East Kitsap Peninsula WRIA 15
Salmon Habitat Restoration Strategy Summary

I. Specificity and Focus of the Strategy

Strategic Planning Area

The planning area for the *East Kitsap Peninsula Salmon Habitat Restoration Strategy* is the eastern portion of Water Resource Inventory Area (WRIA) 15 that drains toward central Puget Sound, with the exception of Vashon Island. This area includes the streams, nearshore and marine waters of the east side of the Kitsap Peninsula, the Key Peninsula, the Gig Harbor Peninsula; and Fox, McNeil, Anderson and Bainbridge Islands. For the purposes of this summary, the area will be referred to as **East Kitsap**.

The *East Kitsap Peninsula Salmon Habitat Restoration Strategy* is described in Chapter 6 of the *Draft Puget Sound Salmon Recovery Plan* as follows:

> The mission of the East Kitsap Lead Entity (LE) is to ensure local salmon habitat is preserved and restored to support salmon populations and human communities. The goal of this strategy is to restore healthy self-sustaining wild populations of the salmon species native to the streams and shorelines of the Kitsap Peninsula. Four objectives include:
>
> - Increase population levels
> - Maintain geographically diverse populations
> - Promote the preservation and restoration of healthy, functioning ecosystems
> - Increase public understanding and support for salmon recovery

This strategy addresses local habitat conditions and is therefore an integral part of the larger regional recovery effort.

1. East Kitsap Salmonid Stocks and Stock Status

The numerous small streams in the East Kitsap region primarily support chum and coho salmon, steelhead and cutthroat trout. Chinook spawning, incubation and rearing has been identified in some of the larger streams. Current knowledge about fish distribution is based on contemporary stock assessment work. The current situation likely represents a more confined distribution than occurred historically when both habitat and fish populations were healthier. The actual numbers of adult salmon that return to spawn has been documented by the Washington Department of Fish and Wildlife (WDFW) and the Suquamish Tribe for most of the major streams over the past thirty years. The capacity for each stream to support salmon can be calculated based on stream flow, spawning gravel availability, rearing habitat, and riparian condition.

Nearshore waters of East Kitsap support Chinook, coho, chum and pink salmon, cutthroat trout, and some steelhead trout. The East Kitsap LE planning area has about 270 miles of shoreline that includes many inlets with quiet, shallow waters which are ideal foraging and rearing habitat for juvenile salmon. Juvenile salmonids are present along the shoreline in high numbers from March through July and in lower numbers throughout the year.

The East Kitsap Lead Entity strategy employs a **multi-species, ecosystem approach**. Actions and projects that will benefit large numbers of salmon and multiple species are given highest priority.

Chinook (*Oncorhynchus tshawytscha*) salmon

The 2002 *Salmon and Steelhead Stock Inventory* (SaSI) groups all summer/fall Chinook spawning in East Kitsap streams with Chinook from all south Puget Sound streams, calling the stock "South Sound Tribs Chinook." It also notes that there are no genetic stock identification data for naturally spawning South Sound Chinook. The grouping of seemingly widely distributed Chinook was based on a history of extensive stock transfers from basin to basin and considerable hatchery outplants and associated straying of hatchery-origin Chinook in south Puget Sound.

The s**tock status** of this Chinook spawning aggregation was **not rated** in SaSI. The Co-managers supported this action with the following rationale:

1. The independent tributaries in south Puget Sound are not typical Chinook habitat because of relatively small stream size and low flows during the late summer/early fall spawning season.
2. The current low escapements (outside of streams that support hatchery Chinook production programs) are believed likely the result of past hatchery plants or straying from either current South Sound hatchery production or viable South Sound natural populations. The ancestry of locally returning adult Chinook is largely Soos Creek Hatchery (Green River) Chinook.
3. Chinook likely were not historically self-sustaining in these habitats and have little chance of perpetuating themselves through natural production.

