

2009 Aquatic Reserve Technical Advisory Committee Recommendation

Nisqually

The TAC unanimously recommends managing this site as an Environmental, Scientific and Educational Aquatic Reserve. The TAC also recommends the following changes to the proposed boundaries (map included):

1. Include the state owned tidelands along the south end of McNeil Island. These tidelands are entirely state-owned, DNR managed, are currently off limits to direct human impact. Inclusion in the Aquatic Reserve would ensure long-term protection for conservation regardless of the future of the state penitentiary.
2. Extending the boundary upstream in the Nisqually River and McAllister Creek to include state-owned bedlands up to the beginning of the refuge. This will provide habitat connectivity with the Nisqually estuary restoration site.

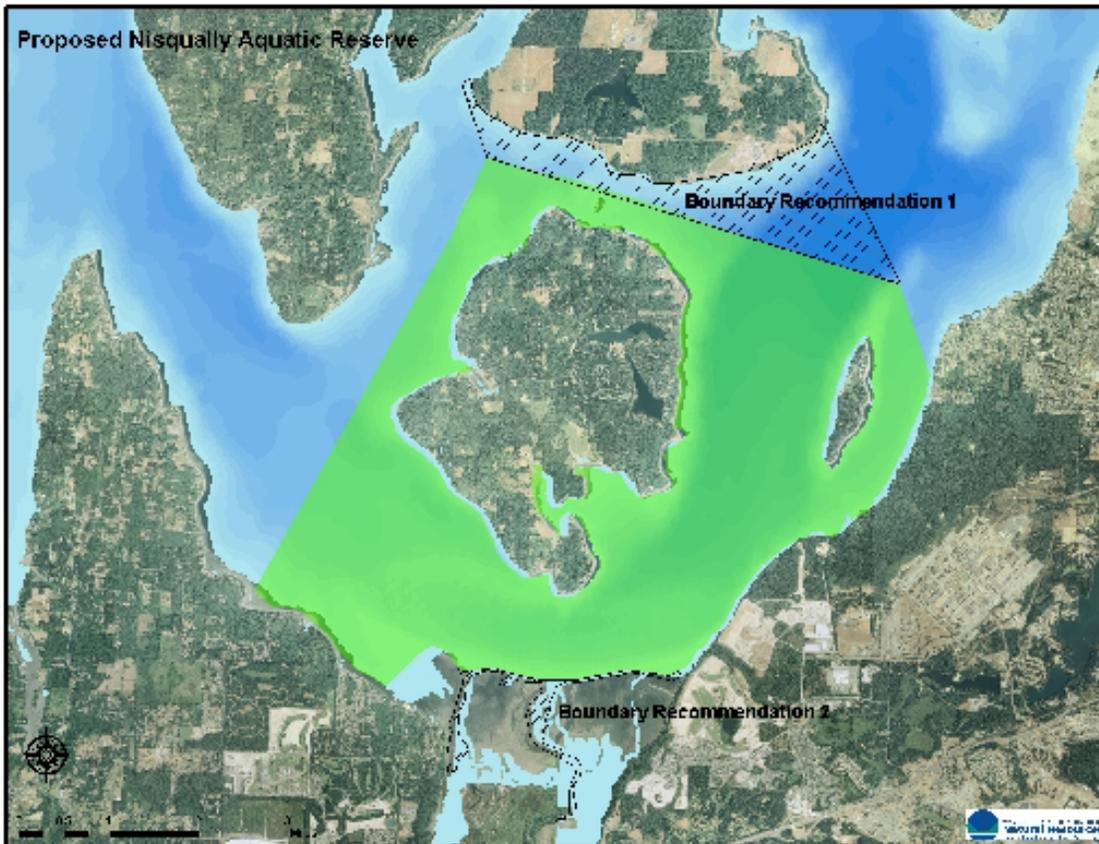
Important environmental attributes noted by the Committee:

