



empowering the lasting conservation of fish and wildlife and citizen enjoyment of our natural resources

Grant Application Cover Sheet

Please complete the following coversheet. See the grant application guidelines on our website www.owf.org/grants to complete your application. Volunteer organizations without nonprofit status must have a tax-exempt fiscal sponsor. You may scan and email this cover sheet and your application.

- 1 Project Title: Nestucca Bay National Wildlife Refuge – Bay Unit Habitat Improvement Project
- 2 Organization: Ducks Unlimited, Inc.
- 3 volunteer organizations without nonprofit status, list your fiscal sponsor: N/A
- 4 Tax id number (not required for governmental applicants): 13-5643799
- 5 Project Manager Name: Kelly Warren Title: Regional Biologist, located in Corvallis, Oregon
- 6 City: Vancouver Address: DU Regional Office: 11805 NE 99th Street, Suite 1300 Zip Code: 98682
- 7 Phone (office): (360)-334-2338 Phone (mobile): (360)-334-2338 email: kwarren@ducks.org
- 8 Tell us about yourself (brief biographical statement): In 2018, DU added a new position to our Oregon team to lead conservation efforts in the western part of the state. Kelly Warren is the Regional Biologist (located in Corvallis). This new position has increased DU's capacity to deliver conservation projects for the area and increased our ability to form and strengthen partnerships in the state. Building and nurturing these relationships is the focus of the Regional Biologist.
- 9 Have you applied for a grant from Oregon Wildlife Foundation before? Yes No
- 10 If "yes", what was the name of the project?

About Your Proposed Project

- 11 What type of project are you proposing? Fish Wildlife Other
- 12 Will it address an Oregon Conservation Strategy habitat or species? Yes No
If "yes", please name the habitat and/or species addressed: Wetlands
- 13 Proposed start date: 1/2019 Anticipated end date: 10/2022
- 14 Project Location (attach map): Nestucca Bay NWR Bay Unit Nearest town or city: Pacific City, OR
County: Tillamook
- 15 Has a local, state, or federal biologist reviewed this project? Yes No
If "yes", what is their name? Kelly Moroney Phone: (541)-270-1864 email: Kelly_maroney@fws.gov
- 16 If "no", what is your plan for an external review of the project?
- 17 Estimated project cost: \$721,000 Funding you are requesting: 5,000
- 18 How will you use the requested funds? Contract personnel for modeling and design
- 19 What will you accomplish (ex., stream miles enhanced, acres planted)? 104 enhanced acres, river miles impacted: 3
- 20 Check the following box to be added to our email distribution list:

Project Abstract/Summary

- 21 Limited to 750 characters. Do not begin your narrative here or link to other pages: The Bay Unit Habitat Improvement Project will improve habitat conditions and water quality for wintering geese and other migratory birds; aquatic species, including anadromous fish including the federally and state threatened Oregon Coast Coho salmon; and other wildlife including amphibians utilizing the Bay Unit. The project focuses on evaluation of alternatives, designs, and implementation for the replacement of the current water management system to improve



empowering the lasting conservation of fish and wildlife and citizen enjoyment of our natural resources wintering goose forage and to improve fish access and prevent entrapment; interior enhancements to improve off-channel/juvenile rearing habitat for salmonids, particularly Coho, and wildlife benefits; and development of agricultural setbacks and riparian restoration plans.

Certifications

- 22 Check here to certify that you have already or will obtain necessary permits from all requisite agencies *as applicable to the proposed project.*
- 23 I have included pre-project pictures or video as well as a picture or video entry of myself.
- 24 I understand that I'm required to submit a Project Completion Report, copies of any publications or social media posts crediting the Foundation's support, and post-project pictures at the completion of my project.
- 25 I warrant that I am the legal owner of all pictures and video submitted in application and grant permission for the Foundation to reproduce, exhibit, or publish them for all general purposes in relation to Oregon Wildlife Foundation's work.
- 26 Signature of Applicant or Authorizing Official: Denise Barrett

Director of Foundation Relations



**Proposal to the Oregon Wildlife Foundation
From Ducks Unlimited
Nestucca Bay National Wildlife Refuge – Bay Unit Habitat Improvement Project**

Project Narrative

Describe your organization and the work that it does.

Ducks Unlimited conserves, restores, and manages wetlands and associated habitats for North America's waterfowl. These habitats also benefit other wildlife and people. Ducks Unlimited is the world's leader in wetlands and waterfowl conservation. DU is able to multilaterally deliver our work through a series of partnerships with individuals, landowners, agencies, scientific communities and other entities. Waterfowl conservation is facing important challenges as wetlands and other habitats are being degraded and destroyed across the continent. Ducks Unlimited has a vision to reverse this trend.

