Rainwater Harvesting
Design & Use in the City of Tacoma
Low Impact Development

Goal
The goal of low impact development is to manage stormwater on-site, thereby enhancing surface water and groundwater.

Objectives
The following are list of objectives for low impact design:

- Minimize the impacts of stormwater runoff by maintaining peak flow frequencies and durations
- Groundwater Recharge
- Reduce maintenance of stormwater facilities downstream
- Manage stormwater as close to the source as possible.
- Provide sustainable facilities, visible to the users of the system

L Street Rain Garden

Leach Creek
Flow Credits:
100% of the annual average runoff volume is reused or

Interior uses have a monthly water balance that demonstrates adequate capacity for each month and reuse of all stored water annually.

Flow Control:
A detailed Operations and Maintenance Manual will be required.

Center for Urban Waters

Surface Water Management Manual
Tacoma Municipal Code 12.08.560

Incentive:
- One basic category rate reduction

Requirements:
- Exceed Minimum Requirements
- LID system meeting forested conditions
- Annual Maintenance Reports and Inspections Required

Low Impact Development stormwater and surface water systems
Water is used at the collection truck wash-down area for the cold wash.

Roof water is collected in two 5,000 gallon tanks.

Sizing was based on available space.

Landfill Admin & Shop Remodel
Turkish bath was retrofitted into a cistern.

Rainwater is harvested to irrigate greenroof and toilets.

150,000 gallons of storage.

Pacific Plaza
A retrofit parking structure with an additional 102 parking stalls to complement the existing 381 stalls; two floors of Class-A office space and the conversion of the Pacific Avenue retail space; and the reconstruction of the public hill climb connecting Pacific Avenue and Commerce Street.
Center for Urban Waters

51,000 square-foot, LEED platinum, office and laboratory building.

Home to the City's Environmental Services analytical labs and engineering offices, University of Washington Tacoma research labs, and offices for the Puget Sound Partnership.
Site Plan: Center for Urban Waters

Courtesy of Perkins|Will
Stormwater BMPs:

- Green roof
- Porous pavers
- Rain garden
- Cistern

Center for Urban Waters
Clean water from lab +350 gallons/day (constant)

Rainfall (winter/spring)

Irrigation 300-1,000 gallons/day

Building usage 214 gallons/day
## Water Balance Spreadsheet

<table>
<thead>
<tr>
<th>RO Volume Created (gallons)</th>
<th>Volume Used by Building (gallons)</th>
<th>Volume Used by Irrigation (gallons)</th>
<th>Daily Rainfall Volume (gallons)</th>
<th>Total Daily Surplus/Deficit (gallons)</th>
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Cistern Water Stored

Tank Volume (gallons)

Overflow

Dry tank
Location of Featured LID

- Center for Urban Waters – 326 East D Street
- Pacific Plaza – 13th and Pacific Ave
- Landfill – 1300 Mullen