The Puget Sound Chinook Evolutionarily Significant Unit (ESU) is listed as Threatened under the federal Endangered Species Act (ESA). It is the assumption of the LE that this threatened population relies on the East Kitsap nearshore for rearing, feeding and migration. Recent studies indicate that Chinook occupy the nearshore regions of East Kitsap nearly year-round with peak abundance from May through July.
[*cf.* Pages 11-12 in the *Strategy*]

Chum salmon (*Oncorhynchus keta*)

East Kitsap streams produce large numbers of chum salmon. The low-gradient streams of the area provide good spawning habitats. Chum salmon abundance in the nearshore is very high during March through June with smaller numbers of fish present until early fall.

Summer Chum salmon

SaSI identifies two distinct summer chum stocks as present in East Kitsap streams: Case Inlet Summer Chum and Blackjack Creek Summer Chum. The status of both of these summer chum stocks is designated as healthy.

In March 2003 the WDFW genetics lab confirmed that the Curley Creek Chum stock is a genetically distinct run of summer timed chum, which spawn in October. The stock status is healthy.

Fall Chum salmon

SaSI designates five distinct fall chum stocks for East Kitsap streams. They are: Case Inlet, Carr Inlet, Gig Harbor/Olalla Creek, Dyes Inlet/Liberty Bay, and the Sinclair Inlet fall chum. The status of all five stocks is designated as healthy.
[*cf*. Pages 12-17 in the *Strategy*]

Coho salmon (*Oncorhynchus kisutch*)

All of the accessible, independent lowland streams of East Kitsap are utilized by coho salmon. Spawning occurs in every independent stream and tributary where suitable conditions exist, particularly in the upper headwaters. Since coho are well adapted to the typical lowland-type streams found in this region, they inhabit the most remote and extreme rivulets, as well as the springs, swamps, and marshes forming the upper headwaters and high water overflow areas on many of these drainages. Coho juveniles rear throughout the accessible lengths of these streams and in the associated estuaries and marine habitats.

SaSI designates two stocks of coho in East Kitsap: Deep South Sound Tributary coho, and East Kitsap coho. The status of both stocks is designated as healthy.
[*cf*. Pages 17-19 in the *Strategy*]

Pink salmon (*Oncorhynchus gorbuscha*)

The typical lowland-type streams of East Kitsap are not normally inhabited by pink salmon, as they seem to prefer drainages that are of glacial origin. Minter Creek is the only East Kitsap stream to consistently record a meager return of pink salmon in each odd year. This stock was not recognized in SaSI 2002. Pink salmon have also been observed irregularly in several of the larger East Kitsap streams in high-abundance years.

Pink salmon have been observed in the nearshore in high numbers from March through May during beach seining efforts on Bainbridge Island shorelines.
[*cf*. Page 19 in the *Strategy*]

Steelhead trout (*Oncorhynchus mykiss*)

Two stocks of winter steelhead are identified in SaSI: Case/Carr Inlet steelhead and East Kitsap steelhead. Both of these stocks are of native origin with wild production. There is not a sufficient abundance of trend data, so the stock status for each is called unknown.
[*cf*. Page 19 in the *Strategy*]

Coastal Cutthroat trout *(Oncorhynchus clarki clarki)*

The East Kitsap cutthroat are referred to in SaSI as part of the “Western South Sound coastal cutthroat stock complex”. A “stock complex” is a group of closely related stocks that is located within a single watershed or other relatively limited geographic area. The anadromous life

history form is likely to be found in most of these systems, but its presence and distribution in freshwater may be quite seasonal because of summer and fall low flows. It is expected that these fish are late-entry. The fluvial form probably inhabits all of the medium-sized streams, and the adfluvial form may be present in as many as twelve lakes within the range of this stock complex. The resident form of this stock complex is present in virtually all perennial independent streams in western South Puget Sound.

