Nisqually Watershed Salmon Recovery
3 year work program 2012-2014

Nisqually Salmon Recovery Summary

Introduction

Since the implementation of the original Nisqually Chinook Recovery Plan (NCRP 2001), we have accomplished major habitat restoration initiatives and continued efforts to protect existing habitat, monitor and evaluate restoration activities, and develop and implement a Nisqually Chinook Stock Management Plan (NCSMP 2011). Major habitat restoration accomplishments include the Nisqually Estuary restoration, Ohop Creek Phase 1, and several Mashel River wood placement projects (Table 1). Future restoration opportunities, such as Ohop Creek Phases 2 and 3 are large-scale and will require complex funding and coordination. Habitat protection efforts continue to advance, ensuring that existing high quality habitat will remain and the quality and quantity of Nisqually salmon habitat will increase over time. Our habitat monitoring efforts, especially in the Nisqually estuary, have been progressing and we are beginning to incorporate predicted climate change effects into our restoration planning. In 2011 we began to implement actions identified in the NCSMP and the lessons learned in 2011 should lead to future success. In addition to implementing all elements of the NCSMP, preliminary steelhead recovery planning has begun in the Nisqually watershed and this will be a focus over the next 3 years.

Table 1. Nisqually Chinook management timeline

Year	Habitat	Hatchery/Weir	Harvest	Stock Status/Escapement Management
1991	Large sections of the Nisqually mainstem are protected by Fort Lewis and Nisqually Indian Reservation. However, sections of the mainstem and tributaries are not protected. The Nisqually estuary is severely reduced in area from dikes on both sides of river.	Clear Cr. hatchery releases began with release goal of 3.4 million fish, in addition to 600,000 release goal from Kalama Creek	Harvest is managed to take advantage of hatchery programs, total exploitation rates consistently exceed 70%	No specific management goals defined for natural escapement.
1996	Red salmon slough estuary restoration: dike breached to restore 12 acres of salt marsh	Last year use of non-Nisqually brood stock at Clear Creek or Kalama Creek. McAllister Creek continues to import brood stock.		
1997	Minimum flows established for hydropower impacted reaches during relicensing			
1999		Mark rates improved dramatically with use of auto-marking trailers		ESA listing of Puget Sound Chinook
2000				Begin period to re-establish natural production of Chinook in Nisqually, target Chinook natural spawning escapement of 1,100 fish of hatchery- or natural-origin.
2001	63% of mainstem Nisqually River shoreline in protected status			Nisqually Chinook Recovery Plan (NCRP) released, details elements of habitat action plan
2002		McAllister Cr. WDFW hatchery closed (program release was 1.0 million subyearling and 300k yearling Chinook from a variety of brood stock sources)		
2004	Lower Mashel Restoration Project (install 7 logjams)			
2005	70% of mainstem Nisqually River shoreline in protected status			Escapement target revised to 1,200 naturally spawning Chinook based on revised estimate habitat potential

Year	Habitat	Hatchery/Weir	Harvest	Stock Status/Escapement Management
2006	Red Salmon Slough dike removal for estuary restoration (150 acres + wetland and surge plain)		Sport regulations revised to require release of all adult non-adipose clipped Chinook	
2007	Eatonville Mashel Phase 1 project (12 logjams)			2001 NCRP adopted as official plan by the federal government, Puget Sound steelhead ESA listed
2009	NNWR estuary restoration with dike removal restoring 760 acres			First year of juvenile out-migrant estimates from trap operated by WDFW at RM 12.8
2010	Eatonville Mashel Phase 2 project (installed 23 logjams), Ohop Phase 1 completed, restored 1 mile of creek	Mark rates improved to over 95% with more efficient sorting of clipped fish	Puget Sound Harvest Management Plan developed to guide annual harvest, includes schedule to reduce total exploitation on Nisqually natural Chinook to 47% by 2014. Total exploitation rate on Nisqually Chinook in 2010 was 72%	
2011	75% of Nisqually River mainstem shoreline in protected status	First year installed mainstem weir, multiple issues with design discovered	Total exploitation rate target on natural Chinook of 65% First year testing selective harvest gear with tribal staff.	Nisqually Chinook Stock Management Plan developed to guide process to achieve a self-sustaining, locally adapted natural population. The plan actions for hatchery brood stock, terminal harvest, and natural spawning escapement.
2012		Plan first year of full weir operation with full implementation of pHOS criteria and escapement objectives identified in NCSMP	Plan total exploitation rate target on natural Chinook less than 56%. First year with treaty fishers using selective gear commercially	Plan first year of mark-recapture study to estimate escapement upstream of weir
2013		Plan first year to integrate Kalama Cr. brood stock using natural-origin adults collected at weir.	Plan total exploitation rate target on natural Chinook of 56%	
2014			Plan total exploitation rate target on natural Chinook of 47%	

Nisqually Chinook Recovery Plan

The NCSMP was developed by the Nisqually Chinook Recovery Team (NIT, WDFW and others) to identify actions to take us from an era of hatchery dominated escapement (percent hatchery exceeding 70%) with a focus on habitat colonization towards promoting the development of a self-sustaining locally-adapted natural population. Included in this process was a review and update of the goals and objectives developed in the Chinook recovery plan in 2001. The updated goals and objectives for Chinook Recovery in the NCSMP can be found in Table 2. The Chinook Recovery Team utilized all available escapement abundance and composition, harvest, hatchery return, and habitat condition data to assess the current stock status. A result of this review was a 'Status and Trends' analysis to be updated annually as new information becomes available. These data were also incorporated into modeling tools including Ecosystem Diagnosis and Treatment (EDT), All-H-Analyzer (AHA), and In-season Implementation Tool (ISIT) to update stock management targets, and to analyze a suite of actions to achieve objectives. A target of less than 10% hatchery-origin spawners was adopted to promote the development of a self-sustaining natural run. The previous management target of 1,200 (mixed composition) spawners has been replaced with a new focus on managing for composition and a minimum escapement of 500 naturally spawning Chinook above the weir. This minimum escapement is not an escapement target; rather it is a critical low abundance threshold for managing harvest and weir operations. One of our primary stock assessment actions over the next three years will be to incorporate historical Chinook stock data, habitat conditions, and current natural-origin Chinook run size under the new harvest regime to develop updated near- and mid-term escapement targets. Actions identified in the NCSMP include exclusion of hatchery strays with a weir, integration of hatchery brood stock, harvest rate reductions on natural-origin returns, and implementation of selective harvest gear in the treaty net fishery.

Key to the success of the NCSMP is efficient and timely inclusion of information in the management structure and a planned process to review and act on information. Specifically, the NCSMP must audit performance, challenge key assumptions, guide decisions, and plan activities for the upcoming year. A critical element is the Annual Project Review (APR) convened each February. The APR is a multi-day meeting planned by NIT and WDFW during monthly Nisqually Stock Assessment Workgroup meetings. The APR is when Nisqually natural resources staff and WDFW set plans and biological targets for the upcoming management season. The APR also includes a public meeting component to present new information and planned activities, and to hear feedback from interested individuals and organizations in the basin. A summary of the 2012 Action plan developed at the February 2012 APR is included in Appendix A.

Table 2. Nisqually Chinook management goals and objectives

Type	Description
Long Term Goals	• Assure natural production of Chinook in perpetuity by providing high quality, functioning habitat and by developing a self-sustaining, naturally spawning population with diverse geographic distribution.
	• Assure a sustainable annual terminal harvest of 10,000 to 15,000 Chinook.
	• Provide significant contributions to ecosystem functions.
	• Secure and enhance natural production of all salmonids.
	• Assure that the economic, cultural, and social benefits derived from the Nisqually ecosystem will be sustained in perpetuity.
Short Term (10 yr) Conservation Objectives	• Manage harvest on natural-origin Nisqually Chinook to not substantially impede the opportunity for the population to grow towards the long-term recovery goal.
	• Manage escapement composition (hatchery- and natural-origin) for the population component upstream of weir to achieve a four-year moving average proportion of hatchery-origin spawners (pHOS) that is less than 10%
	• Develop a hatchery program that has a genetic continuity to the natural population achieved by a 600,000 fish release integrated program with a proportion of natural origin brood stock (pNOB) of 25% and a 3.4 million harvest program with 100% brood stock taken from integrated hatchery return.
Short Term (10 yr) Harvest Objectives	• Manage pre-terminal fisheries to selectively harvest Nisqually hatchery Chinook while not exceeding the total exploitation rate target of 47% (by 2014) on natural-origin Nisqually Chinook.
	• Develop and implement selective gear methods in the Nisqually terminal tribal fishery to achieve the harvest goal of 10,000 to 15,000 hatchery Chinook while reducing impacts to natural-origin Chinook
Short Term (10 yr) Habitat Objectives	• *Protection*: No further degradation in the Nisqually watershed and Puget Sound. Protect habitat to support the productivity, abundance, and life history diversity of natural-origin Nisqually Chinook.
	• *Restoration*: Restore habitat in the Nisqually watershed and in Puget Sound to support the long-term objective to improve natural-origin Nisqually Chinook productivity, abundance, and life history diversity
Short Term (10 yr) Community Support Objectives	• Increase local community awareness of, and support for, high priority actions to recover Nisqually and Puget Sound salmon
	• Increase regional, state, and national community awareness of and support for high priority actions to recover Puget Sound salmon

Habitat

Overview

The 2001 NCRP contained an action plan that outlined specific restoration and protection priorities. The action plan was guided by EDT model results and identified the following general priority areas: the Nisqually estuary, portions of the Nisqually mainstem, Ohop Creek, and the Mashel River. More detail on the habitat priorities can be found in Appendix B. We continue to work on actions listed in this plan and to refine the habitat priorities through research, assessments, monitoring, and evaluation. For example, when the 2001 NCRP was developed we lacked information about how Nisqually Chinook utilize the nearshore environment and about the habitat condition. Juvenile Chinook sampling since then has indicated that the nearshore areas adjacent to the Nisqually Delta are important for Chinook rearing and migration. Additionally, several nearshore assessments have been completed, including the Nisqually to Point Defiance Nearshore Habitat Assessment. This information has resulted in the inclusion of specific nearshore projects in our 3 year work program.

Recent Accomplishments

Large scale habitat restoration projects in all three of the priority restoration areas of the Nisqually watershed (Nisqually River estuary, Mashel River, and Ohop Creek) were implemented over the last three years. This includes finalizing the estuary restoration (Red Salmon Slough Phase 3 and estuary plantings), Ohop Phase 1, and Mashel River wood placement. Habitat protection efforts in the Nisqually watershed progress steadily with over 75% of mainstem shorelines protected, as well as important habitat on the Mashel River and Ohop Creek. Additionally, planning work has advanced for Ohop Phase 2 as well as the lower Nisqually River mainstem, and Puget Sound nearshore.

Plans for 2012-2014

This three year work program includes projects that continue to move large-scale restoration initiatives towards implementation and advance protection of Nisqually salmon habitat. Specific nearshore restoration actions are also included, some of which were identified in the recently completed Nisqually to Point Defiance (WRIA 11/12) Nearshore Habitat Assessment and Restoration Design Project. These nearshore areas are outside of our official watershed/lead entity boundaries however we are including them because protection and restoration of Puget Sound nearshore habitat is one of the most critical habitat actions necessary to recover Nisqually Chinook. The nearshore actions will be forwarded to the South Sound Watershed's 3 year work program as well. Over the next 3 years we will continue to work on moving large-scale projects forward, including Ohop phase 2 and 3, I-5 relocation, and lower Nisqually planning.

One of the new components of the Nisqually work program is the first step in a major initiative to protect and restore over 250 acres of floodplain along the highly impacted McKenna reach. The goal of this initial phase is to develop a protection strategy and a series of alternative restoration designs that will restore and enhance off-channel habitat and reconnect a mile of river frontage/ floodplain with the mainstem Nisqually River. The 2004 Nisqually River Off-Channel Habitat Assessment conducted by the South Puget Sound Salmon Enhancement Group and the Nisqually Indian Tribe identified six severely impaired off-channel habitat complexes within the McKenna Reach, the most heavily impaired reach in terms of floodplain habitat in the Nisqually

Basin. The sites have multiple impairments ranging from severe riparian degradation to hydrologic and morphologic modifications. Four of the six off-channel habitat complexes are located in the proposed project area.

Habitat Monitoring

Nisqually habitat monitoring efforts vary in their intensity and coverage. Implementation monitoring is ongoing throughout the watershed for all salmon recovery projects. Over the next three years we will expand our implementation monitoring metrics and will continue to use the Habitat Work Schedule (HWS) as our primary database. Effectiveness monitoring is being done at specific project areas such as the estuary restoration projects, Mashel River logjam placements, and at the Ohop Creek Phase 1 project area. Effectiveness monitoring includes habitat change assessments. We have a monitoring attribute table that we hope to implement in the next three years. This should enable us to assess the effectiveness of all major habitat actions at addressing the limiting factors. Additionally we look forward to working with the RITT to integrate the open standards approach into our monitoring efforts. Some validation monitoring is ongoing. For example, at the Nisqually Estuary we are testing our hypotheses about how restored estuarine processes affect habitat use and survival of juvenile Chinook. In addition, we are working with the USGS to incorporate climate change induced sea level rise predictions into our estuarine habitat monitoring. Early results indicate that sediment delivery through the system is currently impaired and that restoration of the sediment budget is essential to maintaining and developing estuary marsh habitat in the face of sea level rise. As this research is refined, we will work to develop a suite of options for managing sediment delivery to the delta over the next three years. The Nisqually watershed recognizes that habitat status and trends monitoring is an extremely important component of any long term recovery strategy. A deliberate, strategic, and concerted status and trends monitoring effort has not been implemented. We will continue to look for resources to implement this important component.

<u>Hatchery/Weir</u>

Overview

See Table 1 for major hatchery milestones. The purpose of the Clear and Kalama Creek hatcheries has been to provide fish for pre-terminal and terminal harvest. The purpose of these hatcheries does not change; they will continue to be the primary source of fish for harvest by the Nisqually tribe net fishery and non-treaty fishers. However, hatchery operations are being adjusted to also promote the development of a self-sustaining locally-adapted natural population. The NCSMP outlines exclusion of hatchery-origin Chinook from spawning above the weir at river mile 12.3 and the development of an integrated Kalama Creek hatchery program. This integrated program will be used to generate brood stock to support a stepping-stone harvest program (that uses brood stock collected from the integrated program return) at Clear Creek and to provide a demographic safety net in years of critically low adult abundance.

Recent Accomplishments

Mark rates on our hatchery releases have improved over time due to the use of automatic trailers and improvements in how clipped and unclipped fish are sorted. In summer 2011 we tested installation and operation of a mainstem weir to exclude hatchery fish. We found several design flaws and these findings are being used to revise the weir design for 2012.

Plans for 2012-2014
A mainstem weir will be operated from early July to late October each year to exclude hatchery-origin Chinook. The weir will also be used to collect brood stock for the integrated hatchery program. In 2012 we will not be collecting natural-origin Chinook for the integrated program at Kalama Creek. Instead, we plan to test gear and practice brood stock handling procedures at the weir and hatchery with hatchery-origin Chinook. We plan to begin integration by 2013. Actions planned for 2012 are listed in Appendix A and include measures to reduce the incidence of hatchery strays and to improve recovery data of hatchery return. These actions will continue to be implemented in 2013 and 2014 along with any updates developed through our annual review process.

Harvest

Overview
Fishery management has changed significantly over time (Table 1). Harvest management was simply ensuring sufficient escapement to the hatchery to meet the brood stock collection needs and to achieve a mixed composition natural spawning escapement of 1,200 fish. The NSCMP identifies a total exploitation rate of 47% on natural-origin Chinook by 2014. A higher total exploitation rate on hatchery-origin Chinook, if it can be accomplished with selective fisheries, will be necessary to meet harvest goals and reduce the incidence of hatchery strays.

Recent Accomplishments
Selective gear (drift and set tangle nets) were successfully tested in 2011 both for feasibility and impact on the survival of released fish. A harvest rate reduction in the treaty net fishery was implemented in 2011 by reducing the total number of days the fishery was open.

Plans for 2012-2014
Planned 2012 actions include treaty selective fishery openings, managing fishery openings to meet our targeted terminal harvest rate on natural-origin Chinook, and improvements to pre-season and in-season forecasting tools and protocols to better forecast run size pre-season and update run size in-season (Appendix A). The 2013 and 2014 harvest schedule for Nisqually Chinook calls for further reductions in the terminal net fishery. These reductions are necessary to contribute to reducing the total exploitation rate on natural-origin Chinook to 47% by 2014.

Stock Status/ Adaptive Management

Overview
The escapement estimation methodology that has been used since the 1980's for Nisqually Chinook has provided only a rough estimate of escapement. Poor visibility in the mainstem Nisqually River makes it difficult to accurately count the number of spawners on surveys. There has also, until recently, been no estimate of the number of juveniles out-migrating. There has been good data provided from the monitoring of fisheries and hatchery returns. The combination of an out-migrant trap operated by WDFW since 2009 and the adult weir to be operated by the Nisqually Indian Tribe will allow for substantial improvement in the breadth and accuracy of our stock status information.

Recent Accomplishments

An out-migrant trap was first operated by WDFW in 2009 and has provided estimates of juvenile Chinook, coho, chum, pink, and steelhead each year since. In the future we plan to use these estimates to compute smolt to adult and adult to smolt survival rates. These survival rate estimates will be valuable as we track trends in stock productivity and improve pre-season forecasts. We initiated an annual project review process in 2010 to gather and share information and make plans through adaptive management. A study of juvenile and adult Chinook otoliths, in cooperation with USGS, has completed analysis on a full brood year including habitat use and growth patterns in the estuary by outgoing juveniles and life history of successfully returning adults captured in the fishery or after spawning.

Plans for 2012-2014

Plans for 2012 include using weir counts and a mark-recapture study to produce a more accurate escapement estimate, collection of genetic samples from adult returns passed upstream at the weir for a parentage study, collection of biological data at the weir to improve our understanding of life history of natural-origin Chinook, and improved data management (Appendix A). These actions will be continued into 2013 and 2014 along with updates from the annual project review process. Chinook recovery over the next three years will be characterized by continuing to refine actions described in the NCSMP, developing Nisqually specific VSP metrics, advancing the development of an adaptive management strategy that takes advantage of improvements in stock status and trends data, and continued focus on restoration and protection initiatives. The information compiled from our stock assessment efforts, along with habitat conditions monitoring and evaluation will be used in the APR to advance our H-integration efforts. We will strive to include new information and planning options related to climate change in our planning process.

Steelhead Planning

Over the next 3 years we plan to develop a steelhead recovery plan. The plan will highlight habitat actions not covered in the Chinook plan, incorporate current research on early marine survival, update modeling efforts, and detail research and stock management needs. Some of these early actions are included in this 3 year work plan, including a counter at the Centralia Diversion Dam fish ladder to better estimate steelhead spawner abundance.

Nisqually Watershed Response to the Three Year Work Plan Questions:

Consistency Question
1. What are the actions and/or suites of actions needed for the next three years to implement your salmon recovery chapter as part of the regional recovery effort?

The suite of proposals for 2012 fit our strategy and continue to advance our habitat restoration and protection priorities (Appendix B). Our 3 year work plan also includes large-scale restoration and protection initiatives that could significantly advance recovery. However, the scale and cost of some of these initiatives necessitate complicated funding and phasing strategies. We have included nearshore restoration projects in our 3 year work plan because nearshore restoration is a high priority for Nisqually Chinook, even though these projects lie outside of our WRIA boundary. Our harvest and hatchery actions are necessary to promote development of a self-sustaining locally-adapted stock, and are consistent with our 2011 NCSMP which updates the original recovery plan.

Pace/Status Question
2. What is the status of actions underway per your recovery plan chapter? Is this on pace with the goals of your recovery plan?

Since the implementation of the original Nisqually Chinook Recovery Plan (2001), we have accomplished major restoration initiatives including Nisqually Estuary restoration, Ohop Creek Phase 1 restoration, and several Mashel River wood placement projects (Table 1). Future restoration opportunities, such as Ohop Creek Phases 2 and 3 are large-scale and will require complex funding and coordination. Habitat protection efforts continue to advance, ensuring that the quality and quantity of Nisqually salmon habitat will increase over time. We continue to forward nearshore projects to the South Sound Watershed's 3 year work program but are unable to ensure that these projects are implemented. Last year was our first attempt at implementing the actions identified in the 2011 Nisqually Chinook Stock Management Plan (NCSMP) and the lessons learned in 2011 should lead to future success. These actions included the testing of a mainstem weir to exclude hatchery strays and testing selective fisheries to reduce harvest impacts on natural origin fish. Our harvest management is on track with progressive reductions in our harvest to meet a target total exploitation rate of 47% by 2014.

3. What is the general status of implementation towards your habitat restoration, habitat protection, harvest management, and hatchery management goals?

Habitat restoration – some progress in watershed, little progress in the nearshore.
Habitat protection – some progress in the watershed, some progress in the nearshore
Harvest management – some progress this year
Hatchery management – some progress this year

Sequence/Timing
4. What are the top implementation priorities in your recovery plan in terms of specific actions or theme/suites of actions? How are these top priorities being sequenced in the next three years? What do you need to be successful in implementing these priorities?

The top priorities are described in the attached documents in more detail. In brief summary the top habitat priorities are completion of the Estuary Restoration, protection of the Nisqually mainstem, protection and restoration of the Mashel River, protection and restoration of Ohop Creek, and protection and restoration of the Puget Sound nearshore.

The high priority habitat actions are being sequenced based on landowner willingness and logistics considerations for next steps in the major projects. The primary thing we need to be successful in these projects is the funding necessary to implement them and continued funding for the capacity to coordinate their implementation.

The top stock management priority is to manage the population to allow the development of a natural origin stock that is locally adapted to the Nisqually watershed. This involves both hatchery and harvest management actions sequenced to maximize their effectiveness. For example, decreasing pHOS to < 10% on the spawning grounds depends on a corresponding reduction in the NOR exploitation rate. More information can be found in the attached documents.

Next Big Challenge

5. Do these top priorities reflect a change in any way from the previous three-year work program? Have there been any significant changes in the strategy or approach for salmon recovery in your watershed? If so, how and why?

The top priorities do not reflect a dramatic change from the priorities outlined in the last work plan. They do reflect the continuous refinement of our implementation approach. Recent stock management has attempted to provide an adequate number of Chinook salmon spawning, without regard for the composition of those spawners. We are moving into a period of managing for self-sustaining natural production by planning for adequate natural origin returns, excluding hatchery origin returns from the spawning grounds, and integrating the hatchery program to reduce the impact of strays. The Nisqually Chinook Stock Management Plan describes the actions needed for this change, and implementation of these actions is our next big challenge, including:

A) Installing and operating a mainstem-spanning weir at Nisqually River mile 12.3 during adult Chinook migration season (early July to late October) to exclude hatchery origin returns and eventually gather broodstock
B) Gathering necessary scientific data at this weir and implementing a mark-recapture study to estimate weir efficiency and total escapement above the weir.
C) Transitioning the hatchery program from segregated to integrated with stepping stone. This will happen gradually, with a 2012 action of practicing and evaluating broodstock handling procedures with hatchery origin Chinook collected at the weir. .
D) Reducing harvest impacts on natural origin returns (total exploitation rate down to 47% by 2014) by testing and using techniques that allow for harvest of hatchery origin returns and live release of natural origin returns, allowing us to meet our annual harvest goal of 10000-15000.

6. What is the status or trends of habitat and salmon populations in your watershed?

In the Nisqually watershed salmon habitat has been improving as we implement major habitat protection and restoration projects in the watershed. The restoration work completed in the Nisqually estuary is expected to contribute over time to a significant increase in salmonid abundance in the watershed. Nisqually salmon populations' general status and trends are:

Chum:	Stable with periodic large run sizes
Chinook:	Natural population in decline, stable recent returns maintained by hatchery strays
Coho:	Natural population in decline, early run stable with recent returns maintained by hatchery strays, late run status unknown
Cutthroat:	Unknown
Pink:	Long-term decline with 2 recent cycles of high abundance
Steelhead:	Decline

7. Are there new challenges associated with implementing salmon recovery actions that need additional support? If so, what are they?

For our habitat restoration and protection efforts, the most significant challenge is that funding levels have not kept pace with the increasing sophistication, scale, and complexity of priority large-scale projects. Additionally, the habitat condition baseline is continuing to decrease throughout Puget Sound due to inadequate regulations and ineffective enforcement. When faced with potential sea level rise and impacts to flow regimes due to climate change, only robust natural systems will be resilient enough to support productive natural salmon populations through these changes. The current framework for funding and implementing salmon recovery is inadequate. Our efforts to re-naturalize watersheds and Puget Sound habitat will only be successful with paradigm shifts in regional funding priorities and land use management. Salmon recovery needs to be elevated and integrated into all aspects of the Puget Sound economy.

The erosion of traditional barriers separating harvest, hatchery, and habitat management is necessary for Chinook recovery. However, funding mechanisms and project implementation tracking (e.g. Habitat Work Schedule) continue to be segregated. In order to promote effective H-integration, the Nisqually watershed recommends integrating harvest and hatchery efforts with the habitat funding and implementation tracking process. Harvest and hatchery actions need to be on par with habitat in order to implement inclusive salmon recovery actions.

Appendix A

2012 Harvest, Hatchery, and Monitoring and Evaluation Detailed Action Plan

Harvest

Category	Objective	When	2012 Plan
1.1 Harvest: Set Regulations	Achieve total exploitation rate and terminal harvest rate on natural-origin fish consistent with fishery management plan schedule.	Winter - Spring 2012	Achieve harvest rate target of approximately 26% and a total exploitation rate of less than 56% by managing weeks open, number of days open within week, and change in fishery boundaries. Preseason abundance forecast for 2012 was based on recent four year average (1,644 NORs) and 30,342 HORs The Nisqually treaty terminal gillnet fishery in 2012 is planned for two day a week during weeks 31-35, closed for weeks 36 – 40, and a return to three days a week during week 41. A selective fishery using tangle net gear is planned for two days a week during weeks 36-40.
1.2 Harvest: Improve Preseason Forecast and In-season Updates	Develop forecast tools and protocols for preseason and in-season updates	On-going 2012	For 2012 the plan is as follows: • Review and update the terminal area harvest worksheet and improve its ability to estimate harvest rate by weekly openings/closures specifically look a weekly mark rates in the fishery and expansions for hatchery- and natural-origin, • Evaluate use of the weir and hatchery rack data to monitor run timing and abundance to update fishery openings and closures, and • Evaluate change in ratio or run-timing analysis to make an in-season update to update fishery schedule.
1.3 Harvest: Hatchery and Natural Composition in Tribal and Sport Catch	Estimate hatchery and natural composition in tribal (NIT) and sport catch (WDFW)	Fall 2012 Post Season	Use existing methods for catch and creel sampling. • Summarize weekly mark rates in the net fishery trends to see if possible to detect differences in hatchery- and natural-origin during season • Finalize methods to estimate unmarked encounter and non-retention mortality in sport fishery.
1.4 Harvest: Mark Selective Fishery	Provide the option for a mark-selective fishery to tribal fishers	Summer – Fall 2012	In 2012 the plan is to monitor the selective treaty tangle net fishery for non-retention morality.
1.5 Harvest: Test Selective Harvest Gear	Develop methods to maintain high harvest rates on hatchery fish while keeping mortality at allowable rates on natural fish	Summer – Fall 2012	In 2012 the plan is to experiment with using floating live box capture techniques in the estuary as an alternative method available to tribal fishers

1 Hatchery Operations

Category	Objective	When	2012 Plan
2.1 Hatchery Operations: Program Release	Total program release of 4.0 million Chinook	Spring 2012	As of February 2012 ~4.2 million fish on-station, the additional 200k fish will be surplused to reduce program down to 4.0 million total release – release looks to be about 100k below goal of 4.0 million due to inventory adjustments • Clear Cr – 3.4 million fish release • Kalama Cr – 600k release
2.2 Hatchery Operations: Brood stock	Collect brood stock for a planned total program release of 4.0 million fish in spring of 2013	Fall 2012	In 2012 we will not implement the planned transition to an integrated Kalama Cr program. The Kalama and Clear Creek brood stock will be comprised of 100% hatchery returns. • The Clear Creek program will collect approximately 2,300 adults for brood stock from hatchery-origin adults returning to the Clear Creek hatchery. No natural-origin fish will be collected (pNOB = 0%). • The Kalama Creek program will collect approximately 420 adults for brood stock from hatchery-origin adults returning to the Kalama Creek hatchery. No natural-origin fish will be collected (pNOB = 0%).
2.3 Hatchery Operations: Surplus Hatchery Returns	Develop and implement a plan for managing expected hatchery surplus in 2012	Fall 2012	There were issues in 2011 with volunteers and public requests for surplus fish at the hatchery. The following activities are planned for 2012 to ensure all fish are sampled and counts are accurate. • Control volunteer involvement and fish handout • Increase mort sampling during year in hatchery ponds and sample for CWTs in return • Develop and implement a sample program to remove and salmon dead hatchery adults from pond. • In 2012 maintain existing program to sample all adults for CWTs at hatcheries (necessary for double index and selective harvest studies) • Develop a sampling plan to subsample CWTs from hatchery return for future years (not 2012). Sampling would continue to examine all fish for marks.