Beyond waterfowl habitat, our conservation projects support clean and abundant water, healthy pollinator populations, flood mitigation, public recreation and countless other outcomes. In providing sustainable ecosystems for waterfowl, our work provides myriad benefits to other species and society. DU's on-the-ground restoration and protection of key wetlands and associated habitats is guided by science and dedicated to program efficiency. Thus, our work focuses on restoration, enhancement, and land protection and management in priority landscapes that include waterfowl habitat, primarily wetlands and grasslands. As of 2020, DU has conserved nearly 15 million acres of wetlands and associated habitats across North America.

DU's progress in Oregon is no exception, where our efforts have conserved nearly 123,000 acres of wetlands. As with most states in the Pacific Flyway, Oregon has many vitally important waterfowl habitats. Used by migrating, breeding or wintering waterfowl, these areas span the spectrum from tidally influenced marshes, high-elevation lakes and arid Great Basin oases. Thanks to dedicated support from grants and donations, DU has been able to expand our reach to ensure we make an impact in all areas of the state. With the addition of a Regional Biologist for the western region of Oregon, we are building on our success and will protect and restore

thousands more wetland acres. In 2018, DU added a new position to our Oregon team to lead conservation efforts in the western part of the state. The Regional Biologist for western Oregon (located in Corvallis) has increased DU's capacity to deliver conservation projects for the area and increased our ability to form and strengthen partnerships in the state.

Identify the need for the proposed project; an outline of it; and the anticipated benefits upon completion.

Need for project:

Nestucca Bay National Wildlife Refuge (NWR), managed by the United States Fish and Wildlife Service (USFWS), includes over 1,200 acres of diverse coastal habitats within the Nestucca watershed. The Refuge was established in 1991 to conserve fish, wildlife, and plants which are listed as endangered or threatened species; for migratory birds; and for conservation of wetlands. The Refuge's Comprehensive Conservation and Management Plan (USFWS 2013) contains an objective for protecting and maintaining lowland pastures for wintering Canada geese (e.g., Dusky, Aleutian Canada geese), other waterfowl (e.g., American wigeon, northern pintail, mallard), and other migratory birds. The plan also reinforces the Refuge's commitment to working with local dairy farmers through Cooperative Agricultural Agreements to meet its objective for lowland pasture sustainability, forage production, and shortgrass winter habitat for geese. The Refuge is also committed to managing and protecting other wildlife resources, including anadromous fish, and especially those listed under the Endangered Species Act as per the Refuge purposes.

The Nestucca Bay estuary, which is considered critical habitat for federally listed Oregon Coho salmon, contains managed agricultural lands and pastures that require the use of tide gates and other infrastructure. These agricultural lands also provide off channel freshwater wetlands. Confederated Tribes of Siletz Indians (CTSI) fisheries biologists have documented Coho utilizing these waterways as winter rearing habitat, which is considered a limiting factor in Coho recovery. Approximately 2.5 miles of tidal channels and sloughs have the potential to be reconnected to tidal influence as well as seasonal inundation and improved rearing habitat access of approximately 100 acres of shallow marsh surface on the Bay Unit. Many landowners and stakeholders including the USFWS; Nestucca Bay Landowners Association; local dairy farmers; The Nature Conservancy, and the NNSWC are committed to maintaining lowland pastures for dairy farming while also striving to improve aquatic and riparian habitat that is productive for native avian and aquatic species. This project can serve as a model for the ongoing focus of tide gate maintenance and replacements on the Oregon coast, as well as how working agricultural lands can incorporate ecological design and implementation elements to provide wildlife benefits and ecosystem services.

Wetland connectivity. Natural water flows in the northern section of the

site have been altered and negatively impact water quality. Currently, a dike separates the North and South fields of the Bay Unit and prevents natural hydrologic processes. This internal dike will be breached to allow for natural flow to the Little Nestucca River, thus improving water quality and wetland connectivity. Additionally, improvements to existing wetlands within the project areas will be made by grading and contouring subtle drainage swales and historic tidal channels to improve connectivity and function.

Altered hydrology. The natural hydrology and channel landforms were significantly altered when these wetlands were converted to agriculture approximately 100 years ago. The vision is to restore historic tributary channels to the refuge (wetland) pastures to improve wetland resilience related to climate change and future changes in land management. Additionally, the technical design would address features that improve water quality, restore habitat complexity, improve off-channel / juvenile rearing habitat for salmonids, and allow for improved tidal exchange.

