

# Poulsbo Cleans up a Lot on Liberty Bay

## Introduction

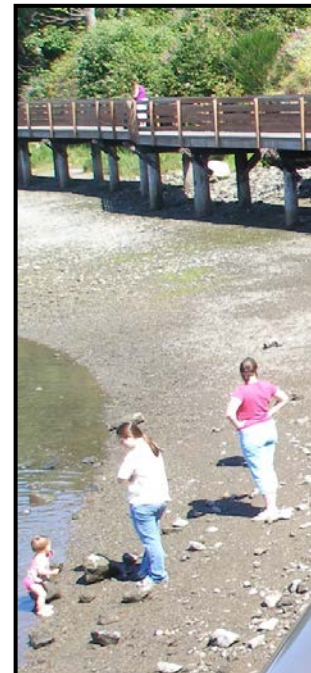
The city of Poulsbo sits at the top of Liberty Bay, an arm of Puget Sound. The first inhabitants of this area, Native Americans followed by Norwegians in the 1880s, found a bounty of salmon and other native fish.

Today, Liberty Bay is an important waterway that supports commercial and recreational shellfish harvesting. Its wealth of fish and beauty is good for residents and businesses alike. In downtown Poulsbo, you can shop, fish, dine, boat, beach comb, or just enjoy the view. It's no wonder people put the Anderson Parkway parking lot right next to the bay so folks can drive right up.

## Problem

The 2.1 acre Anderson Parkway is the single largest impervious surface in downtown Poulsbo. It discharges untreated stormwater directly to Liberty Bay and represents about 20 percent of all downtown's impervious surfaces. The parking lot gets intense use by locals and visitors going to the many restaurants and stores. The runoff from cars results in relatively high amounts of toxic contaminant loading to Liberty Bay.

In 2009, stormwater sampling of Anderson Parkway catch basins found large pollutant concentrations including fecal coliform, dissolved oxygen, and toxics in sediment. In May 2013, the Department of Ecology published a



*Enjoying the Liberty Bay beach by Anderson Parkway*



*Anderson Parkway "before." Looking at parking lot from the bay side. Stormwater goes untreated into storm drain to Liberty Bay.*

total maximum daily load (TMDL) report, which set targets for reducing bacteria pollution in Liberty Bay. These targets will help improve important forage, spawning, and rearing habitat for endangered salmon in the nearshore habitat, which is adjacent to Anderson Parkway.

## Project goals

Large portions of Poulsbo were developed over 100 years ago and have no stormwater treatment facilities. The city recognized that significant improvements could be achieved by retrofitting these developed areas, especially large paved areas near the water. These retrofits use low impact development (LID) techniques to treat polluted runoff from these paved areas.

The Anderson Parkway project installed 1,584 square feet of bioretention cells and 4 Filterra concrete box filtration units. Bioretention cells are engineered planted depressions with special compost mix, and the Filterra units are concrete boxes, also with a compost mix. Between the bioretention cells and the Filterra units, it is estimated that 114 million gallons a day (350 acre-feet) of stormwater will be treated, removing an estimated 330 pounds per year of petroleum hydrocarbons, metals, and toxic organic chemicals. The project is also expected to reduce bacterial contamination to adjacent shellfish beds by an estimated  $8.9 \times 10^{+11}$  organisms annually. Recent sampling by Washington State University Puyallup and Ecology has shown that LID projects have already generated significant water quality benefits.

It is expected that the Anderson Parkway project will continue that trend and provide significant progress toward meeting the goals of the TMDL project.



*Anderson Parkway “after”. Looking at parking lot near Liberty Bay. Picture shows bioretention cells and the top of a Filterra unit in the middle. These clean stormwater from parking lot and add attractive plantings.*

The prime location of Anderson Parkway provides a great opportunity for public education, and signs are installed that explain the LID installations and stormwater treatment. Visitors will find more than the shopping, dining, and recreation opportunities at Poulsbo’s Murial Williams Memorial Park, Pavilion, Boardwalk, and the Port of Poulsbo’s marina. They can take home a message that their city is part of the solution to clean water.