Category	Objective	When	2012 Plan
2.4 Hatchery Operations: Reduce Hatchery Strays at Clear Cr and Kalama Cr	Implement measures to reduce the incidence of hatchery strays to Nisqually and improve recovery data of hatchery return	Fall 2012	The large surplus of fish in 2011 highlighted a need for additional efforts to ensure return rates to the hatchery are as high as possible and fish not entering the hatchery are counted. The plan for 2012 is as follows: • Setup small weir in side channel below Clear Cr. early and maintain weir throughout year to reduce strays • Keep hatchery gate open throughout the season, work adult pond through season as necessary to remove surplus adults • Sample hatchery outlet creeks (Clear and Kalama) – sample for marks and CWTs and include in the hatchery return and mark recovery sample
2.5 Hatchery Operations: Brood stock	Develop and test procedures to collection natural-origin brood stock at weir	Summer and Fall 2012	The plan to implement an integrated program has been postponed to 2013. The plan for 2012 is to develop procedures and test methods using hatchery adults collected at the weir. • Visit similar operations in the region to observe procedures applicable to Nisqually • Develop a work plan for staff for the future integrated program • Evaluate methods to set weekly brood stock objectives using on pre-season and in-season science-based run size predictors • Implement a trial run of brood stock transfer from weir to hatchery with hatchery-origin Chinook. Fish will be jaw tagged to identify when collected at weir and the proportion surviving to spawning will be documented.
2.6 Hatchery Operations: Incubation, Rearing and Marking	Incubate, rear, and release BY 2012 600K Kalama and 3.4 million Clear Creek, achieve at least 95% adipose mark rate in release	Fall 2012 – Spring 2013	The 2013 (BY 2012) release will be unchanged from previous years. • Increase inventory frequency of egg counts per weight will be increase to improve estimate of green and eyed eggs. • Planned smolt release from Clear Creek is 3.4 million Chinook. The entire release will be marked with adipose fin clips, except for 200,000 that will have a CWT and no adipose fin clip and another 200,000 with a CWT/adipose fin clip for the double-index tagging program. The target adipose clip rate target is - 97-98% at release • Planned smolt release from Kalama Creek is 600,000 Chinook. The entire release will be marked with adipose fin clips. A portion of the release (100,000) will also have a CWT for survival and harvest rate studies.

Category	Objective	When	2012 Plan
2.7 Monitor and Record Information: Update Status and Trends	Record number and composition of brood stock, number of smolts released, fish marking	Fall 2012 and Spring 2013	Continue improvements in procedures to ensure data collection, reporting and analysis is timing and accurate. Specific tasks for 2012 are as follows: • Review rack return and release - RMIS data report for accuracy. Specifically check mark rates reported in database • Establish internet connectivity at Clear Creek to improve data sharing • Develop a hatchery information database for internal use and weekly reporting of spawning and sampling • Organize internal work meeting to discuss data management and next steps
2.8 Implementation Planning	Develop procedures and update hatchery management plans	Spring and Summer 2012	Multiple action items for 2012: • Develop protocols for integrated brood stock program and use of these fish in harvest program. • Complete HGMP update by start of fall brood stock season. Review number of unmarked fish for integrated brood stock program in the HGMP and revise as necessary to account for unmarked hatchery fish and prespawn mortality in the brood stock.

2 Weir Operations

Category	Objective	When	2012 Plan
3.1 Weir Operations: Implementation	Test and implement systems, operations at various seasonal flows, refine operating procedures, and train staff in operations and safety for staff and fish.	Summer and Fall 2012	Multiple issues were encountered in 2011 requiring the need for modifications for 2012. The primary issues were with anchoring and airbags. Anchors were not strong enough and the airbag caused too much drag and did not float on surface. • Revise anchoring system, chain did not work – we are working with engineers to revise anchors to increase anchoring and revise weir to resistant board type weir. • Revise weir to resistant board with 6" of foam and smaller air bags used to activate resistant boards. In 2011 the system included 3 12" bags in a tube with sleeve 40". Plan for 2012 is to switch to one airbag that is 12" bag with the goal to reduce drag and improve inflation system • A smaller weir of similar design will be installed and tested in June in the Clear Cr. Hatchery side channel. • Develop better communication for staff working at the weir (phones and/or internet) at the weir.
3.2 Weir Operations: Escapement Objectives	Manage for low pHOS consistent with minimum escapement criteria described in management plan.	Summer and Fall 2012	The 2012 plan for removing known hatchery-origin salmon and steelhead is as follows: • Manage Chinook escapement upstream of weir for objectives for natural composition and abundance targets identified in Chinook Management Plan • Remove all marked (adipose clipped and/or CWT) hatchery Chinook and steelhead, • Release all coho (marked and unmarked) and other species encountered in trap
3.3 Weir Operations: Permitting	Ensure all permits are ready by start of season (late June)	Spring 2012	Several permits are required for operations. • NOAA provided an extension to operating permit 2012 • Fort Lewis is annual permit that will need to be renewed and a long-term agreement is in the works • Smith-root electo anesthesia is a concern with NOAA in Portland. Follow-up is needed with NOAA, however permit is valid through 2017 with existing system. System used in the Nisqually is used elsewhere with no reported concerns.

Category	Objective	When	2012 Plan
3.3 Weir Operations: Fish Enumeration and Sampling	Count and collect biological samples fish removed at weir and fish passed upstream (all species)	Summer - Fall 2012	Operation guidelines and preparation for 2012: • Review and update operations guidelines • Update guidelines to highlight methods to retrieve washed-back fish at the weir for jaw tag recoveries and escapement estimation. • Setup training with staff before weir is installed (early June). Plans for 2012 to evaluate of Weir-Induced Mortality are as follows: • Record fish condition at release (1-5 injury scale), review guidelines for definitions The main tasks for marking of Chinook passed upstream area as follows: • Tag all Chinook passed upstream with a uniquely numbered jaw tag • Record date and time collected and released
3.4 Weir Operations: In-season Updates	In-season escapement monitoring and updates	Summer – Fall 2012	Weekly counts of fish captured at the weir and fish passed upstream will be made available to NIT and WDFW staff. Approximately September 15 NIT and WDFW will meet to review run status against predicted run timing and abundance. The purpose of this meeting is to evaluate if minimum escapement targets will be achieved and if weir operations need to be revised.
3.5 Weir Operations: Reporting and Recording	Implement data management plan	Summer and Fall 2012	Specific actions for 2012 are as follows: • Review and make available to staff and WDFW weekly data summaries • Enter data to database daily • Report trap counts and fish passed upstream on a weekly, monthly, and annual basis to Nisqually NR staff, WDFW, and National Oceanic and Atmospheric Administration (NOAA) (per permit requirements)

3 Monitoring and Evaluation

Category	Objective	When	2012 Plan
4.1 Monitoring and Evaluation: Chinook Escapement	Enumerate abundance and composition of natural spawning escapement	Fall 2012	Plans for estimating Chinook escapement are as follows: • Conduct spawning ground surveys in the usual index reaches (mainstem and Mashel River) • Collect jaws tag data, mark data, and biological data (record sex, lengths, and origin; take scales and otoliths) • Use previous years analytical methods to estimate escapement from spawner counts • Compute trap efficiency based on jaw tag recovery data and weir based escapement estimate
4.2 Monitoring and Evaluation: Escapement Estimation	Enumerate abundance and composition of natural spawning escapement	Fall 2012	The plan is to base the 2012 Chinook escapement on a mark-recapture estimate. • At the APR the participants agreed to expand the carcass survey effort to include other areas to get a better mark recovery and evaluate distribution of spawners. • WDFW again will collect otoliths from carcasses to support the Nisqually life history study. Collecting otoliths from unmarked fish will help ease the need to collect otoliths from unmarked fish in the fishery. At present the crew is sampling 35%+ of the catch to get enough otoliths from unmarked fish. • Update study plan, compute the minimum number of fish marked at the weir and recovered on the spawning grounds to estimate escapement upstream of the weir.
4.3 Monitoring and Evaluation: Escapement Distribution	Estimate spatial distribution and composition of natural spawning escapement	Fall 2012	Implement in 2012 with planned operation of the weir. • Conduct one survey per location (non-index areas) during peak and post peak spawning period • Collect jaws tag data, mark data, and biological data (record sex, lengths, and origin; take scales and otoliths). • Coordinate with salmon watcher volunteers the locations and times of spawning activity for follow-up survey by Nisqually Indian Tribe NR crews • Develop a plan to survey spawning areas downstream of the weir for carcass composition and possibly an estimate of escapement downstream of weir.

Category	Objective	When	2012 Plan
4.4 Monitoring and Evaluation: Juvenile Production Monitoring	Complete annual juvenile outmigration estimates (screw trap at RM 13)	Winter – Summer 2012	Juvenile outmigrant trap operations are planned consistent with previous years: • Record passage at trap for all species by date • Collect biological samples including random samples of fish length (all fish up to 50 fish per day per species) • Estimate trap efficiencies • Expand using trap efficiency to estimate total outmigration The outmigrant trap was operating at the time of the 2012 APR. Matt Klungle with WDFW noted a run of small fry immediately after the trap was installed ~Jan 12th before a period of snow/cool weather in late January 2012.
4.5 Monitoring and Evaluation: Genetic Parentage Study	Collect data for genetic parentage study	Winter – Summer 2013	The plan for 2012 is to initiate a genetic parentage study. This will include tissue samples collected from adults collected at the weir in 2012 and tissue samples collected from juveniles collected at the outmigration trap in spring of 2013. We are not planning to collect samples from juveniles in 2012. The study plan will be developed by Adrian Spidle (NWIFC). This study will estimate weir efficiency (in addition to the estimate from mark-recapture study), and effective number of breeders. The effective number of breeders is the yearly measure of effective population size and will tell us the rate of genetic drift and level of inbreeding. These are important to track during recovery. If effective population size is small the population can be more affected by genetic drift (random fixing of negative traits and loss of positive traits) than by selection. A long-term study could also look at the relative number of progeny (adult – smolt or adult – adult) to track trends in this measure over time, possibly to compare between fish with known parentage composition. This study will not provide information to determine the effect of fish spawning below the weir on upstream genetic composition (due to the unknown rate at which they'd return and try to pass above the weir). If hatchery fish are intentionally passed above the weir this study can also evaluate reproductive success of hatchery- and natural-origin spawners by comparing parentage in the juvenile outmigration. The samples remove about 1 mm tissue and is not expected to affect juvenile survival, assuming careful handling.

Category	Objective	When	2012 Plan
4.6 Monitoring and Evaluation: Population Assessment Tools	Develop population status and trends assessment tools	On-going 2012	The plan for 2012 is to continue with updates to datasets and to develop summaries that include data from the ocean harvest (CWT recoveries), the weir, the adult escapement mark recapture study and juvenile outmigrant monitoring. Develop methods to begin computing natural run recruitment. Our initial task is to build a brood table for the natural population with estimates of adult equivalent abundance (i.e., number of fish that would have returned to the Nisqually absent fishery impacts). This will require information on terminal run and escapement by age and origin. Specifically scales collected at the weir, hatchery, and fishery with mark/tag status. Marianna A. (NWFIC) recommended that 100 scales per strata for marked and unmarked in the fishery and 100 unmarked fish sampled at the weir spread over the entire return would be sufficient. In addition, 500 scales should be collected at the hatchery. Age at return for hatchery fish is needed to evaluate the assumption that the CWT indicator program is an adequate representative of adult maturity for the natural population. Age specific fishery impacts will be based on results of CWT analysis for the Nisqually Fall Chinook indicator program provided by Mariana. We have identified the need to develop a list of metrics and benchmarks that describe hypothesized recovery trajectory to evaluate progress. These benchmarks likely would include measures of juvenile and adult productivity, abundance, life history diversity and spatial diversity. We also have identified the need to Identify minimum escapement at which numeric abundance is more a concern than composition of hatchery fish. The minimum escapement is the threshold where fish should be passed upstream. It is likely minimum escapement will need to consider adult distribution and habitat potential for juveniles and adults.
4.7 Monitoring and Evaluation: Linking Population Assessment Data to Recovery Plan Assumptions	Develop methods to use empirical data to challenge key assumptions in the Terminal Area Management Plan (TAMP)	On-going 2012	Key assumptions that will be tested in 2012 are: • Weir efficiency and improved mark-recapture based escapement estimate
4.8 Monitoring and Evaluation: Habitat Effectiveness Monitoring	Finalize monitoring plan for effectiveness of habitat actions	On-going 2012	NIT staff met with key partners and the plan is to continue discussions in 2012. • Tables are complete, need to finalize protocols.
4.9 Monitoring and Evaluation: Estuary Effectiveness Monitoring	Measure and report on progress of estuary habitat recovery and juvenile use of estuarine zones	On-going 2012	No funding for data collection or analysis in 2012. The group commented on the need to connect this work to the 3-yr work plan.

Category	Objective	When	2012 Plan
4.10 Monitoring and Evaluation: Data Management	Identify data entry, data management, analysis tools required to improve process and establish schedule for their development and testing	On-going 2012	An on-going need for 2012 that is becoming more critical as new information is collected. One possible solution is Partnership database development. The need to manage information is increasing with the weir and change in brood stock management. The first step in this plan is to identify data needs for internal data management and analysis, and identify what needs to be shared. What are the similarities and differences? A data work group will be formed to identify data needs.

Appendix B

Nisqually Salmon Recovery Habitat Restoration and Protection Priorities

The 2001 Nisqually Chinook Recovery Plan (NCRP) contained a habitat action plan that outlined spatially explicit restoration and protection priorities. The action plan was guided by EDT model results and identified the following specific reaches for restoration and/or protection. We continue to work on actions listed in this plan and to refine the habitat priorities through research, assessments, monitoring, and evaluation. The Nisqually salmon recovery priority areas for 2011 are being used again in 2012. Since the priority areas were last identified, an error was found in the fish use characterization of the McKenna and Whitewater reaches. After correcting for the error, restoration of the reaches moved from a Tier 3 priority to a Tier 2 priority. The 2012 list includes an update of the current conditions in the EDT model to reflect several large scale restoration projects including the restoration of over 900 acres of estuary habitat. Since 2010, the list has included steelhead EDT model results in combination with the Chinook salmon model results to identify the habitat priority areas. For more information about the use of EDT in the formulation of the Nisqually Habitat Action Plan please see the 2001 NCRP. The EDT combined percent changes in abundance, capacity, productivity, and life history diversity were combined from both steelhead and Chinook model results to develop these geographic priorities:

Tier 1 (Highest Priority)
Estuary Protection and Restoration
Protection of functioning reaches of the mainstem Nisqually River and the mouth of the river
Protection of the lower Mashel River

Tier 2 (High Priority)
Protection of the rest of the mainstem Nisqually River reaches, except upper Nisqually.
Improving upstream fish passage at Centralia Diversion Dam
Restoration of the lowest reach of the Nisqually River reaches near Mounts Road
Restoration of lower Ohop Creek valley
Protection of the rest of mainstem Mashel River
Restoration of Mashel River
Restoration of South Puget Sound
Protection of lower Yelm Creek
Restoration of McKenna and Whitewater Reaches of Nisqually River

Tier 3 (Medium Priority)
Protection and restoration of Busywild Creek
Protection of Upper Nisqually River from Alder/LaGrande dams to mouth of Ohop Creek
Protection of lower and middle Tanwax Creek and restoration of upper Tanwax
Protection and restoration of Muck Creek downstream of Roy and South Fork Muck
Restoration of Muck Creek upstream of Roy
Restoration of Nisqually and Commencement Bays and Central Puget Sound and Eastern Straits
Protection of entire Ohop Creek Basin
Protection of Little Mashel
Protection of lower sections of Toboton and Powell creeks

Tier 4 (Low Priority)
Protection and restoration of all other areas that are identified to contribute to the recovery of Nisqually Chinook and steelhead

Tier 5
Restoration and protection of the remaining stream reaches in the watershed

Nisqually habitat projects are prioritized based on their location and the following criteria:

1. High priority projects address the limiting factors within a high priority reach or across reaches identified by EDT analysis or other assessments. The project also needs to be at a sufficient scale or blocked with other similar projects to have a detectable impact over time. High priority assessment and development projects accomplish one or more of the following: identify limiting factors, identify or advance on-the-ground projects within a high priority tier, and update the habitat action plan.
2. High priority projects restore habitat forming processes where feasible and are technically sound. Habitat enhancement projects are discouraged except in cases where human infrastructure cannot be feasibly modified.
3. High priority projects are sequenced strategically to maximize restoration and protection potential.
4. High priority projects have support by the affected landowners and the broader watershed community.

Newly added projects (YELLOW)
Active projects (funded) (GREEN)
Completed projects (BLUE)

Major Strategy (Level 1-subbasin)	Initiative (Level 2)	Project (Level 3)	ID#	Project Status	Project Type	Plan Category	Project Name
	Nisqually Wildlife Refuge Restoration & Protection	NWR Estuary restoration 760 acres	11-ESTUARY-1001	**Completed 2011**	Restoration Projects	Capital	Nisqually Refuge Estuary Restoration 760 acres
		Invasive species management at NWR	11-ESTUARY-1003	**Inactive**	Restoration Projects	Non-capital	Invasive Species Management at NWR (obj. 1.4)

2012

Project Description	Priority Area	Principles modifier	Comments on modifier	Priority tier of project	Limiting Factors	Reference Document for limiting factor
This is the single most important habitat project in the Nisqually salmon recovery plan. 4.5 miles of the outer dike was removed in the summer of 2009 allowing the natural regeneration of estuary habitat and reconnection of over 21 miles of historic tidal channel on 762 acres. This project combined with the restoration on the Tribe's estuary lands will result in, and is the primary opportunity for, significant increases in the productivity and capacity of Nisqually Chinook. All the necessary funding has been identified for the project. An additional element of the project - Develop and implement a riparian restoration project for the riparian area at the Refuge to include planting a variety of native riparian trees and shrub species and restoring natural hydrology on 25 acres of formerly diked habitat on the Refuge that is subject to tidal influence (surge plain) near the mouth of the Nisqually River.	1			**1**	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Water Quality, Non-Habitat Limiting Factors, Degraded Habitat-Stream Flow, Degraded Habitat-Estuarine and Nearshore Marine, Estuarine and Nearshore Habitat	Nisqually Chinook Recovery Plan, Salmon and Steelhead Limiting Factors WRIA 11, Nisqually NWR Final Comprhensive Conservation Plan, EDT analysis
Develop and implement an invasive species monitoring and integrated pest management control program for the Nisqually National Wildlife Refuge using both manual and chemical treatment methods. This would require hiring a 0.5 FTE Fish and Wildlife Biologist, GS-7/9 ($27,900 starting annual cost), to conduct the monitoring program and guide treatment efforts as well as some time for a a 0.5 FTE Biological Technician, GS-5/6/7 ($22,500 starting annual cost), to assist in monitoring the establishment of invasive species and implementing control measures as necessary.	1	2	Does not address limiting factor and minor problem for salmon	**3**	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Water Quality	Nisqually NWR Final Comprhensive Conservation Plan

Habitat Type	Activity Type and Project Performance	Primary Species Benefiting	Secondary Species Benefiting	HWS Project Status	2012/Year 1 Activity to be funded	2012/Year 1 Estimated Budget	2013/Year 2 Activity to be funded	2013/Year 2 Estimated Budget
Riparian, Estuary (River Delta)	Dike Removal (762 a), Restore Elevation (surge plain 25 ac) , Shoreline Armor Removal (2.5 ac), Wetland Planting (25 ac)	Chinook	Cutthroat (Secondary Species), Chum (Secondary Species), Coho (Secondary Species), Pink (Secondary Species), Bull Trout (Secondary Species), Steelhead (Secondary Species)	Construction Completed, Monitoring				
Estuary (River Delta)	Plant Removal/Control (1000 ac)	Chinook	Cutthroat (Secondary Species), Chum (Secondary Species), Coho (Secondary Species), Pink (Secondary Species), Bull Trout (Secondary Species), Steelhead (Secondary Species)	Conceptual		0	Hiring staff, project planning, invasive plant surveys, purchase of supplies, initial control measures, and begin IPM document.	60,000

2014/Year 3 Activity to be funded	2014Year 3 Estimated Budget	Likely End Date	Likely Sponsor	Total Cost of Project	Local share or other funding	Source of funds (PSAR, SRFB, other)	Unfunded Need	Project Name	
0	0	5/31/2011	US Fish & Wildlife Service	10000000	10000000	PSAR, SRFB, ESRP, ARRA funds (boardwalk)	0	Nisqually Refuge Estuary Restoration 760 acres	11-ESTUARY-1001
ongoing surveys, IPM measures, and completion of IPM plan for refuge	60,000	12/31/2020	US Fish & Wildlife Service	180000	0	Not Yet Funded	180000	Invasive Species Management at NWR (obj. 1.4)	11-ESTUARY-1003

Major Strategy (Level 1-subbasin)	Initiative (Level 2)	Project (Level 3)	ID#	Project Status	Project Type	Plan Category	Project Name
Estuary Restoration & Protection	Red Salmon Slough Restoration	RSS Restoration - Phase 3	11-ESTUARY-1002	**Active**	Restoration Projects	Capital	Red Salmon Slough Estuary Restoration Phase 3
		Lower Nisq/McAllister Cr. Acquisition	11-MAINSTEM-1006	**Active**	Acquisition for Restoration	Capital	Lower Nisqually Mainstem, McAllister Creek Acquisition
		I-5 feasiblity	11-ESTUARY-1004	**Inactive**	Future Habitat Project Development	Non-capital	I-5 Fill Removal Feasibility Analysis

Project Description	Priority Area	Principles modifier	Comments on modifier	Priority tier of project	Limiting Factors	Reference Document for limiting factor
Removal of last remaining dike on Nisqually Tribes estuary property, old bridge pilings in Red Salmon Slough and restore riparian habitat on the remaining non-saltmarsh areas. The dike is a raised dike for an old road and is not fully impeding salt water access, but is a partial obstruction and causes a delay in tidal inundation.	1			**1**	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Water Quality, Non-Habitat Limiting Factors, Degraded Habitat-Stream Flow, Degraded Habitat-Estuarine and Nearshore Marine	Nisqually Chinook Recovery Plan
Objective in Nisqually National Wildlife Refuge Comprehensive Conservation Plan. Addition of these acres to the Refuge would make them available for restoration. Cost estimate is very preliminary.	1			1	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Water Quality, Degraded Habitat-Stream Flow, Degraded Habitat-Estuarine and Nearshore Marine	Nisqually Chinook Recovery Plan, Salmon and Steelhead Limiting Factors WRIA 11, Nisqually NWR Final Comprhensive Conservation Plan
It has been identified in the watershed habitat analysis that Interstate 5 where it crosses the Nisqually Estuary is itself a serious impediment to the formation of natural tidally influenced habitat. Replacement of the current fill under the road with a pier or bridge structure could result in significant improvements to salmon habitat in the Lower Nisqually and McAllister Creek. This assessment would begin to explore that possibility and determine if a potential project might be developed.	1			**1**	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Channel Structure and Complexity, Non-Habitat Limiting Factors, Degraded Habitat-Stream Flow, Degraded Habitat-Estuarine and Nearshore Marine	Nisqually Chinook Recovery Plan

Habitat Type	Activity Type and Project Performance	Primary Species Benefiting	Secondary Species Benefiting	HWS Project Status	2012/Year 1 Activity to be funded	2012/Year 1 Estimated Budget	2013/Year 2 Activity to be funded	2013/Year 2 Estimated Budget
Estuary (River Delta)	Estuarine & Nearshore Dike or berm modification / removal (320 Acres)	Chinook	Cutthroat (Secondary Species), Chum (Secondary Species), Coho (Secondary Species), Pink (Secondary Species), Bull Trout (Secondary Species), Steelhead (Secondary Species)	Feasibility Completed	Planting, Monitoring, Planting maintenance	20,000		
Estuary (River Delta)	Acquisition	Chinook	Cutthroat (Secondary Species), Chum (Secondary Species), Coho (Secondary Species), Pink (Secondary Species), Bull Trout (Secondary Species), Steelhead (Secondary Species)	Conceptual	indentify parcels that may be available for acquisition from willing sellers	1000000	continue to identify parcels for acquisition and make purchases if opportunites arise	1000000
Estuary (River Delta)	Activity Type - Estuarine & Nearshore: Berm or Dike Removal or Modification (200 Acres)	Chinook	Cutthroat (Secondary Species), Chum (Secondary Species), Coho (Secondary Species), Pink (Secondary Species), Steelhead (Secondary Species)	Conceptual	Seeking funding	5000	Funding, Set-up assessment	60,000

2014/Year 3 Activity to be funded	2014Year 3 Estimated Budget	Likely End Date	Likely Sponsor	Total Cost of Project	Local share or other funding	Source of funds (PSAR, SRFB, other)	Unfunded Need	Project Name	
		12/31/2012	Nisqually Indian Tribe	320000	100000	ESRP, WA DNR, USFWS	0	Red Salmon Slough Estuary Restoration Phase 3	11-ESTUARY-1002
continue to identify parcels for acquisition and make purchases if opportunites arise	1000000	12/31/2010	US Fish & Wildlife Service	3000000	0	Not Yet Funded	3000000	Lower Nisqually Mainstem, McAllister Creek Acquisition	11-MAINSTEM-1006
Assessment	200000	12/31/2014	Nisqually Indian Tribe	400000	0	Not Yet Funded	400000	I-5 Fill Removal Feasibility Analysis	11-ESTUARY-1004

