

## Stillaguamish Salmon Recovery 3Year Work Plan Update

### Summary of changes from 2009 to 2010

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#### Overview:

The 2010 - 2012 Stillaguamish Salmon Recovery 3-Year Work Plan consists of the restoration and protection projects that have been submitted by stakeholders and watershed partners throughout the Stillaguamish Basin. Many of the above-mentioned projects have been deemed critical to the overall recovery of Chinook salmon as outlined in the 2005 Stillaguamish Chinook Salmon Recovery Plan. This work plan has been endorsed by the Stillaguamish Watershed Council (formerly the Stillaguamish Implementation and Review Committee (SIRC)), as well as, the NOAA Review and Implementation Technical Team (RITT), and the Salmon Recovery Funding Board (SRFB). The plan is organized by limiting factors determined to limit Chinook production in the Stillaguamish watershed. The Chinook Recovery Plan strives to integrate harvest, hatchery and habitat actions as outlined on Page 87, as a means to increase production to harvestable levels.

#### Habitat

The primary habitat limiting factors and the actions needed to recover Stillaguamish Chinook include:

*Riparian:* Plant native riparian vegetation, exclude livestock, protect existing native riparian vegetation, and control non-native invasive plants. Riparian actions are focused on restoring 400 acres of riparian forest on rural, urban, and agricultural lands that are not governed by existing private, state, or federal forest regulations within two geographic priority areas. The First Riparian Priority area includes the Upper North Fork Stillaguamish, Squire Creek, French-Segelsen, Lower Canyon Creek, and Lower South Fork Stillaguamish sub-basins. The Second Riparian Priority area includes the Middle North Fork Stillaguamish, Lower North Fork Stillaguamish, Jim Creek, and Lower Pilchuck Creek sub-basins. The plan defers to the existing regulatory framework for riparian forest management on private, state, and federal forestlands.

*Estuary/Nearshore:* Restore blind tidal channels and tidal marsh habitats by removing and/or setting back dikes, restore pocket estuaries, restore or enhance marine shoreline habitat by removing bulkheads and planting native vegetation, retrofit existing tide gates, and construct log jams to enhance tidal channel formation in the river delta. Estuary and marine nearshore restoration actions are focused on three primary locations. These include restoration of 115 acres of tidal marsh habitat on WDFW's, Leque Island property, restoration of 150 acres of tidal marsh habitat on The Nature Conservancy's property adjacent to the mouth of Hat Slough, and creation of 120 acres of new tidal

marsh habitat by removing spartina infestations and adding roughened features to the mud/sand flats in front of the mouth of Hat Slough.

*Large Woody Debris:* Install engineered log jams in main river channels, stabilize eroding stream banks and landslides using large wood revetments, and regenerate mature riparian trees for future instream recruitment. Specific actions to supplement large instream wood include installation of 51 engineered log-jams within specific reaches of the North and South Forks. These reaches have relatively unmodified banks and are therefore expected to be more responsive to the floodplain and channel morphological effects of large instream wood.

*Floodplain:* Reconnect main river channels with side channels and sloughs, reconnect main river channels with floodplains and forested wetlands, remove and/or set back dikes and levees, and remove bank armoring. Specific floodplain improvements include restoration of side channel habitat in the Lower Stillaguamish, Lower North Fork Stillaguamish, Middle North Fork Stillaguamish, and Lower South Fork Stillaguamish sub-basins. Removal of 4.1 miles of bank armoring is also prescribed for reaches above the confluence of the north and south forks of the Stillaguamish River.

*Sediment:* Stabilize large deep-seated landslides along main river channels using large wood revetments, decommission and treat forest roads in areas of steep and potentially unstable geology, restore wetlands to stabilize small tributary sediment regimes. Specific actions to reduce sediment impacts include remediation of the large deep-seated landslides at Steelhead Haven and Gold Basin and treatment of 106 miles of forest roads in the Upper North Fork, French-Segelsen, Deer Creek, Middle North Fork Stillaguamish, Upper Canyon Creek, Robe Valley, and Lower Canyon Creek sub-basins.

*Hydrology:* Restore floodplains to reduce peak flow and low flow impacts, reduce forest road density, increase hydrologically mature forest cover, identify optimum instream flow levels and take actions necessary to reduce water consumption. Riparian vegetation, floodplain, and sediment projects should also contribute to restoring and protecting hydrologic functions.

