



Lead Entity

## **North Olympic Peninsula Lead Entity 2008 Three Year Work Plan Narrative**

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**Table of Contents**

**Workplan Narrative ..... Page 3**

**Table A – Project Narratives..... Page 9**

**Acronym Key ..... Page 41**

**Table B – Ranking of Habitat Projects..... Page 42**

**Table C – Ranking of Non-Capital Projects..... Page 43**

**Technical Note ..... Page 44**

**Matrix Priority Tiering Method..... Page 63**

## Introduction

While there are many different organizations in Clallam County working on saving salmon and ecosystem protection and restoration, the North Olympic Peninsula Lead Entity for Salmon is unique in its big picture approach. The North Olympic Peninsula Lead Entity is the umbrella organization that brings representatives from most of the different stakeholder groups together to coordinate salmon recovery efforts on the North Olympic Peninsula.

NOPLE Members include representatives of:  
The Jamestown S’Klallam, Lower Elwha Klallam and Makah Tribes, Clallam County, the Cities of Port Angeles and Sequim, Olympic National Park, Clallam Conservation District, the North Olympic Salmon Coalition, WA Department of Fish and Wildlife, and the Puget Sound Partnership.

There are citizen members who participate with NOPLE as well as through their work with the Dungeness River Management Team, Elwha Morse Management Team and WRIA 19 Planning Group. There is also participation and coordination with the North Olympic Land Trust and the Wild Fish Conservancy, as well as members with ties to sports fishing, harvest and hatchery.

The North Olympic Peninsula Lead Entity (NOPLE or Lead Entity) was established to determine priorities for habitat protection and restoration projects and actions within the Lead Entity geographic area.

In 1998, the Washington State Legislature passed the Salmon Recovery Act (HB 2496, now codified along with several amendments under RCW 77.85) to address the decline of salmon in this state. The Salmon Recovery Act set up the Salmon Recovery Funding Board (SRFB) and the Lead Entity Program.

Washington State is one of the recipients of the yearly-allocated federal Pacific Coastal Salmon Recovery Fund. The Washington State legislature allocates a certain portion of these funds to the SRFB. The SRFB allocates these funds to salmon habitat recovery projects based on a competitive process that is coordinated locally by the respective lead entities. Each lead entity is responsible for coordinating the process of identifying and prioritizing salmon recovery projects within certain geographical boundaries. NOPLE is one of these lead entities.

## Purpose of Document

This narrative is meant to act as a companion document to both the NOPLE 2008 Salmon Recovery Strategy (NOPLE Strategy) and the 2008 Work Plan Matrix.

The NOPLE Technical Review Group (TRG) has recently completed an update of its strategy. The 2008 NOPLE Salmon Recovery Strategy describes this

process and presents the goals and objectives adopted by the group. The NOBLE Strategy is intended to provide clear and concise direction to NOBLE's activities, programs and projects, and more specifically, to form the basis for the rolling 3-year work plan.

This plan uses a strategic approach for prioritizing activities and tasks and evaluating their effectiveness. This strategic approach is described in detail in the NOBLE Strategy. In summary, development of a vision leads to goals necessary to achieve that vision. Measurable objectives and their corresponding success metrics are derived from the goals. Assessments of existing conditions lead to strategies for achieving objectives. Strategies identify tasks and these tasks must be prioritized according to criteria that are derived from the success criteria. Tasks are commonly referred to as projects and will appear in the work plan. The work plan, with its prioritized tasks or projects, helps guide the group in seeking funding to implement actions needed to help save salmon.

The NOBLE Strategy also addresses the following:

- Change in geographic scope
- ESA Species Recovery
- Integration of Recovery Plans for various ESA listed species
- Ecosystem recovery objectives from the Puget Sound Partnership (PSP)

### Decision Making Process

As part of the strategy update, the NOBLE Technical Review Group adopted a new approach to sequencing and prioritizing projects and activities for implementation. The *Technical Note NOBLE Decision-Making Procedures with Screens, Criteria, and Weights* (Pearson, April 2008) details the multiple criteria decision making process adopted by the group and is presented in Appendix A.

The following presents a summary of the process (please see the Technical Note for a detailed description.)

First the project or activity uses the following screens for inclusion on the draft list:

1. Is the project within the NOBLE area or scope of approved regional plan?
2. Is there a Landowner Acknowledgement? (Not required for an assessment or design study)
3. Is the project in a proper place in sequence of recovery actions?
4. Has the project considered other H management strategies?
5. Has the project considered PSP ecosystem recovery objectives?
6. Does the project have match or in kind funding? (Not required if an assessment or design study)

7. Is the project request below the funding request limit?

Next, narratives were submitted and the NOPLE Technical Review Group scored the projects against the following criteria:

For Habitat Projects:

- Watershed Priority
- Addresses limiting factor
- Addresses stock status and trends
- Benefits a listed stock covered by recovery or implementation plan
- Benefits other stocks
- Protects high-quality fish habitat
- Restores formerly productive habitat
- Supports restoration of ecosystem functions
- Likelihood of success based on applicant's past success in implementation
- Likelihood of success based on approach

The following criteria were not used to score conceptual projects but will be employed when actual project proposals are submitted:

- Reasonableness of cost and budget
- Extent of match, in-kind, or other external funding
- Extent of Partnerships
- Socio-Political Considerations

For Non-Capital Projects, criteria were:

- Advances robust harvestable stocks
- Advances implementation of recovery plans
- Advances habitat protection and restoration
- Advances recovery of ecosystem function
- Advances ecosystem awareness
- Advances integration
- Fulfills requirements from external entities
- Advances multi-agency funding strategy
- Has large spatial-temporal scale of effects

Project narratives are presented in Table A. Scoring from Lead Entity and Technical Review Group members was compiled and projects were ranked. Summaries of the project ranking are presented in Table B. (The data from reviewers and computation of scores is presented in Appendix B.)

While the adoption of a new strategy and decision making process has served to focus the group's priorities, much of the actual work to be done remains the

same. Consequently, many of the projects included on the work plan were included in previous work plans. However, the group has added additional needed activities in response to previous reviews and input from regional entities. Notably, the group has included a much needed non-capital project for increased coordination across the NOPLE area.

### Accomplishments and On-Going Projects

#### WRIA 17 (Quilcene-Snow)

- Pitship Pocket Estuary Restoration
- Working with Hood Canal Coordinating Council on Joint Summer Chum Process for 2008 SRFB Round & Regional Recovery Board

#### WRIA 18 East Dungeness

- Lower Dungeness Floodplain Acquisition
- Funding for Additional Acquisition needed for Dungeness Floodplain
- Lower Dungeness River Dike Setback, Phase I
- Clallam-Cline Irrigation, Phase II
- Meadowbrook Creek Feasibility and Design
- Rivers End Flood Plain Restoration
- Rivers End Salt Marsh Restoration, Phase II
- Conceptual design for McDonald Creek diversion and dam removal
- Cline Spit Estuary Restoration
- Develop comprehensive stormwater management plan for the Sequim-Dungeness watershed
- Jamestown S'Klallam Tribe's Watershed Plan is first by a tribe in the nation to be certified by the U.S. Environmental Protection Agency.
- Dungeness River Management Team celebrates 20 year milestone.

#### WRIA 18 West Elwha-Morse

- Morse Creek Riverine Restoration Design & Construction Set-Aside funds
- Valley Creek Restoration Planning, Phase II
- Re-establishment of the Elwha Morse Management Team
- Creosote Piling Removal in Port Angeles Harbor
- Elevation of Clean-up Efforts at former Rayonier Site
- In redevelopment survey, public identifies possibility of protecting mouth of Ennis Creek Estuary.
- Elwha River Estuary Restoration
- Contracts issued for public works projects required prior to Elwha Dam removal

## WRIA 19 Lyre-Hoko

- Development of WRIA 19 Addition to the Chinook Recovery Plan
- Pysht Estuary Engineering Assessment
- Pysht River LWD, Phase I
- Salt Creek Barrier Correction, Phase I
- WRIA 19 Stock Assessment
- Continued work on WRIA 19 In-Stream Flows
- WRIA 19 Planning Unit Adoption of 9 Stream Studies
- Genetic evidence of listed salmon discovered during Nearshore Assessment of Juvenile Fish Use sent to NOAA for review.

## Across All WRIAs

- DOE/EPA funding for all WRIA workshops
- Nearshore Assessment of Juvenile Fish Use
- Riparian Protection Initiatives
- Partially completed Mapping of Clallam County roadside ditches that are part of the stream network
- NOPLÉ engages in Strategic Planning resulting in updated Strategy.
- NOPLÉ increases diversity and participation of TRG.
- NOPLÉ reestablishes after geographic reorganization.
- NOPLÉ begins work with PSP, new regional salmon recovery organization.
- NOPLÉ engages with Hood Canal Coordinating Council regarding summer chum recovery efforts.
- NOPLÉ works to support Shared Strategy and Puget Sound Action Teams request for new legislative funding for capital projects
- NOPLÉ applies for and receives almost \$5 million in new project funding, a quadrupling of funds received the previous year

## Challenges

Despite the recent reduction in geographic scope, the NOPLÉ area remains a large and diverse physical and political landscape. In the 2007 TRT review, it was noted:

*The take home message is more coordination, synthesis, and reporting of all the moving parts is needed to enable communications in regard to whether progress towards recovery objectives and long-term goals is starting to occur.*

The NOPLÉ LEG and TRG have addressed this issue in good faith and yet remain constrained by the lack of staff and capacity. The TRG now has a workplan with a prioritized project list that is integrated across all watersheds. It also has a separate scoring and ranking process for non-capital projects. As noted in the ranking totals, the top two ranking activities are the development of a NOPLÉ area wide monitoring program and increased capacity of NOPLÉ staff to

address coordination and project development needs. The ‘take home message’ has been received: however, without additional funding, corrective action will be difficult to implement.

A second matter regards the difficulty that project sponsors have encountered with habitat protection acquisitions. Project sponsors have reported that a lack of capacity at the WA Dept of Fish and Wildlife has hampered acquisitions. A specific example is the acquisition of property that would have allowed the setback of the Haller Dike on the Dungeness. WDFW was not able to agree to lands transfer and the purchase could not be completed. There is now a house there and the opportunity has been missed. The example illustrates the point that capacity has to be built among all the relevant organizations, not just within NOPLE.

Another concern reported by local project sponsors is the lack of communication between those involved within differing parts of the fisheries and habitat management. For example, one project sponsor indicated that needed restoration was being delayed due to a recreational fishery being supported in the same area. This appears to be exactly the type of situation that the regional recovery team hopes that local managers can address. However, this type of a coordinated effort requires further staff time and support.

Conclusion

NOPLE has invested a significant amount of time and resources in developing a new decision making process for sequencing and prioritizing projects and non-capital activities. The three year work plan should be regarded as a living document or work in progress. Appropriately, the work plan should be subject to the same review, evaluation and adjustment that are recommended in the 2008 NOPLE strategy. It is intended that the 2008 NOPLE Strategy and Three Year Work Plan advance the coordinated and integrated efforts necessary for salmon recovery and protection.

**Table A – Project Narratives**

<b>No.</b>	<b>Project Description</b>	<b>Likely Sponsor(s)</b>
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No.	Project Description	Likely Sponsor(s)
<b>Habitat Capital Projects</b>		
<b>WRIA 19 (Lyre – Hoko)</b>		
1	<p><b>Hoko (phase I) - Emerson Flats LWD restoration</b> - The first phase of the project will restore spawning and rearing habitat in the Hoko Mainstem, approximately RM 6, which is known Chinook habitat. Adding LWD to this reach will create habitat complexity, providing sheltering areas for spawning adults and rearing fingerlings. It will also reduce scour and assist in gravel bed creation and maintenance. This project will benefit Chinook as well as coho, chum, steelhead and cutthroat.</p>	Makah
2	<p><b>Hoko (phase II) mainstem (RM 1-7) riparian revegetation</b> - This project will compliment phase I by restoring the riparian zone along the Hoko Mainstem, RM 1-7, which is known Fall Chinook habitat. Revegetation of riparian zones will increase channel stability thereby reducing sediment impacts and improving water quality in this reach of the river. The floodplain and channel migration zone will benefit from increased roughness by reducing water velocity and increasing floodplain storage capabilities and creating access to greater diversity of habitat for all salmonids. Shade and eventual LWD recruitment will continue to improve resting and rearing conditions in the mainstem for returning adults and rearing young. Reducing sediment will improve spawning bed and egg incubation conditions. The project will benefit Hoko Fall Chinook as well as coho, chum, steelhead and cutthroat.</p>	Makah
3	<p><b>Hoko (phase III) - Herman Creek LWD restoration</b> – This phase of the project will restore formerly productive spawning and rearing habitat to Herman Creek, a Tributary to the Hoko River and known Chinook habitat. Adding LWD to this tributary will create habitat complexity, providing sheltering areas for spawning adults and rearing fingerlings. It will also reduce scour and assist in gravel bed creation and maintenance. Herman creek provides high quality habitat for Chinook as well as coho, steelhead and cutthroat.</p>	Makah
4	<p><b>Little Hoko River (RM 0-) LWD restoration</b> – The Little Hoko River received extensive habitat restoration efforts between 1994 and 1998. Projects included cattle exclusion, planting of 20,000 native trees and shrubs, floodplain road abandonment, off-channel habitat development and restructuring of channel habitats using LWD. Monitoring has shown that the project has been partially successful in restoring channel and riparian habitat features. Additional LWD treatments have been identified to facilitate floodplain reconnection particularly in channel reaches that have heavily incised. This project would involve the addition of free key pieces (~200) using a heavy lift helicopter. The Little Hoko River provides habitat for Chinook, coho, steelhead, chum and cutthroat trout.</p>	Elwha

No.	Project Description	Likely Sponsor(s)
5	<p><b>Sekiu mainstem (RM 2-5) LWD restoration</b> - The current Fall Chinook population returning to the Sekiu is very low and habitat needs to be improved to facilitate recovery of this traditional Chinook population. Furthermore, this watershed has been severely impacted by logging and road impacts. This project will restore spawning and rearing habitat in the Sekiu Mainstem, which is known Chinook habitat. Adding LWD to this reach will create habitat complexity, providing sheltering areas for spawning adults and rearing fingerlings. LWD also has the potential to moderate temperature by creating large deep pools. It will also assist in gravel bed creation and maintenance. This project will benefit Chinook as well as coho, chum, steelhead and cutthroat. Improvement of upland habitat conditions will contribute to recovering health of estuarine areas and the nearshore migration corridor, which is used by a wide variety of species and stocks as they exit and return to Puget Sound.</p>	Makah
6	<p><b>Sekiu, Clallam, Pysht riparian revegetation</b> - This project will restore the riparian zone along the independent tributaries to the Strait of Juan de Fuca. All of these rivers are known Chinook habitat, although current populations are much depressed. Revegetation of riparian zones will reduce sediment impacts, improve water quality, and restore CMZ habitat and function. Shade and eventual LWD recruitment will continue to improve resting and rearing conditions in the mainstem for returning adults and rearing young. Reducing sediment will improve spawning bed and egg incubation conditions. This project will benefit Chinook as well as coho, chum, steelhead and cutthroat. Improvement of upland habitat conditions will contribute to recovering health of estuarine areas and the nearshore migration corridor, which is used by a wide variety of species and stocks as they exit and return to Puget Sound.</p>	Makah/Elwha
7	<p><b>Salt Creek Final Fish Passage Corrections</b> – Watershed analysis for Salt Creek has identified human caused barriers as the highest priority for restoration. Most of the barriers have been caused by culverts at road crossings. To date, significant progress has been made correcting these barriers. Of the 28 barriers to fish passages identified in the watershed analysis, 15 have been or will be corrected by 2011. This proposal would treat the remaining culvert barriers with the goal of correcting all fish passage barriers in the watershed. Most of the remaining barriers are small streams with undersized culverts on privately owned roads. Salt Creek supports a productive coho salmon population as well as populations of steelhead, chum and cutthroat.</p>	Elwha/CC/CCD
8	<p><b>Salt Creek LWD (RM 2.0-3.0)</b> - This project is an extension of an LWD project completed in 2006 between river mile 3.0-4.0. This reach contains low gradient channel types that have been extensively</p>	Elwha