Western South Sound coastal cutthroat are considered native. The stock is maintained by wild production, and its status is listed as unknown.
[*cf*. Page 20 in the *Strategy*]

Char: Bull trout (*Salvelinus confluentus*) and DollyVarden (*Salvelinus malmo*)

No char populations are identified for East Kitsap. Streams in this area are of low elevation, and as such are not likely to meet the spawning requirements of char for cold, clean, undisturbed waters. However, anadromous bull trout rear in streams and migrate to marine environments to mature. Although bull trout have not been documented in local beach seine studies or in local recreational or commercial fishing, these fish are quite mobile and may be missed by traditional catch methods. Bull trout use of East Kitsap nearshore waters is unknown.
[*cf*. Page 20 in the *Strategy*]

Multi-Species Priority

The emphasis of the East Kitsap *Strategy* is a **multi-species, ecosystem approach**. The highest priority in East Kitsap is given to those freshwater habitat restoration and/or protection actions and projects that will benefit large numbers of salmon and multiple species. Additionally, East Kitsap has identified nearshore habitat conservation and restoration as a high priority, which will benefit local species as well as salmon originating from other watersheds in Puget Sound that use our nearshore areas during migration out to sea and back again.

Rationale

The rationale for this strategy is straight-forward: Puget Sound Chinook salmon, listed as Threatened under the ESA, receives the highest priority for preservation and restoration. Chinook utilize the largest streams on the Peninsula, although, as is noted above, the co-managers believe most of these Chinook to be of hatchery origin. These streams also support the highest diversity of salmonids and the greatest productive capacity for all species. All salmonid stocks that are part of the freshwater ecosystems, as well as transient stocks, use the diverse nearshore habitats of East Kitsap as well.
[*cf*. Pages 25-26 in the *Strategy*]

Project Ranking Criteria

The project ranking criteria that reflect these priorities are as follows:

- Benefits to Salmon from Project: This criterion is weighted at 40% of the total score. High benefit is attributed to projects that address multiple salmonid species, large salmon runs, unique populations of salmonids essential to recovery, and/or stocks listed under the ESA or non-listed populations primarily supported by natural spawning. The proposed

project would address a critical life history stage or habitat type, or would address multiple life history requirements.

- Certainty of Success of Project: This is weighted at 30% of the total score. A higher priority is assigned based on an assessment of the level of certainty that the project would produce its intended benefit for fish.
- Consistency with the East Kitsap Lead Entity *Strategy*: This is weighted at 15% of the total score. The factors that figure into this rating are geographic location (highest ranking is given for location within an identified high-priority ranking area), project type (highest ranking is given for actions that would preserve existing high-quality habitat and restore blocked high quality habitat), priority within a watershed (projects that address the most important limiting factors which are identified in the *Limiting Factors Analysis*), and whether or not a monitoring plan is included in the project.

[*cf.* Pages D8-9 in the *Strategy*]

2. Watershed and Nearshore Ecological Processes

East Kitsap watershed processes that are limiting factors for the stocks prioritized in the strategy (multiple salmonid species emphasis):

Streambed Degradation: Streambed stability and spawning gravel quality have been degraded by high stormwater flow scour and fine sediment deposition.

Channel Degradation: Stream channel changes have resulted from direct alterations such as ditching. In addition, stream bank erosion has increased in frequency and extent due to higher storm flows, loss of natural vegetation cover, and stream bank armoring.

Removal of Large Woody Debris (LWD): There is a general lack of large woody debris in streams, which is important to providing high-quality rearing habitat for juvenile salmonids and deep holding pools for adult salmon migration.

Degradation of Floodplains: There has been a significant degradation and loss of natural floodplain processes in larger stream systems, including the loss of functional off-channel wetland habitat.

Alteration of Riparian Function: Almost all local streams have experienced a loss of natural riparian function due to the removal or alteration of natural riparian forest vegetation. This loss results in a decrease in water quality, an increase in stream bank erosion, and a reduction in shading (needed for water temperature regulation), and in impacts to stream habitat conditions through the decline of LWD recruitment.

[*cf.* Pages 23-24 in the *Strategy*]

East Kitsap nearshore processes that are limiting factors for salmonids and salmonid forage species:

Loss of Saltwater Marshes and Other Intertidal Areas: Activities associated with shoreline development include filling of intertidal mudflats, salt marshes, and lagoon habitats; shoreline armoring; and removal of riparian vegetation.

