

Restoring Harper Estuary

Harper Estuary is a small, but ecologically important bay on Kitsap County's south eastern shore with productive habitats for fish and wildlife. A project to restore the Estuary's natural functions is coordinated and managed by Kitsap County, in partnership with the Washington Departments of Ecology, Fish and Wildlife, and Natural Resources.

Where the tide meets the stream...

The mixing of salty ocean water and freshwater from rivers or streams creates an **estuary**. Estuaries are one of the most productive natural habitats in the world. Many species of fish, birds, mammals, and plants depend on the sheltered water of estuaries for food, shelter, and reproduction. Often referred to as "nurseries of the sea", estuaries provide vital habitat for nesting and spawning for many species.

A history of impacts...

The 1900's brought booming growth to Seattle and Tacoma. An abundance of natural resources drew new industries to the area. With new industries came drastic changes to this natural setting.

Forests were logged, a mill and brick factory were built, roads were paved, and culverts were constructed. These changes restricted tidal flow, all but eliminating the rich marine feeding ground and salmon nursery.

Turning the tides...

Harper Estuary has important value for fish and wildlife, recreation, and local history. The restoration of Harper Estuary aims to reestablish tidal influence and estuarine habitat for salmon and other species that rely on the estuary.



A juvenile coho salmon stuck in the culvert plunge pool at low tide. This plunge pool, created by scour action from the undersized culvert, puts salmon at greater risk to predation and the elements. Once tidal waters move freely again, salmon will have greater access to the estuary. Photo: Jeff Adams

Restoration in Collaboration

The restoration of Harper Estuary brings together various agencies, groups, universities, and community members, all working together to facilitate protection and enhancement of Harper's natural features.

How will replacing a restricted culvert with a bridge affect marine life in the estuary?

To better understand this question, Washington Sea Grant teamed up with UW's Wetland Ecosystem Team (WET) to collect ecological information about the estuary. Once water moves freely in and out of the upper estuary, fish, crabs, and all sorts of flotsam will move with the tides – possibly changing food, habitat, and predation. Washington Sea Grant's Crab Team has partnered with community volunteers to collect, categorize, and measure crabs and fish to understand how these species live in the estuary.



Volunteers processing a trap sample at a regular monitoring site



Contents of a trap placed in the upper estuary

Photos: Jeff Adams

Want to learn more about Washington Sea Grant?
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Brick by Brick: Cleaning Up A Former Industrial Site

Clinker bricks found on Harper's shores are remnants of bygone industrial days. These bricks were either cracked or burned, deemed unusable, and dumped into the estuary. To improve water quality and habitat, crews from Department of Ecology's Washington Conservation Corps and Department of Natural Resources have been removing tons of bricks (literally!) and toxic creosote treated logs from the estuary.



WCC crews removing bricks



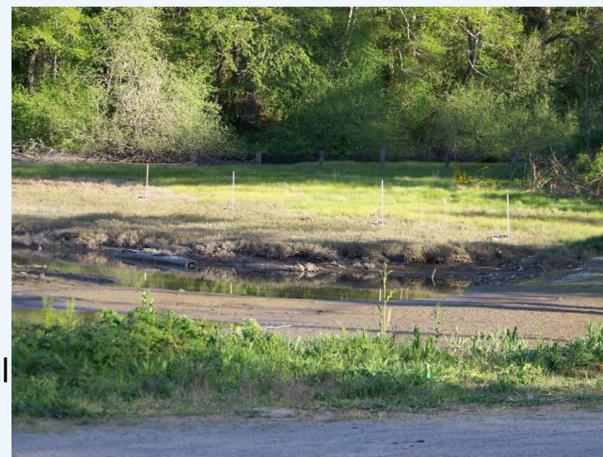
DNR crews removing creosote logs



Collaborators with UW's WET observe logs, seaweed, and insect prey on the same transects (pictured to the left) as WWU, increasing the connection and value of the data

Surveying Harper Creek's Estuary Restoration

Western Washington University's Huxley College of the Environment has set up a monitoring program at Harper Estuary to study how well the restoration efforts are working. The team has been monitoring changes in vegetation, soil/sediment, and water quality, since the culvert removal in 2016 – focusing on changes from and responses to restoration efforts. Conditions in Harper will be compared to three other restored estuaries in the County.