No.	Project Description	Likely Sponsor(s)
	<p>logged and intentionally salvaged to facilitate fish passage. These actions have accelerated channel incision processes and much of the channel bed is now exposed bedrock. LWD placement is proposed to provide sediment storage sites in simplified channel reaches. Aggradation of sediments around LWD placement sites would increase channel bed elevations and provide restored spawning and rearing habitat.</p>	
8A	<p><b>Salt Creek Habitat Protection</b></p> <p>The goal of this project is to permanently protect, by means of conservation easements, the best existing functional spawning and rearing habitat for coho salmon in the Salt Creek Watershed. Salt Creek historically had relatively high productivity and supported significant runs of coho, steelhead and cutthroat as well as chum and Chinook. Specific properties have already been identified in Appendix 1 of <i>Salt Creek Watershed: An Assessment of Habitat Conditions, Fish Populations and Opportunities for Restoration</i>, a report prepared by Mike McHenry and Randall McCoy of the Lower Elwha Klallam Tribe Fisheries. The Assessment identifies <u>conversion</u> as the greatest risk to salmon. Conversion is imminent in the Salt Creek watershed unless habitat preservation is addressed. The Land Trust will contact landowners identified in the Assessment as well as landowners with property adjacent to the estuary and Crescent Bay to discuss conservation easements. The Land Trust will negotiate with willing landowners to acquire development rights by purchase and/or donation. Habitat protection in perpetuity will ensure that the best existing habitat for salmon is not converted to development. Project partners include landowners who donate their development rights to the project and Clallam County. Additional partners include LEKT and WDFW as technical advisors.</p>	NOLT
<b>WRIA 18 (Elwha-Morse)</b>		
9	<p><b>Morse Creek (RM 3.0-4.5) LWD restoration</b> – This project targets LWD restoration in upper Morse Creek from the Four Seasons Park Development to the limits of accessible salmon habitat at the cascades. This reach contains the best existing habitat that provides the majority of spawning habitat for species such as pink, steelhead and coho salmon. However, the reach is chronically deficient in LWD. As a result, low and moderate gradient habitats within the reach are largely plain-bed channels, characterized by large substrate, and limited pool habitat. LWD restoration has been proposed to slow stream velocities thereby increasing sediment (gravel) storage sites for spawning. Access is extremely limited in the reach and LWD projects will likely have to use heavy lift helicopter techniques.</p>	Elwha /NOSC

No.	Project Description	Likely Sponsor(s)
10	<p><b>Morse Creek remeander (WDFW Property)</b> This project will restore high quality mainstem, side channel, and off-channel habitat historically used by all the imperiled Morse Creek salmonids and also by coastal cutthroat trout. Work will include 1) removal of 1,100 feet of dike, 2) restoration of the 1939 stream channel, reconnection of the stream with 9.3 acres of floodplain, and 3) construction of two or more substantial engineered log jams. Morse Creek is a medium-sized tributary to the Strait of Juan de Fuca. It is inhabited by ESA listed Strait of Juan De Fuca summer chum, bull trout, pink salmon, coho salmon and winter steelhead. Puget Sound Chinook were recently extirpated in Morse Creek. Much of the stream reach within the WDFW property (river mile 1.2 to 1.7) is severely degraded by human impacts. It is channelized, confined, over-steepened, diked and depleted of large wood, resulting in severe channel simplification. The channel is extremely energetic, paved with large cobbles and boulders, and lacks complexity. Fish habitat conditions are extremely poor. The project will address limiting factors related to increasing stream length, complexity, riparian habitat, and floodplain connectivity to increase and improve spawning and rearing habitat for all salmonids historically and potentially using Morse Cr. Project partners include WDFW and the Lower Elwha Klallam Tribe. The project is identified as a high priority for WRIA 18 and is timely given WDFW ownership, completion of a feasibility study and partial construction money in hand through WDFW.</p>	NOSC /WDFW/ Elwha/JSKT
11	<p><b>Elwha ELJ's</b> – Removal of two hydroelectric dams on the Elwha River is scheduled for 2012 as authorized by the Elwha River Ecosystem and Fisheries Act (PL102-495). Complementary to this large scale ecosystem restoration project, efforts are being made to restore floodplain habitat conditions in the lower Elwha River prior to dam removal. These include removal of unnecessary flood control structures, addition of large wood in the form of engineered logjams, floodplain revegetation, and pre-project monitoring. Between 1999 and 2004, 21 engineered logjams were constructed in the vicinity of river mile 2.5. An additional 35-50 ELJ sites have been identified to maximize habitat conditions prior to dam removal. Although partial funding has been obtained to construct these structures, additional funding is likely to reach target ELJ levels. The Elwha River supports highly imperiled populations of pacific salmon including listed populations of Chinook salmon, steelhead and bull trout.</p>	Elwha
12	<p><b>Valley Creek restoration Phase III</b> - Remeander middle section of Valley Creek between Hwy 101 and PA Harbor. This phase is the remeandering of approximately 2,000 feet of Valley Creek. This portion of the creek is not in a culvert but has been channelized to facilitate road stability and to protect adjacent property owners from flooding. The city has acquired several parcels of property with the</p>	City of PA

No.	Project Description	Likely Sponsor(s)
	<p>intent to free the watercourse of its channel constraints. Additional work along the creek channel will be completed as a mitigation action from impacts of construction of the 8th Street bridge that spans this section of the creek approximately midway along the reach length. The project addresses altered stream morphology and channel structure.</p>	
13	<p><b>Tumwater Creek estuary restoration</b> - This project would include the removal of existing sheet pile that currently contain and channelize the portion of Tumwater Creek north of Marine Drive. Additional activities would require some land acquisition and the reshaping of the estuary banks to a more natural configuration. Regraded banks would need to be revegetated with native riparian plants. The project addresses altered stream morphology, habitat, and channel structure.</p>	City of PA
14	<p><b>Lower Elwha hatchery outfall and berm removal</b> – The Lower Elwha Klallam Tribal hatchery was constructed in the Elwha River floodplain in 1975 to mitigate losses of fish from two hydroelectric dams. A 2000’ channel was constructed between the hatchery and the river to allow ingress and egress of fish to the facility. The channel was constructed as a straight ditch and spoils that were excavated from the floodplain were placed on both sides of the channel. This has resulted in a perpendicular dike across the Elwha Rivers floodplain. The current hatchery site is expected to be abandoned as a new facility will be built upstream beginning in 2009. This project proposes to fill the existing channel by removing berm deposits to reestablish native floodplain elevations. This project will improve floodplain connectivity and allow historic floodplain channels to reactivate.</p>	Elwha
15	<p><b>Elwha culvert replacement</b> - We propose to restore bull trout and anadromous salmonid refugia in the Elwha Watershed (OLYM) through the replacement of undersized barrier culverts on Olympic Hot Springs Road at Griff Creek, Madison Creek, and two other unnamed tributaries to the Elwha River. This project needs to proceed dam removal on the Elwha River (scheduled to begin in 2012) as culvert replacement will provide access to more than 1500 meters of high quality riverine habitat, providing critical, clear-water refuge habitat for bull trout and other fish species during the period of removal of the Glines Canyon and Elwha dams (when the mainstem of the river will carry large loads of sediment). Culvert replacement will also restore access to important tributary spawning and rearing habitat for all anadromous fish species following dam removal. The existing culverts will be replaced with culverts sized according to Washington State guidelines. The existing culverts are complete or partial barriers to upstream migration of bull trout (a threatened</p>	Elwha/ONP

No.	Project Description	Likely Sponsor(s)
	species), rainbow trout, cutthroat trout, other resident fish species in the Elwha watershed, as well as anadromous salmonids (including listed Puget Sound steelhead and Chinook) following removal of the dams. This project would be implemented through a partnership between the Elwha Tribe and Olympic National Park.	
15A	<b>Ennis Creek Habitat Restoration &amp; Protection-</b> Continuation of prior restoration including addition of large woody debris and boulder placement. Also, augment existing wetlands and riparian tree planting to replace destroyed forest canopy and establish stormwater management ponds to filter runoff from an adjacent new housing development. The property has been designated as a sensitive area by the City of Port Angeles and our local salmon recovery plan describes Ennis Creek as the Port Angeles urban independent stream with the greatest potential, based on its variety of stocks, its snow-fed origins, and its relatively pristine conditions. Its importance was also noted because of its accessible location for public education and outreach. Stocks include coho, winter steelhead and cutthroat trout, and Dolly Varden have been documented there. Fall chum are believed to have been extirpated.	Elwha/NOLT
<b>WRIA 18 (Dungeness)</b>		
16	<b>Lower Dungeness Dikes Setback, Phase II</b> - Floodplain and river recovery in the lower 2.6 miles was ranked #1 by the DRMT and #2 in EDT. The lower river is straightened between two dikes, which cuts off relic meanders and a substantial area of floodplain (River mile 0.8-2.6). Two dimensional modeling has shown that floods greater than bankfull would occupy floodplain beyond the dikes on both sides of the river. Phase I funding was awarded for engineering and design. Phase II funding is needed for project construction. The costs are based on moving and reconstructing at a new location the entire east dike from Schoolhouse Bridge to roughly RM 1.8 (just downstream of the Brown property). In addition, funding is needed for the setback of the Beebe dike on the west bank. This is considered the most important project for habitat recovery in the Dungeness. Historically this was prime summer chum and lower pink spawning habitat, and rearing and feeding habitat for Chinook and bulltrout. Summer chum is practically extirpated in the Dungeness. Summer chum spawning habitat is entirely contained within the diked reaches. This project must be completed at the same time as the channel remeandering and ELJ placement project listed as phase III	CC/ACOE
17	<b>Lower Dungeness Channel Remeandering and Engineered Log</b>	JSKT/CC/ACOE

No.	Project Description	Likely Sponsor(s)
	<p><b>Jam placement, Phase III</b> - Floodplain and river recovery in the lower 2.6 miles was ranked #1 to 3 by the River Restoration workgroup, and Phase II/III are a major first step to habitat recovery in the watershed (Dungeness River Restoration Workgroup and DRMT). This is a phased recovery plan. Phase I is for engineering and design. Phase II is dike setback; Phase II and III together account for four limiting factors: riparian condition (allow for riparian establishment and recovery), floodplain modifications (recover floodplain condition), channel condition (remeander the channel in this reach), and water quality (fine sediment deposition in the floodplain). The Bureau of Reclamation in their report "Physical processes, human impacts, and restoration issues of the lower Dungeness River," found that the riverbed has aggraded at multiple locations within the diked reach due to sediment deposition upstream of constrictions caused by dikes. Aggradation was found up to be up to 8 ft. The purpose of Phase III is to strategically remeander the river and add wood to prevent channel avulsion into agricultural fields following the dike setback. Phase III construction would occur during or following Phase II construction.</p> <p>This is considered the most important project for habitat recovery in the Dungeness. Historically this was prime summer chum and lower pink spawning habitat, and rearing migration, and feeding habitat for Chinook, bulltrout and steelhead. Summer chum is practically extirpated in the Dungeness. Summer chum spawning habitat is entirely contained within the diked reaches, this project would help redress the poor habitat condition for this ESA species</p>	
18	<p><b>Dungeness corridor (RM 3.0 -RM 10.5) habitat protection</b> - This project is a combination of all identified protection acquisitions from RM 2.6 to 11.3. It directly implements an LFA Action Recommendation: "protect side channels." Priority projects have been identified in Recommended Land Protection Strategies for the Dungeness River Riparian Area (2003). The Protection Strategy focused on protecting side channel habitat, in the lower Dungeness are critical as productive rearing habitat utilized by all salmonids, especially coho, steelhead/cutthroat, and Chinook. Some of these side channels also serve as spawning habitat for coho, steelhead, pink, chum, and Chinook. This project addresses four limiting factors: protecting functional side channels, preventing floodplain modifications, protecting water quality by maintaining off-channel habitat and functional floodplains, and protecting riparian forests.</p> <p>The River Restoration Work Group reaffirmed priorities in 2006 in a cooperative planning effort with WDFW and USFWS. Protection in perpetuity could be achieved by fee simple or conservation easement purchase. Conservation easements would meet a rigorous standard</p>	WDFW/NOLT/ JSKT

No.	Project Description	Likely Sponsor(s)
	<p>of habitat protection through review by the River Restoration Work Group. This action increases certainty of recovery (outlined in the 2005 Technical Gap Analysis) by emphasizing habitat protection of functional habitat over the short term, to help prevent a long-term hatchery program that could domesticate Chinook. Dungeness valley is rapidly growing in population, and the window of opportunity to acquire critical riparian habitat is likely confined to the next few years.</p>	
<p>19</p>	<p><b>Dungeness riparian reforestation</b> – This is a long-term need. We have two years of funding, additional funding will be needed beginning in 2009. This directly implements an Limiting Factors Analysis Action Recommendation: restore functional riparian forest throughout the watershed.</p> <p>In the lower Dungeness River corridor (from the mouth to RM 10.5), approximately 20% of riverbank riparian vegetation has been removed or significantly denuded. Problem areas are the Mouth to Hurd Creek, downstream of RR Bridge, and Hwy 101 to May Rd. Loss of native riparian cover allows colonization of invasive species, reduced filtering of sediments and pollutants (fine sediment and water quality), and depleted reserves for woody debris recruitment into the river (channel condition). Four of the above limiting factors are addressed by this project; this is a long-term investment in the river.</p> <p>The purpose of this project is to continue an information and outreach campaign to motivate riverside owners to protect or replant native riparian areas, to provide technical assistance and planting, and control noxious weeds as needed. We are collecting data on areas where noxious weeds were controlled and also replanted.</p>	<p>JSKT/CCD/CC Noxious Weed Board</p>
<p>20</p>	<p><b>Agnew Irrigation District piping</b> - The proposed project involves replacing approximately 8 miles of the Agnew Irrigation District A-18 and A-22 laterals with pipeline. The project will result in an estimated in-river water savings of 0.8 cfs. A secondary benefit of the project is to improve water quality by eliminating the pathway for contaminants that enter the irrigation system at these ditch locations. The ditches proposed for pipes tail into McDonnell and Agnew Creeks. This project will benefit all salmon stocks that utilize the Dungeness River and its tributaries. Specifically, the project is aimed at increasing Dungeness River instream flow and habitat for the four ESA-listed species: Puget Sound Chinook, Hood Canal Summer Chum, Puget Sound Steelhead, and Bull Trout.</p> <p>This project is identified as a high-priority project in the Dungeness River Agricultural Water Users Association Comprehensive Water Conservation Plan, and is recommended in several watershed-planning studies and reports. It is part of a larger community effort</p>	<p>Agnew Irrigation District/CCD</p>



No.	Project Description	Likely Sponsor(s)
	<p>toward salmon recovery and watershed restoration. This project is a joint effort of the Agnew Irrigation District, Clallam Conservation District, and the Washington Conservation Commission. Total estimated cost is \$1.5-2 million. Approximately \$1,250,000 is available through the Conservation Commission Irrigation Efficiencies Program.</p>	
21	<p><b>Dungeness Irrigation Group Water Conservation Project:</b> The Dungeness Irrigation Group Water Conservation Project is a comprehensive irrigation ditch-piping project that will result in anticipated in-river water savings of 2.5-3 cfs. Three major laterals in the Dungeness Group system and approximately 25 percent of the main canal have already been piped. This project will complete the piping of the entire Dungeness Group distribution system, resulting in complete elimination of conveyance losses, elimination of tailwater spills at the end of the system, and pollutants will no longer be able to enter the system. This project will benefit all salmon stocks that utilize the Dungeness River and its tributaries. Specifically, the project is aimed at increasing Dungeness River instream flow and habitat for the four ESA-listed species: Puget Sound Chinook, Hood Canal Summer Chum, Puget Sound Steelhead, and Bull Trout.</p> <p>This project is identified as a high-priority project in the Dungeness River Agricultural Water Users Association Comprehensive Water Conservation Plan, the Dungeness River Comprehensive Irrigation District Management Plan. This project is a joint effort of the Dungeness Irrigation Group, Clallam Conservation District, and the Washington Conservation Commission. Approximately \$1,250,000 is available through the Conservation Commission Irrigation Efficiencies Program.</p>	Dungeness Irrigation Group/CCD
22	<p><b>Dungeness Irrigation District Water Conservation Project:</b> The Dungeness Irrigation District Water Conservation Project is a comprehensive irrigation ditch-piping project that will result in anticipated in-river water savings of 3-4 cfs. The entire distribution system of the Dungeness District will be enclosed, resulting in complete elimination of conveyance losses, elimination of tailwater spills at the end of the system, and pollutants will no longer be able to enter the system. This project will benefit all salmon stocks that utilize the Dungeness River and its tributaries. Specifically, the project is aimed at increasing Dungeness River instream flow and habitat for the four ESA-listed species: Puget Sound Chinook, Hood Canal Summer Chum, Puget Sound Steelhead, and Bull Trout.</p> <p>This project is identified as a high-priority project in the Dungeness River Agricultural Water Users Association Comprehensive Water Conservation Plan, the Dungeness River Comprehensive Irrigation</p>	Dungeness Irrigation District/CCD