## Project highlights

Prior to the project installation, downtown businesses were concerned that construction and the LID design would dampen business. The city of Poulsbo turned this problem into an opportunity to reach out to the businesses. The parkway design improved traffic circulation while maintaining the number of parking stalls available. Through the course of several meetings, the city was able to come up with a schedule for minimal construction disruption and let the public and local businesses know that the work



would beautify Poulsbo as well as clean up pollution. As part of the collaboration with the city to minimize business loss during construction, the Historic Downtown Poulsbo Association hired a contractor to spearhead a branding and marketing campaign as well as be the point of contact for information on construction activities during the construction period. The result of this campaign was a newly “beautified” Anderson Parkway. Merchants concerned about business loss reported their best business ever for the months during construction, and Poulsbo reported that impressions of the results are “universally positive.”

### Beyond Anderson Parkway

This small city of only 9,000 plus is in the forefront of LID installation work. It was the first to adopt an LID ordinance in Kitsap County to promote water quality treatment and infiltration. The city proactively implemented many water quality improvement projects over the last five years, targeting high pollutant loading areas identified in various plans including the Liberty Bay TMDL.

Poulsbo is “on the road” to cleaning up Liberty Bay, one piece of pavement at a time.

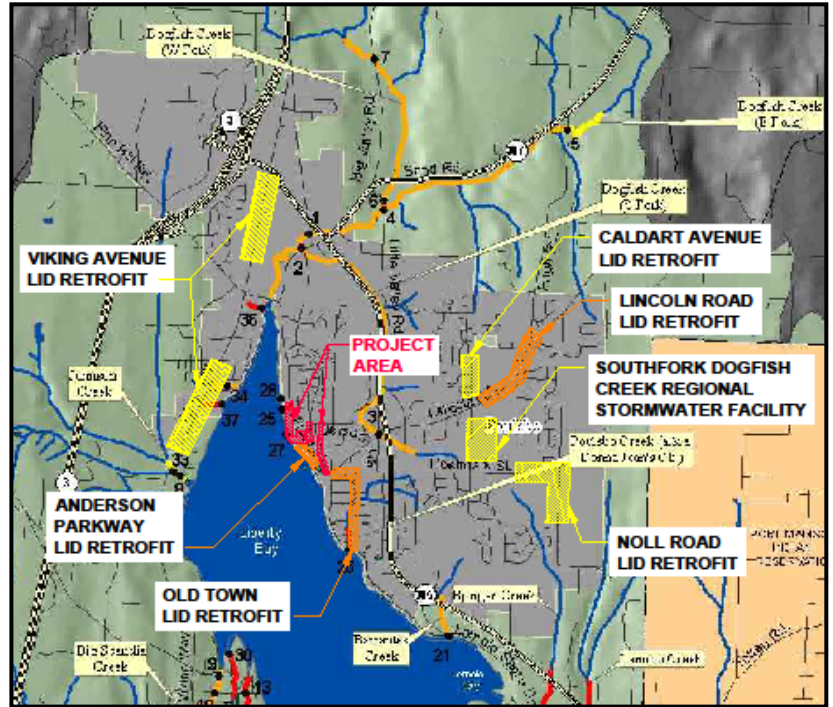
### Funding

In 2010, Poulsbo applied for and was awarded \$270,548 funding for the Anderson Parkway Project from the Department of Ecology through the FY2011 Stormwater Retrofit and LID Grant Program. The city provided \$90,182 match. Total project cost: \$360,730.

### For more information

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*Poulsbo’s many LID projects. Piece of pavement by piece of pavement cleaning water that runs into Liberty Bay.*



*Boating by Anderson Parkway, saving Liberty Bay beneficial uses.*

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