Major Strategy (Level 1-subbasin)	Initiative (Level 2)	Project (Level 3)	ID#	Project Status	Project Type	Plan Category	Project Name
	Lower Nisqually Restoration & Protection	Lower Nisq Side-channel project	11-MAINSTEM-1024	**Active**	Restoration Projects	Capital	Lower Nisqually Side-channel project
		Riverbend Log jam project	11-MAINSTEM-1025	**Inactive**	Restoration Projects	Capital	Riverbend Logjam Project
		Lower Nisqually Mainstem Protection	11-MAINSTEM-1028	**Active**	Acquisition for Protection	Capital	Lower Nisqually Mainstem Protecction

Project Description	Priority Area	Principles modifier	Comments on modifier	Priority tier of project	Limiting Factors	Reference Document for limiting factor
Construction of 2 side channels totalling over 4000 feet in length that would start Mounts rd. bridge and re-enter the mainstem above the I-5 bridge. These channels would re-activate the floodplain which is cut-off to active river migration and side-channel formation.	1			1	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment	Nisqually Chinook Recovery Plan, Lower Nisqually Feasibility Plan (NIT, 2008)
The Nisqually River mainstem approaches the BNSF railroad prism at an angle of approximately 90 degrees, flows north along the embankment, then turns sharply left to cross under the railroad bridge. This alignment is the result of arrested meander migration. The railroad prism has been armored within the vicinity of the river, and this armored bank provides little habitat value or refuge for migrating fish, and is not effective at directing flow away from the apex of the bend. To stabilize the outside of the bend and at the same time provide migrating fish with a boundary refuge from the main force of the river, we propose that up to 9 large log jams be built into the bank and along the margins of the mainstem.	1			**1**	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment	Nisqually Chinook Recovery Plan, Lower Nisqually Feasibility Plan (NIT, 2008)
Acquire 2 acres of Nisqually shoreline on west side of river just upstream of I-5 bridge.	1			1	Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Estuarine and Nearshore Marine	

Habitat Type	Activity Type and Project Performance	Primary Species Benefiting	Secondary Species Benefiting	HWS Project Status	2012/Year 1 Activity to be funded	2012/Year 1 Estimated Budget	2013/Year 2 Activity to be funded	2013/Year 2 Estimated Budget
Riparian, Instream, Rivers/Streams/Shoreline	Floodplain Restoration Site Maintenance - Floodplain Restoration (0.80 Miles) Wood Structures/Barriers # of Structures (25 Each)	Chum, Chinook, Coho, Steelhead	Cutthroat (Secondary Species), Pink (Secondary Species)	Feasibility Completed	Design	100000	Design, Permitting, Funding	150000
Riparian, Instream, Rivers/Streams/Shoreline	Instream Habitat Channel structure - Wood structure / log jam (500 Feet)	Chinook, Steelhead	Cutthroat (Secondary Species), Chum (Secondary Species), Coho (Secondary Species), Pink (Secondary Species)	Feasibility Completed	Design	50,000	Design, Permitting, Funding	150,000
Riparian		Chinook	Chum (Secondary Species), Coho (Secondary Species), Pink (Secondary Species), Steelhead (Secondary Species)	Conceptual	acquisition	30000		

2014/Year 3 Activity to be funded	2014Year 3 Estimated Budget	Likely End Date	Likely Sponsor	Total Cost of Project	Local share or other funding	Source of funds (PSAR, SRFB, other)	Unfunded Need	Project Name	
Permitting, Funding, Construction	3750000	12/31/2020	Nisqually Indian Tribe	4000000	0	Not Yet Funded	4000000	Lower Nisqually Side-channel project	11-MAINSTEM-1024
Permitting, Funding, Construction	1,300,000	12/31/2014	Nisqually Indian Tribe	1500000	0	Not Yet Funded	1500000	Riverbend Logjam Project	11-MAINSTEM-1025
		12/31/2015	Nisqually R Land Trust	30000	30000	NLT	0	Lower Nisqually Mainstem Protection	11-MAINSTEM-1028

Major Strategy (Level 1-subbasin)	Initiative (Level 2)	Project (Level 3)	ID#	Project Status	Project Type	Plan Category	Project Name
	'Independent Projects'	Estuary Restoration Monitoring Project	11-ESTUARY-1006	**Active**	Habitat Project Monitoring	Non-Capital	Estuary Restoration Project Monitoring
		Wilcox Farm Floodplain Restoration	11-MAINSTEM-1001	**Inactive**	Restoration Projects	Capital	Wilcox farm Floodplain Restoration
		Wilcox Flats restoration	11-MAINSTEM-1003	**Active**	Restoration Projects	Capital	Wilcox Flats Nisqually Mainstem and Off-Channel Restoration

Project Description	Priority Area	Principles modifier	Comments on modifier	Priority tier of project	Limiting Factors	Reference Document for limiting factor
'Pre and post monitoring of the estuary restoration project area to determine the extent of estuarine habitat development and document fish and wildlife response in the estuarine restoration area and associated nearshore. Monitoring will include: fish use and prey analysis, vegetation response/development, water quality, salinity, channel development, sediment dynamics/modeling, invertebrate colonization, changes in marsh elevation, tidal inundation, bird use and energetics, climate change/sea level impacts, and effects on the nearshore including eelgrass beds.	1			**1**	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Water Quality, Non-Habitat Limiting Factors, Degraded Habitat-Stream Flow, Degraded Habitat-Estuarine and Nearshore Marine	Nisqually Chinook Recovery Plan, Nisqually Refuge - CCP
Recreate historic floodplain and channel migration zone between the Nisqually mainstem and Harts Lake Creek. This area currently is diked and owned and managed by Wilcox Farms. This would be a combination of land acquisition and restoration of 190 acres of former floodplain.	3	-1	Large scale restoration addressing most limiting factors in entire reach	2	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Water Quality	SPSSEG off-channel report
This project is restoring riparian forest and off-channel habitat on 155+ acres of Nisqually Land Trust property in the active channel migration zone of the Nisqually Wilcox Reach (between river mile 28 and 29.5).	4	-1	Process restoration	3	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Water Quality, Degraded Habitat-Estuarine and Nearshore Marine, Degraded Habitat-Fish Passage	2001 Nisqually Chinook Recovery Plan

Habitat Type	Activity Type and Project Performance	Primary Species Benefiting	Secondary Species Benefiting	HWS Project Status	2012/Year 1 Activity to be funded	2012/Year 1 Estimated Budget	2013/Year 2 Activity to be funded	2013/Year 2 Estimated Budget
Estuary (River Delta)	NA	Chinook	Cutthroat (Secondary Species), Chum (Secondary Species), Coho (Secondary Species), Pink (Secondary Species), Bull Trout (Secondary Species), Steelhead (Secondary Species)	Monitoring	Monitoring of Fish, Avian, Substrate, Vegetation, Hydrology, Water quality and invertebrate response	500000	Monitoring of Fish, Avian, Substrate, Vegetation, Hydrology, Water quality and invertebrate response	500000
Riparian, Instream, Wetland, Rivers/Streams/Shoreline		Chinook	Cutthroat (Secondary Species), Chum (Secondary Species), Coho (Secondary Species), Pink (Secondary Species), Steelhead (Secondary Species)	Conceptual	Find funding for conceptual plan	35000	finish conceptual plan, stakeholder outreach	50000
Riparian	Activity Type - Riparian Habitat: Plant removal/ control (Acres), Activity Type - Riparian Habitat: Planting (Acres), Activity Type - Upland Habitat: Invasives/ weed control (Acres), Activity Type - Upland Habitat: Planting (Acres)	Chinook	Cutthroat (Secondary Species), Chum (Secondary Species), Coho (Secondary Species), Pink (Secondary Species), Bull Trout (Secondary Species), Steelhead (Secondary Species)	Construction Completed	planting; weed control; monitoring	30000	weed control; monitoring	5000

2014/Year 3 Activity to be funded	2014Year 3 Estimated Budget	Likely End Date	Likely Sponsor	Total Cost of Project	Local share or other funding	Source of funds (PSAR, SRFB, other)	Unfunded Need	Project Name	
Monitoring of Fish, Avian, Substrate, Vegetation, Hydrology, Water quality and invertebrate response	500000	12/31/2020	US Fish & Wildlife Service	2000000		EPA, ESRP	1500000	Estuary Restoration Project Monitoring	11-ESTUARY-1006
Engineering design	150000	12/31/2020	Nisqually Indian Tribe	6000000	0	Not Yet Funded	6000000	Wilcox farm Floodplain Restoration	11-MAINSTEM-1001
weed control; monitoring	5000	12/31/2013	Nisqually R Land Trust	200000	200000	SRFB - Salmon Recovery Funding Board, US Fish and Wildlife Service, Nisqually Indian Tribe, Natural Resources Conservation Service	0	Wilcox Flats Nisqually Mainstem and Off-Channel Restoration	11-MAINSTEM-1003

Major Strategy (Level 1-subbasin)	Initiative (Level 2)	Project (Level 3)	ID#	Project Status	Project Type	Plan Category	Project Name
	Wilcox Reach Restoration & Protection	Wilcox area protection project	11-MAINSTEM-1008	Inactive	Acquisition for Protection	Capital	Wilcox Area Protection Project
		Tatrimima Trust Shoreline Acquisition	11-MAINSTEM-1013	Completed 2010	Acquistion Project	Capital	Tatrimima Trust Shoreline Acquisition
		Middle Nisqually Protection - South Shoreline	11-MAINSTEM-1031	**Inactive**	Acquisition for Protection		Middle Nisqually Protection - South Shoreline
		Middle Nisqually Protection - North Shoreline	11-MAINSTEM-1032	**Inactive**	Acquisition for Protection		Middle Nisqually Protection - North Shoreline
		Generic Mainstem Protection	11-MAINSTEM-1007	**Active**	Acquisition for Protection	Capital	Mainstem Protection Project

Project Description	Priority Area	Principles modifier	Comments on modifier	Priority tier of project	Limiting Factors	Reference Document for limiting factor
Acquire easement over 250 acres of channel, floodplain and riparian forest along the Nisqually mainstem and Horn Creek in the Wilcox Farm area. Acquisition of a conservation easement over a large property near the most rapidly urbanizing area along the mainstem of the river.	1			**1**	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Water Quality, Degraded Habitat-Estuarine and Nearshore Marine	2001 Nisqually Chinook Recovery Plan
Permanently protect 30 acres of floodplain and river terrace habitat along broad bend in Nisqually River (includes total shoreline length of nearly one mile). This an area of shoreline acretion and avulsion and contains a wide variety of riparian habitat types. The property is directly across the river from the Nisqually Land Trust's Wilcox Flats management unit.						
Acquire 20 acres of Nisqually shoreline along the south bank just downstream of the confluence of the Nisqually and Tanwax Creek.	2			2	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Riparian Areas and LWD Recruitment	
Acquire up to 160 acres of Nisqually River shoreline on the north bank of the upstream end of the Wilcox Reach.	2			2	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Water Quality	
Acquire 50 acres, 0.5 mile of Nisqually Mainstem per year. Projects would focus on areas with intact riparian function, channel migration zone and seek to block with other parcels already in protected status.	1			**1**	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Water Quality, Degraded Habitat-Estuarine and Nearshore Marine	2001 Nisqually Chinook Recovery Plan

Habitat Type	Activity Type and Project Performance	Primary Species Benefiting	Secondary Species Benefiting	HWS Project Status	2012/Year 1 Activity to be funded	2012/Year 1 Estimated Budget	2013/Year 2 Activity to be funded	2013/Year 2 Estimated Budget
Riparian	Activity Types - Acquisition/Easements/Leases : Streambank or riparian protected (Miles), Activity Types - Acquisition/Easements/Leases : Wetland areas protected (Acres)	Chinook	Chum (Secondary Species), Coho (Secondary Species), Pink (Secondary Species), Steelhead (Secondary Species)	Conceptual				
				Completed				
Upland, Riparian, Rivers/Streams/Shoreline		Chinook	Chum (Secondary Species), Coho (Secondary Species), Pink (Secondary Species), Steelhead (Secondary Species)	Conceptual				
Upland, Riparian, Rivers/Streams/Shoreline		Chinook	Chum (Secondary Species), Coho (Secondary Species), Pink (Secondary Species), Steelhead (Secondary Species)	Conceptual				
Riparian	Activity Types - Acquisition/Easements/Leases : Streambank or riparian protected (Miles)	Chinook	Chum (Secondary Species), Coho (Secondary Species), Pink (Secondary Species), Steelhead (Secondary Species)	Feasibility Pending	acquisition	150000	acquisition	150000

2014/Year 3 Activity to be funded	2014Year 3 Estimated Budget	Likely End Date	Likely Sponsor	Total Cost of Project	Local share or other funding	Source of funds (PSAR, SRFB, other)	Unfunded Need	Project Name	
conservation easement	750000	12/31/2014	Nisqually R Land Trust	750000	0		750000	Wilcox Area Protection Project	11-MAINSTEM-1008
		12/31/2010	Nisqually R Land Trust	240000	240000	Thurston County, Puget Sound Acquisition and Restoration	0	Tatrimima Trust Shoreline Acquisition	11-MAINSTEM-1013
acquisition	200000	12/31/2015	Nisqually R Land Trust	200000	0		0	Middle Nisqually Protection - South Shoreline	11-MAINSTEM-1031
acquisition	500000	12/31/2015	Nisqually R Land Trust	500000	0		500000	Middle Nisqually Protection - North Shoreline	11-MAINSTEM-1032
acquisition	150000	12/31/2020	Nisqually R Land Trust	2500000	0	TBD	450000	Mainstem Protection Project	11-MAINSTEM-1007

Major Strategy (Level 1-subbasin)	Initiative (Level 2)	Project (Level 3)	ID#	Project Status	Project Type	Plan Category	Project Name
	'Independent Projects'	Centralia Diversion Passage Study	11-MAINSTEM-1026	Inactive	Future Habitat Project Development	Non-Capital	Centralia Diversion Dam passage study
		Mainstem Nisqually Riparian Enhancement	11-MAINSTEM-1027	**Active**	Restoration Projects	Capital	Mainstem Nisqually Riparian Enhancement
		Yelm - Lower Reach R	11-MAINSTEM-1014	**Active**	Restoration Projects	Capital	Yelm - Lower Reach Restoration

Project Description	Priority Area	Principles modifier	Comments on modifier	Priority tier of project	Limiting Factors	Reference Document for limiting factor
The passage rates are the only input values in the EDT model used to evaluate dams and culverts, no other affects are being used for the evaluation of those "point" reaches. The Centralia Diversion dam includes an upstream fish ladder for adults and a juvenile exclusion device for the diversion canal. Downstream passage appears to be no problem, but the adult and juvenile upstream migration rate could be a major impediment to species recovery. The rates used at this point is based on professional estimates, with no empirical data to back the assumptions, and result in a significant limiting factor for all salmon populations in the Nisqually.	2			**2**		NCRP
This project proposes to restore degraded portions of the riparian zone along the Nisqually River by revegetating the valley floor with native trees and shrubs. Activities include: identification of willing landowners, individual site assessments, development of restoration plans, control of invasive species and valley floor revegetation. Cleared areas will be replanted. Secondary deciduous floodplain forests will be underplanted with native conifer species to provide a sustainable source of LWD. Restoration planning will include additional recommendations for habitat enhancement. This project will include volunteer planting events to further involve the surrounding community. Landowners will be trained on planting maintenance and will assist with maintenance activities such as weed control and plant protection tube removal.	2			2	Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Water Quality	Nisqually Chinook Recovery Plan
Restoration of riparian and upland forest on 30+ acres of Nisqually Land Trust property adjacent to the Nisqually mainstem, just downstream of the confluence of Thompson Creek and the Nisqually mainstem. Removal of invasive species and debris; and planting of native trees and shrubs in forest openings and understory.	4			**4**	Degraded Habitat-Riparian Areas and LWD Recruitment	2001 Nisqually Chinook Recovery Plan

Habitat Type	Activity Type and Project Performance	Primary Species Benefiting	Secondary Species Benefiting	HWS Project Status	2012/Year 1 Activity to be funded	2012/Year 1 Estimated Budget	2013/Year 2 Activity to be funded	2013/Year 2 Estimated Budget
	Fish Passage				Assessment	50,000	assessment	150,000
Riparian	Activity Type - Riparian Habitat: Plant removal/ control (20 Acres), Activity Type - Riparian Habitat: Planting (25 Acres)	Chinook	Cutthroat (Secondary Species), Chum (Secondary Species), Coho (Secondary Species), Pink (Secondary Species), Steelhead (Secondary Species)	Conceptual	Identify priority revegetation areas. Landowner outreach.	5000	Identify priority revegetation areas. Landowner outreach. Develop and implement projects. Invasive species monitoring and control.	50000
Upland, Riparian, Rivers/Streams/Shoreline	Plant removal/ control (Acres) Planting (Acres)	Chinook	Cutthroat (Secondary Species), Chum (Secondary Species), Coho (Secondary Species), Pink (Secondary Species), Bull Trout (Secondary Species), Steelhead (Secondary Species)	Feasibility Completed	weed control	2500	forest enhancement, weed control	10000

2014/Year 3 Activity to be funded	2014Year 3 Estimated Budget	Likely End Date	Likely Sponsor	Total Cost of Project	Local share or other funding	Source of funds (PSAR, SRFB, other)	Unfunded Need	Project Name	
Assessment	50,000				0	Not Yet Funded	0	Centralia Diversion Dam passage study	11-MAINSTEM-1026
Landowner outreach. Develop and implement projects. Invasive species monitoring and control.	50000	12/31/2015	Nisqually Indian Tribe	200000		Not Yet Funded	200000	Mainstem Nisqually Riparian Enhancement	11-MAINSTEM-1027
weed control; monitoring	3000	12/31/2015	Nisqually R Land Trust	30000	3000	Nisqually R Land Trust	27000	Yelm - Lower Reach Restoration	11-MAINSTEM-1014

Major Strategy (Level 1-subbasin)	Initiative (Level 2)	Project (Level 3)	ID#	Project Status	Project Type	Plan Category	Project Name
	Yelm/McKenna Shoreline Projects	North Yelm Riparian R	11-MAINSTEM-1015	**Active**	Restoration Projects	Capital	North Yelm Riparian Restoration
		Yelm-McKenna Riparian Restoration	11-MAINSTEM-1016	**Active**	Restoration Projects	Capital	Yelm-McKenna Riparian Restoration
		Yelm Shoreline protection	11-MAINSTEM-1022	**Completed 2011**	Acquisition Projects	Capital	Yelm Shoreline Protection

Project Description	Priority Area	Principles modifier	Comments on modifier	Priority tier of project	Limiting Factors	Reference Document for limiting factor
This project would enhance and restore river bank, riparian and upland forest and shrub habitats on two Nisqually Land Trust properties in North Yelm. Together the properties are approximately 42 acres. They are directly across the river from one another and contain a 200-ft wide power easement which has received heavy public use. Restoration activities would include: installing fences and gates where needed, rehabilitating areas impacted by public access; removal of invasive species; and planting native trees and shrubs.	4	-1	EDT problem	3	Degraded Habitat-Riparian Areas and LWD Recruitment	2001 Nisqually Chinook Recovery Plan
Restoration of riparian habitat along the Nisqually mainstem, McKenna Creek, and a large off-channel wetland on 110+ acres of Nisqually Land Trust property in Yelm. Ongoing activities include: control of invasive species along McKenna Creek in the vicinity of the Elledge culvert; removal of non-native landscaping plants and invasive species throughout the property; and initial planting of native trees and shrubs in old horse camp area. Additional activities to be completed as funding is available: control of invasive species along the full length of McKenna Creek and throughout property; additional plantings of native trees and shrubs in open areas; and improvement of wetland connectivity.	4	-1	EDT problem; highly visible, high community support	**3**	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Riparian Areas and LWD Recruitment	2001 Nisqually Chinook Recovery Plan
This project proposes to acquire three properties totaling 45 acres and 0.4 miles of mainstem Nisqually River shoreline near Yelm/McKenna, the most rapidly urbanizing area along the mainstem. These properties are in a reach of the river rated highest priority for protection in the Nisqually Chinook Recovery Plan. They directly adjoin the Nisqually Land Trust's 168-acre Yelm Shoreline Management Unit which includes 1.5 miles of permanently protected shoreline. They contain approximately 25 acres of mature riparian forest and 10 acres of Class I wetlands. They also contain rare Gary oak habitat. The properties suffer are in need of clean up, restoration and protection against trespass. 2010: Acquisition of the 1st of the three parcels was completed.	1			**1**	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Water Quality	2001 Nisqually Chinook Recovery Plan

Habitat Type	Activity Type and Project Performance	Primary Species Benefiting	Secondary Species Benefiting	HWS Project Status	2012/Year 1 Activity to be funded	2012/Year 1 Estimated Budget	2013/Year 2 Activity to be funded	2013/Year 2 Estimated Budget
Upland, Riparian, Rivers/Streams/Shoreline	Plant removal/ control (Acres) Planting (Acres)	Chinook	Cutthroat (Secondary Species), Chum (Secondary Species), Coho (Secondary Species), Pink (Secondary Species), Bull Trout (Secondary Species), Steelhead (Secondary Species)	Feasibility Completed	develop management plan	2000	invasive species control	10000
Riparian, Wetland, Rivers/Streams/Shoreline	Activity Type - Riparian Habitat: Planting (Acres), Activity Type - Riparian Habitat: Plant removal/ control (Acres)	Chinook	Cutthroat (Secondary Species), Chum (Secondary Species), Coho (Secondary Species), Pink (Secondary Species), Bull Trout (Secondary Species), Steelhead (Secondary Species)	Feasibility Completed	planting; weed control; monitoring	7500	weed control; monitoring	2500
Riparian, Wetland, Rivers/Streams/Shoreline	Activity Types - Acquisition/Easements/Leases : Wetland areas protected (Acres), Activity Types - Acquisition/Easements/Leases : Streambank or riparian protected (Miles), Activity Types - Acquisition/Easements/Leases : Upland protected (Acres)	Chinook	Cutthroat (Secondary Species), Chum (Secondary Species), Coho (Secondary Species), Pink (Secondary Species), Steelhead (Secondary Species)	Completed				

2014/Year 3 Activity to be funded	2014Year 3 Estimated Budget	Likely End Date	Likely Sponsor	Total Cost of Project	Local share or other funding	Source of funds (PSAR, SRFB, other)	Unfunded Need	Project Name	
invasive species control, planting	15000	12/31/2016	Nisqually R Land Trust	35000	0	Not Yet Funded	35000	North Yelm Riparian Restoration	11-MAINSTEM-1015
planting; weed control; monitoring	2500	12/31/2014	Nisqually R Land Trust	75000	40000	Nisqually Indian Tribe, Nisqually R Land Trust, Natural Resources Conservation Service	35000	Yelm-McKenna Riparian Restoration	11-MAINSTEM-1016
		12/31/2011	Nisqually R Land Trust	180000	180000	SRFB - Salmon Recovery Funding Board, Thurston County	0	Yelm Shoreline Protection	11-MAINSTEM-1022

Major Strategy (Level 1-subbasin)	Initiative (Level 2)	Project (Level 3)	ID#	Project Status	Project Type	Plan Category	Project Name
		McKenna 94th Ave Riparian Restoration	11-MAINSTEM-1017	**Active**	Restoration Projects	Capital	McKenna 94th Ave Riparian Restoration
		Yelm Shoreline Access project	11-MAINSTEM-1004	Inactive	Habitat Protection	Non-Capital	Yelm Shoreline Access Project
		McKenna Protection Project	11-MAINSTEM-1009	**Active**	Acquisition for Protection	Capital	McKenna Area Protection Project
		Nisqually Whitewater Reach Protection - East Shoreline	11-MAINSTEM-1029	**Inactive**	Acquisition for Protection		Nisqually White Reach Protection - East Shoreline

Project Description	Priority Area	Principles modifier	Comments on modifier	Priority tier of project	Limiting Factors	Reference Document for limiting factor
Remove invasive species and plant native trees and shrubs on 1.5 acres adjacent to Nisqually mainstem in McKenna.	3	0		3	Degraded Habitat-Riparian Areas and LWD Recruitment	2001 Nisqually Chinook Recovery Plan
Evaluate Nisqually Land Trust shoreline properties along the Nisqually mainstem in Yelm for low-impact, day-use public access opportunities. Where appropriate, plan and develop trails or other public access opportunities in cooperation with local agencies and organizations. This project will include outreach and education to the local community about Nisqually River habitats and species.	1	2	Does not address limiting factor and minor problem for salmon	**3**	Degraded Habitat-Riparian Areas and LWD Recruitment, Non-Habitat Limiting Factors	2001 Nisqually Chinook Recovery Plan
Protect over 250 acres along the Nisqually River that includes portions of McKenna Creek headwater wetlands, riparian areas along the mainstem. The sponsors will acquire a conservation easement over this property situated near the most rapidly urbanizing area along the mainstem of the Nisqually River.	2			**2**	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Water Quality, Degraded Habitat-Estuarine and Nearshore Marine	2001 Nisqually Chinook Recovery Plan
Acquire 12 acres of Nisqually River shoreline in the Whitewater Reach. This property is on the east side of the river, just downstream of 20 acres and across the river from 25 acres already protected by the Land Trust.	1			1	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Water Quality	

Habitat Type	Activity Type and Project Performance	Primary Species Benefiting	Secondary Species Benefiting	HWS Project Status	2012/Year 1 Activity to be funded	2012/Year 1 Estimated Budget	2013/Year 2 Activity to be funded	2013/Year 2 Estimated Budget
Upland, Riparian, Rivers/Streams/Shoreline	Plant removal/ control (Acres) Planting (Acres)	Chinook	Cutthroat (Secondary Species), Chum (Secondary Species), Coho (Secondary Species), Pink (Secondary Species), Bull Trout (Secondary Species), Steelhead (Secondary Species)	Construction Completed	planting; weed control; monitoring	3000	weed control; monitoring	1500
Riparian		Chinook	Cutthroat (Secondary Species), Chum (Secondary Species), Coho (Secondary Species), Pink (Secondary Species), Bull Trout (Secondary Species), Steelhead (Secondary Species)	Conceptual				
Riparian	Activity Types - Acquisition/Easements/Leases : Streambank or riparian protected (Miles), Activity Types - Acquisition/Easements/Leases : Wetland areas protected (Acres)	Chinook	Chum (Secondary Species), Coho (Secondary Species), Pink (Secondary Species), Steelhead (Secondary Species)	Proposed		0	develop plan	60000
Riparian, Rivers/Streams/Shoreline		Chinook	Chum (Secondary Species), Coho (Secondary Species), Pink (Secondary Species), Steelhead (Secondary Species)	Conceptual				