Secondary limiting factors and actions needed to recover Stillaguamish Chinook include:

*Fish Passage and Barrier Removal:* Reconnect habitat that has been disconnected from natural processes by anthropocentric actions such as dikes and levees, tide gates, dams, roads, and railway berms. Remove undersized and/or blocking culverts, bridges, and fishways.

*Water Quality and Quantity:* Take actions necessary to reduce temperature, increase dissolved oxygen and reduce fine sediment and turbidity from tributaries and mainstem reaches. Reduce the impacts of low flow on fish productivity. Ensure the Stillaguamish Instream Flow rule is fully implemented and flows protected for instream needs.

Purchase water rights from landowners as they become available to supplement existing flows.

### Harvest

The Recovery Plan states, that “Washington Co-Managers have set an exploitation rate of 25% for the Stillaguamish Chinook salmon management unit.” According to the simulation model this level of exploitation affords a 92% probability of recovery and a 4% risk of the management unit falling below the critical escapement threshold of 500. It is the goal of the SIRC that the exploitation rate of Stillaguamish Chinook salmon stay at or below 25%.

### Hatchery

There are currently captive brood stock programs on both the North and South Forks of the Stillaguamish. The intent of the program is to help restore the listed populations, and release sub-yearling North and South Fork Stillaguamish origin fish each year. Specific performance measures for the program include: 1) initially maintain and then increase the total abundance of the composite natural/hatchery Chinook salmon populations; 2) as habitat improves, increase the ratio of natural origin spawners vs. hatchery origin spawners on the spawning grounds; 3) produce hatchery reared fish that are similar to natural origin fish in morphological and life history traits; 4) maintain the genetic diversity of the population.

## **Anticipated Progress on 2010 – 2012 Stillaguamish Salmon Recovery Work Plan**

During the 2010 - 2012 field seasons it is anticipated that several projects on the 3year work plan will be completed or well underway, notwithstanding monitoring and maintenance. These projects include Lower Pilchuck Wetland Restoration, Blue Slough Channel Reconnection Phase III, ELJ Placement on the North and South Fork, Stillaguamish Big Tree Placement, Knotweed and Spartina invasive species control, and the Leque Island and TNC Dike Removal (see concerns regarding farmland and estuary restoration). Several large-scale reconnection and restoration projects have begun preliminary feasibility and design such as Gold Basin, South Slough and South Meander. There are many projects ongoing related to fish passage, hatchery, harvest, outreach and education, monitoring and adaptive management and watershed coordination that have continued to show annual progress.

## **3 Year Workplan Organization**

Continuing with a change initiated in the 2009 workplan, this year’s update organizes and lists projects that have been funded (completed or ongoing), along with some large-scale potential acquisitions or restoration projects. Previous iterations of the 3-Year work plan included many conceptual projects with little ownership or specificity. By capturing the major habitat limiting factors and the targets for 10 years of recovery in each category we

can calculate work done to date by adding completed project performance measures, (e.g. linear miles or acres of riparian planted). The remainder of the target should be useful guidance for sponsors wanting to do worthwhile recovery projects that scientists feel will do the most good for Chinook salmon (e.g. Riparian 10 Year target 400 acres planted (2005-2009) 200 acres planted. Therefore (2010-2014) will need 200 more acres planted.

An additional section dealing with invasive species (primarily knotweed and spartina) was added to the capitol projects table for the 2010 update. Although a specific goal is not listed in the plan for dealing with invasive species, the local stakeholders have come to see this as a critical effort to maintain existing high quality habitats, and prevent further degradation.

While this new approach is being viewed as an experiment and will be evaluated each year during the work plan update, there are stakeholders in our watershed group (SWC) that prefer the past format of listing all potential salmon recovery projects in the document. The lead entity and SWC need to determine which method is most useful for potential project sponsors, the PSP and RITT, as well as carrying out the complete implementation of the WRIA 5 Chinook Salmon Recovery Plan.

Table 1. Breakdown of 2010-2012 3-year work plan projects by capital (limiting factor) and non-capital project types.

