

**Billy Frank Jr. Nisqually National Wildlife Refuge
Waterfowl Hunting Plan**

August 2019

U.S. Fish and Wildlife Service

**Nisqually National Wildlife Refuge Complex
100 Brown Farm Road
Olympia, Washington 98516**

Submitted By:
Project Leader

Signature

Date

Concurrence:

Refuge
Supervisor

Signature

Date

Approved:

Regional Chief,
National Wildlife
Refuge System

Signature

Date

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BILLY FRANK JR. NISQUALLY NATIONAL WILDLIFE REFUGE WATERFOWL HUNTING PLAN

I. Introduction

National wildlife refuges are guided by the mission and goals of the National Wildlife Refuge System (NWRS), the purposes 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, selected portions of the Code of Federal Regulations, and the Service's Manual.

Billy Frank Jr. Nisqually National Wildlife Refuge (NWR, Refuge) was established on January 22, 1974, with approval by the Migratory Bird Conservation Commission. Approximately 2,925 acres of the 7,415 acres within the approved acquisition boundary have been acquired. Legal authorities used for establishment of the Refuge include the Migratory Bird Conservation Act, as amended (16 U.S.C. 715-715d, 715e, 715f-715r) and Fish and Wildlife Act of 1956, as amended (16 U.S.C. 742a-742j). The purposes of the Refuge are:

- "...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds" (16 U.S.C. 715d);
- "...for the development, advancement, management, conservation, and protection of fish and wildlife resources..." (16 U.S.C. 742f(a)(4); and
- "...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. 742f(b)(1).

Billy Frank Jr. Nisqually NWR is located at the southern end of Puget Sound, Washington, in the Nisqually River Delta (Map A). The Refuge, located in Thurston and Pierce Counties, is managed by the Service and protects one of the few relatively undeveloped large estuaries remaining in Puget Sound.

The south Puget Sound region, with its rapidly growing urban development, is undergoing dramatic changes in population and landscape. Billy Frank Jr. Nisqually NWR plays an increasingly important role in the protection of the Nisqually Delta and the lower Nisqually River watershed. The Refuge consists of a diverse mosaic of habitats, including salt marsh, marine waters, riparian forest, diked freshwater wetlands, pasture, and upland forest. The Refuge has international significance as a staging area, sanctuary, and migration stopover for migratory birds of the Pacific Flyway. The Refuge also has regional importance as migration and rearing habitat for salmon, particularly the Nisqually River run of the federally listed Puget Sound Chinook salmon.

Located on the Interstate 5 corridor 20 miles south of Tacoma and 8 miles east of Olympia, Billy Frank Jr. Nisqually NWR is one of the Service's urban refuges. Visitor use and interest in the Refuge have increased as residential developments expand in the nearby cities of Lacey, DuPont, Olympia, and the Tacoma-Seattle area. Thousands of students and teachers participate in the

Refuge's environmental education program. An average of 220,000 visitors come to Billy Frank Jr. Nisqually NWR each year to participate in wildlife interpretation, wildlife observation, environmental education, photography, boating, fishing, and waterfowl hunting.

The 779-acre Nisqually Delta Research Natural Area (RNA), established by the Service in 1989, is located at the mouth of the Nisqually River in the northeastern portion of the Refuge (Caicco 1989). RNA objectives are limited to (1) preserving and protecting the delta as a significant natural ecosystem, (2) serving as a gene pool for the preservation of native and endangered species, and (3) providing educational and research areas for the study of scientific aspects, including successional trends. Management activities that modify or alter natural ecological processes, including consumptive uses, are not allowed in RNAs (CH2M Hill et al. 1978; USFWS 1981)

The mission of the NWRS, as outlined by the National Wildlife Refuge System Administration Act of 1966 (NWRSA), as amended by the National Wildlife Refuge System Improvement Act of 1997 (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 mandates the Secretary of the Interior in administering the System to (16 U.S.C. 668dd(a)(4):

- 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 National Wildlife Refuge System.

When Billy Frank Jr. Nisqually NWR was established, Refuge lands were closed to waterfowl hunting. However, waterfowl hunting was permitted within the Refuge acquisition boundary on three parcels totaling 625 acres owned by Washington Department of Fish and Wildlife (WDFW). Hunting occurred throughout the waterfowl season (October through January). Estimated use ranged from 1,000 to 2,100 hunter visits per season (USFWS, unpublished data). Because WDFW parcels have irregular boundaries and were not clearly distinguished from Refuge lands by boundary signs, hunters often hunted on Refuge lands that were closed to hunting. Unauthorized hunting occurred on large portions of Refuge tideflats, and as a result, the Refuge was providing insufficient sanctuary for wintering migratory birds.

In November 2004, the Nisqually NWR Comprehensive Conservation Plan was approved by the Service's Regional Director (USFWS 2004). As part of the planning effort, a Compatibility Determination for waterfowl hunting was prepared, including stipulations necessary to ensure that hunting was compatible with the purposes for which the Refuge was established. In 2007, the Refuge-WDFW boundary was posted and waterfowl hunting was better controlled. In 2008, additional assessments of the impacts of a waterfowl hunt to Refuge wildlife, habitats, and visitors were completed (USFWS 2008a, 2008b). In 2009, 192 acres of Refuge lands that were adjacent to WDFW lands were opened to 7 day/week waterfowl hunting (USFWS 2009). In this hunting plan, the Service opens an additional 380 acres of the Refuge to waterfowl hunting. This Hunt Plan amends the CCP and supersedes the 2009 Waterfowl Hunt Plan. Supporting documents include a Categorical Exclusion (Appendix A) and Compatibility Determination (Appendix B).

II. Statement of Objectives

Waterfowl hunting is consistent with the Refuge's CCP's larger goal to: "Provide quality wildlife-dependent recreation, interpretation, and outreach opportunities to enhance public appreciation, understanding, and enjoyment of fish, wildlife, habitats, and cultural resources of the Nisqually River delta and watershed."

The objectives of a waterfowl hunting program on Billy Frank Jr. Nisqually NWR are to:

- Provide the public with an opportunity to experience wildlife on more Refuge lands and increase opportunities for waterfowl hunters;
- Provide wildlife-dependent public recreation as mandated by and according to Service law and policy;
- Provide a quality hunting experience, with uncrowded conditions and a reasonable opportunity for harvest, that meets Refuge guidelines and policies;
- Provide manageable and enforceable hunt boundaries that reduce conflicts with other users, reduce confusion for hunters, and provide sufficient wildlife sanctuary; and
- Promote safety and minimize conflicts between waterfowl hunters and other visitors, such as kayakers, anglers, and trail users.

III. Description of Hunting Program

A. Areas to be Opened to Hunting

Currently, 192 acres of Refuge lands are open to waterfowl hunting. Waterfowl hunting is open on 625 acres of adjacent WDFW lands, made up of three separate tracts. The current Refuge hunt area adjoins two of these state tracts. In this plan, we expand the waterfowl hunting area to include 380 additional acres in the Nisqually River Delta, north of and adjacent to the existing hunt area, for a total of 1,197 acres of Refuge lands open to waterfowl hunting. The majority of Service and WDFW lands open to hunting are configured in a single contiguous block that can be posted and enforced, which reduces confusion regarding boundary issues.

See attached Map:

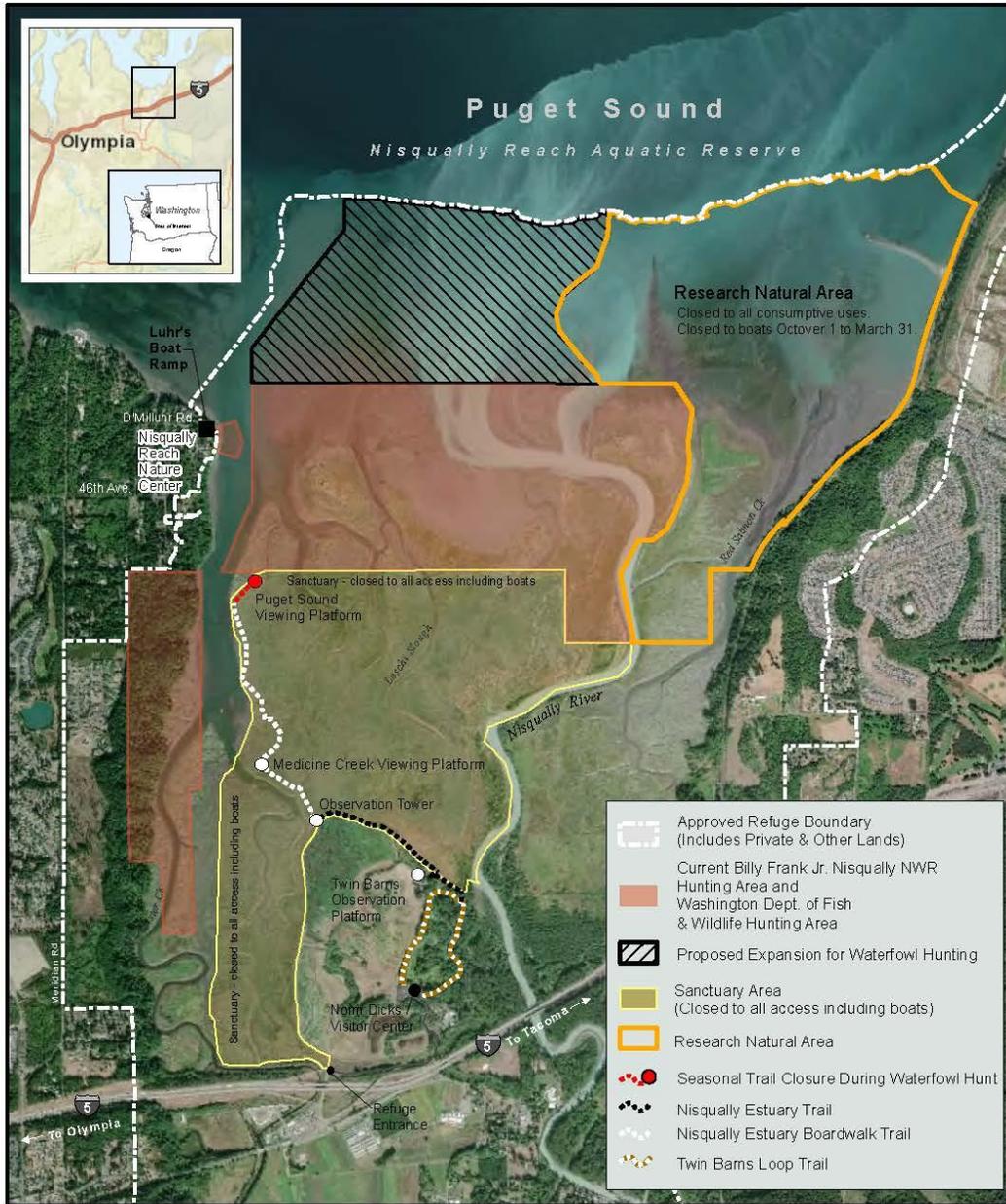
- *Map A – Billy Frank Jr. Nisqually National Wildlife Refuge, Waterfowl Hunt Areas*

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

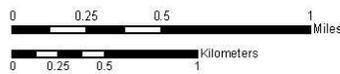
- **Migratory Bird Hunting:** Geese, ducks, and coots may be taken by waterfowl hunters in accordance with state, federal, and Refuge-specific regulations. Bag limits and hunting seasons on the Refuge coincide with adjacent WDFW areas open to waterfowl hunting. Access to all hunt areas is by boat only, with a maximum speed limit of 5 miles per hour for boats in all Refuge waters.

C. Hunter Permit Requirements (if applicable)

Hunters must comply with all state and federal regulations regarding waterfowl hunting, including provisions outlined in the Code of Federal Regulation 50 CFR 32.2. Hunters must possess the required state license and waterfowl validation, and hunters 16 years old and older must possess a federal Migratory Bird Hunting Stamp while hunting migratory waterfowl. No Refuge-specific hunt permit is required. The federal duck stamp serves as a Refuge entrance fee, so no additional Refuge-specific fees are required.



