Connecticut Department of Energy and Environmental Protection

Connecticut Department of
ENERGY & ENVIRONMENTAL PROTECTION

Moving Beyond Assessments to Successful Implementation: Tools for Use with Urban Waters

June 2, 2017

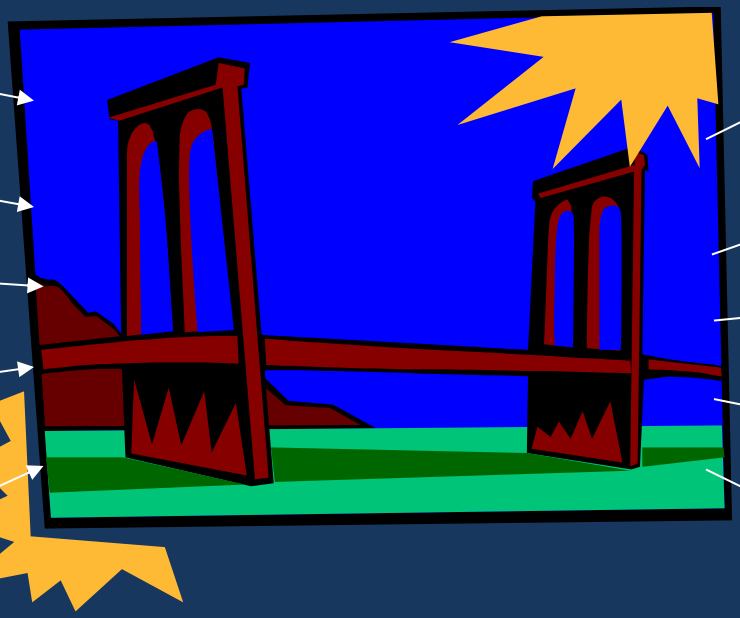
Traci Iott, CT DEEP

National TMDL Meeting

Connecticut Department of Energy and Environmental Protection

How Can We Build A Bridge to Water Quality Success?

Data, Environmental Information & Goals → Action Plan: Bridging the Gap → Implementation Program



- Data
- Criteria
- Monitoring
- Standards
- Natural Resource & Stressor Information

- Groundwater Remediation
- Non-point Source
- Wastewater Permitting
- Natural Resource Management
- Watershed Plans

Use the Right Tools!

