



Western Washington University  
**Western CEDAR**

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Salish Sea Ecosystem Conference

2018 Salish Sea Ecosystem Conference  
(Seattle, Wash.)

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Apr 4th, 3:30 PM - 3:45 PM

## **Regional approaches using green stormwater solutions: multi-benefit/functional stormwater parks in Kitsap County**

Christopher May

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May, Christopher, "Regional approaches using green stormwater solutions: multi-benefit/functional stormwater parks in Kitsap County" (2018). *Salish Sea Ecosystem Conference*. 61.  
<https://cedar.wwu.edu/ssec/2018ssec/allsessions/61>

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# REGIONAL APPROACHES USING GREEN STORMWATER SOLUTIONS

Multi-Benefit/Functional  
Stormwater Facilities in  
Kitsap County WA

Chris May  
Kitsap County Public Works



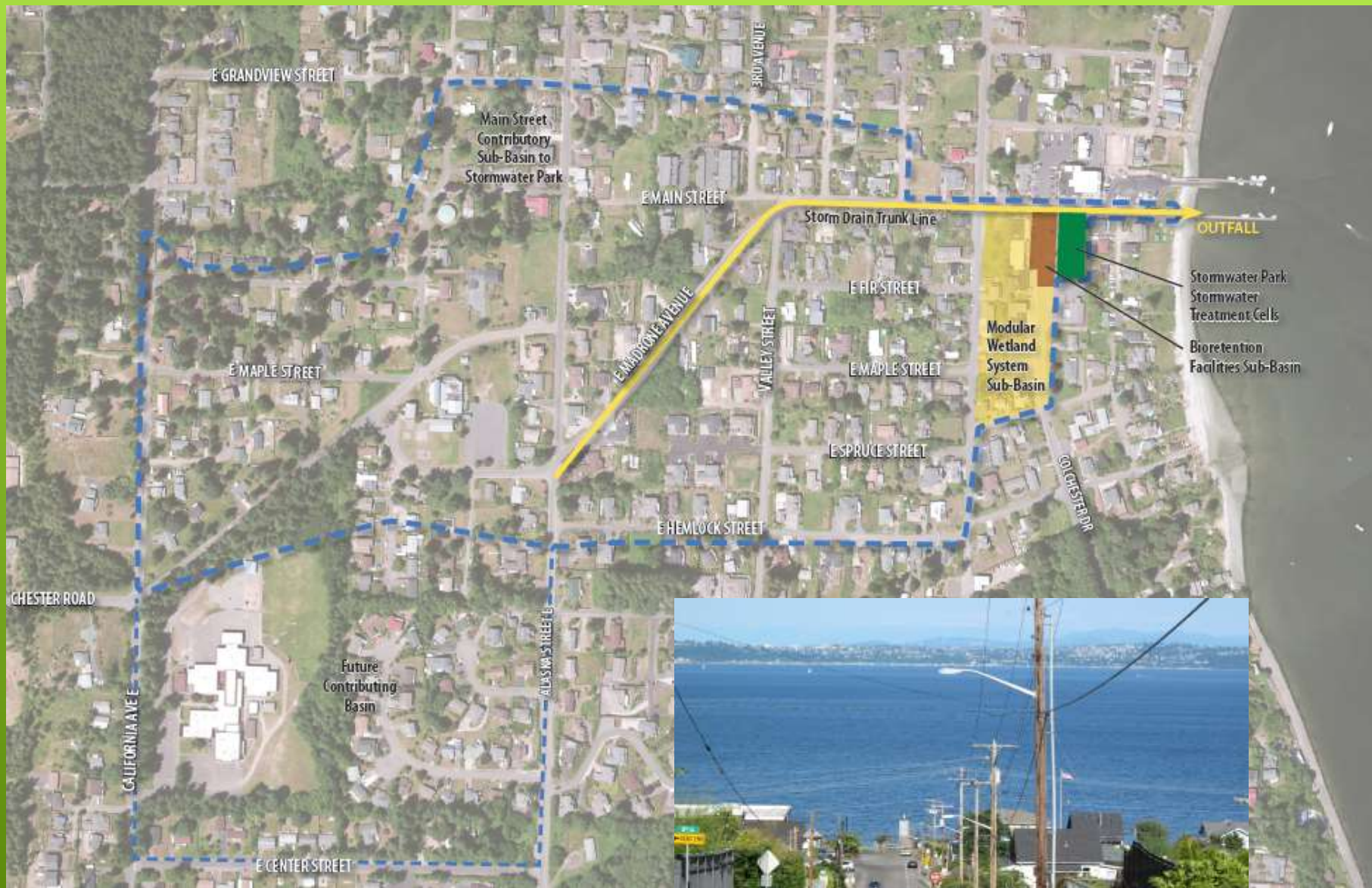


# Manchester Stormwater Park



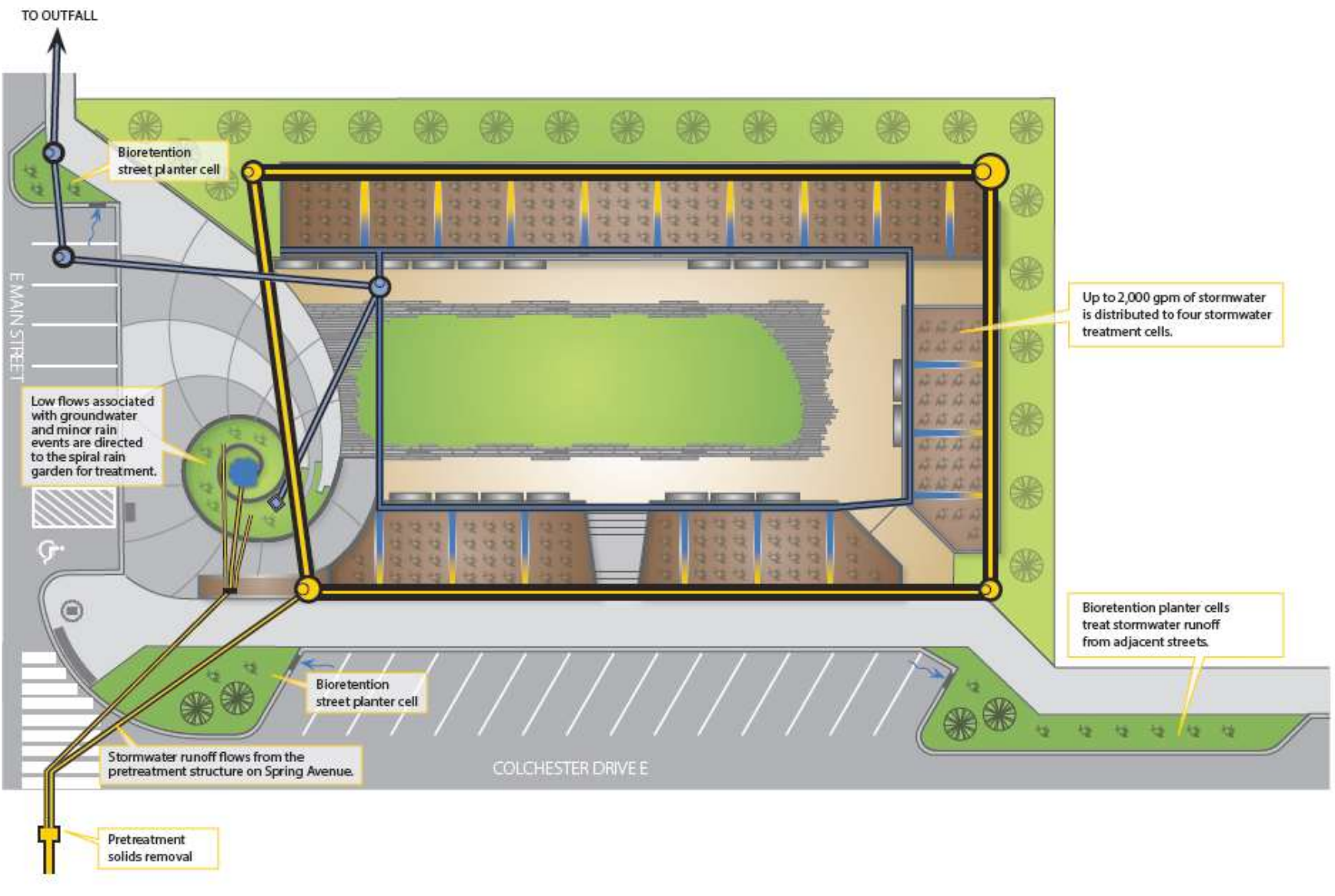
**Clean Water Kitsap**  
Partners in Stormwater Solutions