No.	Project Description	Likely Sponsor(s)
	<p>District Management Plan, and was nominated by the Water Users Association as one of their top two priority projects for water conservation. This project is a joint effort of the Dungeness Irrigation District, Clallam Conservation District, and the Washington Conservation Commission. More than \$1,600,000 is available through the Conservation Commission Irrigation Efficiencies Program.</p>	
23	<p><b>Sequim Prairie-Tri Irrigation District Conservation Project – SP-5 Lateral:</b> This project will result in anticipated in-river water savings of 0.8 cfs. This project will benefit all salmon stocks that utilize the Dungeness River and its tributaries. Specifically, the project is aimed at increasing Dungeness River instream flow and habitat for the four ESA-listed species: Puget Sound Chinook, Hood Canal Summer Chum, Puget Sound Steelhead, and Bull Trout.</p> <p>This project is identified as a high-priority project in the Dungeness River Agricultural Water Users Association Comprehensive Water Conservation Plan, and the Dungeness River Comprehensive Irrigation District Management Plan. This project is a joint effort of the Sequim Prairie-Tri Irrigation Association, Clallam Conservation District, and the Washington Conservation Commission. Total project cost is estimated to be \$60,000. All anticipated funding is expected to be available through a combination of the Conservation Commission Irrigation Efficiencies Program, Pioneers in Conservation grant program, and the Sequim Prairie-Tri Irrigation Association.</p>	<p>CCD/Sequim Prairie-Tri Irrigation Association</p>
24	<p><b>Highland Irrigation District Water Conservation Project – H10 Lateral:</b> This project will result in anticipated in-river water savings of 1.1 cfs and elimination of tailwater to Bell Creek. One to two miles of open ditch will be either eliminated by installing a well or replaced with pipeline. This project will benefit all salmon stocks that utilize the Dungeness River and its tributaries. Specifically, the project is aimed at increasing Dungeness River instream flow and habitat for the four ESA-listed species: Puget Sound Chinook, Hood Canal Summer Chum, Puget Sound Steelhead, and Bull Trout.</p> <p>This project is identified as a high-priority project in the Dungeness River Agricultural Water Users Association Comprehensive Water Conservation Plan, the Dungeness River Comprehensive Irrigation District Management Plan. This project is a joint effort of the Highland Irrigation District, Clallam Conservation District, and the Washington Conservation Commission. All anticipated funding is expected to be available through the Conservation Commission Irrigation Efficiencies Program.</p>	<p>CCD/Highland Irrigation District</p>
25	<p><b>Jimmycomelately riparian protection</b> - This is an acquisition or conservation easement for 62 acres (0.75 river miles) from a single owner for habitat protection. This is the only privately held riparian</p>	<p>JSKT/NOLT/WDFW</p>

No.	Project Description	Likely Sponsor(s)
	<p>property between the JCL restored channel and state/federal forests, and is the remaining major element for the restoration/protection of the lower watershed. The riparian forest and channel condition through this reach are in very good condition. All the species present in the watershed spawn and/or rear in this reach (summer chum, coho, steelhead, cutthroat). Two ESA species will benefit. Protecting this corridor will help ensure the success of the large scale Jimmcomelately restoration project (planned and implemented 1996-2005) immediately downstream and in the nearshore.</p>	
26	<p><b>Meadowbrook Creek habitat restoration Phase II</b> - Phase I was funding for design, Phase II is to implement the project. The project focuses on restoring approximately 40 acres of wetland and salt marsh associated with Meadowbrook Creek and Dungeness Bay. The properties were purchased for conservation purposes but are in seriously degraded conditions with compacted soils from livestock, modified channels and drainage ditches, and noxious weeds (both knotweed and reed canary grass). Estuary that has been degraded or eliminated no longer serves as vital refuge for juvenile salmon. Truncated tributaries and riparian channels that have been artificially narrowed by bridges that constrict the channel have a devastating impact on salmon production. High velocities impede migration and scour redds. The fact that Meadowbrook Creek has lost its historic connectivity to the Dungeness River impedes salmon migration and also affects the quality of that creek for fish populations. Sediments and nutrients build up in streams that lack the ability to effectively flush due to loss of system connectivity</p> <p>This is a high priority project as Meadowbrook Creek was historically connected to the Dungeness River, and from this historical perspective should be considered (and will be if connection is reestablished) a part of the Dungeness watershed. Because this project will include reestablishing this historic connection, and restoring estuary, there is potential for this project to impact all salmonid species and stock found in Meadowbrook Creek and the Dungeness River. Estuaries provide habitat for all species and stock at some point in their life cycle, including the ESA-listed priority salmon stock for the Dungeness Watershed. For example, Chinook in the Dungeness spend most of their first year in the estuary and near shore areas. (From Shared Strategy Watershed Profile: Dungeness).</p> <p>The project is being proposed because of the benefits to fish and other wildlife. Restoring connectivity to the Dungeness, while also restoring estuary, will increase and enhance the availability of habitat for all stocks and species, which will increase overall productivity in this area. Limiting factor analysis has identified water quality and/or</p>	Ducks Unlimited

No.	Project Description	Likely Sponsor(s)
	<p>habitat recommendations that this project will address including: Maintaining function of wetland associated with lower Meadowbrook Creek, restoring functional riparian zones (by reestablishing connectivity), and addressing floodplain connectivity.</p> <p>Project can be implemented in the next three years. Previous project funding has been for feasibility/design. The design process will take place over the next several months. Funding is being sought for the actual on the ground restoration effort. This project will provide funding for construction and monitoring. Landowners are willing and ready to proceed.</p>	
27	<p><b>McDonald Creek diversion &amp; dam removal &amp; ditch lining -</b>            McDonald Creek diversion dam blocks adult and juvenile fish passage during low flow summer months. The fish ladder is closed during summer months to increase flow into the ditch outtake. This project would discontinue using McDonald Creek to convey Agnew ditchwater and remove the possibility of attracting strays in to McDonald Creek from the Dungeness. This is an action recommendation in the LFA report.</p> <p>The project is to 1) remove the Agnew diversion dam just upriver of Hwy 101 and 2) to pipe the ditchwater into a pipe that follows alongside a county road.</p> <p>Coho, winter steelhead, and sea-run cutthroat spawn and rear both upstream and downstream of the diversion dam. Juveniles cannot move upstream in summer months, and downstream movement is either over a concrete spillway, or through a steep pipe. Both can potentially injure or kill fish.</p> <p>The best habitat in McDonald Creek is upstream of the diversion dam. The diversion dam, irrigation channel and spillway all occupy floodplain in a naturally moderately confined section of river. Removal of this infrastructure would provide opportunities for floodplain/riparian restoration and would also require WSDOT to design a wider opening when the Hwy 101 bridge at McDonald is replaced (directly downstream). At the request of Agnew Irrigation Ditch, a preliminary diversion dam/piping feasibility and cost estimate was completed by Bob Montgomery in 2004. This cost was inflation-adjusted per communication with Bob. Partners with Jamestown S’Klallam Tribe would be Agnew Irrigation District, WA Dept. of Fish and Wildlife, and potentially WA Dept. of Transportation.</p>	JSKT, Agnew Irrigation District, WDFW
<b>Nearshore</b>		
28	<p><b>Pitship Pocket Estuary Protection Project.</b> Jimmycomelately (JCL) Creek is the historic western stronghold of the Hood Canal/Strait of Juan de Fuca summer chum salmon population.</p>	JSKT

No.	Project Description	Likely Sponsor(s)
	<p>Through extensive stock recovery and habitat restoration work, JCL summer chum are recovering from near extirpation. Even in its restored condition, the JCL estuary contains limited tidal marsh habitat, a preferred habitat type for juvenile chum salmon. The Pitship Pocket Estuary (PPE) contains about 4 acres of tidal marsh habitat and is located only 3.3 miles along the marine migration corridor from the mouth of JCL Creek and is therefore considered an important part of the JCL summer chum ecosystem. Funds have been granted to restore unimpeded fish access into PPE. This habitat protection project will permanently protect PPE and a 150-foot riparian buffer, through the purchase of conservation easements.</p> <p><u>Limiting Factors Addressed</u></p> <ol style="list-style-type: none"> <li>1. "Ecosystem links between upland and nearshore habitats are extremely important. While the area may appear rural and remote, habitat loss has been identified as the most serious threat to marine ecosystems of Puget Sound and the northeast Straits. A number of human activities along the Straits and Hood Canal, in a cumulative context, have significant ecosystem effects on their respective nearshore environments." (WRIA 17 LFA)</li> <li>2. "There is broad consensus that salmon require estuarine conditions that support production of prey organisms for juvenile outmigrants as well as for juvenile salmonid rearing and for returning adults.--- Estuaries, which provide critical rearing and transition habitat for salmonids (as they move as juveniles from fresh to salt water, and as adults from the marine environment back to fresh water), have been physically altered at the mouth of many of the streams in WRIA 18, dramatically affecting the habitat and physical functions characteristic of natural estuaries." (WRIA 18 LFA)</li> </ol> <p><u>Stock Status and Trends</u></p> <p>The project addresses stock status and trends by restoring fish access to important estuarine habitat for numerous salmonid populations and forage fish.</p> <p><u>Listed Stocks</u></p> <p>Hood Canal/Strait of Juan de Fuca summer chum and Puget Sound steelhead: Jimmycomelately Creek (3 miles directly along the migration corridor), Salmon Creek and Snow Creek (18 miles east along the likely migration corridor), Dungeness River (8 miles west), Chimacum Creek (26 miles east).</p> <p>Puget Sound Chinook and bull trout: Dungeness River (7 miles west). Dungeness Chinook marine distribution data suggest that this population likely utilizes Pitship Pocket Estuary.</p>	

No.	Project Description	Likely Sponsor(s)
	<p><u>Other Stocks</u>                      Non-listed stocks originating in nearby watersheds include coho and cutthroat from Jimmycomelately Creek and Discovery Bay, and Dungeness pinks, fall chum, coho, and cutthroat. A multitude of other Hood Canal and Puget Sound salmonids also potentially utilize this habitat.</p> <p><u>Habitat Status</u>                      The project will protect high quality fish habitat that is clearly at risk. The Point No Point Treaty Council Report, <i>“Historical Changes to Estuaries, Spits, and Associated Tidal Wetland Habitats in the Hood Canal and Strait of Juan de Fuca Regions of Washington State”</i> (2006) makes the following observations. “Air photos beginning in 1977 show that the far northeast portion of the tidal marsh had been filled for a building and parking.” “A massive amount of clearing of forest immediately up-slope of the marsh is evident from the 1994 oblique air photos and this area now appears to be re-vegetating. However, a clearing of this magnitude, coupled with the proximity of roads and road crossings, likely impairs storm drainage to the marsh.”</p> <p><u>Ecosystem Restoration</u>                      The project addresses ecosystem processes by permanently protecting a pocket estuary with high value to fish and waterfowl.</p> <p><u>Partnerships</u>                      The project is envisioned as a partnership between the Jamestown S’Klallam Tribe, the Washington Department of Fish &amp; Wildlife, and the North Olympic Land Trust.</p>	
29	<p><b>Dungeness Spit Drift Cell Protection Project.</b> Dungeness Bay provides approximately 5,200 acres of critical spit and estuarine habitat for a large variety of forage fish, waterfowl, shorebirds, wading birds, marine and freshwater mammals, crustaceans, shellfish and salmonids, including Puget Sound Chinook, Puget Sound steelhead, bull trout, Hood Canal/Strait of Juan de Fuca chum, and pink salmon. Dungeness Bay is wholly created by the fragile 5-mile long Dungeness Spit. The spit itself is entirely a product of enormous sediment recruitment, originating primarily from the 8-1/2 mile drift cell to the west. Although upland areas are being developed adjacent to the Dungeness Spit drift cell (DSDC), no shoreline armoring has occurred to date. Evidence seen at similar Ediz Hood in Port Angeles demonstrates the vulnerability of Strait of Juan de Fuca spits to the loss of recruited sediment. Any significant shorelines armoring within the DSDC will seriously imperil the existence of Dungeness Spit and Dungeness Bay. Existing regulations do not provide protection from this potential devastating impact. This project will provide long-term protection for Dungeness Spit and Dungeness Bay through the</p>	JSKT

No.	Project Description	Likely Sponsor(s)
	<p data-bbox="345 306 1133 338">purchase of conservation easements along the entire DSDC.</p> <p data-bbox="345 373 703 405"><u>Limiting Factors Addressed</u></p> <ol data-bbox="345 443 1242 1010" style="list-style-type: none"> <li>1. Reduced sediment input from feeder bluffs to nearshore area, leading to A) transformation of the character of the beach, affecting the kinds of life the beach can support, and B) the degradation of the beach, resulting in loss of the shallow, nearshore migration corridors for salmonids that provide protection from predation.</li> <li>2. Permanent loss of habitat above +5 feet Mean Low-Low Water (MLLW), which represents the suitable habitat area for surf smelt and sand lance spawning.</li> <li>3. Loss of riparian vegetation that provides shade to the upper beach. Shade minimizes desiccation of baitfish eggs that are laid in high intertidal gravels and sands.</li> <li>4. Change in substrate from finer to coarser-grained material.</li> <li>5. Nearshore habitat has been significantly altered due to extensive armoring of the marine shoreline, alteration of the longshore littoral drift process (resulting from shoreline armoring and alteration of the sediment supply from streams). (WRIA 18 LFA)</li> </ol> <p data-bbox="345 1045 670 1077"><u>Stock Status and Trends</u></p> <p data-bbox="345 1115 1219 1209">The project addresses stock status and trends by maintaining expansive, important nearshore and estuarine habitat for numerous salmonid populations and forage fish.</p> <p data-bbox="345 1245 524 1276"><u>Listed Stocks</u></p> <p data-bbox="345 1314 1227 1444">Hood Canal/Strait of Juan de Fuca summer chum and Puget Sound steelhead: Dungeness River, Jimmycomelately Creek (11 miles southeast), Salmon Creek and Snow Creek (22 miles east along the likely migration corridor), , Chimacum Creek (26 miles east).</p> <p data-bbox="345 1482 1057 1514">Puget Sound Chinook and bull trout: Dungeness River.</p> <p data-bbox="345 1549 524 1581"><u>Other Stocks</u></p> <p data-bbox="345 1619 1203 1713">Non-listed stocks include Dungeness pinks, fall chum, coho, and cutthroat. A multitude of other Strait of Juan de Fuca, Hood Canal and Puget Sound salmonids also likely utilize this habitat.</p> <p data-bbox="345 1749 524 1780"><u>Habitat Status</u></p> <p data-bbox="345 1818 1252 1875">The project protects extremely high quality fish habitat, but this habitat is clearly at extreme risk. The Point No Point Treaty Council</p>	

No.	Project Description	Likely Sponsor(s)
	<p>Report, <i>“Historical Changes to Estuaries, Spits, and Associated Tidal Wetland Habitats in the Hood Canal and Strait of Juan de Fuca Regions of Washington State”</i> (2006) makes the following observations. “The Dungeness Spit and bay is broadly recognized for its ecological value to fish, waterfowl, shorebirds, and marine mammals. Though the Dungeness Spit has a long history of human presence and activity, including that of Euro-Americans, the modifications have left few or relatively subtle permanent signs, a sharp distinction from the extensive industrial alterations seen at Ediz Hook near Port Angeles. The spit is known to be dynamic and shows signs of erosion and accretion in various locations along its length (Kunze 1984). The spit is known to breach (earliest known occurrence in 1871 according to Kunze 1984) particularly in narrow low-lying sections, during winter storms, but these breaches evidently heal over in short time.”</p> <p><u>Ecosystem Restoration</u></p> <p>The project addresses ecosystem processes by permanently protecting this enormous but fragile nearshore/estuarine habitat complex. The loss of Dungeness Spit and Bay would be a catastrophic impact to the regional marine ecosystem.</p> <p><u>Partnerships</u></p> <p>The project is envisioned as a partnership between the Jamestown S’Klallam Tribe, the Washington Department of Fish &amp; Wildlife, the North Olympic Land Trust, the North Olympic Salmon Coalition, and the U.S. Fish &amp; Wildlife Service.</p>	
30	<p><b>Washington Harbor Habitat Protection Project.</b> Washington Harbor is an approximately 118-acre estuarine system at the mouth of Bell Creek and is also located adjacent to the entrance of Sequim Bay. The estuary lies 5 miles along the marine migration corridor of Puget Sound steelhead and Hood Canal/Strait of Juan de Fuca summer chum salmon from Jimmycomelately Creek in Sequim Bay. Washington Harbor is also located just 7.5 miles from the Dungeness River mouth and therefore likely provides habitat for Dungeness Chinook, bull trout, and summer chum. The estuary is probably used by many populations of juvenile salmonids originating from Discovery Bay and other systems to the west. This habitat protection project will purchase conservation easements to permanently protect a 150 to 450-foot wide riparian buffer (approximately 75 acres) surrounding Washington Harbor. The bed of Washington Harbor is state-owned.</p> <p><u>Limiting Factors Addressed</u></p>	NOLT/JSKT