2014/Year 3 Activity to be funded	2014Year 3 Estimated Budget	Likely End Date	Likely Sponsor	Total Cost of Project	Local share or other funding	Source of funds (PSAR, SRFB, other)	Unfunded Need	Project Name	
weed control; monitoring	1500	12/31/2015	Nisqually R Land Trust	8000	4000	Nisqually Indian Tribe; Nisqually R Land Trust	4000	McKenna 94th Ave Riparian Restoration	11-MAINSTEM-1017
Assessment	50000	12/31/2016	Nisqually R Land Trust	200000	0	TBD	200000	Yelm Shoreline Access Project	11-MAINSTEM-1004
develop plan	60000	12/31/2014	Nisqually R Land Trust	140000	20000	TBD	120000	McKenna Area Protection Project	11-MAINSTEM-1009
acquisition	130000	12/31/2015	Nisqually R Land Trust	130000	0		130000	Nisqually Whitewater Reach Protection - East Shoreline	11-MAINSTEM-1029

Major Strategy (Level 1-subbasin)	Initiative (Level 2)	Project (Level 3)	ID#	Project Status	Project Type	Plan Category	Project Name
		Brighton Cr Property Protection	11-MAINSTEM-1030	**Inactive**	Acquisition for Protection		Brighton Ck Property Protection
	Mainstem Monitoring and Assessments	Mainstem Nisqually LWD assessment and restoration plan	11-MAINSTEM-1012	**Inactive**	Future Habitat Project Development	Non-capital	Mainstem Nisqually LWD Assessment and Restoration Plan
		Off-channel project	11-MAINSTEM-1011	**Active**	Future Habitat Project Development	Non-capital	Nisqually Mainstem Off-Channel Restoration Project Development-Feasibility

Project Description	Priority Area	Principles modifier	Comments on modifier	Priority tier of project	Limiting Factors	Reference Document for limiting factor
Protection of 20+ acres of riparian and upland forest along the lower reach of Brighton Creek through a conservation easement.	2			2	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Water Quality	
In the Watershed analysis and in other assessments of the mainstem Nisqually it has been noted that certain sections of the Nisqually mainstem is lacking wood, especially in the reaches immediately downstream of the Alder/La Grande Hydro Project. This project will assess the large woody debris loading in the many of these reaches and identifies wood loading deficiencies, combines them with the data on wood recruitment and identifies wood project for the mainstem including 30% engineering designs.	2			**2**	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Stream Substrate	NCRP
An off-channel habitat assessment completed by SPSSEG and the Tribe in 2004 evaluated the presence and condition of off-channel habitat throughout the Nisqually mainstem. The report identified high priority sites for restoration of off-channel habitat. However, the highest priority projects have not yet been implemented due in large part to a lack of landowner willingness. There is a need to do additional landowner outreach, identify new willing landowners and then assess feasibilitly an design key projects.	2			2	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Water Quality, Degraded Habitat-Stream Flow, Degraded Habitat-Stream Substrate, Degraded Habitat-Estuarine and Nearshore Marine, Degraded Habitat-Fish Passage	NCRP

Habitat Type	Activity Type and Project Performance	Primary Species Benefiting	Secondary Species Benefiting	HWS Project Status	2012/Year 1 Activity to be funded	2012/Year 1 Estimated Budget	2013/Year 2 Activity to be funded	2013/Year 2 Estimated Budget
Upland, Riparian, Rivers/Streams/Shoreline		Steelhead	Cutthroat (Secondary Species), Chum (Secondary Species), Coho (Secondary Species)	Conceptual			conservation easement	25000
Instream	Instream Habitat	Chinook	Cutthroat (Secondary Species), Chum (Secondary Species), Coho (Secondary Species), Pink (Secondary Species), Steelhead (Secondary Species)	Conceptual	Design	50,000	Design	50,000
Wetland	Instream Habitat	Chinook	Cutthroat (Secondary Species), Chum (Secondary Species), Coho (Secondary Species), Pink (Secondary Species), Steelhead (Secondary Species)	Conceptual	Design	30000	Design	30000

2014/Year 3 Activity to be funded	2014Year 3 Estimated Budget	Likely End Date	Likely Sponsor	Total Cost of Project	Local share or other funding	Source of funds (PSAR, SRFB, other)	Unfunded Need	Project Name	
		12/31/2015	Nisqually R Land Trust	25000	0	Not Yet Funded	25000	Brighton Ck Property Protection	11-MAINSTEM-1030
Design	35,000	12/31/2014		135000	0	Not Yet Funded	135000	Mainstem Nisqually LWD Assessment and Restoration Plan	11-MAINSTEM-1012
Design	33000	12/31/2015		93000	0	Not Yet Funded	93000	Nisqually Mainstem Off-Channel Restoration Project Development-Feasibility	11-MAINSTEM-1011

Major Strategy (Level 1-subbasin)	Initiative (Level 2)	Project (Level 3)	ID#	Project Status	Project Type	Plan Category	Project Name
lly Restoration & Protection		Thurston Ridge Ripari	11-MAINSTEM-1019	**Active**	Restoration Projects	Capital	Thurston Ridge Riparian Restoration
		South Wilcox Flats Restoration Phase 2	11-MAINSTEM-1020	**Active**	Restoration Projects	Capital	South Wilcox Flats Riparian Restoration - Phase II
		Peissner Upland Forest Restoration	11-MAINSTEM-1021	**Active**	Restoration Projects	Capital	Piessner Upland Forest Restoration
		Northern Powell Complex Restoration	11-MAINSTEM-1023	**Active**	Restoration Projects	Capital	North Powell Complex Riparian Restoration

Project Description	Priority Area	Principles modifier	Comments on modifier	Priority tier of project	Limiting Factors	Reference Document for limiting factor
The Nisqually Land Trust owns 65+ acres of riparian forest habitat on the Thurston side of the Nisqually mainstem. This area is just downstream of known infestations of English ivy and reed canary grass. This area is at the bottom of a high river bluff and access is limited. Project activities will include: evaluation of the area for invasive weeds; removal of invasive species; and planting of native trees and shrubs to shade out invasives.	4	-1	Will "protect" the long-term habitat features	3	Degraded Habitat-Riparian Areas and LWD Recruitment	2001 Nisqually Chinook Recovery Plan
Removal of invasive species was started at this site in 2010. Native trees and shrubs will be planted in 2011 on 15+ acres owned by the Nisqually Land Trust on the Thurston County side of the Nisqually mainstem along the Wilcox Reach. This planting will enhance existing riparian forest and fill in gaps created by previous residential and recreational use on the property.	4			**4**	Degraded Habitat-Riparian Areas and LWD Recruitment	2001 Nisqually Chinook Recovery Plan
This project will enhance 45 acres of poorly stocked forest on land adjacent to the Nisqually mainstem, just downstream of the confluence of Powell Creek and the Nisqually. Project activities will include: Control of invasive species on old logging roads and landings; and planting 9,000 native trees and shrubs.	4			**4**	Degraded Habitat-Water Quality	2001 Nisqually Chinook Recovery Plan
Restoration of riparian forest habitat is ongoing on 46 acres in the channel migration zone along the middle reach of the Nisqually mainstem in Thurston County.	4	-1	Addresses major limiting factor in reach	**3**	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Water Quality	2001 Nisqually Chinook Recovery Plan

Habitat Type	Activity Type and Project Performance	Primary Species Benefiting	Secondary Species Benefiting	HWS Project Status	2012/Year 1 Activity to be funded	2012/Year 1 Estimated Budget	2013/Year 2 Activity to be funded	2013/Year 2 Estimated Budget
Riparian, Rivers/Streams/Shoreline	Plant removal/ control (Acres) Planting (Acres)	Chinook	Cutthroat (Secondary Species), Chum (Secondary Species), Coho (Secondary Species), Pink (Secondary Species), Bull Trout (Secondary Species), Steelhead (Secondary Species)	Proposed	planting; weed control; monitoring	15000	weed control; monitoring	5000
Upland, Riparian	Plant removal/ control (Acres) Planting (Acres)	Chinook	Cutthroat (Secondary Species), Chum (Secondary Species), Coho (Secondary Species), Pink (Secondary Species), Bull Trout (Secondary Species), Steelhead (Secondary Species)	Construction Completed	planting; weed control; monitoring	20000	weed control; monitoring	5000
Upland	Activity Type - Upland Habitat: Fencing (Miles), Activity Type - Upland Habitat: Planting (Acres), Activity Type - Upland Habitat: Invasives/ weed control (Acres)	Chinook	Cutthroat (Secondary Species), Chum (Secondary Species), Coho (Secondary Species), Pink (Secondary Species), Steelhead (Secondary Species)	Construction Completed	planting; weed control; monitoring	13000	weed control; monitoring	3000
Riparian	Activity Type - Riparian Habitat: Planting (Acres), Activity Type - Riparian Habitat: Plant removal/ control (Acres)	Chinook	Cutthroat (Secondary Species), Chum (Secondary Species), Coho (Secondary Species), Pink (Secondary Species), Bull Trout (Secondary Species), Steelhead (Secondary Species)	Construction Completed	weed control; irrigation; monitoring	15000	weed control; irrigation; monitoring	15000

2014/Year 3 Activity to be funded	2014Year 3 Estimated Budget	Likely End Date	Likely Sponsor	Total Cost of Project	Local share or other funding	Source of funds (PSAR, SRFB, other)	Unfunded Need	Project Name	
weed control; monitoring	5000	12/31/2016	Nisqually R Land Trust	45000	20000	Natural Resources Conservation Service	25000	Thurston Ridge Riparian Restoration	11-MAINSTEM-1019
weed control; monitoring	5000	12/31/2016	Nisqually R Land Trust	85000	85000	SRFB - Salmon Recovery Funding Board, Thurston County	0	South Wilcox Flats Riparian Restoration - Phase II	11-MAINSTEM-1020
weed control; monitoring	3000	12/31/2014	Nisqually R Land Trust	20000	20000	Nisqually Indian Tribe, Nisqually R Land Trust, Natural Resources Conservation Service	0	Piessner Upland Forest Restoration	11-MAINSTEM-1021
weed control; monitoring	5000	12/31/2014	Nisqually R Land Trust	275000	275000	SRFB - Salmon Recovery Funding Board, Nisqually Indian Tribe, USDA Natural Resources Conservation Service	0	North Powell Complex Riparian Restoration	11-MAINSTEM-1023

Major Strategy (Level 1-subbasin)	Initiative (Level 2)	Project (Level 3)	ID#	Project Status	Project Type	Plan Category	Project Name
Mainstem Nisqua	Middle Nisqually	Thurston Ridge Boundary Protection	11-MAINSTEM-1018	**Active**	Restoration Projects	Non-Capital	Thurston Ridge Boundary Protection
		Powell/Nisqually mainstem off-channel reconnection	11-POWELL-1002	**Completed 2010**	Restoration Projects	Capital	Powell Creek/Nisqually Mainstem Off-Channel Reconnection
		Tanwax Nisqually Confluence Acquisition	11-MAINSTEM-1033	**Completed 2011**	Acquisition for Protection		Tanwax/Nisqually Confluence Acquisition
		Nisqually/Powell Protection Ph II	11-MAINSTEM-1034	**Active**	Acquisition for Protection		Nisqually-Powell Floodplain Protection

Project Description	Priority Area	Principles modifier	Comments on modifier	Priority tier of project	Limiting Factors	Reference Document for limiting factor
This project will enhance and protect the upland boundary of over a mile of river bluff, off-channel habitat, and riparian forest along the Wilcox Reach of the Nisqually River. Activities will include: removal of debris and invasive species along the top of the bluff adjacent to a county road; dense planting of native shrubs along bluff edge; and installation of informational and boundary signs. If dumping and erosion-causing public access escalates at the site, the boundary should be fenced to protect the bluff riparian habitat.	1	2	Already purchased property; low risk to habitat features	**3**	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Stream Substrate, Degraded Habitat-Estuarine and Nearshore Marine	2001 Nisqually Chinook Recovery Plan
This project restored access for juvenile salmon to half of the largest off-channel wetland complex on the mainstem river. A series of culverts along a former logging haul road were removed and the road was abandoned and planted. An old bridge abutment along the mainstem of the river was also removed. Phase 2 of the project removed a culvert from Elbow Lake Creek, just upstream of where Elbow Lake Creek joins Powell Creek. Monitoring and maintenance of the project area is ongoing and includes control of invasive species and supplemental plantings.	4	-1	Major limiting factor in otherwise pristine mainstem reach	**3**	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Stream Flow, Degraded Habitat-Estuarine and Nearshore Marine, Degraded Habitat-Fish Passage	2001 Nisqually Chinook Recovery Plan
Acquire for permanent protection approximately 33 acres of shoreline property along lower Tanwax Creek and the Nisqually River, including the confluence of the two streams. The property is adjacent to shoreline property already owned by the applicant, and will expand the block of protected Nisqually River shoreline property by approximately 1/4 river miles. It will also permanently protect the lower ¼ miles of Tanwax Creek, an important tributary stream to the Nisqually River.	2			2	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Water Quality	
Current Nisqually Land Trust ownership includes the confluence of the Nisqually River and Powell Creek; and a mosaic of surrounding floodplain and riparian habitats. This project will protect an additional 5+ acres in the area permanently protected in the channel migration zone along the Middle Reach of the Nisqually.	2 or 3			2	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Riparian Areas and LWD Recruitment	

Habitat Type	Activity Type and Project Performance	Primary Species Benefiting	Secondary Species Benefiting	HWS Project Status	2012/Year 1 Activity to be funded	2012/Year 1 Estimated Budget	2013/Year 2 Activity to be funded	2013/Year 2 Estimated Budget
Riparian	Activity Type - Upland Habitat: Planting (Acres), Activity Type - Upland Habitat: Invasives/ weed control (Acres)	Chinook	Cutthroat (Secondary Species), Chum (Secondary Species), Coho (Secondary Species), Pink (Secondary Species), Bull Trout (Secondary Species), Steelhead (Secondary Species)	Construction Completed	planting; weed control; monitoring	4000	weed control; monitoring	1000
Wetland	Activity Type - Fish Passage: Road-crossing removal (Each), Activity Type - Wetlands: Wetland plant removal / control (Acres), Activity Type - Riparian Habitat: Planting (Acres), Activity Type - Upland Habitat: Invasives/ weed control (Acres), Activity Type - Upland Habitat: Planting (Acres)	Chinook	Cutthroat (Secondary Species), Chum (Secondary Species), Coho (Secondary Species), Steelhead (Secondary Species)	Construction Completed, Land Acquisition Completed	weed control	3000		
Upland, Riparian, Wetland, Rivers/Streams/Shoreline		Chinook	Chum (Secondary Species), Coho (Secondary Species), Pink (Secondary Species), Steelhead (Secondary Species)	Completed				
Riparian, Wetland, Rivers/Streams/Shoreline		Chinook	Chum (Secondary Species), Coho (Secondary Species), Pink (Secondary Species), Steelhead (Secondary Species)	Conceptual			conservation easement or acquisition	20000

2014/Year 3 Activity to be funded	2014Year 3 Estimated Budget	Likely End Date	Likely Sponsor	Total Cost of Project	Local share or other funding	Source of funds (PSAR, SRFB, other)	Unfunded Need	Project Name	
weed control; monitoring	1000	12/31/2015	Nisqually R Land Trust	20000	6000	Nisqually Indian Tribe, Nisqually R Land Trust	14000	Thurston Ridge Boundary Protection	11-MAINSTEM-1018
		12/31/2011	Nisqually R Land Trust	242000	242000	SRFB - Salmon Recovery Funding Board, US Fish and Wildlife Service, Nisqually Indian Tribe	0	Powell Creek/Nisqually Mainstem Off-Channel Reconnection	11-POWELL-1002
		12/31/2011	Nisqually R Land Trust	196300	196300	SRFB- Salmon Recovery Funding Board, Nisqually Indian Tribe	0	Tanwax/Nisqually Confluence Acquisition	11-MAINSTEM-1033
		12/31/2015	Nisqually R Land Trust	20000	0	Not Yet Funded	20000	Nisqually-Powell Floodplain Protection	11-MAINSTEM-1034

Major Strategy (Level 1-subbasin)	Initiative (Level 2)	Project (Level 3)	ID#	Project Status	Project Type	Plan Category	Project Name
		Middle Nisqually Riparian Enhancement	11-MAINSTEM-1035	**NEW 2012**	Restoration Project		Middle Nisqually Riparian Enhancement
		Nisqually to Pt. Defiance nearshore restoration	11-NEARSHORE-1005	**Completed 2011**	Restoration Projects	Capital	Nisqually to Pt. Defiance nearshore restoration assessment

Project Description	Priority Area	Principles modifier	Comments on modifier	Priority tier of project	Limiting Factors	Reference Document for limiting factor
The objective of this project is to enhance the riparian habitat conditions in the Niqually River active channel migration zone in the Middle Reach. The proposed treatment areas on either side of a slough with a permanent surface water connection to the mainstem on Nisqually Land Trust property. Treatment will include removal of invasive, non-native vegetation across 3 acres (reed canary grass, Scotch broom, etc.) and planting of native trees and shrubs on 22 acres to increase woody debris recruitment in this reach.	4	1	Protection of this reach is Tier 1	3	Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment	2001 Nisqually Chinook Recovery Plan
This project is assessing nearshore habitat between the Nisqually River and Point Defiance to identify potential restoration projects likely to benefit salmon. Both the WRIA 11 and WRIA 12 limiting factors analyses noted the poor habitat condition of this shoreline, including estuarine habitat loss and impacts from rail line fill. Burlington Northern is a cooperating partner on this project. A final report will identify and prioritize potential restoration project sites. Preliminary engineering designs and landowner agreements will be developed for restoration at 2-3 specific project sites. The project construction proposed for 2010 would be the implementation of one of these projects. Because the assessment is still underway the cost estimate for project construction is quite rough at this point. (also listed under capital projects)	2			**2**	Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Water Quality, Degraded Habitat-Stream Flow, Degraded Habitat-Stream Substrate, Degraded Habitat-Estuarine and Nearshore Marine, Degraded Habitat-Fish Passage	2001 Nisqually Chinook Recovery Plan

Habitat Type	Activity Type and Project Performance	Primary Species Benefiting	Secondary Species Benefiting	HWS Project Status	2012/Year 1 Activity to be funded	2012/Year 1 Estimated Budget	2013/Year 2 Activity to be funded	2013/Year 2 Estimated Budget
Riparian, Rivers/Streams/Shoreline		Chinook, Steelhead	Chum, Coho, Pink, Cutthroat	Proposed			planting; weed control	30000
Nearshore (Beaches)		Chinook	Cutthroat (Secondary Species), Chum (Secondary Species), Coho (Secondary Species), Bull Trout (Secondary Species), Steelhead (Secondary Species)		NA	0	NA	0

2014/Year 3 Activity to be funded	2014Year 3 Estimated Budget	Likely End Date	Likely Sponsor	Total Cost of Project	Local share or other funding	Source of funds (PSAR, SRFB, other)	Unfunded Need	Project Name	
weed control; monitoring	5000	12/31/2017	Nisqually R Land Trust	47000	0	SRFB - Salmon Recovery Funding Board	47000	Middle Nisqually Riparian Enhancement	11-MAINSTEM-1035
NA	0	12/31/2009		1675000	0		1675000	Nisqually to Pt. Defiance Nearshore Restoration Project	11-NEARSHORE-1005

Major Strategy (Level 1-subbasin)	Initiative (Level 2)	Project (Level 3)	ID#	Project Status	Project Type	Plan Category	Project Name
		Sequalitchew Estuarine Restoration Design	11-NEARSHORE-1006	**Active**	Future Habitat Project Development	Non-Capital	Sequalitchew Estuarine Restoration Design

Project Description	Priority Area	Principles modifier	Comments on modifier	Priority tier of project	Limiting Factors	Reference Document for limiting factor
Restore fish passage and tidal hydrology to the Sequalitchew Creek estuary. The Sequalitchew estuary has been highly impacted by the BNSF causeway which has severed the connection between the estuary and the Puget Sound except through a small a 5-foot diameter concrete box culvert. Additionally, a remnant bulkhead and pilings from the decommissioned DuPont ammunitions dock constrains the upper beach profile and limits riparian, fringe habitat. This project will explore feasibility and design options for restoring estuarine and beach processes through installation of a new structure/pile trestle in place of the causeway, removal of derelict creosote pilings and bulkhead structures, restore natural beach profile, remove invasive plants and restore native, marine riparian corridor.	2			**2**	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Water Quality, Degraded Habitat-Stream Flow, Degraded Habitat-Estuarine and Nearshore Marine, Degraded Habitat-Fish Passage	2001 Nisqually Chinook Recovery Plan

Habitat Type	Activity Type and Project Performance	Primary Species Benefiting	Secondary Species Benefiting	HWS Project Status	2012/Year 1 Activity to be funded	2012/Year 1 Estimated Budget	2013/Year 2 Activity to be funded	2013/Year 2 Estimated Budget
Nearshore (Embayments)	Estuarine and Nearshore	Chum, Chinook, Coho, Cutthroat	Pink (Secondary Species), Bull Trout (Secondary Species), Steelhead (Secondary Species), Pacific Herring, River Lamprey, Surf Smelt, Sand Lance	Feasibility Completed	Design	100,000	Design	200,000

2014/Year 3 Activity to be funded	2014Year 3 Estimated Budget	Likely End Date	Likely Sponsor	Total Cost of Project	Local share or other funding	Source of funds (PSAR, SRFB, other)	Unfunded Need	Project Name	
Design	50,000	12/31/2014	South Puget Sound SEG	350000	0	Not Yet Funded	350000	Sequalitchew Estuarine Restoration Design	11-NEARSHORE-1006

Major Strategy (Level 1-subbasin)	Initiative (Level 2)	Project (Level 3)	ID#	Project Status	Project Type	Plan Category	Project Name
		Chambers Bay Estuarine and Riparian Enhancement	11-NEARSHORE-1007	**Active**	Acquisition and Restoration Projects	Capital	Chambers Bay Estuarine and Riparian Enhancement, Design

Project Description	Priority Area	Principles modifier	Comments on modifier	Priority tier of project	Limiting Factors	Reference Document for limiting factor
Enhance estuarine habitat structure within Chambers Bay through active restoration and creation of salt marsh habitat within the Bay. Restore marine riparian corridor in and around Chambers Bay through removal of invasive vegetation and planting of native trees and shrubs.Acquire Mill property and remove dam and estuarine fill. Issues: •Industrial use practices of Chambers Bay for timber storage. •Construction of road and mill site over the historic estuarine area. •Construction of dam which has reduced sediment transport. •Gravel mining operations on the north side of the bay which removed mature riparian forest •Construction of the BNSF railway which changed the connection of the estuary to Puget Sound. Chambers Bay is the major estuarine feature between the Nisqually River and Central-North Sound. Given the current lack of habitat structure and food production inside the Bay, this historically important habitat feature now provides limited refuge, rearing and foraging capacity for migrating salmonids.	2			**2**	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Estuarine and Nearshore Marine	2001 Nisqually Chinook Recovery Plan

Habitat Type	Activity Type and Project Performance	Primary Species Benefiting	Secondary Species Benefiting	HWS Project Status	2012/Year 1 Activity to be funded	2012/Year 1 Estimated Budget	2013/Year 2 Activity to be funded	2013/Year 2 Estimated Budget
Nearshore (Embayments)	Estuarine and Nearshore	Chum, Chinook, Coho, Pink	Cutthroat (Secondary Species), Bull Trout (Secondary Species), Steelhead (Secondary Species), Pacific Herring, Surf Smelt, Sand Lance, Steller Sea Lion	Feasibility Completed	Design	150,000	Design	150,000

2014/Year 3 Activity to be funded	2014Year 3 Estimated Budget	Likely End Date	Likely Sponsor	Total Cost of Project	Local share or other funding	Source of funds (PSAR, SRFB, other)	Unfunded Need	Project Name	
Design	50,000	12/31/2014	South Puget Sound SEG	2100000	0	Not Yet Funded	2100000	Chambers Bay Estuarine and Riparian Enhancement, Design	11-NEARSHORE-1007

Major Strategy (Level 1-subbasin)	Initiative (Level 2)	Project (Level 3)	ID#	Project Status	Project Type	Plan Category	Project Name
	Nisqually to Point Defiance Restoration & Protection	East Nisqually Reach Beach Nourishment Pilot	11-NEARSHORE-1008	**Inactive**	Restoration Projects	Capital	East Nisqually Reach Beach Nourishment Pilot

Project Description	Priority Area	Principles modifier	Comments on modifier	Priority tier of project	Limiting Factors	Reference Document for limiting factor
Initiate a pilot beach restoration and marine riparian planting project on existing pocket beaches persisting waterward of the BNSF railine between Sequalitchew Creek and Solo Point to track and streamline beach nourishment and riparian enhancement techniques along the degraded shoreline. The shoreline between Nisqually and Point Defiance has been highly degraded due to shoreline development and the location of the BNSF railway at or below the MHHW effectively truncating and severing functional nearshore habitat. The shoreline has very little functional beach habitat to support migration, foraging and rearing needs of juvenile salmonids and forage fish spawning capacity. Several small pocket beaches exist along the East Nisqually Reach, these beach support forage fish spawning and shallow water refugia. Without sediment input into the system, there is not material to feed and accrete these beach. This project seeks to actively nourish these pocket beaches and track the results of nourishment events to better understand this treatment as a viable restoration option.	2			**2**	Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Estuarine and Nearshore Marine	2001 Nisqually Chinook Recovery Plan

Habitat Type	Activity Type and Project Performance	Primary Species Benefiting	Secondary Species Benefiting	HWS Project Status	2012/Year 1 Activity to be funded	2012/Year 1 Estimated Budget	2013/Year 2 Activity to be funded	2013/Year 2 Estimated Budget
Nearshore (Beaches)	Estuarine and Nearshore	Chum, Chinook, Cutthroat	Coho (Secondary Species), Pink (Secondary Species), Bull Trout (Secondary Species), Steelhead (Secondary Species), Pacific Herring, Surf Smelt, Sand Lance	Feasibility Completed			Design	100,000

2014/Year 3 Activity to be funded	2014Year 3 Estimated Budget	Likely End Date	Likely Sponsor	Total Cost of Project	Local share or other funding	Source of funds (PSAR, SRFB, other)	Unfunded Need	Project Name	
Construction	502,300	12/31/2014	South Puget Sound SEG	602300	0	Not Yet Funded	602300	East Nisqually Reach Beach Nourishment Pilot	11-NEARSHORE-1008

Major Strategy (Level 1-subbasin)	Initiative (Level 2)	Project (Level 3)	ID#	Project Status	Project Type	Plan Category	Project Name
		Chamber Beach Reconstruction and Riparian	11-NEARSHORE-1009	**Inactive**	Restoration Projects	Capital	Chambers Beach Reconstruction and Riparian Enhancement
		Titlow Estuary Restoration	11-NEARSHORE-1010	**Active**	Restoration Projects	Capital	Titlow Estuary Restoration

