SKAGIT (WRIAs 3 and 4)

HABITAT CAPITAL PROGRAM
2011 UPDATE

SUMMARY NARRATIVE

The three-year work plan/program updates should include a narrative to describe the progress, changes, and status of recovery implementation and your work program since the previous year's update. These narratives can be a summary. Some questions may not be answerable at this time, please note where you cannot answer the questions.

Overview

The 2011 *Skagit Basin Three-Year Work Program (3 Year Project List)* updates those projects and programs, active and planned, targeted at the recovery of Chinook salmon populations in the Skagit watershed for the next three years (2011, 2012, and 2013). This update was completed by Skagit Watershed Council staff in consultation with project sponsors and local technical experts. The actions identified are consistent with the recovery needs found in the *Skagit Chinook Recovery Plan* (Beamer et al. 2005). The proposed actions also provide valuable habitat benefits to other listed and non-listed species including bull trout, steelhead, pink, chum, and coho salmon.

Until a forum exists for the integration of all elements of the Skagit Chinook Recovery Plan, our Three-Year Work Program is limited in scope to those elements contracted and funded under the lead entity authority. This includes the Habitat Capital program, non-capital needs related to the habitat capital program, and watershed research needs not identified in harvest and hatchery programs.

With respect to monitoring and adaptive management the Watershed Council has been engaged with Puget Sound Partnership and the Recovery Implementation Technical Team (RITT) in their development of a watershed-scale adaptive management framework (template) for over a period of the last two years. The RITT has used the Skagit as one of three chapters to build an adaptive management framework for the watershed chapters of the Puget Sound Salmon Recovery Plan. Last year we anticipated the template would be made available to us to vet and flesh out, while furthering a dialogue about the technical components of recovery. As of this update, an early summer release of the template has been projected. The shape or form of future engagement on integration of the parts of the Skagit Chinook Recovery Plan cannot yet be projected at this time.

Summary of Changes to the Three Year Habitat Capital Project List for 2011

Changes to the Skagit Three Year Work Program for 2011 include an update of the status of active projects from the 2010 list, and removal of six projects for reasons explained in the list. Our annual SRFB grant process remains open to take advantage

of new opportunities as they arise, and the 2011 Habitat Capital projects list includes seven new (color-coded) project proposals with six currently under review for the 2011 SRFB grant round. Three of these are projects not previously identified that were considered consistent with our updated Strategic Approach; one is a continuation of the successful floodplain habitat protection acquisitions; two were identified in the Skagit Chinook Recovery Plan; and one was identified in our middle Skagit assessment. A reminder that the Habitat Capital Projects list is organized to reflect the Tiers and Target Areas (Table 1) adopted in the 2010 update of the Council's Strategic Approach provided last year.

Research and monitoring needs have not yet been updated. New information for these projects and programs will be incorporated as it is available.

Year 2012 and 2013 estimated project costs and activities are approximate. With this year's list we have interpreted the "20xx Estimated Cost" column to be the year in which a funding request of a certain amount will be made. The "20xx Activity to be funded" column indicates the type of work on the grant that is expected to occur during that year regardless the year the activity was funded.

We remain focused on developing projects in our target areas and out-planning. We are completing a project to identify restoration opportunities in a 43-mile reach of the middle Skagit River, which has increased the number of identified restoration actions from 7 to 21. Two of these projects and several proposed acquisitions are included in this year's Work Program. As with last year's update, we are providing a longer-term context for viewing the collection of actions supporting the implementation of the Skagit Chinook Recovery Plan. Accompanying this summary and Three Year Work Program spreadsheet is a Gantt chart listing of projects funded and planned from 2000 through approximately 2020. Projects funded in multiple phases are shown on a single line, color-coded by different stages of development. Those projects on the Three Year Work Plan are bracketed by dark vertical lines for reference. The Gantt chart is provided as a visual aid for understanding the stage of development and timeline for projects that exist beyond the 2011-2013 Work Program window. As planned projects are ready for implementation they will move or be moved into the three year planning window.

Table 1. Summary of Target Areas for the Skagit Watershed Council 2010 Strategic Approach.