Capital Projects	Units	10 Year Goal	Progress since 2005	Ongoing Degradation	10 Year Goal Remaining	Additional Funding needed Next Three Years
Riparian	Acres	400	235.7	?- Trend is one of decreasing near stream forest cover (LandSat)	164.3	\$1,050,600
Estuary/Nearshore	Acres	315	0	New Bulkheads/Armoring placed yearly	315	\$1,680,773
Large Wood		51	4	unknown quantities of wood removed yearly for firewood/"public/infrastucture safety"	47	\$1,193,864
Floodplain	Acres	30	6.7	No new known side channel impacts	23.3	\$1,184,500
	Miles Armoring removed	4.1	-0.4	0.43 miles added, 0.03 miles removed	4.5	\$436,377
Sediment	Major Landslide Treatments	2	1	No new major slides noted	1	\$1,545,000
	Forest Road Treatments	106	Working on reporting problems	Forest Roads being brought up to standard, problems with DNR tracking progress by WRIA	?	\$1,455,733
Acquisition	Acres	1445	525	? - Land being subdivided and cleared at an alarming rate	920	\$5,705,342
Invasive Species Control	Acres Treated	Will Vary	2363.4	Making good progress at controlling Spartina and Knotweed	Eradication of Spartina and Knotweed from the Watershed	\$300,000
Total Capital Need (3 yr)						<b>\$14,552,188</b>
<b>Non Capital Needs for the Next Three Years</b>						
Hatchery	program					\$308,220
Harvest	program					\$5,769
Stewardship	program					\$1,450,000
M&AM	program					\$1,452,788
						\$3,574,115

## Update on response to recent TRT Comments

The continued struggle of balancing between restoring historic habitat and protecting what is left of the good habitat is a high priority discussion topic in WRIA 5 but a definitive solution has yet to be found. Individual watershed partners track and comment on local government regulations such as Critical Area Regulations, Shoreline Master Plan and Comprehensive Plan updates, and development applications but the Stillaguamish Watershed Council (formerly the Stillaguamish Implementation and Review Committee, SIRC), our local watershed stakeholder group, has not felt they have the jurisdiction nor authority to require any compliance with our Chinook Recovery Plan. **We did make it clear in our plan that we DO NOT feel as a watershed we can recover Stillaguamish Chinook Salmon without major changes made at the State and Federal levels including: adequate in-stream flows, improved timber harvest regulations and enforcement to reduce peak flow activity, improved water quality enforcement and compliance, improved protection and enforcement on agricultural lands, and development regulations that protect critical habitat throughout the floodplain and the estuary. Many of our biggest hurdles to recovery need regional action.**

The Stillaguamish watershed is actively working to reduce sediment inputs in the headwaters from landslide and road activities. At the same time efforts are underway to begin to remove some hardened banks allowing both the estuary and floodplain to recapture historic habitat. We currently are carrying out projects throughout the watershed, which combine salmon recovery with water quality and water quantity benefits. The efforts to implement a TMDL, In-stream Flow regulations and a salmon recovery plan are occurring simultaneously. Restoring floodplain and hydrologic function is a primary example of the need to develop regional protection guidelines for actions beyond the scope of an individual watershed. Rules need to be developed to reduce increasing winter peak flows as well as to help increase summer low flows. Bank armoring and floodplain developments have to be addressed as impediments to recovering Stillaguamish Chinook salmon. Future development should not occur in the floodplain or impinge on critical ecosystem processes.

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?

Currently the Stillaguamish watershed 3-year work plan process does not have a screen or filter to prioritize or eliminate projects on the front end. It has been our philosophy to allow the local ranking and state review process to create a priority list of projects. With that said all our project sponsors and partners are aware of the critical limiting factors

effecting Chinook production. Projects are categorized within each of the six limiting factors. Project sponsors are advised to consult the Stillaguamish Chinook Recovery Plan for fit with the watershed strategy. Over the past decade the watershed strategy has been to not prioritize between limiting factors as it was and is felt that the interaction of the major limiting factors are all interwoven and equally important. That said, there is a need to address factors beyond our control that limit our ability to carry out actions needed to recover Chinook salmon, such as: hardened bank removal, reduction in the magnitude and frequency of peak flows, and the reconnection of the main-stem river to its floodplain. Several projects or suites of projects are underway to reduce sediment, restore riparian areas, control invasive species, reconnect side channel habitat, and the installation of Engineered Log Jams (ELJ's) to both the North and South Forks.

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

Projects on the Stillaguamish 3year work plan are a mix of large capital, small-scale capital and non-capital. Depending on which limiting factor is being addressed there is positive movement of select habitat improvement on a trajectory that could reach the ten year goal in time. Riparian restoration and sediment reduction are examples of actions moving forward as planned. Removal of hardened banks and reconnection of the river to its floodplain are examples of actions that are not only not on target but are actually losing ground with increased bank protection and development of infrastructure in the floodplain. Placement of large wood is moving forward but not as quickly as planned. Time has been taken to develop a prioritization plan for locating wood, riparian, side channel reconnection and cold water inputs. Peak flows continue to be a huge issue with increasing magnitude and frequency. Some of the hydrology issues can be addressed by restoring natural flow patterns across the landscape but much of the needed change will only come about by changes in State and Federal legislation. Again we need your help in addressing issues beyond the watershed scale.

