

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

SAN JUAN ISLANDS

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 San Juan Islands sub-basin. People interested 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 following recommendations. 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 Chinook populations in this sub-basin. There is only limited data on Chinook use of the San Juan Island sub-basin, however, past efforts have found that adult and sub-adult fish from a number of populations in Canadian rivers, the Columbia River basin and Puget Sound use the San Juan Island waters. It is probable that all 22 populations in the Puget Sound chinook salmon ESU use the San Juans as a migratory corridor and a foraging area. It is likely that a diversity of size classes uses this sub-basin. Because the sub-basin is not close to any major delta, fish using this area are expected to be larger in size than fish found in close proximity to their natal streams. They tend to arrive in the San Juans later in their life cycle because they have to migrate greater distances. This means that fish using the San Juans need a diversity of habitats and hence prey types. Larger prey types such as baitfish are expected to be especially important in the San Juan Islands. Migration patterns through the Islands are probably a function of a variety of oceanographic features such as river discharge from the Fraser River and upwelling off the coast. More research is needed to improve understanding of the diversity of life history types using this sub basin.

Landscape Story:

San Juan County has a land area of 175 square miles and 408 miles of shoreline. Only 4.3% of the shoreline is armored, the least of any of the sub-basins in Puget Sound. The shoreline is predominately rocky with deeper waters and channels in close proximity to the shoreline, and these areas are significantly impacted by tidal action. Kelp habitat is abundant in this area. Eelgrass occurs primarily in protected areas such as Westcott Bay. In general, the nearshore and marine environments of the San Juans are healthy and productive. Beaches are a smaller percentage of the shoreline and the impact of development specifically on these areas is not documented. One impact to forage fish habitat is roads along the backshore, with nearly eight miles of potential spawning beach

affected by roads according to the draft San Juan County Salmon Recovery Plan. Seawalls, bulkheads or jetties occur at ten documented surf smelt spawning sites. Sewage outfalls are a known stressor in this sub-basin. There are numerous recreational and commercial shellfish harvesting areas that are dependent on good water quality. The small tributary streams in this sub-basin are generally associated with the locations of most development.

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 against catastrophic events.
- Protect key sediment transport processes and features such as feeder bluffs.
- Protect kelp and eelgrass habitats and the processes that support them.
- Ensure that the system provides sufficient food items such as bait fish to support migrants and residents. Protect the types of habitats that sustain forage fish throughout their life history, not just spawning habitat.
- Protect the existing pocket estuaries.
- Habitat activities (e.g., dredging) in this area must be managed according to the time fish are present which is likely later than in the main basin of Puget Sound. Habitat management should be tailored to fit probable fish use of this area.
- Consider wastewater reclamation and reuse retrofits for Friday Harbor, Roche Harbor, Orcas and Rosario wastewater discharges.
- Analysis of the relationship of development patterns to habitat locations and types is needed to determine and prioritize actions associated with these strategies. This analysis should not delay proposed protection or restoration actions.
- Protect all remaining functional nearshore habitat throughout the sub-basin via shoreline master programs, critical areas ordinances, enforcement and incentives.

Key Restoration Actions:

There is not sufficient information to evaluate the regional benefit of restoration actions in this sub-basin. PSAT and PSNERP are encouraged to continue working with watershed planning teams on the regional assessment and prioritization of actions that are of regional benefit.

- Research the geologic and oceanographic processes that support food webs in this region.
- 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?