



Manchester Stormwater Park



The park treats polluted runoff from roads, parking lots, commercial property and residential areas through innovative Green Stormwater Solutions (GSS) by using soil and plants. It's the first of its kind in the Puget Sound region.

Location: Manchester, WA
 Type: Public
 Category: Land Development
 Owner: Kitsap County
 General Contractor: Northwest Cascade
 Contract: \$2,400,000
 Construction period: April 2015 to November 2015
 (Six weeks ahead of schedule)

Job Description:

Northwest Cascade Inc. was contracted by Kitsap County to build an environmentally friendly, state-of-the-art stormwater treatment facility that would also serve as a park with community meeting space. The goal of the project was to improve the stormwater quality from the Manchester community before it discharges into Puget Sound. This facility is the first of its kind in the region.

Challenge:

Manchester is a small community of about 4,600 people that is on an east-facing slope 400 feet above Puget Sound. The downtown area lies at the foot of this slope and is prone to seasonal flooding and ponding; and is generally soggy throughout the year. The causes of these issues are high groundwater, an undersized storm drain system, and sheet flow from roadways. This runoff allows surface pollutants to enter Puget Sound which ultimately degrades the natural habitat. This situation had to be addressed while still maintaining Manchester's desire to develop a rural village center and retain its quaint small-town charm.

Solution:

The stormwater facility collects runoff from 80-acres upslope from downtown Manchester. Four in-ground concrete chambers filled with a proprietary filtration media and plants will treat the water before flowing through a 36-inch pipe into Puget Sound. A spiral rain garden is not only the main architectural element of the park but will also treat light rainfall and ground water in the same manner as the main system. The concrete around the spiral garden wall features a poem etched into it that can only be seen when the concrete is damp. The park has a large grass meeting space, colored gravel and brick walking paths, stone benches, handsome light stanchions, and trendy bike stands for the community to utilize.

Result:

The project is a major success for Kitsap County and the residents of Manchester. The stormwater facility will treat flow volumes exceeding 2,000 gallons per minute. Over the next ten years, 100 million gallons of rainwater per year will be treated by the system eliminating 100,000 pounds of pollutants from reaching Puget Sound. Additionally, the City of Manchester has a beautiful park in the center of downtown for the community to enjoy year round.



Before construction: the empty half-acre lot was the former site of a commercial gas station. Contaminated soil had to be removed and managed during construction.



After construction: the four treatment cells contain filter media and plants to clean the runoff before it reaches Puget Sound.



The spiral rain garden is not only aesthetically pleasing but is designed to treat low flows from groundwater and small storms to assist the larger treatment cells.

