

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

**PADILLA/SAMISH BAY**

**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 Padilla/Samish Bay 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 TRT identified no independent populations from the Padilla/Samish Bay sub-basin, but the area does provide support for non-natal Chinook populations, especially Skagit and Nooksack fish. Larger juvenile Chinook salmon and older life history types use the area for feeding and growth, refuge, physiological transition and as a migratory corridor. Adults are known to use the area, but it is not known if fish from outside Puget Sound are present. The Fidalgo Bay herring stock is a significant prey resource for salmon. Hood Canal/Eastern Strait of Juan de Fuca summer chum use may occur, but is not known for certain. This sub-basin can play a role supporting abundance, productivity, spatial structure and diversity parameters for all populations.

**Landscape Story:**

The Padilla/Samish Bay sub-basin contains about 10% of the nearshore of the entire Puget Sound basin. Railroads follow a portion of the shoreline, and 52% of the 99-mile long shoreline is armored. Seven pocket estuaries have been identified and analyzed by the PSAT and most were considered at risk. Shoreline development, urbanization, diking and filling, and susceptibility to spills and discharges were highlighted for most of the pocket estuaries. *Spartina* colonies are a concern, as they continue to try and take hold in this area. Padilla Bay has the second largest eelgrass meadow on the west coast. Eelgrass beds are located around Samish Island and continuous bands run along much of the eastern shoreline through both bays and adjacent to Guemes Island. The Fidalgo Bay Reserve and state parks currently provide protection for eelgrass habitats.

### **Key Actions:**

At the September 9, 2004 meeting of Puget Sound Action Team, the Technical Recovery Team and Shared Strategy, 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 unarmored shorelines, especially along the west shore of Padilla Bay and all shorelines of Guemes Island.
- Protect Fidalgo Bay herring stock. Support both staging and spawning functions in this area.
- Continue protection of the large eelgrass meadow in Padilla Bay.
- Protect against catastrophic events related to oil spills (loading and filling, additive smaller spills, March Point refinery).
- Protect against *Spartina* infestation, and continue to mechanically remove these colonies.
- Protect Joe Leary Slough, Indian Slough and Samish River delta estuaries.
- Protect all remaining functional nearshore habitat throughout the sub-basin via shoreline master programs, critical areas ordinances, enforcement and incentives.
- Consider wastewater reclamation and reuse retrofits for Anacortes wastewater discharge.

### **Key Restoration Actions:**

There is not 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.

- Improve connections between the Skagit delta and Padilla Bay to support two-way movement of fish to improve the access/connectivity and feeding and refuge functions. If connected, address turbidity and what it means for Bay ecology (eelgrass, food web).
- Address the water quality issues related to effects of agricultural runoff into Padilla Bay and impacts on the food web (i.e. lower Skagit region, Joe Leary and Indian sloughs).
- Conduct studies to better understand the role of eelgrass detritus export to other sub-basins and model expected changes to eelgrass cover and distribution as a result of various delta reconnection scenarios.

- Remove agricultural dikes along the south shoreline of Padilla and Samish Bays where feasible.
- 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?