National Coastal Wetland Conservation Grant Application

Lower Tarboo Creek Wetland Acquisition and Floodplain Restoration - Phase II

WASHINGTON STATE DEPARTMENT OF ECOLOGY

June 2006
Ecology Publication #07-06-006

National Coastal Wetland Conservation Grant Application

Lower Tarboo Creek Wetland Acquisition and Floodplain Restoration - Phase II

Submitted By: Washington Department Of Ecology
P.O. BOX 47600
Olympia, Washington 98504-7600

Contact: Jeanne Koenings 360-407-7254

Date: June 2006

LOWER TARBOO CREEK WETLAND ACQUISITION AND FLOODPLAIN RESTORATION – PHASE II

EXECUTIVE SUMMARY

Description – This project will permanently preserve and restore wetlands and salmon streams on approximately 124 acres, representing the key remaining unprotected portions of the Lower Tarboo Creek floodplain joining Tarboo-Dabob Bay. In Phase I, completed in 2006, four properties, totaling 285 acres, were secured and wetland restoration is underway. The proposed project will secure four parcels that are key to forming a continuous nature preserve of floodplain wetlands and salmon habitat from the Lower Tarboo Valley to Tarboo-Dabob Bay; protecting a high diversity of at-risk freshwater and estuarine species including five salmon stocks, forage fish species, numerous shorebird, waterfowl, and land bird species.

Need - The proposal area comprises 90 percent of the remaining unprotected wetlands in the lower Tarboo floodplain and connects upstream and downstream areas protected in Phase I. The Tarboo floodplain was historically the most productive salmon habitat within the watershed before clearing and draining of Sitka Spruce bottomlands in the 1890s. Restoring this lower floodplain is also critical for the long-term health of Tarboo-Dabob Bay and its diverse coastal saltmarsh, sand spit and mudflat habitats.

Objectives -

1) Protect through conservation easement and fee simple acquisition approximately 124 acres of Lower Tarboo Creek and floodplain.
2) Restore one-half mile of mainstem Tarboo Creek and one-half mile of tributary channels, including adding large wood, riparian planting and non-native species control.
3) Restore 74 acres of decreasing and rare palustrine wetland types in areas that are now drained wetlands of mostly abandoned pasture, including plugging several drainage ditches, riparian planting, non-native species control, and installing habitat logs.

Habitat and species benefits –

1) Permanent protection and long-term restoration of rare wetland types on the site will greatly increase habitat for a diversity of at-risk fish and wildlife species, including restoring core habitat for five species of salmonids.
2) Because the project area is the conduit for 80% of the freshwater entering Tarboo-Dabob Bay (located one-half mile downstream), protecting and restoring floodplain wetlands at the site are essential to maintaining water quality and reducing sediment loading of Tarboo-Dabob Bay.

Duration of benefits – in perpetuity

Restoration management– The stream and wetland restoration will be managed by Northwest Watershed Institute, a Washington non-profit specializing in watershed assessment and restoration, in coordination with a scientific team, including specialists with the U.S. Fish and Wildlife Service, U.S. Natural Resource Conservation Service and Washington Department of Ecology (Ecology).

Land ownership and management – **Northwest Watershed Institute will own and provide long-term management for 104-acres (3 of four properties) as an addition to their adjacent 200-acre nature preserve ownership. For the Yeakel-Purdy property, the landowners will donate a conservation easement to Jefferson Land Trust as a match to the grant. Jefferson Land Trust will hold permanent conservation easements for all four properties. Ecology will be granted an assignment of rights for all properties.**

LOWER TARBOO CREEK WETLAND ACQUISITION AND FLOODPLAIN RESTORATION – PHASE II

C1. PROJECT DESCRIPTION AND NEED:

This project aims to acquire and restore the remaining unprotected floodplain areas that are of central importance in salmon restoration and in the conservation of Tarboo-Dabob Bay, one of the highest quality and biologically most diverse estuarine areas of Puget Sound, Washington. Since the 1980's, state and federal agencies and non-profit organizations have worked to protect the Lower Tarboo floodplain and Tarboo-Dabob Bay. The Washington Department of Natural Resources established a 350-acre Natural Area Preserve that includes rare salt marsh spit habitats and associated uplands on both sides of the bay. In 1998, Washington Department of Fish and Wildlife purchased 160 acres at the mouth of Tarboo Creek, the main freshwater source to the estuary. In 2006, Phase I of the Lower Tarboo Creek wetland and floodplain acquisition project was completed, with 285 acres permanently protected and restoration currently underway. The proposed project secures the key remaining areas of unprotected land within the lower Tarboo floodplain.