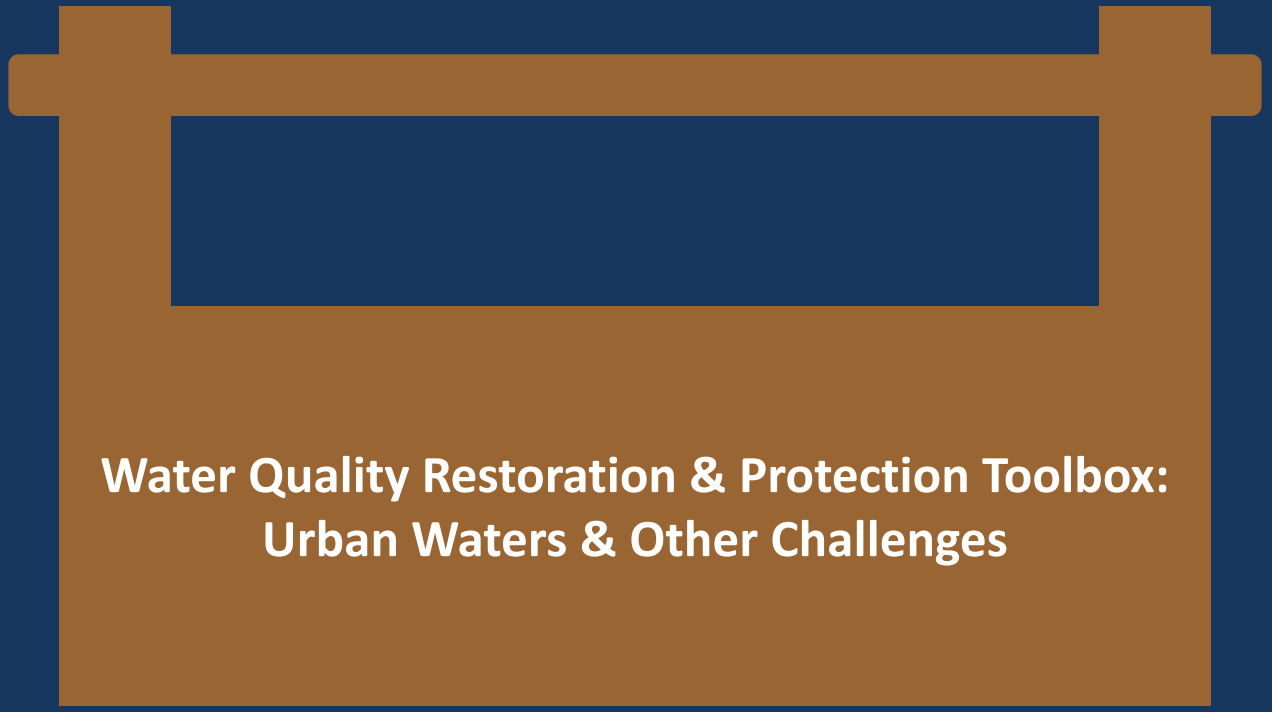
Build Your Water Quality Tool Box

Standards

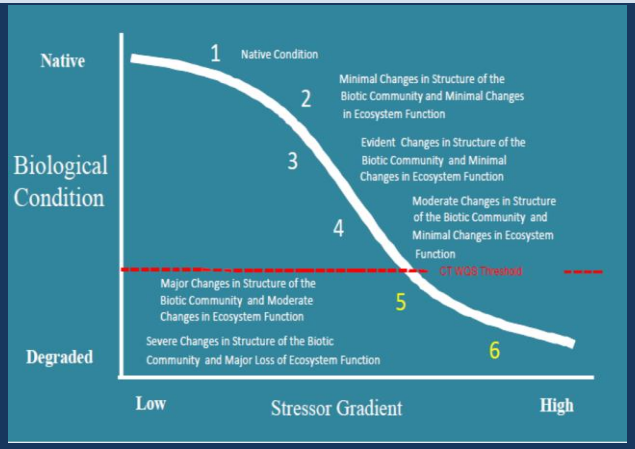
Stressor Relationships

Communication

Partnerships



Tools: WQ Standards



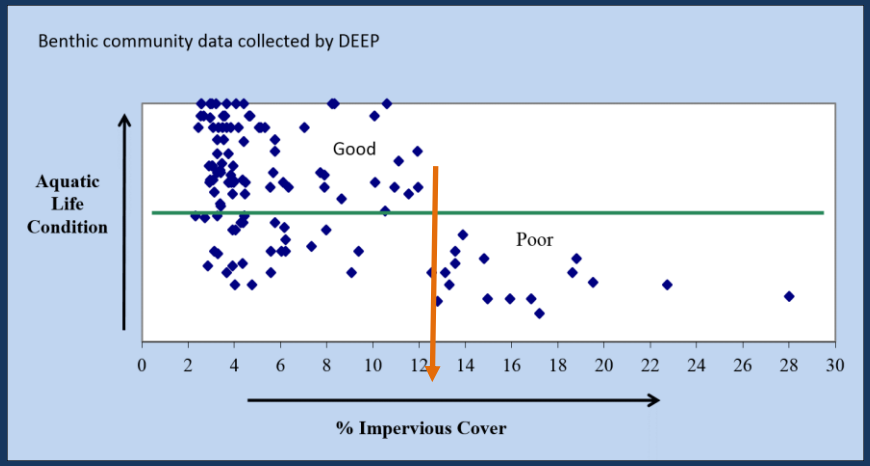
Adopt the Biological Condition Gradient WQS

Insure "No toxics in toxic amounts" provisions address surface waters, sediments, bioaccumulation, and health impacts to people & wildlife

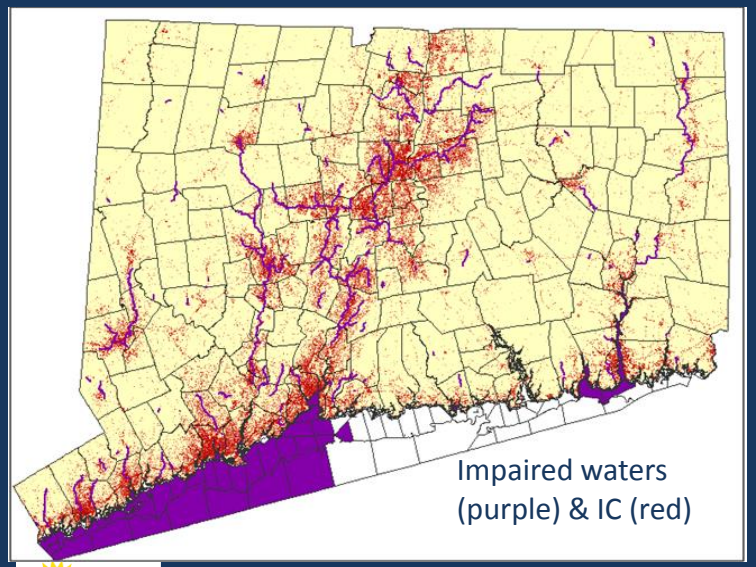
No significant WQ impact if first inch of storm water is not discharged and BMPs applied

