



## Southeast New England Program (SNEP) Network Stormwater Training/Facilitated Planning Series

**Outcome:** Participants will generate designs for stormwater solutions addressing identified problems in their selected drainage areas.

**Audience(s):** Staff and partners/stakeholders from the municipalities, tribes, and/or community based organizations/nonprofit organizations.

### Learning objectives:

Participants will:

- translate the tools and techniques presented in the training sessions to the identification of innovative and low-cost solutions to address stormwater problems in specific locations within their selected drainage area
- generate conceptual designs, magnitude of order cost estimates, and stormwater credits for green infrastructure installation and/or stormwater retrofits
- employ and assess innovative strategies to managing stormwater that fit with their municipal/tribal culture and operation and maintenance regime
- demonstrate understanding and confidence when meeting with engineers and other project consultants

### Partners:

- Elizabeth Scott, Elizabeth Scott Consulting (RI Liaison for SNEP Network)
- Dr. Jamie Houle, Director of the University of New Hampshire's Stormwater Center
- Wenley Ferguson, Director of Habitat Restoration, Save the Bay
- Priscilla De La Cruz, Sr. Director of Government Affairs, and Ryan Kopp, Stormwater Coordinator, Audubon Society of Rhode Island (Providence Stormwater Innovation Center)
- Jen West, Coastal Training Coordinator, Narragansett Bay National Estuarine Research Reserve
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- Dr. Kimberly Groff, Kimberly Groff Consulting (MA Liaison for SNEP Network)



Narragansett Bay  
Research Reserve

## Approach:

Through a series of training sessions and facilitated planning meetings with each municipality and Tribe (including an in-person site visit and/or virtual Google Earth visit of the selected drainage area), the SNEP Network Team will assist each municipality/Tribe with identifying innovative and low-cost solutions to identified stormwater problems in their selected drainage area. Through this facilitated process, participants will identify stormwater solutions and develop “plans” for their selected drainage area via “homework assignments,” applying the tools and techniques presented in the training sessions to develop conceptual designs, cost estimates, and pollutant removal benefits. Woven into the process will be activities to engage stakeholders and build public support for the selected stormwater solutions. Peer-to-peer learning among participants will augment materials presented by the SNEP Network Project Team.

In advance of the first training session, the SNEP Network Point of Contact will work with each municipal/tribal team in identifying the drainage area for which stormwater solutions are sought. Participants unfamiliar with basic hydrology and stormwater management are strongly encouraged to watch the following training modules in advance of the series:

- Providence Stormwater Innovation Center’s (PSIC) Stormwater 101 Training video, “Green Stormwater Infrastructure 101 Training”: <https://www.stormwaterinnovation.org/stormwater-101-training-1> (1 hr, 55 min)
- Providing Resilience Education for Planning in Rhode Island (PREP-RI) training module: “Managing Stormwater to Protect Rhode Island’s Waters”: <https://prep-ri.org/prep-ri/stormwater-green-infrastructure/> (10 minutes) seconds)

Training sessions and most facilitated planning sessions will be held virtually. To the extent feasible, the Site Visit with SNEP Network Team Members and community participants will be held in person (some SNEP Network team members may participate virtually) and will be scheduled between the first and second training sessions. The objectives of the site visits are that participants and SNEP Network team members:

- become familiar with the selected drainage area for which the community seeks solutions
- understand identified stormwater problem areas and issues (e.g., water quality and/or flooding concerns)
- Identify municipally owned properties or other locations where stormwater treatment may be feasible

Participating communities are encouraged to be inclusive in inviting up to 5 staff members, volunteer board members and/or representatives from non-governmental organizations to participate in the training sessions and/or individual facilitated sessions to identify stormwater solutions for your selected drainage area.

**Training Sessions** (Please note homework assignments are tentative and may change as the series progresses)

### **Session I: Series Overview and Understanding the Target Stormwater Problem(s)**

**Objectives:** Participants will:

- Recognize the purpose and objectives of the SNEP Network's stormwater training series and facilitated planning process to be undertaken over the next year
- Describe drainage areas of interest and associated stormwater problems for which solutions are sought

**What participants need to do to prepare for the session:** A member from each participating community/Tribe must be prepared to describe the drainage area for which they are seeking stormwater solutions, including approximate physical bounds and historical context and/or other background information that helps convey the issues and concerns to be addressed. Participants are encouraged to bring and share virtually **any available maps** of the selected drainage area, such as GIS maps depicting topography, drainage infrastructure, parcel delineations, and/or other coverages or features related to managing stormwater.

**Class "homework" assignment:** Participants will prepare a problem statement which briefly describes the drainage area and stormwater issues they wish to address (including any water quality impairments and locations of street flooding).

### **Session II: Options for Retrofitting Existing Drainage Systems and Greening Urbanized Landscapes**

**Objectives:** Participants will:

- Identify options for retrofitting existing drainage systems and installing green infrastructure within the built environment
- Discuss specific options suitable to address identified stormwater problems in each community's selected drainage area
- Review the importance of identifying and engaging stakeholders throughout the process
- Discuss the importance of understanding municipal/tribal culture and community operation and maintenance regimes in the design of stormwater solutions

**What participants need to do to prepare for the session:** Participants will have met with SNEP Network partners to visit the selected drainage area and identify the stormwater issues/problem areas and municipally owned land and other areas where opportunities for treating stormwater are possible.

**Class "homework" assignment:** Participants select feasible GI/stormwater retrofit solutions for 1-3 locations within their selected drainage area

### **Session III: Developing Conceptual Designs**

**Objectives:** Participants will:

- Describe the process of developing a conceptual design for their selected stormwater retrofit/GI practice including approximate dimensions and stormwater volume to be managed/treated
- Practice the process of developing a conceptual design for one location in their selected drainage area

**What participants need to do to prepare for the session:** Participants will have selected at least one feasible GI/stormwater retrofit solution within their selected drainage area.

**Class “homework” assignment:** Participants will complete conceptual design(s) for one or more locations in their selected drainage area.

### **Session IV: Calculating Estimated Costs and Water Quality Benefits**

**Objectives:** Participants will:

- Describe the process of calculating stormwater volume to be managed/treated, stormwater credits (# of pollutant removed), and an order of magnitude cost estimate for their selected stormwater control measure (SCM)
- Practice the process of calculating stormwater volumes managed/treated, stormwater credits, and/or order of magnitude costs for their selected SCM

**What participants need to do to prepare for the session:** Participants will have completed one conceptual design.

**Class “homework” assignment:** Participants will complete conceptual designs and generate cost estimates and pollutant reduction credits for the remaining locations identified in their selected drainage area.

### **Session V: Putting it all Together and Developing Key Messages**

**Objectives:** Participants will:

- Present the stormwater solutions for their selected drainage area
- Recognize strategies and tools for stakeholder education and engagement
- Discuss next steps for advancing their conceptual designs to implementation

**What participants need to do to prepare for the session:** Participants will “bring” materials developed over the course of the training series to the session and begin to develop key messaging that can be used to advance their projects to implementation.

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