Alteration of Shoreline: Waterfront development activities such as armoring, filling, and dredging have altered natural shoreline processes. These processes include the recruitment of sediment and woody debris from eroding bluffs, littoral drift, and nutrient exchange.

Alteration of Tidal Flow: The freshwater-saltwater exchange from tidal flow has been extensively altered due to tide gates, culverts, filling, dredging and other activities associated with the protection and modification of upland property.

Alteration of Intertidal/Shallow Subtidal Vegetation: Intertidal and shallow subtidal vegetation has been adversely affected by shoreline armoring and filling. Specifically, the loss of eelgrass (*Zostera marina*) habitat is a concern. Remaining eelgrass meadows appear to be at risk of eutrophication and elimination due to the increasing presence of ulvoid mats (*Ulva* spp.). Stormwater outfalls may also alter eelgrass and aquatic macroalgae beds. The mechanisms for these alterations are likely related to both changes in water quality and reduced salinity near the stormwater outfalls.

Loss of Shoreline Riparian Vegetation: There has been a significant loss of marine shoreline riparian vegetation. This vegetation provides similar functions to that of the riparian vegetation in the freshwater environment: bank stability, shade, detrital/nutrient input, and contribution of LWD.

Water and Sediment Pollution: There are a number of potential problems associated with water and sediment quality that are of a larger scope than can be addressed by the East Kitsap *Strategy*. These include: risk of toxic and/or oil spills, existing sediment contamination, stormwater discharge, and point-source pollutants such as aquaculture net pens.

[*cf.* Pages 22-23 in the *Strategy*]

Highest-Priority Limiting Ecological Processes

The highest-priority limiting process for **watersheds** in East Kitsap is protecting and restoring hydrologic and riparian functional integrity.

Rationale: The resources that are available for salmon recovery activities are finite and should therefore be distributed strategically where they will preserve and restore the diversity and productive capacity of watersheds. To achieve this objective, the East Kitsap *Strategy* places the greatest priority on streams that have been identified as having the highest watershed integrity. Streams are ranked as Tier 1, 2, 3, 4 or 5, with the highest priority assigned to Tier 1.

[*cf.* Pages 25-29 in the *Strategy*]

The highest priority limiting process for **nearshore** areas is the loss of sediment supply and marine shoreline vegetation, which is often associated with shoreline armoring.

Rationale: The east side of the Kitsap Peninsula constitutes almost half of the nearshore habitat in central and south Puget Sound. To prevent further degradation of the nearshore areas the East Kitsap *Strategy* places the highest priority on protection or restoration where natural processes are restored. The LE recognizes that more work is needed to identify and prioritize nearshore areas and projects: this is a primary goal of the upcoming East Kitsap

nearshore assessment project. For project ranking priority in comparison to freshwater projects, all nearshore projects are currently rated as Tier 1.

[*cf.* Pages 30-31 in the *Strategy*]

Project ranking criteria:
The project ranking criteria that reflect these priorities are as follows:

- Benefits to Salmon from Project.—Weighted at 40% of the total score. For acquisitions a high benefit would include projects with a majority of the habitat intact. For location, if a project is located in a Tier 1 or Tier 2 watershed it would be considered in a high-priority geographic area.
- Consistency with the East Kitsap Lead Entity Strategy.—Weighted at 15% of total score. The factors that figure into this are geographic location (highest ranking for Tier 1 and 2 watersheds), project type (highest ranking for preservation of existing high-quality habitat and restoring blocked high-quality habitat), priority within a watershed (projects that address the most important limiting factors identified in the *Limiting Factors Analysis*), and whether or not a monitoring plan is included in the project.
- Certainty of Success of Project.—Weighted at 30% of the total score. Projects that complement protection or restoration actions can receive high scores of certainty.

