

# Shoal Bay Forage Fish Habitat Restoration Project and San Juan Bulkheading Case Study

Barbara Rosenkotter, San Juan County Lead Entity Coordinator

## Project Description

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Two projects will be presented describing a highly successful restoration project but also documenting the “flip side” where additional degradation continues to occur. One project is a full restoration project on a documented surf smelt spawning beach on Lopez Island and one is a case study regarding a bulkhead being approved on a documented surf smelt spawning beach on San Juan Island.

Lopez Island Restoration Project: The beaches of Shoal Bay on Lopez are documented surf smelt spawning habitat. An old shuffleboard court directly covered the upper beach with a degraded concrete and creosote beach structure. The specific objectives and species/habitat benefits of the Shoal Bay Forage Fish Habitat Restoration Project included: Restore suitable habitat at a documented surf smelt spawning site, Remove an unnecessary shoreline modification to restore natural coastal processes, Improve water quality conditions for all marine species through removal of 35-40 creosoted wood piles from the upper beach habitat, Enhance nearshore restoration actions planned for the adjacent property, Foster improved understanding and involvement by other Shoal Bay and regional shoreline landowners. The Shoal Bay Forage Fish Habitat Restoration Project restored over 600 square feet of beach habitat below Mean High High Water and allowed restoration of natural geologic and vegetative processes to reform the upper beach profile, berm and substrate. The project was completed in December 2008. In July 2009 surf smelt were seen spawning on the newly restored beach with salmon foraging on the surf smelt.

San Juan Island Case Study: In 2009, in separate proceedings, both the Washington Shorelines Hearings Board and Washington Department of Fish and Wildlife approved a 100 foot rockery bulkhead on a surf smelt spawning beach on San Juan Island. Eelgrass and Pacific herring spawning habitat were also identified in the nearshore reach of the shoreline property. The applicants’ stated need for the bulkhead was the protection of lawn, landscaping, and trees, as well as improved aesthetics for their shoreline property. The case study outlines Lessons Learned and Recommended Steps for Improving Protection.

## Guiding Principles

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These process-based principles apply to the project(s):

- Principle #1: Target root causes of habitat and ecosystem change
- Principle #2: Tailor restoration actions to local potential
- Principle #3: Match the scale of restoration to the scale of physical and biological processes
- Principle #4: Be explicit about expected outcomes, including recovery time

## **Constraints**

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The forage fish habitat restoration project was a small but highly effective project which encountered minimal issues. However, the “flip side” of the story is that while effective habitat restoration actions are occurring additional habitat degradation is being approved, i.e. protection efforts are not holding the line on additional habitat degradation.

Lessons learned – The primary result of the Shorelines Hearings Board (SHB) decision is that a shoreline property owner can obtain a permit to construct a bulkhead on a shoreline in San Juan County if the bulkhead will prevent erosion to a lawn, landscaping, and shoreline trees, and testimony convinces the SHB that the bulkhead will not alter the beach profile. Likewise, a shoreline property owner can obtain an HPA for a bulkhead by stating in the application that the bulkhead will be located above OHWM.

Other lessons include:

- If Washington communities truly intend to protect marine resources, improved protection at all levels must receive the same priority as restoration;
- Decision makers are not using forage fish maps at hand;
- Scientific uncertainty leads to a battle of consultants;
- To the extent that current legal authority or political will prevents achieving no-net-loss of shoreline ecosystems or even critical food fish, communities need to candidly concede this point and focus on protecting the most essential critical areas, or honestly concede lack of intent to protect shoreline species so that members of the public understand that we are not actually trying to meet a no-net-loss goal;
- This SHB decision may set a precedent; the San Juan County hearing examiner cited it within a couple of months to justify new shoreline armoring on forage fish spawning habitat in an area with no excessive erosion or threatened structure;
- The implementation of state and local shoreline protections is not accounting for critical real-world changes like sea-level rise.