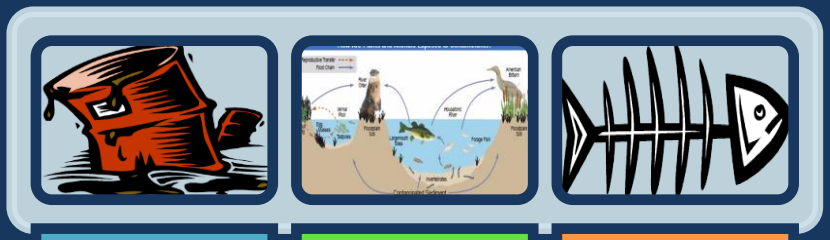
Consider adopting WQS for groundwater with designated uses to include supporting uses in surface waters

Tools: Describe Stressor Relationships



Storm Water:
Link biological condition (Benthic MMI) to surrogate measure for storm water (Impervious Cover)

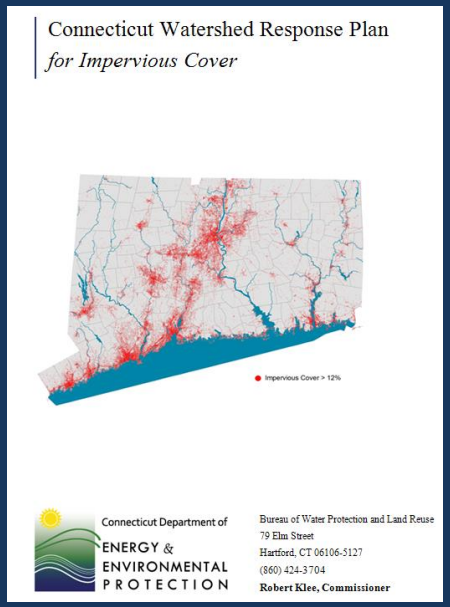




Stressors	Exposures	Effects
• Chemical • Physical • Biological	• Dermal • Ingestion • Inhalation	• Acute • Chronic

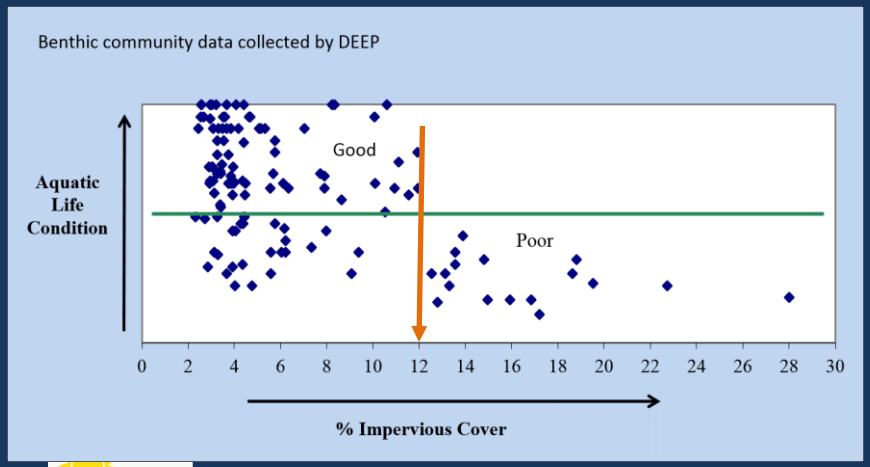
Develop risk assessment protocols that evaluate WQ impacts

Tool: Improved Communication



Watershed Response Plan for Impervious Cover

- Watershed vs municipal boundary
- Resource Guide
  - What to do
  - Where to target efforts
  - Success stories
- Procedure to Calculate Directly Connected Impervious Cover

