

Project Information Sheet

Applicant: WSU Extension

Strategic Initiative: Stormwater

Priority Near-Term Action: C2.5 Provide focused stormwater-related education, training, and assistance

Also addresses substrategies:

C7.1. Improve water quality to prevent downgrade and achieve upgrades of important current tribal, commercial and recreational shellfish harvesting areas (shellfish)

D5.3. Enable and encourage residents to take informed stewardship actions addressing infiltration, pollution reduction, habitat improvement, forest cover, soil development, critical areas, reductions in shoreline armoring, and specific actions identified in sub-strategy D5.1

D7.4. Provide public information conduits connecting individuals to local activities, resources and decision making processes—including cost-share programs, technical assistance, volunteer experiences and ways to engage in civic structures and processes

Ecosystem threat summary

A major contributor of toxic pollutants entering South Puget Sound is stormwater that runs off highways, roads, driveways, roofs, parking lots, disturbed soils, and other developed surfaces. Contaminants such as heavy metals, PAHs, sediment, nutrients, bacteria and other pathogens are carried to stream systems and Puget Sound by stormwater. These contaminants can affect all trophic levels in the ecosystems they are introduced to. Also, when stormwater is not properly managed, the result is excessive stormwater, resulting in the scouring of rivers and streams. Without a reserve of water in the ground and wetlands to feed streams, fish and other aquatic organisms are left with little or no water during dry summer months.

Project Description

To bring about the large-scale retrofits to manage polluted runoff in existing developments will require investments far beyond what local and state jurisdictions can be expected to support financially. However, through capacity-building efforts relying largely on a volunteer-based strategy, we can move forward dramatically in facilitating on-the-ground change at the residential and small commercial scale, implementing LID strategies such as rain gardens/bioretention facilities, sustainable-landscaping techniques, and replacing impervious surfaces with pervious pavements.

This project geographically expands and builds on a program that has been successfully piloted in Thurston County since 2011 called "Stormwater Stewards." Stormwater Stewards (SWS) is a capacity-building program in which capable, committed, and highly trained citizen volunteers provide peer-to-peer technical assistance to other residents seeking opportunities to manage and treat polluted runoff on their home or small-commercial sites (referred to as "clients"). Although the primary focus is retrofits within existing development, opportunities arise in which clients are planning new construction and the focus shifts to incorporating green stormwater or low-impact development (LID) techniques into the new project.

Long-term Goal: A cost-effective program that provides significantly improved stormwater management in developed areas, leading to improved ecosystem health in the South Puget Sound region.

Short-term Goal: Create a volunteer-based, peer-to-peer education and technical assistance program to support individual property owners, small businesses, and schools in identifying options, creating plans, and implementing on-site stormwater management strategies (LID). The program would be targeted to basins identified by local jurisdictions as stormwater management priorities.

Evaluation data from the first four years of pilot program implementation show significant impacts from clients who follow through on recommendations. Program evaluation has also identified some barriers, most significantly some clients requiring more on-site, personalized assistance to carry out the LID recommendations for their site. WSU Extension has developed a proposal to address that need which involves an additional peer-to-peer component to the existing SWS program in which volunteers support on-the-ground LID efforts with minimal staff support. This expanded component would also produce significant opportunities for broad public engagement in understanding stormwater problems and contributing to solutions.

A major goal of this project is to demonstrate the level of measurable change that can be achieved with volunteer-based capacity-building efforts when the program is scaled up to include more communities and appropriately funded to support communication and follow-through for both the volunteers and clients. The program will target specific priority basins for greater immediate impact to specific waterbodies. It can simultaneously be implemented to support residents in other areas who seek to be part of the solution; implementation in those instances often leads to broader community engagement and the potential that the early adopters inspire interest by their neighbors in following suit.

Thus, this project has two distinct but complementary aspects:

(1) **Evaluation/recommendation technical assistance program**, whose objectives are to (1) review sites for all potential LID opportunities (e.g. rain gardens; pervious pavements; green roofs; cisterns; compost-amended soils; etc.); and (2) make recommendations and provide resources for implementation.

(2) **Installation-support technical assistance program**, whose objectives are to (1) support "clients" who need direct assistance moving forward with recommendations, especially building rain gardens/bioretenion and installing DIY pervious pavements; and (2) expanding public engagement and demonstration opportunities related to stormwater pollution prevention. (Substrategies would include working with schools and other organizations).