Overall, the project will benefit fish, migratory birds, protect restored and functional habitat, improve the function of aquatic habitat and wetlands, and address increasing sea level rise related to climate change. The project will also help determine how biological benefits can be achieved to meet fish passage and fish habitat requirements for Oregon Coastal Coho salmon while still achieving the stated land management goals for migratory waterfowl.

Outline of project:

The land management objective of the project is to improve water level management capabilities and water quality in the Bay Units of the Nestucca Bay National Wildlife Refuge (NWR). This supports the operational needs of the Refuge, as defined by its Comprehensive Conservation and Management Plan, for meeting the goal of lowland pasture sustainability for forage production and short grass winter habitat for Canada geese including Dusky and Semidi Island Aleutian Canada geese (identified as species of concern by the Pacific Flyway Council) and expand high quality habitat for aquatic species. With improved function of tide gates, USFWS will be able to improve water management.

This project area is approximately 104 acres, located in the Bay Unit of Nestucca Bay National Wildlife Refuge, 2.75 miles southeast of Pacific City, Oregon. This site is bounded by the Little Nestucca River to the south and southwest, Nestucca Bay to the west, private land to the north, and Highway 101 to the east. By improving the hydrology of the site with careful design/modeling and by upgrading water management structures, the project will achieve off-channel habitat for anadromous fish species. Wetland habitats will be improved by scraping and contouring historic tidal channels to restore endemic topography. Cattle grazing

will continue to be utilized and managed to meet the Refuge's goals of providing short-grass habitat for wintering geese and other wildlife in the higher elevation areas within the project area.

The Bay Unit Habitat Improvement Project (Project) will improve habitat conditions and water quality for 1) wintering geese and other migratory birds; 2) aquatic species, including anadromous fish including the federally and state threatened Oregon Coast Coho salmon; and 3) other wildlife including amphibians utilizing the Bay Unit. The project focuses on evaluation of alternatives, designs, and implementation for the replacement of the current water management system (i.e., tidegate). This project will improve wintering goose forage and improve fish access and prevent entrapment. Interior enhancements to drainage ditches, swales, and depressional wetlands will improve off-channel / juvenile rearing habitat for salmonids, particularly Coho, and wildlife benefits. The project will also include development of agricultural setbacks and riparian restoration plans.

The project is currently in the design and modeling stages. Completed tasks include documentation of existing conditions (creation of base maps), formation and evaluation of alternatives, design and review of 30% drawings, development of a 30% design draft of a hydrological model, selection of preferred alternative, and a regulatory pre-consultation meeting. The next steps include completing a second hydrological modeling run of the preferred alternative with additional project features incorporated followed by engineering of project elements from results of the 2nd hydrological modeling. Partners will review the preferred alternative for 90% design and then begin project implementation.

Most of the project funding is secured. The proposed \$5,000 from the Oregon Wildlife Foundation will be leveraged with secured match funds for continuation of design to project implementation. The technical design would address features that improve natural hydrology and water quality and restore historic instream channels. Additionally, wetlands within the project would have improved function and values from restoration of those water features, thus providing benefits to both fish and wildlife.

With the heightened focus of tidegate management and utilization in Oregon, this is a project that can serve as a model for future tide gate projects, including potential positive and negative pre- and post-project impacts. Success will be measured by post restoration monitoring. We will evaluate hydrology and its function in the channels. CTSI will conduct surveys to monitor fish presence and use. USFWS will continue monitoring goose and other migratory bird numbers to determine level of use. USFWS believes this is an opportunity to bring stakeholders with different backgrounds and interest together to meet common goals. The Nestucca Bay NWR Upton Slough Infrastructure Improvement and Habitat Enhancement Project (2018–2019) and the proposed Bay Unit Assessment/Design Project could be used as

models for future projects to show how local agricultural interests are compatible with habitat conservation and can be stewards of sensitive resources. This project can evaluate 3 different land management actions implemented on the Refuge by measuring the aquatic habitat and water quality improved and fish/wildlife response to each action:

- 1) Little Nestucca full tidal restoration (OWEB 2007)
- 2) Upton Slough –traditional side-hinged tide gate with interior habitat improvements (2019)
- 3) Bay Unit - tide gate and interior habitat improvements (2021/22).