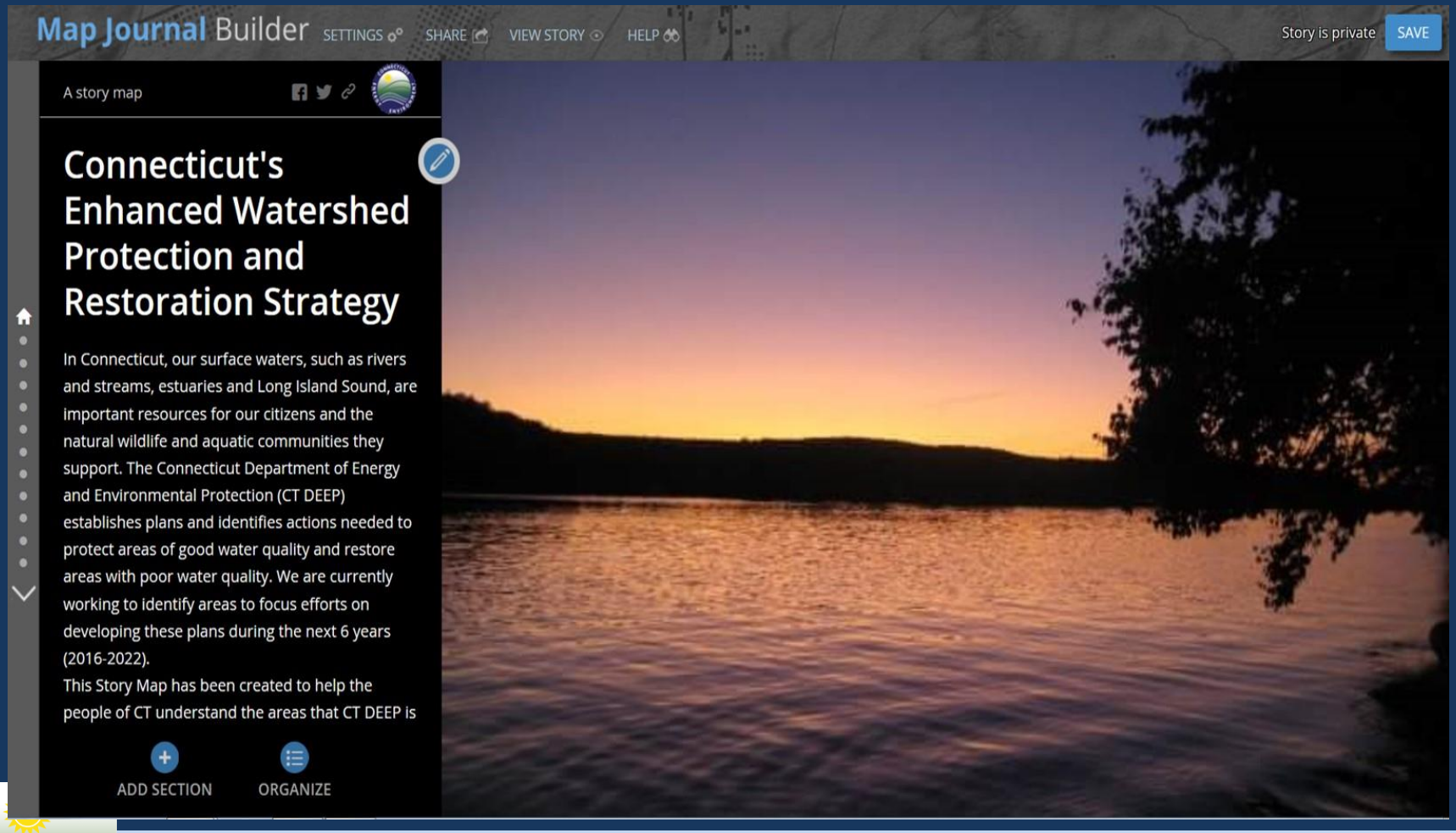


NEMO Bioretention Cell Laurel Hall UCONN

NEMO Green Roof UCONN

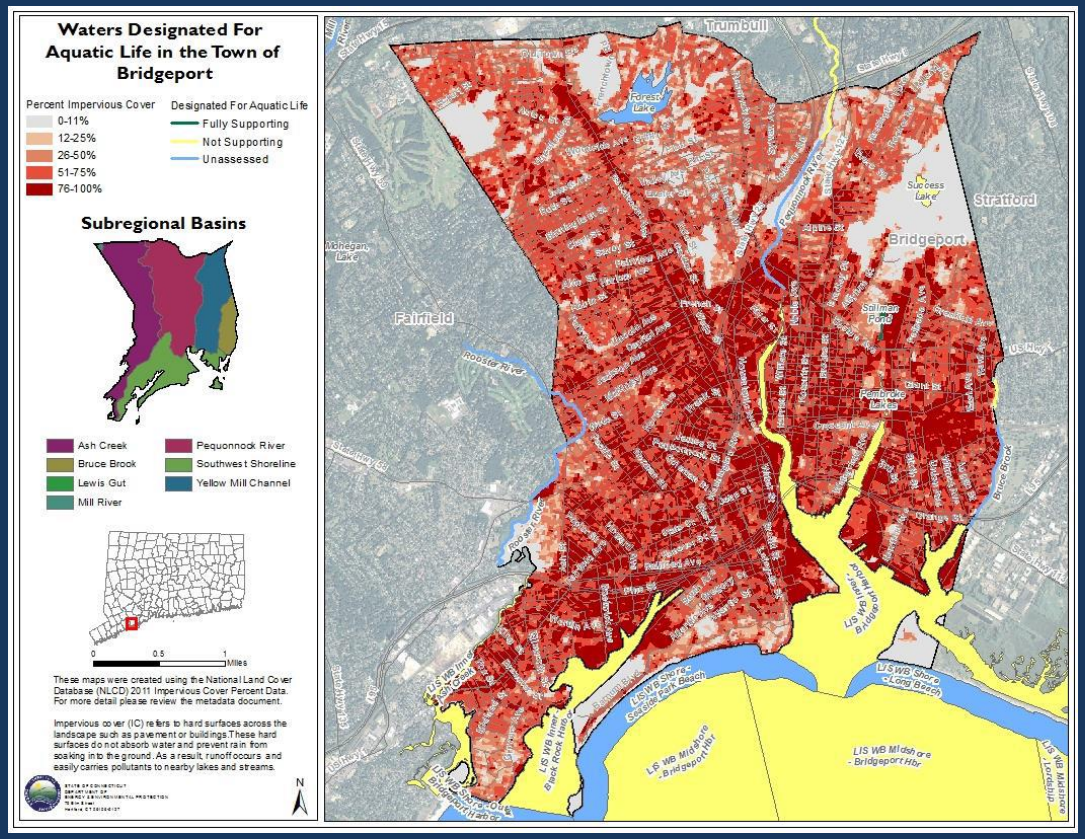
Tool: Improved Communication

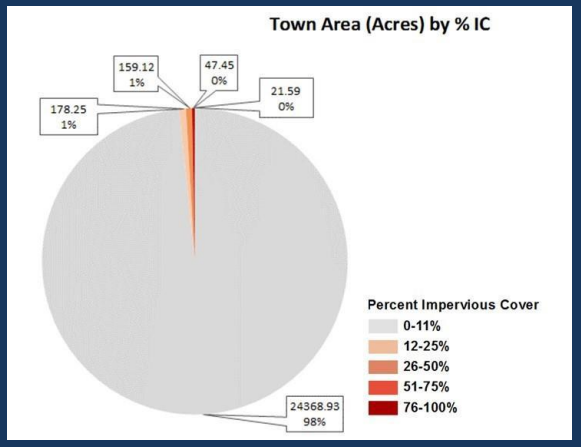
- Online GIS Interactive Web "Storyboard"