For the past four years, 14 organizations coordinated by the Northwest Watershed Institute have been conducting whole watershed assessment, protection and restoration of Tarboo Creek and Tarboo-Dabob Bay. They identified the highest priority need for fish and wildlife restoration as the protection and restoration of the lower Tarboo floodplain. Between 1880 and 1910, 95 percent of Tarboo Valley's Sitka spruce bottomland floodplains and beaver pond wetlands were cleared and drained for pasture and most of the streams were channelized. The Tarboo-Dabob estuary, immediately downstream, was impacted by excessive sedimentation and non-point water quality pollution. Wetlands and floodplains that previously functioned to trap and store sediments, filter floodwaters of pollutants, and regulate seasonal stream flows, are largely dysfunctional. Although dairy farming has declined in the Tarboo valley, the potential development of the floodplain into 20-acre hobby farms or a golf course further jeopardizes the existing salmon habitat and palustrine wetlands of Tarboo Creek and health of Tarboo-Dabob Bay.

This project fills the key remaining gap in 875 acres of nature preserves that have been established from Tarboo-Dabob Bay through the Lower Tarboo floodplain. The project represents an unprecedented opportunity due to its large scale, potential to fully restore stream and floodplain processes, recover productive and diverse salmonid habitats, and protect the water quality and ESA listed salmon habitat in Tarboo-Dabob Bay. This project is the key component in a larger whole-watershed restoration program that is protecting and restoring Tarboo Creek and Tarboo-Dabob Bay.

C2. OBJECTIVES:

The project objectives are to --

1) Protect through conservation easement and fee simple acquisition approximately 124 acres of Lower Tarboo Creek and floodplain wetlands.
2) Restore one-half mile of mainstem Tarboo Creek and one-half mile of tributary channels, including installing large wood, planting and maintaining riparian areas and controlling non-native species.
3) Restore 74 acres of decreasing and rare palustrine wetland types in areas that are now drained wetlands of mostly abandoned pasture, including plugging several drainage ditches, riparian planting, non-native species control, and adding habitat logs.

C3. EXPECTED RESULTS AND BENEFITS:

The proposed project will protect in perpetuity the lower Tarboo Creek floodplain and allow full restoration of wetland functions and watershed processes over time. This project proposes to restore one-half mile of mainstem stream channel, wetland hydrology, and a mosaic of rare Sitka spruce forested wetlands, shrub/scrub and open water wetlands to the floodplain. Restoring rare wetland types on the site will greatly increase habitat for a diversity of at-risk fish and wildlife species and protect water quality and sediment balance of Tarboo-Dabob Bay, located immediately downstream. The benefits of this project include:

1) The project protects and restores potentially the most productive and diverse habitat in the watershed for five species of anadromous fish: Chinook salmon, coho salmon, fall chum salmon, steelhead salmon, and coastal cutthroat trout.

2) The project protects and restores a mosaic of 74 acres of rare Spruce forested wetlands, shrub/scrub and open water wetlands to the floodplain that provide habitat for a high diversity of freshwater wetland birds, waterfowl, and amphibians.

3) Restoring the floodplain will directly benefit Tarboo-Dabob Bay and a high diversity of estuarine fish and bird species by reducing the excessive sediment loading of the Bay. Sediment from extensive bank erosion along the existing channelized streams will be reduced when streams are re-meandered and more closely connected to the floodplain. Restored floodplains will provide areas for long-term sediment storage and dissipation of flood flows.

4) Restoring the floodplain will provide long-term protection for the water quality of Tarboo-Dabob Bay. Approximately 80 percent of the freshwater entering the Tarboo-Dabob estuary flows through the proposed project area first. Protecting this floodplain from intensive use by agriculture or rural residential uses will

protect water quality in the Bay. In addition, restoring wetland functions to the floodplain will help infiltrate and treat nutrients and non-point runoff before reaching the estuary.

5) The project secures parcels adjacent to the Phase I acquisition of the 200-acre "Yarr Preserve" that are needed to fully implement wetland restoration in the lower Tarboo valley due to their location in the contiguous floodplain and potential to constrain restoration options if flooding is not tolerated.