Tier	Target Area	Description	Geographic Locations within Watershed	Importance to Skagit Chinook Production
1	Skagit Estuary	Estuarine emergent marsh, estuarine scrub shrub.* Saltwater-freshwater mixing areas. Most productive aquatic ecosystem in watershed. Remaining brackish habitats areas are highly compressed due to dikes and levees. Key habitat features include delta distributaries and blind sloughs.	Skagit Bay including Fir Island bay front; lower end of North and South Fork Skagit River; Swinomish Channel; and associated wetlands on Padilla Bay	Critical physiological transition zone for juvenile Chinook (all life history types). Highest growth rates for juvenile Chinook in watershed (hence high ocean survival). Loss of habitat substantially reduces juvenile survival in Puget Sound and ocean.
	Riverine Tidal Delta	Riverine tidal marshes and wetlands* are the second most productive aquatic ecosystems in watershed.	North and South Fork Skagit River up to and including Cottonwood Island	Historically expansive habitat area for delta-rearing Chinook juvenile life history type. Rearing habitat areas limited due to dike and levee system.
	Floodplains (mixed population rearing)	Broad large-river floodplain areas with prominent alluvial features formed by channel migration, including secondary (islanded) channels, backwater habitats, freshwater sloughs, and oxbows. Highly productive aquatic habitats due to frequent floodplain inundation and extensive wetlands.	Floodplains of the Skagit River from Cottonwood Island to Marblemount, and the Sauk River up to Darrington.	Historically expansive rearing habitat area for distinct riverine juvenile Chinook life history type. Middle Skagit provides rearing habitat for all six independent Chinook populations in Skagit. Growth rates of juveniles equivalent to tidal freshwater habitats. Major spawning areas for fall and summer Chinook.
2	Nearshore Pocket Estuaries	Isolated and relatively small estuary habitats located along nearshore areas of Skagit Bay (WRIA 3).	Pocket estuaries in Skagit Bay that are in close proximity to the delta	Rearing habitats for fry migrant Chinook salmon emigrate from Skagit River in large numbers. Ocean survival rates extremely low (near zero) for emigrating fry that don't rear in these habitats.
	Floodplains (single population rearing)	River floodplain areas with prominent alluvial features formed by channel migration, including secondary (islanded) channels, backwater habitats, freshwater sloughs, and oxbows. Highly productive aquatic habitats due to frequent floodplain inundation and extensive wetlands. Large tributaries that currently or historically provided extensive spawning and rearing habitat areas for Chinook salmon.	Floodplains of the upper Skagit (above Marblemount), upper Sauk (above Darrington), Suiattle, and Cascade Rivers. Day Creek, Finney Creek, Illabot Creek, Bacon Creek	Major spawning areas for single Chinook populations. Historically expansive rearing habitat area for riverine juvenile Chinook. Important to spatial structure and life history diversity of Chinook populations according to NOAA Viable Salmonid Population (VSP) criteria.
3	Sediment and Hydrology Impaired (High Risk) Watersheds	Watersheds that have been identified as major sediment risk areas to important downstream Chinook spawning and rearing habitats. Watersheds located in unstable soils, sedimentary geology, and which possess high densities of forest roads.	Major tributaries to lower Cascade River, lower Suiattle River, and middle Skagit.	Increased risk of severe habitat degradation and reduced Chinook survival due to high risk of landslides, road failures, combined with peak flows caused by historic land management (i.e., logging) and forest road development.

* See Skagit Chinook Recovery Plan (2005) Appendix D for definitions.

Responses to Watershed Questions for Three-Year Work Programs

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?*

Attached is our updated list of actions and projects identified for some phase of implementation within the next three years. The format of the list complies with the regional template. As we have for the past several years, projects are color-coded by status as follows to assist review:

- Added to the list for 2011
- Removed from 2011 list
- In progress, phased implementation and funding
- Completed projects proposed for or being monitored

Also attached is a Gantt chart showing those projects on our Three Year Work Program within the context of a larger timeline.

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

An analysis of projects done last fall shows that about 12% of the restoration goals for the tidal delta have been achieved and that we are currently keeping pace if we assume the habitat goal is on a 50 year timeline. The Fisher Slough tidal marsh restoration should be largely completed by this year, and two tidal delta projects on WDFW land, Cottonwood Island and Fir Island Farms, could be implemented in the next couple of years. Whether or not we can keep up this pace is debatable as many of the remaining projects involve privately owned agricultural land.

In the freshwater, more progress has been made in acquisitions for protection of existing habitat than in restoration. Roughly 47 percent of Skagit SRFB funds have gone toward acquisitions, primarily for protection of functioning floodplain habitat, although we do not yet have a means by which to estimate the maintenance or loss of the existing habitat following the baseline estimate in the recovery plan. The results of the Middle Skagit project development work should help us in moving more freshwater restoration projects forward in the next five years.

We do not yet have templates finalized for estimating the benefit of proposed restoration projects available for use by our project sponsors. The Watershed Council plans to focus more time in the coming year on completing those templates, producing estimates of juvenile holding capacity of projects, and keeping project information current in the Habitat Work Schedule.

An important piece of an adaptive management strategy that is not yet in place is effectiveness monitoring of projects to test the model predictions, especially on large, complex, and high profile projects. At this time, implementation and effectiveness monitoring of habitat restoration projects is spotty at best. The funding sources for

these restoration projects, particularly those with large capital investments, should include the funding for a minimum period of monitoring. All of our projects are experiments, none exactly like the next. The opportunity to learn and adapt is lost without this small investment.

3. *What is the general status of implementation towards your habitat restoration, habitat protection, harvest management, and hatchery management goals? Progress can be tracked in terms of 'not started, little progress, some progress, or complete' or in more detail if you choose.*

Please see the discussion for the question above relative to the habitat capital program. This narrative does not attempt to speak to harvest and hatchery management goals. As harvest goals are currently limited by habitat, however, habitat restoration and protection is actively and aggressively pursued in the Skagit. We don't yet have the complete yardstick by which to measure our progress.