[*cf.* Pages D8-9 in the *Strategy*]

3. Habitat Features

Freshwater habitat conditions that are limiting factors for salmonids

The salmonid habitat in the streams of East Kitsap appears to be highly susceptible to changes in hydrology that result from stormwater runoff from development in the watersheds. The increase in impervious surfaces, associated with the conversion of vegetated areas to residential and commercial development, decreases evapotranspiration and the infiltration of precipitation into the soils and wetlands, and increases surface runoff and the frequency, duration and magnitude of peak stream flows. The result is that less water will be available to sustain flows through the dry months, and the increased peak flows will result in increased bank and streambed instability, channel scour, and loss of instream habitat diversity, all of which adversely affect salmonid production.

Nearshore conditions that are limiting factors for salmonids and forage fish

The habitat quality and natural physical processes of estuarine and nearshore environments have been severely impacted throughout much of East Kitsap. Estuaries have been adversely affected by the encroachment on, and fill of, historic intertidal areas at the mouths of streams for roadways and other development. Nearshore habitat has been significantly altered due to the extensive armoring and alteration of the marine shoreline and associated alteration of the sediment supply and distribution. Roadways across or along the mouths of streams and marine shorelines have significantly altered or eliminated estuarine and nearshore function. Docks, groins, and other anthropomorphic structures have contributed to altered habitat conditions.

Highest Priority Limiting Habitat Feature

The highest priority limiting feature for **watersheds** in East Kitsap is altered watershed function and integrity.

> **Rationale**: The resources that are available for salmon recovery activities are finite and should therefore be distributed strategically where they will preserve and restore the diversity and productive capacity of watersheds. To achieve this objective, the East Kitsap strategy places the greatest priority on streams that have been identified as having the highest watershed integrity, referred to as Tier 1, 2, 3, 4 or 5 (highest priority is Tier 1).

[*cf.* Pages 25-26 in the *Strategy*]

The highest priority limiting feature for **nearshore** areas is the alteration of natural shorelines and functions.

> **Rationale**: The east side of the Kitsap Peninsula constitutes almost half of the nearshore habitat in central and south Puget Sound. To prevent further destruction of the nearshore areas the East Kitsap strategy places the highest priority on identification and prioritization of nearshore habitat types and attributes needing protection and conservation. (The SRFB 5th Round funded the Nearshore Habitat Assessment Project to accomplish this prioritization). Until identification of highest priority tiers in the nearshore, all nearshore projects are rated as Tier 1.

[*cf.* Pages 30-31 in the *Strategy*]

Project ranking criteria

The project ranking criteria that reflect these priorities are as follows:

- Benefits to Salmon from Project.—Weighted at 40% of the total score. For acquisitions a high benefit would be assigned to projects located where a majority of the habitat remains intact. For location, if a project is located in a Tier 1 or Tier 2 watershed it would be considered in a high-priority geographic area.
- Consistency with the East Kitsap Lead Entity Strategy.—Weighted at 15% of the total score. The factors that figure into this ranking are benefit to salmon, geographic location (highest ranking assigned to Tier 1 and 2 watersheds), project type (highest ranking given for projects that would preserve existing high-quality habitat and restore blocked high-quality habitat), priority within a watershed (highest ranking given to projects that address the most important limiting factors identified in the *Limiting Factors Analysis*), and whether or not a monitoring plan is included in the project.

[*cf.* Pages D8-9 in the *Strategy*]

4. Actions and Geographic Areas

Specific actions for the restoration and/or protection of targeted habitat features and ecological processes are grouped by watershed. Watersheds are prioritized in recovery tiers that are based on the salmonid diversity, habitat quality and size of the watersheds. Those watersheds that are included in the highest priority (Tier 1) list are: Chico Creek, Coulter Creek, Gorst Creek, Rocky Creek, Minter Creek and the marine nearshore habitat.
[*cf.* Pages 26-28 in the *Strategy*]

These Tier-1 watersheds are each described in detail in the *East Kitsap Strategy,* Appendix B, which also includes a specific list of prioritized actions that are recommended for each watershed.
[*cf.* Pages 10-11, 17, 26-27, 34 in Appendix B of the *Strategy*]

Appendix C of the *Strategy* is a list of preliminary nearshore recovery actions. This list will be updated as the nearshore assessment and associated databases are completed.