Project Description	Priority Area	Principles modifier	Comments on modifier	Priority tier of project	Limiting Factors	Reference Document for limiting factor
Reconstruct a natural beach profile along Chambers Beach through removal of derelict structures, active nourishment of degraded areas and reconstruction of back beach berm where the bank is unstable. Restore a riparian corridor through removal of invasive species and planting of native vegetation. Issues: •Lack of riparian corridor along the Chambers Beach and presence of several derelict structures located within the intertidal zone. •Lack of continuous functional habitat along the Nisqually to Point Defiance shoreline. •Beach and bank instability as a result of gravel mining operations. The shoreline between Nisqually and Point Defiance has been highly degraded due to shoreline development and the location of the BNSF railway at or below the MHHW. The shoreline has very little functional beach habitat to support migration, foraging and rearing needs of juvenile salmonids and forage fish spawning capacity. The 1.5-mile project reach has some existing function as the BNSF causeway is set back from the shoreline and presents and opportunity to support a riparian corridor, backshore berm, beach face and low-tide terrace. However a legacy of gravel mining has significantly disturbed the beach creating instability, degraded beach profiles and little to no	2			**2**	Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Estuarine and Nearshore Marine	2001 Nisqually Chinook Recovery Plan
Replace culvert/tidegate through BNSF railroad to improve connectivity and fish passage between Titlow lagoon and Puget Sound. Remove shoreline armor and derelict structure to restore/enhance the shoreline. A tidegate installed through the BNSF causeway blocks fish passage and inhibits tidal exchange within the lagoon. Native vegetation and habitat structure has been removed from the lagoon limiting rearing and foraging capacity of the lagoon. Shoreline armor associated with the BNSF railway and park infrastructure impairs beach and riparian processes. Derelict piles within the intertidal-subtidal region inhibit sediment transport.	2			**2**	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Estuarine and Nearshore Marine	2001 Nisqually Chinook Recovery Plan

Habitat Type	Activity Type and Project Performance	Primary Species Benefiting	Secondary Species Benefiting	HWS Project Status	2012/Year 1 Activity to be funded	2012/Year 1 Estimated Budget	2013/Year 2 Activity to be funded	2013/Year 2 Estimated Budget
Nearshore (Beaches)	Estuarine and Nearshore	Chum, Chinook, Cutthroat	Coho (Secondary Species), Pink (Secondary Species), Bull Trout (Secondary Species), Steelhead (Secondary Species), Pacific Herring, Surf Smelt, Sand Lance	Feasibility Completed			Design	100,000
Nearshore (Embayments)	Estuarine and Nearshore	Chum, Chinook, Cutthroat	Coho (Secondary Species), Pink (Secondary Species), Bull Trout (Secondary Species), Steelhead (Secondary Species), Pacific Herring, Surf Smelt, Sand Lance	Feasibility Completed	Design	130,000	Design	50,000

2014/Year 3 Activity to be funded	2014Year 3 Estimated Budget	Likely End Date	Likely Sponsor	Total Cost of Project	Local share or other funding	Source of funds (PSAR, SRFB, other)	Unfunded Need	Project Name	
Construction	1,400,000	12/31/2014	South Puget Sound SEG	1700000	0	Not Yet Funded	1700000	Chambers Beach Reconstruction and Riparian Enhancement	11-NEARSHORE-1009
Construction	6,300,000	12/31/2014	South Puget Sound SEG	6,480,000	0	Not Yet Funded	6480000	Titlow Estuary Restoration	11-NEARSHORE-1010

Major Strategy (Level 1-subbasin)	Initiative (Level 2)	Project (Level 3)	ID#	Project Status	Project Type	Plan Category	Project Name
		Ketron Island Protection	11-NEARSHORE-1016	**Inactive**	Acquisition for Protection	Capital	Ketron Island Protection Project
	Thurston Shoreline Projects	Hogum Bay restoration	11-NEARSHORE-1003	**Active**	Restoration Projects	Capital	Hogum Bay Riparian Restoration
		Filucy Bay Bulkhead removal	11-NEARSHORE-1012	**Active**	Restoration Projects	Capital	Filucy Bay Bulkhead Removal
		East Oro bay restoration	11-NEARSHORE-1011	**Inactive**	Restoration Projects		East Oro Bay restoration

Project Description	Priority Area	Principles modifier	Comments on modifier	Priority tier of project	Limiting Factors	Reference Document for limiting factor
Protect any functioning habitat along Ketron Island's shoreline	4	-2	EDT scale problems	**2**	Degraded Habitat-Estuarine and Nearshore Marine	2001 Nisqually Chinook Recovery Plan
Mallard Cove, a small pocket estuary just west of the Nisqually Estuary, is situated along the shore of Hogum Bay and is protected by the Nisqually Land Trust. The Land Trust completed a managment plan for these properties in 2010, which identified the following tasks: invasive species removal - ivy, spurge laurel, and blackberry; removal of 3 culverts from abandoned road; and understory planting to enhance forest species diversity. The managment plan also identified additional protection priorities in the area. 2010 Land Trust staff removed spurge laurel from edge of lagoon; 2011 Land Trust staff and volunteers working on removing ivy from edges of bluffs and upland areas	2	1	Already purchased property; low risk to habitat features; very small scale	3	Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Water Quality, Degraded Habitat-Stream Substrate	2001 Nisqually Chinook Recovery Plan
The project is located on the north eastern side of Filucy Bay near a small embayment and perennial stream. Projects sponsors will work with the landowner to remove a 100-foot long wooden pile bulkhead. Removal of the bulkhead will include installation of woody structure to tie into adjacent back beach and salt marsh habitat.	2			**2**	Degraded Habitat-Estuarine and Nearshore Marine	2001 Nisqually Chinook Recovery Plan
This project seeks to remove an earthen dam impounding the upper sections of finger estuary in East Oro bay. Bay removal will restore tidal connectity and estuarine processes to a salt marsh wetland.	2			2	Degraded Habitat-Estuarine and Nearshore Marine, Degraded Habitat-Fish Passage	2001 Nisqually Chinook Recovery Plan

Habitat Type	Activity Type and Project Performance	Primary Species Benefiting	Secondary Species Benefiting	HWS Project Status	2012/Year 1 Activity to be funded	2012/Year 1 Estimated Budget	2013/Year 2 Activity to be funded	2013/Year 2 Estimated Budget
Nearshore (Beaches)	Estuarine and Nearshore	Chum, Chinook, Cutthroat	Coho (Secondary Species), Pink (Secondary Species), Bull Trout (Secondary Species), Steelhead (Secondary Species), Pacific Herring, Surf Smelt, Sand Lance	Conceptual	Scoping	10,000	acquisition	300,000
Riparian	Activity Type - Riparian Habitat: Plant removal/ control (Acres), Activity Type - Riparian Habitat: Planting (Acres), Activity Type - Estuarine & Nearshore: Invasive Species Control (Acres)	Chinook	Cutthroat (Secondary Species), Chum (Secondary Species), Coho (Secondary Species), Bull Trout (Secondary Species), Steelhead (Secondary Species)	Feasibility Completed	remove cross drains; weed control	12000	planting; weed control	12000
Nearshore (Beaches)	Estuarine and Nearshore	Chum, Chinook, Cutthroat	Coho (Secondary Species), Pink (Secondary Species),, Steelhead (Secondary Species), Pacific Herring, Surf Smelt, Sand Lance	Feasibility Completed	Design	5,000	Construction	42,034
Nearshore (Embayments)	Estuarine and Nearshore	Chum, Chinook	Coho (Secondary Species), Pink (Secondary Species),, Steelhead (Secondary Species), Pacific Herring, Surf Smelt, Sand Lance	Feasibility Pending	Scoping	5,000	Design	40,000

2014/Year 3 Activity to be funded	2014Year 3 Estimated Budget	Likely End Date	Likely Sponsor	Total Cost of Project	Local share or other funding	Source of funds (PSAR, SRFB, other)	Unfunded Need	Project Name	
acquisition	3000000	12/31/2014		3,310,000	0	Not Yet Funded	3310000	Ketron Island Protection Project	11-NEARSHORE-1016
monitoring and maintenance	2000	12/31/2015	Nisqually R Land Trust	30000	30000	US Fish and Wildlife Service, Nisqually R Land Trust	0	Hogum Bay Riparian Restoration	11-NEARSHORE-1003
		12/31/2013	South Puget Sound SEG	47,034	0	Proposed to SRFB	47034	Filucy Bay Bulkhead Removal	11-NEARSHORE-1012
Construction	150,000	12/31/2014	South Puget Sound SEG	195,000	0	Not Yet Funded	195000	East Oro Bay restoration	11-NEARSHORE-1011

Major Strategy (Level 1-subbasin)	Initiative (Level 2)	Project (Level 3)	ID#	Project Status	Project Type	Plan Category	Project Name
	Kitsap Peninsula & Islands Nearshore	VonGeldern Cove Bulkhead removal	11-NEARSHORE-1014	**Inactive**	Restoration Projects	Capital	VonGeldern Cove Bulkhead Removal
		Penrose Point Bulkhead removal	11-NEARSHORE-1015	**Active**	Restoration Projects	Capital	Penrose Point Bulkhead Removal
	'Independent Projects'	South Sound nearshore protection	11-NEARSHORE-1004	**Active**	Acquisition for Protection	Capital	South Sound Nearshore Protection Project

Project Description	Priority Area	Principles modifier	Comments on modifier	Priority tier of project	Limiting Factors	Reference Document for limiting factor
This project is located on the north eastern end of Von Geldern Cove on the Key Peninsula in Carr Inlet. Project sponsors will work with at least one, and up to five landowners, to remove a wooden, pile bulkhead and shoreline armor. Removal of the bulkhead will include restoration of a natural beach profile and re-vegetation of the shoreline.	2			**2**	Degraded Habitat-Estuarine and Nearshore Marine	2002 Nisqually Chinook Recovery Plan
The project is located on a marine shoreline just southwest of Penrose Point in Penrose Point State Park on the east side of the Key Peninsula in Carr Inlet. The project reach consists of a bluff backed beach that leads into an estuarine embayment with three small freshwater unnamed tributaries entering the head of the embayment. A 750-foot long creosote bulkhead encroaches on a portion of an otherwise pristine beach. The Penrose Point Bulkhead Removal Project proposes to remove the creosote bulkhead and associated armor and fill to restore/reconstruct the natural beach profile and restore processes at Penrose Point State Park.	2			**2**	Degraded Habitat-Estuarine and Nearshore Marine	2003 Nisqually Chinook Recovery Plan
Protection of nearshore has been identified as a high priority but no specific sites have yet been identified. This cost estimate is more preliminary.	4	-2	EDT scale problem	**2**	Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Water Quality, Degraded Habitat-Stream Flow, Degraded Habitat-Estuarine and Nearshore Marine, Degraded Habitat-Fish Passage	2001 Nisqually Chinook Recovery Plan

Habitat Type	Activity Type and Project Performance	Primary Species Benefiting	Secondary Species Benefiting	HWS Project Status	2012/Year 1 Activity to be funded	2012/Year 1 Estimated Budget	2013/Year 2 Activity to be funded	2013/Year 2 Estimated Budget
Nearshore (Beaches)	Estuarine and Nearshore	Chum, Chinook, Cutthroat	Coho (Secondary Species), Pink (Secondary Species),, Steelhead (Secondary Species), Pacific Herring, Surf Smelt, Sand Lance	Feasibility Completed	Design	30,000	Construction	400,000
Nearshore (Beaches)	Estuarine and Nearshore	Chum, Chinook, Cutthroat	Coho (Secondary Species), Pink (Secondary Species),, Steelhead (Secondary Species), Pacific Herring, Surf Smelt, Sand Lance	Design Completed	Construction	20,000	Construction	360,000
Riparian		Chinook	Cutthroat (Secondary Species), Chum (Secondary Species), Coho (Secondary Species), Pink (Secondary Species), Bull Trout (Secondary Species), Steelhead (Secondary Species)		acquisition	100000	acquisition	100000

2014/Year 3 Activity to be funded	2014Year 3 Estimated Budget	Likely End Date	Likely Sponsor	Total Cost of Project	Local share or other funding	Source of funds (PSAR, SRFB, other)	Unfunded Need	Project Name	
		12/31/2014	South Puget Sound SEG	430,000	0	Not Yet Funded	430000	VonGeldern Cove Bulkhead Removal	11-NEARSHORE-1014
planting	6000	12/31/2014	South Puget Sound SEG	386,000	25000	Proposed to SRFB, partial cost share funded by USFWS	50900	Penrose Point Bulkhead Removal	11-NEARSHORE-1015
acquisition	100000	12/31/2020	Nisqually R Land Trust	3000000	0	Not Yet Funded	3000000	South Sound Nearshore Protection Project	11-NEARSHORE-1004

Major Strategy (Level 1-subbasin)	Initiative (Level 2)	Project (Level 3)	ID#	Project Status	Project Type	Plan Category	Project Name
		Mashel Eatonville restoration - Phase II	11-MASHEL-1005	**Completed 2010**	Restoration Projects	Capital	Mashel Eatonville Restoration Phase II
		Mashel Eatonville restoration - Phase III	11-MASHEL-1006	**Active**	Restoration Projects	Capital	Mashel Eatonville Restoration Phase III

Project Description	Priority Area	Principles modifier	Comments on modifier	Priority tier of project	Limiting Factors	Reference Document for limiting factor
This project will restore habitat diversity in 2000 feet of the highest priority reaches of the Mashel River and protect and restore over 6 acres of the riparian buffer. 16 engineered log jams and log structures will be installed. In combination with adjacent work happening simultaneously by the Washington Dept. of Transportation in the same location, and the completed Phase 1, the project will install 22 log structures that will increase pool habitat, increase stable and high quality spawning habitat, increase floodplain connections and decrease bank erosion and mass wasting. These actions are identified as one of the three highest priority restoration activities in the Nisqually watershed chapter of the NOAA approved Puget Sound Chinook Recovery Plan. This project will significantly advance the high priority restoration implementation in the Nisqually watershed by moving the restoration of the Mashel substantially towards completion. In the long term this project will contribute to a	2			**2**	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Stream Flow, Degraded Habitat-Estuarine and Nearshore Marine, Biological Processes	Nisqually Chinook Recovery Plan, Mashel Restoration Plan (PCD, 2004)
Restore the in-stream, riparian and floodplain habitat of the Mashel River through the Eatonville Segment Reach 7. This would include riparian and instream restoration of 0.5km of the Mashel River at the Little Mashel River confluence. Instream restoration would entail installation of over 10 engineered log jams to reactivate the floodplain and create in-stream complexity.	2			2	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Stream Flow, Degraded Habitat-Stream Substrate, Degraded Habitat-Estuarine and Nearshore Marine, Biological Processes	NCRP

Habitat Type	Activity Type and Project Performance	Primary Species Benefiting	Secondary Species Benefiting	HWS Project Status	2012/Year 1 Activity to be funded	2012/Year 1 Estimated Budget	2013/Year 2 Activity to be funded	2013/Year 2 Estimated Budget
Riparian, Instream, Rivers/Streams/Shoreline	Channel structure - Wood structure / log jam (2,000 Feet)	Chinook, Coho, Steelhead, Rainbow	Cutthroat (Secondary Species), Pink (Secondary Species), River Lamprey	Construction Completed				
Upland, Riparian, Instream, Rivers/Streams/Shoreline	Instream Habitat	Chinook, Coho, Steelhead	Cutthroat (Secondary Species), Pink (Secondary Species), River Lamprey	Conceptual	Design	50000	Construction	950000

2014/Year 3 Activity to be funded	2014Year 3 Estimated Budget	Likely End Date	Likely Sponsor	Total Cost of Project	Local share or other funding	Source of funds (PSAR, SRFB, other)	Unfunded Need	Project Name	
		6/30/2011	Nisqually Indian Tribe	1400000	140,000	PSAR	0	Mashel Eatonville Restoration Phase II	11-MASHEL-1005
		12/31/2013		1000000	0	Not Yet Funded	1000000	Mashel Eatonville Restoration Phase III	11-MASHEL-1006

Major Strategy (Level 1-subbasin)	Initiative (Level 2)	Project (Level 3)	ID#	Project Status	Project Type	Plan Category	Project Name
	Mashel Eatonville Reach Restoration & Protection	Mashel Eatonville Protection Initiative (Phase I)	11-MASHEL-1002	**Completed 2011**	Acquisition for Protection	Capital	Mashel Eatonville Reach Protection Initiative (Phase I)
		Mashel Shoreline Protection - Phase 2	11-MASHEL-1012	**Active**	Acquisition	Capital	Mashel Shoreline Protection - Phase 2

Project Description	Priority Area	Principles modifier	Comments on modifier	Priority tier of project	Limiting Factors	Reference Document for limiting factor
This project proposes to acquire an additional 105 acres and .75 miles in two acquisitions. This project supports and expands Phases I and II of the Mashel Eatonville Reach Instream Restoration Project. Of the proposed acquisitions, 68 acres form the main holding and historic homestead of the Van Eaton Family, the founders of Eatonville, near the confluence of the Mashel and Little Mashel rivers. The Land Trust holds an option to buy the property at appraised value by 2012. Securing it will protect .25 miles of salmon-producing shoreline; 30 acres of mature riparian forest in excellent condition; 20 acres of mature conifer upland forest that buffers the riparian zone; and 18 acres of Class II wetlands. This acquisition directly adjoins 43 acres already in Land Trust or Town of Eatonville ownership and would permanently secure the only existing access to Phase II of the	2			**2**	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Water Quality, Degraded Habitat-Stream Substrate, Degraded Habitat-Estuarine and Nearshore Marine	2001 Nisqually Chinook Recovery Plan
Phase II of the Mashel Eatonville Reach Protection Initiative began in January 2012 with the acquisition of the Thureson Property, which totals 4.8 acres and 278 feet of Mashel River shoreline and is the gateway parcel to Boxcar Canyon, site of Phase I of the Mashel Eatonville Reach Instream Restoration Project.The Hamilton Family owns the other Phase II target property, which is located on the Mashel River in Eatonville and includes 22 acres and .5 miles of salmon-producing shoreline. The property is directly across the river from shoreline owned by the Town of Eatonville and is within Phase I of the Mashel Eatonville Reach Instream Restoration Project. Acquisition would protect and assure permanent access to Phase I, including 16 log structures along the property's shoreline, and prevent development of the property as residential real estate.						

Habitat Type	Activity Type and Project Performance	Primary Species Benefiting	Secondary Species Benefiting	HWS Project Status	2012/Year 1 Activity to be funded	2012/Year 1 Estimated Budget	2013/Year 2 Activity to be funded	2013/Year 2 Estimated Budget
Upland, Riparian, Instream, Rivers/Streams/Shoreline	Activity Types - Acquisition/Easements/Leases : Streambank or riparian protected (Miles), Activity Types - Acquisition/Easements/Leases : Upland protected (Acres)	Chinook	Cutthroat (Secondary Species), Coho (Secondary Species), Pink (Secondary Species), Steelhead (Secondary Species)	Completed				
				Feasibility Completed	1st acquisition	120000	2nd acquisition	250000

2014/Year 3 Activity to be funded	2014Year 3 Estimated Budget	Likely End Date	Likely Sponsor	Total Cost of Project	Local share or other funding	Source of funds (PSAR, SRFB, other)	Unfunded Need	Project Name	
		12/31/2012	Nisqually R Land Trust	3087000	3087000	SRFB- Salmon Recovery Funding Board; Pierce County	0	Mashel Eatonville Reach Protection Initiative	11-MASHEL-1002
		12/31/2014	Nisqually R Land Trust	390000	390000	SRFB - Salmon Recovery Funding Board	0	Mashel Shoreline Protection - Phase 2	11-MASHEL-1012

Major Strategy (Level 1-subbasin)	Initiative (Level 2)	Project (Level 3)	ID#	Project Status	Project Type	Plan Category	Project Name
Mashel River Restoration & Protection		Mashel Shoreline Protection - Phase 3	11-MASHEL-1014I	**Inactive**	Acquisition/Restoration	Capital	Mashel Shoreline Protection - Phase 3
		Mashel Riparian Habitat Acquisition Project	1-MASHEL-100	**Completed 2010**	Acquisition for Protection	Capital	Mashel Riparian Habitat Acquisition Project
		Mashel Eatonville Shoreline Riparian Enhancement	11-MASHEL-1011	**Active**	Restoration Projects	Capital	Mashel Eatonville Shoreline Riparian Enhancement

Project Description	Priority Area	Principles modifier	Comments on modifier	Priority tier of project	Limiting Factors	Reference Document for limiting factor
As part of the ongoing Mashel River Eatonville Reach Protection and Restoration Initiative, this project proposes to acquire and restore a five-acre property with 445 feet of Mashel River shoreline in the heart of the Initiative. This project will expand the exisiting block of protected shoreline properties in this reach to 267 acres; ensure additional available habitat for Chinook salmon and steelhead trout in an important channel-migration zone; and provide access to potential in-stream restoration sites. The project is located along the Mashel River, the largest tributary to the Nisqually River, near Eatonville, Pierce County. A house and outbuilding will be demolished and 4.85 acres of riparian floodplain will be restored.						
The Hamilton Family owns the other Phase II target property, which is located on the Mashel River in Eatonville and includes 22 acres and .5 miles of salmon-producing shoreline. The property is directly across the river from shoreline owned by the Town of Eatonville and is within Phase I of the Mashel Eatonville Reach Instream Restoration Project. Acquisition would protect and assure permanent access to Phase I, including 16 log structures along the property's shoreline, and prevent development of the property as residential real estate.	2			**2**	Degraded Habitat-Channel Structure and Complexity Degraded Habitat-Estuarine and Nearshore Marine Degraded Habitat-Floodplain Connectivity and Function Degraded Habitat-Riparian Areas and LWD Recruitment Degraded Habitat-Stream Substrate Degraded Habitat-Water	2001 Nisqually Chinook Recovery Plan
The Nisqually Land Trust will work in partnership with the Town of Eatonville to control invasive species and enhance riparian forest species composition on protected properties in the Mashel Eatonville Reach.	2			2	Degraded Habitat-Riparian Areas and LWD Recruitment	

Habitat Type	Activity Type and Project Performance	Primary Species Benefiting	Secondary Species Benefiting	HWS Project Status	2012/Year 1 Activity to be funded	2012/Year 1 Estimated Budget	2013/Year 2 Activity to be funded	2013/Year 2 Estimated Budget
				Proposed			acquisition	250000
Riparian, Instream, Rivers/Streams/Shoreline	Activity Types - Acquisition/Easements/Leases -Streambank or riparian protected (Miles)	Chinook, Coho, Steelhead	utthroat (Secondary Species), Pink (Secondary Species), River Lamprey	Completed				
Upland, Riparian, Wetland, Rivers/Streams/Shoreline		Chinook, Coho, Steelhead, Rainbow	Cutthroat (Secondary Species), Pink (Secondary Species), River Lamprey	1st Planting Completed	weed control; monitoring - 439th St Ct	2500	weed control; monitoring	2500

2014/Year 3 Activity to be funded	2014Year 3 Estimated Budget	Likely End Date	Likely Sponsor	Total Cost of Project	Local share or other funding	Source of funds (PSAR, SRFB, other)	Unfunded Need	Project Name	
Demolition; planting	95000	12/31/2014	Nisqually R Land Trust	346000	0	TBD		Mashel Shoreline Protection - Phase 3	11-MASHEL-1014
		2/15/2010	Town of Eatonville	873286	873286	WWRP	0	Mashel Riparian Habitat Acquisition Project	11-MASHEL-1003
		12/31/2016	Nisqually R Land Trust; Nisqually Indian Tribe	110000	?	NIT-PCCSF funds	?	Mashel Eatonville Shoreline Riparian Enhancement	11-MASHEL-1011

Major Strategy (Level 1-subbasin)	Initiative (Level 2)	Project (Level 3)	ID#	Project Status	Project Type	Plan Category	Project Name
		Mashel Middle Reach Protection Project	11-MASHEL-1007	**Completed 2012**	Acquisition for Protection	Capital	Mashel Middle Reach Protection
	Independent Projects	Middle Mashel Riparian Enhancement	11-MASHEL-1009	**Active**	Restoration Projects	Capital	Middle Mashel Riparian Enhancement

Project Description	Priority Area	Principles modifier	Comments on modifier	Priority tier of project	Limiting Factors	Reference Document for limiting factor
Acquire 300+ acres and 3.0+ miles of Mashel River shoreline upstream of Boxcar Canyon and Phase I of the Mashel Eatonville Reach Instream Restoration Project. The Mashel River and surrounding property upstream of Boxcar Canyon is owned by timber investment management organizations that are actively seeking to sell. These properties include both banks of the Mashel River, steep bluffs along the river, and undeveloped, industrial timberland in the upland ranging in stand age from 15 to 80 years. Acquiring the property would nearly double the scope of the Mashel Eatonville Reach Protection Initiative and significantly buffer Phase I of the restoration project. Protection of salmon habitat in this reach of the Mashel is rated high priority by the Nisqually Chinook Recovery Plan. Acquiring this property would also prevent timber harvest immediately above the river's riparian zone on either bank.	2			**2**	Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Water Quality	2001 Nisqually Chinook Recovery Plan
This project will restore degraded portions of the riparian zone along the Mashel River upstream of RM 6.0 and the town of Eatonville – an area that is in timber production and owned primarily by private timber companies - and will include enhancement plantings within existing buffers as well as plantings that increase buffer width to ensure a sustainable source of LWD and adequate channel shading. A shade deficit map of the Mashel river will be developed to determine areas that currently exhibit riparian buffers of inadequate width and composition. Activities will include: identification of willing landowners, individual site assessments, development of restoration plans, control of invasive plants and riparian revegetation plantings	2			2	Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Water Quality	Nisqually Chinook Recovery Plan

Habitat Type	Activity Type and Project Performance	Primary Species Benefiting	Secondary Species Benefiting	HWS Project Status	2012/Year 1 Activity to be funded	2012/Year 1 Estimated Budget	2013/Year 2 Activity to be funded	2013/Year 2 Estimated Budget
Upland, Riparian, Rivers/Streams/Shoreline	Activity Types - Acquisition/Easements/Leases : Streambank or riparian protected (Miles), Activity Types - Acquisition/Easements/Leases : Upland protected (Acres)	Chinook, Steelhead	Cutthroat (Secondary Species), Chum (Secondary Species), Coho (Secondary Species), Pink (Secondary Species)	Conceptual				
Riparian	Activity Type - Riparian Habitat: Plant removal/ control (25 Acres), Activity Type - Riparian Habitat: Planting (35 Acres)	Chinook	Cutthroat (Secondary Species), Coho (Secondary Species), Pink (Secondary Species), Steelhead (Secondary Species)	Conceptual	Identify priority revegetation areas. Landowner outreach.	5000	Identify priority revegetation areas. Landowner outreach. Develop and implement projects. Invasive species monitoring and control.	75000

2014/Year 3 Activity to be funded	2014Year 3 Estimated Budget	Likely End Date	Likely Sponsor	Total Cost of Project	Local share or other funding	Source of funds (PSAR, SRFB, other)	Unfunded Need	Project Name	
		6/1/2012	Nisqually R Land Trust	660000	660000	Not Yet FundedSRFB-Salmon Reovery Funding Board, Nisqually Indian Tribe	0	Mashel Middle Reach Protection	11-MASHEL-1007
Identify priority revegetation areas. Landowner outreach. Develop and implement projects. Invasive species monitoring and control.	75000	12/31/2015	Nisqually Indian Tribe	250000		Not Yet Funded	250000	Middle Mashel Riparian Enhancement	11-MASHEL-1009

Major Strategy (Level 1-subbasin)	Initiative (Level 2)	Project (Level 3)	ID#	Project Status	Project Type	Plan Category	Project Name
		Mashel Basin Monitoring Plan	11-MASHEL-1004	**Inactive**	Habitat Project Monitoring	Non-capital	Mashel Monitoring Plan
		Mashel River Flow Enhancement Investigation	11-MASHEL-1010	**Active**	Future Habitat Project Development	Non-capital	Mashel River Flow Enhancement Investigation
		Lower Ohop Valley Restoration - Phase I	11-OHOP-1001	**Completed 2011**	Restoration Projects	Capital	Lower Ohop Valley Restoration - Phase I