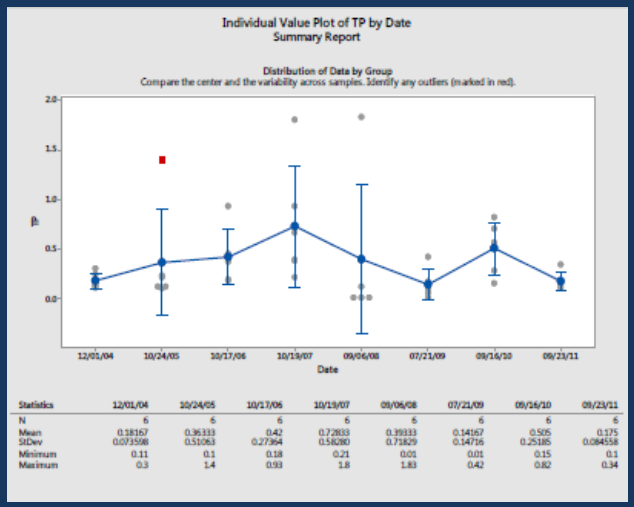


Tool: Improved Communication

Town-specific storm water and WQ analysis







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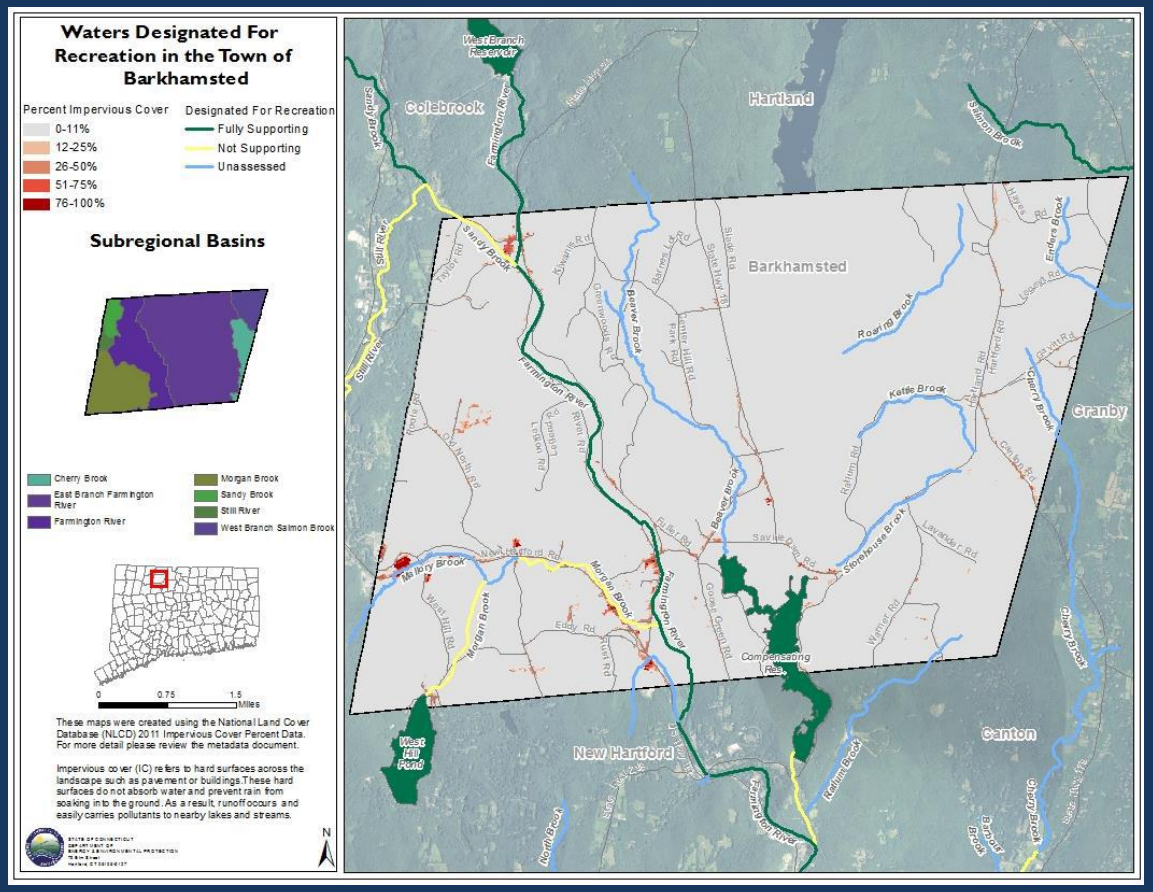
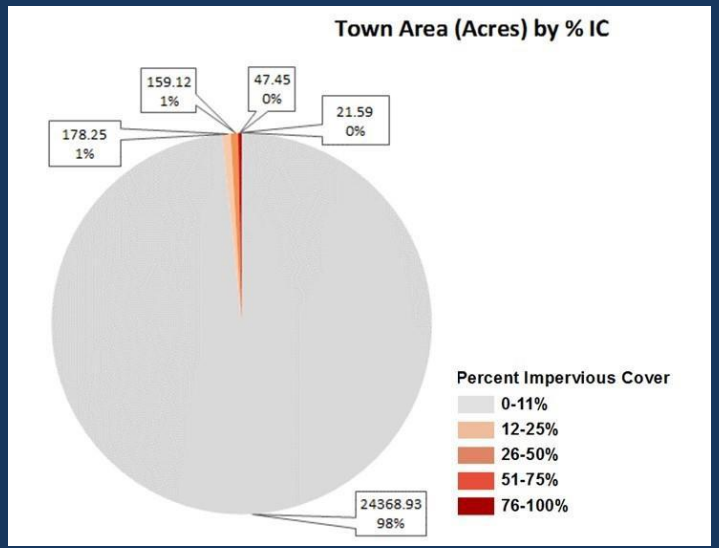
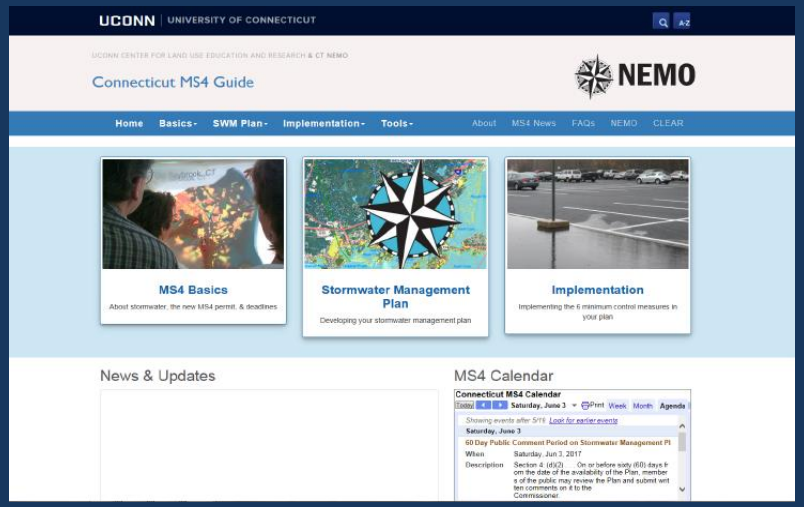
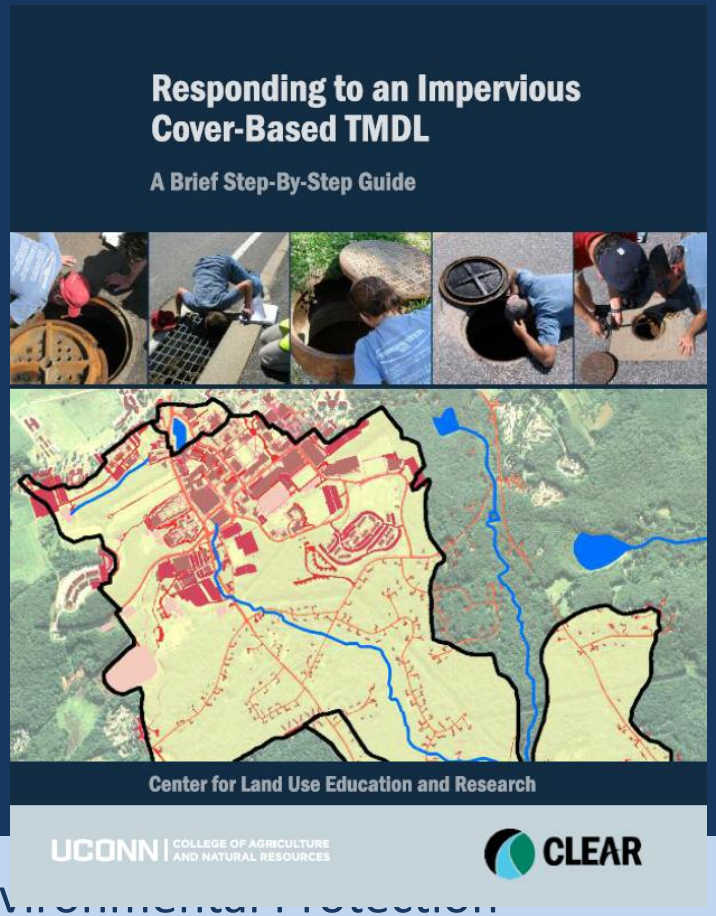


