Massachusetts Watershed Based Plans

Massachusetts s.319 Program Challenges

- Nearly half of MA regulated as MS4
- 319 funds cannot* be applied to regulated stormwater
- Problems require complex, multi-year projects
- An integrated approach to polluted runoff is needed

Most impairments are in MS4 areas

Impairment Category
- 4A – TMDL Completed
- 5 – TMDL Required
Massachusetts Watershed Based Plans

WBPs not just for 319s!

- MS4 SWMPs
- TMDL program vision / alternative TMDLs
- Lake /watershed groups
- Municipal planning efforts
- Education/outreach
- Partner programs and agencies
Project Vision
Project Vision

Thousands of watersheds - carefully tailored to the correct scale for planning

Rivers  Lakes/Ponds  Coastal Watersheds  MS4s
Project Vision

Simplify and support statewide WBP development with web-based **resources, tools, and guidance**.

**9 Required Elements of a WBP**

A. ID causes /sources of pollution requiring control.
B. Determine pollutant load reductions needed.
C. Develop measures to achieve water quality goals.
D. Determine technical/financial assistance needed.
E. Information/education component.
F. Develop implementation schedule.
G. Develop interim milestones to track implementation.
H. Develop criteria to measure progress towards goals.
I. Monitoring component.
The 9 Elements

Element A:
Identify *causes and sources* that need to be controlled to achieve necessary pollutant load reductions.
Element B:
Determine *pollutant load reductions* needed to meet water quality goals.
Element C:
Develop *management measures* to achieve water quality goals.
Water Quality Modeling

Hydrologic Response Unit (HRU) Characterization:

- Impervious Cover (MassGIS)
- Land Use (MassGIS)
- Soil Hydrologic Group (USDA)
Water Quality Modeling

Hydrologic Response Unit (HRU)
Used to calculate annual pollutant loads

BMP
Estimate performance for P, N and TSS…and cost
Element D:
Estimate the *technical and financial assistance* needed to implement the plan.
The 9 Elements

Element E: Public Information and Education
The 9 Elements

Element F: Implementation Schedule

Element G: Interim Measureable Milestones
The 9 Elements

**Element H:** Criteria to measure progress

**Element I:** Monitoring
Massachusetts watershed based plans

Get Started!
WBP
Adaptations?

- Alternate modeling approaches (Opti Tool, etc.)
- Include lake trophic modeling
- Unified approach to river/lake watersheds
  *(make sure confluence points and “pour points” are accurate)*
- Incorporate state-specific resources
  - NHDES 2014 Surface Water Quality Assessment Viewer
  - RI MS4 Stormwater Discharge Outfall Viewer
  - CT-ECO maps/geospatial data