Produced in the Division Realty
 Portland, Oregon
 Produced: February 11, 2019
 Basemap: USDA Washington NAIP 11/28/2017
 File: R1_NWRS_FY19_136-1.mxd



D. Consultation and Coordination with the State

Extensive coordination was conducted with WDFW in designing the waterfowl hunt and hunt area during the preparation of the Nisqually NWR CCP. The state supported the final alternative described in the Record of Decision for the Nisqually NWR Final CCP/EIS. The 2019 Waterfowl Hunting Plan supersedes the 2009 Waterfowl Hunting Plan for the Refuge. Refuge staff notified WDFW that the Service proposed to expand the area of the Refuge open to waterfowl hunting. WDFW was given an advance copy of the 2019 Draft Waterfowl Hunting Plan and was invited to provide comments prior to issuance of the draft plan for public review and comment. No comments were received from the State regarding the draft plan. A letter from WDFW on the 2019-2020 Proposed Sport Hunting and Fishing Rule supported the expansion.

E. Law Enforcement

WDFW has jurisdiction and management responsibility over WDFW lands within the Refuge's boundary, while the Service manages the hunting program on Refuge lands. Regular coordination with WDFW will continue, particularly boundary posting and enforcement of the 5 mph boating speed limit and other regulations.

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 on the Refuge website and at the Refuge headquarters;
- Service law enforcement staff will randomly check hunters for compliance with federal and state laws as well as Refuge-specific regulations pertinent to the hunt, including compatibility stipulations;
- Service law enforcement staff will coordinate with WDFW and other law enforcement agencies. WDFW officers will patrol state lands when available to help ensure compliance with laws and hunting regulations. Concurrent jurisdiction will allow WDFW officers some authority on Refuge lands as well; and
- Information will be made available at the Refuge headquarters, Refuge website, and at the state boat launching site at Luhr's Landing.

F. Funding and Staffing Requirements

Administering the waterfowl hunt will require Refuge staff time to coordinate with WDFW and other cooperators, produce brochures and news releases, respond to hunter inquiries, conduct hunter and visitor outreach, minimize conflicts among users, conduct law enforcement, maintain boundary posting and visitor information sites, monitor impacts to wildlife and habitat and visitor use, and ensure public safety. Because of the adjoining Refuge and State lands, close coordination will be needed between the Refuge and WDFW. This coordination will be necessary to effectively conduct outreach, enforcement, and implement regulations.

Surveying and posting Refuge and state hunt and RNA boundaries were accomplished in 2007. The north boundary of the expanded hunt area coincides with the Refuge's approved boundary that has been surveyed and marked with pilings, which can be used to post hunt signage;

however, additional posting to delineate the west and east boundaries of the hunt area will be required. Surveying and posting the expansion area will require the highest expense, particularly delineating the west and east boundaries of the hunt area.

Costs to administer the waterfowl hunting program at Billy Frank Jr. Nisqually NWR will be approximately \$54,700 in one-time costs and \$45,000 in annual costs, including salaries and maintenance expenses. Additional annual funds are required to maintain posts and signs around the hunt area perimeter, especially in the marine environment. Additional law enforcement staffing will be needed during the hunt season. Other funding sources will be sought through strengthened partnerships, grants, and additional Refuge operations funding.

Table 1. Costs to Administer and Manage the Waterfowl Hunting Program on Billy Frank Jr. Nisqually NWR		
Activity or Project	One-time Cost	Recurring Cost
Develop a Hunting Program expansion package	\$5,000	
Survey and post expanded hunt area boundary	\$30,000	6,000
Replace bollards at Luhr's Boat Ramp Kiosk	7,000	
New map panels	\$ 700	
Brochures		\$1,000
Law enforcement patrols		\$20,000
Administration (Staff)		\$10,000
Outreach, education, and monitoring (Staff)	\$12,000	\$8,000
Total	\$54,700	\$45,000

IV. Conduct of the Hunting Program

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

No special permit is required. Hunting is permitted in accordance with all state regulations (see <https://wdfw.wa.gov/hunting/regulations/>) and special Refuge regulations. Information for waterfowl hunting on Billy Frank Jr. Nisqually NWR is listed below and/or can be downloaded from the Refuge website:

https://www.fws.gov/refuge/Billy_Frank_Jr_Nisqually/visit/visitor_activities/hunting.html

Additional information on season dates, species, and bag limits may be obtained from the WDFW publication “Migratory Waterfowl and Upland Game Regulations;” the Washington State Department of Fish and Wildlife at (360) 902-2200, or the Refuge at (360) 753-9467. You may also visit the WDFW website: <http://wdfw.wa.gov/hunting/regulations/>.

B. Refuge-Specific Hunting Regulations

Listed below are Refuge-specific regulations that pertain to hunting on Billy Frank Jr. Nisqually NWR as of the date of this plan. These regulations may be modified as conditions change or if Refuge expansion continues/occurs.

- A. [Migratory Game Bird Hunting]. We allow hunting of goose, duck, and coot on designated areas of the refuge subject to the following conditions:
1. We allow hunters to possess and carry no more than 25 approved shells while hunting in the field.
 2. Hunters may access the hunt areas by boat only.

B. Relevant State Regulations

WDFW: Waterfowl hunting is permitted in accordance with all state regulations found at: <https://wdfw.wa.gov/hunting/regulations/>

1. Age (if restrictions are imposed by the state)

Age requirements will be in accord with WDFW regulations.

2. Allowable equipment (dogs, vehicles, blinds, sporting arms, ammunition)

Requirements will be in accord with WDFW and Refuge regulations.

3. License and permits

All duck and goose hunters must have valid, current Washington state small game

license and state migratory bird permit, and federal migratory bird stamp (not required for youth under 16). In addition, sea duck hunters must have a migratory bird authorization with sea duck harvest record card. Brant hunters must have a migratory bird authorization with brant harvest record card.

4. Reporting harvesting

Hunters must fulfill all WDFW reporting requirements. All hunters of migratory game birds (ducks, geese, doves, coots, and snipe) are required to complete a Harvest Information Program (HIP) survey at a license dealer and possess a state migratory bird permit as evidence of compliance with this requirement when hunting migratory game birds.

5. Hunter training and safety

Hunters must fulfill all WDFW requirements for training and hunter safety classes. All hunters born after January 1, 1972, are required to show proof of hunter education course completion.

6. Hunting Hours

Official hunting hours for migratory game birds can be found at https://wdfw.wa.gov/hunting/regulations/mwug_hunting_hours.html

7. Special Area Restrictions.

WAC 220-414-050 Shotgun Shell Restriction Areas. (2) It is unlawful to have in possession more than 25 shotgun shells or to fire (shoot) more than 25 shells in one day on the Nisqually Unit of the South Puget Sound Wildlife Area in Thurston County.

D. Other Refuge Rules and Regulations for Hunting

- All hunters must have valid, current Washington state licenses, state migratory bird validation (stamp), as well as a federal migratory bird stamp (“Duck Stamp.”).
- Access to hunt areas is by boat only.
- The maximum speed is 5 miles per hour for boats in all Refuge waters.
- No more than 25 shells may be in hunter possession while in the field and hunters must only possess approved non-toxic shotshells while in the field.
- Waterfowl hunting is allowed on state lands and designated Refuge lands, 7 days per week, consistent with the annual state hunting regulations and seasons.
- Only ducks, geese, and coots may be taken in accordance with Washington Department of Fish and Wildlife bag and possession limits.
- The Research Natural Area (RNA) is closed to hunting, fishing, and shellfishing year-round, and is closed to boats from October 1 through March 31 to reduce disturbance to wintering waterfowl populations.

- Estuarine restoration areas (Sanctuary) are closed to boats year round. No motorized or non-motorized boats are allowed into this area. Hunting is not permitted east of the Nisqually River.
- Camping, overnight use, and fires are prohibited.
- Permanent blinds are not allowed; however, hunters will be allowed to use portable blinds or blinds constructed of onsite dead vegetation or driftwood under the condition that they either be removed or disassembled at the end of each day.
- Dogs used for hunting will be allowed but they must be engaged in hunting activity and under the immediate control of a licensed hunter (see 50 CFR 26.21(b)).

V. Public Engagement

A. Outreach for Announcing and Publicizing the Hunting Program

The Refuge has a standard list of local media contacts for news releases. A news release announcing the waterfowl hunting opportunities will be sent out prior to the first hunting season, and a yearly announcement thereafter. Notices will also be posted on the Refuge website, at the Refuge Visitor Center, and other appropriate locations.

B. Anticipated Public Reaction to the Hunting Program

Extensive public participation occurred during the development of the Nisqually NWR CCP. Comments were solicited on waterfowl hunting through a variety of methods, including public meetings, presentations, newsletters, electronically, focus groups, and release of draft and final documents. More than 1,700 public comments were received on the Draft CCP and Environmental Impact Statement. The most comments received dealt with the issue of hunting on Refuge lands. Although a majority of commenters indicated opposition to opening a hunt program at Nisqually NWR, offering compatible wildlife-dependent recreation opportunities such as hunting and fishing is a Refuge management priority. Thus, public input was thoroughly considered and extensive efforts were made to design the hunt program to meet Refuge goals and objectives, provide a high quality experience, minimize wildlife disturbance, provide improved wildlife sanctuary, reduce conflicts with other visitors, and reduce confusion for hunters.

A Draft Supplemental Cumulative Impact Analysis (Draft Supplement) was provided for public comment in November 2008 (USFWS 2008a). A total of 102 public comments were received, including 60 (59 percent) that supported opening the Refuge to waterfowl hunting. All comments received were considered in the development of the Final Supplement (USFWS 2009). Implementation and management of the waterfowl hunt program will include outreach, education, and enforcement to maintain a high quality and minimize wildlife disturbance. Also see the Summary of Public Comments, Draft Supplemental Cumulative Impact Analysis (USFWS 2008b) and Appendix M, Summary of Public Comment and the Service's Responses in the Final CCP/EIS, pages M-50 to M-60 in the Nisqually NWR Final CCP/EIS (USFWS 2004) for a detailed summary of public comments received and Service responses.

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

General information regarding hunting, regulations, maps, and other wildlife-dependent public uses can be obtained at Nisqually NWR Complex Headquarters at 100 Brown Farm Road Olympia, Washington 98516 or by calling (360) 753-9467. Hunting regulations and maps are also available on the website:

https://www.fws.gov/refuge/Billy_Frank_Jr_Nisqually/visit/visitor_activities/hunting.html.

WDFW hunting information is available at the Washington State Department of Fish and Wildlife at (360) 902-2200, the Region 6 (Coastal) office located at 48 Devonshire Road Montesano, Washington 98563, (360) 902- 2515, or by emailing wildthing@dfw.wa.gov. Hunting resources are also available on the WDFW 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 Waterfowl Hunting on Billy Frank Jr. Nisqually National Wildlife Refuge.

References

Caicco, S. L. 1989. Research Natural Area Proposal for Nisqually Delta, Nisqually National Wildlife Refuge, Washington. The Nature Conservancy. 18pp.

CH2M Hill, EDAW Inc., BEAK Consultants Inc., Office of Public Archaeology, and Nisqually National Wildlife Refuge staff. 1978. Nisqually National Wildlife Refuge conceptual plan. Prepared for the U. S. Department of the Interior, Fish and Wildlife Service, Nisqually National Wildlife Refuge. 81 pp.

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USFWS. 2008b. Summary of Public Comment on Draft Supplemental Cumulative Impact Analysis, Nisqually NWR Waterfowl Hunt. U. S. Fish and Wildlife Service, Olympia, WA.

USFWS. 2009. Final Supplemental Cumulative Impact Analysis, Nisqually National Wildlife Refuge. U. S. Fish and Wildlife Service. Nisqually NWR. Olympia, WA.

**Appendix A. Billy Frank Jr. Nisqually National Wildlife Refuge
Categorical Exclusion for the Proposed Waterfowl Hunt Expansion**

**U. S. FISH AND WILDLIFE SERVICE
ENVIRONMENTAL ACTION STATEMENT FOR
CATEGORICAL EXCLUSION**

The U.S. Fish and Wildlife Service (Service) is proposing to expand waterfowl hunting opportunities at Billy Frank Jr. Nisqually National Wildlife Refuge (Refuge, NWR) in accordance with the Refuge's 2019 Hunt Plan and Compatibility Determination (USFWS 2019a, 2019b), which is incorporated by reference. Hunting would be allowed on an additional 380 acres of tidal wetlands, along the northeastern portion of the Refuge within the Nisqually River floodplain.