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?*

Last year the Skagit Watershed Council updated our Strategic Approach and refined target areas based on the Skagit Chinook Recovery Plan (Table 1). These target areas are divided into three tiers based on their importance to Chinook salmon recovery and on the number of populations that will benefit from habitat protection and restoration actions within each area. While projects in all tiers are consistent with the Chinook Recovery Plan, projects within the Tier 1 target areas are the primary focus as they are the habitats used by all six Skagit Chinook populations.

In terms of sequence, our restoration community is making progress in important areas where they can. We are also just completing a larger scale planning effort to identify reaches and projects with the greatest benefit in the Tier 1 floodplain target area of the middle Skagit River. We expect the resulting Habitat Protection and Restoration Master Plan for the Middle Skagit River to bring more understanding and focus on restoration needs and priorities within both the restoration community and the community at large to enable some of the more challenging and important projects to move forward.

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 & why?*

The Middle Skagit Master Plan does not constitute a fundamental change in priorities since last year, but there is greater focus on areas and projects that will net greater or more measureable progress. The greatest change we see in our strategy has been since adoption of the Puget Sound Salmon Recovery Plan. Because of our six listed

Chinook stocks and the focus of our funding sources, we have not developed specific strategies or prioritized actions that will benefit other listed species or areas.

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

No status and trend monitoring of habitat in the Skagit is conducted. This year we did, however, complete repeat habitat mapping and update a bank modification inventory for 43 miles of mainstem Skagit River from Sedro Woolley to the Sauk River confluence as part of an assessment to identify restoration locations. The assessment repeated the same photo-based methods used to quantify freshwater habitat in the 2005 Skagit Chinook Recovery Plan. In the absence of any major restoration in the reach, the estimated juvenile holding capacity was similar to that calculated in the recovery plan, so we can assume no loss of existing habitat in this area in the intervening years. Refer also to the first paragraph in Question #2. From a restoration standpoint, there has not yet been enough restoration completed to detect a change in the population.

NOAA is still in the process of conducting a five year review of the status of 27 ESU's & DPS's of Pacific salmon and steelhead. And while Chinook smolt estimates obtained at the Skagit smolt trap appear to be improving over time, an analysis of this trend is not available. For the most current assessment of Skagit Chinook stocks, we include this excerpt from the June 21, 2010 "Comprehensive Management Plan for Puget Sound Chinook: Harvest Management Component" by Puget Sound Indian Tribes and the Washington Department of Fish and Wildlife:

> "The 2009 spawning escapement of wild Skagit summer/fall Chinook plus the wild indicator stock groups of 7,127 was lower than the Upper Escapement Threshold (14,500; Low Abundance Threshold is 4,800) for the third year in a row, even though the three brood year escapements that contributed to the 2009 Skagit summer/fall Chinook run were all higher than 20,000, which was well in excess of the Upper Escapement Threshold. Although the lower escapement in 2007 was predicted, all three years' return abundances were apparently adversely affected by poor ocean conditions and floods. FRAM predicted spawning escapement of summer/fall naturals was modeled at 17,549 Chinook. " *(It should also be acknowledged that river harvest was allowed in 2009 in what turned out to be a poor return year.)* "The 2009 observed spawning escapement of wild Skagit spring Chinook was 978, lower than the FRAM predicted escapement of 1,204. Though lower than expected, the wild spring Chinook escapement was higher than the Low Abundance Threshold of 576, but below the Upper Management Threshold of 2,000."

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

The list of challenges to salmon recovery in the Skagit is long and persistent. As lead entity, we ask for and receive support from the RITT and the regional organization as necessary.

Last year we wrote that we were expecting the delayed adaptive management framework from the RITT that would enable us to better develop the information necessary to inform and adaptively manage our Chinook recovery work or the structure by which to engage in the dialog or process. We expected to have made progress on this front by this year. The RITT is expecting to finish that work soon, however.

From a technical standpoint, there is still a need for the region and the state to identify how to roll information up from the watershed level to make any statements about salmon or Chinook recovery at the regional or state levels. This remains a topic among the Lead Entity organizations.

Three-Year Implementation Salmon Plan for the Skagit Basin 2011-2013

Year 2011 reflects currently funded projects and those propsed in the current SRFB grant round