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

This could be easily determined by reviewing the 2009 Monitoring and Adaptive Management Report. Unfortunately the completion of that report does not coincide directly with the 3-Year work plan update schedule. We will include a draft update table with this update, which addresses harvest, hatchery and habitat progress. By using an integration process to link habitat to harvest and hatchery actions we can adjust our trajectory to meet changing conditions. Projects on the 3year work plan include a multitude of priorities from the highest to the lowest. All projects should be linked to the priorities in the Chinook Recovery Plan. The ultimate goal of the 3year plan is to develop an inclusive list of projects that protect and restore Chinook habitat throughout the Stillaguamish basin. The projects funded under each limiting factor are prioritized during local evaluation. The watershed goal is to maintain maximum flexibility as projects become available throughout the funding cycle. Properties go on the market and catastrophic events occur that may cause an immediate shift in priorities. The 3year work

plan has, up to the present, been used primarily for SRFB and DOE Centennial project funding. It is a goal to make the project list a universal document that can steer potential sponsors to numerous funding opportunities outside of traditional sources. This change or opportunity will become available over the coming year. A prioritization scheme will also be developed during the same time period. Currently the thinking at the watershed is prioritization will occur within each of the limiting factors but not between factors. If current or future research indicates a definitive bottleneck, highlighting one of our existing limiting factors, this strategy will be adjusted accordingly.

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?

Our implementation priorities are again based on the six factors we feel are limiting production of Stillaguamish Chinook. These factors are currently equally weighted as we feel there is a need to implement them all in order to bring about meaningful restoration and protection. We are implementing actions that have concurrence and willing landowners at this time. These actions include riparian planting, large wood placement, landslide and road treatment to reduce fine sediment input, and control of invasive species. Currently there are non-capital projects on the list that include harvest, hatchery, monitoring, and education and outreach that would not typically be funded under existing SRFB guidelines and priorities. Had it not been for the PSAR funding from the governor and legislature our highest priority SF Chinook Supplementation Project would not have been funded in 2007. Our Stillaguamish Chinook Recovery Plan describes in detail how our harvest, hatchery and habitat are integrated to bring about recovery. If H-Integration is truly a concept that the federal and state government support then funding should be adjusted to implement projects in all categories.

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?

There are no dramatic changes in the strategy or approach from previous years or the original Stillaguamish Chinook Salmon Recovery Plan in 2005. Our goal has been to use the critical habitat limiting factors, believed to be the cause of reduced Chinook production, in conjunction with harvest and hatchery actions to bring about recovery to harvestable levels of fish.

6. What is the status or trends of habitat and salmon production in your watershed  
Natural escapement of both North Fork and South Fork Stillaguamish Chinook salmon has remained relatively steady since the 1970s (Fig. 1).

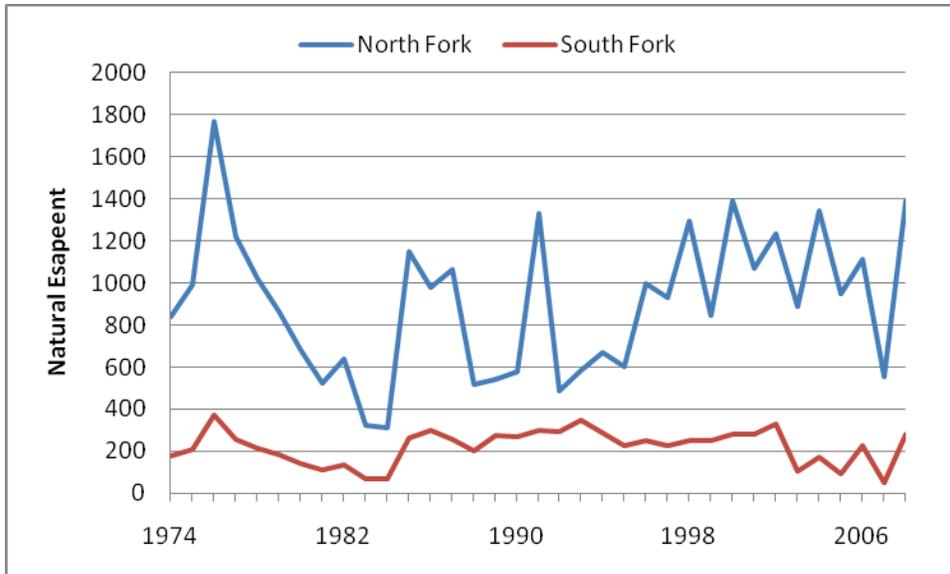


Figure 1. Natural escapement of North Fork and South Fork Stillaguamish Chinook salmon, 1974-2008. Fish removed for hatchery broodstock are not included in these figures. SOURCE: WDFW spawning escapement surveys.

