Retrofit Incentives
Breakout Session

4th Annual Puget Sound Green Infrastructure Summit
March 22nd, 2019 | Cascadia College/U.W. Bothell
Green Infrastructure Summit
February 8th, 2019

Retrofit Incentives

Brian Stahl
Kitsap Conservation District
Rain Gardens for Surface and Storm Water Management
“Treating water as a resource not a waste stream”
What is the Conservation District?

- We are a legal subdivision of state government that administers programs to conserve natural resources.
- We are non-regulatory. Through voluntary cooperation with private landowners, we promote Best Management Practices that benefit both the environment & the landowner.
- We coordinate technical assistance & cost share incentives to encourage good stewardship of our natural resources.
Implementing best management practices to reduce flooding and protect water quality is one of Kitsap County’s Public Work’s Stormwater division NPDES permit requirements.

In addition to the programs conducted by KCPW Stormwater management program, funding is provided to KCD through the Clean Water Kitsap partnership to implement the following programs in support of the County’s NPDES permit:

- KCD’s Rain gardens and more program
- KCD’s Green Stormwater Solutions program, and
- KCD’s Backyard Habitat program
The Rain Gardens and More Program for Kitsap County provides green stormwater practices to landowners of Unincorporated Kitsap County. The program applies to existing structures; new construction does not qualify.

Green Stormwater Solutions include: Rain Gardens, Soaker Trenches, Permeable Paving, Cisterns, Rain Barrels, and Landscape Modification (Lawn Removal/Native Planting).

The program offers two options: Dig Day or Cost Share.

With a Dig Day, KCD supplies installation and materials*, and pays the contractor directly. *For rain gardens, landowners will supply mulch and some plants.

With the Cost Share option, KCD reimburses landowners for costs for materials and contractor labor, up to $1000.

The Rain Garden Program process has several steps:

1) Landowner fills out the Rain Garden Program application and schedules a site visit
2) KCD evaluates the application using a matrix of criteria to determine if site meets prioritization criteria for funding
3) If project is approved for funding, Landowner signs and dates the Rain Garden Program Agreements (Cooperator and Assistance Agreements). Contractor and material receipt are eligible for reimbursement after this date.
4) KCD can contribute technical assistance for design or construction. KCD design specifications must be followed to receive reimbursement, even if using a contractor.
5) After project completion, landowner submits original receipts (Cost Share) and schedules KCD to inspect the finished practice and get completion signatures.
6) Reimbursement check is issued to landowner (usually within two weeks)

To apply, contact: Kitsap Conservation District Rain Gardens and More Program
10332 Central Valley Rd NE, Poulsbo WA 98370
m.korch@kitsapcd.org 360.204.5529 ext.123
c.kowal@kitsapcd.org 360.204.5529 ext. 124
g.ward@kitsapcd.org 360.204.5529 ext.114
What you need to know before a Cost Shared Project is started!
Rain Garden Program Application

Applicant Name: ______________________ Email address: ______________________

Phone number: ______________________ Site Address: ______________________

Mailing Address (if different): ______________________

How did you hear about our program?

Please check answers for the following questions:

1. Is your property located in unincorporated Kitsap? □ Yes □ No □ Do not know

2. Will the project treat water runoff from an existing structure (i.e., existing building or driveway; new construction is not covered by program)? □ Yes □ No

3. Has a KCD staff member conducted a site visit at your property? □ Yes □ No

4. Are you planning to sell, lease or rent your property in the near future? □ Yes □ No □ Not sure

5. Project is intended to treat runoff from: (mark all that apply) □ Driveway □ Road □ Roof □ Other

   If other, please explain: ______________________

6. Stormwater runoff from existing structure currently flows: □ into a road ditch or storm drain

   □ directly into a waterway (stream, lake, etc.) □ into low spots on property

   □ into a grassed or native habitat area □ Other

   If other, please explain: ______________________

Please indicate which type(s) of project(s) you are interested in: (Check all that apply)

