

## CHAPTER 6

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# Regional Salmon Recovery Strategies

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Introduction	350
Habitat Strategies	353
Protecting Existing Physical Habitat and Habitat Forming Processes	353
Estuaries, Puget Sound and the Pacific	362
Water Quality	386
Instream Flow	394
Forest Management and Puget Sound Salmon Recovery	401
Proposal for the Prosperity of Farming and Salmon	411
Regional Harvest Management Strategies	420
Regional Hatchery Management Strategies	429
H-integration Strategies	439

# Regional Recovery Strategies: Introduction

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*"We are all in this boat, in the same watershed, together and the sooner we realize it the more progress we will make...we must work together across Puget Sound to make sure our efforts will add up to meet the biological goals set by the federal government for the ESU."*

*William D. Ruckelshaus*

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Site-specific strategies and suites of management actions to recover listed Chinook salmon in the Puget Sound Evolutionarily Significant Unit (ESU) are provided in the individual watershed chapters. These are summarized in the watershed profiles section of this document, and included in their entirety as submitted by local watershed groups in Volume II of this plan.

A key strength of this plan is that each watershed chapter is tailored to the particular conditions and needs of its area. Another key strength of this plan is that the 15 watershed and nearshore chapters create a composite result that meets the criteria for ESU recovery provided by the Puget Sound Technical Recovery Team (TRT).

In some cases as noted in the watershed profiles, the TRT identified additional factors or conditions that merit particular attention or additional effort to increase the certainty of achieving a watershed plan's outcomes and contribution to overall ESU recovery. A number of these issues, even if appropriately addressed at an individual watershed scale, are common to multiple watersheds and need both regional and local attention to resolve. Where a regional approach is needed in addition to a local approach to address these items, they are discussed in the regional strategies in this chapter or in the adaptive management and monitoring section (Chapter 7).

The strategies discussed in this chapter are not intended to replace actions or strategies identified within individual watershed plans. Together with the additional factors and conditions identified by the TRT, the watershed plans are considered to be based on the best available science for recovery in the individual watershed. The strategies in this chapter are intended to bolster and support watershed efforts by adding appropriate regional scale approaches or guidance. If there is a conflict between the recommendations of the regional strategies and the individual watershed chapters, the individual watershed chapters shall take precedence.

This chapter is organized as follows:

### 1. Regional habitat strategies

- Habitat protection
- Nearshore
- Water quality
- In-stream flows
- Forests and fish
- Farms and fish

### 2. Regional harvest management strategies

### 3. Regional hatchery management strategies

### 4. Integration of Habitat, Harvest and Hatchery Strategies and Actions

*The essence of each strategy is summarized below for reference purposes, but the full discussion should be read to help understand the context and details of each approach:*

#### Protection of Existing Physical Habitat and Habitat Forming Processes:

The regional approach to habitat protection is three-pronged. It capitalizes on existing resources and seeks to reduce known areas of uncertainty.

1. Improve certainty of results of the various protection efforts by conducting an analysis of the effects of existing programs on habitats and fish.
2. Improve existing regulatory and voluntary protection programs and continue implementation at the local, state and federal levels of government.
3. Coordinate regulatory and voluntary protection actions at the appropriate scale to ensure protection objectives are met.

#### Nearshore: Estuaries, Puget Sound and the Pacific Ocean Supporting Salmon Recovery:

The importance of the estuarine and marine environments are highlighted in this section. It presents a regional approach to protect and restore the Sound and shows the connection between watershed and regional efforts. There are major results, strategies, and actions for seven key factors.

These are:

- A. Protect key fresh- and saltwater processes and habitats from physical or biological disruptions.
- B. Restore estuarine processes and habitat.
- C. Restore marine shorelines (including freshwater inputs) outside major deltas.
- D. Protect and restore fresh- and saltwater quality.
- E. Protect and restore freshwater quantity.
- F. Reduce the risk and damage from catastrophic events.
- G. Reduce risk and damage from non-indigenous species and other changes to food webs.

Key ocean strategies are also included.

#### In-Stream Flow Protection and Enhancement:

There is a three part strategy to ensuring instream flows that support salmon recovery. This section describes:

- The schedule and approach for setting flows;
- The need and approach for improving the science that connects flows to salmon needs; and
- A ten year timeframe to achieve flows that support recovery.

#### Forests and Fish and Salmon Recovery:

The regional strategy for addressing forest factors related to salmon recovery seeks to increase coordination between forest managers and salmon recovery managers within existing regulatory frameworks by:

- Sharing lessons learned from monitoring and research activities.
- Requesting specific and strategic adaptive management projects for consideration by the Forest Practices Board.
- Communicating monitoring and research needs and the studies underway for habitat functions covered by Forests and Fish, and communicating about monitoring and research needs and programs that will be covered by others.

- Coordinating restoration efforts such as sequencing of fish passage barrier projects from the lower to the upper watershed.
- Working together on legislation and fundraising where mutually beneficial.
- Coordinating public education and outreach where mutually beneficial.
- Working together to help small forest land owners implement fish-friendly practices without undue economic hardship.

**Proposal for the Prosperity of Farming and Salmon:**

This proposal focuses on three initiatives, each with its own set of tools:

- Protecting & restoring fish habitat;
- Keeping farmland in farming; and
- Improving farming’s bottom line.

The regional strategy assumes that existing regulatory protection mechanisms will continue to be applied and so this section focuses on bolstering the incentive-based approaches to help farmers help fish.

**Regional harvest management strategy:**

This section summarizes the overall harvest management strategy to ensure that fishery-related mortality will not impede the rebuilding of natural Puget Sound Chinook salmon populations, while maintaining consistency with treaty-reserved fishing rights and international agreements. The Harvest Management Component of the Comprehensive Chinook Management Plan (PSTT and WDFW, 2004) sets limits on annual fishery-related mortality through the establishment of harvest rate ceilings and thresholds of low Chinook abundance that trigger additional conservation measures.

**Regional hatchery management strategy:**

Strategies to reform hatchery programs have been underway for decades. The Puget Sound Salmon Management Plan in 1985 between state and tribal co-managers and the development of new stock transfer policies in 1991 fostered the

use of local brood stocks and reduced the transfer of eggs and juveniles between watersheds. Recent reform efforts to modify hatchery structures and operations, and to emphasize the maintenance of genetic flow and diversity for natural populations are largely outlined in the Comprehensive Puget Sound Chinook resource Management Plan - Hatchery Component (WDFW and PSTT, 2004) and the associated 42 Hatchery Genetic Management Plans. This section summarizes these existing approaches.

**Integration of Habitat, Harvest and Hatchery Strategies and Actions:**

This section summarizes the need, guidance and existing approaches for developing strategies to integrate the three H’s, and recommends next steps to move further down the integration continuum over time.