- Geological and oceanographic conditions have created an unusual co-occurrence of marine habitats including deepwater sand waves, shallow banks, deepwater trenches, and sand, mud and rocky reef habitats - very rare ecosystem types in the South Puget Sound ecoregion.
- The marine influence of the Tacoma Narrows combined with the freshwater flows from the Nisqually River provide important sediment and nutrient inputs that support regionally high fish species biodiversity and abundance.
- The complexity of physical and biological conditions found in marine habitats, the large freshwater estuary (Nisqually River delta) in addition to a complex shoreline creates a high diversity of habitat types that support hundreds of species, including federally listed species.
- Numerous pocket estuaries support migrating juvenile Pacific salmonids and the potential for restoration opportunities for the native Olympia oyster.
- Marine waters and habitats within aquatic reserve boundary provide foraging habitats for breeding and non-breeding populations of Marbled Murrelets, Common Murres, Rhinoceros Auklets, Pacific Loons, Common Loons, Harlequin Ducks, Surf Scoters, Great Blue Herons, and Bald Eagles.
- Islets and kelp beds provide breeding and foraging habitats for harbor seals.
- Historically (ca. 1880s), marine habitats supported extensive *Nereocystis* (floating kelp) beds.
- Relatively intact shoreline on Anderson Island (e.g., limited number of retaining walls) allows nearshore sediment drift cells to remain intact.

- The Nisqually River delta is a nationally recognized shorebird and waterfowl migration site on the Pacific flyway.
- Nisqually National Wildlife Refuge protects foraging habitat for migratory species, and has existing infrastructure to provide environmental education opportunities for the public.
- The Nisqually Reach Nature Center contains existing infrastructure for environmental education and scientific research. This provides an excellent opportunity to build on existing educational and monitoring activities provided by the Nisqually National Wildlife Refuge and the Nature Center.
- Proximity to the Nisqually estuary restoration provides unique opportunities for monitoring the effects of a large-scale estuary restoration project on adjacent intertidal and subtidal habitats.
- Currently, no large-scale aquatic conservation areas exist in South Puget Sound ecoregion to protect representative or unique marine habitats.

Boundary Recommendations

The following map details the TAC recommended boundary modifications (hatched polygons) to the proposed Nisqually Reach Aquatic Reserve. The TAC recommends that the boundary of the Aquatic Reserve extend northward to include the southern shore of McNeil Island to preserve habitat connectivity surrounding Anderson Island.



Management Recommendations

- Recommend requiring directional drilling of replacement utility cable to Anderson Island under eelgrass beds to avoid disturbance to this habitat.
- If dredging is allowed in Oro Bay to support existing water-dependent uses, require on-site mitigation.
- Monitor dispersal of material at existing dredge disposal site in deepwater trench to gain knowledge about interaction between disposal of dredge material and the unique hard bottom ecosystem found at the site.
- Consider restricting new overwater structures on DNR managed lands in order to protect unique habitat types and supported species throughout the site.
- Consider restricting activities that might disrupt and/or destroy the oceanographic and estuarine conditions that influence the movement and retention of water, sediment and nutrients that support the diversity of habitats and species found at the site.

TAC Evaluation Background

The TAC visited this site once on June 8th. This site visit included an on-the-water tour of the shorelines of Anderson Island, Thurston and Pierce Counties within the proposed reserve boundaries. During this site visit, the TAC was also able to access several of the public tidelands that are included in the proposed reserve boundaries. The site visit concluded with a tour of the Nisqually Reach Nature Center. The following individuals also participated in the site visit and provided additional information to the TAC:

- Doug Myers – President – Nisqually Reach Nature Center (Representing site proponent)
- Daniel Hull – Executive Director – Nisqually Reach Nature Center (Representing site proponent)
- Jerry Johannes – Naturalist – Anderson Island
- Tom Mumford – Nearshore Ecologist – Washington State Department of Natural Resources