□ Rain Garden □ Soakage Trench □ Permeable Pavement □ Cistern

□ Landscape modification (with native plants)
Program Requirements

- Landowners must live in Unincorporated Kitsap
- Utility locates
- Paid attention to Rain Garden Constraints?
  - Septic setbacks
  - Well setbacks
  - Property lines
  - Building foundation
  - Steep slopes
  - Tree canopy
# Rating Potential Projects

## 2018 Rating Matrix for LID Program

### Practice ID:  

**Landowner Name:**

<table>
<thead>
<tr>
<th>Property meets LID designation and landowner is willing to implement LID approach</th>
<th>Max Pts</th>
<th>Score</th>
<th>Comments</th>
</tr>
</thead>
</table>
| I. Overall Concerns:  
  LID Practice affects stream or shoreline on or adjacent to property (within 200 ft)  
  Critical Aquifer Recharge Area  
  Size of area that will drain to project (1 pt/125 ft² for RG, ST, PP & CH - 1 pt/250 ft² for LM)  
  Diversifies water directly from storm drain, county ditch, and/or waterway | 5 | Stream Name:  
  Aquifer Name:  
  Impervious area: (sq. ft) Type:  
  Residence:  
  Storm Drain:  
  Rain Barrel:  
  Ditch |  
| Subtotal Section 1: | 35 |  
| II. Referral Response:  
  Grant Funded Area or other Agency priority area  
  State, County, or City referral. * Includes Neighborhood Priority Areas  
  CWK Watershed or PIC program area | 10 | Watershed Name:  
  Soil Type(s): |  
| Subtotal Section 2: | 25 |  
| III. Specific Concerns/Benefits:  
  Project will treat runoff from a heavily polluted source of runoff  
  Project part of a KCD, CWK partnership, or neighborhood program (5 pt each)  
  Project results in protection of a critical area (Geo-hazard, eroded, wetlands; etc.)  
  Project could be a useful demonstration/educational site (visibility, location)  
  Project will improve a visible water quality / quantity problem  
  Landowner will contribute labor/materials to project | 10 | Soil Infiltration Rate:  
  Geohazards:  
  Wetlands:  
  Eroded area:  
  Demo Project:  
  Water evidence:  
  Surface/ponding:  
  Springs/stream:  
  Wetlands:  
  High groundwater:  
  Erosion |  
| Subtotal Section 3: | 55 |  
| SUBTOTAL POINTS (Section 1, 2 & 3): | 115 |  

**IV. Technical Review Index (up to 5 additional points may be given) Explain:**

**TOTAL POINTS (including Technical Review):** 120

**Minimum Points to qualify for Incentive:** 50

**Site Address:**

**Comments:**

**Practice Type:**  

**Dig Day**  

**Shoreline**  

**Cat II Critical**
Who does the paperwork?

Kitsap Conservation District

- Landowner completes Application Form
- Meet landowner on site to sign Cooperative Agreement
- Landowner signs Rain Garden Program Agreement (Cost Share)
- Provide design, if necessary
- Completes as-build, receives original receipts, and landowner signs cost share final completion
How long does it take?

• Less than a month to develop and sign agreements
• As-builds completed within one week
• Landowner reimbursements usually within two weeks of receiving receipts and signed cost share final completion
What can the funding be used for?

Any direct cost associated with project

• Contractor costs
• Materials essential for practice function
• Permit fees
Who gets the actual funds?

- Kitsap Conservation District reimburses landowner, up to $1000.00, after project has been completed and approved by KCD (KCD needs original receipts)
- May be able to pay contractor directly under special circumstances
Where does the funding come from?

- **Clean Water Kitsap**
  - CWK is a unique nationally recognized multi-agency partnership created to reduce flooding, prevent pollution and restore fish habitat through stormwater management activities.
  - Funding provided by Kitsap County Public Works Stormwater Division (through the stormwater utility fee)

- **Washington Conservation Commission**
  - Shellfish Closure Growing Areas
  - Very site specific – Watershed restricted
Contractor Restrictions

- Federal funds – Agency must search for violators
  - https://www.sam.gov/portal/SAM

- State funds – Agency must search for violators
  - https://www.sam.gov/portal/SAM
  - https://secure.lni.wa.gov/debarandstrike/ContractorDebarList.aspx
King County Green Stormwater Infrastructure (GSI) Incentive Program

