DRAFT Sub-basin Summary
Regional Nearshore and Marine Chapter of the Puget Sound Salmon Recovery Plan

SOUTH SOUND

Introduction:

This document summarizes discussions between the Puget Sound Technical Recovery Team (TRT), NOAA Fisheries scientists, the Puget Sound Action Team (PSAT) and Shared Strategy staff about salmon recovery in the South Sound sub-basin. People with an interest in this area should also review the recommendations provided to watershed planning groups in the Shared Strategy Feedback for Decision Makers (October 2004) and the Technical Feedback from the TRT (November 2004). The nearshore and marine chapter of the recovery plan which is under development will expand upon the information in this summary and will provide the scientific foundation for the recommendations that follow. This summary is intended to help regional and watershed planning groups synthesize the technical and policy information that has been compiled to date and stimulate policy discussions on the conditions that are necessary to implement actions that will support recovery in the nearshore and marine environments.

Fish Story:

The South Sound Sub-basin does not have any historically independent Chinook salmon populations, natal populations of summer chum, or bull trout core areas. This sub-basin can contribute to salmon recovery by providing support functions for non-natal populations from throughout the Sound, use by local adults spawning in smaller tributaries, and by providing the capacity to support certain life history trajectories from the Nisqually Chinook salmon population. The marine areas of the sub-basin provide foraging and migrating habitat for bull trout.

Landscape Story:

Of the 292 miles of shoreline in the sub-basin, 37% is armored. Sixty two pocket estuaries, more than any other sub-basin, have been identified and analyzed by the PSAT using oblique aerial photos on the DOE Digital Coastal Atlas website. All three Chinook functions (feeding, osmoregulation, refuge) were observed in 20 of the pocket estuaries. About half of the pocket estuaries were functioning well according to the PSAT's analysis. Known landscape stressors include shoreline development, urbanization, diking and filling, susceptibility to spills and discharges, and the potential for substrate alterations with aquaculture-related activities. Eelgrass habitat is limited, with the only known continuous eelgrass band located in Henderson Bay. Water quality issues include contamination by PCBs and PBDEs, and portions of the sub-basin are becoming increasingly anoxic. The PSAT identified 10 sewage outfalls.

Key Actions:
At the September 9, 2004 meeting of PSAT, the TRT, and Shared Strategy staff, actions for marine and nearshore sub-basins were organized under two strategy types – **protection** and **restoration**. Protection is recommended as the primary strategy direction for nearshore and marine areas, given the current state of knowledge. This strategy is designed to protect what is currently functioning, while leaving options open for future restoration. In the next five years, the Puget Sound Nearshore Ecosystem Restoration Program (PSNERP) is expected to provide additional information that will better inform the development of large-scale restoration efforts. Restoration actions in the near-term should occur where benefits to fish are reasonably certain and there is local support.

Key **Protection** Actions:
In addition to the recommendations identified in the WRIA plans, the following actions should be considered in the near-term if possible, and in the longer-term as part of a regional Puget Sound assessment:

- Protect water quality. Some areas within this sub-basin are becoming increasingly anoxic.
- Protect pocket estuaries, including those in the eastern third of the sub-basin to support the Nisqually population (west shoreline of Anderson Island, southern Key peninsula and Thurston County shoreline southeast of Johnson Point).
- Protect functioning drift cells that support depositional features throughout the sub-basin but especially along the west shoreline of Key Peninsula, Hartstene Island, east shoreline of Budd Inlet, all of Totten and Skookum inlets, Oakland Bay and outer Hammersly Inlet.
- Protect shorelines via shoreline master programs, critical areas ordinances, enforcement and incentives.
- Protect freshwater tributary areas.
- Work with regional authorities to protect against catastrophic events, such as oil spills.
- Add enhanced treatment, to the same standards as for salmon bearing streams, for stormwater discharging directly to Puget Sound.
- Consider wastewater reclamation and reuse retrofits for LOTT and Shelton wastewater discharges.
- Promote shellfish environmental codes of practice.

Key **Restoration** Actions:
There is not currently sufficient information to evaluate the regional benefit of restoration actions in this sub-basin. The following actions should be considered as part of a Puget Sound regional assessment and prioritized for their benefit.

- Consider restoration of tidal influence to the historic Deschutes estuary (Capitol Lake).
- Restore pocket estuaries, including those in the eastern third of the sub-basin to support the Nisqually population (west shoreline of Anderson Island, southern Key peninsula and Thurston County shoreline southeast of Johnson Point).
- Implement actions that will improve water quality (e.g., dissolved oxygen) to prevent additional impacts on corridor function, prey resources and refugia.

- Encourage voluntary revegetation of residential shorelines throughout the sub-basin.
- Evaluate the effects of hatchery fish using nearshore habitats under current and restored conditions—how will their presence affect the status of wild salmon in the area?