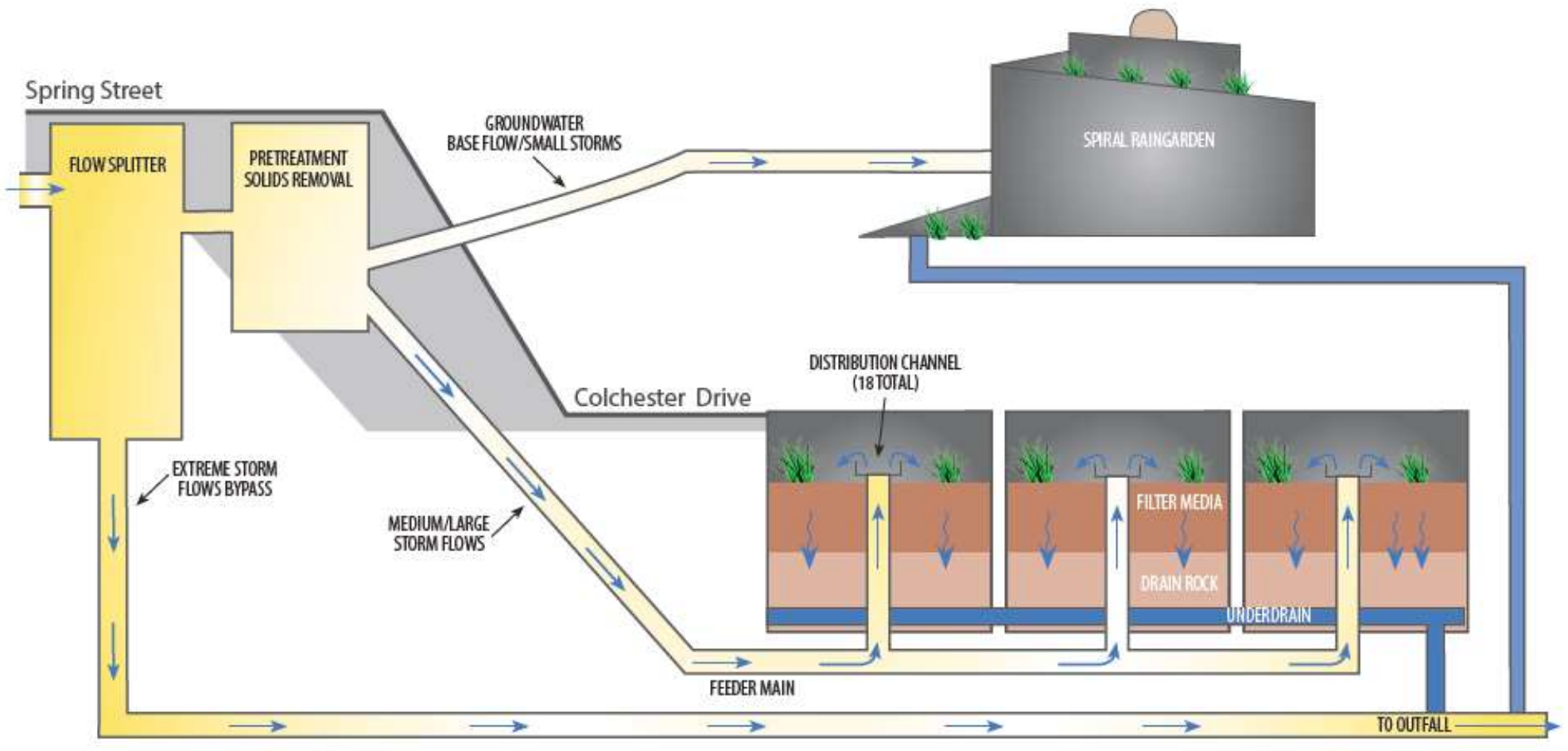






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## A PIONEERING PARK

**Soil**  
Filters out debris and pollutants.

**Plants**  
Roots help break up debris and pollutants.

**Microbes**  
Eat and break down pollutants.

**STORMWATER SUPERHEROES: SOIL, PLANTS, AND MICROBES!**

Whenever polluted runoff comes in contact with soil and plants, as in the park, the bacteria and microbes will break down the pollutants. The soil and the plants work together to clean up pollution.

**Where does the water come from?**  
The best place is the area of best cover. Rainfall runs the most slowly over grass. Rain runs faster over the road through a storm drain. Behind the storm drain, the water goes into a storm drain. Behind the storm drain, the water goes into a storm drain. Behind the storm drain, the water goes into a storm drain.

**A PARK AND A STORM WATER TREATMENT SYSTEM**

The city is doing not only an impressive job of creating a park, but also a stormwater treatment system. Behind the storm drain, the water goes into a storm drain. Behind the storm drain, the water goes into a storm drain. Behind the storm drain, the water goes into a storm drain.