Project Description	Priority Area	Principles modifier	Comments on modifier	Priority tier of project	Limiting Factors	Reference Document for limiting factor
Monitoring the physical and biological response to the Mashel river restoration work.	2			**2**	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Water Quality, Degraded Habitat-Stream Flow, Degraded Habitat-Stream Substrate, Degraded Habitat-Estuarine and Nearshore Marine	Nisqually Chinook Recovery Plan, Mashel Restoration Plan (PCD, 2004)
This proposal recommends conducting a study to determine the feasibility of supplementing stream flows to the Mashel River.	2			2	Degraded Habitat-Stream Flow Degraded Habitat-Water Quality	2005 Mashel instream Flow Investigation (Golder Associates)
Evaluation of multi-species salmon habitat needs in the Nisqually watershed have ranked lower Ohop Creek one of the highest priority freshwater habitats for restoration. Funded by a previous SRFB grant, a restoration plan for lower Ohop Creek was developed which summarizes habitat conditions in the project reach and evaluates restoration alternatives. Using that assessment, the most comprehensive restoration alternative has been selected and engineering designs developed. The 17 landowners in the project reach are all supportive of this option. The total project will re-elevate the 4.4 miles of severely channelized creek back into its original floodplain recreating a 6 mile long stream with its original meander pattern and restoring its hydrologic connection to the adjacent floodplain and wetland areas. Off-channel habitat will be created and the riparian areas	2			**2**	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Water Quality, Non-Habitat Limiting Factors, Degraded Habitat-Stream Flow, Degraded Habitat-Stream Substrate, Degraded Habitat-Estuarine and Nearshore Marine, Degraded Habitat-	2001 Nisqually Chinook Recovery Plan

Habitat Type	Activity Type and Project Performance	Primary Species Benefiting	Secondary Species Benefiting	HWS Project Status	2012/Year 1 Activity to be funded	2012/Year 1 Estimated Budget	2013/Year 2 Activity to be funded	2013/Year 2 Estimated Budget
N/A	NA	Chinook	Cutthroat (Secondary Species), Coho (Secondary Species), Pink (Secondary Species), Steelhead (Secondary Species)		On-going monitoring	30,000	on-going monitoring	30,000
Instream	Activity Type - Instream Flow Water Flow Returned to Stream (Acre feet)	Chinook	Cutthroat (Secondary Species), Coho (Secondary Species), Pink (Secondary Species), Steelhead (Secondary Species)	Conceptual	Receive Fudning contract wok	20000	Final report	30000
Wetland	Activity Type - Instream Habitat: Channel reconfiguration and connectivity (5000 Feet)	Chinook	Cutthroat (Secondary Species), Coho (Secondary Species), Pink (Secondary Species), Steelhead (Secondary Species)	Design Completed, Permitting Completed, Construction Completed, Land Acquisition Completed				

2014/Year 3 Activity to be funded	2014Year 3 Estimated Budget	Likely End Date	Likely Sponsor	Total Cost of Project	Local share or other funding	Source of funds (PSAR, SRFB, other)	Unfunded Need	Project Name	
On-going monitoring	30,000	12/31/2018		190000	30000	Tribe	160000	Mashel Monitoring Plan	11-MASHEL-1004
		41274	Nisqually Indian Tribe	50000	0			Mashel River Flow Enhancement Investigation	
		12/31/2011	SPSSEG	2700000	2400000	SRFB or PSAR, NRCS		Lower Ohop Valley Restoration - Phase I	11-OHOP-1001

Major Strategy (Level 1-subbasin)	Initiative (Level 2)	Project (Level 3)	ID#	Project Status	Project Type	Plan Category	Project Name
		Lower Ohop Valley Restoration - Phase II	11-OHOP-1002	**Active**	Restoration Projects	Capital	Lower Ohop Valley Restoration - Phase II
		Lower Ohop Valley Restoration - Phase III	11-OHOP-1003	**Inactive**	Restoration Projects	Capital	Lower Ohop Valley Restoration - Phase III

Project Description	Priority Area	Principles modifier	Comments on modifier	Priority tier of project	Limiting Factors	Reference Document for limiting factor
Evaluation of multi-species salmon habitat needs in the Nisqually watershed have ranked lower Ohop Creek one of the highest priority freshwater habitats for restoration. Funded by a previous SRFB grant, a restoration plan for lower Ohop Creek was developed which summarizes habitat conditions in the project reach and evaluates restoration alternatives. Using that assessment, the most comprehensive restoration alternative has been selected and engineering designs developed. The 17 landowners in the project reach are all supportive of this option. The total project will re-elevate the 4.4 miles of severely channelized creek back into its original floodplain recreating a 6 mile long stream with its original meander pattern and restoring its hydrologic connection to the adjacent floodplain and wetland areas. Off-channel habitat will be created and the riparian areas	2			**2**	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Water Quality, Non-Habitat Limiting Factors, Degraded Habitat-Stream Flow, Degraded Habitat-Stream Substrate, Degraded Habitat-Estuarine and Nearshore Marine, Degraded Habitat-	2001 Nisqually Chinook Recovery Plan
Evaluation of multi-species salmon habitat needs in the Nisqually watershed have ranked lower Ohop Creek one of the highest priority freshwater habitats for restoration. Funded by a previous SRFB grant, a restoration plan for lower Ohop Creek was developed which summarizes habitat conditions in the project reach and evaluates restoration alternatives. Using that assessment, the most comprehensive restoration alternative has been selected and engineering designs developed. The 17 landowners in the project reach are all supportive of this option. The total project will re-elevate the 4.4 miles of severely channelized creek back into its original floodplain recreating a 6 mile long stream with its original meander pattern and restoring its hydrologic connection to the adjacent floodplain and wetland areas. Off-channel habitat will be created and the riparian areas will be planted with native vegetation. The project will also	2			**2**	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Water Quality, Non-Habitat Limiting Factors, Degraded Habitat-Stream Flow, Degraded Habitat-Stream Substrate, Degraded Habitat-Estuarine and Nearshore Marine, Degraded Habitat-Fish Passage	2001 Nisqually Chinook Recovery Plan

Habitat Type	Activity Type and Project Performance	Primary Species Benefiting	Secondary Species Benefiting	HWS Project Status	2012/Year 1 Activity to be funded	2012/Year 1 Estimated Budget	2013/Year 2 Activity to be funded	2013/Year 2 Estimated Budget
Wetland	Instream Habitat	Chinook	Cutthroat (Secondary Species), Coho (Secondary Species), Pink (Secondary Species), Steelhead (Secondary Species)	Proposed	Final design, Permit and funding application	40,000	Funding and permitting	40,000
Wetland	Instream Habitat	Chinook	Cutthroat (Secondary Species), Coho (Secondary Species), Pink (Secondary Species), Steelhead (Secondary Species)	Conceptual			Revisit Feasibility, Landowner Outreach	50,000

2014/Year 3 Activity to be funded	2014Year 3 Estimated Budget	Likely End Date	Likely Sponsor	Total Cost of Project	Local share or other funding	Source of funds (PSAR, SRFB, other)	Unfunded Need	Project Name	
Start Construction	2,000,000	12/31/2014		2700000	97550	SRFB or PSAR	2602450	Lower Ohop Valley Restoration - Phase II	11-OHOP-1002
Engineering design	250,000	12/31/2014		3150000	0	SRFB or PSAR	3150000	Lower Ohop Valley Restoration - Phase III	11-OHOP-1003

Major Strategy (Level 1-subbasin)	Initiative (Level 2)	Project (Level 3)	ID#	Project Status	Project Type	Plan Category	Project Name
Ohop Creek Restoration & Protection	Lower Ohop Restoration & Protection	Lower Ohop protection project	11-OHOP-1004	**Active**	Acquisition for Restoration	Capital	Lower Ohop Protection Project
		Ohop monitoring plan	11-OHOP-1006	**Active**	Habitat Project Monitoring	Non-capital	Ohop Monitoring Plan

Project Description	Priority Area	Principles modifier	Comments on modifier	Priority tier of project	Limiting Factors	Reference Document for limiting factor
This project would acquire 100 acres and one mile of lower Ohop Creek, which is rated highest priority for permanent habitat protection in the Nisqually Chinook Salmon Recovery Plan. This is a key property for permanent protection because it would connect the recently completed 1.1-mile restoration of the creek's original channel with the mainstem Nisqually River, thus assuring the project's success. It would also ensure the long-term stewardship of the site for salmon and other wildlife.	3	-1	Protection to make restoration available	**2**	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Water Quality, Non-Habitat Limiting Factors, Degraded Habitat-Stream Flow, Degraded Habitat-Stream Substrate, Degraded Habitat-Estuarine and Nearshore Marine, Degraded Habitat-Fish Passage	2001 Nisqually Chinook Recovery Plan
Monitor the effectiveness of the Ohop Creek restoration project both in physical and biological responses.	2		same as restoration	**2**	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Water Quality, Non-Habitat Limiting Factors, Degraded Habitat-Stream Flow, Degraded Habitat-Stream Substrate, Degraded Habitat-Estuarine and Nearshore Marine, Degraded Habitat-Fish Passage	Nisqually Chinook Recovery Plan

Habitat Type	Activity Type and Project Performance	Primary Species Benefiting	Secondary Species Benefiting	HWS Project Status	2012/Year 1 Activity to be funded	2012/Year 1 Estimated Budget	2013/Year 2 Activity to be funded	2013/Year 2 Estimated Budget
Wetland	Activity Type - Riparian Habitat: Plant removal/ control (Acres), Activity Type - Riparian Habitat: Planting (Acres), Activity Types - Acquisition/Easements/Leases : Wetland areas protected (Acres), Activity Types - Acquisition/Easements/Leases : Streambank or riparian protected (Miles)	Chinook	Cutthroat (Secondary Species), Coho (Secondary Species), Pink (Secondary Species), Steelhead (Secondary Species)	Acquisition	acquisition	850000	Demolition; maintenance and monitoring	45000
Riparian, Instream, Wetland, Rivers/Streams/Shoreline	NA	Chinook	Cutthroat (Secondary Species), Coho (Secondary Species), Pink (Secondary Species), Steelhead (Secondary Species)	Monitoring	Monitoring of fish, wildlife, habitat and hydrology	60,000	Monitoring of fish, wildlife, habitat and hydrology	60,000

2014/Year 3 Activity to be funded	2014Year 3 Estimated Budget	Likely End Date	Likely Sponsor	Total Cost of Project	Local share or other funding	Source of funds (PSAR, SRFB, other)	Unfunded Need	Project Name	
Maintenance and monitoring	5000	12/31/2014	Nisqually R Land Trust	900000	900000	SRFB - Salmon Recovery Funding Board, Pierce County	0	Lower Ohop Protection Project	11-OHOP-1004
		12/31/2018		120000	0	US Fish and Wildlife Service		Ohop Monitoring Plan	11-OHOP-1006

Major Strategy (Level 1-subbasin)	Initiative (Level 2)	Project (Level 3)	ID#	Project Status	Project Type	Plan Category	Project Name
		Lower Ohop Creek Acquisition and Restoration	11-OHOP-1012	**NEW 2012**	Acquisition and Restoration Projects	Capital	Lower Ohop Creek Acquisition and Restoration
		Lower Ohop Upland Restoration	11-OHOP-1007	**Active**	Restoration Projects	Capital	Lower Ohop Upland Restoration
		Upper Ohop Valley protection	11-OHOP-1005	**Inactive**	Acquisition for Protection	Capital	Upper Ohop Valley Protection

Project Description	Priority Area	Principles modifier	Comments on modifier	Priority tier of project	Limiting Factors	Reference Document for limiting factor
Increase Ohop Creek floodplain and enhance the riparian buffer along the west side of the recently restored section of Ohop Creek just downstream of the Mountain Highway by acquiring a 10 acre parcel at the corner of Kjelstad Road and Mountain Highway; removing existing structures and infrastructure; and planting native trees and shrubs throughout the property.	2			**2**	Degraded Habitat - Riparian Areas and LWD Recruitment, Degraded Habitat - Floodplain Connectivity and Function	Nisqually Chinook Recovery Plan
The Nisqually Land Trust owns 95+ acres of valley bluff and uplands around the Lower Ohop creek and floodplain restoration site. Repairs to a historic barn were made in 2010 and debris and invasive species were removed from around the barn. Additional restoration needs on Land Trust property include: continuted intensive invasive species control; removal of debris; demolition of structures; and reforestation.	3	1	does not address limiting factor	4	Degraded Habitat-Water Quality	2001 Nisqually Chinook Recovery Plan
Protection of 180 acres of Ohop valley including large amounts of wetland and 1 mile of Ohop Creek. The protection of this functioning habitat benefits a array of fish and wildlife, including salmon of upper Ohop Creek, 25-Mile Creek and a third, unnamed tributary.	3			**3**	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Water Quality, Degraded Habitat-Stream Substrate	2001 Nisqually Chinook Recovery Plan

Habitat Type	Activity Type and Project Performance	Primary Species Benefiting	Secondary Species Benefiting	HWS Project Status	2012/Year 1 Activity to be funded	2012/Year 1 Estimated Budget	2013/Year 2 Activity to be funded	2013/Year 2 Estimated Budget
Riparian		Chinook	'Cutthroat (Secondary Species), Coho (Secondary Species), Pink (Secondary Species), Steelhead (Secondary Species)	Proposed			acquisition	190,000
Upland	Activity Type - Upland Habitat: Planting (Acres), Activity Type - Upland Habitat: Invasives/ weed control (Acres)			Design Completed	weed control; monitoring	30000	weed control; monitoring	3000
Wetland	Activity Types - Acquisition/Easements/Leases : Streambank or riparian protected (Miles), Activity Types - Acquisition/Easements/Leases : Wetland areas protected (Acres)	Steelhead	Cutthroat (Secondary Species), Chinook (Secondary Species), Coho (Secondary Species), Steelhead (Secondary Species)	Conceptual				

2014/Year 3 Activity to be funded	2014Year 3 Estimated Budget	Likely End Date	Likely Sponsor	Total Cost of Project	Local share or other funding	Source of funds (PSAR, SRFB, other)	Unfunded Need	Project Name	
demolition; planting; weed control	30000	12/31/2016	Nisqually R Land Trust	235000	$0	SRFB - Salmon Recovery Funding Board; Nisqually Indian Tribe	235000	Lower Ohop Creek Acquisition and Restoration	11-OHOP-2012
demolition; weed control; monitoring	15000	12/31/2015	Nisqually R Land Trust	120000	30000	Nisqually Indian Tribe; Nisqually R Land Trust	90000	Lower Ohop Upland Restoration	11-OHOP-1007
acquisition	800000	12/31/2014	Nisqually R Land Trust	800000	0		800000	Upper Ohop Valley Protection	11-OHOP-1005

Major Strategy (Level 1-subbasin)	Initiative (Level 2)	Project (Level 3)	ID#	Project Status	Project Type	Plan Category	Project Name
	'Independent Projects'	Middle Ohop Restoration Project	11-OHOP-1008	**Active**	Restoration Projects	Capital	Middle Ohop Revegetation Project
		Middle Ohop Protection Project	11-OHOP-1010	**Active**	Acquisition for Restoration	Capital	Middle Ohop Property Protection

Project Description	Priority Area	Principles modifier	Comments on modifier	Priority tier of project	Limiting Factors	Reference Document for limiting factor
This project will restore degraded portions of the riparian zone along over two miles of Ohop Creek between river mile 4 and Ohop Lake by revegetating the valley floor with native trees and shrubs. Activities include: identification of willing landowners, individual site assessments, development of restoration plans, control of invasive species and valley floor revegetation. Cleared areas will be replanted. Secondary deciduous floodplain forests will be underplanted with native conifer species to provide a sustainable source of LWD. Restoration planning will include additional recommendations for habitat enhancement. This project will connect with the Lower Ohop Valley Restoration Project – Phases I, II and III in an attempt to provide an extended habitat corridor.	2			**2**	Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Water Quality	Nisqually Chinook Recovery Plan
Acquire a conservation easement over 38 acres and over .5 river miles along Ohop Creek that includes the protection of a Chinook spawning reach in upper Ohop watershed. The riparian portion of the property was recently planted to improve the habitat condition along the creek. The balance of the property is partially included in the Eatonville UGA and is currently owned by a commercial developer. The conservation easement could be secured at a bargain sale.	3			3	Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Water Quality	

Habitat Type	Activity Type and Project Performance	Primary Species Benefiting	Secondary Species Benefiting	HWS Project Status	2012/Year 1 Activity to be funded	2012/Year 1 Estimated Budget	2013/Year 2 Activity to be funded	2013/Year 2 Estimated Budget
Riparian	Planting 25 Acres, Livestock Exclusion 20 Acres, Plant Removal/Control 20 Acres	Chinook	Cutthroat (Secondary Species), Coho (Secondary Species), Pink (Secondary Species), Steelhead (Secondary Species)	Conceptual	Landowner Outreach, Planting Plan Development, Farm Conservation Plan Development	5000	Planting Plan Development, Farm Conservation Plan Development, Prepare Planting Sites: 5 Acres, Plant 5 Acres, Exclude Livestock 5 Acres	45,000
Riparian, Rivers/Streams/Shoreline		Chinook	Cutthroat (Secondary Species), Coho (Secondary Species), Pink (Secondary Species), Steelhead (Secondary Species)	Feasibility Pending	Conservation easement	225000	planting; weed control	15000

2014/Year 3 Activity to be funded	2014Year 3 Estimated Budget	Likely End Date	Likely Sponsor	Total Cost of Project	Local share or other funding	Source of funds (PSAR, SRFB, other)	Unfunded Need	Project Name	
Planting Plan Development, Farm Conservation Plan Development, Prepare Planting Sites: 10 Acres, Plant 10 Acres, Exclude Livestock 10 Acres	90,000	9/30/2015	Nisqually Indian Tribe	230,000	0	Not Yet Funded	230000	Middle Ohop Revegetation Project	11-OHOP-1008
weed control; monitoring	5000	12/31/2015	Nisqually R Land Trust	250000	200000	SRFB- Salmon Recovery Funding Board	50000	Middle Ohop Property Protection	11-OHOP-1010

Major Strategy (Level 1-subbasin)	Initiative (Level 2)	Project (Level 3)	ID#	Project Status	Project Type	Plan Category	Project Name
Small Tributary Restoration & Protection		Red Salmon Creek Watershed Protection	11-RSSWASH-1002	**Inactive**	Acquisition for Restoration	Capital	Red Salmon Creek Watershed Protection

Project Description	Priority Area	Principles modifier	Comments on modifier	Priority tier of project	Limiting Factors	Reference Document for limiting factor
Red Salmon Creek is an independent tributary to the Nisqually Delta. It is utilized primarily by chum salmon, but also by coho, steelhead and cutthroat trout. The health of the down-gradient Nisqually estuary depends on the water quality and quantity from this spring fed creek. Red Salmon Creek is fed by springs that arise on the subject property and act as the headwaters of the stream. The purpose of this project is to permanently protect a 40-acre tract of land at these headwaters. The project sponsors would like to own the property in fee and manage the spring and adjacent habitat land. Unfortunately, the property is a significant source of invasive species in the Red Salmon Creek Watershed. Currently, the Forespring Family Trust owns this land, are willing to consider a conservation easement to extinguish development potential and protect the spring fed headwater area. This land is adjacent to the Dupont UGA that is now built out and the property is increasingly under more development pressure.	4	-1	close proximity and connection to highest priority estuary	**3**		2001 Nisqually Chinook Recovery Plan

Habitat Type	Activity Type and Project Performance	Primary Species Benefiting	Secondary Species Benefiting	HWS Project Status	2012/Year 1 Activity to be funded	2012/Year 1 Estimated Budget	2013/Year 2 Activity to be funded	2013/Year 2 Estimated Budget
Riparian	Activity Types - Acquisition/Easements/Leases Upland protected (Acres) Wetland areas protected (Acres)	Chum	Cutthroat (Secondary Species), Chinook (Secondary Species), Coho (Secondary Species)	Conceptual				

2014/Year 3 Activity to be funded	2014Year 3 Estimated Budget	Likely End Date	Likely Sponsor	Total Cost of Project	Local share or other funding	Source of funds (PSAR, SRFB, other)	Unfunded Need	Project Name	
conservation easement	500000	12/31/2015	Nisqually R Land Trust	500000	0		500000	Red Salmon Creek Watershed Protection	11-RSSWASH-1002

Major Strategy (Level 1-subbasin)	Initiative (Level 2)	Project (Level 3)	ID#	Project Status	Project Type	Plan Category	Project Name
	Red Salmon Creek Projects	Red Salmon Creek Headwaters	11-RSSWASH-1003	**Active**	Restoration Projects	Capital	Red Salmon Creek Headwaters
		Protection of Red Salmon and Washburn Creeks	11-RSSWASH-1004	**Inactive**	Acquisition for Protection	Capital	Protection of Red Salmon and Washburn Creeks

Project Description	Priority Area	Principles modifier	Comments on modifier	Priority tier of project	Limiting Factors	Reference Document for limiting factor
This project has two components: restoration of a 3.5 acre property that conducts water from seeps along I-5 to Red Salmon Creek and contains springs that drain to Red Salmon Creek; and outreach to neighboring landowners about controlling the non-native, invasive plant species that have been removed from the lower reaches of the streams in the Red Salmon Watershed. The Land Trust will work with partners to implement an outreach program to inform neighboring upstream landowners about the impacts of English Ivy, Himalayan blackberry, and other invasive species that are commonly used for landscaping purposes and found in the watershed. Restoration activities will include removal of debris and extensive areas of English ivy, Himalayan blackberry and other invasive species from the 3.5 acre property; and planting of native trees and shrubs on the property.	4			**4**	Degraded Habitat-Riparian Areas and LWD Recruitment	2001 Nisqually Chinook Recovery Plan
Acquire 5 acres of riparian forest adjacent to existing Land Trust property in the Red Salmon Creek watershed. The property is upstream of recently restored sections of Red Salmon and Washburn creeks and provides a buffer between the restoration areas and a housing development upstream. This property contains approximately 400 feet of Washburn Creek and 200 feet of Red Salmon Creek.	4			4	Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Water Quality	

Habitat Type	Activity Type and Project Performance	Primary Species Benefiting	Secondary Species Benefiting	HWS Project Status	2012/Year 1 Activity to be funded	2012/Year 1 Estimated Budget	2013/Year 2 Activity to be funded	2013/Year 2 Estimated Budget
Upland, Riparian	Activity Type - Upland Habitat: Invasives/ weed control (Acres), Activity Type - Upland Habitat: Planting (Acres), Activity Type - Upland Wetland: Invasives/Weed Control - Upland Wetland (Acres), Activity Type - Upland Wetland: Wetland Upland - Revegetation Planting (Acres)	Chum	Cutthroat (Secondary Species), Coho (Secondary Species), Steelhead (Secondary Species)	Design Completed	planting; weed control; monitoring	12000	weed control; monitoring	5000
Riparian		Chum	Cutthroat (Secondary Species), Coho (Secondary Species), Steelhead (Secondary Species)	Conceptual				

2014/Year 3 Activity to be funded	2014Year 3 Estimated Budget	Likely End Date	Likely Sponsor	Total Cost of Project	Local share or other funding	Source of funds (PSAR, SRFB, other)	Unfunded Need	Project Name	
weed control; monitoring	5000	12/31/2014	Nisqually R Land Trust	60000	60000	USFWS	0	Red Salmon Creek Headwaters	11-RSSWASH-1003
acquisition	170000	12/31/2015	Nisqually R Land Trust	170000	0		170000	Protection of Red Salmon and Washburn Creeks	11-RSSWASH-1004

Major Strategy (Level 1-subbasin)	Initiative (Level 2)	Project (Level 3)	ID#	Project Status	Project Type	Plan Category	Project Name
	Horn Creek Fish Passage Projects	Horn Cr Fish passage project	11-HORNHARTS-1001	**Inactive**	Restoration Projects	Capital	Horn Creek Fish Passage Project
		Harts Lk Loop Rd Horn Cr culvert replacement	11-HORNHARTS-1002	**Inactive**	Restoration Projects	Capital	Harts Lake Loop Road Horn Creek Culvert Replacement Project
		Lower Lacamas Creek Riparian Restoration	11-MUCK-1001	**Inactive**	Acquisition for Protection	Capital	Lower Lacamas Creek Riparian Restoration
		North Fork Muck Creek Restoration	11-MUCK-1002	**Inactive**	Restoration Projects	Capital	North Fork Muck Creek Restoration
		South Muck Creek Restoration	11-MUCK-1003	**Inactive**	Restoration Projects	Capital	South Muck Creek Restoration

Project Description	Priority Area	Principles modifier	Comments on modifier	Priority tier of project	Limiting Factors	Reference Document for limiting factor
Replace partial fish barrier at Horn Creek. A man-made waterfall at rivermile 1.0 precludes most salmon from migration upstream. Greatest benefit will be to coho and chum with some benefit also for steelhead. There is a partial barrier just upstream of this site under Harts Lake Loop Road that should also be addressed to ensure full access to the stream for salmon.	4			**4**	Degraded Habitat-Fish Passage	NCRP
This project will replace the partial fish passage barrier at Harts Lake Loop Rd. (RM 1.2) and replace it with a bottomless arch culvert that would open up several miles of salmon habitat upstream. This project should be considered in connection with the Horn Creek Fish Passage Project that is located just	4	-1	Adresses major limiting factor in entire basin	**3**	Degraded Habitat-Fish Passage	PCD culvert inventory
A total of approximately 4.6 miles of potential stream restoration area have been identified within this stream reach. It is unlikely that all the potential restoration sites will be accessible. The budget would be sufficient for restoration of nearly 2.2 miles of stream reach.	4			**4**	Stream habitat, water quality, LWD	Muck Creek Basin Plan
A total of approximately 5.6 miles of potential stream restoration area have been identified within this stream reach. It is unlikely that all the potential restoration sites will be accessible. The budget would be sufficient for restoration of approximately 2.5 miles of stream reach.	4			**4**	Stream habitat, water quality, LWD	Muck Creek Basin Plan
A total of approximately 1.9 miles of potential stream restoration area have been identified within this stream reach. Some of the areas to be restored could include wetlands, for increased flow attenuation to the Creek. It is unlikely that all the potential restoration sites will be accessible. The budget would be sufficient for restoration of approximately .8 miles of stream reach. Funds are budgeted for 1 acre of wetland restoration during the plan period.	3			**3**	Stream habitat, water quality, LWD	Muck Creek Basin Plan

Habitat Type	Activity Type and Project Performance	Primary Species Benefiting	Secondary Species Benefiting	HWS Project Status	2012/Year 1 Activity to be funded	2012/Year 1 Estimated Budget	2013/Year 2 Activity to be funded	2013/Year 2 Estimated Budget
Instream	Fish Passage	Steelhead	Cutthroat (Secondary Species), Chinook (Secondary Species), Chum (Secondary Species), Coho (Secondary Species), Pink (Secondary Species)	Conceptual	Design	30,000	Construction	100,000
Instream		Steelhead	Cutthroat (Secondary Species), Chinook (Secondary Species), Chum (Secondary Species), Coho					
Riparian	Restore about 2.2 miles of stream reach	Steelhead	Cutthroat (Secondary Species), Chum (Secondary Species)	Conceptual	Scoping	50,000		
Riparian	Restore about 2.5 miles of stream reach	Steelhead	Cutthroat (Secondary Species), Chum (Secondary Species)	Conceptual				
Riparian	Restore .8 miles of stream reach. Restore 1 acre of wetland	Steelhead	Cutthroat (Secondary Species), Chum (Secondary Species)	Conceptual			Scoping	50000