Project Ranking Criteria:
The project ranking criteria that reflect these priorities are as follows:

- Benefits to Salmon from Project.—Weighted at 40% of the total score. For acquisitions a high benefit would be assigned to projects located where a majority of the habitat remains intact. For location, if a project is located in a Tier 1 or Tier 2 watershed it would be considered in a high-priority geographic area.
- Consistency with the East Kitsap Lead Entity Strategy.—Weighted at 15% of the total score. The factors that figure into this ranking are benefit to salmon, geographic location (highest ranking assigned to Tier 1 and 2 watersheds), project type (highest ranking given for projects that would preserve existing high-quality habitat and restore blocked high-quality habitat), priority within a watershed (highest ranking given to projects that address the most important limiting factors identified in the *Limiting Factors Analysis*), and whether or not a monitoring plan is included in the project.

[*cf.* Pages D8-9 in the *Strategy*]

5. Community Issues

The general community issues and concerns regarding salmon habitat protection are:

- Lack of funding for education, outreach and monitoring of salmon recovery actions;
- Lack of understanding of complexity of ecosystems;
- Concern about the impact of recovery actions on private property; and
- Fear that restoring habitat is not equitably integrated with other recovery actions such as harvest or hatchery management.

[*cf.* Page 34 in the *Strategy*]

The *Strategy* describes current actions and priority actions on pages 35-37: these include outreach efforts and a list of desired outcomes. Pages 37-38 detail the strategy for incorporating education, outreach and partnerships into project proposals. In summary, the Kitsap County LE Coordinator, the Citizens' Committee and the Technical Advisory Group are working with, and will continue to work with individual sponsors to include education and outreach components into their projects. The intent is to use salmon recovery and conservation projects as opportunities to improve the community and its sense of place by integrating signage, public access and community participation in projects and actions whenever possible.

The project ranking criteria that reflect this priority are as follows:

- Consistency with the East Kitsap Peninsula Salmon Recovery Strategy.—Weighted at 15% of total score. Part Five of the *Strategy* is "Community Outreach Strategy". [*cf*. Pages 34-38 in the *Strategy*)
- Education, Outreach and Partnership.—Weighted at 10% of total score. Projects that are designed and implemented in a manner which includes outreach components will receive a higher rating. Proposals must include a detailed description of community support and participation of the public or partnerships. If the project is located in an area that is inaccessible to the public the proposal should include how the sponsors intend to get the public involved (whether it is through the use of volunteers, news media, and/or strong partnerships).

II. Fit of the Project List to the Strategy or Recovery Plan

6. Actions and Geographic Areas

- *Based on scientific information and assessment of community interests, to what extent does the project list address the highest priority action and areas identified in the recovery plan?*

  The project list addresses the highest-priority areas by selecting the projects in Tier-1 watersheds (Chico Creek, Rocky Creek, Minter Creek, marine nearshore habitat) and one project in a Tier-2 watershed (Ollala Creek). With regards to the project in a Tier-2 watershed, the community elevated this project and included in the list because the project 1) has a very high certainty of success, 2) is very cost effective (54% match), and 3) is rated the first-priority action in the entire watershed by the *Limiting Factors Analysis*. The highest-priority actions in the *Strategy* are restoration, preservation and education, and the project list addresses all of these priority actions.

- *To what extent does the project list benefit the highest priority stocks, limiting watershed and marine ecological processes, and limiting habitat features identified in the recovery plan?*

  The project list benefits the highest-priority stocks, limiting ecological processes and habitat features by including two projects that address the restoration of nearshore habitat, four projects that would benefit the most diverse and largest populations of salmonids (Tier-1 streams) and one project that has been identified as a total fish barrier in a Tier-2 stream.