	Project Information and How it relates to the Recovery Plan									
Project Type	**Plan Category**	**Project Name**	**Brief Project Description**	**Priority tier of project**	**Limiting Factors**	**Document Ref for limiting factors**	**HWS Habitat Type**	**HWS Activity Type**	**Project Performance**	**Primary Species Benefiting**
CAPITAL PROJECTS										
Habitat Capital Projects										
Estuary / Riverine Tidal Delta (Tier 1)										
Restoration		Wiley Slough Estuary Restoration	Restoration of 160 ac tidal marsh	1	Loss of habitat	Skagit Chinook Recovery Plan	Estuary river delta	Estuary or nearshore	160.6 acres	Chinook
Restoration		Swinomish Channel Restoration (i.e. Fornsby or Smokehouse Floodplain)	Completion of Fornsby Ck SRTs to provide fish access and dredge spoil removal from intertidal at several locations	1	Loss of habitat	Skagit Chinook Recovery Plan	Estuary river delta	Estuary or nearshore	50 acres	Chinook
Restoration		Swinomish Channel Fill Removal	Removal of dredge spoils from west side of Swinomish Channel to restore tidal marsh habitat	1	2	Skagit Chinook Recovery Plan	Estuary river delta	Estuary or nearshore		Chinook
Restoration		McGlinn Island Causeway	Improve hydraulic connection between the N. Fork of the Skagit and Swinomish Channel to improve access by juveniles to estuarine rearing habitat in Padilla Bay	1	Loss of habitat	Skagit Chinook Recovery Plan	Estuary river delta	Estuary or nearshore		Chinook
Restoration		Milltown Island	Second phase of restoration on WDFW tidal delta island	1	2	Skagit Chinook Recovery Plan	Estuary river delta	Estuary or nearshore		Chinook
Restoration		Fisher Slough	Restores 50-80 acres of farmland within the riverine tidal zonea to channel, scrub-shrub, forested wetland, and tributary junction habitats	1	Loss of habitat	Skagit Chinook Recovery Plan	Estuary river delta	Estuary or nearshore	68 acres	Chinook
Restoration		South Fork Off Channel	Reconnection of riverine wetland in freshwater delta. Grant funding acquisition & restoration feasibility complete. Restoration not scheduled.	1	Loss of habitat	Skagit Chinook Recovery Plan	Estuary river delta	Estuary or nearshore	40 acres	Chinook
Restoration		Fir Island Farm Restoration (i.e. Dry Slough Tidegate, Goose Reserve)	Restoration of tidal marsh on 264 acres of WDFW property currently managed as a snow goose reserve	1	Loss of habitat	Skagit Chinook Recovery Plan	Estuary river delta	Estuary or nearshore	120 acres	Chinook
Restoration		Cottonwood Island	Reconnection of relict side channel for rearing habitat	1	Floodplain Connectivity & Function, Loss of habitat	Skagit Chinook Recovery Plan	Instream	Instream	170 acres	Chinook
Restoration		Deepwater Slough Phase 2	Restore and reconnect 268 ac of estuarine habitat on South Fork Skagit	1	Loss of habitat	Skagit Chinook Recovery Plan	Estuary river delta	Estuary or nearshore	268 acres	Chinook
		TOTAL ESTUARY/TIDAL DELTA CP								
Floodplain (multiple Chinook population rearing areas) (Tier 1)										
Acquisition for Protection/ Restoration		Snell Acquisition	*Proposed to remove from list for 2011. Landowner sold to another party. Acquisition of 81 acres of floodway property along 3700 feet of the Skagit River on Cockreham Is.*	1	Floodplain Connectivity & Function, Loss of habitat	Skagit Chinook Recovery Plan		Land Protected/Aquired/ Leased	81 acres	Chinook
Restoration		Gilligan Floodplain	Restore function to 170 acres of side channel and floodplain habitat in the Skagit R downstream from Gilligan Creek by removing 170 linear meters of a flood control dike and riprap & replant	1	1	Skagit Chinook Recovery Plan	Instream	Instream	170 acres	Chinook