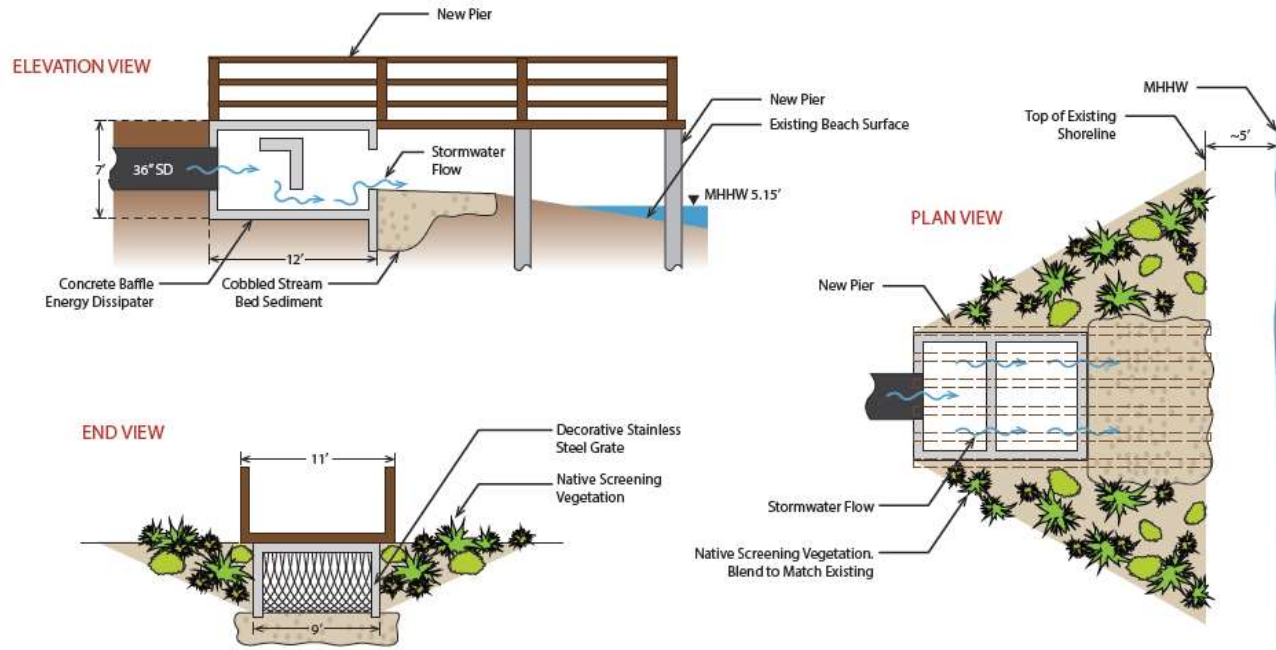
The City of Everett





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# Stormwater Outfall Pipe Concept





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# Show Manchester Videos



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- DATE: November 14, 2014 FILE: DUWEIQA\_ILUSTRATIVE
- LEGEND**
- EMERGENT PLANTING MIX
  - SHALLOW EMERGENT PLANTING MIX
  - LOW NATIVE SHRUB MIX
  - NATIVE SHRUB PLANTING MIX
  - NATIVE GRASS
  - CONTROL WEEDS, MULCH AREA, AND INFILL PLANT TREES AND SHRUBS
  - EXISTING TREES
  - LIVE STAKE WILLOWS AND RED-TWIG DOGWOOD
  - LARGE NATIVE CONIFER TREES
  - LARGE NATIVE DECIDUOUS TREES
  - SMALL NATIVE CONIFER TREES OR LARGE NATIVE EVERGREEN SHRUBS
  - SMALL NATIVE DECIDUOUS TREES
  - ROCK PILE
  - BRUSH PILE
  - SNAG
  - ANCHORED LOG

**Site Plan**  
Duwe'iqa Treatment Wetland Plan  
Silverdale, Washington



# Duwe'iqa Stormwater Treatment Wetland



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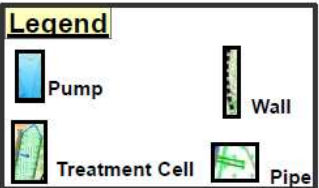


# Show Duwe'iq Video



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# Whispering Firs



# Stormwater Park







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# Kitsap County Department of Public Works

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## Lessons Learned

- **Retrofit, Retrofit, Retrofit...**
- **There's more than one way to do LID/GSS**
- **Think Multi-Functional/Benefit**
- **Engage with the Community**
- **Consider O&M right from the start**
- **Make a big deal of it!**



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