These three units allow different types of habitats to appeal to a wider variety of fish and wildlife species and assist the refuge in meeting their goals for management.

Benefits of project:

Collaboration: This project encourages cooperative efforts by the US Fish and Wildlife Service and private landowners to protect and enhance estuarine habitat values. The project will restore diked tidelands where feasible and appropriate and maintain existing zoning on agricultural lands.

Habitat: Restoration will benefit several species of conservation focus including Dusky Canada Geese, Semidi Island Aleutian Canada Geese, Northern Pintails, Mallards, American Wigeon and numerous shorebird species. More precise and natural management of water will directly benefit fish and wildlife species utilizing these habitats.

Public Recreation: This project is located directly off a Highway 101. Therefore, it is visible and will be a high-profile restoration project for the public. This will be an opportunity for outreach and education on the incorporation of certain elements of the project and the projected benefit for fish and wildlife.

Replication: Tide gate maintenance projects are a programmatic focus in Oregon. Planning groups, such as the OWEB Tide gate Working Group, have discussed the potential environmental and economic benefits of projects like this to landowners, local economies, fish and wildlife. This project may serve as a model for tide gate replacement projects on working ag lands on the Oregon coast, particularly those in major estuaries.

Quantify your outcomes (i.e., acres planted, stream miles enhanced, etc.)

The project area is approximately 104 acres and we will complete the following objectives for the project.

Objective 1: Obtain existing conditions of project area

Outcomes from objective 1 include a completed mapping of current conditions, monitoring and data collection of water quality and species present and wetland delineation and functions assessment.

Objective 2: Complete design and modeling

The project will complete design and modeling for project implementation including alternatives analysis, permitting, biological design input by partners and selection of the preferred alternative. This will lead to final design selection and implementation.

Objective 3: Project implementation

Objective 3 of the project is to implement the designs with installation of a new culvert and tide gate at the northwestern edge of field #12 in the Middle Fields, review and consider alternatives for the second water conveyance structure (at the northwestern edge of field #2 in the North Fields), connect North and Middle fields via culvert and internal levee breach, installation of large woody debris within the channel network, reestablishment of native vegetation along tidal/stream channels, and installation of riparian set back fencing.

Objective 4: Continue post-restoration monitoring.

Finally, DU and partners will complete post-restoration monitoring to evaluate changes in water quality, species present and hydrological function from conditions. These findings can help to inform future projects in the region.

Identify who or what entity will manage or operate the project once it's completed.

Ducks Unlimited is applying to the Oregon Wildlife Foundation as the lead entity for the project. However, the project is a highly collaborative effort involving public and private stakeholders in the region including the US Fish and Wildlife Service, The Nature Conservancy, Confederated Tribes of Siletz Indians (CTSI), Nestucca, Neskowin & Sand Lake Watersheds Council (NNSWC), Oregon Watershed Enhancement Board (OWEB), and the Oregon State Extension Service.

Describe how the Foundation will be recognized for its funding support

Your conservation investment can be recognized in local and national media channels to highlight your commitment to Oregon and inspire others. DU will work with the Oregon Wildlife Foundation on the recognition opportunities that most interest the foundation. We can also publicize these projects through local DU chapter events, DU regional Facebook and Twitter pages, DU's regional newsletter and DU's Oregon webpage.

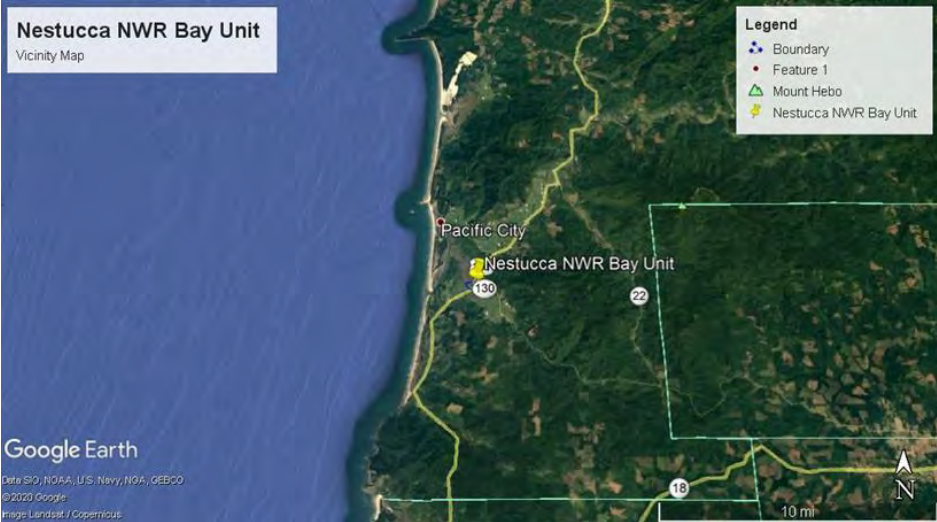


Figure 1. Nestucca Bay National Wildlife Refuge - Bay Unit.