Restoration		Skagit River Floodplain Restoration (Middle Skagit Floodplain Restoration)	Small scale restoration actions on properties permanently protected for conservation purposes in the Upper and Middle Skagit Floodplain areas; total 25 acres of riparian restoration	1	5	Skagit Chinook Recovery Plan	Instream	Floodplain Restoration	25 acres	Chinook
Restoration		Skiyou Slough	*Implementation date moved beyond 2013.* Reconnection of mainstem side channel; project needs to follow the Gilligan dike removal not yet funded	1	1	Skagit Chinook Recovery Plan	Instream	Instream		Chinook
Acqusition for Restoration		Savage Slough Acquisition & Restoration	Acquisition of 211 ac in middle Skagit w/3,460 ft of river front, portion of Savage Ck., isolated Savage Slough, and assoc. off-channel habitats	1	1	Skagit Chinook Recovery Plan	Instream	Floodplain Restoration	60 acres	Chinook
Restoration		Skagit Floodplain Riparian (Upper Skagit Floodplain Restoration)	Restore riparian area of 5 floodplain properties owned by the USFS along the Skagit R. and major trib junctions; will enhance 74 acres of protected riverine habitat	1	5	Skagit Chinook Recovery Plan	Instream	Floodplain Restoration	74 acres	Chinook
Acquisition for Protection		Skagit Floodplain Habitat Acquisition Phase 2 (Upper Skagit Acquisitions)	Acquisition of floodplain properties for protection of habitat	1	1	Skagit Chinook Recovery Plan	Instream	Land Protected/Aquired/ Leased		Chinook
Restoration		Barnaby Reach Restoration	Restoration of large side chnl complex at confluence of Skagit & Sauk Rivers	1	1	Skagit Chinook Recovery Plan	Instream	Floodplain Restoration		Chinook
Restoration		Sauk River Riparian Restoration	Restoration of 35 ac of riparian floodplain in Sauk R	1	3	Skagit Chinook Recovery Plan	Riparian	Floodplain Restoration		
Restoration		Davis Slough hydrologic connectivity	Improve/restore hydrologic connectivity of mainstem Skagit historic side channel	1	Floodplain Connectivity & Function, Loss of habitat	Skagit Chinook Recovery Plan	Instream	Floodplain Restoration		
Restoration		Howard Miller Steelhead Park off channel enhancement	Improve/restore hydrologic connectivity of mainstem Skagit historic side channel	1	Floodplain Connectivity & Function, Loss of habitat	Skagit Chinook Recovery Plan	Instream	Floodplain Restoration		
Acquisition		Skagit Watershed Tier 1 and Tier 2 Floodplain Acquisitions	Acquisitions in Tier 1 and 2 floodplain area targeting properties identified in previous benefit/cost assessment work.	1	1	Skagit Chinook Recovery Plan	Instream	Land Protected/Aquired/ Leased		
Acquisition		Skagit Watershed Tier 1 and Tier 2 Floodplain Acquisitions Phase 2	Acquisitions in Tier 1 and 2 floodplain area targeting properties identified in previous benefit/cost assessment work.	1	1	Skagit Chinook Recovery Plan	Instream	Land Protected/Aquired/ Leased		Chinook
Restoration		Robinson Road rock removal	Removal of riprap in mainstem side channel and riparian restoration	1	1	Skagit Chinook Recovery Plan	Instream	Instream/Floodplain Restoration	250 ft of hardened bank removal/~10 acres of floodplain restoration	Chinook
Restoration		Hobbit Corners Floodplain Restoration	Riparian restoration of	1	1	Skagit Chinook Recovery Plan	Riparian	Floodplain Restoration	20 acres; 30 logs	Chinook
Restoration		Ross Island Inlet Side Channel Restoration	Removal of rip rap and restoration of ripairan vegetation on ~40 acres of floodplain between Kosbab Slough and an unamed Slough. Project identfied in middle Skagit assmt.	1	1	Skagit Chinook Recovery Plan	Instream	Floodplain Restoration	40 acres	Chinook
		TOTAL FLOODPLAIN TIER 1								
Nearshore (Tier 2)										
Restoration		Lone Tree lagoon	Procket estuary restoration	2	2		Nearshore embayments	Estuary or nearshore		Chinook
Restoration		Turners Bay	Restore connectivity to pocket estuary by removing road fill	2	Loss of habitat	Skagit Chinook Recovery Plan	Nearshore embayments	Estuary or nearshore	8.7 acres	Chinook

