wildlife Refuge. Cheney, WA and Portland, OR.
- U.S. Fish and Wildlife Service. March 2007. Turnbull National Wildlife Refuge Comprehensive Conservation Plan. Available at: <https://ecos.fws.gov/ServCat/DownloadFile/164241>
- WDFW. 2021a. 2020 Statewide turkey harvest statistics. Available at: <https://wdfw.wa.gov/hunting/management/game-harvest/2020/turkey-statewide>
- WDFW. 2021b. Turkey Takeover. Hunting Highlights, February 12, 2021. Available at: <https://www.mywdfw.com/hunting-highlights-tt-ch1-2021/>
- Washington Department of Fish and Wildlife. 2021c. Washington Game Bird and Small Game Hunting Regulations, 2021. Washington Department of Fish and Wildlife, Olympia, Washington, USA. Available at: <https://wdfw.wa.gov/publications/02265>
- Washington Department of Fish and Wildlife. 2014. Game Management Plan, July 2015-June 2021. Wildlife Program, Washington Department of Fish and Wildlife, Olympia, Washington, USA. Available at: <https://wdfw.wa.gov/sites/default/files/publications/01676/wdfw01676.pdf>

Washington Department of Fish and Wildlife. 2005. Wild Turkey Management Plan. Wildlife Program, Washington Department of Fish and Wildlife, Olympia, Washington, USA. Available at: <https://wdfw.wa.gov/publications/00425>



Map 1. Turnbull NWR proposed turkey hunt area.