Jessica Engel
Water Quality Planner
King County Water and Land Resources Division
What are we trying to accomplish?
Goals for the Program:

• Add stormwater pollution controls to private properties
• Allow more stormwater to infiltrate close to where it falls, the way nature intended
• Incentivize private property owners to be part of the solution to stormwater pollution
• Increase co-benefits of stormwater management
Rain Gardens
Cisterns
Depaving
Tree Planting
Surface Water Management Fee
Planning 1

2 Pilot Projects  Audience Research

Planning 2

Develop GSI Incentive Program

Implementation

Build GSI on Private Property
Pilot Project #1: Vashon IGA Market
Area of Asphalt For Removal = 570 SY
Length of PCC Curb for Removal = 650 LF
Estimated Volume of Topsoil To Be Removed
From Existing Planter Islands to Match Asphalt
Surface Elevation = 120 CY

Notes:
- Existing parking lane striping to be removed or painted over with paint matching existing pavement.
- Areas of parking lot outside of footprint of new construction shall be restored to the same or better condition than before construction.
- Edge of asphalt concrete for removal shall be sawcut.
Pilot Project #2:
Fairwood Community United Methodist Church
HURDLES TO SOLVE:

Maintenance

Permitting

Internal processes

Prioritization

Varied user needs

Feasibility

Climate change

Commercial sites are time intensive
5 Projects
Veteran Crew?
Prioritization
Assess Research
Maintenance Contract
Feasibility Analysis
Website
FUTURE
THANK YOU!

Jessica Engel
Water Quality Planner
King County Water and Land Resources Division
Jessica.Engel@KingCounty.gov
Lake Whatcom
Homeowner Incentive Program

Retrofits on a Watershed Scale

Eli Mackiewicz, City of Bellingham
Barrier: Distrust of Government

<table>
<thead>
<tr>
<th>Description</th>
<th>What We've Done</th>
<th>What Could We Do?</th>
</tr>
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<tbody>
<tr>
<td>Skepticism of public programs, generally</td>
<td>Staff is liaison</td>
<td>Reevaluate permitting barriers</td>
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<tr>
<td>Eminence of existing and future regulations</td>
<td>Respond quickly to requests</td>
<td>Engage non-governmental partners to greater extent</td>
</tr>
<tr>
<td>Holdership of permitting process</td>
<td>Ensure smooth reimbursement process</td>
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<tr>
<td>Private utility training</td>
<td>Other?</td>
<td></td>
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Lake Whatcom
Homeowner Incentive Program (HIP)

• Technical and financial assistance

• Voluntary and non-regulatory

• Best Management Practices (BMPs) selected to reduce phosphorus inputs
Why?

Rebuilding San Francisco after 1906 Earthquake and Fire

Whatcom Museum
Why?

City Obligation:
87% Reduction of Effective Developed Acres
$1,000,000 per year for 50 years

Strategies: Capital Facilities, Residential Assistance, Operations and Maintenance
FAQ:
What’s the Incentive?

• $1.30 reimbursement per square foot treated, no maximum
• Free technical assistance
• Reimbursables: Design Fees, Construction Labor, All materials
• On average, reimbursement covers ~85% of cost.
FAQ: What Types of Projects Are Eligible?

- Native Landscaping (>80% P-reduction)
- Infiltration Trenches and Rain Gardens (>90% P-reduction)
- Treatment/Media Filter Drains (>85% P-reduction)
- Full Dispersion (>80% P-reduction)
FAQ: What Role Does the City Play?

- Preliminary design and geotechnical data, feasibility
- Connect homeowners to designers and contractors
- Free permitting and permit assistance
- NO role in negotiating contracts, price, or payment
- NO ability for city crews or contractors to do work
FAQ:
What about Maintenance?