Within the spirit and intent of the Council on Environmental Quality's regulations for implementing the National Environmental Policy Act (NEPA), and other statutes, orders, and policies that protect fish and wildlife resources, I have established the following administrative record and determined that the following proposed action is categorically excluded from NEPA documentation requirements consistent with 40 CFR 1508.4, 43 CFR 46.205, and 516 DM 8.5.

The Service has fully satisfied the other requirements for expanding these opportunities on the Refuge, including:

- determining that the opportunities are compatible with the purposes for which the Refuge was established and the mission of the National Wildlife Refuge System (see attached Compatibility Determination);
- ensuring the opportunities are consistent with existing state, local, and Refuge-specific regulations (50 CFR § 32);
 - *Use of signs and brochures may supplement the Refuge-specific regulations
- complying with the National Environmental Policy Act;
- complying with the Endangered Species Act section 7 evaluation; OR
 - not applicable because there are no threatened or endangered species present;
- complying with the National Historic Preservation Act section 106 consultation; OR
 - not applicable because there are no cultural or historic resources present;

Signature _____

Date: _____

Title _____

CATEGORICAL EXCLUSION

Proposed Action: Billy Frank Jr. Nisqually NWR is proposing to expand tidal waterfowl recreational hunting opportunities on 380 acres on the Nisqually River Delta. The proposed action represents a minor change in the amount or type of public use on Service or state-managed lands, and is in accordance with existing regulations, management plans, and procedures. Environmental effects related to recreational waterfowl hunting were analyzed in the Final Nisqually NWR Comprehensive Conservation Plan (CCP) and Environmental Impact Statement (USFWS 2004), the Final Supplemental Cumulative Impact Analysis (USFWS 2009a), the revised 2019 Draft Waterfowl Hunting Compatibility Determination (USFWS 2019b), and the Draft Hunt Plan (USFWS 2019c) which are incorporated herein by reference.

Categorical Exclusion: These proposed actions are covered by the following categorical exclusion: 516 DM 8.5 B (7): Minor changes in the amounts or types of public use on Service or state-managed lands, in accordance with existing regulations, management plans, and procedures.

Discussion: An action by the Service that only results in “minor changes in the amounts or types of public use on Service or state managed lands, in accordance with existing regulations, management plans, and procedures” is categorically excluded from further NEPA analyses, because it has been determined to be a class of action which does not individually or cumulatively have a significant effect on the human environment (516 DM 8.5 B (7)).

In 2009, following a supplemental analysis of cumulative impacts related to waterfowl hunting (USFWS 2009a), the Refuge opened a limited amount of Refuge waters and tide flats (192 acres) to waterfowl hunting. This was in addition to the three Washington Department of Fish and Wildlife (WDFW) parcels within the Refuge-approved boundary that were already open to hunting (625 acres). The Refuge lands opened to hunting in 2009 served to square off one of the WDFW hunt areas within the Refuge. This proposed addition increases the hunt area by approximately 380 acres on waters and tide flats that are immediately north of the existing hunting area (toward Puget Sound).

The restored estuary area (Sanctuary) and Research Natural Area (RNA) are closed to hunting and boating (see map of waterfowl hunt areas) to provide adequate wildlife sanctuary and would remain closed. Safety buffers from levees encompassing the freshwater wetlands and closure of the last 700 feet of the Nisqually Estuary Boardwalk Trail during the hunting season allows for multiple wildlife-dependent activities with visitor safety as a priority.

Hunting within the Refuge would be consistent with the annual WDFW hunting regulations and seasons and is permitted by boat access only. Areas designated as “No Hunting Areas” are posted and enforced, minimizing unauthorized hunting. A 25-shell limit would apply to all hunt areas. WDFW would continue to have jurisdiction and management responsibility over WDFW lands. The Service manages the hunting program on Refuge lands; however, both agencies assist with monitoring as boundary lines are irregular and difficult to discern. The waterfowl hunting season typically falls within the period that extends from October through January. There is no limit on the number of hunters or hunt days, and there would be no designated blind sites.

The expansion of the hunt area on the Refuge accomplishes the following: (1) accommodates the existing hunt program on Refuge and WDFW lands/waters, (2) establishes consistent regulations across all lands and waters within the Nisqually River delta, (3) provides a quality

hunting experience that meets Refuge guidelines and policies, and (4) provides sufficient waterfowl sanctuary.

Extraordinary Circumstances (43 CFR 46.215) :
Could This Proposed Action:

- | <u>Yes</u> | <u>No</u> | |
|--------------------------|-------------------------------------|---|
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | a. Have significant adverse effects on public health or safety? |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | b. Have significant impacts on such natural resources and unique geographic characteristics as historic or cultural resources; park, recreation or refuge lands; wilderness areas; wild or scenic rivers; national natural landmarks; sole or principal drinking water aquifers; prime farmlands; wetlands (EO 11990); floodplains (EO 11988); national monuments; migratory birds; and other ecologically significant or critical areas? |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | c. Have highly controversial environmental effects or involve unresolved conflicts concerning alternative uses of available resources [NEPA section 102(2)(E)]? |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | d. Have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks? |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | e. Establish a precedent for future action or represent a decision in principle about future actions with potentially significant environmental effects? |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | f. Have a direct relationship to other actions with individually insignificant but cumulatively significant environmental effects? |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | g. Have significant impacts on properties listed, or eligible for listing, on the National Register of Historic Places as determined by the bureau? |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | h. Have significant impacts on species listed, or proposed to be listed, on the List of Endangered or Threatened Species, or have significant impacts on designated Critical Habitat for these species? |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | i. Violate a Federal law, or a State, local, or tribal law or requirement imposed for the protection of the environment? |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | j. Have a disproportionately high and adverse effect on low income or minority populations (EO 12898). |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | k. Limit access to and ceremonial use of Indian sacred sites on Federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites (EO 13007). |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | l. Contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area or actions that may promote the introduction, growth, or expansion of the range of such species (Federal Noxious Weed Control Act and EO 13112). |
| <input type="checkbox"/> | <input checked="" type="checkbox"/> | m. Have material adverse effects on resources requiring compliance with Executive Order 11988 (Floodplain Management), Executive Order 11990 (Protection of Wetlands), or the Fish and Wildlife Coordination Act? |

(If any of the above exceptions receive a “Yes” check (X), an EA/EIS must be prepared.)

The federally threatened marbled murrelet, Steller sea lion, and endangered brown pelican occur on Nisqually NWR. The presence and associated activity of hunters, anglers, and boating activity in the estuary would disturb threatened and endangered species that use this habitat and are sensitive to disturbance. Section 7 consultation for listed species under Service jurisdiction concluded expanding the hunt area would have no effect on brown pelican and bull trout and may affect and is not likely to adversely affect the marbled murrelet (Attachment 1). The proposed hunt expansion would have no

effect on listed species under the jurisdiction of the National Marine Fisheries Service (Attachment 2). Section 106 of the National Historic Preservation Act (NHPA) requires federal agencies to take into account the effects of their undertakings on historic properties. The proposed actions would not alter, directly or indirectly, any characteristic of a historic property. No further NHPA section 106 consultation is required.

References

U.S Fish and Wildlife Service. 2004. Nisqually National Wildlife Refuge Final Comprehensive Conservation Plan and Environmental Impact Statement. U.S. Fish and Wildlife Service. Portland, OR. <http://www.fws.gov/pacific/planning/main/docs/WA/docsnisqually.htm>

U.S Fish and Wildlife Service. 2009a. Final Supplemental Cumulative Impact Analysis

U.S Fish and Wildlife Service. 2009b. Billy Frank Jr. Nisqually National Wildlife Refuge Draft Waterfowl Hunting Plan.

U.S. Fish and Wildlife Service. 2009c. Draft Compatibility Determination for Waterfowl Hunting at Billy Frank J. Nisqually National Wildlife Refuge.

Within the spirit and intent of the Council of Environmental Quality's regulations for implementing the National Environmental Policy Act (NEPA) and other statutes, orders, and policies that protect fish and wildlife resources, I have established the following administrative record and have determined:

- The proposed action is covered by a categorical exclusion as provided by 43 CFR §46.210 or 516 DM 8.5. No further NEPA documentation will therefore be made.**
- An Extraordinary Circumstance (43 CFR 46.215) could exist for the proposed action and, so an EA/EIS must be prepared.**

Service signature approval:

Date: _____

Signature _____

Title _____

Attachment 1
U.S. Fish and Wildlife
Endangered Species Act Section 7 Consultation

U.S. Fish and Wildlife
Endangered Species Act Section 7 Consultation Form
for
Billy Frank Jr. Nisqually NWR 2019 Waterfowl Hunt Plan

File #: R1-13530-2019-NS-0001

Refuge Name: Billy Frank Jr. Nisqually National Wildlife Refuge
Address: 100 Brown Farm Road, Olympia, WA 98516
Phone: 360-753-9467

Refuge Action: Allow waterfowl hunting on an additional 380 acres of tidal wetlands, along the northeastern portion of the refuge within the Nisqually River floodplain; Thurston County, WA.

Part 1

I. Project Overview

Following approval of the 2005 Final Comprehensive Conservation Plan, Billy Frank Jr. Nisqually National Wildlife Refuge (Refuge, NWR) opened 192 acres of Refuge lands to waterfowl hunting in 2009. This proposed action would add 380 acres to the existing waterfowl hunt areas. This Section 7 evaluates possible effects of this proposed action to species listed under the federal Endangered Species Act of 1973, as amended (ESA) under the jurisdiction of the U.S. Fish and Wildlife Service (Service).

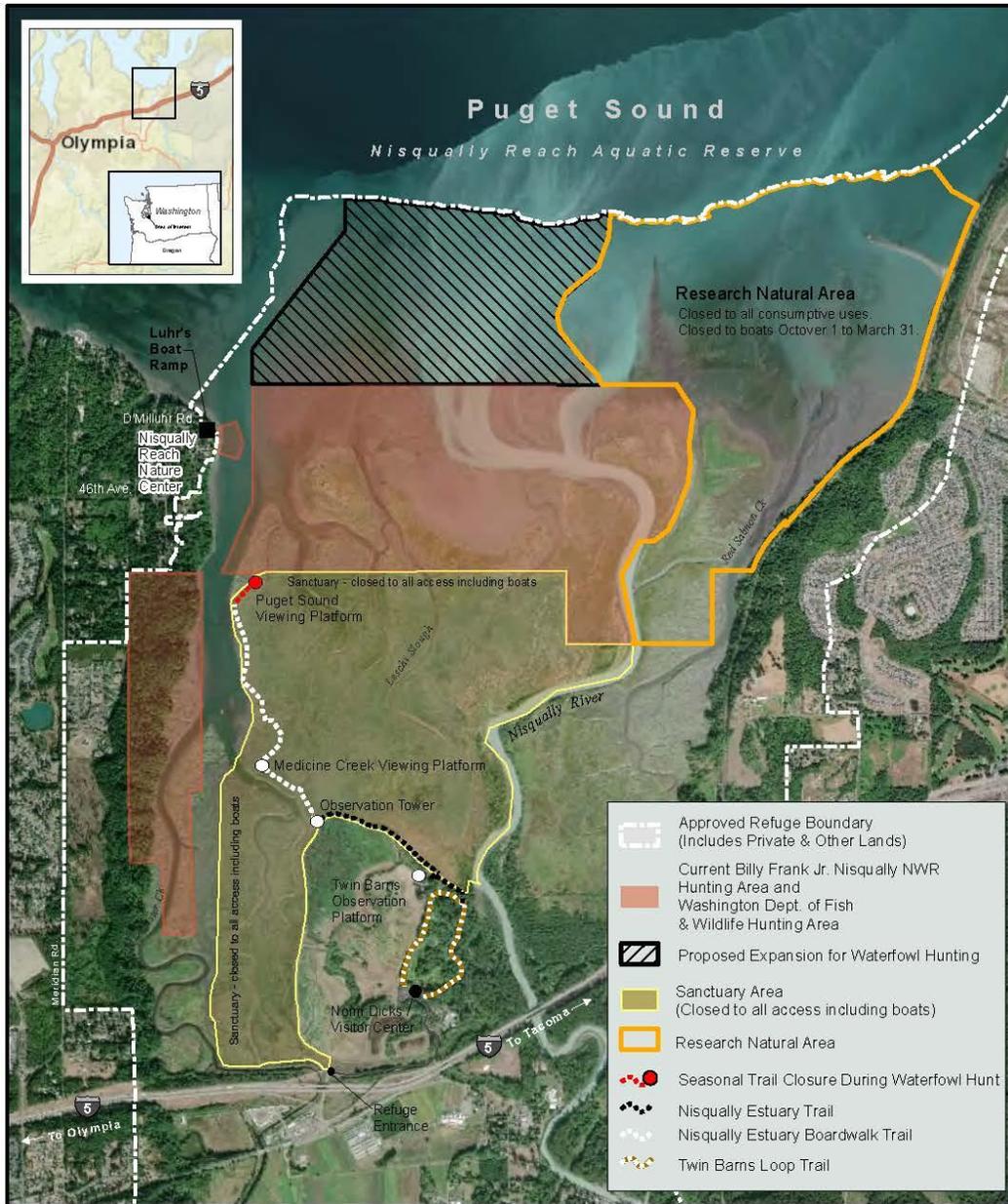
1. Project Location

The proposed Refuge hunt expansion area is immediately north of the existing hunt area (toward Puget Sound). Figure 1 (following page) shows the location of the proposed expanded hunt area and its juxtaposition to previously opened Refuge areas and the Washington Department of Fish and Wildlife (WDFW) owned hunt areas.