C4. APPROACH:

Northwest Watershed Institute (NWI) will acquire three of the four properties for long-term restoration and management. An assignment of rights and conservation assurances will be provided to the Washington Department of Ecology (Ecology). NWI will also transfer a conservation easement to Jefferson Land Trust that ensures protection of these three properties in perpetuity. These properties will be additions to the 200-acre "Yarr Preserve" that NWI purchased as part of Phase 1 of the project (2004 NCWC grant) and which is permanently protected as a nature preserve and environmental education and research center under a conservation easement held by the Jefferson Land Trust. For the Yeakel-Purdy property, the landowners will donate a permanent conservation easement to Jefferson Land Trust as a match to the grant with an assignment of rights and conservation assurances to Ecology.

Northwest Watershed Institute (NWI) is a Washington non-profit organization that will serve as the principal partner in this project. NWI's mission is to provide scientific and technical support for watershed assessment, protection, and restoration, including leading a model whole-watershed conservation project for the Tarboo watershed. NWI initiated a long-term comprehensive program in 2001 to protect and restore the Tarboo watershed, including Tarboo-Dabob Bay. They are currently working with 14 project partners, including NOAA Fisheries and U.S. Fish and Wildlife Service, to address priority restoration needs. NWI staff has 15 years experience as professional fish and wildlife biologists in the Hood Canal region.

Jefferson Land Trust currently stewards over 28 different properties protecting nearly 1200 acres in east Jefferson County. Stewardship and monitoring protocols were developed with the guidance of The Land Trust Alliance, a national organization of land trusts, and have been effectively utilized locally for more than 17 years. Jefferson Land Trust conducts a detailed baseline documentation of the conservation values, and creates a property specific monitoring manual for field use. A stewardship plan will be developed for the protected properties with the participation of the Northwest Watershed Institute and based on the issues and conservation objectives identified on the property. Land Trust staff and community volunteers conduct annual monitoring in trained teams that include biologists, foresters and other specialists as appropriate. Monitoring ensures compliance with the terms of the easement and adherence to the stewardship plan. As of June 2006, the Land Trust has an endowment of $208,000 set aside for stewardship, monitoring expenses and legal defense of protected properties, and will be building that fund over time.

A scientific advisory team organized by NWI is currently developing a restoration plan for the Yarr Preserve for stream re-meanders, large wood addition to the stream, restoration of floodplain and wetland hydrology, and native plant re-vegetation. This team will extend their restoration plan to the Phase II properties. The scientific team includes Ecology wetland restoration biologists, and local, tribal, state, and federal scientists. NWI is using the Yarr Nature Preserve as the base of operations for the long-term program to restore the Tarboo watershed. NWI will manage the restoration on all four proposed properties and eventually develop a field research and educational station on an upland portion of the Yarr property.

C5. LOCATION:

The proposed Lower Tarboo Floodplain Acquisition and Restoration Project – Phase II is located in eastern Jefferson County, east of Quilcene, Washington. The entire 124 acre proposal is located within Sections 28 and 33, Township 28N, R1W. The location is shown on the attached maps (Figures 1 and 2).

Phase II targets four parcels that connect the Phase I acquisitions to the WDFW and DNR protected property along Tarboo Bay (Figure 2). The properties are located primarily downstream of and adjacent to the 200 acre Yarr Preserve and Freeman conservation easement (2004 NCWC grant funded) and 80 acre Pokorny Conservation Easement, to the west of the 68 acre East Fork Tarboo Creek Conservation Easements (County funded), and to the north of the 160 acre Washington Department of Fish and Wildlife Critical Habitat Preserve and 350 acre Washington Department of Natural Resources Natural Area Preserves along Tarboo Bay. This project proposes to protect and restore the key unprotected areas of the lower Tarboo floodplain.

C6. ESTIMATED COSTS:

Ecology is requesting a federal grant of $770,000. The estimated total cost of the project, including all administrative and associated costs is $1,120,000. The estimates of property values and transaction costs were provided by Northwest Watershed Institute based on their detailed knowledge of the four proposed parcels and six recent appraisals of nearby properties that included timber value and conservation easement considerations.

The estimate of restoration costs are provided by Northwest Watershed Institute based on NRCS accepted costs for restoration and NWI's costs on similar projects successfully completed in the watershed. Restoration costs are for restoring 74 acres of wetlands, including plugging several drainage ditches, wetland and riparian planting of native trees and shrubs, non-native species control, and placement of habitat logs and snags in the stream and floodplain.