The natural origin portion of the natural escapement shows a similar pattern, although there appears to be a long-term steady decline in the South Fork since the mid-1990s and evidence of a progressive increase in North Fork NOR escapement during that period, except for 2006 and 2007 (Fig. 2).

Because exploitation rates on Stillaguamish Chinook have continued to decrease (Fig. 3) without a corresponding increase in escapement, we conclude that the productivity and capacity of habitat supporting chinook salmon in the Stillaguamish basin continues to decline, or certainly is not improving.

The continued decline in the natural origin portion of the South Fork population, combined with recent genetic evidence that this group remains a unique population, has resulted in the evaluation of a captive brood program to prevent extinction of this population.

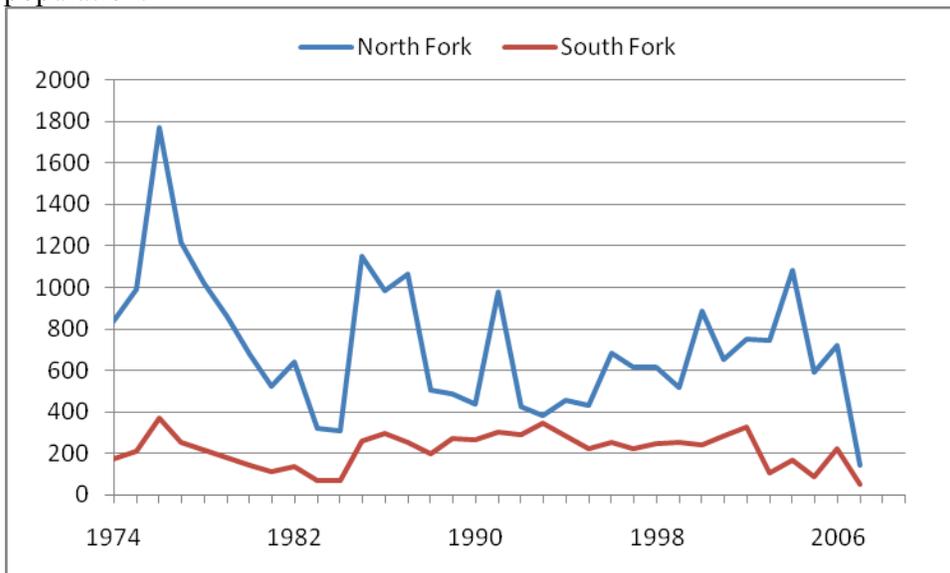


Figure 2. North Fork and South Fork Stillaguamish natural origin Chinook escapement, 1974-2007. Does not include fish removed for hatchery broodstock. SOURCE: Sampling data from the Stillaguamish Tribe applied to total escapement estimates in Fig. 1.