2014/Year 3 Activity to be funded	2014Year 3 Estimated Budget	Likely End Date	Likely Sponsor	Total Cost of Project	Local share or other funding	Source of funds (PSAR, SRFB, other)	Unfunded Need	Project Name	
reporting	2,000	12/31/2014		132000	0	Not Yet Funded	132000	Horn Creek Fish Passage Project	11-HORNHARTS-1001
		12/31/2014		294000	0	Not Yet Funded	294000	Harts Lake Loop Road Horn Creek Culvert Replacement Project	11-HORNHARTS-1002
		12/31/2014	Pierce County of	1,444,000	Local SWM funds	PSAR, SRFB	1,444,000	Lower Lacamas Creek Riparian Restoration	11-MUCK-1001
Scoping	90000	12/31/2014	Pierce County of	1880000	Local SWM funds	PSAR, SRFB	1,880,000	North Fork Muck Creek Restoration	11-MUCK-1002
Design	135000	12/31/2014	Pierce County of	1010000	Local SWM funds	PSAR, SRFB	1,010,000	South Muck Creek Restoration	11-MUCK-1003

Major Strategy (Level 1-subbasin)	Initiative (Level 2)	Project (Level 3)	ID#	Project Status	Project Type	Plan Category	Project Name
	Muck Creek Basin Projects	Muck Creek Basin Floodplain Acquisition	11-MUCK-1004	**Inactive**	Acquisition for Protection	Capital	Muck Creek Basin Floodplain Acquisition
		Brighton Cr culvert replacement	11-BRIGHTON-1001	**Inactive**	Restoration Projects	Capital	Brighton Creek Culvert Replacement Project
		Upper McKenna Creek culvert replacement	11-MCKENNA-1001	**Completed**	Restoration Projects	Capital	Upper McKenna Creek culvert project
		Toboton Cr at Peissner Rd culvert replacement	11-TOBOTON-1001	**Active**	Restoration Projects	Capital	Toboton @ Peissner Rd culvert replacement
		Powell Creek Watershed Restoration	11-POWELL-1004	**Completed 2010**	Restoration Projects	Non-Capital	Powell Creek Watershed Restoration

Project Description	Priority Area	Principles modifier	Comments on modifier	Priority tier of project	Limiting Factors	Reference Document for limiting factor
The headwaters of the North Fork of Muck Creek are at Patterson Springs, in the Graham area. The area has been under development pressure. A large amount of land in the area has been acquired by other agencies to ensure its preservation as a resource area. Approximately 350 acres of land have been identified as desirable for acquisition. Some of the purchases may involve partnerships with other agencies. It is also assumed that not all properties desired will be available. The cost estimate is for acquisition of approximately 60 acres in the Patterson Springs area.	3			**3**	Stream habitat, water quality, LWD	Muck Creek Basin Plan
Replace partial fish barrier culvert on Brighton Creek under Harts Lake Loop Road with a fish-friendly culvert. This culvert is highest priority culvert for replacement of any culvert assessed in the Nisqually watershed because it is a more complete barrier and there is still some good intact habitat upstream that is currently mostly inaccessible for salmon. It is however not rated a 1 because it is on a minor tributary to the Nisqually and will not have significant direct benefit for Chinook or steelhead. It will have greatest benefit to coho and chum as well as some smaller benefit for steelhead and indirect benefit for Chinook salmon.	4	-1	Adresses major limiting factor in entire basin	3	Degraded Habitat-Fish Passage	PCD culvert inventory
Replace a total fish-blocking culvert on McKenna Creek with a bridge or fish-friendly culvert to allow juveniles move into the large off-channel ponds located in the headwaters.	3	-1	Off-channel within McKenna mainstem reach	2	Degraded Habitat-Fish Passage	NROC Assessment
Replace culvert with larger culvert	4			4	Degraded Habitat-Fish Passage	
This project will educate and inform the Powell Creek watershed community about potential restoration actions in the watershed. This project will also identify new restoration projects.	4			**4**	Degraded Habitat-Stream Flow, Degraded Habitat-Fish Passage	NCRP

Habitat Type	Activity Type and Project Performance	Primary Species Benefiting	Secondary Species Benefiting	HWS Project Status	2012/Year 1 Activity to be funded	2012/Year 1 Estimated Budget	2013/Year 2 Activity to be funded	2013/Year 2 Estimated Budget
Riparian, Instream, Wetland, Rivers/Streams/Shoreline	Acquire about 60 acres	Steelhead	Cutthroat (Secondary Species), Chum (Secondary Species)	Conceptual			Scoping	300000
Instream		Steelhead	Cutthroat (Secondary Species), Coho (Secondary Species)	Conceptual			Design, Permitting, Funding	100000
Instream, Wetlands	Fish Passage	Coho, Cutthroat,	Chinook, Steelhead,	Construction Completed				
Instream	Fish Passage	Coho, Cutthroat, steelhead	Chinook, Chum, Pinks	Feasibility Pending				
Riparian, Instream, Wetland, Rivers/Streams/Shoreline	Fish Passage	Coho	Cutthroat (Secondary Species), Chinook (Secondary Species), Chum (Secondary Species), Pink (Secondary Species), Steelhead (Secondary Species)	Constuction Completed				

2014/Year 3 Activity to be funded	2014Year 3 Estimated Budget	Likely End Date	Likely Sponsor	Total Cost of Project	Local share or other funding	Source of funds (PSAR, SRFB, other)	Unfunded Need	Project Name	
Scoping	300000	12/31/2014	Pierce County of	1041000	Local SWM funds	PSAR, SRFB	1,041,000	Muck Creek Basin Floodplain Acquisition	11-MUCK-1004
Construction	720000	12/31/2014	Pierce County of	820000	0	Not Yet Funded	820000	Brighton Creek Culvert Replacement Project	11-BRIGHTON-1001
		12/31/2012	South Puget Sound SEG	150000	0				11-MCKENNA-1001
		12/31/2015	Thurston Co.	550000				Toboton @ Peissner Rd culvert replacement	11-TOBOTON-1001
		12/31/2011	South Puget Sound SEG	300000	25000	NFWF		Powell Creek Watershed Restoration	11-POWELL-1004

Major Strategy (Level 1-subbasin)	Initiative (Level 2)	Project (Level 3)	ID#	Project Status	Project Type	Plan Category	Project Name
	Independent Projects	Powell Wetland Protection	11-POWELL-1005	**NEW 2012**	Acquisition Projects	Capital	Powell Wetland Protection
		Tanwax Creek Restoration	11-TANWAX-1001	**Active**	Restoration Projects	Capital	Tanwax Creek Riparian Restoration

Project Description	Priority Area	Principles modifier	Comments on modifier	Priority tier of project	Limiting Factors	Reference Document for limiting factor
Current Nisqually Land Trust ownership includes the confluence of the Nisqually River and Powell Creek; and a mosaic of surrounding floodplain and riparian habitats. This project will protect an additional 5+ acres of the Powell Creek wetland, which is in the channel migration zone along the Middle Reach of the Nisqually.	3			**3**	Degraded Habitat - Structure and Complexity, Degraded Habitat-Floodplain Connectivity and Function; Degraded Habitat - Riparian Areas and LWD Recruitment	Nisqually Chinook Recovery Plan
The lower Tanwax Creek flows for 4.5 miles through a 98 acre riparian wetland that had been cleared and now consist of small shrubs and large amounts of reed canary grass. A 1998 wetland assessment of Nisqually basin wetlands identified this areas as a high priority for restoration due to its benefits to salmon. This project would work with local volunteers and landowners to revegetate between 3 to 5 acres annually in this high priority area.	4	-1	Protection of area is tier 2, and this has high community support and exposure	**3**	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Water Quality, Degraded Habitat-Stream Substrate	1999 Nisq.Tribe Wetland Inventory

Habitat Type	Activity Type and Project Performance	Primary Species Benefiting	Secondary Species Benefiting	HWS Project Status	2012/Year 1 Activity to be funded	2012/Year 1 Estimated Budget	2013/Year 2 Activity to be funded	2013/Year 2 Estimated Budget
Riparian, Wetland, Rivers/Streams/Shoreline		Chinook	'Cutthroat (Secondary Species), Chinook (Secondary Species), Chum (Secondary Species), Pink (Secondary Species), Steelhead (Secondary	Proposed			acquisition	30000
Riparian	Riparian Habitat Planting (10 Acres)	Coho	Cutthroat (Secondary Species), Chinook (Secondary Species), Steelhead (Secondary Species)	Conceptual	Riparian plantings (3-5 acres), maintenance, monitoring	32,000	Riparian plantings (3-5 acres), maintenance, monitoring	32,000

2014/Year 3 Activity to be funded	2014Year 3 Estimated Budget	Likely End Date	Likely Sponsor	Total Cost of Project	Local share or other funding	Source of funds (PSAR, SRFB, other)	Unfunded Need	Project Name	
		12/31/2015	Nisqually R Land Trust	30000	0	SRFB- Salmon Recovery Funding Board	30000	Powell Wetland Protection	11-POWELL-1005
Riparian plantings (3-5 acres), maintenance, monitoring	32,000	12/31/2018	Nisqually Indian Tribe	96000	0	Not Yet Funded	96000	Tanwax Creek Riparian Restoration	11-TANWAX-1001

Major Strategy (Level 1-subbasin)	Initiative (Level 2)	Project (Level 3)	ID#	Project Status	Project Type	Plan Category	Project Name
	Watershed-wide Habitat Restoration and Enhancement	Nisqually vegetation management	11-MISC-1001	**Active**	Restoration Projects	Capital	Nisqually Vegetation Management

Project Description	Priority Area	Principles modifier	Comments on modifier	Priority tier of project	Limiting Factors	Reference Document for limiting factor
An assessment of riparian vegetation in the Nisqually watershed was completed in 2004. There is a need to groundtruth the assessment, identify priority revegetation areas, and organize and implement projects. In addition, monitoring of invasive plants that threaten ecosystem processes and habitat must be ongoing. An invasive management plan needs to be developed that prioritizes weed species and areas for control and outlines control measures. This will fund 1 FTE biologist to develop and implement a watershed vegetation management plan and a 3 FTE crew to plant and maintain a minimum of 15 acres of riparian vegetation annually and control invasive plants in the watershed. The crew in particular is key to our long term success with vegetation projects. Without proper maintenance many revegetation projects will fail.	2			**2**	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Water Quality, Degraded Habitat-Stream Substrate, Degraded Habitat-Estuarine and Nearshore Marine	Nisqually Chinook Recovery Plan

Habitat Type	Activity Type and Project Performance	Primary Species Benefiting	Secondary Species Benefiting	HWS Project Status	2012/Year 1 Activity to be funded	2012/Year 1 Estimated Budget	2013/Year 2 Activity to be funded	2013/Year 2 Estimated Budget
Riparian	Planting: 150 Acres, Plant Removal/Control: 100 Acres	Chinook	Cutthroat (Secondary Species), Chum (Secondary Species), Coho (Secondary Species), Pink (Secondary Species), Steelhead (Secondary Species)	Feasibility Completed	Identify priority revegetation areas. Landowner outreach. Develop and implement projects. Invasive species monitoring and control.	90,000	Identify priority revegetation areas. Landowner outreach. Develop and implement projects. Invasive species monitoring and control.	90,000

2014/Year 3 Activity to be funded	2014Year 3 Estimated Budget	Likely End Date	Likely Sponsor	Total Cost of Project	Local share or other funding	Source of funds (PSAR, SRFB, other)	Unfunded Need	Project Name	
Identify priority revegetation areas. Landowner outreach. Develop and implement projects. Invasive species monitoring and control.	90,000	12/31/2020	Nisqually Indian Tribe	1075790.63	40000	Nisqually Indian Tribe. Other sources to be determined.	1035790.63	Nisqually Vegetation Management	11-MISC-1001

Major Strategy (Level 1-subbasin)	Initiative (Level 2)	Project (Level 3)	ID#	Project Status	Project Type	Plan Category	Project Name
		Nisqually basin farm planning	11-MISC-1002	**Inactive**	Restoration Projects	Non-capital	Nisqually Basin Farm Planning
		Carcass Project	11-MISC-1004	**Active**	Restoration Projects	Capital	Salmon Carcass Nutrient Enhancement
		Thurston County CAO revision	11-MISC-1010	**Active**	Habitat Protection	Non-capital	Thurston County CAO Revision

Project Description	Priority Area	Principles modifier	Comments on modifier	Priority tier of project	Limiting Factors	Reference Document for limiting factor
One FTE farm planner/habitat specialist each for Pierce and Thurston Conservation Districts with additional funds for cost share assistance. Each farm planner would conduct targeted outreach to farms in high priority salmon reaches of the Nisqually. Farm plans would be developed for willing landowners and cost-share and technical assistance would be provided for implementation.	2			**2**	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Water Quality, Degraded Habitat-Stream Flow, Degraded Habitat-Stream Substrate, Degraded Habitat-Estuarine and Nearshore Marine, Degraded Habitat-Fish Passage	Nisqually Chinook Recovery Plan
The Nisqually Tribe has managed a project to return salmon carcasses to the watershed from the Tribes hatchery for the last five years. Program staff that help in implementation include our Restoration Biologist, Volunteer Coordinator, and our Technician. The Restoration Biologist develops an annual plan for carcass distribution including locations, amounts and timing using our best available scientific understanding of the system. Our Technician helps collect and store the carcasses at the hatchery. The Volunteer Coordinator, with the assistance of the Biologist	2	-1	Does not address major limiting factor, not process restoration	**3**	Degraded Habitat-Water Quality, Non-Habitat Limiting Factors	Nisqually Chinook Recovery Plan
Thurston County staff time to do required updates to Thurston Countys Critical Area Ordinance.	2	0		**2**		Nisqually Chinook Recovery Plan

Habitat Type	Activity Type and Project Performance	Primary Species Benefiting	Secondary Species Benefiting	HWS Project Status	2012/Year 1 Activity to be funded	2012/Year 1 Estimated Budget	2013/Year 2 Activity to be funded	2013/Year 2 Estimated Budget
Riparian		Chinook	Cutthroat (Secondary Species), Chum (Secondary Species), Coho (Secondary Species), Pink (Secondary Species), Bull Trout (Secondary Species), Steelhead (Secondary Species)	Conceptual	Inventory Farms. Landowner outreach. Develop farm plans and assist in implementation whereever possible via technical assistance and cost share funding (PCD 120K, TCD 75K)	195000	Inventory Farms. Landowner outreach. Develop farm plans and assist in implementation whereever possible via technical assistance and cost share funding (PCD 120K, TCD 75K)	195000
Instream	Nutrient enrichment - carcass placement	Chinook	Cutthroat (Secondary Species), Chum (Secondary Species), Coho (Secondary Species), Pink (Secondary Species), Steelhead (Secondary Species)		distrbution of 30,000 lbs. of salmon nutrients	30,000	distrbution of 30,000 lbs. of salmon nutrients	30,000
N/A	NA	Chinook	Cutthroat (Secondary Species), Chum (Secondary Species), Coho (Secondary Species), Pink (Secondary Species), Bull Trout (Secondary Species), Steelhead (Secondary Species)					

2014/Year 3 Activity to be funded	2014Year 3 Estimated Budget	Likely End Date	Likely Sponsor	Total Cost of Project	Local share or other funding	Source of funds (PSAR, SRFB, other)	Unfunded Need	Project Name	
Inventory Farms. Landowner outreach. Develop farm plans and assist in implementation whereever possible via technical assistance and cost share funding (PCD 120K, TCD 75K)	195000	12/31/2020		680000	65000	not Yet Funded	615000	Nisqually Basin Farm Planning	11-MISC-1002
distrbution of 30,000 lbs. of salmon nutrients	30,000	12/31/2020	Nisqually Indian Tribe	90000	15000	Nisqually Indian Tribe	75000	Salmon Carcass Nutrient Enhancement	11-MISC-1004
		12/31/2014	Thurston County	280000	0	General Funds (County)	280000	Thurston County CAO Revision	11-MISC-1010

Major Strategy (Level 1-subbasin)	Initiative (Level 2)	Project (Level 3)	ID#	Project Status	Project Type	Plan Category	Project Name
Nisqually Watershed-Wide Restoration & Protection	Regulatory Habitat Protection	Thurston County Shoreline Master program revision	11-MISC-1011	**Active**	Habitat Protection		Thurston County Shoreline Master Program Revision
		Pierce County Shoreline Master program revision	11-MISC-1012	**Active**	Habitat Protection	Non-Capital	Pierce County Shoreline Master Program Revision
		Forest and Fish project	11-MISC-1013	**Active**	Habitat Protection	Non-capital	Forest and Fish Prescription Implementation Monitoring/Tech. Assistance
		DNR Acquatic HCP planning	11-MISC-1009	**Active**	Habitat Protection	Non-Capital Project	DNR Aquatic HCP Planning

Project Description	Priority Area	Principles modifier	Comments on modifier	Priority tier of project	Limiting Factors	Reference Document for limiting factor
Thurston County staff time to do required updates to the countys Shoreline Master Program.	2	0		**2**		Nisqually Chinook Recovery Plan
	2	0		**2**		Nisqually Chinook Recovery Plan
This 1 FTE would support the continued monitoring of forest practices to ensure consistency with the Forest and Fish agreement and the Nisqually salmon recovery plan.	2			**2**	Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Water Quality, Degraded Habitat-Stream Substrate, Degraded Habitat-Estuarine and Nearshore Marine, Degraded Habitat-Fish Passage	
Washington DNR is in consultation with the USFWS for an Aquatic HCP, that at this time would cover all waters (tidal and non-tidal). The USFWS will dedicate 1 FTE to this consultation for potentially the next three years. DNR will probably cover the costs of that FTE.	2	1	small impact on process	**3**	Degraded Habitat-Water Quality	Nisqually Chinook Recovery Plan

Habitat Type	Activity Type and Project Performance	Primary Species Benefiting	Secondary Species Benefiting	HWS Project Status	2012/Year 1 Activity to be funded	2012/Year 1 Estimated Budget	2013/Year 2 Activity to be funded	2013/Year 2 Estimated Budget
N/A	NA	Chinook	Cutthroat (Secondary Species), Chum (Secondary Species), Coho (Secondary Species), Pink (Secondary Species), Bull Trout (Secondary Species), Steelhead (Secondary Species)					
N/A	NA	Chinook	Cutthroat (Secondary Species), Chum (Secondary Species), Coho (Secondary Species), Pink (Secondary Species), Bull Trout (Secondary Species), Steelhead (Secondary Species)					
Riparian	NA	Chinook	Cutthroat (Secondary Species), Chum (Secondary Species), Coho (Secondary Species), Pink (Secondary Species), Bull Trout (Secondary Species), Steelhead (Secondary Species)					
Instream	NA	Chinook	Cutthroat (Secondary Species), Chum (Secondary Species), Coho (Secondary Species), Pink (Secondary Species), Bull Trout (Secondary Species), Steelhead (Secondary Species)					

2014/Year 3 Activity to be funded	2014Year 3 Estimated Budget	Likely End Date	Likely Sponsor	Total Cost of Project	Local share or other funding	Source of funds (PSAR, SRFB, other)	Unfunded Need	Project Name	
		12/31/2014	Thurston County	444000	0	General Funds (County)	444000	Thurston County Shoreline Master Program Revision	11-MISC-1011
		12/31/2020	Pierce County of	0	0	General Funds (County)	0	Pierce County Shoreline Master Program Revision	11-MISC-1012
		12/31/2020	Nisqually Indian Tribe	298353.66	100000	TFW	198353.66	Forest and Fish Prescription Implementation Monitoring/Tech. Assistance	11-MISC-1013
		12/31/2014	USFWS / WA DNR	220675	0	Not Yet Funded	220675	DNR Aquatic HCP Planning	11-MISC-1009

Major Strategy (Level 1-subbasin)	Initiative (Level 2)	Project (Level 3)	ID#	Project Status	Project Type	Plan Category	Project Name
	Habitat Protection	Knotweed Control	11-MISC-1003	**Active**	Restoration Projects	Non-capital	Japanese Knotweed Eradication
		NLT property stewardship/natural resource management	11-MISC-1007	**Active**	Habitat Protection	Non-capital	Nisqually Land Trust Property Stewardship
		Protection enforcement on NWR	11-ESTUARY-1005	**Active**	Habitat Protection	Non-Capital	Protection Enforcement on Nisqually Wildlife Refuge (Obj. 1.2)

Project Description	Priority Area	Principles modifier	Comments on modifier	Priority tier of project	Limiting Factors	Reference Document for limiting factor
Annually identify and eradicate Japanese Knotweed infestations in the Nisqually River basin. This work takes up to 4 technicians and 0.5 project manager 3 months each summer for eradication efforts and 0.5 project manager 9 months for receiving landowner permission, surveying, reporting and education. This project addresses both salmon bearing areas and areas with potential to affect salmon-bearing areas by transport of knotweed fragments via multiple vectors within the watershed. Active identification and eradication portion of this project will continue through 2020, with a maintenance plan created for ongoing success of eradication efforts.		0	does not address limiting factor, but addresses potential large future problem	**0**	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Water Quality, Degraded Habitat-Stream Substrate, Degraded Habitat-Estuarine and Nearshore Marine	Nisqually Chinook Recovery Plan
By the end of 2009 the Land Trust will own approximately 1550 acres in the salmon-producing section of the Nisqually River. It is essential to have the resources to continue to manage the properties for protection of their habitat value. In total, then, the annual stewardship costs will be approximately $58,125, or about $174,375 for the 2009-2011 period. Currently, NLT has a small endowment that will generate approximately $3,000 per year for stewardship. In addition for general support of volunteer coordination and education associated with stewardship activities, NLT estimates it needs an additional $10,000/yr to support that work.	2		protection of potentially high priority areas	**2**	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Water Quality, Degraded Habitat-Stream Substrate, Degraded Habitat-Estuarine and Nearshore Marine	2001 Nisqually Chinook Recovery Plan
Protect Nisqually National Wildlife Refuge lands from unauthorized human disturbances. One 0.5 FTE Refuge Enforcement Officer ($31,100 annual cost)	1	2	Does not address limiting factor and minor problem for salmon	**3**		Salmon and Steelhead Limiting Factors WRIA 11, Nisqually NWR Final Comprhensive Conservation Plan, EDT anaylsis

Habitat Type	Activity Type and Project Performance	Primary Species Benefiting	Secondary Species Benefiting	HWS Project Status	2012/Year 1 Activity to be funded	2012/Year 1 Estimated Budget	2013/Year 2 Activity to be funded	2013/Year 2 Estimated Budget
Riparian	Activity Type - Riparian Habitat - Plant removal/ control	Chinook	Cutthroat (Secondary Species), Chum (Secondary Species), Coho (Secondary Species), Pink (Secondary Species), Steelhead (Secondary Species)		Search and destroy of japanese knotweed	100,000	Search and destroy of japanese knotweed	100,000
Riparian	NA	Chinook	Cutthroat (Secondary Species), Chum (Secondary Species), Coho (Secondary Species), Pink (Secondary Species), Steelhead (Secondary Species)	Monitoring	monitoring and maintenance	60000	monitoring and maintenance	60000
Estuary (River Delta)	Habitat Protection (3000 ac)	Chinook	Cutthroat (Secondary Species), Chum (Secondary Species), Coho (Secondary Species), Pink (Secondary Species), Bull Trout (Secondary Species), Steelhead (Secondary Species)	Conceptual	Support of 0.5 FTE wildlife enforcement officer	34200	Support of 0.5 FTE wildlife enforcement officer	34200

2014/Year 3 Activity to be funded	2014Year 3 Estimated Budget	Likely End Date	Likely Sponsor	Total Cost of Project	Local share or other funding	Source of funds (PSAR, SRFB, other)	Unfunded Need	Project Name	
Search and destroy of japanese knotweed	100,000	12/31/2014	Pierce Conservation District	300000	44000	SRFB, Community Salmon Fund	256000	Japanese Knotweed Eradication	11-MISC-1003
monitoring and maintenance	60000	12/31/2020	Nisqually R Land Trust	480000	60000	Nisqually R Land Trust	420000	Nisqually Land Trust Property Stewardship	11-MISC-1007
Support of 0.5 FTE wildlife enforcement officer	34200	12/31/2020	US Fish & Wildlife Service	151500	0	Not Yet Funded	151500	Protection Enforcement on Nisqually Wildlife Refuge (Obj. 1.2)	11-ESTUARY-1005

Major Strategy (Level 1-subbasin)	Initiative (Level 2)	Project (Level 3)	ID#	Project Status	Project Type	Plan Category	Project Name
		Community Forest Initiative	11-MISC-1017	**Active**	Habitat Protection		Community Forest Initiative
	Stormwater Impact Reduction	Eatonville Stormwater Reduction Project	11-OHOP-1009	**Active**	Restoration Projects	Capital	Eatonville Stormwater Reduction Project
		Eatonville Stormwater Planning	11-OHOP-1011	**Active**	Habitat Protection/Future Habitat Project Development	Non-Capital	Eatonville Stormwater Management Plan Update
		Street Edge Alternative (SEA) street	11-MISC-1018	**Active**	Restoration Projects	Capital	Street Edge Alternative (SEA) Street

Project Description	Priority Area	Principles modifier	Comments on modifier	Priority tier of project	Limiting Factors	Reference Document for limiting factor
The Nisqually Land Trust, Mount Rainier National Forest, and the Northwest Natural Resource Group, propose to develop a plan for creation of a community forest in the Nisqually Watershed. A community forest is a forest that is owned and managed by a municipal entity, nonprofit organization, or other such group on behalf of a community. The community participates in management decisions, and the forest is managed to provide a suite of benefits, typically including sustainable forestry, recreation, education, and environmental benefits such as clean water and habitat. This project will identify the key ownership and management partners; determine the broad outline of what lands the forest should encompass and how they should be managed; and make initial approaches to potential landowners.	?				Degraded Habitat-Water Quality	
Work with Town of Eatonville to update stormwater plan and actively implement rain-garden challenge by installing 10 rain gardens annually. Supports the Stewardship Partners/WSU Extension campaign to install 12,000 Rain Gardens in Puget Sound by 2016.	2			**2**	Degraded Habitat-Water Quality, Water Quantity, Stream Substrate	2001 Nisqually Chinook Recovery Plan
The Town of Eatonville will update its stomwater management plan. The update will have a special focus on identifying ways to incorporate retrofits and low impact development to infiltrate and treat the greatest possible percentage of Eatonville's stormwater.	2			**2**	Degraded Habitat-Water Quality, Water Quantity, Stream Substrate	2001 Nisqually Chinook Recovery Plan
This "SEA Street" type retrofit will convert one block of a Town of Eatonville street using porous pavement and rain gardens in the right-of-way to infiltrate stormwater runoff. Projects in the right-of-way provide a model for project owners and developers in South Puget Sound. This SEA Street will be complete with rain gardens in the public right-of-way to capture any excess stormwater runoff from the street, sidewalks, and driveways.	2			**2**	Degraded Habitat-Water Quality, Water Quantity, Stream Substrate	2001 Nisqually Chinook Recovery Plan