7. Fit of Project Ranking

To what extent does the rank order of the project list address the highest priorities in the recovery plan for the following:

- *Stocks*
- *Limiting watershed processes*
- *Limiting habitat features*
- *Action*
- *Geographic areas*

- *Community interests*

1. Chico Creek Property Acquisition

- Stocks – Chico Creek has the largest number and variety of salmon stocks in the East Kitsap area, and includes Chinook salmon.
- Limiting watershed processes – This project would preserve the only reach of the urbanized part of Chico Creek watershed that has retained access to its floodplain, large woody debris and a complex profile of pools and riffles.
- Limiting habitat features – Acquisition of this parcel would preserve the property and avert the conversion of forestland to residential or commercial development. The development of this property would negatively impact the quality of the existing habitat.
- Action – The project would preserve and restore riparian habitat. It would complement other restoration projects within the lower watershed (including a Round-5 SRFB project—Chico Creek Instream Restoration) and the protected habitats in the upper reaches of the creek. This is an identified high-priority action in the *Strategy*.
- Geographic areas – Chico Creek is a Tier-1 stream.
- Community interests – The intent of the County is to make this a regional salmon park. There would be many volunteer opportunities for everything from removal of invasive plants to stream stewardship, as well as many educational benefits.

2. Beaver Creek Estuary Restoration

- Stocks – The estuarine habitat supports all salmonid species (including Chinook) and important prey resources.
- Limiting watershed processes – The project would restore estuarine processes to a portion of Clam Bay.
- Limiting habitat features – This project would re-establish the saltwater wedge in the upper estuary to its historic limit. The project would result in a net gain of approximately 4.5 acres of estuary and riparian habitat and 1,200 feet of shoreline.
- Action – This would be the 3rd phase of a multi-phased and extensive restoration effort. (Phase 1 was completed in 2003, and Phase 2 is in progress.)
- Geographic areas – The marine nearshore area is a Tier-1 area.
- Community interests – The project has strong partners in the U.S. Navy and the Suquamish Tribe. Partner match is 30% and opportunities for education are good.

3. Rocky Creek Barrier Replacement

- Stocks – There are five species of salmonids using Rocky Creek including Chinook salmon.
- Limiting watershed processes – The project would improve watershed processes such as the passage of gravel and large woody debris.

- Limiting habitat features – The project would remove a culvert that is a passage barrier and which causes road flooding during high-flow events, and would replace it with an adequately sized structure.
- Action – Two other barriers on the West Fork of Rocky Creek would be funded through a separate program. The three projects in combination would open five miles of spawning and rearing habitat. This is an identified high-priority action in the *Strategy*.
- Geographic areas – Rocky Creek is a Tier-1 stream and has been identified as a salmonid refugium.
- Community interests – There is a strong level of community support for this project by neighboring landowners. The project should alleviate occasional flooding during high-water events.

4. <u>Chico Creek – Kitty Hawk Culvert Restoration</u>

- Stocks – Chico Creek has the largest number and variety of salmon stocks in the East Kitsap area, and includes Chinook salmon.
- Limiting watershed processes – Upstream passage is currently constrained by this culvert. This has a significant watershed effect for chum salmon, for example, because a significant delay at the mouth of the creek can subsequently retard or eliminate spawning usage of the upper watershed. The project would remove this passage delay factor. The project will also restore/improve access to the nearshore area of mainstem Chico Creek.
- Limiting habitat features – The culvert at the project site currently constitutes a barrier to migrating salmon at times of low flow and low tide, and is in deteriorating condition. This proposal would design a restoration solution (remove for the existing problem in concert with addressing the upstream problem at the Highway 3 culvert).
- Action – The project site has been identified as a significant partial barrier at the mouth of the most productive salmon stream in East Kitsap WRIA 15. The project will remove the barrier and restore the stream, and thereby improve the access of anadromous salmonids to and the use of 17 miles of stream. The LE's decision to submit the project for this round of SRFB funding was subject to agreement by the Washington Department of Transportation (WDOT) to work concomitantly on addressing the Highway 3 culvert passage issues: the WDOT has submitted a letter which indicates their strong interest in partnering to address the Chico Creek problems.
- Geographic areas – Chico Creek is a Tier-1 stream.
- Community interests – Both Chico Creek and this project site have a very high cultural significance to the Suquamish Tribe. Sportsfishers, birdwatchers, and the wildlife viewing public utilize this area heavily: it is a well-known fish-viewing site. The WDOT has expressed its strong interest in partnering to address Chico Creek issues (*see above*).