Ecology is committing to $350,000 in matching funds being provided from several sources, described as follows and in the table below.

- Jim Yeakel and Joan Purdy (Yeakel-Purdy) will donate a conservation easement on 20 acres of mainstem Tarboo Creek and floodplain including mature forest and wetland pasture. The value of this donation, based on a 2006 appraisal of land and timber value, is $150,000.

- Jefferson Land Trust will provide a match of $3,500 of in-kind staff support for administering transfer of the conservation easements.

- Jefferson Land Trust will provide a land match of $112,400, based on a portion of the appraised value of two conservation easements obtained in April of 2006 on the East Fork of Tarboo Creek as part of Phase I of the Lower Tarboo Creek Wetlands Project. Yeakel-Purdy donated a 21-acre conservation easement for an appraised value of $237,500 and a Jefferson County Conservation Futures Grant paid for an upstream conservation easement of 47 acres appraised at $95,000.

- NWI will provide a match totaling $5,000 of in-kind services toward coordinating the project.

- NWI will provide a cash donation of $65,600 toward the restoration. NWI has the funding on-hand from a major donor and cash reserves to provide this donation. However, NWI may substitute private foundation or state grant funds for existing NWI funds if these sources become available. One likely source is the Aquatic Land Enhancement Account (ALEA), which has funded NWI's Plant-A-Thons for the past two years for an average of $59,000 annually. The Plant-A-Thon is an annual event organized by NWI, whereby 200 children and parents raise money for their schools by selling tree cards and then planting several thousand trees at a prepared site in a one day event. The Plant-A-Thon has proven a successful model for involving the community in restoration. If no grant funding is available, NWI will use its cash reserves and major donor funds to meet this commitment.

Property	**Acres**	**Conservation approach**	**Total Cost**	**NCWC request**	**Matching funds**
ORM	20	Fee title acquisition	140,000	140,000	
Reinertsen	10	Fee title acquisition	75,000	75,000	
McDonald	74	Fee title acquisition	420,000	420,000	
Yeakel-Purdy	20	Conservation easement	150,000		150,000 in-kind
All properties	124	Real estate transaction costs, appraisal, survey	98,500	76,500	5,000 – NWI in-kind 13,500 – cash Freeman 3,500 – JLT in-kind &
E. Tarboo Ck	67	Land match (JLT acquired CE in 2006)	112,400		$112,400- JLT land match (CE value)
		Grant Admin-Ecology	10,000	10,000	
Total Wetland acreage	74	Wetland and stream Restoration	114,100	48,500	65,600–NWI cash
Totals	**124**		**1.12 M**	**770,000**	**350,000**

C7. FORM DI-2010 - ATTACHED.

C8. SUMMARY FORM 3-2179 - ATTACHED.

C9. STATE TRUST FUND THAT SUPPORTS A REQUEST FOR A 75% FEDERAL SHARE

Motor vehicle license plate funds (WDFW)
Washington Wildlife Recreation Program (WWRP)
Washington Department of Natural Resources (DNR) Aquatic Lands Enhancement Account (ALEA – aquatic lands lease revenues)
Interagency for Outdoor Recreation (IAC) Riparian Corridor Funds

C10. RELATIONSHIP TO OTHER PROJECTS:

The proposed project secures the key remaining parcels of the Lower Tarboo floodplain, a culmination of over two decades of acquisition and restoration work along Tarboo Creek and Tarboo-Dabob Bay. The proposed parcels are critical for the overall effort to restore the health of diverse salmon runs in Tarboo Creek and protect Tarboo-Dabob Bay. The project is related to the following projects.

- A comprehensive, field based assessment of the Tarboo watershed, including Tarboo-Dabob Bay, was initiated by Northwest Watershed Institute and 14 project partners in 2001. This assessment provided extensive historical and biological data on the watershed and identified the Lower Tarboo floodplain as a conservation priority.

- As the Puget Sound region has urbanized, efforts have been made to identify and prioritize remaining wetlands. The Tarboo-Dabob region has been identified as conservation priority in numerous plans including the *Pacific Coast Joint Venture Strategy*, The Nature Conservancy's *Eco-regional Conservation Plan*, and the Trust for Public Land's Report on *Conservation Priorities for Puget Sound Salmon*.