No.	Project Description	Likely Sponsor(s)
	<p>1. "There is broad consensus that salmon require estuarine conditions that support production of prey organisms for juvenile outmigrants as well as for juvenile salmonid rearing and for returning adults.--- Estuaries, which provide critical rearing and transition habitat for salmonids (as they move as juveniles from fresh to salt water, and as adults from the marine environment back to fresh water), have been physically altered at the mouth of many of the streams in WRIA 18, dramatically affecting the habitat and physical functions characteristic of natural estuaries." (WRIA 18 LFA)</p> <p>2. "This marine estuary has long been recognized as providing very high quality fish and wildlife habitat. The Interagency Committee for Outdoor Recreation (IAC) has committed \$3.2 million towards acquisition of property in and immediately adjacent to Washington Harbor. Unfortunately, there has been a lack of willing sellers. Funds should be retained to utilize for any acquisition or conservation easement opportunities that may arise." (WRIA 18 LFA)</p> <p><u>Stock Status and Trends</u></p> <p>The project addresses stock status and trends by maintaining expansive, important nearshore habitat for numerous salmonid populations and forage fish.</p> <p><u>Listed Stocks</u></p> <p>Hood Canal/Strait of Juan de Fuca summer chum and Puget Sound steelhead: Jimmycomelately Creek (5 miles directly along the migration corridor), Salmon Creek and Snow Creek (16 miles east along the likely migration corridor), Dungeness River (7 miles west), Chimacum Creek (20 miles east).</p> <p>Puget Sound Chinook and bull trout: Dungeness River (7 miles west). Dungeness Chinook marine distribution data suggest that this population most likely utilizes Travis Spit nearshore habitat.</p> <p><u>Other Stocks</u></p> <p>Non-listed stocks originating in nearby watersheds include coho and cutthroat from Jimmycomelately Creek and Discovery Bay, and Dungeness pinks, fall chum, coho, and cutthroat. A multitude of other Hood Canal and Puget Sound salmonids also likely utilize this habitat.</p> <p><u>Habitat Status</u></p>	

No.	Project Description	Likely Sponsor(s)
	<p>The project protects extremely high quality fish habitat, but this habitat is clearly at risk. The Point No Point Treaty Council (PNPTC) Report, <i>“Historical Changes to Estuaries, Spits, and Associated Tidal Wetland Habitats in the Hood Canal and Strait of Juan de Fuca Regions of Washington State”</i> (2006) makes the following observations. “We consider the Gibson Spit/Washington Harbor habitat complex “Moderately Impaired” in part because of some conversion of tidal marsh and lagoon habitat to upland or fill. Also, overall connectivity has been impaired, associated with channelization and sea dikes in lower Bell Creek, the road bed across the north portion of the complex, and the diking/drainage ditches near the base of Gibson Spit.” The Washington Harbor Tidal Flow Restoration Project will eliminate the connectivity impact identified in the PNPTC report.</p> <p><u>Ecosystem Restoration</u></p> <p>The project addresses ecosystem processes by permanently protecting a major estuarine system with high value to fish, waterfowl, wading birds and shorebirds.</p> <p><u>Partnerships</u></p> <p>The project is envisioned as a partnership between the Jamestown S’Klallam Tribe, the Washington Department of Fish &amp; Wildlife, and the North Olympic Land Trust.</p>	
31	<p><b>Washington Harbor Tidal Flow Restoration Project.</b> Washington Harbor is an approximately 118-acre estuarine system at the mouth of Bell Creek and is also located adjacent to the entrance of Sequim Bay. The estuary lies 5 miles along the marine migration corridor of Puget Sound steelhead and Hood Canal/Strait of Juan de Fuca summer chum salmon from Jimmycomelately Creek in Sequim Bay. Washington Harbor is also located just 7.5 miles from the Dungeness River mouth and therefore likely provides habitat for Dungeness Chinook, bull trout, and summer chum. The estuary is probably used by many populations of juvenile salmonids originating from Discovery Bay and other systems to the west. A 1,300-foot long roadway, equipped with two small culverts, crosses the estuary and disrupts tidal exchange to the northern 33 acres of Washington Harbor. This area historically provided the finest tidal marsh and eelgrass habitat within the estuary. The impact of the roadway appears to have destroyed the eelgrass beds. The marsh remains intact, but the culverts impair fish access to this superb habitat. The project will provide unrestricted fish access and tidal exchange to the north end of Washington Harbor by removing the culverts and roadway fill and replacing them with an elevated causeway structure.</p>	JSKT/City of Sequim

No.	Project Description	Likely Sponsor(s)
	<p><u>Limiting Factors Addressed</u></p> <ol style="list-style-type: none"> <li>1. "There is broad consensus that salmon require estuarine conditions that support production of prey organisms for juvenile outmigrants as well as for juvenile salmonid rearing and for returning adults.--- Estuaries, which provide critical rearing and transition habitat for salmonids (as they move as juveniles from fresh to salt water, and as adults from the marine environment back to fresh water), have been physically altered at the mouth of many of the streams in WRIA 18, dramatically affecting the habitat and physical functions characteristic of natural estuaries."</li> <li>2. "Intertidal water exchange to the north end of the harbor was significantly restricted by the construction of a 650-foot long fill causeway across the tidelands to support the Sequim Wastewater Treatment Plant outfall (Figure30). This fill resulted in the direct loss of approximately 13,000 ft.2 of intertidal area under the road fill, assuming an average fill base width of 20 ft."</li> <li>3. "In addition, approximately 10-12 acres of intertidal estuary in the north end of the bay was adversely affected by reduction of tidal flux and hypersalinity, which has also developed as a result of reduced tidal interchange."</li> <li>4. LFA recommendation: "Restore unrestricted tidal flow and flushing to the north end of Washington Harbor." (WRIA 18 LFA)</li> </ol> <p><u>Stock Status and Trends</u></p> <p>The project addresses stock status and trends by maintaining expansive, important nearshore habitat for numerous salmonid populations and forage fish.</p> <p><u>Listed Stocks</u></p> <p>Hood Canal/Strait of Juan de Fuca summer chum and Puget Sound steelhead: Jimmycomelately Creek (5 miles directly along the migration corridor), Salmon Creek and Snow Creek (16 miles east along the likely migration corridor), Dungeness River (7 miles west), Chimacum Creek (20 miles east).</p> <p>Puget Sound Chinook and bull trout: Dungeness River (7 miles west). Dungeness Chinook marine distribution data suggest that this population most likely utilizes Travis Spit nearshore habitat.</p> <p><u>Other Stocks</u></p> <p>Non-listed stocks originating in nearby watersheds include coho and</p>	

No.	Project Description	Likely Sponsor(s)
	<p>cutthroat from Jimmycomelately Creek and Discovery Bay, and Dungeness pinks, fall chum, coho, and cutthroat. A multitude of other Hood Canal and Puget Sound salmonids also likely utilize this habitat.</p> <p><u>Habitat Status</u></p> <p>The project restores formerly productive fish habitat. The Point No Point Treaty Council (PNPTC) Report, <i>“Historical Changes to Estuaries, Spits, and Associated Tidal Wetland Habitats in the Hood Canal and Strait of Juan de Fuca Regions of Washington State”</i> (2006) makes the following observations. “Perhaps the most apparent human alteration to wetland habitat is a 1250 foot-long east-west road that traverses the lagoon and tidal marsh and alters much of the north section of tidal lagoon and marsh habitats (Figure 7). This road has substantially impaired the historical habitat connectivity of the complex.” The project will eliminate the connectivity impact identified in the PNPTC report.</p> <p><u>Ecosystem Restoration</u></p> <p>The project addresses ecosystem processes by significantly restoring a major estuarine system with high value to fish, waterfowl, wading birds and shorebirds.</p> <p><u>Partnerships</u></p> <p>The project is envisioned as a partnership between the Jamestown S’Klallam Tribe, the Washington Department of Fish &amp; Wildlife, and the City of Sequim.</p>	
32	<p><b>Ediz Hook A Frame Site shoreline restoration</b> - The A-Frame has been removed. However, no structures that could potentially have destabilized the shoreline and thus the city roadway were allowed to be removed. This resulted in large concrete pieces remaining at access road ends and piles/wooden bulkhead remaining in place. These remaining structures should be removed and the beach restored through grading, replacement of beach material, and placement of soft armoring materials, such as logs with intact root wads. Beach restoration would include appropriate stabilization of the roadway in a manner acceptable to the City of Port Angeles.</p>	WDFW/Elwha/ Port PA/DNR
33	<p><b>Elwha River Estuary restoration</b> The Elwha estuary provides critical habitat to numerous federally listed species and is a component of the nationally recognized dam removal restoration project that will begin in 2012. The project is listed in the Elwha chapter of the regional recovery plan. This project will develop and implement a short and long term strategy for ecosystem restoration focusing on property acquisition and conservation easement. Project</p>	Elwha/CC/ WDFW/TNC

No.	Project Description	Likely Sponsor(s)
	<p>will build on short term fish passage restoration of west levee currently underway. The project directly benefits numerous federally listed ESA species including Puget Sound (Elwha) and numerous listed Columbia river Chinook, steelhead, bull trout, and eulachon.</p>	
34	<p><b>Salt Creek salt marsh reconnection</b> Salt Creek estuary provides critical estuarine habitat to a number of critical stocks including Chinook, steelhead, and coho. The Salt Creek estuary is bisected by a 1000 foot long, 10 feet high and 50 foot wide earthen dike which was installed in the early 1920's (Figure 1 and 2). The dike road, which provides access to actively managed private forest lands and residences, includes two 1 foot wide square wooden culverts that were installed when the dike was built (Figure 4). The culverts are failed, and undersized. They do allow extremely limited fish access but are largely passage barriers.</p> <p>The dike is completely on private property. The majority of the dike is owned by one landowner, who has applied to FFFPP for fish passage restoration. With the specific goals of 1) Improving fish access; 2) Decreasing mosquito populations, and; 3) Possibly provide additional water storage during high flows. The project has tentatively been accepted for wetland reserve funding. The Clallam conservation district, WDFW, and the landowner of the dike continue working together.</p> <p>The project provides fish passage to the west estuary. It will include finalizing design specifications (currently range from bottomless six foot culverts to a span), permitting, and project implementation. Community landowner issues are ongoing.</p>	<p>CCD/WDFW/ Elwha</p>
35	<p><b>Travis and Paradise Cove Spit Protection Project.</b> Travis and Paradise Cove Spits are located at the entrance of Sequim Bay and comprise over 12,000 linear feet of important spit habitat for many populations of juvenile salmonids and forage fish. The spits also directly create approximately 115 acres of shallow water habitat and are crucial to the integrity of Sequim Bay and Paradise Cove. The existence of these spits is entirely dependent upon the continued recruitment of sediment from feeder bluffs within their drift cells. Evidence seen at similar Ediz Hood in Port Angeles demonstrates the vulnerability of Strait of Juan de Fuca spits to the loss of recruited sediment. The project will permanently protect marine feeder bluffs within the Travis and Paradise Cove Spit drift cells through the purchase of conservation easements.</p> <p><u>Limiting Factors Addressed</u></p> <ol style="list-style-type: none"> <li>1. "Ecosystem links between upland and nearshore habitats are extremely important. While the area may appear rural and</li> </ol>	

No.	Project Description	Likely Sponsor(s)
	<p>remote, habitat loss has been identified as the most serious threat to marine ecosystems of Puget Sound and the northeast Straits. A number of human activities along the Straits and Hood Canal, in a cumulative context, have significant ecosystem effects on their respective nearshore environments.” (WRIA 17 LFA)</p> <ol style="list-style-type: none"> <li>2. Reduced sediment input from feeder bluffs to nearshore area, leading to A) transformation of the character of the beach, affecting the kinds of life the beach can support, and B) the degradation of the beach, resulting in loss of the shallow, nearshore migration corridors for salmonids that provide protection from predation.</li> <li>3. Permanent loss of habitat above +5 feet Mean Low-Low Water (MLLW), which represents the suitable habitat area for surf smelt and sand lance spawning.</li> <li>4. Loss of riparian vegetation that provides shade to the upper beach. Shade minimizes desiccation of baitfish eggs that are laid in high intertidal gravels and sands.</li> <li>5. Change in substrate from finer to coarser-grained material.</li> <li>6. Nearshore habitat has been significantly altered due to extensive armoring of the marine shoreline, alteration of the longshore littoral drift process (resulting from shoreline armoring and alteration of the sediment supply from streams). (WRIA 18 LFA)</li> </ol> <p><u>Stock Status and Trends</u></p> <p>The project addresses stock status and trends by maintaining expansive, important nearshore habitat for numerous salmonid populations and forage fish.</p> <p><u>Listed Stocks</u></p> <p>Hood Canal/Strait of Juan de Fuca summer chum and Puget Sound steelhead: Jimmycomelately Creek (4 miles directly along the migration corridor), Salmon Creek and Snow Creek (15 miles east along the likely migration corridor), Dungeness River (7 miles west), Chimacum Creek (23 miles east).</p> <p>Puget Sound Chinook and bull trout: Dungeness River (7 miles west). Dungeness Chinook marine distribution data suggest that this population most likely utilizes Travis Spit nearshore habitat.</p> <p><u>Other Stocks</u></p> <p>Non-listed stocks originating in nearby watersheds include coho and cutthroat from Jimmycomelately Creek and Discovery Bay, and Dungeness pinks, fall chum, coho, and cutthroat. A multitude of other Hood Canal and Puget Sound salmonids also likely utilize this habitat.</p>	

No.	Project Description	Likely Sponsor(s)
	<p><u>Habitat Status</u></p> <p>The project protects extremely high quality fish habitat, but this habitat is clearly at risk. The Point No Point Treaty Council Report, <i>“Historical Changes to Estuaries, Spits, and Associated Tidal Wetland Habitats in the Hood Canal and Strait of Juan de Fuca Regions of Washington State”</i> (2006) makes the following observations. Paradise Cove: “Based on a comparison of 1858 GLO notes (Trutch 1858), the 1870 and 1926 T sheets, and modern day air photos, it appears few changes have occurred to this habitat complex. Shoreline modifications up-drift (including the divergence zone) of the Paradise Cove complex include 9% bulkheading and several overwater structures (Hirschi et al. 2003). Based on very little change to spit and lagoon habitat features, we consider the Paradise Cove habitat complex “Functional”. Travis Spit: “Despite the development of homes and associated clearing of forest in recent decades, much of this shoreline, with eroding bluffs facing the Strait, remains one of the more intact functional stretches of shoreline in the study area. The length of the spit has not changed since 1870, though it is possible that it has narrowed somewhat about halfway down its length. The lagoon and associated salt marsh near the base of Travis Spit has been reduced in size, at least in part due to fill from an access road (Table 9). Few other changes are evident along Travis Spit itself, although the small lagoon features suggested in the 1870 T sheet are not found in current day imagery. Based on noted reductions in salt marsh and lagoon habitat features, and disturbance near the base of the spit, we consider the Travis Spit habitat complex “Moderately Impaired”.</p> <p><u>Ecosystem Restoration</u></p> <p>The project addresses ecosystem processes by permanently protecting this enormous but fragile habitat complex. The loss of these spits would be a catastrophic impact to the regional marine ecosystem.</p> <p><u>Partnerships</u></p> <p>The project is envisioned as a partnership between the Jamestown S’Klallam Tribe, the Washington Department of Fish &amp; Wildlife, the North Olympic Land Trust, and the Washington State Parks and Recreation Commission.</p>	
<b>Hatchery Capital Projects</b>		
<b>Non Capital Programs</b>		
<b>Harvest Program Management</b>		

