From Plan to Planted-Part 2
Design and Install

Soaking it in: The A-Z of Stormwater Management in the Landscape for Professionals

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Case Study – The Infiltrator

City project on residential site – Permitted & Engineered
Case Study – The Infiltrator
Case Study – The Infiltrator
Case Study – Parking Lot

Forming and pouring curbs
Case Study – Parking Lot

Protecting site from water during construction
Case Study – Parking Lot

Pre-existing grate higher than overflow
Residential Case Study - Debolock

NW High water table
Residential Case Study - Debolock

After planting – wetland at bottom of slope
Residential Case Study - Debolock

Overflow to sump – pumped to street
Challenging Sites

- Poor percolation rate
- Solution – bog with overflow
Challenging Sites

• Water collects in a low spot
• Solution - Remove lawn and plant wetland plants
Case Study – Jordan

Before
Jordan dig out

Future Rain Gardens
Jordan final grading

Reducing compaction during construction
Jordan Permeable Stone Patio

Rain garden
Rain Garden Engineering Study

Proposed but not installed

Engineered Rain Garden area

Project area
### Rain Garden Size Comparison for Northern Portion of Hastings's Green

<table>
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<th>Rain Garden</th>
<th>North 25-Year</th>
<th>North 10-Year</th>
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<td>Bottom Width</td>
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Jordan Engineered Rain Garden
Challenging Sites

Water coming from another property
Case Study Slopes- Parking
Case Study Slopes- Parking

overflow
Case Study Slopes- Parking

Seep area
Case Study Slopes - Heiden

Water previously sheeting onto property here

Taller wall forces water where we want it
Case Study Slopes- Heiden
Other Solutions – Planted slope
Try to reduce compaction by machinery.

Building infiltration swales
Case Study – Large Slope

Layout and Planting for Swale
Other Solutions – Fish Scale Swales

Slowing flow on a slope
Case Study – Petersen
Case Study – Petersen

Note the use of 2 levels here.
Case Study – Petersen
string of brown pearls
Case Study – Petersen
at planting
Case Study – Petersen
6 months later

- No overflow
- Thriving plants
Other Solutions
Excess Runoff
Case Study - Plantings

At installation
Case Study - Plantings

After 3 years
Case Study – Plantings

- Acer circinatum
- Acorus gramineus ‘Ogon’
- Carex obnupta – slough sedge
- Cornus ‘Kelseyi’
- Eleocharis palustris – miniature bulrush
- Mahonia nervosa
- Nandina ‘Moon Bay’
- Primula veris ‘Sunset Shades’
- Zantedeschia aethiopica – calla lily
Other Favorites

trees + shrubs

- Chamaecyparis thyoides ‘Red Star’ or ‘Little Jamie’
- Clethra alnifolia ‘Ruby Spice’ or ‘Sixteen Candles’
- Cornus ‘Arctic Fire’
- Ilex verticillata – *deciduous male/female*
- Itea ‘Henry’s Garnet’ or ‘Little Henry’
- Magnolia virginiana ‘Moonglow’ – *swamp magnolia*
- Malus fusca – *native crabapple*
- Picea sitchensis ‘Papoose’ or ‘Sugarloaf’
- Salix gracilistyla melanostachys – *black pussywillow*
Other Favorites

groundcovers + grasses

• Ajuga reptans
• Blechnum penna-marina – *alpine water fern*
• Carex ‘Ice Dance’ – *runner*
• Carex ‘Sparkler’ - *clumper*
• Deschampsia caespitosa ‘Northern Lights’
• Fragaria chiloensis – *very spreading native*
• Juncus spp. – curly, striped, J. patens ‘Elk Blue’
• Vaccinium macrocarpon – *american cranberry, native*
• Mazus radicans – *swamp musk*
Other Favorites
perennials

- Canna ‘Tropicana’
- Farfugium spp.
- Hibiscus moscheutos
- Lupinus rivularis – **evergreen native**
- Lysimachia clethroides – **gooseneck loosestrife**
- Mimulus spp. – **monkey flower, some native**
- Osmunda regalis – **royal fern**
- Phormium
- Primula japonica ‘Miller’s Crimson’
- Sidalcea – **checkermallow, some native**
Other Solutions – Hugelkultur

Rotting wood absorbs & holds water
Other Ideas

• Rainbarrels into rain gardens
Other Ideas

Spillways
Other Ideas

Channel drain with stone tiles
Other Ideas

Art + steel

Garden of Lynn Wolfstone
Other Ideas

Fun with downspouts

Bucket Brigade by Buster Simpson
EMSWCD offices, N. Portland
Go with the Flow