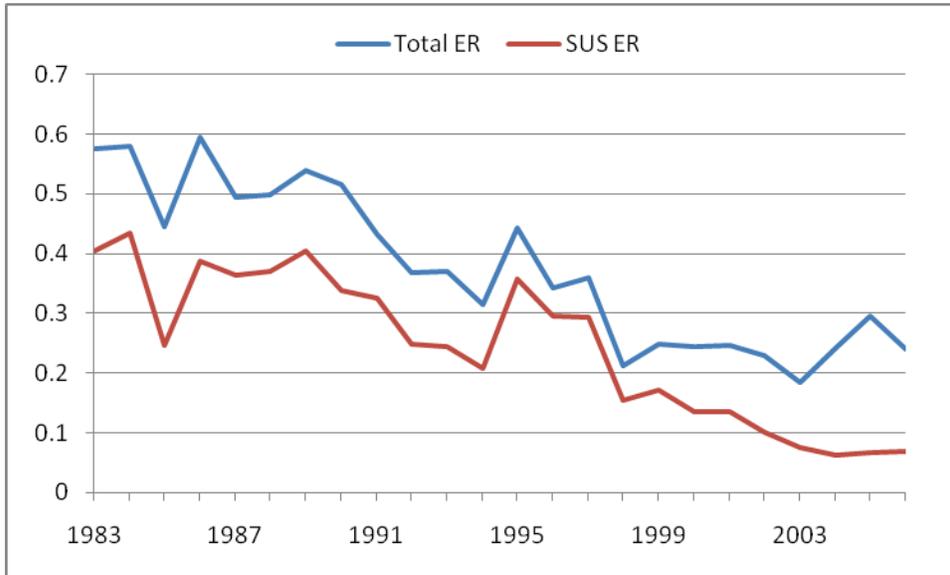


Figure 3. Annual exploitation rate on Stillaguamish Chinook salmon as measured by post-season FRAM runs, 1983-2006. “Total ER” is the estimate of the fraction that the potential escapement was reduced by all sources of fishery-related mortality. “SUS ER” is the part of that that occurred in United States waters south of the southern United States- Canada border. SOURCE: Northwest Indian Fisheries Commission and WDFW post-season FRAM runs, 2007.

We are seeing use of ELJ projects by Chinook as well as an increase in spawning downstream of the Steelhead Haven Landslide Remediation Project. Up to 100 redds were seen downstream of the landslide for the first time in several decades. It is far too early in the recovery process to detect a trend in actual fish numbers. Primarily fish are redistributing themselves throughout the watershed as conditions begin to improve. The South Fork Chinook population continues to be depressed. Spawning escapement has ranged from 43 up to 200-300 fish over the past several years. A brood stock program is being established by the Stillaguamish Tribe to supplement the natural spawning population with fish reared and released during normal out migration timing.

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

Currently we are working with the PSP to find a solution to the hydrology/peak flow issue associated with forest practices and road drainage networks. Impacts from peak flows have been devastating to eggs and fry in the gravel. Monitoring out migration at our downstream smolt trap shows dramatic reductions in Chinook production during years of high peak flows, which seem to be recurring each year. The primary land use upstream and surrounding Chinook spawning habitat is forestry, coupled with a changing climate solutions need to be found to reduce downstream impacts. Secondly we are faced with a new hurdle to implementing salmon recovery projects. Snohomish County now requires project proponents to go before the Agricultural Advisory Board with any

project that may potentially impact farmland. This board is advisory to the County Council and makes recommendations concerning agricultural lands and potential impacts. There focus seems to be primarily on salmon projects, housing and other developments that convert farmland do not receive the same scrutiny. The local farm bureau has also taken a stance of no-net-loss of Agricultural ground. We could use some help from the PSP and NOAA Fisheries to get this issue resolved as soon as possible. The PSP has provided significant assistance in resolving issues related to the estuary restoration project at Leque Island. There has been opposition from the local Farm Bureau, waterfowl and bird watching interests and most recently drinking water associations on Camano Island. The Co-Lead entity in the watershed will continue to try and resolve the issues preventing recovery from happening. Most recently during high tide events the dikes surrounding Leque Island have been breached potentially allowing listed Chinook, steelhead and bull trout juveniles to swim freely throughout the property.

It was pointed out recently by the Stillaguamish Flood Control District, that any removal of bank armoring should be well thought out and could exacerbate conditions leading to increased erosion and destruction of existing infrastructure. In order to complete the floodplain bank armor removal goal as outlined in our Chinook Salmon Recovery Plan we need to remove armoring and allow the river to recapture a portion of its historic floodplain. In some cases, we must seek to find creative solutions that could combine salmon restoration and flood protection. Another area of concern from the district and others is the acquisition of land for protection with little or no funding for stewardship, maintenance or restoration. This is an on-going problem that again needs a regional fix.

**Three-Year Stillaguamish Salmon Recovery Work Plan: 2010 - 2012**

Numbers in [ ] indicate amount of progress that is anticipated by 2012, but not realized as of 2010.