No.	Project Description	Likely Sponsor(s)
36	<p><b>Dungeness improved fisheries enforcement</b> - Harvest management calls for effective enforcement of harvest regulations and implementation of orderly fisheries. Currently fisheries are limited in the vicinity of the Dungeness watershed. However, control of the limited existing fisheries and protection against poaching to which Chinook are particularly vulnerable during the low flow summer months, requires enforcement personnel to patrol the river and proximal marine waters. Two additional officers are needed for effective enforcement of closures and to ensure orderly fisheries.</p> <p>Currently, enforcement personnel are spread thin and do not sufficiently cover enforcement needs. The addition of two officers would meet present requirements and help ensure that the harvest management provisions of the recovery plan are met. If the this program is not funded as part of the three year plan, the existing risk of illegal harvest of already small numbers of Dungeness Chinook will continue.</p>	WDFW/JSKT
<b>Future Habitat Project Development</b>		
37	<p><b>Siebert Creek Highway 101 Fish Passage Restoration Phase I Conceptual Design</b> – Siebert Creek's anadromous length is approximately 10 miles, but fish passage is severely impaired at river mile 2.4 by a box culvert on Hwy 101. This project is a conceptual bridge and site design to 10% engineering. Once the design is in place, then we can have this project placed on the DOT project list. The eventual goal is to replace the box culvert with a bridge to restore unimpeded fish passage to prime spawning and rearing habitat upstream for ESA listed steelhead, along with coho, and coastal cutthroat. The project will address two limiting factors including fish passage and poor channel condition downstream created by the culvert.</p> <p>Siebert Creek headwaters in the Olympic National Park, and flows through State (DNR) and private forestland before it reaches Hwy 101. Below Hwy 101, less than 10 landowners control Siebert Creek corridor. Lower Elwha Tribe has placed numerous pieces of LWD below Old Olympic Hwy greatly improving habitat condition. Clallam County removed a fish passage culvert block in 1998 at Old Olympic Hwy. Habitat is in relatively good condition upriver of Hwy 101. The estuary is in superb condition.</p> <p>The Hwy 101 culvert outlet drops about 8 feet to a pool below. The Siebert Watershed Analysis called for the replacement of the culvert with a bridge (2004, Siebert Technical Advisory Group). The culvert is equipped with a sub-standard fishway that provides, at best, partial fish passage. This culvert is the last impediments to fish passage in Siebert Creek.</p>	JSKT/CC/WSDOT



No.	Project Description	Likely Sponsor(s)
38	<p><b>Clallam County - inventory culverts</b> - For stream crossings on roads within County jurisdiction, assess fish passage conditions and develop a prioritized list of fish passage improvement projects. Identified as a limiting factor and benefiting a multitude of stocks, improving fish passage provides access to habitat that is now inaccessible and presents an opportunity to regain lost function in the stream channel. The Lower Elwha Klallam Tribe and the County have partnered to assess and replace inadequate stream crossings in the Salt Creek basin.</p>	CC
39	<p><b>Dungeness River habitat resurvey - 15 years later</b> – Baseline habitat monitoring is a basic need to understanding whether habitat conditions are improving or degrading. In 1993 JKST along with Steve Ralph and Jack Orsborn completed a Dungeness watershed-wide habitat survey. Since 1998, the Tribe, County, CCD, and others have engaged in habitat restoration throughout the lower 10 miles of river. The purpose is to redo the habitat survey to look at trends in habitat conditions at a watershed level, and additionally identify areas of concern. This survey will be GPS-based in order to create a habitat map of the river. The survey will encompass the full anadromous portion of the river, the Dungeness mouth to Gold Creek, and the Greywolf to Three Forks. This is the habitat for the 5 ESA list salmonids in the Dungeness.</p>	JSKT
40	<p><b>12 Rivers channel migration zone assessment</b> – Clallam County has jurisdiction and authority to limit development within channel migration zones (CMZs) through Clallam County’s Critical Areas Ordinance. In all watersheds, the CMZ’s are found in lower reaches, which also are the most productive salmonid habitat and the first to develop. Without CMZ delineations, the County cannot effectively protect this productive riverine habitat. Floodplain modifications invariably follow floodplain development.</p> <p>CMZ mapping and delineation would occur for McDonald Creek, Siebert Creek, Morse Creek, Salt Creek, Lyre River, East and West Twin Rivers, Deep Creek, Pysht River, Clallam River, Hoko River and Sekiu River. Methodology would follow Department of Ecology guidelines where aerial photos can identify channel patterns, and follow DNR Forest and Fish guidelines where mapping must occur on the ground.</p> <p>This project would provide the funding to conduct a CMZ delineation for each of these drainages and work with Clallam County DCD to incorporate those maps into the Critical Areas Ordinance. The project will also be important as an educational tool to increase public and landowner awareness of probable channel movements and erosion in the next five to ten decades.</p>	JSKT/Elwha/Makah/CC

No.	Project Description	Likely Sponsor(s)
41	<p><b>Clallam River Mouth geomorphology assessment</b> - Synthesize and analyze geomorphologic and biological data. Develop a prioritized project list for the river mouth and lower reach to reduce or eliminate the large scale juvenile salmonid mortality that occurs during seasonal closures of the river mouth. An assessment of the upper reaches of the river did not include the lower reach and mouth.</p> <p>Closure of the mouth has been identified as an anadromous fish passage barrier. Large scale mortalities (1,000s) have been documented when juvenile salmonids are unable to emigrate to the marine environment. In May 2004, the Clallam River became bar bound. Large scale juvenile mortalities were documented as juvenile salmonids attempting to enter the Strait of Juan de Fuca were left stranded on the bar during the falling tidal cycle. A prioritized list resulting from the project ultimately benefits multiple salmonid species, addresses the limiting factor of barrier to fish passage, advances recovery of ecosystem function, and advances habitat protection and restoration. Partners are Clallam County, Lower Elwha Klallam Tribe, Makah Tribe, WDFW, WSU Beachwatchers, Streamkeepers of Clallam County, Clallam Conservation District, North Olympic Salmon Coalition researchers, and landowners.</p>	Makah/Elwha/ WDFW/CC
<b>Habitat Protection</b>		
42	<p><b>NOPLÉ area wide data base for habitat restoration, protection, &amp; permitted activities</b> - Work with neighboring jurisdictions to integrate Geographic Information System and the Permit Tracking programs to understand and monitor the landscape-scale development patterns occurring in the LE's geographic setting. Understanding the patterns at this scale will advance ecosystem awareness and offer a useful tool for monitoring and adaptive management. Partners include cities, county, state agencies, tribes.</p>	CC/City of PA/City of Sequim
43	<p><b>NOPLÉ Area Wide assess implementation of Critical Areas Ordinance, Shoreline Master Plan, Hydraulics Permit Act with ground truthing</b></p> <p>A ground-truth survey is essential to understand the status and effectiveness of regulations designed to protect habitat. Coupled with the tracking system described in (42), a ground-truthed assessment will be used as a tool for monitoring and adaptive management. Partners include Clallam County, cities, state agencies, tribes. The project can also be used as a tool to advance habitat protection and restoration.</p>	CC/City of PA/City of Sequim
44	<p><b>NOPLÉ Area Wide increase compliance with ordinances &amp; codes</b> - The City of Port Angeles has recently hired a Code Compliance Officer. At this time the position is only funded as a 40% position. Recent efforts to strengthen the Environmentally Sensitive Areas</p>	CC/City of PA/City of Sequim

No.	Project Description	Likely Sponsor(s)
	<p>Protection Ordinance has been successful and the city plans further code amendments to further strengthen the ESA Protection Ord. The enforcement sections of our codes are a little weak and will require political support and staff effort to strengthen. A community forestry program is being developed with the intent to increase the tree canopy cover in the city to increase stormwater interception, infiltration, and evapotranspiration. Clallam County DCD has revamped its code compliance program to include 2 Code Compliance officers and a group of active volunteers. Still, most compliance actions are limited to responding to complaints due to limited staff resources. Additional resources will help to increase compliance through active involvement in project inspection and monitoring at all stages of development. This program advances habitat protection.</p>	
45	<p><b>Clallam County map roadside ditches that contribute to stream network</b> – Streamkeepers of Clallam County monitors water quality in area streams on a quarterly basis. However, impervious surfaces in the LE area have increased in recent years, with a potential increase in the contribution of stormwater to roadside ditches. The quantity and quality of stormwater contributions from roadside ditches to stream channels need to be identified and a prioritized list of improvement projects must be developed. This project advances habitat protection and restoration and could become a baseline for stormwater quality monitoring.</p>	CC
46	<p><b>Jimmycomelately Creek and Dungeness River habitat stewardship programs</b> – Implementing conservation goals laid out in watershed recovery plans has resulted in about 300 acres of land conserved in acquisitions and easements by WDFW, Clallam County, Jamestown S'Klallam Tribe, and NOLT. There is a strong need for stewardship funding to assure that the conservation goals are met and the habitat remains in good condition. Stewardship will focus protecting the sites from improper use, noxious weed control, general site maintenance, and monitoring of land use. WDFW is very close to placing a moratorium on future land acquisition because they lack funds and personnel to maintain the portion of their land base purchased for salmon recovery. Habitat protection through acquisition and easement is a cornerstone for salmonid recovery. This is a critical issue that needs funding.</p>	WDFW, JSKT, CC, NOLT
47	<p><b>NOPLE Area Wide update stormwater management program</b> - The City of Port Angeles is currently drafting programs to better manage stormwater, including LID techniques, elimination of combined sewer overflows (CSO), and Phase II NPDES requirements. The long-term goal of the County is to improve water quality through stormwater management. Salmonid recovery plans</p>	CC/City of PA/City of Sequim

No.	Project Description	Likely Sponsor(s)
	and watershed plans recommend a more comprehensive, collaborative stormwater management program that builds on existing local efforts. To most effectively advance salmonid recovery, the program needs to be extended to other areas of the county. Partners are county, cities, tribes, Clallam Conservation District, North Olympic Salmon Coalition.	
48	<b>NOPLE Area Wide update Shoreline Master Program (SMP)</b> - The City of Port Angeles is mandated by the State of Washington to update its Shoreline Master Program by 2011. Review and update required to comply with new state requirements. Funding needed for staff support, public process, and supporting studies Clallam County updates will consider the findings and recommendations in <i>the Dungeness Watershed Salmonid Recovery Planning Notebook</i> . Updates of the SMP are identified as implementation actions in the salmonid recovery plans; will help to advance habitat protection and restoration; and will affect shorelines across the county .	CC/City of PA/City of Sequim
49	<b>Create stable-funded incentive programs</b> – Habitat protection is a priority action. Non-regulatory riparian protection incentives are successful and with sufficient funding could be more widely used. Currently a County-sponsored riparian habitat protection program is funded by one-time only grant dollars. Through conservation easements, the program has contributed to protecting in perpetuity about 500 acres of marine and freshwater riparian habitat. The project protects high quality fish habitat and helps to support ecosystem function. Project partners include Clallam County, land trusts; willing private landowners; tribes; cities; state agencies, and local businesses.	CC/CCD
50	<b>Clallam watertype inventory &amp; assessment to verify and field-truth state regulatory water type maps to safeguard stream habitat and aid in restoration planning.</b>  Errors in Washington State water type maps result in the under-protection of 40-60% of the fish-bearing stream network. Work by the Wild Fish Conservancy, Tribes, and others have systematically documented streams mapped incorrectly or not at all, limiting the effectiveness of habitat protection on private lands under local government land use and state forest practice regulations. Though water typing errors have been documented as a problem on managed timberlands, problems on private developed/developing lands are less well known. Washington State local governments make frequent use of the WDNR water type maps but do not have resources to validate their accuracy in land use planning permitting. The correction and updating of these water type maps are pivotal to the full protection of streams from development impacts, since fish-bearing streams are frequently misrepresented as non-fish-bearing,	Wild Fish Conservancy

No.	Project Description	Likely Sponsor(s)
	<p>mis-located, or even missing from regulatory maps.</p> <p>Using visual and electrofishing surveys, Wild Fish Conservancy will document and correct water type classifications using established state protocols in approximately 60 sq miles of at-risk lands around fast-developing urban fringe areas prioritized by the NOPLÉ technical advisory committee. Using GPS and GIS, WFC will accurately map previously unmapped/incorrectly mapped water courses to ensure informed and responsible watershed management. WFC will incorporate assessment results in a web-based interactive GIS available to planners, landowners, and resource managers (see <a href="http://www.wildfishconservancy.org">www.wildfishconservancy.org</a>). WFC will also submit assessment results to WDNR for correction and update of state water type maps. In addition to corrected water type maps, this assessment will generate species-specific fish distribution data and identify restoration opportunities on lesser-known tributaries.</p> <p>The Clallam water type inventory and assessment “advances implementation of the recovery plan” (ii.) by improving local government information sources for the protection of critical areas under the GMA. The project would “advance habitat protection and restoration” (iii.) by improved on-the-ground resource protection for sensitive stream-riparian corridors, and by pinpointing small restoration opportunities on lesser-known tributaries. The project would also “advance recovery of ecosystem function” (iv.) and “advance ecosystem awareness” (v.) through improved habitat protection and public awareness of the significance of individual stream segments passing through neighborhoods. Finally, the project would “advance integration” (vi.) by linking habitat assessment with growth management policy implementation, and providing proactive assistance to private landowners seeking to protect fragile public resources on their land.</p>	
<b>Watershed Plan Implementation</b>		
<b>Outreach and Education</b>		
51	<p><b>NOPLÉ Area Wide: Develop &amp; support ongoing outreach program-</b> These varied efforts will inform and educate about the need for salmon recovery, local projects underway and a call to action about the local changes required to assist salmon and lessen degradation of salmon habitat. This specifically addresses Non-Capitol project objectives objectives iii, iv, v, vi, vii and viii.</p>	
52	<p><b>Clallam County salmonid recovery planner position at Department of Community Development -</b> Building on existing local efforts, develop a comprehensive collaborative program for outreach, education, public involvement, and stewardship promotion At this time outreach efforts are funded by project monies only and are focused on an individual project. A coordinated and consistent</p>	CC/CCD

No.	Project Description	Likely Sponsor(s)
	effort to communicate with citizens about salmonid ecology and recovery will go a long way to increase public awareness of salmonid recovery efforts and the role that each individual can play. Partners include Clallam County, cities, tribes, state agencies, Clallam Conservation District, North Olympic Salmon Coalition, Clallam Marine Resources Committee, WSU Beachwatchers, and school districts.	
53	<b>Update State of the Waters of Clallam County</b> -First published in 2004, <i>State of the Waters</i> describes water quality conditions and biological/habitat integrity of watersheds in Clallam County. The report may be used as an outreach tool, to advance ecosystem awareness, as well as a summary of water quality monitoring efforts which will inform adaptive management decisions. Partners include tribes, Streamkeepers of Clallam County, Olympic National Forest, and local businesses.	CC
54	<b>Dungeness River Management Team</b> – support and develop capacity	
55	<b>Elwha Morse Management Team</b> - support and develop capacity	
55A	<b>WRIA 19 Watershed Council</b> - support and develop capacity	
<b>Instream Flow Protection</b>		
<b>Salmon Recovery Coordination</b>		
56	<b>NOPLÉ Area Wide Capacity:</b> This program will build & support increased capacity for habitat project sponsors, additional coordination with PSP, develop funding strategies, and further ESA recovery efforts. This will allow for funding diversification, increased project design and implementation, all of which will quicken recovery efforts. This meets all objectives(I through ix) for non-capital projects.	NOPLÉ
<b>Habitat Project Monitoring</b>		
57	<b>NOPLÉ Area adaptive management plan &amp; monitoring:</b> This will allow the lead entity to participate in the group process needed to create an adaptive management plan which incorporates areas needed for recovery which have not been primary focuses previously and better integrates efforts. This meets Non-Capitol program objectives I, ii, iii,iv,vi,vii, and ix.	NOPLÉ
58	<b>Elwha watershed adaptive management plan &amp; monitoring</b> – The Elwha River Fish Restoration Plan (Ward et al, 2008), which was developed to support the Elwha River Fisheries and Ecosystem Restoration Act (PL 102-495), contains a detailed monitoring and adaptive management strategy. Monitoring the fish population and ecosystem response to the removal of the Elwha River dams and implementation of appropriate adaptive management actions are critical to achievement of the Act’s goals. The strategy contains a	Elwha

