

WAQUOIT BAY RESERVE COASTAL TRAINING PROGRAM

Using Permeable Reactive Barriers to Address Nitrogen Pollution

Wednesday, April 5, 2017

Hyannis Golf Course, 1800 Lyannough Road, Hyannis, MA

AGENDA

- 8:15 Coffee and Sign-in
- 9:00 **Welcome and Introductions** – Tonna-Marie Rogers, Waquoit Bay Reserve
- 9:15 **The Cape Cod 208 Plan and the PRB Technology for Nitrogen Remediation**
Tom Cambareri, Cape Cod Commission
- The 208 approach, alternative technologies and PRBs
 - Getting to know PRBs – what are they? How do they work? How are they installed?
 - Why are PRBs applicable on Cape Cod?
 - What has been learned about PRBs through the 208 process to date?
- 10:00 **Primer on the Nitrogen Cycle**, Kevin Kroeger, United States Geological Survey
- overview of key components of the nitrogen cycle and the role of the microbial community and other factors in controlling nitrogen transformation processes
 - provide information on the nitrogen cycle helpful for understanding how PRBS work and why hydrogeological characterization of potential PRB sites is needed
- 10:25 **Coffee Break**
- 10:45 **Right Place, Right Technology**
Findings, Lessons and Next Steps from an EPA Study of Pilot PRB Sites on Cape Cod
Marcel Belaval, Environmental Protection Agency
- 11:30 **Findings from an Early PRB Installation at the Waquoit Bay Reserve: *The Nitrex Barrier***
Ken Foreman, Marine Biological Laboratory
- 12:00 Lunch (*provided*)
- 12:45 **Regulatory Perspectives on PRB Use for Water Quality Remediation** – Brian Dudley, MA Department of Environmental Protection

1:00 **Learning from Cape Towns Exploring PRB Use**

Part 1: Town of Orleans Case Study – Paul Dombrowski, ISOTEC

Part 2: Town of Falmouth Case Study – Anastasia Karplus, Science Wares and
Jim Begley, MT Environmental Restoration

Case study presentations will look at issues such as site characterization, cost of the technology, successes, challenges, community concerns/questions, the process each town went through to decide on exploring PRBs, and lessons learned.

2:10 **Ramping Up From Pilots: Key Take-Aways for Towns Interested in Using PRBs**

Panel Discussion with Workshop Presenters

3:00 **Wrap-up & Evaluation**