Capital Projects from Plan  
 Funded 2005-date  
 Concept/Pending Funding

**Capital projects and programs**

ID	Project Type/Name	Units	Quantity	Sponsor	Project/Program Status	Cost/Unit	Total Cost for 10 Year Goal	Next 3 Year Cost	2010	2011	2012
1	<b>Riparian</b>	Acres planted (In priority areas)	400	Many	10 year Goal	\$8,667	\$3,466,980	\$1,050,600	\$350,200	\$350,200	\$350,200
2	<b>Banksavers Inmate Crew</b>	acres	184.5	Stillaguamish Tribe	ongoing						
	<b>Miscellaneous local planting efforts</b>	acres	40	Various	Complete						
3	<b>South Fork Big Trees</b>	acres	9.4	SnoCo	ongoing						
4	<b>North Fork Big Trees</b>	acres	1.8	SnoCo	ongoing						
5	Progress since 2005	Acres	235.7								
	Total 10 year Target Amount Remaining	Acres	164.3								
	North Fork and Tributary Goal remaining	Acres	60								
	South Fork, Tributaries, and Pilchuck Goal Remaining	Acres	60								
	Mainstem Goal Remaining	Acres	44.3								
6	<b>Estuary</b>	Acres tidal marsh restored	195	TNC, Tribes, WDFW, Counties	10 year Goal	\$23,690	\$4,619,550	\$1,399,864	\$466,621	\$453,030	\$453,030
7		Acres tidal marsh created	120	TNC, Tribes, WDFW, Counties	10 year Goal	\$7,725	\$927,000	\$280,909	\$93,636	\$90,909	\$90,909
8	<b>Leque Island Restoration</b>	Acres	[115]	DU	Funded/no construction yet						
9	<b>Port Susan Bay Preserve Dike Removal</b>	Acres	[180]	TNC	Partially funded, Final design complete						
	Progress since 2005	Acres	0								
	10 year Target Amount Remaining	Acres	315								
10	<b>Large Wood</b>	Large river ELJs	51	Stillaguamish Tribe, Snohomish County, Sno. Cons. District	10 year Goal	\$77,250	\$3,939,750	\$1,193,864	\$397,955	\$386,364	\$386,364
11	<b>North Fork ELJs</b>	Large river ELJs	1	Stillaguamish Tribe	Funded, ongoing						
	<b>South Fork ELJ's</b>	Large river ELJs	[3?]	SnoCo	Funded/no construction yet						
12	<b>Steelhead Haven</b>	Large river ELJs	1	Stillaguamish Tribe	Complete						
13	<b>Hazel ELJs</b>	Large river ELJs	2	Stillaguamish Tribe	Complete						
	Progress since 2005	ELJ's	4								
	10 year Target Amount Remaining	ELJ's	47								
14	<b>Floodplain</b>	Miles armoring removed	4.1	Various	10 year Goal	\$319,300	\$1,309,130	\$436,377	\$145,459	\$141,222	\$141,222
15		Acres restored	30	Various	10 year Goal	\$118,450	\$3,553,500	\$1,184,500	\$394,833	\$383,333	\$383,333
16	<b>North Meander Pilchuck</b>	Acres restored	6.3	SnoCo	Complete						
17	<b>Wetland/Floodplain</b>	Miles Removed	0.03	Stillaguamish Tribe	Complete						
18	<b>Blue Slough Phases II-III</b>	Acres restored	[3.5]	Stillaguamish Tribe	Under Construction						
19	<b>Hazel Sidechannel (formed by Hazel ELJs)</b>	Acres restored	0.4	Stillaguamish Tribe	Complete						
21	<b>Jim Creek Restoration Design</b>	Miles Removed	?	SSFETF	Funded, ongoing						
	<b>Chatham Acres Armoring Removal</b>	Miles Removed	[0.1]	SnoCo	Seeking funding						
	<b>South Meander</b>	Acres restored	[?]	SnoCo	Concept			\$4,000,000			
	<b>South Slough Feasibility and Design</b>	Acres restored	[?]	SnoCo/Arlington/Tribe	Concept			\$200,000			
	Progress since 2005 (Acres)		6.7								