No.	Project Description	Likely Sponsor(s)
	<p>suite of testable hypotheses which will provide information on each of the four ViableSP parameters, guiding future management actions. In order to test these hypotheses, certain baseline information is needed prior to dam removal. Additionally, it will be necessary to mark hatchery and wild fish up to four years prior to dam removal through a variety of potential methods (PIT tags, CWT tags, etc.) in order to evaluate their response to conditions in the river during dam removal. Dam removal is currently scheduled to begin in 2012.</p>	
<b>Stock Monitoring Support</b>		
59	<p><b>NOPLE Area Wide Monitoring Program</b> – This program will establish watershed- based programs to monitor for Viable Salmonid Populations parameters and will provide for intra-NOPLE coordination to compile and report data/findings for EDT/AHA. The following present details on the Dungeness. As the program develops, appropriate programs would be developed for other watersheds.</p> <p><b>Dungeness Chinook Population Analysis and Modeling to Support Harvest, Hatchery and Habitat Management and Planning</b> - This program would address the population analysis and modeling needs identified in the Dungeness Chinook recovery plan. Accomplishing the tasks under this program would help fill gaps identified by the TRT (see below) and would increase understanding and certainty in the management of Dungeness Chinook recovery. The program would support hiring an analyst proficient in population modeling and assessment to accomplish the following tasks:</p> <ul style="list-style-type: none"> <li>• Chinook cohort analysis and run reconstruction of Dungeness Chinook Hatchery stock. Though data is currently limited, the layout and initiation of the analysis and could and should begin.</li> <li>• Use run reconstruction results to estimate Chinook exploitation rates over time and provide historical modeling input for preseason fisheries planning.</li> <li>• Estimate a rebuilding exploitation rate (RER) as defined in the Co-managers Chinook Harvest Management Plan; this would be the exploitation rate that controls protective measures incorporated in annual fisheries planning and management.</li> <li>• Update the Dungeness Chinook EDT analysis and use it to reinforce and expand assessments of impacts on VSP parameters and effectiveness of recovery measures.</li> <li>• Help prepare for 2009 PST negotiations of a new Chinook annex to offer improved protection from non-southern U.S. harvest impacts.</li> </ul> <p>This is a high priority program because it addresses immediate needs for population analysis and modeling to help reduce uncertainties and close gaps in the Dungeness recovery plan, including those identified by the Puget Sound Technical Recovery Team (TRT)*. The immediate need for improving the recovery plan and its ongoing and</p>	JSKT

No.	Project Description	Likely Sponsor(s)
	<p>pending recovery measures is necessary for effective adaptive management. Accordingly this program should be put in place as soon as possible and operate at least over the next three years.</p> <p><b>Dungeness Chinook Biological Monitoring Project</b> - A biological monitoring project is proposed to augment the current biological monitoring of spawning escapements (that includes determining natural and hatchery origin of Chinook spawners), and juvenile out-migrant trapping on Matriotti Creek. This project is intended to collect life history and distribution information on Chinook in the watershed and Dungeness estuary, and also on other salmonids that may interact with the Chinook. Data collected over the long-term would provide for monitoring biological changes or trends in relation to recovery actions and to test assumptions made in recovery planning.</p> <ul style="list-style-type: none"> <li>• Operate a screw trap on the Dungeness mainstem to determine juvenile abundance of Chinook, coho and steelhead, and timing of their migratory movements (Apr. – Sep.).</li> <li>• Survey the Dungeness nearshore with beach seines and traps at a variety of tidal regimes to collect information on the distributions and life histories of all species (Apr. Sep.).</li> <li>• Fence trap Canyon Creek (fish passage is being restored) and Bear Creek to determine juvenile distribution, abundance and migration patterns of all salmonid species (Apr. – Sep.).</li> <li>• Help with Chinook and pink (in odd numbered years) salmon spawner surveys in late summer/early fall (Aug.-Oct.). Conduct coho salmon spawner surveys in late fall/early winter (Oct. – Dec.). Determine proportion of hatchery and wild origin coho salmon on spawning grounds.</li> <li>• Conduct steelhead spawner surveys in April and May, as time permits (priority is with juvenile sampling of other species), to determine stock status.</li> <li>• As time permits, snorkel survey index areas throughout the system to determine relative species abundance and rearing habitats.</li> </ul> <p>The project was identified in the Dungeness recovery plan as a critical part of the hatchery and harvest components. The TRT stated that the most important way to improve certainty of an effective hatchery strategy was to improve adaptive management.*</p>	



<b>Acronym Key</b>	
<b>Acronym</b>	<b>Full Name</b>
ACOE	Army Corps of Engineers
CC	Clallam County
CCD	Clallam Conservation District
City of PA	City of Port Angeles
DNR	WA Dept. of Natural Resources
Elwha	Lower Elwha Klallam Tribe
JSKT	Jamestown S'Klallam Tribe
Makah	Makah Tribe
NOLT	North Olympic Land Trust
NOSC	North Olympic Salmon Coalition
ONP	Olympic National Park
Port PA	Port of Port Angeles
TNC	The Nearshore Conservation
WDFW	WA Dept. of Fish & Wildlife
WDOT	WA Dept. of Transportation

**Table B**  
**Ranking of Habitat Projects**

<b>No.</b>	<b>Project</b>	<b>Wt Ave Score</b>	<b>Project Rank</b>
17	Lower Dungeness Channel Remeandering and Engineered Log Jam placement, Phase III	128.20	1
16	Lower Dungeness Dikes Setback, Phase II	127.82	2
11	Elwha Engineered Log Jams	120.15	3
31	Washington Harbor Tidal Flow Restoration Project	117.23	4
22	Dungeness Irrigation District Water Conservation Project	117.00	5
18	Dungeness corridor (RM 3.0 -RM 10.5) habitat protection	115.65	6
21	Dungeness Irrigation Group Water Conservation Project	115.58	7
29	Dungeness Spit Drift Cell Protection Project	113.36	8
33	Elwha River Estuary restoration	110.71	9
10	Morse Creek remeander (WDFW Property)	110.16	10
15	Elwha culvert replacement	109.50	11
34	Salt Creek salt marsh reconnection	108.64	12
23	Sequim Prairie-Tri Irrigation District Conservation Project	108.27	13
9	Morse Creek (RM 3.0-4.5) LWD restoration	108.14	14
25	Jimmycomelately riparian protection	107.99	15
24	Highland Irrigation District Water Conservation Project	107.86	16
28	Pitship Pocket Estuary Protection Project	107.74	17
30	Washington Harbor Habitat Protection Project	106.92	18
19	Dungeness riparian reforestation	106.81	19
20	Agnew Irrigation District piping	105.98	20
35	Travis and Paradise Cove Spit Protection Project	101.44	21
14	Lower Elwha hatchery outfall and berm removal	98.13	22
4	Little Hoko River (RM 0-) LWD restoration	97.86	23
5	Sekiu mainstem (RM 2-5) LWD restoration	96.73	24
7	Salt Creek Final Fish Passage Corrections	96.17	25
8A	Salt Creek Habitat Protection	95.20	26
26	Meadowbrook Creek habitat restoration Phase II	94.01	27
8	Salt Creek LWD (RM 2.0-3.0)	92.80	28
1	Hoko (phase I) - Emerson Flats LWD restoration	91.93	29
27	McDonald Creek diversion & dam removal & ditch lining	91.67	30
3	Hoko (phase III) - Herman Creek LWD restoration	91.48	31
6	Sekiu, Clallam, Pysht riparian revegetation	89.48	32
32	Ediz Hook A Frame Site shoreline restoration	87.01	33
15A	Ennis Creek Habitat Restoration & Protection	86.94	34
2	Hoko (phase II) mainstem (RM 1-7) riparian revegetation	86.22	35
13	Tumwater Creek estuary restoration	80.11	36
12	Valley Creek restoration Phase III	70.24	37

**Table C**  
**Ranking of Non-Capital Conceptual Projects**

No.	Project	Wt Ave	Project Rank
59	NOPLE Area Wide Monitoring Program	87.97	1
56	NOPLE Area Wide: Capacity	86.35	2
47	NOPLE Area Wide: Update stormwater management program	85.89	3
38	Clallam County - Inventory Culverts	84.33	4
58	Elwha watershed adaptive management plan & monitoring	83.94	5
37	Siebert Creek Highway 101 Fish Passage Restoration Phase I Conceptual Design	81.33	6
40	12 Rivers channel migration zone assessment	80.97	7
41	Clallam River Mouth geomorphology assessment	80.19	8
55	Elwha Morse Management Team	79.52	9
54	Dungeness River Management Team	79.46	10
48	NOPLE Area Wide update Shoreline Master Program	79.37	11
43	NOPLE Area Wide assess implementation of CAO, SMP, HPA with ground truthing	79.25	12
44	NOPLE Area Wide increase compliance with ordinances & codes	79.18	13
39	Dungeness River habitat resurvey	78.99	14
49	Create stable-funded incentive programs	78.50	15
46	Jimmycomelately Creek and Dungeness River habitat stewardship programs	78.02	16
52	Clallam County salmonid recovery planner position at DCD	77.94	17
45	Clallam County map roadside ditches that contribute to stream network	77.70	18
55A	WRIA 19 Watershed Council	77.64	19
50	Clallam watertype inventory & assessment	76.94	20
57	NOPLE Area adaptive management plan & monitoring	75.83	21
42	NOPLE area wide data base for habitat restoration, protection, & permitted activities	73.17	22
51	NOPLE Area Wide: Develop & support ongoing outreach program	70.71	23
36	Dungeness improved fisheries enforcement	68.21	24
53	Update State of the Waters of Clallam County	62.92	25

**TECHNICAL NOTE  
NOPLE Decision-Making Procedures  
with Screens, Criteria, and Weights  
WH Pearson  
16APR2008**

**PURPOSE OF THIS DOCUMENT**

The geographic area and future scope of activities of the North Olympic Peninsula Lead Entity (NOPLE) has changed recently, and these changes have occasioned the updating of the NOPLE strategy. A portion of the updating in 2008 re-examined the NOPLE decision-making process and assessed what modifications are needed in light of these recent changes. This re-examination of the procedures occurred in a series of workshops on 20 and 21 FEB 2009 and 5MAR2008. This document briefly reviews the past NOPLE decision-making process and the state of the art in environmental decision making, offers an assessment of the critical questions that NOPLE needed to address concerning its decision making, and outlines workshop outcomes concerning the decision-making process including the agreed screens, criteria, and weights.

**PAST NOPLE DECISION-MAKING PROCESS**

The past NOPLE decision-making process focused on the ranking of projects for the restoration of fish habitat so that projects could be placed in a prioritized order in the 3-Year Work Plan and in the annual requests for funding. The past process included two stages: First, tiering of watersheds, and, second, ranking of projects for inclusion in the Work Plan. The NOPLE 2004 Strategy called for the independent watersheds to be assigned to tiers in the next version of the strategy. Further, the past watershed prioritization included WRIA 20 watersheds that are no longer within NOPLE's geographic area. The past NOPLE criteria for ranking took into account almost all the elements required in the salmon recovery statute (RCW 77.85.005, 77.85.130). However, many of the past NOPLE criteria combined three or more elements. Only three of the ten elements in the statute appeared to be directly and explicitly expressed in the past NOPLE procedures.

**BACKGROUND ON FORMAL DECISION MAKING**

Formal decision making processes have been the subject of operations research for decades with applications in medicine, defense, finance, corporate management, transportation, energy, research planning, and the management of natural resources and the environment (Belton and Stewart 2002). The techniques range from simple ones that can be accomplished a laptop computer to sophisticated analysis models that require substantial computing power, a GIS database, and specialized (often proprietary and expensive) software. A few

examples of state-of-the-art decision making procedures applied to watersheds include:

- A geomorphologic-based procedure used by the Zuni Tribe in the American Southwest to rank watersheds for restoration (Gellis et al. 2001).
- A decision optimization framework coupled to adaptive management for deactivating roads in British Columbia (Allison et al. 2004)
- A multivariate scheme to identify river reaches for protection and restoration in the Ozarks (Radwell and Kwak 2005)
- A spatial decision support tool for forest management planning implemented with an advanced model on a GIS in British Columbia (Mathey et al. 2008).

In addition, Linkov et al. (2006) compares several current procedures for formal decision-making and how they may be coupled to adaptive management to address environmental management issues. Smith and Jones (2007) have reviewed the utility of historic data for setting watershed-level conservation goals. Although NOPLE may eventually need such sophisticated decision tools in the future, its present needs were more modest but still urgent. NOPLE needed a simple, transparent, useable system that is flexible to adapt to changing circumstances without a complete re-visit but rigorous and systematic enough to make informed decisions among alternatives.

## **DECISIONS THAT NOPLE NEEDS TO MAKE**

In the course of its efforts, NOPLE needs to make decisions concerning the following questions:

- What non-capital activities are needed?
- What habitat projects are needed?
- What priorities are to be given to activities and projects (RCW 77.85.005)?
- How will project priorities take into account logical sequencing (RCW 77.85.005)?

In addition, the NOPLE 2004 strategy called for two decisions in the next strategy update. First, assignment of independent watersheds to tiers was needed. Second, for the nearshore, some ranking of priorities and concepts was needed. Eventually, NOPLE will probably need to make decisions concerning other options or alternative approaches.

## **OPTIONS AND CRITICAL QUESTIONS**

NOPLE had three options for the 2008 Strategy: First, retain the existing tiering and ranking procedures as is. Second, modify the existing tiering and ranking procedures. Third, adopt the proposed new procedure and develop new screens, criteria, and weights. In deciding on these options in the 5MAR workshop, members of NOPLE's Lead Entity Group (LEG) and Technical Review Group (TRG) addressed the following critical questions:

- Does NOPLE retain the tiering step?
- If so, then does NOPLE retain the existing procedure for tiering?
- If so, do the tier assignments need to be redone in light of scope changes and the call in 2004 Strategy to revisit assignments in next version of the strategy?
- If not, is the proposed procedure (or with some modification) acceptable?
- If so, what modifications are required to proposed screens? To proposed criteria?

The outcomes of the 5MAR Workshop were to adopt the proposed procedure and to develop new single-factor screens and criteria. Separate sets of screens, criteria and weights were developed for non-capital activities and for habitat capital projects.

## **THE DECISION-MAKING PROCESS**

Elements considered in the selection of the current decision-making process included the following:

- Method is proven and widely accepted.
- Method does not rely on sophisticated or proprietary software that would be opaque and expensive.
- Method is transparent: All components, operations, and data are completely open to inspection.
- Procedure is user-friendly, readily understood, and can be accomplished by non-technical stakeholders with spreadsheet software and modest computer.
- Procedure enables the group to develop screens, criteria, and weighting.
- Procedure is flexible enough to be applied to make a number of different kinds of decisions beyond the ranking of projects.

The selected procedure is based on multiple criteria decision-making analysis or aid (MCDA), a long-standing and widely-used procedure (Belton and Stewart 2002; Pohekar and Ramachandran 2004). The proposed procedure includes the Weighted Sum Method (WSM) for numerical ranking of options. WSM is one of the simplest and most widely-used approaches although it is being supplanted by sophisticated software packages. The past NOPLE procedure for ranking used an approach similar to WSM for ranking but the method for tiering was not clear. The selected procedure can be accomplished by non-technical people with a

spreadsheet on a laptop or even by hand if necessary. The ranking does still require review of information and documents before scoring as is the long-standing NOPLE practice.

The steps in the procedure are outlined in Table 1 (pg 50). A variety of approaches to arriving at the list of constraints, preferences, and criteria were discussed at the 5MAR Workshop. Consensus was used to arrive at the screens and criteria. Statistical averaging of weighting by LEG and TRG members was used to arrive at criteria weights. Some criteria were reserved for use by the LEG.

## **CONSTRAINTS, PREFERENCES, SCREENS AND CRITERIA**

The constraints and preferences were developed in the workshop on February 21 2008 and appear in Table 2 (pg 51). These constraints and preferences were used to develop screens and criteria. Screens are either questions that can be answered yes/no or are questions that enable a reviewer to sort proposals into one of several mutually exclusive categories. The final screens in Table 3 (pg 52) were developed from the constraints listed during the workshop on 21FEB and modified during the 5MAR workshop.

The final criteria developed at the workshops appear in Table 4 for habitat projects and Table 5 for non-capital activities. General rules governing construction of decision making criteria included the following:

- Criteria should be as independent as possible and mutually exclusive
- Criteria should be single factors or of one dimension so that scorers do not need to evaluate more than one aspect of the issues at a time
- All the criteria should be written to be scored in the same direction (e.g. if 5 is best, a high cost is scored as 1 not 5)
- The number of criteria should be from about 6 to about 12.