Habitat Type	Activity Type and Project Performance	Primary Species Benefiting	Secondary Species Benefiting	HWS Project Status	2012/Year 1 Activity to be funded	2012/Year 1 Estimated Budget	2013/Year 2 Activity to be funded	2013/Year 2 Estimated Budget
Upland		Chinook	Cutthroat (Secondary Species), Chum (Secondary Species), Coho (Secondary Species), Pink (Secondary Species), Steelhead (Secondary Species)	Feasibility Pending	Assessment	40000	business plan	53000
	Water Quality	Chinook, Coho, Steelhead, Rainbow	Cutthroat (Secondary Species), Pink (Secondary Species), River Lamprey	Active	Design/Construction	50000	Design/Construction	50000
	Water Quality	Chinook, Coho, Steelhead, Rainbow	Cutthroat (Secondary Species), Pink (Secondary Species), River Lamprey	Active	Data gathering/planning	100000	planning	40000
	Activity Type - Upland Habitat; Water development	Chinook, Coho, Steelhead, Rainbow	Cutthroat (Secondary Species), Pink (Secondary Species), River Lamprey	Conceptual	Design	50000	Construction	400000

2014/Year 3 Activity to be funded	2014Year 3 Estimated Budget	Likely End Date	Likely Sponsor	Total Cost of Project	Local share or other funding	Source of funds (PSAR, SRFB, other)	Unfunded Need	Project Name	
acquisition support	28000	12/31/2014	Nisqually R Land Trust	120000	120000	National Park Service, EPA	0	Community Forest Initiative	11-MISC-1017
Design/Construction	50000	12/31/2012	Stewardship Partners / Town of Eatonville	150000	50000	Community Salmon Fund, Nisqually Tribe Charitable Fund,	100000	Eatonville Stormwater Reduction Project	11-OHOP-1009
		6/30/2012	Stewardship Partners / Town of Eatonville	140000	140000	Funded - EPA Tribal Assistance, Town of Eatonville local funds	0	Eatonville Stormwater Planning	11-OHOP-1011
		12/31/2012	Stewardship Partners / Town of Eatonville	450000	0	Not Yet Funded	450000	Street Edge Alternative (SEA) Street	11-MISC-1018

Major Strategy (Level 1-subbasin)	Initiative (Level 2)	Project (Level 3)	ID#	Project Status	Project Type	Plan Category	Project Name
	Basin-wide Habitat Acquisition	Upper Watershed small properties protection	11-MISC-1006	**Active**	Acquisition for Protection	Capital	Upper Watershed Small Properties Protection
	Community Involvement and Education	Nisqually River Education Project	11-OUTREACH-1001	**Active**	Outreach and Education	Non-Capital	Nisqually River Education Project
		Nisqually Stream Stewards	11-OUTREACH-1003	**Active**	Outreach and Education	Non-Capital	Nisqually Stream Stewards

Project Description	Priority Area	Principles modifier	Comments on modifier	Priority tier of project	Limiting Factors	Reference Document for limiting factor
Acquire small properties along the highest priority streams in the upper watershed, Ohop Creek and the Mashel River. Projects would focus on areas with intact riparian function and channel migration zone; and seek to block with other parcels already in protected status.	2			**2**	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Water Quality, Degraded Habitat-Stream Substrate, Degraded Habitat-Estuarine and Nearshore Marine	2001 Nisqually Chinook Recovery Plan
The Nisqually River Education Project (NREP) brings students into the watershed for field-based environmental science experiences and habitat restoration projects that benefit both the classroom curriculum and the river habitat. NREP has the mission of creating students who are stewards of the Nisqually River watershed and the water resources in their community.	2			**2**		2001 Nisqually Chinook Recovery Plan
Teach Nisqually River Watershed residents about stream health and involve residents in monitoring and improving the health of their local streams. Discuss environmental awareness issues and information with those who are in the program, so that they can apply that learning to their own lives and share the knowledge with others.	2			**2**		2001 Nisqually Chinook Recovery Plan

Habitat Type	Activity Type and Project Performance	Primary Species Benefiting	Secondary Species Benefiting	HWS Project Status	2012/Year 1 Activity to be funded	2012/Year 1 Estimated Budget	2013/Year 2 Activity to be funded	2013/Year 2 Estimated Budget
Riparian	Activity Types - Acquisition/Easements/Leases : Streambank or riparian protected (Miles)	Chinook	Cutthroat (Secondary Species), Coho (Secondary Species), Pink (Secondary Species), Steelhead (Secondary Species)	Conceptual	acquisition	150000	acquisition	150000
	Outreach and Education				School children involement	95000	School children involement	95000
	Outreach and Education				Public Outreach, Education, Volunteer Recruitment, Training, Tours, Salmon Habitat Restoration Activities	70000	Public Outreach, Education, Volunteer Recruitment, Training, Tours, Salmon Habitat Restoration Activities	70000

2014/Year 3 Activity to be funded	2014Year 3 Estimated Budget	Likely End Date	Likely Sponsor	Total Cost of Project	Local share or other funding	Source of funds (PSAR, SRFB, other)	Unfunded Need	Project Name	
acquisition	150000	12/31/2020	Nisqually R Land Trust	470000	0	TBD	470000	Upper Watershed Small Properties Protection	11-MISC-1006
School children involement	95000	12/31/2020	Nisqually Foundation / NREP	285,000	50000	EPA	235000	Nisqually River Education Project	11-OUTREACH-1001
Public Outreach, Education, Volunteer Recruitment, Training, Tours, Salmon Habitat Restoration Activities	70000			210,000	70000	Tribe	140000	Nisqually Stream Stewards	11-OUTREACH-1003

Major Strategy (Level 1-subbasin)	Initiative (Level 2)	Project (Level 3)	ID#	Project Status	Project Type	Plan Category	Project Name
Community Outreach	Landowner Incentives	Salmon Safe Certification	11-OUTREACH-1004	**Active**	Outreach and Education	Non-Capital	Salmon-Safe Certification Program
		FSC market development	11-OUTREACH-1005	**Inactive**	Outreach and Education	Non-capital	FSC Market Development
		Forest certification Program	11-OUTREACH-1006	**Inactive**	Outreach and Education	Non-capital	Forest Landowner Certification Program

Project Description	Priority Area	Principles modifier	Comments on modifier	Priority tier of project	Limiting Factors	Reference Document for limiting factor
Salmon-Safe certification is a labeling and marketing program to recognize local agricultural landowners as well as urban land uses (corporate campuses, industrial sites, residential development and golf courses) that protect water quality and habitat benefiting native salmon and other wildlife as well as overall watershed health. The program evaluates practices to protect streams and wetlands, prevent soil erosion, practice water conservation, minimize chemical use, promote native biodiversity, and manage storm water to prevent polluted runoff. Stewardship Partners coordinates independent third party certification inspections and administers a variety of marketing and promotional activities in support of Salmon-Safe certified operations.	2			**2**		2001 Nisqually Chinook Recovery Plan
NNRG and partners will work to develop the market for Forest Stewardship Council certified (and Nisqually Sustainable) branded wood products from local forests, stimulate local small scale manufacturing, and increase local use of local products. This will increase community investment in and understanding of local sustainable forestry and provide incentives for local forest owners leading to improved forest practices on the ground and improved local economies.	2			**2**		NCRP
The Northwest Natural Resource Group and partners are working to implement Forest Stewardship Council sustainable forestry certification within the Nisqually watershed. Sustainable forest certification can provide an economic incentive as well as third party verification for practices that lead to improved water quality and wildlife habitat on and downstream from working forests. The goal is to certify approximately 20 forest landowners per year in the watershed.	2			**2**		NCRP

Habitat Type	Activity Type and Project Performance	Primary Species Benefiting	Secondary Species Benefiting	HWS Project Status	2012/Year 1 Activity to be funded	2012/Year 1 Estimated Budget	2013/Year 2 Activity to be funded	2013/Year 2 Estimated Budget
	Outreach and Education				Certification evaluations, marketing and promotions	15,000	Certification evaluations, marketing and promotions	15,000
	Outreach and Education				Manufacturer and Public Outreach, Education, and Tours	23,897	Manufacturer and Public Outreach, Education, and Tours	19,297
	Outreach and Education				Forest Landowner Outreach and Certification	51,384	Forest Landowner Outreach and Certification	19,297

2014/Year 3 Activity to be funded	2014Year 3 Estimated Budget	Likely End Date	Likely Sponsor	Total Cost of Project	Local share or other funding	Source of funds (PSAR, SRFB, other)	Unfunded Need	Project Name	
Certification evaluations, marketing and promotions	15,000			45,000	0	Not Yet Funded	45000	Salmon-Safe Certification Program	11-OUTREACH-1004
Manufacturer and Public Outreach, Education, and Tours	18,457				0	Not Yet Funded	0	FSC Market Development	11-OUTREACH-1005
Forest Landowner Outreach and Certification	18,457				0	Not Yet Funded	0	Forest Landowner Certification Program	11-OUTREACH-1006

Major Strategy (Level 1-subbasin)	Initiative (Level 2)	Project (Level 3)	ID#	Project Status	Project Type	Plan Category	Project Name
		Ecosystems Market Development	11-OUTREACH-1007	**Inactive**	Outreach and Education	Non-Capital Project	Ecosystem Services Market Development
Salmon Research, Monitoring and Evaluation	Salmon Recovery Plan Monitoring	Chinook Plan Habitat Monitoriong	11-MISC-1014	**Active**	Habitat Project Monitoring	Non-capital	Nisqually Chinook Recovery Habitat Monitoring

Project Description	Priority Area	Principles modifier	Comments on modifier	Priority tier of project	Limiting Factors	Reference Document for limiting factor
NNRG and partners will work to develop the market for carbon offsets and water quality within the Nisqually Watershed. Carbon offset contracts can provide long term development restrictions and guarantee certified forest management for 100 years. Water quality trading can also provide for specific water quality improvements on forest land. Both markets provide incentives for improved practices leading to better habitat and improved water quality and regular quantity beyond regulatory requirements.	2			**2**		NCRP
Creation and implementation of a watershed-wide habitat and restoration action monitoring plan to assess effect of recovery plan.	1			**1**	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Water Quality, Non-Habitat Limiting Factors, Degraded Habitat-Stream Flow, Degraded Habitat-Stream Substrate, Degraded Habitat-Estuarine and Nearshore Marine, Degraded Habitat-Fish Passage	NA

Habitat Type	Activity Type and Project Performance	Primary Species Benefiting	Secondary Species Benefiting	HWS Project Status	2012/Year 1 Activity to be funded	2012/Year 1 Estimated Budget	2013/Year 2 Activity to be funded	2013/Year 2 Estimated Budget
	Outreach and Education				Carbon Recruitment and Offset Sales, Water Quality Trading Framework Development	53,897	Recruitment and Offset Sales, Water Quality Trading Modeling and Feasibility Study, Funding Source Development	44,297
N/A	NA	Chinook	Cutthroat (Secondary Species), Coho (Secondary Species), Pink (Secondary Species), Steelhead (Secondary Species)		On-going monitoring	85,000	On-going monitoring	85,000

2014/Year 3 Activity to be funded	2014Year 3 Estimated Budget	Likely End Date	Likely Sponsor	Total Cost of Project	Local share or other funding	Source of funds (PSAR, SRFB, other)	Unfunded Need	Project Name	
Recruitment and Offset Sales, Water Quality Trading Modeling and Funding Source Development	43,457				0	Not Yet Funded	0	Ecosystem Services Market Development	11-OUTREACH-1007
On-going monitoring	85,000	12/31/2020	Nisqually Indian Tribe	468240	0	Not Yet Funded	468240	Nisqually Chinook Recovery Habitat Monitoring	11-MISC-1014

Newly added projects (YELLOW)
Active projects (funded) (GREEN)
Completed projects (BLUE)
New information/updates to existing projects (Orange)

2012 Status	Project Type	Plan Category	Project Name	Project Description	Priority Area	Principles modifier	Comments on modifier	Priority tier of project	Limiting Factors	Reference Document for limiting factor	Habitat Type	Activity Type and Project Performance	Primary Species Benefiting	Secondary Species Benefiting	Current Project Status	Year 1 Activity to be funded	Year 1 Estimated Budget	Year 2 Activity to be funded	Year 2 Estimated Budget	Year 3 Activity to be funded	Year 3 Estimated Budget	Likely End Date	Likely Sponsor	Total Cost of Project	Local share or other funding	Source of funds (PSAR, SRFB,	Project ID	Unfunded Need
Active	Harvest Management Support	Non-Capital	Treaty Commercial Fishery Monitoring	Monitoring the treaty commercial fishery is critical for stock assessment and adaptive management. Fishery monitoring provides fundamental data for management including but not limited to NOR and HOR abundance, timing, and composition. Implement fishery schedule that meets exploitation rate objectives.				1		Nisqually Chinook Stock Management Plan (2011)		Harvest Management	Chinook	Pink, Coho, Chum	On-going	Monitoring	100,000	Monitoring	100,000	monitoring	100,000	On-going	NIT	300,000				300,000
Active	Harvest Management Support	Non-Capital	Implement Selective Commercial Fishing Gear Use	Selective commercial fishing has the potential to increase hatchery Chinook harvest rates while decreasing impact on natural origin fish. Incentives for using commercial selective fishing gear types (eg. financial assistance with purchase of new gear) will be used to give the fisher the opportunity to catch Chinook while segregating HORs from NORs and releasing NORs live.				1		Nisqually Chinook Stock Management Plan (2011)		Test 3 selective gear types	Chinook	Pink	On-going	Gear Purchase, testing, and evaluation	50,000	Gear Purchase, testing, and evaluation	50,000	Gear Purchase, testing, and evaluation	50,000	2014	NIT	150,000				150,000
Active	Harvest Management Support	Non-Capital	In-river Creel Survey	Monitor the in river sport fishery to more accurately assess the impact on marked and unmarked, natural origin and hatchery origin salmon.				1		Nisqually Chinook Stock Management Plan (2011)		Harvest Management	Chinook		On-going	Monitoring	50,000					2012	WDFW	50,000				50,000
Active	Hatchery	Capital	Mainstem Weir	of Nisqually Chinook, the proportion of Hatchery Origin Recruits (HORs) to Natural Origin Recruits (NORs) on the spawning grounds must be decreased. A seasonal weir on the lower mainstem will trap all Chinook, enabling the segregation of NORs from HORs while providing invaluable stock assessment information. Broodstock will be collected at the weir for the integrated hatchery program.				1		Nisqually Chinook Stock Management Plan (2011)		Complete construction and successfully operate weir to achieve 5% or best possible HOR/total composition on spawning grounds.	Chinook		Design Completed	Finishing construction, operation	705,000	Weir Operation	375,000	Weir Operation	375,000	On-going	NIT	1,455,000	1,455,000	Hatchery Reform Federal Funds		0
Planned	Hatchery	Capital	Integration Program Pond Construction	Modify pond at Clear Creek Hatchery to provide ability to integrate natural origin Chinook with hatchery stock.				1		Nisqually Chinook Stock Management Plan (2011)		Hatchery Program	Chinook		Conceptual			Design and Cost Estimate	50,000	Construction	3,000,000	On-going	NIT	3,050,000				3,050,000
Planned	Hatchery	Non-capital	CWT Integrated Hatchery Program Releases	Coded wire tags will be inserted in all Chinook released from the integrated program. 75000 will also have adipose clips to benefit the double index tag program, and the rest will not.				1		Nisqually Chinook Stock Management Plan (2011)		Hatchery Program	Chinook		Planned					CWT 600K Chinook	90,000	On-going	NIT	90,000	90000	Coded Wire Tag Improvement CWTIT		0
Active	Stock Management Support	Non-Capital	Nisqually Chinook Stock Management Plan	The Nisqually Chinook Stock Management Plan will guide Chinook management, include management at the weir, to ensure that escapement and NOR/HOR composition goals are met.				1				Stock Assessment	Chinook		Draft Completed	Finalize plan and host annual project review	40000	Host annual project review	40000	Host annual project review	40000	On-going	NIT	120000				120000
Active	Stock Monitoring Support	Non-Capital	EDT Habitat Attribute Updates	EDT Habitat Attribute Updates are needed to model the response of the Chinook population to habitat changes caused by large scale habitat restoration projects or incorporate more accurate data. Data from various monitoring and assessment projects will be synthesized and used to run the model updates. Model updates will be coordinated with the annual project review.				1				Stock Assessment	Chinook		On-going	Improve description and delineation of estuary in model. General model updates.	40,000	Model updates and database maintenance	30,000	Model updates and database maintenance	30,000	On-going	NIT	100,000				100,000
Active	Stock Monitoring Support	Non-Capital	Chinook Spawner Surveys and Mark-recapture	Chinook spawner surveys are essential for determining the abundance, spatial and temporal distribution, and composition of spawning Chinook. A mark-recapture study will be done to estimate the efficiency of the weir. All fish passed at the weir will be marked and spawner surveys will be focused on recovering spawners to determine recapture rate.				1				Stock Assessment	Chinook	Pink, Coho	On-going	Spawner surveys and mark-recapture study	100,000	Spawner surveys and mark-recapture study	100,000	Spawner surveys and mark-recapture study	100,000	On-going	NIT, WDFW	300,000				300,000
Planned	Stock Monitoring Support	Non-Capital	Chinook Spawner Surveys Below the Weir	It is important to document the number and composition of fish that spawn below the weir because the progeny of these spawners will return as unmarked fish and affect stock recovery. Surveys will assess weir-induced delay and impact on spawner distribution.				1				Stock Assessment	Chinook	Pink, Coho	On-going	Spawner surveys	100,000	Spawner surveys	100,000	Spawner surveys	100,000	On-going	NIT, WDFW	300000				300,000
Active	Stock Monitoring Support	Non-Capital	Downstream Migrant Trapping	WDFW installed a downstream migrant trap on the Nisqually River in January 2009. The trap will enable managers to determine the abundance, timing, and diversity of migrating juvenile salmonids. When combined with adult spawner abundance the trap will also give us the ability to estimate the productivity of the watershed.				1				Stock Assessment	Chinook, Steelhead	Chum, Pink, Coho	3rd Season Implemented	Trap Operations	125,000	Trap Operations	125,000	Trap Operations	125,000	On-going	WDFW	375,000				375,000
Active	Stock Monitoring Support	Non-Capital	Otolith Analysis	Chinook otolith analysis provides key information on Chinook life history diversity including growth and residency in key habitats like the estuary.				1				Stock Assessment	Chinook		On-going	Analysis of adult and juvenile otoliths, baseline and post-restoration	275,000	Analysis of adult and juvenile otoliths, post-restoration	100,000	Analysis of adult and juvenile otoliths, post-restoration	100,000	On-going	USGS, NIT, USFWS Nisqually NWR	475,000				475,000

Active	Stock Monitoring Support	Non-Capital	Steelhead Spawner Surveys	Steelhead spawner surveys are essential for determining the abundance, spatial and temporal distribution, and composition of spawning steelhead.				1					Stock Assessment	Steelhead		Surveys on-going, would be expanded	Survey	100,000	Survey	100,000	Survey	100,000	On-going	NIT, WDFW	300,000				300,000
Planned	Stock Monitoring Support	Non-Capital	Automated Counter @ Centralia Diversion Dam	spawn in the upper Nisqually River and in Ohop Creek and the Mashel River must swim through the fish ladder at the Centralia Diversion Dam. This creates an opportunity to install a fish counter. A fish counter will provide invaluable stock assessment data, especially for steelhead that run at a time of high turbidity in the Nisqually River which prevents accurate spawner counts.				1					Stock Assessment	Steelhead	Chinook, Coho, Chum, Pink	Conceptual	Identify, purchase and Install counter	200000	Operate counter	40000	Operate counter	40000	None	NIT	280000				280,000
Planned	Stock Monitoring Support	Non-Capital	Nisqually Chinook parentage assessment	Take genetic samples of Chinook passed at weir (and any recovered spawners that were not tagged at the weir) and a portion of outmigrating Chinook at the outmigrant trap. This will be used to estimate weir efficiency and the effective number of breeders.				1					Stock Assessment	Chinook		Planned	Field sampling	0	Field sampling and lab anaylysis of previous year's samples	40000	Field sampling and lab anaylysis of previous year's samples	40000	On-going	NIT	80,000				80,000
Planned	Stock Monitoring Support	Non-Capital	Late chum stock assessment	Develop an updated inseason management tool to improve post season escapement estimates for Nisqually late chum.				2					Stock Assessment	Chum		Conceptual	develop new tool	250,000										0
Active	Watershed Plan Implementation & Coordination	Non-capital	Nisqually Chinook Recovery Habitat Monitoring	Work with RITT to develop monitoring metrics consistent with regional standards. The Nisqually Tribe is currently finalizing an adaptive management framework in order to gauge the effectiveness of the restoration and conservation initiatives and to provide planning guidance. A crucial component of the adaptive management plan is robust estimates of the status and trends in indicators of watershed health and salmon recovery. The goal of this collaborative monitoring project is to collect status and trends habitat data and apply it to adaptive management decision-making in the Nisqually Watershed.				1	Degraded Habitat-Floodplain Connectivity and Function, Degraded Habitat-Channel Structure and Complexity, Degraded Habitat-Riparian Areas and LWD Recruitment, Degraded Habitat-Water Quality, Non-Habitat Limiting Factors, Degraded Habitat-Stream	NA	N/A	NA	Chinook	Cutthroat (Secondary Species), Coho (Secondary Species), Pink (Secondary Species), Steelhead (Secondary Species)	Monitoring	On-going monitoring	85,000	On-going monitoring	85,000	On-going monitoring	85,000	12/31/2020	NIT	468240	0	Not Yet Funded	11-MISC-1014	468,240
Active	Watershed Plan Implementation & Coordination	Non-Capital	Adaptive Management Plan Implementation	The Nisqually Chinook Adaptive Management Framework Implementation Project will provide the population modeling, habitat characterization, and stock status update support necessary to complete an adaptive management cycle.				1						Chinook		On-going	Plan refinement and support of annual project review	40,000	Plan refinement and support of annual project review	40,000	Plan refinement and support of annual project review	40,000	On-going	NIT	120,000				120,000
Active	Watershed Plan Implementation & Coordination	Non-Capital	Restoration Biologist					1								On-going	1 FTE (including 54% indirect)	105,000	1 FTE (including 54% indirect)	110,000	1 FTE (including 54% indirect)	113,300		NIT	328,300	105,000	PCSRF, Tribe		223,300
Planned	Watershed Plan Implementation & Coordination	Non-Capital	Lead Entity Coordinator					1								On-going	1 FTE (including 54% indirect)	105,000	1 FTE (including 54% indirect)	110,000	1 FTE (including 54% indirect)	113,300		NIT	328,300		PCSRF, Tribe, PSAR, SRFB		328,300
Active	Watershed Plan Implementation & Coordination	Non-Capital	Salmon RecoveryProject Technician					1								On-going	.5 FTE (including 54% indirect)	40,425	.5 FTE (including 54% indirect)	42,446	.5 FTE (including 54% indirect)	43,720		NIT	126,591	40,425	PCSRF, Tribe		86,166
Active	Watershed Plan Implementation & Coordination	Non-Capital	Salmon Recovery Program Manager					1								On-going	Staffing (1 FTE + 54% indirect)	124,740	Staffing (1 FTE + 54% indirect)	129,360	Staffing (1 FTE + 54% indirect)	133,241		NIT	387,341	124,740	PCSRF, Tribe		262,601
Active	Watershed Plan Implementation & Coordination	Non-Capital	GIS support for plan development/implementation					1								On-going	Staffing (1 FTE + 54% indirect)	124,740	Staffing (1 FTE + 54% indirect)	129,360	Staffing (1 FTE + 54% indirect)	133,241		NIT	387,341	124,740	PCSRF, Tribe		262,601
Active	Watershed Plan Implementation & Coordination	Non-Capital	Development and Coordination of Adaptive Management Program					1						Chinook		On-going	Staffing (1 FTE + 54% indirect)	118,580	Staffing (1 FTE + 54% indirect)	123,200	Staffing (1 FTE + 54% indirect)	126,896		NIT	368,676	118,580	PCSRF, Tribe		250,096
Active	Watershed Plan Implementation & Coordination	Non-Capital	Identify and research key uncertainties to improve plan					1						Chinook		On-going	Staffing (1 FTE + 54% indirect)	118,580	Staffing (1 FTE + 54% indirect)	123,200	Staffing (1 FTE + 54% indirect)	126,896		NIT	368,676	118,580	PCSRF, Tribe		250,096
Active	Watershed Plan Implementation & Coordination	Non-Capital	Complete Adaptive Management plan and database					1						Chinook		On-going	complete structure, tracking database	75,000	update, adjust structure	25,000		0		NIT	100,000				100,000
Planned	Watershed Plan Implementation & Coordination	Non-Capital	Adaptive Management database	Database for storing and sharing data needed for adaptive management, including data from the new weir.				1						Chinook	Pink, Coho	Conceptual			1 FTE data manager, database maintenance costs, maintenance, data input	126,000	1 FTE data manager, database maintenance costs, maintenance, data input	129,780		NIT	255,780				255,780
New 2012	Watershed Plan Implementation & Coordination	Non-Capital	Steelhead Recovery Plan	Over the next 3 years we plan to develop a steelhead recovery plan. The plan will highlight habitat actions not covered in the Chinook plan, incorporate current research on early marine survival, update modeling efforts, and detail research and stock management needs.				1						Steelhead		Planned	coordinate plan development, work with contractor to model conditions, scenarios, develop options	75,000	coordinate plan development, work with contractor to model conditions, scenarios, develop options	75,000				NIT	150,000				150,000

Active	Other	Non-Capital	Multispecies Nisqually Salmon Plan	Utilize EDT and other models to publish a multi-species Nisqually salmon recovery plan that addresses all four 4 H's. This includes formulation of goals, objectives and an action plan to restore salmon runs to PFC.				2					Chum, Pink, Coho	Steelhead, Chinook	On-going	coordinate plan development, work with contractor to model conditions, scenarios, develop options	75,000	coordinate plan development, work with contractor to model conditions, scenarios, develop options	75,000				NIT	150,000				150,000
Active	Research	Non-Capital	Steelhead Acoustic Tracking	in 2007. Preliminary information suggests that steelhead are experiencing poor survival as they migrate through Puget Sound. This project utilizes acoustic tags and receivers to track individual steelhead as they move through the lower Nisqually river, estuary, and Puget Sound in order to determine migration patterns and survival.				1					Steelhead		On-going	Data Analysis	20,000	tag >50 steelhead, update and improve receiver network	90,000	tag >50 steelhead	61,000	2014	NIT	171,000				171,000
New 2012	Watershed Plan Implementation & Coordination	Non-Capital	Chinook Recovery Tracking Targets	Develop short-term salmon performance targets based on habitat potential and measured stock status to track progress.efforts, and detail research and stock management needs.				1					Chinook		Planned	Co-managers develop methodology for identifying indicators	80,000	Monitor and evaluate	40,000	Monitor and evaluate	40,000		NIT	160,000				150,000