- TMDL compliance requires periodic inspections and O+M
- Homeowner signs maintenance agreement “If A, then B”
- City Codes provide inspection access and required maintenance
- Whatcom County projects have easement requirement
Lessons Learned (Pilot)

- Cost is #1 concern, knowledge was #1 benefit
- Fear of unknown can’t be overcome with pretty pictures and government promises
- If designer/contractor doesn’t “get it”, they may undermine good will
Improving your shoreline with native landscaping

**Benefits**
- Add value to your landscape
- Control runoff
- Reduce financial reimbursement
- Reduce technical assistance
- Protect Lake Whatcom

**Native Plants**
- Improve the view and beach
- Enhance your property with native plants
- Low maintenance
- Create a sanctuary for birds and butterflies
- Reduce maintenance

**HIP**

Thinking about landscaping your shoreline?

HIP reimburses up to $3.20 per square foot of property that is converted from phosphorus-generating lawns to native landscaping. You can choose the aesthetic native plant buffer for your property to continue to enjoy your shoreline, and help protect Lake Whatcom at the same time.

When you build along the shoreline, there isn’t much room to absorb runoff from roofs, driveways, and lawns before it enters the lake. Creating a landscaped area with a thick mulch layer and native plants reduces the amount of phosphorus in runoff by more than 80%.

Installing a Lake Whatcom rain garden

**Benefits**
- Improve your landscape
- Control runoff
- Reduce financial reimbursement
- Reduce technical assistance
- Protect Lake Whatcom

**Low Maintenance**
- You can have a beautiful yard and enjoy its fruits: Landscaping with native plants almost makes itself and requires less work.

**HIP**

Want to create beautiful gardens that filter pollution from your property? Rain gardens add enticement to your landscape, help control runoff, and improve the quality of water draining from your property into Lake Whatcom. HIP-certified designs can help you craft your rain garden location, size, and plant composition while incorporating your preferences for the overall landscape.

HIP reimburses up to $1.30 per square foot of property that filters phosphorus-containing runoff from roofs and driveways with native landscaping. Low maintenance rain gardens give you more time to enjoy your yard, attract beneficial pollinators, and help protect Lake Whatcom all at the same time.
Custom Landscape Designs
Streamlined Permitting

Project Summary

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<th>Address</th>
<th>Parcel No.</th>
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<th>Short Description</th>
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Check boxes below to characterize the project:

- [ ] Best Management Practices
  - [ ] Filtered Lending
  - [ ] Bottomland Timber
  - [ ] Moisture Monitoring
  - [ ] Integrated Pest Management
  - [ ] Sediment Filling
  - [ ] Other

- [ ] Stormwater Calculations
  - [ ] Rainwater Harvesting
  - [ ] Biofilters
  - [ ] Other

- [ ] Stormwater Pollution Prevention Plan (SWPPP)

Describe all elements below that apply to your project. Refer to the current edition of the Stormwater Management Manual for Western Washington for drainage project instructions. If you are still completing a landscaping project, describe elements below that you will implement during the winter work season.

Elements of the SWPPP

Element 1 - Mark Clearing Limits:

Element 2 - Establish Stabilized Construction Access:

Element 3 - Control Flow Rates:

Element 4 - Install Sediment Controls:

Element 5 - Stabilize Soils:

All disturbed, exposed, stockpiled, or uncovered soil matrices will be covered using an approved material (flexible tarps, tarpaulin, straw, etc.) during all rain events occurring during construction. Unused sediments that will be left exposed for more than 60 hours will be covered at the end of the last working day prior to that 48-hour duration. All disturbed soils will be covered completely between October 1 and May 30.

Element 6 - Protect Slopes:
IMPROVE YOUR PROPERTY
PROTECT LAKE WHATCOM
Get Reimbursed

Start typing your address and select it from the dropdown list

Check Your Address
Lessons Learned (Transition)

- **Lots** of staff time (2-3+ FTE)
- $160,000 in professional services; Balance between in-house and professional services
- $150,000 in geotechnical explorations Requiring expensive on-site testing not economical
- Different jurisdictions = different permitting **COORDINATION!**
Lessons Learned (Re-Launch)

- Baseline knowledge of residents key to participation
- Professional Training does not always equal professional competence
- Turnover hurts!
  - Years of meetings with staff no longer involved in project
For More Information

www.lakewhatcomHIP.org

Eli Mackiewicz
City of Bellingham Public Works
emackiewicz@cob.org
360-778-7742
Questions?

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