2. Description of the Proposed Action

The waterfowl hunt program on Nisqually NWR would open an additional 380 acres of Refuge lands. Waterfowl hunting is currently open to the public on 625 acres of state-owned lands managed by the WDFW and 192 acres of Refuge lands. Areas designated as “No Hunting Areas” are posted and enforced. The estuary restoration area (Sanctuary) and Research Natural Area (RNA) are currently closed to hunting and boating and would remain so.

The hunting area includes portions of the Nisqually River estuary, primarily areas west of the river mouth and the McAllister Creek estuary. This estuarine habitat consists of open saltwater, aquatic beds, unconsolidated shoreline, and vegetated intertidal areas. Aquatic beds contain eelgrass, an important vegetation community in the Nisqually delta. Eelgrass provides shelter for fish and invertebrates and is an important source of food for



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 Portland, Oregon
 Produced: February 11, 2019
 Basemap: USDA Washington NAIP 11282017
 File: R1_NWRS_FY19_136-1.mxd

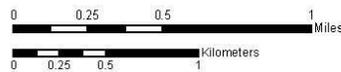


Figure 1

shorebirds, waterfowl, benthic invertebrates, and a large number of other animals. Unconsolidated shore areas consist of mudflats and sandflats that are characterized by a lack of vegetation, except for pioneering plants that become established during brief periods when growing conditions are favorable. Sparse mudflat vegetation includes algae, ulva, sand-spurry, seashore saltgrass, and pickleweed. The sparsely vegetated mudflats transition into the more abundant vegetation and dense drainage channels of the low salt marsh. Vegetated intertidal or estuarine emergent areas are better known as salt marshes. Low to intermediate salt marsh plant communities are dominated by pickleweed, Lyngby's sedge, gumweed, tufted hairgrass, seaside arrowgrass, seashore saltgrass, fleshy jaumea, halberd-leaf saltbush, and scattered patches of Baltic rush (Burg 1984, Burg et al. 1980, Mason et al. 1974). High saltmarsh plant communities are dominated by tufted hairgrass, Lyngby's sedge, Baltic rush, Douglas aster, silverweed, kneeling angelica, and cow parsnip. In sandy, low intertidal marsh areas, plant communities include seashore saltgrass and pickleweed (Kunze 1984; WNHP 1998).

The waterfowl hunt program would follow State and Federal regulations, as well as Refuge specific regulations. Waterfowl species to be taken include goose, ducks, and coots in designated areas. The waterfowl hunt would take place during the normal State waterfowl hunting season, typically an early goose season in late September, then the regular waterfowl hunt season from early October to late January, as set by the State Commission in accordance with Federal guidelines. Hunting would occur 7 days/week during normal shooting hours of ½ hour before sunrise to sunset. Hunters must possess a valid hunting license and all Federal and State duck stamps. Numbers of hunters would not be limited in the hunt area. Access to the Refuge hunt area would be by boat. A 25-non-toxic, shell limit would apply to the entire hunt area. Hunting dogs for retrieval of birds within hunt boundaries would be allowed, but must be under the control of their owners at all times. Youth hunts would be allowed in accordance with State regulations. Boat only access to hunting areas and boat restrictions include speed limits of 5 mph for all watercraft in Refuge waters.

Further description of the hunt program can be found in the revised Waterfowl Hunting Compatibility Determination (USFWS 2019a) and Waterfowl Hunt Plan (2019b).

3. Project Timeline

The Nisqually NWR hunt program would be initiated in the fall of 2019 and would continue in accordance with federal, state, and Refuge-specific regulations until terminated or modified through future evaluation.

4. Federally Listed Species and Critical Habitat

A. Listed species and/or their critical habitat:

Name	Scientific Name	Federal Status	Critical habitat
Brown pelican	<i>Pelecanus occidentalis</i>	Endangered	None in the Refuge
Marbled murrelet	<i>Brachyramphus marmoratus marmoratus</i>	Threatened	None within the action area of Refuge
Bull trout	<i>Salvelinus confluentus</i>	Threatened	None in the Refuge, nearby marine and river waters are designated.

B. Proposed species and/or proposed critical habitat:

None

C. Candidate species¹:

None

Part 2 – Informal Consultation

II. Effects Analysis

Brown Pelican:

The brown pelican (*Pelecanus occidentalis*) was listed as an endangered species under the ESA in June 1970. Brown pelicans do not nest in Washington. During the summer and fall, birds disperse northward from their breeding grounds in southern California and Mexico, and forage along the Oregon and Washington coasts. The brown pelican eats mainly small, coastal surface-schooling fish such as anchovy. Brown pelicans have been observed in Puget Sound and have occasionally been seen in south Puget Sound but are rarely observed in the Nisqually Reach area. The Nisqually Reach includes the subtidal waters located mostly north of Refuge boundaries, northward to Anderson Island in Puget Sound. The Refuge is separated from the Nisqually Reach by 1 to 5 miles or more (depending on location) of salt marsh and tideflats. A single brown pelican was observed near the Refuge in 1982, three in 1983, one in 1998, as many as three in 1999, three in 2007 and five in 2008.

This species could use but has been rarely observed in the deep waters of the Nisqually Reach. Pelicans would not be expected in the Nisqually River, the shallow waters of the Nisqually Delta or within the hunt area which is separated from the Nisqually Reach by salt marsh and tideflats.

The Effect of the Hunt Program on Brown Pelicans:

No effects on brown pelicans are expected as pelicans very rarely utilize the waters around the Nisqually Reach which are outside the hunt area and any occurrences would be considered

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

extralimital. Brown pelicans generally return south following their post-breeding dispersal starting about November and have generally returned to their breeding grounds by December (Shields 2002). This further reduces the likelihood that pelicans would even occur in the Pacific Northwest during the majority of the hunting season.

Marbled Murrelet:

The marbled murrelet (*Brachyramphus marmoratus*) was listed as a threatened species under the ESA in October 1992. Primary causes of population decline include the loss of nesting habitat and direct mortality from gillnet fisheries and oil spills (USDOI 1996).

In Washington, marbled murrelets generally nest between late-May and late-August. While adult murrelets are feeding their young, they fly between terrestrial, old growth nest sites and ocean feeding areas primarily during dawn and dusk hours. These birds usually forage in marine waters up to 1.25 miles from shore (USCOE 2001). Murrelets are opportunistic foragers and probably have great flexibility in prey species (USDOI 1996). Murrelets respond to changes in the availability of food by making choices that maximize their net energy intake, as predicted by foraging theory. Forage fish found in south Puget Sound include appropriate species rich in lipids such as herring, sand lance, surf smelt, and possibly anchovy (Burkett 1995).

Marbled murrelets do not nest near or in the Refuge because appropriate nesting habitat does not currently exist. The closest appropriate old growth nesting habitat is close to Mount Rainier, approximately 70 miles up the watershed from the Refuge. Marbled murrelets have occasionally been observed in or heard flying over the Nisqually Reach (N. Seto and C. Ellings, pers. comm.). The Nisqually Reach, which includes subtidal waters generally north of Refuge boundaries northward to Anderson Island, possibly serves as important feeding grounds during the nesting period and as an over-wintering area for much of the south Puget Sound population (B. Richie, pers. comm.). Murrelets probably travel from the Reach, using the Nisqually River corridor, to unidentified nesting locations in forested upland areas near Mount Rainier. The WDFW considers all of Thurston County potential marbled murrelet habitat (Thurston County Department of Water and Waste Management 1993).

The effects of human disturbance on murrelets at sea are not well documented, but the birds apparently habituate to heavy levels of boat traffic (Strachan et al. 1995). USFWS guidance suggests that noise above ambient levels could potentially disturb marbled murrelets when it occurs within 0.25 mile of suitable foraging habitat (USFWS 1996). Marbled murrelets are relatively opportunistic foragers; they have flexibility in prey choice which likely enables them to respond to changes in prey abundance and location (USFWS 1996). This indicates that if murrelets are present in the area they should not be disturbed while foraging, however if they were, they would likely move to a different location without significant disruption to foraging activity (USCOE 2001).

Marbled Murrelet Level of Use and Potential Impacts:

The critical time of murrelet foraging is during their nesting season; however no appropriate nesting habitat exists in the lower Nisqually watershed. Birds would not be flying toward or from breeding sites during the hunt season timeframe, as murrelets nest between late-May and late-August.

Occasionally marbled murrelets have been documented to forage on surface schooling fish in south Puget Sound. Little if any effect is expected, as murrelets are flexible in searching marine environments for forage fish schooling near the water surface. The Nisqually Reach area is large and the birds would most likely not be forced to move from the site. Expansion of the hunt program is not expected to significantly increase boat traffic, as the use already occurs on the Refuge and estuary. Non-hunting boat use also occurs within the estuary. The Refuge hunting program may redistribute foraging murrelets within the hunt area; however, this area is generally not utilized by foraging birds.

The Effect of the Hunting Program on Marbled Murrelets:

Expanding the existing hunt program may affect, but is not likely to adversely affect marbled murrelets. Displacement of foraging murrelets is highly unlikely due to the distance of suspected primary foraging locations from the hunt area.

Bull Trout:

Bull trout (*Salvelinus confluentus*) within the Coastal/Puget Sound Distinct Population Segment (DPS) were listed as threatened under the ESA on 1 November 1999 (64 FR 58909). Based on their geographic distribution, WDFW classified Nisqually River bull trout as “distinct” from other Puget Sound char stocks in their Salmonid Stock Inventory (WDFW 1998). Due to insufficient information, the stock status was classified as “unknown.” Bull trout generally spawn from August through November in small tributaries and headwater streams. Because bull trout eggs incubate about 7 months in loose, clean gravel, they are especially vulnerable to fine sediments and water quality degradation (Fraley and Shepard 1989). Hatching occurs in late winter or early spring (Rieman and McIntyre 1993). Anadromous bull trout juveniles typically spend 2 to 3 years rearing in tributary streams before migrating to sea. Bull trout eat aquatic and terrestrial insects, macrozooplankton, mysids, and fish (Shepard et al. 1984). Large bull trout may feed almost exclusively on fish (Fraley and Shepard 1989; Shepard et al. 1984).

In general, bull trout need habitat providing cold water, complex cover, stable substrate with a low percentage of fine sediments, high channel stability, and stream/population connectivity (Fraley and Shepard 1989; Rieman and McIntyre 1993; USFWS 1998). Bull trout populations are threatened by habitat degradation, dams and diversion, and predation by non-native fish. The anadromous form of bull trout is the least understood and documented of the four life history forms (resident, fluvial, adfluvial, and anadromous) (USFWS 1998).