An Abundance of Natural Resources

The early attraction and development of the Kitsap Peninsula

Tribal and European settlements were drawn to the natural resource wealth of the northwest. Interest in the fisheries and forest for lumber grew exponentially during the 1800's to early 1900's. The abundance of easily extracted resources spurred the growth of seaports, towns, and industries.

People of the Clear Salt Water ... the Suquamish ...

Harper is in the heartland of the Suquamish People, the People of the Clear Salt Water. Suquamish families fished, hunted, collected shellfish and plant resources throughout the Salish Sea for thousands of years. Archaeological sites in the vicinity have shell and other food refuse deposits that document shellfish collecting, hunting land animals, fishing for salmon and other marine fish, and collecting berries and other vegetal foods.

A permanent Suquamish village with cedar houses was at the mouth of the Curley Creek in nearby Colby and was visible in the early historic period. Chief Colby and his fellow Suquamish families had a seasonal campsite at Harper to access marine and terrestrial resources.



Suquamish leader William Chico and his sister Mary Wilson processing salmon at Chico village on Dyes Inlet, circa 1900 Photo: Suquamish Tribe Archives.



Log dump at Harper Estuary, circa 1940 Photo: Jim Heytvelt

From the Forests

Due to its vast forests of old-growth trees and number of convenient harbors for transportation, the Kitsap Peninsula was very attractive for the timber industry. Looking for new timber sources to support booming growth, men came from San Francisco and beyond to take advantage of the Northwest's rich forests. Mill sites were established at Port Gamble, Port Orchard, Seabeck, Port Blakely, and Port Madison – providing numerous jobs and turning these areas into populated communities and political centers. The first voting precincts were at Port Gamble, Port Orchard, and Port Madison – and the first County Commissioners were mill owners.

From the Sound

The Pacific Northwest has long been known for its large salmon populations. In the early 1800's, some estimates put total salmon populations in the millions. Seeing opportunity in the Northwest, many fishermen relocated looking to capitalize on these historic runs as salmon populations were depleted in California and the Atlantic. Competition was fierce and fishermen utilized new technologies to get a leg up on their competition. Fish runs began to decline in the late 1890's due to overfishing, habitat loss, and other factors. Restoring habitat and fish populations is a focus of Puget Sound restoration efforts today.



Fishermen in Puget Sound, circa 1917

A Long Time Community Park

Dedicated as a public park in the 1940's, Harper Park has been a spot for locals to gather, hike, play ball, and enjoy the scenery for decades.

From Industrial Site To Public Park

The brick era of Harper ended in 1927 Harper Clay Products Company shut its doors. Over the next several years, kilns and other remnants of brick production were torn down. In the mid 1930's, two brothers bought twenty acres of the land to use for their brush-packing business. The rest of the land was dedicated as a public park in 1946 after locals persuaded the County to make a park.

Enjoy Harper today by strolling on trails through a maturing coniferous forest, leading to evidence of a bygone industrial site. Take in expansive water views and observe wildlife. You may spot one of the various birds that call the area home – such as a Robin, Towhee, Thrush, or Pileated Woodpecker. Gather with friends and family for a picnic and a ball game.



Picnic at Harper Park, circa 1994



Harper Park ball field, sign installed 1995

Photos: Jim Heytvelt

A Rich History of Stewardship

There have been stewardship activities at Harper Park since the 1940's – guided by the idea that you take care of what you love. The Harper Community Club was formed in the 40's to create and maintain the park. Holding fundraisers to pay for improvements to the park and roads and hosting community picnics, the Club was active into the 60's.

In the 1990's, a group of Harper residents came together to form the Harper Park Improvement Club to clean up and reclaim the park. With a potential radio station taking over the park, the Club worked to clear trails, remove debris, build a picnic shelter, installed a bridge over the creek, and planted native plants.

In 2019, the Harper Park Stewardship Group formed to maintain and improve the park - and to get folks out to enjoy all that Harper has to offer. The Group has been active in removing invasive ivy and planting native species. Pictures to the right are from the Group's planting event in 2020. Photos: Carmen Smith



During and after construction of the picnic shelter, donated by HPIC and Curley Creek Grange members, 1999 Photos: Jim Heytvelt