5. **Ollala Creek Culvert Restoration**

- Stocks – The primary benefits from this stream restoration would be to coho and chum salmon; cutthroat and steelhead trout are also present.
- Limiting watershed processes – The project would restore access to almost two miles of spawning and rearing habitat.
- Limiting habitat features – The area has been identified as a salmon refugium.
- Action – The project has been fully designed, and the permits have already been acquired. This is the number-one action identified in the entire watershed by the *Limiting Factors Analysis*.
- Geographic areas – Ollala Creek is a Tier-2 stream. The tributary that will benefit from this project is largely undeveloped. This action is anticipated to make significant new habitat available to salmonids in the watershed.
- Community interests – The Kitsap County Stream Team, which does education and outreach, has been included as a project partner. Spawning salmon in this tributary have significant potential to attract wildlife watching enthusiasts. The partner match is 54%.

6. **Little Minter Creek Culvert Restoration**

- Stocks – The primary benefits from this stream restoration would be to coho and chum salmon, and cutthroat and steelhead trout.
- Limiting watershed processes – The project would restore access to almost two miles of spawning and rearing habitat.
- Limiting habitat features – The channel is constrained in this reach due to a failing culvert, limiting hydraulic capacity and fish migration.
- Action – The project would restore access to almost two miles of spawning and rearing habitat. One barrier was replaced downstream in 2005 and there are no barriers upstream of this site. This project was identified as a high priority in the *Strategy*.
- Geographic areas – Minter Creek is a Tier-1 stream.
- Community interests –Tacoma Public Utilities and Pierce Conservation District are included as project partners. Interns from the Clover Park Technical College will conduct spawner surveys in the fall before and after construction. The partner match is 35%.

7. **Moorelands Estuary Restoration**

- Stocks – The target stocks are salmonids using the nearshore area.
- Limiting watershed processes – The project would restore estuarine/tidal marsh processes.
- Limiting habitat features – The area has been compromised by a tide gate and fill.
- Action – This project would re-introduce tidal saltwater into the project area and result in the restoration of approximately 1.3 acres of intertidal marsh.
- Geographic areas – The marine nearshore is a Tier-1 area.

- Community interests – The project is fully supported by the Moorelands Corporation, an association of private homeowners who desire to conduct and participate in salmon habitat restoration, improve community property, and promote educational opportunities. The project could be a showcase for similar projects in South Puget Sound.

III. Relationships between Strategies, Recovery Plans and Project Lists

The East Kitsap *Strategy* is included in the draft *Puget Sound Salmon Recovery Plan* in two chapters. In Chapter 5, "Watershed Profiles," the description of the East Kitsap Salmon Recovery Planning Area uses much of the same language as is present in the *Strategy*. In Chapter 6, "Regional Salmon Recovery Strategies," the *Strategy* is one of the appendices to the "East Kitsap Watershed Chapter Salmon Recovery and Conservation Plan." Specifically, the *Strategy* is described in the East Kitsap Watershed Chapter (page 58) as "an integral part of the larger regional salmon recovery effort."

The Round 6 project list for East Kitsap Peninsula WRIA 15 reflects the priorities that are identified in the regional *Salmon Recovery Plan* by addressing the three categories (tracks) of activities which currently support salmon recovery (categorized as restoration, education and conservation).

- The Chico Creek acquisition project would conserve riparian habitat and would allow public access and educational opportunities to East Kitsap's most productive salmon stream.
- The Beaver Creek estuary project would restore the estuary of the creek and re-establish the saltwater wedge to its historic limit.
- The Rocky Creek fish passage project would restore spawning and rearing habitat and conserve riparian habitat by eliminating flood events.
- The Chico Creek – Kitty Hawk culvert project would restore estuary function, improve salmonid migration, and provide educational opportunities for salmon viewing.
- The Olalla Creek culvert project would restore the migration route for salmonids.
- The Little Minter fish passage project would restore fish passage to two miles of spawning and rearing habitat.
- The Moorelands estuary project would restore estuary function in the upper intertidal zone.