

Update Report

Period 2/1/2013 - 1/31/2014

Project 2013-R/COCC-4 - Effects of Waterfront Stormwater Solution Prototypes on Water Quality Runoff in Penn Cove, Town of Coupeville.

STUDENTS SUPPORTED

Gao, Yuan, gaoyuan702@gmail.com, University of Washington, Civil and Environmental Engineering, status new, field of study Water Quality, no advisor, degree type PhD, degree date 2015-06-01, degree completed this period No
Student Project Title Effects of Waterfront Stormwater Solution Prototypes on Water Quality Runoff in Penn Cove

Involvement with Sea Grant This Period Yuan assisted with identifying monitoring protocols and equipment, with writing the Quality Assurance Project Plan (QAPP) required by the Department of Ecology (still in process) and with the Data Management Plan for Washington Sea Grant.

Post-Graduation Plans none

Pagan, Jonathan, jonpagan@gmail.com, UW, Landscape Architecture, status new, field of study Landscape Architecture, no advisor, degree type MA, degree date 2014-06-01, degree completed this period No
Student Project Title Effects of Waterfront Stormwater Solution Prototypes on Water Quality Runoff in Penn Cove

Involvement with Sea Grant This Period Assisted with developing graphic materials to inform and solicit volunteers.

Post-Graduation Plans Landscape Architect practice

CONFERENCES / PRESENTATIONS

Co-PI Nancy Rottle presented the project to the monthly meeting of the Island County Marine Resources Committee at the Island County headquarters in Coupeville. Attendees included representatives of Island County Beach Watchers and Island County Public Health, both potential organizations which might provide volunteers to assist with monitoring., public/profession presentation, 20 attendees, 2013-07-03

ADDITIONAL METRICS

K-12 Students Reached

Curricula Developed

Acres of degraded ecosystems restored
as a result of Sea Grant activities

Resource Managers who use
Ecosystem-Based Approaches to

| | |
|--|--|
| | Management |
| Volunteer Hours | HACCP - Number of people with new certifications |
| Cumulative Clean Marina Program - certifications | |

PATENTS AND ECONOMIC BENEFITS

No Benefits Reported This Period

TOOLS, TECH, AND INFORMATION SERVICES

No Tools, Tech, or Information Services Reported This Period

HAZARD RESILIENCE IN COASTAL COMMUNITIES

No Communities Reported This Period

ADDITIONAL MEASURES

Safe and sustainable seafood

Number of stakeholders modifying practices
 Actual (2/1/2013 - 1/31/2014)
 Anticipated (2/1/2014 - 1/31/2015)

Number of fishers using new techniques
 Actual (2/1/2013 - 1/31/2014)
 Anticipated (2/1/2014 - 1/31/2015)

Sustainable Coastal Development

Actual (2/1/2013 - 1/31/2014)
 Anticipated (2/1/2014 - 1/31/2015)

Coastal Ecosystems

Actual (2/1/2013 - 1/31/2014)
 Anticipated (2/1/2014 - 1/31/2015)

PARTNERS

Partner Name Island County Marine Resources Committee

Partner Name Town of Coupeville, type Government, scale Local

IMPACTS AND ACCOMPLISHMENTS

Title Washington Sea Grant research supports monitoring to test an innovative community solution to waterfront stormwater pollution

Type accomplishment

Description Relevance With its low flushing rates, Penn Cove in northern Puget Sound is particularly vulnerable to stormwater pollution. This small cove is also home to Washington’s oldest and largest mussel farm. The bayside Town of Coupeville plans to build an underground artificial wetland within a one-acre public park to reduce contamination, habitat loss, and environmental degradation caused by stormwater runoff. If successful, this innovative approach could help other coastal communities find ways to capture the

economic, aesthetic, and environmental benefits of green shoreline infrastructure. Response Washington Sea Grant funding is being used to encourage design implementation, providing support for pre- and post-construction monitoring at the site. The project will train citizen and student researchers and deepen public understanding of shoreline and aquatic issues. Publications, interpretive materials, and citizen engagement will document the project and educate academics, professionals and the public about the utility and effectiveness of the approach. Results The researchers planned the monitoring equipment and protocols, integrated the equipment location requirements into the construction documents, and created graphics presenting the project to citizens and prospective volunteers. The Town of Coupeville leveraged WSG monitoring funds to obtain more than \$600,000 from the Washington Department of Ecology for detailed design and construction of the stormwater park.

Recap Washington Sea Grant funds leveraged support for design and construction of an innovative, multifunctional stormwater treatment system that may significantly reduce pollution in Penn Cove and serve as a model for other Puget Sound communities.

Comments Primary Focus Area COCC (SCD) Secondary Focus Area OCEH (HCE) State Goals Reduce toxic, nutrient and pathogen pollutants in water and the marine food web and address their relationships to and impacts on human health (HCE, Restore). Assist coastal communities and marine-dependent businesses in planning and making decisions that provide local and regional economic benefits, increase resilience and foster stewardship of social, economic and natural resources (SCD Efficiency)

Related Partners ,

PUBLICATIONS

Title Coupeville Heritage Stormwater Park Graphics

Type Educational materials Publication Year 2014 Uploaded File [20131002_SchematicWate....w.pdf](#) URL none

Abstract We created simple graphics to use to convey the stormwater park that is planned for construction and monitoring.

Citation not published

Copyright Restrictions + Other Notes

Journal Title none

OTHER DOCUMENTS

No Documents Reported This Period

LEVERAGED FUNDS

Type influenced Period 2012-02-01 2015-12-31 Amount \$667838

Purpose Design and construction of the Coupeville Heritage Stormwater Park.

Source Washington Department of Ecology, with matching funds from the Russell Family Foundation and in-kind services from the Town of Coupeville

UPDATE NARRATIVE

Uploaded File [Rottle_1468_update_nar....1.pdf](#)

eSeaGrant Report

Effects of Waterfront Stormwater Solutions Prototypes on Water Quality Runoff in Penn Cove, Town of Coupeville

Project Number: R/COCC-4

UW Green Futures Lab

31 March 2014

Over the past year we began planning for monitoring the stormwater wetlands as we expected the wetlands to be constructed during summer and autumn of 2013. However, the Town of Coupeville elected to postpone construction to this year so we limited our activities to conserve funds for when they will be needed. During this 2013 time period we:

- Tested existing water quality to establish baseline conditions (Town of Coupeville)
- Identified the desired monitoring equipment and its size, location, and project infrastructure relationship parameters, and incorporated considerations for equipment location and housing in the stormwater park construction documents;
- Made substantial progress on the QAPP;
- Completed the data management plan and NEPA documentation for Sea Grant;
- Developed graphics to be used on an educational brochure;
- Presented the project to the Island County Marine Resources Committee to solicit volunteers for citizen monitoring, and corresponded with King County Public Health staff.

This work was accomplished by:

- PhD Student Yuan Gao, under consultation with co-PI Richard Horner
- co-PI Nancy Rottle
- Masters student Jonathan Pagan

At this point in time we are waiting for a meeting with the Town of Coupeville to establish the construction plan and schedule for 2014. Once we know that schedule, we will proceed with setting up the monitoring project, such as ordering monitoring equipment, establishing and documenting protocols, re-invigorating our partnerships, hiring staff, informing and training volunteers, etc.

I look forward to discussing the project status with Washington Sea Grant staff.