Acquisition for Protection		Kiket Island Conservaton Acquisition	Protection of 2+ miles of shoreline, 96 ac upland peninsula island, 3.4 ac pocket estuary	2	Loss of habitat	Skagit Chinook Recovery Plan	Nearshore (Beaches), Nearshore (Embayments), Nearshore (Rocky Coast)	Nearshore or Estuarine Areas Protected	44.9 acres	Chinook
Restoration		Similk Bay	Restore intertidal pocket estuary by replacing road fill w/bridge & constructing channels	2	Loss of habitat	Skagit Chinook Recovery Plan	Nearshore (Beaches), Nearshore (Embayments)	Estuary or nearshore	23.6 acres	Chinook
Restoration		Dugualla Heights Lagoon Restoration	Restore tidal lagoon to provide access for juvenile Chinook in WRIA 6; joint WRIA funding considered. Feasibility & design work funded through WRIA 6	2	Loss of habitat	Skagit Chinook Recovery Plan	Nearshore (Beaches), Nearshore (Embayments)	Estuary or nearshore	25 acres	Chinook
		TOTAL NEARSHORE CP								
Floodplain (single Chinook population rearing areas) Tier 2										
Restoration		Day Creek Habitat Restoration	Instream & floodplain restoration in lower Day Creek funded in two phases but designed & constructed simultaneoulsy. Includes design and installation of LWD jams in chinook tributary	2	1	Skagit Chinook Recovery Plan	Instream	Instream	3 miles stream; 21 ac riparian	Chinook
Restoration		Lower Finney Supplemental Instream (LWD treatment)	Design and installation of LWD jams in chinook tributary	2	5	Skagit Chinook Recovery Plan	Instream	Instream		Chinook
Restoration		Hansen Creek Alluvial Fan (Reaches 3 & 4)	*Restoration project completed in 2010.* Restored aluvial fan and wetland function to dredged and diked tributary	2	1	Skagit Chinook Recovery Plan	Instream	Floodplain Restoration	145 acres	Chinook
Combination		Hansen Creek Reach 5 Acquisition & Restoration (previously titled Martinez Acquisition and Restoration)	Acquisition and restoration of key floodplain parcels on Hansen and Red Creeks and associated wetlands; potential for additional restoration in coordination with mgmt plan in area	1	Floodplain Connectivity & Function, Loss of habitat	Skagit Chinook Recovery Plan	Instream	Floodplain Restoration		Coho
Restoration		Illabot Creek alluvial fan restoration	Relocate Illabot Creek to historic channel	2	1	Skagit Chinook Recovery Plan	Instream	Instream	440' of channel bank	Chinook
Restoration		Finney Riparian	Conifer plantings in hardwood dominated riparian in important chinook tributary	2	3	Skagit Chinook Recovery Plan	Riparian	Riparian		Chinook
Restoration		Downey Creek Crossing	Closing or expanding Suiattle River road crossing at Downey Cr to minimize impacts to 3 ac alluvial fan. Pushed out beyond 3 yr window last year; added back in this year as schedule accelerated	2	1	Skagit Chinook Recovery Plan	Instream	Instream	3 acres of alluvial fan	Suiattle Spring Chinook
Restoration		Cascade River Trib Fish Passage	*Proposed to remove from 2011 list as barrier overtopped per Brett Barkdull. Removal of fish passage barrier at unused crossing of chinook trib on Cascade R.*	2	7	Skagit Chinook Recovery Plan	Instream	Instream		Chinook
Restoration		Suiattle Riprap Removal	Removal of riprap to improve edge habitat	2	1	Skagit Chinook Recovery Plan	Instream	Instream	900 feet	Chinook
		TOTAL FLOODPLAIN TIER 2								
Sediment & Hydrology Impaired Watersheds (restoration actions in spawning habitat) (Tier 3)										
Restoration		Diobsud Roads Erosion Control	*Road sediment reduction project in Chinook tributary completed in 2010*	3	4	Skagit Chinook Recovery Plan	Uplands	Sediment Reduction		Chinook
Restoration		Illabot Creek Road decommissioning	Permanently closing 14 mi of USFS rd to protect intact habitat in Illabot Ck	3		Skagit Chinook Recovery Plan	Uplands	Sediment Reduction		Chinook
Restoration		Suiattle Roads	*Road sediment reduction project completed in 2010* in important refuge tributaries to the glacially sediment rich Suiattle R.	3	4	Skagit Chinook Recovery Plan	Uplands	Sediment Reduction		Chinook
Restoration		Lower Cascade Roads	Deconstruction of 1.1 miles of forest road in the Boulder Creek drainage	3	4	Skagit Chinook Recovery Plan	Uplands	Sediment Reduction	1.1 miles	Chinook

Restoration		Sauk Roads	Sediment reduction work on remaining 25/50 miles of USFS roads in Sauk Prarie and Dan Ck areas identified in recovery plan	3	4	Skagit Chinook Recovery Plan	Uplands	Sediment Reduction	25 miles of roads	Chinook
Restoration		Upper Sauk Erosion Control	Reduction of road sediment from USFS road in upper Sauk R.	3	4	Skagit Chinook Recovery Plan	Uplands	Sediment Reduction	7 Miles	Chinook
		TOTAL IMPAIRED WATERSHEDS (T3)								
TOTAL CAPITAL PROJECTS AND PROGRAMS										
KEY FOR										
Habitat Capital Projects										
*	Amount of LE SRFB/PSAR funds									
	Added in 2010									
	Removed from 2010 list for reasons described									
	In progress phased implementation and funding									
	Post-project monitoring phase									
Primary Limiting Factor										
1 - Degraded floodplain and in-river channel structure										
2 - Degraded nearshore and estuarine conditions and loss of associated habitat										
3 - Riparian area degradation and loss of in-river large woody debris										
4 - Excessive sediments in spawning gravels										
5 - Degraded water quality and temperature										
6 - Impaired instream flows										
7 - Barriers to fish passage										
Acquisition										
AP- Acquisition for protection										
AR-Acquisition for restoration										
R -Restoration										
Restoration Type & Performance										
I - Instream habitat projects (stream miles treated)										
W - Wetland habitat projects (acres created/treated)										
E - Estuarine habitat projects (acres created and treated)										
L - Land acquisition projects (acres/ miles acquired for protection and/or restoration)										
R - Riparian habitat projects (stream miles/acres treated)										
U - Upland habitat projects (acres treated)										
P - Fish passage projects (barriers removed/stream miles opened/fish screens installed)										
M - Marine shoreline projects (miles/acres) (pocket estuaries and shorelines outside of natal delta areas and tributaries to Puget Sound)										
F - Floodplain reconnection projects (miles/acres)										
Hatchery Capital Projects										
Harvest Capital Projects										
Hydropower Capital Projects										
NON-CAPITAL PROGRAMS										
Harvest Management support										
Future Habitat Project Development										
Assessments										