Bull trout have historically occurred in the Nisqually River watershed. Habitat is available in the Nisqually River for all four life history forms. Bull trout/Dolly Varden were described as entering the Nisqually River in "vast numbers" in historical accounts, but little is known about the current status of the population (WDFW 1998; USFWS 2004c). Adequate spawning habitat in up-stream tributaries appears to be no longer available since changes in the watershed have altered habitat this fish needs. Spawning habitat continues to exist for bull trout in the main-stem of the Nisqually River. Extensive surveys have enumerated fish usage of the Nisqually River and estuary, by various methods, throughout the watershed during the last three decades (Cook-Tabor 1999). One possible finding came from a fish trap operation in the river during the early 1980's that encountered a single fry that was preliminarily identified as a “native char” (*Salvelinus sp.*) (G. Walter, pers. comm., as cited in Leischner 2001). In the late 1990's, a single

adult was observed at the Clear Creek Hatchery in mid-September (J.Barr, pers. comm., as cited in USFWS 2004c). In July 2004 a juvenile native char, most likely a bull trout, was captured in a fyke net during fish monitoring field studies at the mouth of the Nisqually River (USFWS 2004b). An intensive fish monitoring project by the Nisqually Tribe and Refuge was conducted on the Nisqually estuary, Nisqually River, McAllister Creek, and nearshore habitats on either side of the Nisqually Delta between 2002 and 2007. These extensive monitoring efforts, including other juvenile netting, electro-shocking, and trapping by other agencies have not been able to confirm further bull trout usage in the Nisqually River basin (C. Ellings, pers. comm.). Historic accounts indicate a much greater use of the Nisqually watershed by bull trout in the past, however current use appears to be very limited, primarily for foraging (USFWS 2004c).

Bull Trout Level of Use and Potential Impacts:

The suspected level of use by bull trout is very low throughout the year in the expanded hunt area. Any juvenile bull trout that might rear in the Nisqually River would be expected to out migrate from the estuary by mid-July, along with most other anadromous salmonid juveniles. The hunt program will occur from September through January based on annual hunting regulations; any adult bull trout present during the hunt season would be adults entering the Nisqually River from August through November. Adults would be expected to pass quickly through the short portion of the Nisqually River channel that lies within the hunt area. However, extensive monitoring from 2002-2007 failed to find any life stages of bull trout within the Nisqually River or McAllister Creek systems or the immediate estuary. No adult bull trout have been found in these systems in over 25 years. Because bull trout are not expected to be in the area, no impact is expected on this species.

The Effect of the Project on Bull Trout:

No effects on bull trout are expected due to the extremely low use of the estuary by bull trout.

Part 3 – Effects Determination

A. no effect/no adverse modification

species: brown pelican _____ status: _____ *

species: bull trout _____ status: _____ *

critical habitat: _____ *

B. may affect, but is not likely to adversely affect species/adversely modify critical habitat

species: marbled murrelet _____ status: threatened

species: _____ status: _____

critical habitat: _____

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

species: _____ status: _____ *

species: _____ status: _____ *

critical habitat: _____ *

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

species: _____ status: Proposed **

species: _____ status: Candidate **

proposed critical habitat: _____ **

** Formal Consultation is required, check the appropriate concurrence statement below and sign; then proceed to Part 3, Section IV (Formal Consultation)*

*** For Proposed Species and Critical Habitat, or Candidate Species a conference with Branch or Refuge Biology is required; a Formal Consultation is not required*

Signature of Preparer

Date

Evaluation by Project Leader:

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

Signature of Project Leader

Date

References for Section 7 Consultation on Nisqually NWR Hunt Program

- Burg, M.E. 1984. Habitat changes in the Nisqually River delta and estuary since the mid-1800s. Master's thesis, University of Washington, Seattle. 113pp.
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- U.S. Fish and Wildlife Service (USFWS). 2004. Nisqually National Wildlife Refuge Final Comprehensive Conservation Plan and Environmental Impact Statement. U.S. Fish and Wildlife Service, Nisqually National Wildlife Refuge, Olympia, Washington. <http://www.fws.gov/pacific/planning/main/docs/WA/docsnisqually.htm>.
- U.S. Fish and Wildlife Service (USFWS). 2005. Nisqually National Wildlife Refuge Final Comprehensive Conservation Plan. U.S. Fish and Wildlife Service, Nisqually National Wildlife Refuge, Olympia, Washington. <http://www.fws.gov/pacific/planning/main/docs/WA/docsnisqually.htm>.

U.S. Fish and Wildlife Service (USFWS). 2019a. Billy Frank Jr. Nisqually National Wildlife Refuge Revised Waterfowl Hunting Compatibility Determination.

U.S. Fish and Wildlife Service (USFWS). 2019b. Billy Frank Jr. Nisqually National Wildlife Refuge Revised Waterfowl Hunting Plan.

WDFW (Washington Department of Fish and Wildlife). 1998. 1998 Washington salmonid stock inventory: bull trout/Dolly Varden. Olympia, Washington.

WNHP (Washington State Natural Heritage Program). 1998. Natural community element abstracts, Northern Puget Trough. Department of Natural Resources. Six abstracts + maps of Nisqually delta. 13pp.

Attachment 2
National Marine Fisheries Service
Endangered Species Act No Effects Determination

Memorandum

To: Files

From: Refuge Manager, Billy Frank Jr. Nisqually NWR Complex

Subject: 2019 No Effect Determination on NOAA Species regarding the Billy Frank Jr. Nisqually NWR Proposed Expansion of the Waterfowl Hunt Area

This memo documents the finding of no effect on NOAA threatened and endangered species in compliance with Section 7 of the Endangered Species Act, as related to the Billy Frank Jr. Nisqually NWR proposed expansion of the waterfowl hunt area. Refer to the Billy Frank Jr. Nisqually 2019 NWR Waterfowl Hunt Plan and the 2019 Compatibility Determination for more information.

Rationale for “No Effects” Determination

Listed species and/or their critical habitat within the action area:

Name	Scientific Name	Location / ESU	Federal Status	Critical habitat
Humpback Whale	<i>Megaptera novaengliae</i>	Puget Sound	Endangered	No designation
Orca Whale	<i>Orcinus orca</i>	Eastern North Pacific Southern Resident Stock	Endangered	Puget Sound
Steller Sea Lion	<i>Eumetopias jubatus</i>	Puget Sound	Threatened	None in Nisqually NWR
Chinook Salmon	<i>Oncorhynchus tshawytscha</i>	Puget Sound ESU	Threatened	Nisqually marine waters and other areas in Thurston Co.
Steelhead	<i>Oncorhynchus mykiss</i>	Puget Sound ESU	Threatened	Puget Sound

Geographic area or station name and action: The station name is Billy Frank Jr. Nisqually National Wildlife Refuge (NWR), which is located at the mouth of the Nisqually River in south Puget Sound. The hunt expansion area would be located on the Refuge which is located in eastern Thurston County and western Pierce County. It is located east of the Willamette Meridian, east of the city of Olympia, Washington.

Location: Approximately 8 miles east of Olympia, north of I-5, and 3 miles southwest of mouth of Nisqually River.

County and State: Thurston, WA

Determination of Effects

Pacific humpback whale

The northern Pacific humpback whale (*Megaptera novaengliae*) migrates along the Pacific coast between the Arctic and Mexico. The humpback whale uses baleen to siphon krill, small fish, and other small animals from ocean waters and sometimes forages in the coastal waters south of the Strait of Juan de Fuca and north of Washington. Humpback whales rely on underwater communication with other whales and echolocation to find prey. Humpback whale sightings in South Puget Sound occur between mid-spring and mid-fall when a whale evidently gets lost during migration. Only four sightings of humpback whales have been documented in all of Puget Sound since 1976 and only two animals have been observed traveling through South Puget Sound in the last 20 years (Calambokidis and Steiger 1990). In 2004 a subadult was observed for one day in Budd Inlet near Olympia (Olympian 2004), which is many miles distant from the Nisqually estuary. Whales that move into South Puget Sound constantly travel instead of engaging in loafing, milling, and active feeding behaviors. This shows minimal use of South Puget Sound by the estimated population of about 1000 individuals migrating off the coast of Washington and Oregon. Humpback whales are rarely sighted in South Puget Sound and are not expected to stay in the Nisqually Reach. If a lost humpback whale were in the area, it would most likely continue swimming through the Reach, past the hunt area, as it tries to find its way out of South Puget Sound. No effect to humpback whales is expected.

Orca whale

The eastern north Pacific southern resident stock of Orca whale (*Orcinus orca*) was listed as endangered by NOAA in November 2005 (NMFS 2005). The listed whales consist of three separate groups (J, K, and L pods). A pod consists of two or more matriarchs along with her offspring. Pods will split into matriarch and offspring groups and forage apart for days or weeks at a time before joining back together. The listed southern resident Orcas forage extensively on mature salmon returning to spawn in Pacific northwest rivers and streams. Orcas are sensitive to underwater noise that can interfere with communication between pod members and echolocation needed for identifying and finding prey (Garrett 2005). From April to December, the three resident Orca pods (J, K, and L pods) have been observed traveling the waters of Puget Sound, the Northwest Straits, and Georgia Strait of British Columbia. In recent years K and L pods have been seen in Southern Puget Sound during the winter (Garrett 2005). Orcas are occasionally sighted near the Tacoma Narrows during the winter months and very occasionally they come in the deep waters of the Nisqually Reach, which is located outside of the proposed waterfowl hunt area. Orca whales are generally not found in South Puget Sound during the summer or fall

seasons or are rarely seen other times of year at Nisqually NWR. No effects to Southern Resident Orca Whales in Puget Sound are expected.

Orca Whale (Eastern North Pacific Southern Resident) Critical Habitat

Virtually all of Puget Sound is considered critical habitat, including south Puget Sound. Southern Resident killer whales require open waterways that are free from obstruction to move between important habitat areas, find prey and fulfill other life history requirements. The Southern Residents spend large amounts of time in “core” inland marine waters coinciding with congregations of migratory salmon returning from the Pacific Ocean to spawn in U.S. and Canadian Rivers. The extremely shallow waters found in some areas of Puget Sound are not considered to be within the geographical area occupied by the species. Male orcas grow to 29.5 feet (9m), and females to 25.3 feet (7.7m), which may limit maneuverability in shallow waters.

The presence of Southern Residents in Area 2 (Puget Sound-south of Deception Pass Bridge) is intermittent, with the smallest number of sightings in May-July. There are different sighting patterns in Area 2 for the three pods. During September, Southern Residents, especially J pod, expand their movements into Puget Sound to likely take advantage of chum and chinook salmon runs (Osborne 1999). In the most southern portion of Area 2, south of Tacoma Narrows Bridge, Southern Residents have been observed in October-January, with one additional sighting in April.

Orcas will most likely not use Refuge or State hunt areas which are made up primarily of shallow tideflats and therefore no adverse modification to Southern Resident Orca Whale critical habitat is expected.

Steller sea lion

The Steller sea lion (*Eumetopias jubatus*) is listed as threatened within Puget Sound and there are habitat areas throughout Puget Sound and the Strait of Juan de Fuca where they haul out or fish (Leischner 2001). Steller sea lions periodically haul-out on several structures near the south end of Fox Island about ten miles northeast of the Refuge (J. Calambokidis email 2001, as cited in Leischner 2001). Between 1983 and 1986 Steller sea lions were observed between the late fall and mid-spring at the Fox Island haul out. When not hauled out, over-wintering Steller sea lions feed in the waters off of Tolivia Shoal, north of Steilacoom, and occasionally in the Nisqually Reach. Steller sea lions have occasionally been observed in the Refuge area during winter months (USFWS 2004). The main forage species in Washington for Steller sea lion are flatfish, cod, squid, octopus, rockfish, and occasionally salmon. The Refuge hunt area covers a very small portion of the Nisqually River. All boaters and hunters are restricted to a maximum five miles per hour speed limit. Because the Steller sea lion does not frequently forage in the Nisqually River delta, the possibility of encountering a hunter would be negligible. No effect to Steller sea lions is expected.

Chinook salmon

The Nisqually Fall chinook stock is one of the 27 stocks in the Puget Sound where the evolutionarily significant unit is listed as threatened under the federal Endangered Species Act (NCRT 2001). Chinook salmon (*Oncorhynchus tshawytscha*) are known to use the Nisqually Estuary (Cook-Tabor 1999, Nisqually Chinook Recovery Team 2001, Pearce et al. 1982, Ellings and Hodgson 2003-2007). The estuary is important to adult Nisqually origin chinook for staging and physiological transition. Adults usually mill at the head of the estuary for several weeks, starting in June and then move upstream to spawning habitat outside of saltwater influence from July to October. Adult chinook from other South Sound systems, such as the Deschutes and Puyallup River, might utilize the Nisqually River for feeding before returning to their natal rivers. Juvenile chinook utilize the estuary extensively for rearing, physiological transition, and refugia. Rearing also very likely occurs in all accessible channels most heavily in early May through June (Pearce et al. 1982). Juvenile chinook salmon from other South Sound streams and rivers probably also utilize the estuary on their migration to the ocean for rearing and feeding. Sampling of fish on local Nisqually estuary restoration sites has revealed juvenile chinook usage of the site between late March and late June. This confirms that the Nisqually estuary is used very minimally by juvenile chinook after June. Most chinook salmon in the South Sound are of hatchery origin. Hatcheries in the Deschutes River, Nisqually River, McAllister Creek, and Puyallup River produce the majority of chinook salmon in the South Sound, with some wild origin and hatchery strays. The fall and winter hunt season takes place during a time of minimal Chinook presence in the Nisqually delta and river. No effect to Chinook salmon is expected.