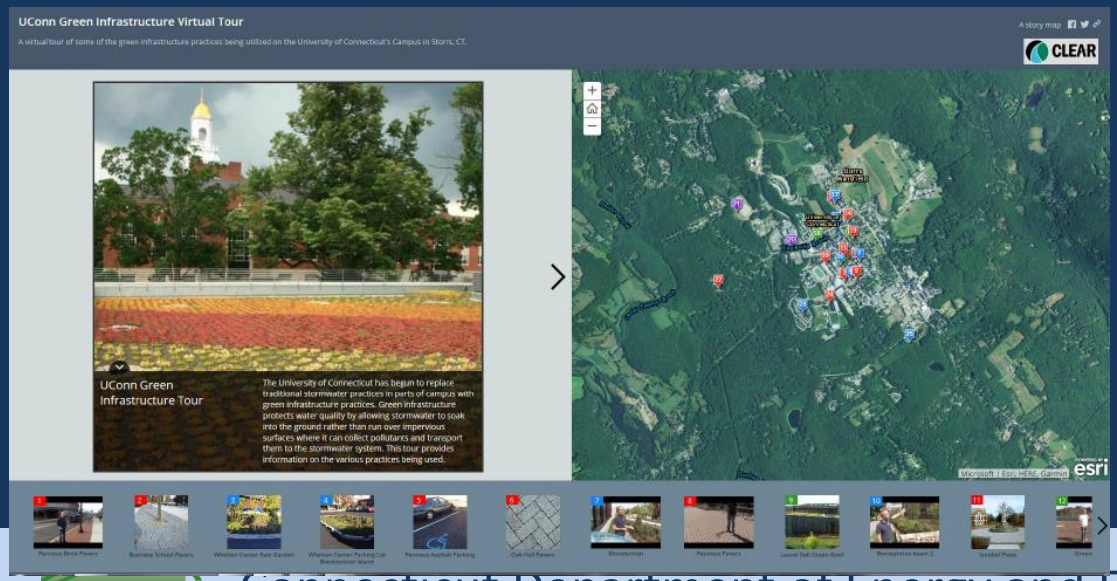


Tools: Partnerships



- Web Resources for Towns
  - Background Materials
  - Plan Templates
- Dedicated Staff to help with MS4 Outreach





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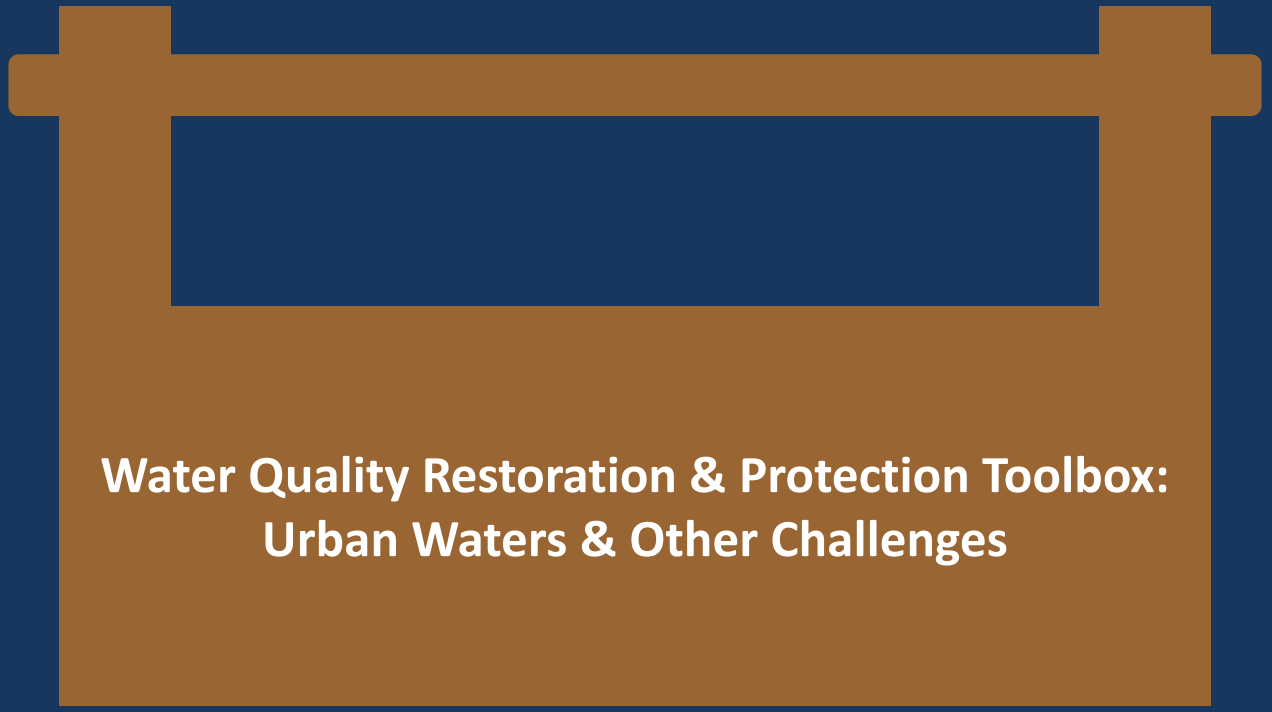

Result: Water Quality based Stormwater Permits

Construction GP

- Requirement to infiltrate / treat first inch of stormwater post construction

MS4

- Nitrogen
- Phosphorus
- Bacteria
- Impervious Cover

- Additional Requirements for Implementation
- Potential for future statewide permit

Result: Sediment Clean Up to Meet Designated Uses

Human Health Risk Assessment

- Sediment & Surface Water
- Fish & Shellfish Tissue
- Children & Adults Fishing and Direct Contact

Ecological Risk Assessment

- Sediment & Surface Water
- Plants, Aquatic Organisms, Birds & Mammals
- Biological Assessments for Survival, Growth & Reproduction