- The proposed project protects and restores four of the ten Priority One Habitats of Conservation Concern listed in Washington's Comprehensive Wildlife Conservation Strategy (2005), including Westside Riparian-Wetlands, Herbaceous Wetlands, Westside Lowland Conifer-Hardwood Forest, and Bays and Estuaries. The proposed project protects habitat for numerous species of birds, fish, and amphibians listed as Species of Greatest Conservation Need in the Strategy, including a diversity of federal and state Threatened, Endangered, and Candidate species.

- Northwest Watershed Institute and project partners have successfully completed a significant amount of restoration in the Tarboo watershed since 2001. NWI has

worked with Jefferson County, NOAA Fisheries, USFWS, and private landowners to successfully complete 12 fish passage projects in the watershed, opening up most of the streams to salmon. Several stream re-meander and wetland restoration projects have been completed, including an 8-acre project on the Freeman property in 2005, a "pilot project" for the larger restoration effort on the downstream 200-acre Yarr Preserve property that has begun with 1.1 million dollars in NRCS cost-share, U.S. Fish and Wildlife Private Stewardship Program, and state funds.

- Over the past two decades, project partners have protected 875 acres of critical wetland and riparian habitat along Tarboo Creek and Tarboo-Dabob Bay as part of a comprehensive program to protect one of the highest quality estuaries and potentially productive stream systems remaining in the rapidly developing Puget Sound region. Northwest Watershed Institute, Jefferson Land Trust, The Nature Conservancy, Washington Department of Fish and Wildlife, and Washington Department of Natural Resources – Natural Areas Program have conserved and holds, through fee acquisition and conservation easement, properties totaling 875 acres within the Tarboo watershed, as detailed in the following table.

Properties	Acres	Benefits
Dabob Bay Natural Area Preserve (DNR and TNC)	350	High quality saltmarsh, mudflats and forested shorelines on both sides of Tarboo-Dabob Bay.
Lower Tarboo Creek Critical Habitat Area (WDFW)	160	High quality floodplain forest on both sides of the mainstem of Tarboo Creek and located at the head of Tarboo Bay.
Ryan Dicks Conservation Easement (CE) (JLT)	47	A permanent conservation easement on the upper East Fork of Tarboo Creek.
Yeakel-Purdy East Fork Tarboo Creek CE (JLT)	21	A permanent conservation easement adjacent and downstream of Dicks CE. Both conservation easements protect the entirety of the lower East Fork Tarboo Creek.
Yarr Nature Preserve (NWI and JLT)	200	Phase I acquisition, now owned and managed by NWI for wetland and salmon restoration and a regional environmental education and research facility. JLT holds a CE on the property.
Freeman CE (JLT)	17	A permanent conservation easement held by JLT. Stream and floodplain restored in 2004-5 by NWI.
Pokorny CE (JLT)	80	80 acres to be placed under CE in 2007 to protect stream, floodplain and forest along upper Tarboo Creek.

C11. PUBLIC INVOLVEMENT:

The proposal has received broad based support from local, state, federal and tribal governments, industry, local salmon restoration groups, and the local community. Two public meetings were held in 1994 in Belfair and Brinnon to receive local input on the Pacific Coast Venture Strategic Plan, including the Tarboo-Dabob component. Also, Tarboo Creek and Tarboo-Dabob estuary have been the focus for two decades of acquisition and restoration work by a broad range of agencies and groups. The following 26 organizations are partners with Ecology and Northwest Watershed Institute in the long-term effort to protect and restore the Tarboo watershed, including Tarboo-Dabob Bay.

Tarboo Watershed Restoration Program Partners
Bonneville Environmental Foundation
Bullitt Foundation
Broadspit Oyster Company
FishAmerica Foundation
Hood Canal Coordinating Council
Hood Canal Environmental Council
Hood Canal Ranger District
Jefferson County Conservation District
Jefferson County Marine Resources Committee
Jefferson County Public Works
Jefferson Land Trust
National Fish and Wildlife Foundation
NOAA Fisheries and Community Based Restoration Program
Olympic Music Festival
Pacific Coast Joint Venture
Point No Point Treaty Council
Port Townsend Marine Science Center
Private landowners in the Tarboo valley
Rock Point Oyster Company
The Nature Conservancy
The Switzer Foundation
USDA Natural Resource Conservation Service
USFWS Private Stewardship Program
Washington Department of Fish and Wildlife
Washington Department of Natural Resources Natural Areas and Natural Heritage Programs
Washington Trout