Chinook Critical Habitat (Puget Sound)

Hunting will occur within the designated chinook critical habitat for marine nearshore areas. Chinook critical habitat designation in the Puget Sound ESU includes - Major river basins known to support this ESU include Nisqually, and South Sound as part of the entire Puget Sound system. Juveniles generally exit the Nisqually delta by July. Adult chinook generally stay in the deep, fast waters of the mainstem or large tributaries. The fall and winter hunt season takes place during a time of minimal Chinook presence in the Nisqually delta and river. No effects to Chinook salmon critical habitat are expected.

Steelhead

Puget Sound steelhead (*Oncorhynchus mykiss*) Distinct Population Segment (DPS) which includes the Nisqually River winter-run stock is listed as threatened. The majority of Nisqually steelhead spend 2 years in the marine environment before returning to the river to spawn. Nisqually adult steelhead enter the river generally between January to May, with peak spawning occurring in April and May (Busby 1996). Decades ago, the steelhead run size numbered around 6,000 but following steady declines, the current run size is estimated in the hundreds. Spawning takes place primarily in the mainstem Nisqually River, Mashel River, Ohop Creek, Muck Creek, and other small drainages throughout the basin (WDFW 2003). Nisqually steelhead juveniles

typically spend 2 years in freshwater before out-migrating through the Nisqually Estuary and into Puget Sound (Busby 1996). Intensive sampling of the lower Nisqually River and estuary from 2004-2006 has documented steelhead smolt presence in the estuary between mid-May and early June. Early adult steelhead returning to the Nisqually to spawn may overlap with hunting for the month of January, but no effect to fish is expected from hunting activity, as hunter use is low, boat speed limits of 5 miles per hour are in place, and hunting activity occurs primarily in shallow tideflats. No effect to steelhead is expected.

Essential Fish Habitat Evaluation

The Nisqually delta has two separate eelgrass beds: one is along the mouth of McAllister Creek on the northwest portion of the Nisqually delta; the other is located on the northeastern portion of the delta. Refuge hunting is not allowed near the beds themselves, so hunters would not be walking in them. Boat traffic can affect eelgrass beds at low tide level. The McAllister Creek beds are found in the last half mile of the creek, the creek mouth and extend into the Nisqually delta to the Nisqually Reach. Hunters launch boats at the mouth of the McAllister Creek to access Refuge hunt lands in the Nisqually delta. The potential for boat scarring the eelgrass beds is unlikely as hunters launch at a high enough tide to float the boat and motor. The northwestern eelgrass bed is not located near the Refuge hunting area and would not be impacted.

EFH Designations:

Salmon: Chinook Salmon, Coho Salmon, Pink Salmon, *Coastal Pelagic:* Northern Anchovy, and *Pacific Groundfish FMP:* English Sole, Pacific Sanddab, Rock Sole, Sand Sole, and Starry Flounder.

Pink salmon

Pink salmon (*Oncorhynchus gorbuscha*) use the mainstem of large rivers such as the Nisqually River every other year. In the Nisqually River, adult pinks run upstream to spawn between August and November (C. Ellings, pers. comm.). In Puget Sound and southern British Columbia, fry migrate downstream in March and April, occasionally extending into May. Hunting would occur for a month and a half when adult pinks are transitioning in the estuary and moving upstream to spawn. Hunting does not directly impact fish and boat speed is restricted to 5 miles per hour. No effects to pink salmon are expected.

Anchovy

Anchovies (*Engraulis mordax*) are pelagic and are particularly susceptible to changes in water temperature. They are thought to move inshore in spring and summer and have been observed in south Puget Sound and they move offshore in the fall and winter. All life stages are found in surface waters. Spawning peaks from February to April and does not coincide with the waterfowl hunt season. No effects to anchovies are expected.

Pacific ground fish

Pacific ground fish species are found in shallow-water, soft-bottom marine and estuarine environments along the Pacific coast and in Puget Sound. Larvae and juveniles occur in most

estuaries in Puget Sound and these fish use nearshore coastal and estuarine waters as nursery areas. Adults and juveniles can be found in soft bottoms composed of fine sands or mud and in eelgrass habitats. Spawning occurs in Puget Sound from December to April. Hunting does not directly impact fish and generally hunters walk very little in the muddy substrate. Hunters boating to hunt locations must go at a reduced speed and are in deep enough water to avoid scarring or disturbing muddy substrate and eelgrass beds. No effects to Pacific groundfish species are expected.

Conclusion

Overall, expanding the existing waterfowl hunt to an additional 380 acres has been determined to have no effect on humpback whale, orca whale, Stellar sea lion, chinook salmon, steelhead, or coho salmon.

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**Appendix B. Billy Frank Jr. Nisqually National Wildlife Refuge
Compatibility Determination for Waterfowl Hunting**

Appendix B. Billy Frank Jr. Nisqually National Wildlife Refuge Compatibility Determination for Waterfowl Hunting

Use: Waterfowl Hunting

Refuge Name: Billy Frank Jr. Nisqually National Wildlife Refuge

County and State: Thurston and Pierce counties, Washington

Establishing and Acquisition Authorities: Billy Frank Jr. Nisqually National Wildlife Refuge (NWR, Refuge) was established on January 22, 1974, with approval by the Migratory Bird Conservation Commission. Approximately 2,925 acres of the approved 7,415 acres have been acquired. Legal authorities used for establishment of the Refuge include: Migratory Bird Conservation Act, as amended (16 U.S.C. 715-715d, 715e, 715f-715r); and Fish and Wildlife Act of 1956, as amended (16 U.S.C. 742a-742j).

Refuge Purposes:

- “...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds” (16 U.S.C. 715d).
- “...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. 742f(b)(1).

National Wildlife Refuge System Mission:

“...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” (National Wildlife Refuge System Administration Act of 1966 as amended, 16 U.S.C. 668dd-668ee).

Description of Use:

Current use: Billy Frank Jr. Nisqually NWR provides 192 acres of water and tideflats for waterfowl hunting adjacent to 625 acres of Washington Department of Fish and Wildlife (WDFW) lands within the Refuge-approved boundary. To provide adequate wildlife sanctuary, the estuary restoration area (Sanctuary) and Research Natural Area (RNA) are closed to hunting and boating. Safety buffers from levees encompassing the freshwater wetlands and closure of the last 700 feet of the Nisqually Estuary Boardwalk Trail during the hunting season allows for multiple wildlife-dependent activities with visitor safety as a priority.

Waterfowl hunting within the Refuge is consistent with the WDFW hunting regulations and seasons and is permitted by boat access only. Both motorized and non-motorized boats are permitted with a speed limit of 5 mph in Refuge waters. Areas designated as “No Hunting Areas” are posted and

enforced, minimizing unauthorized hunting. A 25-shell limit is instituted on both the Refuge and WDFW lands. WDFW will continue to have jurisdiction and management responsibility over WDFW lands, and the Service manages the hunting program on Refuge lands; however, both agencies assist with monitoring because boundary lines are irregular and difficult to discern between the two properties. Waterfowl hunting is allowed 7 days per week during the state season, which typically falls within the period from October through January. There is no limit on the number of hunters that may use the hunt area. There are no designated blind sites and legal hunting times are set by the state.

Although dogs are prohibited on the Refuge, they are a vital part of the waterfowl hunting tradition and can reduce the loss of waterfowl to the hunter's bag and hence prevent waste and reduce the overall impact to the resource. Because of their role, both as part of the waterfowl hunting tradition and their contribution to increasing the likelihood of retrieval of birds that have been shot, properly trained dogs used in the act of hunting will be allowed on the Refuge per Service Policy in 50 CFR 32.26.21.

Hunters must comply with all state and federal regulations regarding waterfowl hunting, including provisions outlined in the Code of Federal Regulation 50 CFR 32.2, which states:

- Each person shall secure and possess the required State license and waterfowl validation.
- Each person 16 years of age and older shall secure and possess a Federal Migratory Bird Hunting Stamp while hunting migratory waterfowl.
- Each person shall comply with the terms and conditions authorizing access or use of wildlife refuges.
- The distribution of bait and the hunting over bait is prohibited on wildlife refuges.
- The use or possession of alcoholic beverages while hunting is prohibited.
- Hunters may possess only approved nontoxic shot while in the field or on certain other areas of the National Wildlife Refuge System.

Sanctuary areas must provide high quality habitat for feeding, resting, and thermal protection. Since waterfowl hunting in the delta is focused in estuarine habitat, it is important that sufficient estuarine habitat on the Refuge remain set aside as sanctuary. The RNA (779 acres) containing a mixture of nearshore, intertidal, and salt marsh habitat is closed to all consumptive uses year-round, and to boating from October 1 to March 31, including during the waterfowl hunting season, to provide sanctuary. Estuarine habitat within McAllister Creek is closed to hunting. The previously (2009) restored estuarine area (699 acres) is closed to public access to ensure successful restoration and to allow undisturbed research and monitoring to evaluate wildlife and habitat response to restoration activities. This area also serves as a sanctuary site. The majority of the remaining diked area (263 acres) serves as sanctuary for waterfowl that prefer to move between the tidally influenced estuary and freshwater wetlands. Some of the freshwater units include public access on trails and do not function as complete sanctuary. Monitoring is conducted to determine if sanctuary units are functional (e.g., sanctuary areas receive significant daytime use by waterfowl throughout the hunting season).

Proposed Use: In June 2019, the Service proposed to expand the waterfowl hunting area to include 380 additional acres in the Nisqually River Delta, north of and adjacent to the existing hunt area. Waterfowl hunting season and regulations within this area are to be consistent with the existing hunt areas.

Availability of Resources:

Annual costs to administer the fishing program at Billy Frank Jr. Nisqually NWR are approximately \$54,700 in one-time costs and \$45,000 in annual costs, including salaries and maintenance expenses. Surveying and posting the expansion area requires the highest expense, particularly delineating the west and east boundaries of the hunt area. The north boundary of the expanded hunt area coincides with the Refuge's approved boundary that has been surveyed and marked with pilings, which can be used to post hunt signage. Additional annual funds are required to maintain posts and signs around the hunt area perimeter, especially in the marine environment. Additional law enforcement staffing is needed during the hunt season to ensure hunters are staying within the hunt area; this is especially the case along McAllister Creek where incidents of hunting outside the boundary are a common occurrence. Other funding sources will be sought through strengthened partnerships, grants, and additional Refuge operations funding to support a safe, quality public use program as described above.

Table 1. Costs to Administer and Manage the Waterfowl Hunting Program on Billy Frank Jr. Nisqually NWR

Activity or Project	One-time Cost	Recurring (Annual) Cost
Develop a Hunting Program expansion package	\$5,000	
Survey and post hunt area boundary	\$30,000	\$6,000
Replace bollards at Luhr's boat ramp kiosk	\$7,000	
New map panels	\$700	
Brochures		\$1,000
Law enforcement patrols		\$20,000
Administration (Staff)		\$10,000
Outreach, education, and monitoring (Staff)	\$12,000	\$8,000
Total	\$54,700	\$45,000

Anticipated Impacts of the Use:

Effects to Waterfowl: Direct effects of hunting on waterfowl are mortality, wounding, and disturbance (DeLong 2002). Hunting can alter behavior (e.g., foraging time), population structure, and distribution patterns of wildlife (Owens 1977, Raveling 1979, White-Robinson 1982, Thomas 1983, Bartelt 1987, Madsen 1985, and Cole and Knight 1990). In Denmark, hunting was documented to affect the diversity and number of birds using a site (Madsen 1995). Avian diversity changed from predominantly mute swan and mallard to a more even distribution of a greater number of species

when a sanctuary was established. Hence, species diversity increased with the elimination of hunting. There also appears to be an inverse relationship between the numbers of birds using an area and hunting intensity (DeLong 2002). In Connecticut, lesser scaup were observed to forage less in areas that were heavily hunted (Cronan 1957). In California, the numbers of northern pintails on Sacramento NWR non-hunt areas increased after the first week of hunting and remained high until the season was over in early January (Heitmeyer and Raveling 1988). Following the close of hunting season, ducks generally increased their use of the hunt area; however, use was lower than before the hunting season began.