	Sediment Impaired Watersheds	Update of 10+ year old assessment of Skagit River sub-basins following road sediment reduction work and new road inventories								
	Middle Skagit Project Development	Assessment, identify restoration actions, develop reach-specific plans	1							
	Skagit Delta Hydraulic Model	Extend FVCOM 3D hydraulic modeling across the entire geomorphic delta of the Skagit River to evaluate synergy between proposed projects and their affects on geomorphic evolution across the delta, especially in relation to flood dynamics.								
	Riprap inventory	Update 1998 inventory of hydromodifications; middle Skagit update completed in early 2010 as part of project development grant								
	Floodplain Productivity Assessment									
	TOTAL ASSESSMENTS									
Habitat protection										
Watershed Plan Implementation and Coordination										
	Lead entity Functions									
	Lead entity capacity									
	HWS									
	TOTAL WATERSHED IMPL & COORD	2011 LE budgeting in progress								
Outreach & Education										
Instream Flow protection										
Habitat Project Monitoring										
	project eff monitoring framework									
	Skagit delta habitat monitoring strategy									
	IMW									
	TOTAL HABITAT PROJECT MONITORING									
Stock Monitoring Support										
Research										
Regional Research Studies (Whidbey Basin)										
	Global Warming Impacts									
	SRT Evaluation	Project funded in 2010								
	WRIA 6 Origin of Chinook salmon in mixed stock nearshore rearing habitat				Skagit Chinook Recovery Plan					
	Habitat-based assessment of juvenile salmon in WRIA 2				Skagit Chinook Recovery Plan					
	TOTAL REGIONAL STUDIES									
Research (Skagit Watershed)										
	Yearling Chinook Research									
	Chinook Life Histories & Marine Survival									
	Hatchery/Wild Fish Interactions									
	Salmon habitat and agriculture research									
	Incorporate spawning population-based monitoring into IMW Monitoring									
	TOTAL SKAGIT RESEARCH									
TOTAL NON-CAPITAL NEED:										
TOTAL CAPITAL & NON-CAPITAL NEED:										

	Project Planning								Project Cost and Sponsor			
Secondary Species Benefiting	Current Project Status	2011 Activity to be funded	2011 Estimated Cost	2012 Activity to be funded	2012 Estimated Cost	2013 Activity to be funded	2013 Estimated Cost	Likely End Date	Likely Sponsor	Total cost of project	Local share or other funding	Source of funds (PSAR, SRFB, other)
	Near completion	Monitoring	$75,000	Monitoring	$75,000	Monitoring		2015	SRSC	$4,305,197	$2,284,954	SRFB, PSNER
Chum	Construction Completed 2009	Monitoring		Monitoring				2012	SRSC			
Chum	Construction	Construction		Monitoring				2012	SRSC	$953,600	$90,000	PSAR, PSCS
	Feasibity/90% Design	Feasibility/Design			$3,000,000	Permitting		2015	SRSC	$3,511,754	$544,861	SRFB, PSAR
Chum	Post-construction monitoring	Construction		Construction				2012	SRSC	$432,208	$57,683	SRFB, PSCS
Coho	Design & Construction	Construction and monitoring	$354,470	Monitoring	$180,000	Monitoring		2011	TNC	$7,700,000	$2,800,000	SRFB, PSAR, NOAA
Chum	Feasibility complete				$300,000	Design/Permitting		2011		$195,000	$20,000	
Chum	Feasibility	Design	$25,000		$10,000,000	Construction		2015	WDFW	$10,276,900	$50,000	PSAR, SRFB, ESRP
Coho	Design & Permitting	90% Design	$1,400,000	Permitting		Construction		2012	SCD	$1,500,000	$200,000	SRFB, PSAR
	Conceptual				$300,000	Feasibility/ Design		2017	WDFW	$4,000,000		SRFB, PSAR, PSNER
			$1,854,470		$13,855,000		$0			$32,874,659	$6,047,498	
	Incomplete								Skagit County	$516,000	$86,000	PSAR
Coho	Feasibility/30% design complete					Design/ Permitting/ Construction	$2,000,000	2016	SRSC	$2,060,000	$309,000	SRFB, PSAR