Major Tasks

1. Create South Sound Stormwater Stewards Advisory Committee with representatives from Mason, Pierce, and Thurston County jurisdictional stormwater programs; Tribes; Conservation Districts; relevant NGOs; volunteers from pilot SWS program. Work with Advisory Committee to refine program. Identify priority areas for services in each jurisdiction. (November 2016-February 2017, June 2017, Nov 2017, May 2018)
2. Through an application process, recruit capable, dedicated volunteers for training in both aspects of program: (1) Site evaluation, providing recommendation technical assistance and (2) Installation-support technical assistance. (February-March 2017)
3. Carry out trainings in Mason, Pierce, and Thurston Counties. Engage volunteers in LID projects as part of their practicum (or internship) period so they can develop skills and competencies. (Trainings: April-June 2017; practicum July 2017-ongoing)
4. Market services to potential clients and schedule technical assistance in identified priority areas. Staff to provide on-site support to SWS volunteers until adequate numbers are certified to develop draft

recommendations without staff on site. Staff review recommended actions reports prior to sending to clientele. (May 2017-ongoing)

5. Follow through with clients to identify actions taken and need for additional support to overcome barriers. (October 2017-ongoing)

6. Provide peer-to-peer volunteer-based installation assistance where necessary. (July 2017 – ongoing)

7. Evaluate both aspects of the program. Develop final recommendations. (Evaluations begin October 2017-ongoing; recommendations refined and presented in final report April-June 2018.)

For **Evaluation/recommendation technical assistance program**, short-term evaluation criteria will include:

- success of training and practicum model in developing and retaining competent, contributing peer-to-peer volunteers;
- number of client interactions and projected potential as program develops;
- number and effectiveness of on-the-ground LID projects;
- cost/benefit analysis of program;
- other program impacts, such as engagement and "ripple effect" to non-target audiences.

For **Installation-support technical assistance program**, short-term evaluation criteria will include:

- program costs and logistics, including staffing needs;
- effectiveness of classroom and field training in developing competent lead volunteers;
- opportunities for reducing costs due to economies of scale in expansion, including sourcing supplies;
- viability of peer-to-peer volunteer model;
- potential for significant on-the-ground change;
- potential for involvement of entire neighborhoods/basins;
- potential for significant increase in knowledge and understanding of water-quality issues affecting the broader Salish Sea Ecosystem.

For both aspects of the program, mid-term evaluation can consider:

- effectiveness in managing/treating polluted runoff;
- additional barriers;
- impact over time of short-term participants' involvement in program and hosting LID facility, vis-à-vis changes in attitudes, behavior and communication with others ("ripple effect");
- impact over time of longer-term peer-to-peer volunteers' involvement in program, vis-à-vis changes in attitudes, behavior and communication with others ("ripple effect").

Budget: (20 Months Nov 2016-June 2018)

Category	Cost (\$)
Salary and Benefits	229,000
Administration - Overhead	\$59,540
Office Supplies	\$3,200
Equipment	\$4,500
Office Supplies	\$800
Travel (4500 miles @ \$0.575/mile)	\$2,588
Total	\$299,628

Project Schedule

Task 1: November 2016-February 2017, June 2017, Nov 2017, May 2018

Task 2: February-March 2017

Task 3: Trainings: April-June 2017; practicum July 2017-ongoing

Task 4: May 2017-ongoing

Task 5: October 2017-ongoing

Task 6: July 2017-ongoing

Task 7: Evaluations begin October 2017-ongoing. Recommendations refined and presented in final report April-June 2018.

Project Partnerships and Roles

The following entities will be sought to participate in the Advisory Committee:

- Local municipal and county stormwater program staff;
- natural resources and educational staff from local Tribes;
- staff from relevant NGOs; stormwater staff from Conservation Districts;
- existing program volunteers from pilot Thurston Co. program;
- WSU Extension Natural Resources and Master Gardener program staff.

The roles of the Advisory Committee participants will include:

- Define and refine program direction;
- adapt the model as necessary for local conditions;
- collaborate on elements of program implementation;
- direct residents to the program;
- develop and provide incentives for participation as possible;
- assist in analyses of cost-benefit from different perspectives;
- refine evaluation criteria;
- review and provide feedback on evaluation results;
- assist in developing recommendations for program adoption following pilot period.