Human disturbance to wintering birds and other wildlife using the open waters and marshes on the Nisqually River delta occurs as a result of hunting activity. Migratory and wintering waterfowl generally attempt to minimize time spent in flight and maximize foraging time because flight requires considerably more energy than any other activity, other than egg laying. Human disturbance associated with hunting includes loud noises and rapid movements, such as those produced by shotguns and boats powered by outboard motors. This disturbance, especially when repeated over a period of time, compels waterfowl to change food habits, feed only at night, lose weight, or desert feeding areas (Bélanger and Bédard 1995, Madsen 1995, Wolder 1993). Disturbance levels from hunting activity outside Chincoteague NWR were found to be high enough to force wintering black ducks into a pattern of nocturnal feeding within surrounding salt marsh and diurnal resting within Refuge impoundments (Morton et. al. 1989a, 1989b). Unhunted populations have been documented to behave differently from hunted ones (Wood 1993).

These impacts can be reduced by the presence of adjacent sanctuary areas where hunting does not occur, and birds can feed and rest relatively undisturbed. Sanctuaries or non-hunt areas have been identified as the most common solution to disturbance problems caused from hunting (Havera et. al. 1992). Prolonged and extensive disturbances may cause large numbers of waterfowl to leave undisturbed areas and migrate elsewhere (Madsen 1995, Paulus 1984). In Denmark, hunting disturbance effects were experimentally tested by establishing two sanctuaries (Madsen 1995). Over a 5-year period, those sanctuaries became two of the most important staging areas for coastal waterfowl. Numbers of dabbling ducks and geese increased 4 to 20-fold within the sanctuary (Madsen 1995). Thus, sanctuary areas are very important to minimize disturbance to waterfowl populations to ensure their continued use of the Nisqually River Delta.

Intermittent hunting can be a means of minimizing disturbance, especially if rest periods in between hunting events are weeks rather than days (Fox; and Madsen 1997). It is common for Refuges to manage hunt programs with non-hunt days. At Sacramento NWR, 3-16% of pintails were located on hunted units during non-hunt days, but were almost entirely absent in those same units on hunt days (Wolder 1993). In addition, northern pintails, American wigeon, and northern shovelers decreased time spent feeding on days when hunting occurred on public shooting areas, as compared to non-hunt days (Heitmeyer and Raveling 1988). However, intermittent hunting may not always greatly reduce hunting impacts. The intermittent hunting program of three hunt days per week at Sacramento NWR results in lower pintail densities on hunt areas during non-hunt days than non-hunt areas (Wolder 1993). In Germany, several studies reported a range from a few days to approximately three weeks for waterbird numbers to recover to pre-disturbance levels (Fox and Madsen 1997). Waterfowl hunting at Billy Frank Jr. Nisqually NWR will not be intermittent; it will occur 7 days per week during the state season.

Although hunting directly impacts individual birds, the amount of waterfowl harvest is not expected to have a measurable effect on Refuge populations, especially since waterfowl hunting activity is not extremely high in the delta. For example, the average number of hunter visits per day was 7.4 during the 2011/12 season (USFWS unpublished data). Hunting may be either compensatory or additive to natural mortality (Anderson 1995). Compensatory mortality occurs when hunting substitutes for other forms of mortality (disease, competition, predation, severe weather, etc.).

In concert with Canada, Mexico, and multi-state Flyway councils, the Service and WDFW regulate hunting so that harvest does not reduce populations to unsustainable levels. The Service conducts annual surveys that are used to estimate waterfowl hunting activity, success, and harvest by species. Results are used by the Service and state wildlife agencies, in part, to establish season lengths and bag limits designed to maintain healthy, sustainable waterfowl populations. Waterfowl hunters in Washington harvested an estimated 420,700±19% ducks in 2016 and 328,700±8% ducks in 2017. They harvested an estimated 67,500±15% geese in 2016 and 65,100±16% geese in 2017 (Raftovich *et al.* 2018). Coot harvest was relatively low, 23,200 ± 49% in 2016 and 18,400 ± 41% in 2017 for the entire Pacific Flyway (Raftovich *et al.* 2018). Waterfowl harvest data are unavailable for the Nisqually River Delta because only a small number of hunters pursue waterfowl in the area. For the most recent year where data were available (2011–12 season) there were 1–18 hunting parties on state and Refuge lands within the current Refuge boundary at any given time; as noted above, the average was 7.4 hunters per day (USFWS unpublished data). Based on hunter use data collected during the 2011–12 season, the number of hunting parties was fairly consistent each month with the lowest number at the end of November. Tides in the delta have a heavy influence on hunting days and times. The 2011–12 hunt season ran 105 days, resulting in an estimated 777 hunter use days on the Nisqually Delta.

National data indicates that between 2014 and 2017, duck hunters in Washington state spent approximately 7 days in the field per year and harvested approximately 19 ducks over the course of the season, or an average of approximately 2.7 ducks per day (Raftovich *et al.* 2016, 2017, 2018). During the same period, goose hunters spent approximately 5 days in the field per year and harvested approximately 5 geese over the course of the season, or an average of approximately one goose per day. Assuming that harvest rates for hunters on the Nisqually Delta are similar to statewide rates, and that the average number of hunters per day is unchanged from the 2011–12 season, this would result in an estimated total annual harvest of 2,100 ducks and 777 geese from the Nisqually River Delta. This is only a fraction of 14,000-18,000 ducks harvested in Thurston County annually between 2014 and 2017 (Tirhi and Bulter 2018) or the 329,000–445,000 ducks and 55,000- 67,500 geese harvested in Washington state annually between 2014 and 2017 (Raftovich *et al.* 2016, 2017, 2018).

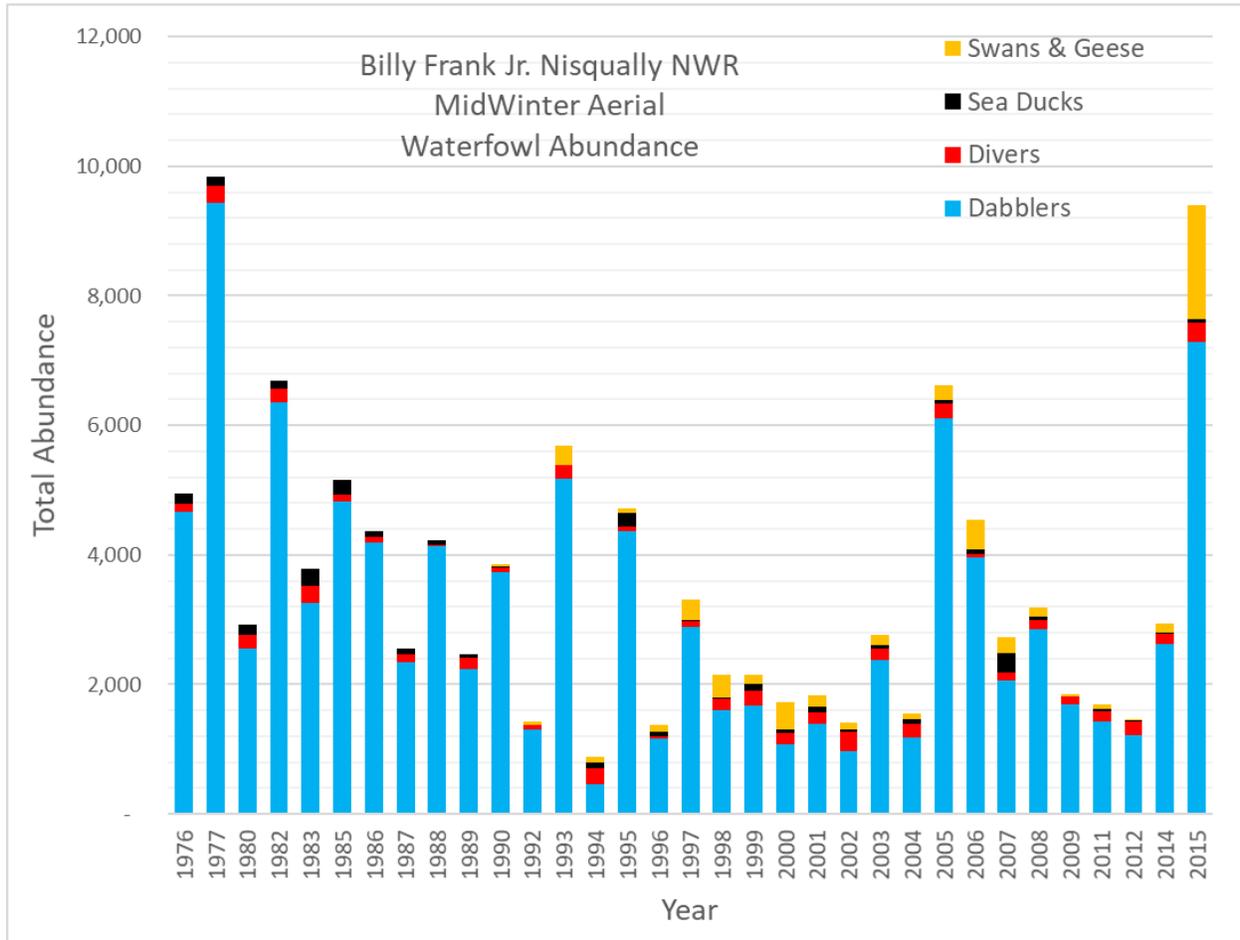
The most heavily harvested duck species in Washington are mallard, American wigeon, northern pintail, green-winged teal, and northern shoveler (Raftovich *et al.* 2016). In 2018, continental populations of northern shoveler, green-winged teal, and mallard were all above their long-term averages. American wigeon and northern pintails were similar to their long-term average (USFWS 2018). Pacific Population Canada geese, Aleutian Canada geese, and the Wrangel Island Population lesser snow geese had significant (< 0.05) positive trends (percent change per year) during the most recent 10-year period. Two goose populations had a significant negative 10-year trend: Ross's geese and Pacific brant. Of the populations for which primary indices included variance estimates, the most recent estimate significantly decreased for cackling Canada geese and Ross's geese. Of the six populations for which primary indices did not include variance estimates, the most recent count was less than the prior count for Wrangel Island Population lesser snow geese, Pacific brant, and Pacific

Population white-fronted geese. However, anecdotal data suggest that the Nisqually River Delta is primarily a duck hunting area, and relatively few geese are taken. We expect that because of the low harvest rates of these species on the Nisqually River delta relative to the state harvest, the Refuge hunt program will not significantly contribute to the population changes of these species. The Refuge will continue to conform to state bag limits for ducks, geese, and coots.

Biologists from state and federal agencies annually conducted the Midwinter Waterfowl Survey (Aerial) to provide a measure of the relative numbers or trends of duck populations. The survey identified winter waterfowl distribution and habitat use throughout the United States. The survey also provided estimates of the size of goose and swan populations and tracked population trends of duck species that nest outside breeding survey areas. Midwinter surveys of the Nisqually River Delta were conducted between 1976 and 2015. Surveys have indicated that waterfowl make significant use of the open bay, mud flats, and tidal marsh with heaviest use occurring from September through January and again during spring migration. Most use of the Nisqually Delta is by dabbling ducks, including American wigeon, mallard, green-winged teal, northern pintail, and gadwall. Other waterfowl that commonly use the Nisqually River Delta include common and red-breasted mergansers, cackling Canada geese, and western Canada geese. Diving ducks include bufflehead, greater and lesser scaup, common goldeneye, and surf scoter.