The criteria on Tables 4 and 5 (pgs 53 & 54) were developed from the requirements of the Statute (77.85), the previous NOPLE criteria, and the values and principles expressed at the workshops on February 20 and 21 2008. The weights also appear in Tables 4 and 5.

## **UPDATED WATERSHED PRIORTIES**

The past approach to watershed priorities was to assign watersheds to one of four tiers of priorities based on information about the status and trends of stocks, the historic and current productivity and watershed size. The NOPLE 2008 Strategy Workshops updated the approach to watershed prioritization. As requested, the TRG reviewed and updated the data for the watershed priorities

(Table 6, pgs 55-58). This review and update enabled the separate assessment of the independent watersheds. Criteria and weights for the watershed priorities were developed and applied Table 7 (pg 60). The TRG scored the watersheds against the criteria in Table 7 based on the information in Table 6. The results were normalized to give scores with 5 being the highest and appear in Table 8 (pg 61 & 62).

## **RANKING OF PROJECTS AND ACTIVITIES**

Capital projects for habitat protection and restoration will be screened using the screens in Table 3 and then scored under each criterion in Table 4. Scoring will be 0 to 5 with 5 being best. A score of zero will be used if the project does not address the criterion at all. Criterion 1 for watershed priorities will be scored based on the priority of the watershed given in Table 8. If the project encompasses more than one watershed, the score taken from Table 8 will be that for the highest ranked watershed in the project. For each criterion the scores will be weighted by multiplying the score by the weight. The weighted scores are averaged and summed to give the overall average weight score for each project. These scores are then used to rank the projects. Non-capital activities will be scored using the same process as that for the habitat capital projects but using the criteria and weights in Table 5.

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Table 1. Process for NOPLE Decision Making Selected in the NOPLE 2008 Workshops.

Step Number	Step
1	Assemble evaluation team (LEG and TRG)
2	Develop strawman criteria
3	Weight criteria
4	Obtain mean of weights and standard deviation
5	Re-iterate weighting if necessary
6	Finalize criteria and weighting
7	Identify constraints and preferences for screens
8	Develop list of items (options, programs, activities, or projects) to be scored
9	Apply screens to items
10	Score items against criteria
11	Calculate weighted scores by multiplying score by weight
12	Use sum of weighted scores for all criteria to rank items

Table 2. Constraints and Preferences from NOPLE 2008 Strategy Workshop, February 21 2008

<b>Factor or Element</b>	<b>Constraint or Preference</b>	<b>In Process Proposed as</b>	<b>Comments/Questions</b>
Recovery Plans	Constraint	Screen	
All stocks need attention	Preference	Decision criterion	Long standing NOPLE principle
Within schedule/deadlines	Constraint	Screen	
Jurisdictions and Boundaries	Constraint	Screen	Is project within NOPLE area and scope?
Geographic equity	Constraint or Preference?	Screen	Tiering and LEG considerations
Capacity	Constraint	Sequencing screen	Undertake when capacity is built
Landowner Willingness	Constraint	Screen	If no willing landowner, perhaps request design only
Credibility	Preference	Decision Criterion	Needs definition
Social/Political Considerations	Preference	LEG screen	Duty of LEG
Creativity/Imagination	Preference	Not proposed	Handle in Adaptive Management
Funding ceiling	Constraint	Secondary Screen	If over ceiling, request phasing
Match requirement	Constraint	Screen but with exceptions	Consider exception for some types of projects, e.g. feasibility assessments
Sequencing	Constraint	Screen and Decision Criteria	
Social Acceptance	Constraint	Not proposed	Lump with Social/Political Considerations
External drivers	Constraint	Not proposed	Handle in Adaptive Management
Environmental constraints	Constraint	Not proposed	Handle in Adaptive Management
State of Knowledge	Constraint	Not proposed	Handle in Adaptive Management
Scientific Uncertainty	Constraint	Not proposed	Handle in Adaptive Management

Table 3. Screens for Habitat Capital Projects from NOBLE 2008 Strategy Workshops.

ID	Screen	Comments/Questions
1	Is the project within NOBLE area or scope of approved regional plan?	
2	Is there a Landowner Acknowledgement? (Not required for an assessment or design study)	
3	Is the project in a proper place in sequence of recovery actions?	If not, return for appropriate sequencing
4	Has the project considered other H management strategies?	If not, return for documentation of consideration
5	Has the project considered PSP ecosystem recovery objectives?	If not, return for documentation of consideration
6	Does the project have match or in kind funding? (Not required if an assessment or design study)	
7	Is the project request below the funding request limit?	If over ceiling, return for appropriate phasing

Table 4. Criteria and Weights for Habitat Capital Projects from NOPL 2008 Strategy Workshops. Criterion 1, Watershed Priorities, is scored based on values in Table 8.

<b>ID</b>	<b>Criteria for Ranking</b>	<b>MEAN Weight</b>	<b>SD</b>
1	Watershed Priority	3.40	1.897
2	Addresses limiting factor	3.70	1.252
3	Addresses stock status and trends	2.44	1.130
4	Benefits a listed stock covered by recovery or implementation plan	3.40	1.174
5	Benefits other stocks	2.40	0.843
6	Protects high-quality fish habitat	3.20	1.398
7	Restores formerly productive habitat	3.30	1.160
8	Supports restoration of ecosystem functions	2.70	0.823
9	Likelihood of success based on proposer's past success in implementation	1.50	0.850
10	Likelihood of success based on approach	2.65	1.203
11	Reasonableness of cost and budget	1.70	0.483
12	Extent of match, in-kind, or other external funding	LEG Responsibility	
13	Extent of Partnerships	LEG Responsibility	
14	Socio-Political Considerations	LEG Responsibility	

Table 5. Criteria and Weights for Non-Capital Activities, Programs and Projects from NOPL 2008 Strategy Workshops.

<b>ID</b>	<b>Criteria for Ranking</b>	<b>MEAN Weight</b>	<b>SD</b>
1	Advances robust harvestable stocks	3.69	1.18
2	Advances implementation of recovery plans	3.15	1.21
3	Advances habitat protection and restoration	3.92	0.76
4	Advances recovery of ecosystem function	3.46	1.05
5	Advances ecosystem awareness	2.42	1.15
6	Advances integration	1.38	0.65
7	Fulfills requirements from external entities	2.12	1.63
8	Advances multi-agency funding strategy	1.62	0.96
9	Has large spatial-temporal scale of effects	2.65	0.69

Table 6. Updated Information for Watershed Priorities from NOPL 2008 Strategy Workshops. Weights for weighted scores appear in Table 7. The weighted scores were normalized so that the highest score was 5.

WRIA	System	List of Stocks Historically	List of Stocks Critical or Extirpated	Historic Productivity	Current Productivity	Number of Stocks Historically	Number of Stocks Critical or Extirpated	Weighted Score	Normalized Score (5 is best)
17	Nearshore	co, ch, fc, sc, ws,ss, ep,p, bt,ct, so		5	3	11		35	4.27
17	17.0277	unknown	unknown	1	1	1	1	6	0.73
17	17.0284	unknown	unknown	1	1	1	1	6	0.73
17	17.0295	unknown	unknown	1	1	1	1	6	0.73
17	17.0296	unknown	unknown	1	1	1	1	6	0.73
17	17.0297	unknown	unknown	1	1	1	1	6	0.73
17	17.0300	unknown	unknown	1	1	1	1	6	0.73
17	Chicken Coop Creek	co, (ws), ct (fc)	co, (ws), ct (fc)	2	1	2	1	10	1.22
17	Dean Creek	co, (ws), ct (fc)	co, (ws), ct (fc)	2	1	2	1	10	1.22
17	Jimmycomelately Creek	co, ws, sc, ct	co, ws, sc, ct	4	3	4	2	21	2.56
17	Johnson Creek	co, (ws), ct (fc)	co, (ws), ct (fc)	2	1	2	1	10	1.22
18	Nearshore	co, ch, fc, sc, ws,ss, ep,p, bt,ct, so		5	3	11		35	4.27

18	Bell Creek	co,ws,ct, (fc), (bt)	co,ws,ct, (fc), (bt)	1	1	3	2	11	1.34
18	Cassalery Creek	co, (ws), ct (fc)	co, (ws), ct (fc)	1	1	2	1	8	0.98
18	18.0017 (Cooper Creek)	co, (ws), ct (fc)	co, (ws), ct (fc)	1	1	3	1	10	1.22
18	18.0159	unknown	unknown	1	1	1	1	6	0.73
18	Agnew Creek (18.0172)	unknown	unknown	1	1	1	1	6	0.73
18	Bagley Creek	co, ws, ct (fc)	co, ws, ct (fc)	1	1	3	2	11	1.34
18	Dry Creek	co, ws, ct (fc)	co, ws, ct (fc)	1	1	3	2	11	1.34
18	Dungeness River	co, ch, fc, sc,ep, p, bt, ct, ws, ss	ch, sc, ep, p, bt,ss, ws	5	2	10	7	39	4.76
18	Elwha River	co, ch, fc, (sc),ep, p, bt, ct, ws, ss, so	ch, (sc), fc, ep, p, bt,ss, ws, so	5	1	11	8	41	5.00
18	Ennis Creek	co, ws, ct, fc, bt	co, ws, fc, bt	3	1	5	4	21	2.56
18	Gierin Creek	co, (ws), ct (fc)	co, (ws), ct (fc)	1	1	2	1	8	0.98
18	Lees Creek	co,ws,ct, (fc),	co,ws,ct, (fc),	2	1	3	2	13	1.59
18	McDonald Creek	co, ws, ct, fc	co, ws, ct, fc	3	2	4	3	19	2.32
18	Meadowbrook Creek	co,ws,ct, (fc), (bt)	co,ws,ct, (fc), (bt)	2	1	3	2	13	1.59



18	Morse Creek	co, ch, fc, (sc), p, bt, ct, ws, ss	co, ch, fc, (sc), p, bt, ct, ws, ss	4	1	8	7	32	3.90
18	Peabody Creek	co,ws,ct, (fc),	co,ws,ct, (fc),	2	1	3	2	13	1.59
18	Siebert Creek	co, ws, ct, fc	co, ws, ct, fc	3	2	4	2	18	2.20
18	Tumwater Creek	co,ws,ct, (fc),	co,ws,ct, (fc),	2	1	3	2	13	1.59
18	Valley Creek	co,ws,ct, (fc),	co,ws,ct, (fc),	2	1	3	2	13	1.59
19	Nearshore	co, ch, fc, sc, ws,ss, ep,p, bt,ct		5	3	10		33	4.02
19	Colville Creek	co,ws,ct, (fc),	co,ws,ct, (fc),	2	1	3	2	13	1.59
19	19.0005							0	0.00
19	19.0006							0	0.00
19	19.0018							0	0.00
19	19.0019							0	0.00
19	19.0080							0	0.00
19	19.0081							0	0.00
19	Bullman Creek	co,ws,ct, (fc),	co,ws,ct, (fc),	2	1	3	2	13	1.59
19	Butler Creek (19.0112)	co,ws,ct, (fc),	co,ws,ct, (fc),	2	1	3	2	13	1.59
19	Clallam River	co,ws,ct, fc, ch	fc, ch	4.5	2	5	2	23	2.80
19	Deep Creek	co,ws,ct, fc	ch	3.5	2	4	1	18	2.20

19	East Twin River	co,ws,ct, fc	ws	3	2	4	2	18	2.20
19	Falls Creek	unknown	unknown	1	1	1	1	6	0.73
19	Field Creek	co,ws,ct, (fc),	co,ws,ct, (fc),	2	1	3	2	13	1.59
19	Hoko River	co,ws,ct, fc, ch	fc, ch	5	2	5	2	24	2.93
19	Jim Creek	co,ws,ct, (fc),	co,ws,ct, (fc),	3	2	3	1	15	1.83
19	Joe Creek	co,ws,ct, (fc),	co,ws,ct, (fc),	2	1	3	1	12	1.46
19	Lyre River	co,ws,ct, fc, ss, (ch), (p)	fc, ss, ws	5	2	5	3	25	3.05
19	Murdock Creek	co,ws,ct, (fc),	co,ws,ct, (fc),	2	1	3	1	12	1.46
19	Olsen Creek	co,ws,ct, (fc),	co,ws,ct, (fc),	1	1	3	1	10	1.22
19	Pysht River	co,ws,ct, fc, ch	fc, ch, ct	5	2	5	2	24	2.93
19	Sail River	co,ws,ct, (fc),	co,ws,ct, (fc),	3	1	3	1	14	1.71
19	Salt Creek	co,ws,ct, fc, ch	fc, ws, ch	4	2	5	3	23	2.80
19	Sekiu River	co,ws,ct, fc, ch	fc, ch	4	2	5	2	22	2.68
19	Whiskey Creek	co,ws,ct, (fc),	co,ws,ct, (fc),	2	1	3	3	14	1.71
19	West Twin River	co,ws,ct, fc	fc, ws	3	2	4	2	18	2.20



Table 7. Criteria and Weights for Watershed Priorities from NOPLE 2008 Strategy Workshop.

<b>Assignment Criteria</b>	<b>Weight</b>
<b>Historic Productivity</b>	<b>2</b>
<b>Current Productivity</b>	<b>1</b>
<b>Number of Populations Historically</b>	<b>2</b>
<b>Number of Critical, Extirpated Stocks</b>	<b>1</b>

Table 8. Normalized Weighted Scores for Each Watershed from NOPL 2008 Strategy Workshops. This list is sorted from highest to lowest priority.

WRIA	System	Normalized Score (5 is Best)
18	Elwha River	5.00
18	Dungeness River	4.76
17	Nearshore	4.27
18	Nearshore	4.27
19	Nearshore	4.02
18	Morse Creek	3.90
19	Lyre River	3.05
19	Hoko River	2.93
19	Pysht River	2.93
19	Clallam River	2.80
19	Salt Creek	2.80
19	Sekiu River	2.68
17	Jimmycomelately Creek	2.56
18	Ennis Creek	2.56
18	McDonald Creek	2.32
18	Siebert Creek	2.20
19	Deep Creek	2.20
19	East Twin River	2.20
19	West Twin River	2.20
19	Jim Creek	1.83
19	Sail River	1.71
19	Whiskey Creek	1.71
18	Lees Creek	1.59
18	Meadowbrook Creek	1.59
18	Peabody Creek	1.59
18	Tumwater Creek	1.59
18	Valley Creek	1.59
19	Colville Creek	1.59
19	Bullman Creek	1.59
19	Butler Creek (19.0112)	1.59
19	Field Creek	1.59
19	Joe Creek	1.46
19	Murdock Creek	1.46
18	Bell Creek	1.34
18	Bagley Creek	1.34
18	Dry Creek	1.34
17	Chicken Coop Creek	1.22
17	Dean Creek	1.22
17	Johnson Creek	1.22

18	18.0017 (Cooper Creek)	1.22
19	Olsen Creek	1.22
18	Cassalery Creek	0.98
18	Gierin Creek	0.98
17	17.0277	0.73
17	17.0284	0.73
17	17.0295	0.73
17	17.0296	0.73
17	17.0297	0.73
17	17.0300	0.73
18	18.0159	0.73
18	Agnew Creek (18.0172)	0.73
19	Falls Creek	0.73
19	19.0005	0.00
19	19.0006	0.00
19	19.0018	0.00
19	19.0019	0.00
19	19.0080	0.00
19	19.0081	0.00

<b>Abbreviation Key</b>	
Abbreviation	Full Name
bt	Bull trout
ch	Chinook
co	Coho
ct	Cutthroat
ep	Early pink
fc	Fall chum
p	Pink
sc	Summer chum
SD	Standard Deviation
so	Sockeye
ss	Summer steelhead
ws	Winter steelhead

**Matrix Priority Tiering Method**

The projects were ranked from highest to lowest according to their weighted average. They were then divided into categories of high (1), medium (2) and low (3) priorities.

There are 37 Capital Projects, so:  $37/3 = 12.33$  projects per category. The first top 12 projects are designated in the high (1) category, the next 12 into the medium (2) category and the last 13 projects into the low (3) category.

There are 25 Non-Capital Projects, so:  $25/3 = 8.33$  projects per category. The first top 8 projects are designated in the high (1) category, the next 8 projects into the medium (2) category and the last 9 projects into the low (3) category.

These ranking categories can be viewed on the Matrix under the Priority Tier column.