Coho	Construction - funded in 2008	Planting maintenance						2011	SFEG	$234,055	$34,000	SRFB
Coho	Conceptual											
Steelhead	Funded 2010; acqs complete	Further design & riparian restoration		Restoration			$1,000,000	2014	SCL, SRSC, Skagit Co.	$3,497,500	$1,437,125	PSAR
Coho	Construction	Planting maintenance						2011	SFEG	$357,850	$53,678	PSAR
Steelhead	Funded 2010	Acquisition		Acquisition		Acquisition		2012	SLTL/SCL	$1,509,218	$226,383	SRFB, PSAR
Steelhead	Feasibility/Design	Feasibility/Design		Feasibility				2012	SRSC	$285,010	$42,750	PSAR
	Construction	Construction		Construction		Planting maintenance		2013	SRSC	$191,000	$28,650	PSAR
	Feasibility/90% design	Feasibility/Design			$500,000	Construction		2014	SFEG	$800,000	$71,250	SRFB
	Construction	Construction		Construction				2013	SFEG	$163,000	$24,450	Skagit County
	Acquisition	Acquisition		Acquisition					SLTL/SCL			
	Proposed		$1,176,500	Phase 3 Acquistions	$1,000,000	Phase 4 Acquisitions	$1,000,000	2016	SLTL/SCL	$3,176,500	$476,475	SRFB, PSAR
	Proposed		$120,000	Construction		Construction		2012	Skagit County	$120,000	$18,000	SRFB
	Proposed		$162,308	Construction		Construction		2014	SFEG	$162,308	$24,346	SRFB
	Conceptual			Feasibility assessment	$150,000	Restoration	$400,000	2017	SFEG	$550,000	$60,000	SRFB
			$1,458,808		$1,650,000		$4,400,000			$13,622,441	$2,892,107	
Bull Trout	Monitoring	Monitoring						2010	SRSC	$30,000	$20,000	
Bull Trout	Design & Permitting	Construction		Monitoring				2011	SRSC	$904,394	$144,384	SRFB, PSNERP

Bull Trout	Acquisition complete	Stewardship Planning		Stewardship Planning				2012	WSP	$15,060,000	$1,000,000	CELCP, NCWCG, WWRP, ESRP, SRFB
	Conceptual					Feasibility	$150,000	2015	SRSC	not evaluated		
	30% design	Design/Permitting	$843,716	Construction				2015	WCLT	$1,755,716	$241,557	SRFB, PSAR
			$843,716		$0		$150,000			$17,750,110	$1,405,941	
	Construction	Riparian plantings		Construction		Construction		2015	SFEG	$407,160	$61,100	SRFB, PSAR, DOE
Steelhead	Construction	Construction		Construction				2012	SFEG	$283,200	$42,480	SRFB, PSAR
Coho	Completed in 2010							2011	USIT	$3,758,000	$2,758,000	SRFB, NOAA
Chinook	Proposed	Acquisition	$333,500	Restoration design				2015	SRSC	$333,500	$50,025	SRFB
Steelhead	Design & Permitting		$460,000	Construction		Construction	$950,000	2015	SRSC	$1,558,572	$248,966	SRFB, PSAR
Steelhead	Conceptual			Site Planning	$175,000			2013	SFEG	$175,000	$0	PSAR
Bull Trout	Proposed/design complete		$983,000	Construction				2012	SRSC/USFS	$983,000	$478,000	SRFB, PSAR
Coho	Conceptual											
	Proposed		$248,744	Construction		Construction		2014	SRSC/USFS	$292,675	$43,091	SRFB, PSAR
			$2,025,244		$175,000		$950,000			$7,791,107	$3,681,662	
Steelhead	Completed in 2010							2010	SCD/USFS	$395,000	$60,000	SRFB
Steelhead	Design/Permitting	Design/Permitting						2012	SCD/USFS	$190,000		PSAR
Steelhead	Completed in 2010							2010	SRSC/USFS	$395,000	$60,000	PSAR
Steelhead	Conceptual				$50,000	Construction		2014	SCL	$50,000	$7,500	SRFB

Steelhead	Conceptual			Data Collection	$300,000	Construction		2015	SRSC/USFS	$300,000	$45,000	SRFB
Steelhead	Conceptual				$400,000	Construction		2015	SRSC/USFS	$400,000	$60,000	SRFB
			$0		$750,000		$0			$1,730,000	$232,500	
			$6,182,238		**$16,430,000**		**$5,500,000**			**$73,768,317**	**$14,259,708**	

					$120,000	Data Collection		2014		$120,000	$120,000		
		Final report											
					$300,000	Data Collection & Analysis		2014		$350,000	$50,000		
						Data Collection		2014		$50,000	$0		
					$50,000			2014		$150,000	$0		
			$0		$470,000					$670,000	$170,000		
		Staffing		Staffing				Ongoing		$0			
		Consultants		Consultants						$0			
		Contractors		Contractors				Ongoing		$0			
			$0		$0					$0			
				Study Design	$25,000					$150,000	$150,000		
				Implementation	$50,000		$50,000			$100,000			
					$75,000		$50,000			$250,000	$150,000		
				Implementation	$400,000			Ongoing		$400,000			
		Data Collection		Results				2011		$2,011			
								2010	SRSC	$2,010			
								2010	SRSC	$2,010			
			$0		$400,000					$400,000	$0		
										$0			
										$0			
		Reporting	$150,000					2012		$152,012			
		Implementation	$100,000					2012		$102,012			
								2010		$2,010	$0		
		Implementation	$150,000					2008		$152,008	$0		
		Data collection & lab	$150,000	Data collection & lab	$150,000					$300,000			
			$550,000		$150,000					$700,000	$0		
			$550,000		**$1,095,000**		**$50,000**			**$2,020,000**	**$320,000**		
			$6,732,238		**$17,525,000**		**$5,550,000**			**$75,788,317**	**$14,579,708**		