Midwinter waterfowl surveys are conducted during the first two weeks in January along the Washington coast. Observers count divers, dabblers, sea ducks, geese, swans, and American coots from a fixed-wing aircraft and an overall abundance is estimated (USFWS unpublished data). Data were compiled for all waterfowl observed at Nisqually River Delta during the midwinter waterfowl surveys from 1976 to 2015 and the data are displayed in Figure 1. The overall average count was 3,522 individuals and the lowest count was 883 individual birds recorded in 1994 and the highest was 9,847 in 1977. These data are collected from a fixed-wing aircraft at 60–100 meters (197–328 feet) altitude and traveling 130–200 kilometers per hour (80–124 miles/hour), which limits ability to survey all areas and all habitats and count every individual present. However, general abundance and population trends can be inferred. Based on the data, it is apparent that the Nisqually River Delta is an important area for waterfowl. As an overwintering waterfowl Refuge, abundance is usually high and diverse during the January mid-winter survey. Given the relatively low number of waterfowl hunters relative to the large wintering duck population, we anticipate that the Refuge hunt program will not significantly contribute to waterfowl population changes and the area should support a sustainable harvest. We will continue to conduct monthly bird surveys of all wetland habitats to monitor waterfowl abundance and habitat use, and ensure that the sanctuary area is functional (e.g., receives significant daytime waterfowl use).

Figure 1. Midwinter Aerial Waterfowl Surveys at Nisqually River Delta, Washington from 1976 to 2015 (USFWS unpublished data).



Impacts to Non-Target Species: Boating activity associated with hunting during the fall and winter can alter distribution, reduce use of particular habitats or entire areas by waterfowl and other birds, alter feeding behavior and nutritional status, and cause premature departure from areas (Knight and Cole 1995). In the upper Midwest, motor boating and hunting have been found to be the two main activities that disturb waterfowl (Korschgen et. al. 1985). In Connecticut, selection of feeding sites by lesser scaup was influenced by disturbances from hunters, anglers, and pleasure boaters (Cronan 1957). In Germany, boating pressure on wintering waterfowl had reached such a high level that it was necessary to establish larger sanctuaries, implement a seasonal closure on water sports and angling, and impose a permanent ban on hunting (Bauer et. al. 1992). Impacts of boating can occur even at low densities, given their noise, speed, and ability to cover extensive areas in a short amount of time. This is especially important in the Research Natural Area and McAllister Creek. These are both areas with high waterfowl use. The habitat along McAllister Creek is a relative narrow tidal system that receives high use by a variety of waterfowl, waterbirds, wading birds, and raptors. In addition, an active bald eagle nest is located along McAllister Creek. The nesting period identified in the Bald Eagle Recovery Plan identifies January 1 as the beginning of the nesting season when special protective measures should begin (USFWS 1986). A great blue heron nesting colony along McAllister Creek has declined significantly since the 1970s and may no longer exist. Nesting great

blue herons are sensitive to a variety of human disturbances. Washington state requires a minimum 300-meter buffer zone to protect colonies from human disturbance (WDFW 2001), but it is possible that hunting outside the hunt zone and boating activities may be one of the contributing factors affecting these nesting birds, as well as other wildlife using this narrow system.

Expanding the hunt area into shallow water tidelands and open water will likely impact waterfowl and other wildlife by flushing them to other areas within the Nisqually River Delta due to auditory and physical disturbance; however this is not expected to be significant since there would still be adequate sanctuary area for birds utilize. We would expect the number of hunters to increase. This would increase disturbance to waterfowl, waterbirds, wading birds, and raptors. Potentially, this could cause a decline in bird use or the fitness of birds due to increased energy expenditures or decreased feeding time. However, this effect is not expected to be significant because the number of waterfowl hunters using the Nisqually River Delta is low, and the increase in hunting would be expected to be modest.

Impacts to Other Priority Public Uses:

While hunting and wildlife observation and photography, interpretation, and environmental education will be available to the public during the same time of year, the direct impacts to Refuge visitors engaged in these uses during the hunting season (October through January) are expected to be minor. Gunshot noise can disturb visitors engaged in other uses and flush wildlife being viewed or photographed. However, these impacts would be minor given that (1) the hunt period occurs during the time of year when the activities of wildlife observation and photography receive the lowest amount of use by visitors due to rainy and windy weather; and (2) the northern portion of the Nisqually Estuary Boardwalk Trail is closed during the waterfowl hunting season. To ensure safety, there is a minimum 200-yard buffer between trails and hunt areas. Most hunters use state lands north of the sanctuary area. Environmental education activities are conducted approximately 0.5 miles south of the hunt area.

There is potential for conflicts between hunters and individuals participating in wildlife-dependent priority public uses from boats (e.g. wildlife observation, photography, and fishing) as they use the some of the same areas within the Nisqually River Delta. In the past the Refuge has received numerous comments from canoers and kayakers indicating concern for their safety while boating during the waterfowl hunting season. Complaints have decreased over the past decade, likely due to a combination of outreach, education, and enforcement. To ensure safety and minimize conflict between hunters and people engaged in wildlife observation and photography, the Service will provide information about hunting boundaries and seasons to the general public and those utilizing other Refuge programs. The northern portion of the Nisqually Estuary Boardwalk Trail is closed during the waterfowl hunting season. Information will be provided at the interpretive kiosks, on the Refuge website, and in Refuge offices. In addition, law enforcement patrols will be conducted on a regular basis to ensure compliance with state, federal, and Refuge regulations. The Refuge law enforcement officer will also monitor and collect data on hunting activities in the field to ensure limited conflicts with other wildlife-dependent uses. If necessary, the program will be modified accordingly.

Public Review and Comments:

This Compatibility Determination includes changes to the Refuge waterfowl program as described in the Waterfowl Hunting Plan for the Billy Frank Jr. Nisqually NWR (2019), and supersedes the

2009 Compatibility Determination for Waterfowl Hunting. Public review and comments for the Draft Compatibility Determination were solicited in conjunction with release of the Draft Waterfowl Hunting Plan for Billy Frank Jr. Nisqually NWR (USFWS 2019) in order to comply with the National Environmental Policy Act and with Service policy, before implementing changes to the waterfowl hunting program.

Determination:

_____ Use is Not Compatible

 X Use is Compatible with the Following Stipulations

Stipulations necessary to ensure compatibility:

The Refuge hunting program is designed to provide a safe, quality experience with reasonable harvest opportunities, while ensuring that waterfowl and other wildlife have adequate sanctuary where they can feed and rest during the hunting season, and avoiding significant impacts to other users and non-target wildlife resources. The Refuge has developed the following stipulations to reduce impacts to non-target wildlife resources, ensure adequate waterfowl sanctuary, and promote safety:

- Waterfowl hunting is allowed on state lands and designated Refuge lands, 7 days per week, consistent with the annual state hunting regulations and seasons.
- Only ducks, geese, and coots may be taken in accordance with WDFW bag and possession limits.
- Hunting is permitted by boat access only. Both motorized and nonmotorized boats are permitted. There is a 5 mph speed limit for boats in all Refuge waters.
- The Research Natural Area (RNA) is closed to hunting, fishing, and shellfishing year-round, and is closed to boats from October 1 through March 31 to reduce disturbance to wintering waterfowl populations.
- Estuarine restoration areas (Sanctuary) are closed to boats year round. No motorized or non-motorized boats are allowed into this area. Public access is allowed by foot on trails only. Hunting is not permitted east of Nisqually River.
- Camping, overnight use, and fires are prohibited.
- Permanent blinds are not allowed; however, hunters will be allowed to use portable blinds or blinds constructed of onsite dead vegetation or driftwood under the condition that they either be removed or disassembled at the end of each day.
- Dogs used for hunting will be allowed but they must be engaged in hunting activity and under the immediate control of a licensed hunter (see 50 CFR 26.21(b)).
- Hunters may not enter closed areas to retrieve dead or crippled birds (including dogs).
- Law enforcement patrols will be conducted on a regular basis to assure compliance with state, federal, and Refuge regulations. The Refuge law enforcement officer will also monitor and collect data on hunting activities in the field to ensure limited conflicts with other wildlife-dependent public uses. If necessary, the program will be modified accordingly.
- 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

utilizing other Refuge programs. Information will be provided at interpretive kiosks, on the Refuge website, and in Refuge offices.

- The Refuge will provide signs and brochures to promote appropriate use of Refuge lands to minimize wildlife and habitat disturbance, including boating practices such as no-wake and slower speeds. These materials will clearly state pertinent Refuge-specific regulations.
- There will be a minimum 200-yard buffer between trails and waterfowl hunting areas.
- The Service will conduct periodic biological and social monitoring and evaluation of the hunting program, including feedback from users to determine if objectives are being met, and reserves the right to modify existing programs to accommodate existing or changing conditions.
- The Service will conduct monitoring to evaluate whether boating stipulations are sufficient to minimize disturbance to wildlife, and reserves the right to modify existing programs to accommodate existing or changing conditions.

Justification:

Hunting is one of the six priority uses of the NWRS. Providing a quality hunting program contributes to achieving one of the Refuge goals. Expansion of the existing hunt area was determined to be compatible. The Refuge will open more area for waterfowl hunting, with sufficient restrictions in place on hunting, boating, and other public uses to ensure that an adequate amount of high quality feeding and resting habitat would be available in relatively undisturbed areas (sanctuaries) for the majority of waterfowl and other wetland birds using the Refuge. Although boating has the greatest potential to impact wetland wildlife, implementing the prescribed measures listed in the Stipulations section and in the Recreational Boating Compatibility Determination (2009) should reduce major impacts to acceptable levels.

Refuge hunt programs are designed to provide high quality experiences. In general, hunting on Refuges should be superior to that available on other private or public lands, which may require special restrictions (Refuge Manual 8 RM 5). Measures are often used to ensure quality, including limited hunt days and shell limits and using buffers for public use trails eliminating the need for seasonal trail closures. The expansion of the hunt area on the Refuge accomplishes the following: (1) accommodates the existing hunt program on Refuge and WDFW lands/waters; (2) establishes consistent regulations across all lands and waters within the Nisqually River delta; (3) provides a quality hunting experience that meets Refuge guidelines and policies; and (4) provides sufficient waterfowl sanctuary.

It is anticipated that an adequate amount of quality, non-hunted estuarine habitat is still available to the majority of waterfowl and other wetland birds because (1) some high wildlife-use areas are set aside as sanctuary (779 acres in the RNA and 699 acres of estuarine restoration area); (2) boating regulations are maintained and enforced; and (3) hunting activity is confined to designated areas because “no hunting zones” are posted and enforced. Consolidation of the expanded hunt area with the existing hunt areas provides a distinct, manageable unit that can be more easily delineated, posted, and enforced, resulting in larger contiguous sections of the estuary in the delta that are available for waterfowl use. Thus, it is anticipated that birds will find sufficient food resources and resting places such that their abundance and use of the Refuge will not be measurably lessened, hunting pressure will not cause premature departure from the area, the physiological condition and production of waterfowl and other waterbirds will not be impaired, their behavior and normal activity patterns will not be altered dramatically, and their overall status will not be impaired. The Refuge

will continue the overwintering waterfowl survey (ground survey) to monitor waterfowl abundance and habitat use during winter months (October through April).

Given the relatively limited number of waterfowl hunters expected to use the Refuge, waterfowl hunting will be expected to have a minor direct impact on Refuge resources. The associated disturbance to wildlife from waterfowl hunting, though larger than at present, is also expected to be minor. It is anticipated that wildlife populations will find sufficient food resources and resting places such that their abundance and use of the Refuge will not be measurably lessened from allowing waterfowl hunting to occur. The relatively limited number of individual animals and plants expected to be adversely affected will not cause wildlife populations to materially decline, the physiological condition and production of Refuge species will not be impaired, their behavior and normal activity patterns will not be altered dramatically, and their overall welfare will not be negatively impacted. Thus, allowing waterfowl hunting under the stipulations described above will not materially detract or interfere with the purposes for which the Refuge was established or the Refuge mission.

Furthermore, waterfowl hunting will create the opportunity for greater awareness about the importance of estuaries for a wide array of fish and wildlife. Waterfowl hunting provides visitors with the joy of experiencing wildlife on their public lands, and as such, helps fulfill the mission of the National Wildlife Refuge System.

Signature:

Refuge Manager: _____ Date: _____

Concurrence:

Regional Chief: _____ Date: _____

Mandatory Re-Evaluation Date:

2034 Mandatory 15-year Re-evaluation date (for priority public uses)

____ Mandatory 10-year Re-evaluation date (for all uses other than priority public uses)

NEPA Compliance for Refuge Use Decision:

Categorical Exclusion without Environmental Action Statement

____ Categorical Exclusion and Environmental Action Statement

____ Environmental Assessment and Finding of No Significant Impact

____ Environmental Impact Statement and Record of Decision

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