ID	Project Type/Name	Units	Quantity	Sponsor	Project/Program Status	Cost/Unit	Total Cost for 10 Year Goal	Next 3 Year Cost	2010	2011	2012
	10 year Target Amount Remaining (Acres)		23.3								
	Progress since 2005 (Miles Removed)		-0.4								
	10 year Target Amount Remaining (Acres)		4.5								
22	<b>Sediment</b>	Landslide treatments	2	Stillaguamish Tribe	10 year Goal	\$2,317,500	\$4,635,000	\$1,545,000	\$515,000	\$500,000	\$500,000
23		Forest Road Treatments	106	USFS, WADNR, Tribes	10 year Goal	\$41,200	\$4,367,200	\$1,455,733	\$485,244	\$471,111	\$471,111
24	<b>Segelson Road Treatments</b>	Road Treatments	?	Snohomish Conservation District	Complete, staff changes made for reporting problems						
25	<b>Steelhead Haven Slide Remediation</b>	Landslide treatments	1	Stillaguamish Tribe							
26	<b>Deer Creek Headwaters Erosion Control</b>	Road Treatments	?	Snohomish Conservation District	Complete, staff changes made for reporting problems						
27	<b>Higgins Instream</b>	Sediment Stored	?	Stillaguamish Tribe-USFS	Complete, monitoring data incomplete						
28	<b>Gold Basin Feasibility and Design</b>	Landslide treatments		Stillaguamish Tribe-USFS	Pending			\$150,000	\$50,000	\$50,000	\$50,000
29	<b>Canyon Creek Roads Phase I&amp;II</b>	Road Treatments	21.6	Stillaguamish Tribe-USFS	Phase I Funded, Phase II still needed			\$918,000	\$306,000	\$306,000	\$306,000
	<b>Trangen Meander Feasibility and Design</b>	Landslide treatments		SnoCo	Concept			\$197,000			
	<b>Gold Basin Construction</b>	Landslide treatments	[1]	Tribe/USFS	Concept			\$1,500,000			
	Progress since 2005 (Landslides)		1								
	Progress during 2009 (Forest Road Treatments)		applications for 56 miles of new road, 26 miles of abandonment		Working on reporting problems going back to 2005						
	10 year Target Amount Remaining (Landslides)		1								
	10 year Target Amount Remaining (Forest Road Treatments)		?		Working on reporting problems going back to 2005						
30	<b>Protection/Acquisition</b>	Acres acquired in Priority Reaches (Floodplain, Riparian, Large Wood, Estuary)	1445	Tribes, CLC, WCLT, TNC	10 year Goal	\$11,845	\$17,116,025	\$5,705,342	\$1,901,781	\$1,846,389	\$1,846,389
31	<b>Arney Acquisition/Restoration</b>	fee simple	19.35	CLC/Stillaguamish Tribe	Pending						
32	<b>Graafstra Floodplain</b>	fee simple	137	City of Arlington	Complete						
33	<b>Pilchuck Wetland/Floodplain</b>	fee simple	70	Stillaguamish Tribe	Complete						
34	<b>Fish Creek Buffalo Farm</b>	fee simple	56	Stillaguamish Tribe	Complete						
35	<b>Grandy Lake C-Post</b>	Easement	80		Complete						
36	<b>PTF Hazel Hole Conservation</b>	Easement	26		Complete						
37	<b>French-Segelson Acquisition/Restoration</b>	fee simple	77, [21]	CLC	in process						
38	<b>Klein Farm Acquisition</b>	fee simple	60	Stillaguamish Tribe	Pending						
	<b>Noble Acquisition</b>	fee simple	[137]	Stillaguamish Tribe	Pending						
	<b>Ellingsen Acquisition</b>	fee simple	[240]	Tribe/CLC	Concept			\$5,000,000			
	<b>Rengen Acquisition</b>	fee simple	[210]	Tribe/CLC	Concept			\$4,000,000			
	<b>Gardner Acquisition</b>	fee simple	[3]	Tribe	Concept			\$150,000			

ID	Project Type/Name	Units	Quantity	Sponsor	Project/Program Status	Cost/Unit	Total Cost for 10 Year Goal	Next 3 Year Cost	2010	2011	2012
	<b>Sierra Pacific Upper NF Timberland Acquisition</b>	fee simple	[1000]	Tribe/CLC	Concept			\$1,000,000			
	<b>Deer Creek Timberland Acquisition</b>	fee simple	[1000]	Tribe/CLC	Concept			\$1,000,000			
	Progress Since 2005	Acres	525.35								
	10 year Target Amount Remaining	Acres	919.65								
	<b>Invasive Species Control</b>	<b>Acres treated</b>	<b>Not specified in Plan</b>	<b>Various</b>	<b>As needed to deal with emerging threats</b>	<b>Varies</b>	<b>\$1,000,000</b>	<b>\$300,000</b>	<b>\$100,000</b>	<b>\$100,000</b>	<b>\$100,000</b>
	Progress since 2005	Marine acres treated (primarily Spartina)	1928.3								
		Freshwater riparian acres treated (primarily Knotweed)	435.1								
	Amount Remaining										
						<b>Total capital need</b>	<b>\$44,934,135</b>	<b>\$14,552,188</b>	<b>\$4,850,729</b>	<b>\$4,722,559</b>	<b>\$4,722,559</b>