

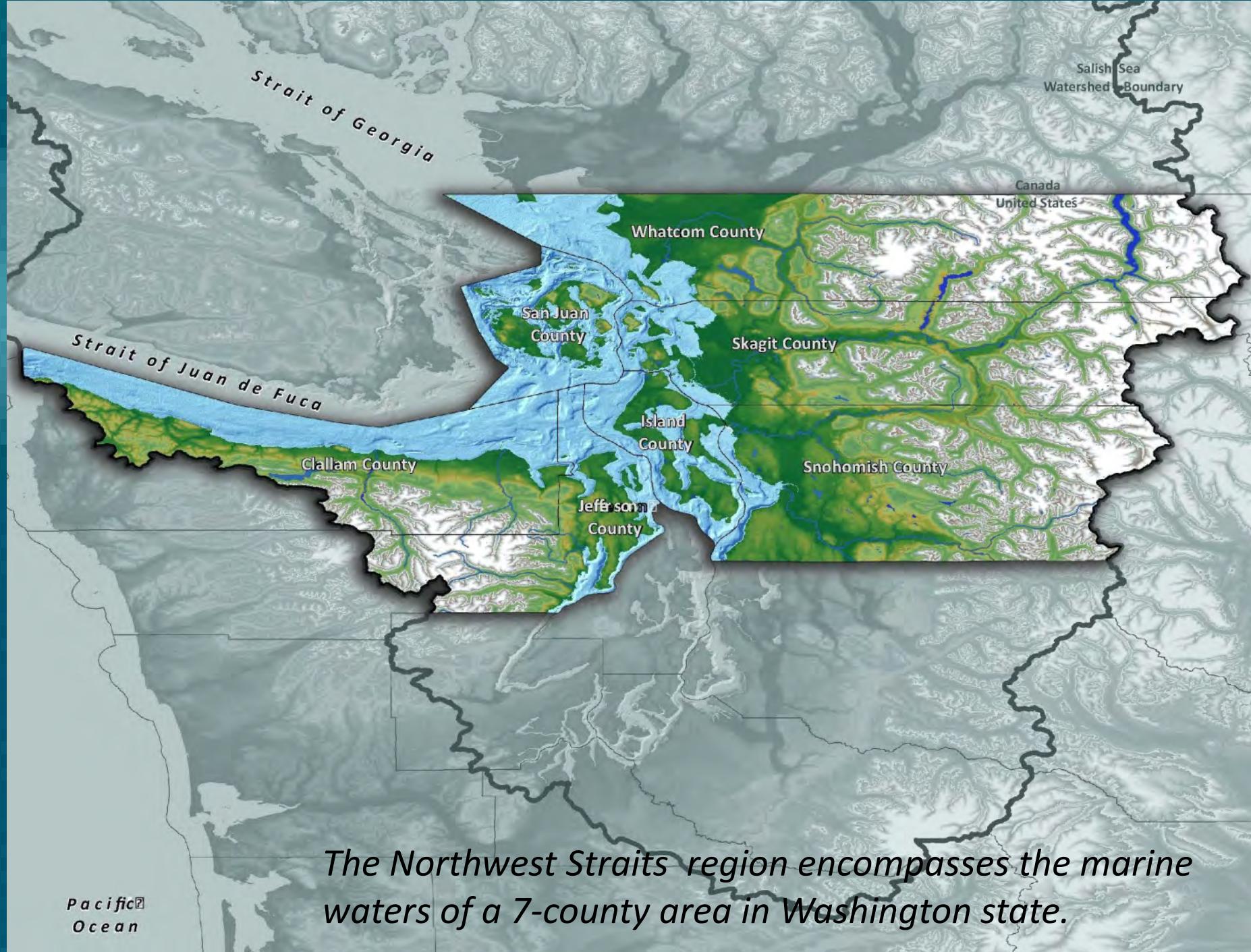


Which way to the beach?

and other considerations of fish as forage

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Background

Puget Sound is home to a variety of species of small, energy-rich, schooling fishes that are the foundation of marine food webs. Collectively known as forage fish, they are fuel for migratory birds, marine mammals, and other fish, and depend on nearshore and coastal habitats during many stages of their life cycles. Pacific herring, sand lance, and surf smelt spawn in the intertidal zone. The loss of natural beaches, eelgrass beds, and kelp forests - compounded by disease, pollution and other stressors - is impacting forage fish populations throughout the Sound.

Our Program

The **Northwest Straits Initiative** has worked to protect forage fish and nearshore marine habitats since 1998. In 2010, the organization established a Forage Fish Program to bolster research and conservation efforts around the region. Documenting spawning beaches continues to be one necessary step toward forage fish protection, under a 'no net loss' requirement in the Washington Administrative Code. In September 2012, the Northwest Straits Initiative co-hosted a symposium of forage fish experts to identify priority science and policy actions. Here, we shine a light on two projects through which critical habitat for forage fish, shorebirds, and other wildlife will be protected and restored.

Two examples of community-based projects that protect/restore forage fish habitat

Skagit County: Citizen Science

In Skagit County, home to the third-largest river on the West Coast of the contiguous U.S., volunteer community members have been sampling nearshore habitats using a beach seine and established survey protocols.

During summer and early fall 2012, juvenile salmon, larval rockfish, sand lance and other fishes were collected along the west side of Fidalgo Bay, a known surf smelt spawning area. These data will be used in the development of a sampling plan for future monitoring.



Island County: Habitat Restoration

Cornet Bay in Deception Pass State Park is on the northern end of Whidbey Island, located along the migration path for the largest source of juvenile Chinook salmon in Puget Sound. The Northwest Straits Initiative worked with project partners to remove more than 800 feet of creosoted bulkhead and restore the shoreline to improve the habitat for spawning forage fish and other wildlife.

This restoration project:

- Eliminates a bulkhead as a source of beach scouring
- Expands intertidal habitat
- Improves beach composition
- Removes a source of hydrocarbons leaching from the bulkhead
- Improves riparian vegetation



The construction phase of the beach restoration at Cornet Bay, removing creosoted bulkhead from 800 feet of shoreline.



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