Project No.	Priority Tier	Primary Limiting Factors Addressed	Project Name	Likely Sponsor	Total Cost of First Three Years	Proposed SRFB (or grant) share	Local Share or Other Funding	Source of Other Funds	2007		2008		2009		Likely End Date	Activity Type	Habitat Type	
									Year 1 Scope	Year 1 Cost	Year 2 Scope	Year 2 Cost	Year 3 Scope	Year 3 Cost				
<b>CAPITAL PROJECTS</b>																		
<b>Habitat Capital Projects</b>																		
<b>WRIA 19 (Lyre-Hoko)</b>																		
1	3	3	Hoko (phase I)-Emerson Flats LWD restoration	Makah	\$700,000	\$650,000	\$50,000	staff support, wood, reveg	LWD purchase and ELJ installation	\$400,000	LWD purchase and ELJ installation	\$300,000			2010	habitat complexity	I	
2	3	3	Hoko (phase II) mainstem (RM 1-7) riparian revegetation	Makah	\$255,000	\$245,000	\$10,000	staff support	order trees, identify areas	\$5,000	plant trees	\$250,000			2010	riparian revegetation	R	
3	3	3	Hoko (phase III)-Herman Creek LWD restoration	Makah	\$250,000	\$190,000	\$60,000	staff support, LWD donations			LWD purchase and ELJ installation	\$250,000			2010	habitat complexity	I	
4	2	3	Little Hoko River (RM 0-4) LWD restoration	Elwha	\$400,000	\$325,000	\$75,000	staff support							2011	I		
5	2	3	Sekiu mainstem (RM 2-5) LWD restoration	Makah	\$400,000	\$350,000	\$50,000	staff support, wood, reveg			LWD purchase and ELJ installation	\$300,000	Maintenance	100,000	2011	habitat complexity	I	
6	3	3	Sekiu, Clallam, Pysht riparian revegetation	Makah/Elwha	\$255,000	\$245,000	\$10,000	staff support	order trees, identify areas	\$5,000	plant trees	\$250,000			2010	riparian revegetation	R	
7	3	3	Clallam mainstem (RM 5-10) LWD restoration	Elwha	\$600,000	\$550,000	\$50,000	staff support, wood, reveg			LWD purchase and ELJ installation	\$300,000	LWD purchase and ELJ installation					
8	3		Salt Creek LWD	Elwha	\$400,000	\$325,000	\$75,000											
8A	3		Salt Creek habitat protection	NOLT	\$1,500,000	\$300,000	\$1,200,000	donated development rights	Contact landowners, title rept, surveys & appraisal	\$80,000	Negot. & Draft Conser. Easements	\$80,000	Purchase Development rights	\$1,340,000	2010	L		
<b>WRIA 18 (Elwha - Morse)</b>																		
9	2	3	Morse Creek (RM 3.0-4.5) LWD restoration	Elwha /NOSC	\$400,000	\$23,000	\$20,000	staff support, LWD donations	LWD Purchase.	\$125,000	LWD Mobilization.	\$125,000	LWD Placement	\$150,000	2008	I		
10	1	1	Morse Creek remeander (WDFW Property)	Elwha/WDFW/NOSC	\$950,000	\$900,000	\$50,000	staff support, wood, reveg	Channel Excavation & Preparation	\$500,000	LWD purchase and ELJ installation	\$250,000	Riparian Planting & Monitoring	\$150,000	2009	I		
11	1	3	Elwha ELJ	Elwha	\$850,000	\$800,000	\$50,000	staff support, wood, reveg	LWD purchase and Placement	\$350,000	LWD purchase and Placement	\$250,000	LWD purchase and ELJ installation	\$150,000	2009	I		
12	3		Valley Creek restoration remeander	City of PA	\$600,000		>15%	Staff support			Construction					Riparian	Riparian	
13	3	1, 2, 5, 7, 10	Tumwater Creek estuary restoration	City of PA	\$600,000		>15%	Staff support	Engineering & Design	\$200,000	Construction	\$400,000				Fish passage	E	
14	2	1, 2, 5, 7, 10	Lower Elwha hatchery outfall and berm	Elwha	\$750,000	\$650,000	\$100,000	Elwha Project	planning and design underway with current funding	na	planning and design underway with current funding	na	Construction	\$750,000	2011			
15	1		Elwha culvert replacement	Elwha														
15A	3	2	Ennis Creek estuary restoration	Elwha/WDFW/NOSC	\$100,000	\$100,000	\$0											
<b>WRIA 18 (Dungeness)</b>																		
16	1	1	Dungeness ACOE/Beebe dike setback	CC	\$7,500,000	\$5,000,000	\$2,500,000		design and permitting	\$200,000	construction/setback	\$7,300,000	na	na	2009	F		
17	1	1	Dungeness ACOE/Beebe channel remeandering and ELJ placement	JSKT	\$2,175,000	\$1,800,000	\$375,000		design and permitting	\$175,000	channel reconstruction and ELJ installation	\$2,000,000	na	na	2009	F		
18	1	3	Dungeness corridor (RM 3.0 -RM 10.5) habitat protection	WDFW/NOLT/JSKT	\$4,295,000	\$2,500,000	\$1,795,000		negotiations and acquisitions	\$1,000,000	negotiations and acquisitions	\$2,295,000	negotiations and acquisitions	\$1,000,000	2010	R		
19	2	3	Dungeness riparian reforestation	CCD/ JSKT/CC	\$150,000	\$130,000	\$20,000		landowner contacts/ planting	\$50,000	landowner contacts/ planting	\$50,000	landowner contacts/ planting	\$50,000	2010	R		
20	2	6	Agnew Irrigation District piping	Agnew Irrigation District	\$500,000	\$425,000	\$75,000		design and partial construction	\$250,000	remaining construction	\$250,000	na	na	2009	I,P		
21	1	6	Dungeness Irrigation Group water conservation	Dungeness Irrigation District	\$3,500,000	\$1,800,000	\$1,700,000	Irrigation Efficiencies Program	engineering and permitting	\$50,000	construction	\$1,500,000	construction	\$1,950,000	2010	I,P		
22	1	6	Dungeness Irrigation District water conservation	Dungeness Irrigation District	\$1,650,000	\$400,000	\$1,250,000	Irrigation Efficiencies Program	engineering and permitting	\$50,000	construction	\$800,000	construction	\$800,000	2010	I,P		
23	2	6	Sequim Prairie Tri Irrigation Association SP-5 Lateral Piping	Sequim Prairie Tri Irrigation Association/CC D	\$300,000	\$100,000	\$200,000	Irrigation Efficiencies Program	design, lower reach construction	\$60,000	construction	\$240,000	na	na	2008	I,P		
24	2	6	Highland Irrigation District H-10 Lateral Piping	Highland Irrigation District/CCD	\$200,000	\$100,000	\$100,000	Irrigation Efficiencies Program	design	\$10,000	construction	\$190,000	na	na	2008	I,P		



Project No.	Priority Tier	Primary Limiting Factors Addressed	Project Name	Likely Sponsor	Total Cost of First Three Years	Proposed SRFB (or grant) share	Local Share or Other Funding	Source of Other Funds	2007		2008		2009		Likely End Date	Activity Type	Habitat Type
									Year 1 Scope	Year 1 Cost	Year 2 Scope	Year 2 Cost	Year 3 Scope	Year 3 Cost			
25	2	1	Jimmycomelately riparian protection	JSKT/NOLT/WDFW	\$1,000,000	\$850,000	\$150,000		appraisal/ review/ title report/ negotiations	\$15,000	purchase	\$985,000	na	na	2009	I,P	
26	3	3	Meadowbrook Creek habitat restoration	Ducks Unlimited	\$300,000	\$200,000	\$100,000	Federal/private	feasibility	\$100,000	design/construction	\$200,000	na	na	2009	W,E	
27	3	10,14	McDonald Creek diversion & dam removal & ditch lining	JSKT	\$502,000	\$426,000	\$76,000	Irrigation Efficiencies Program								Fish Passage, Fish Screen, Instream Flow	
<b>Nearshore Restoration</b>																	
28	2		Pit Ship Pocket Estuary conservation easement	NOLT	\$250,000	\$225,000	\$25,000		Landowner Discussions	\$125,000	Easement finalized.	\$125,000					
29	1	2	Dungeness Bay Drift Cell protection	JSKT	\$520,000	\$520,000	unknown	unknown	Planning	\$10,000	Work with Landowner	\$10,000	Implementation	\$500,000			E
30	2	2	Washington Harbor habitat protection easement(s) aquisition	NOLT/JSKT	\$1,020,000	unknown	unknown	unknown	Plan & begin work w/landowners	\$10,000	Design & implement	\$1,000,000	Cont. Implementation	\$10,000	2010		
31	1	2	Washington Harbor tidal flow restoration	JSKT/CCD/City of Sequim	\$140,000	unknown	unknown	unknown		\$20,000		\$100,000		\$20,000			
32	3	7, 10	Ediz Hook A Frame Site shoreline restoration	WDFW/Elwha/Port PA/DNR/City of Port Angeles	\$475,000	unknown	>15%	unknown		\$10,000		\$460,000		\$5,000		Marine beach restoration	Nearshore
33	1	2	Elwha River Estuary restoration	Elwha/CC/WDFW	\$1,320,000	\$700,000	unknown	unknown		\$210,000	Implementation	\$1,040,000	Implementation	\$70,000			
34	1	2	Salt Creek salt marsh reconnection	WDFW/Elwha/CCD	\$95,000		FFPP	unknown		\$10,000		\$80,000		\$5,000			
35	2	2	Travis and Paradise Cove Spit Drift Cells protect coastal feeder bluffs	JSKT	\$2,015,000	unknown	unknown	unknown	Plan&Work w/landowners	\$15,000	Begin to implement	\$1,000,000	More implementation	\$1,000,000	2010		
<b>Hatchery Capital Projects</b>																	
<b>NON-CAPITAL PROJECTS</b>																	
<b>Harvest Program Management</b>																	
36	3		Dungeness improved fisheries enforcement	WDFW/ JSKT	\$600,000	0	\$600,000	unknown	staffing (2 FTEs)								
<b>Future Habitat Project Development</b>																	
37	1		Siebert Creek Highway 101 fish passage restoration Phase 1 conceptual design														
38	1		Clallam County - inventory culverts	CC													
39	2		Dungeness - update habitat survey	JSKT													
40	1		12 Rivers channel migration zone assessment	JSKT/Elwha/Makah/CC	\$300,000	\$255,000	\$45,000	unknown	project scope, consultant selection		project completion						
41	1	6	Clallam River Mouth geomorphology assessment	Makah/Elwha/WDFW/CC	\$200,000	\$200,000			design and initiate study with UW or OSU team of coastal/fluvial	\$100,000	complete study	\$100,000				F	
<b>Habitat Protection</b>																	
42	3		NOPE area wide data base for habitat restoration, protection, & permitted activities	CC/Cities of Port Angeles & Sequim/ NOPE	\$275,000	\$225,000	\$50,000	unknown	Design & Initiate Data Base	\$150,000	Gather date & populate data base	\$100,000	Ongoing addition of new data	\$25,000	ongoing		
43	2		NOPE Area Wide assess implementation of CAO, SMP, HPA with ground truthing	CC/Cities of Port Angeles & Sequim/ NOPE	\$250,000	\$200,000	\$50,000	unknown									
44	2		NOPE Area Wide: Increase compliance w/ordinances & codes	CC/Cities of PA & Sequim /NOPE	\$360,000	\$360,000	\$0										
45	3		Clallam County map roadside ditches that contribute to stream network	CC	\$75,000	\$71,250	\$11,250		Staffing (2 FTE)	\$120,000	Staffing (2 FTE)	\$120,000	Staffing (2 FTE)	\$120,000			
46	2	1,3	Jimmycomelately Creek habitat stewardship program	WDFW, JSKT	\$51,600	\$51,600	In Kind		Identify crossing and ditches on maps	\$15,000	Field check and wq monitoring	\$30,000	wq monitoring and develop report	\$30,000			
									staff (0.17 FTE), mileage, supplies, equipment								

Project No.	Priority Tier	Primary Limiting Factors Addressed	Project Name	Likely Sponsor	Total Cost of First Three Years	Proposed SRFB (or grant) share	Local Share or Other Funding	Source of Other Funds	2007		2008		2009		Likely End Date	Activity Type	Habitat Type
									Year 1 Scope	Year 1 Cost	Year 2 Scope	Year 2 Cost	Year 3 Scope	Year 3 Cost			
47	1		NOPLE Area Wide update stormwater management program	CC/City of PA/City of Sequim	\$600,000	\$450,000	\$150,000	Ecology	Staffing (3 FTE)	\$300,000	Staffing (3 FTE)	\$300,000	-	-	2009		
48	2		NOPLE Area Wide update Shoreline Master Program	CC/City of PA/City of Sequim	\$600,000	\$150,000	\$450,000	Ecology	Staffing (3 FTE)	\$300,000	Staffing (3 FTE)	\$300,000	-	-	2009		
49	2		Clallam County create stable-funded incentive programs	CC	\$300,000	\$150,000	\$150,000	Clallam Co. WFC staff, equipment, vehicles	scoping, landowner contacts, fieldwork, data management	\$120,000	assessment: field work, data entry, interactive mapping database	\$200,000	follow-up field work, data entry, interactive mapping database	\$50,000	2011	mainstem & headwater tributaries	assessment
<b>Watershed Plan Implementation</b>																	
<b>Outreach and Education</b>																	
51	3		NOPLE Area Wide develop outreach program	NOPLE	\$100,000	\$85,000	\$15,000	WDFW	Dev. & Implement Outreach Plan	\$30,000	Update Web Site & Outreach Displays	\$30,000	Expand & continue outreach	\$25,000	Ongoing		Non-Capital
52	3		Clallam County salmonid recovery planner position at DCD	CC	\$200,000	\$170,000	\$30,000	Ecology, WDFW, etc.	Determine existing local efforts, id potential linkages, id gaps	\$66,600	Create links; close gaps	66,600	Project design & further recovery plan implementation	\$66,600	Ongoing		Non-Capital
53	3		State of the Waters report update	CC	\$75,000	\$71,250	\$3,750		Collect updated data	\$25,000	Write and publish	\$50,000			2010		Non-Capital
54	2		Dungeness River Management Team	CC	\$250,000	\$225,000	\$25,000	Unknown	Increase Capacity	\$75,000	Project design/ volunteer dev.	\$75,000	Implement Projects	\$75,000	Ongoing		Capacity
55	2		Elwha Morse Management Team	CC	\$250,000	\$225,000	\$25,000	Unknown	Increase Capacity	\$75,000	Project design/ volunteer dev.	\$75,000	Implement Projects	\$75,000	Ongoing		Capacity
55A	3		WRIA 19 Watershed Council	CC	\$250,000	\$225,000	\$25,000	Unknown	Increase Capacity	\$75,000	volunteer dev.	\$75,000	Implement Projects	\$75,000	Ongoing		Capacity
<b>Instream Flow Protection</b>																	
<b>Salmon Recovery Coordination</b>																	
56	1		NOPLE Area Wide increase coordination and support capacity	NOPLE	\$275,000	\$245,000	\$35,000	Unknown/Local	increase needed capacity	\$100,000	Manage added responsibilities	\$90,000	Handle new programs & projects	\$85,000	Ongoing	Program Design	Capacity
<b>Habitat Project Monitoring</b>																	
57	3		NOPLE Area adaptive management plan & monitoring	NOPLE	\$275,000	\$275,000	In-Kind	Unknown	Begin Adaptive Mgmt Process	\$100,000	Dev. Of local Adaptive Mgmt Plan	\$90,000	Implement Adaptive Mgmt Plan	\$85,000		Recovery Integration	
58	1		Elwha watershed adaptive management plan & monitoring	LEKT	\$375,000	\$360,000	\$15,000	Unknown	Begin Adaptive Mgmt Process	\$145,000	Dev. Of Elwha Adaptive Mgmt & Monitoring	\$130,000	Implement Adaptive Mgmt Plan & Monitoring	\$85,000		Recovery Integration & Monitoring	
<b>Stock Monitoring Monitoring Support</b>																	
59	1		NOPLE Area Wide Monitoring Program for VSP parameters	NOPLE	\$300,000	\$290,000	\$10,000	Unknown	Dev & Institute Monitoring Program	\$100,000	Ongoing Monitoring Efforts	\$100,000	Further Monitoring & Analysis	\$100,000		Monitoring Recovery	