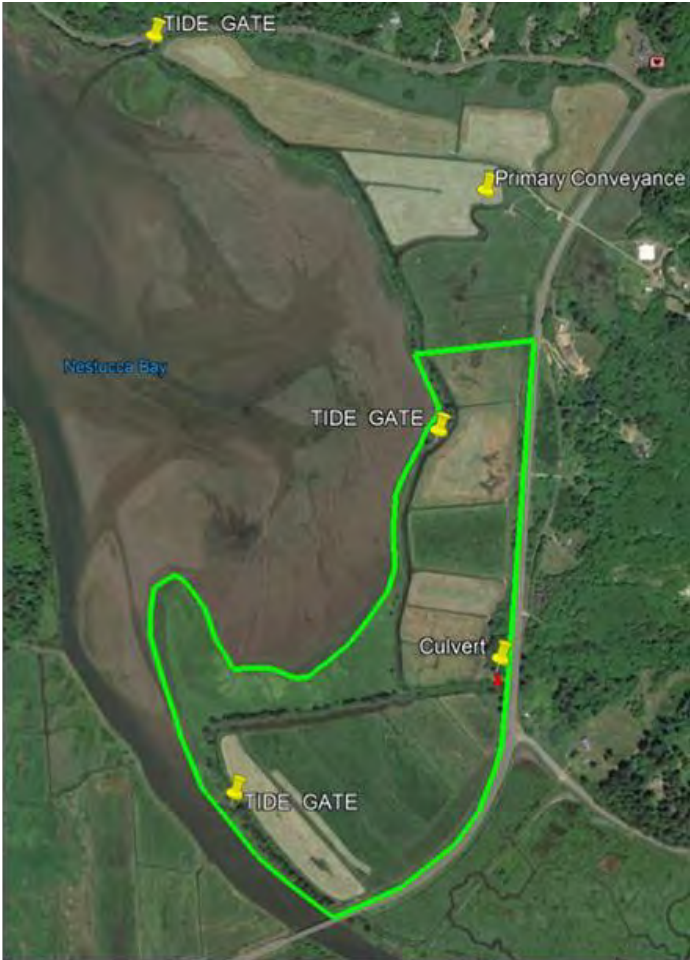


Figure 2: Nestucca Bay NWR – Bay Unit Infrastructure and Habitat Improvement – Project Area

Photos of the area and details can be found at https://www.fws.gov/refuge/nestucca_bay/.



United States Department of the Interior



FISH AND WILDLIFE SERVICE
Oregon Coast National Wildlife Refuge Complex
2127 SE Marine Science Drive
Newport, Oregon 97365-5258

In Reply Refer to:
FWS/R1/

August 6, 2020

Oregon Wildlife Foundation
901 SE Oak St, Suite 103
Portland, OR 97214

RE: Ducks Unlimited proposal to the Oregon Wildlife Foundation, Nestucca Bay National Wildlife Refuge – Bay Unit Habitat Improvement Project

Dear Oregon Wildlife Foundation Board of Directors:

Please accept this letter as statement of my support for Ducks Unlimited's application to the Oregon Wildlife Foundation to support the Nestucca Bay National Wildlife Refuge Bay Unit Habitat Improvement Project. I have reviewed the proposal for this project and agree with the plans put forward. We are honored to work alongside Ducks Unlimited and other partners to see designs developed to improve habitat in the Bay Unit and look forward to implementing the project and monitoring it for success.

This project is a great collaboration among public and private stakeholders and will be a showcase habitat improvement project for the region. Thank you for consideration of joining the US Fish and Wildlife Service, The Nature Conservancy, Confederated Tribes of Siletz Indians (CTSI), Nestucca, Neskowin & Sand Lake Watersheds Council (NNSWC), Oregon Watershed Enhancement Board (OWEB), and the Oregon State Extension Service, to make this project possible.

Sincerely,

KELLY
MORONEY

Digitally signed by
KELLY MORONEY
Date: 2020.08.06
13:33:08 -07'00'

Kelly Moroney
Project Leader