



How Science Benefits Our Community

Nearshore Salmon Habitat Assessment

The Science of Salmon Recovery

Nearshore habitats in Puget Sound are the focus of increasing attention by scientists and resource managers seeking to understand the importance of shorelines in supporting a wide variety of important species. The nearshore environment spans a range of habitats from uplands, through riparian and intertidal zones, to subtidal areas down to the lower limit of light penetration (about 30 meters). Nearshore environments are critical to the life histories of numerous species of birds, mammals, shellfish, forage fish, and salmon. Pierce County is committed to understanding, protecting, and restoring nearshore environments as a part of the salmon recovery effort.



Puget Sound shorelines provide important habitat for many plant and animal species, including all species of salmon.

Nearshore Salmon Habitat Assessment

Pierce County has recently completed a nearshore habitat assessment of the Key Peninsula, Gig Harbor, and Islands (KGI) marine shoreline. Habitat assessments fill gaps in our knowledge of existing conditions in our nearshore areas and their specific roles in supporting important marine

species and processes. In addition, habitat inventories may be used in identifying high quality areas that should be protected and those that have a high potential for restoration of former ecological functions. The information derived from habitat assessments is critical to the development of land use and resource management plans.



The Pierce County Nearshore Salmon Habitat Assessment includes the entire marine shoreline of Key Peninsula, Gig Harbor, and Islands (KGI) area.

The KGI nearshore habitat assessment includes field reconnaissance of the entire marine shoreline of western Pierce County – about 179 miles of shoreline. The shoreline was divided into 15 large sub-areas, called Ecological Management Units, which were further sub-divided into 413 smaller assessment units. For each assessment unit, 34 different habitat indicators were recorded, including the location of potential forage fish spawning beaches, presence of eelgrass, important

sediment-producing steep slopes, riparian condition, amount of shoreline armoring, and other habitat features. Underwater videography was used in certain areas to confirm eelgrass distribution.

Nearshore Habitat Quality Scores

For each assessment unit, a point score was calculated from the habitat features present. Relative ranking of the habitat scores show us the best and worst salmon habitat in the KGI area. Typically the higher scoring assessment units had features such as erosive bluffs, large eelgrass beds, or sources of large woody debris that provide ecological benefit to areas beyond the boundaries of the assessment unit. Lower scoring assessment units were those that have been altered by human activities such as bulkheading, overwater structures, and riparian degradation. During the course of the study, assessment units that have been disturbed by human activity, but which retain a high potential for habitat restoration, were identified. Potential restoration actions most prevalent throughout the study area include bulkhead and fill removal, riparian enhancement, removal of derelict

structures, and restoration of connectivity between the nearshore and small freshwater estuaries.

Nearshore Assessment Available Online

The KGI Nearshore Salmon Habitat Assessment final report is available online at the following website:

<http://www.co.pierce.wa.us/pc/services/home/environ/water/swm/watershed/leadentity.htm>

For more information on the nearshore habitat assessment please contact:

Dave Renstrom, Environmental Biologist
Pierce County Water Programs
(253) 798-4680
drenstr@co.pierce.wa.us

For general information on salmon recovery in Pierce County please contact:

Tom Kantz, Environmental Biologist
Pierce County Special Projects
(253) 798-4625
tkantz@co.pierce.wa.us



Small freshwater estuaries provide important rearing habitat for juvenile salmon. Bulkheading and the removal of shoreline vegetation reduce nearshore habitat quality.