



Jane Peirce, Deputy Director
Division of Municipal Services

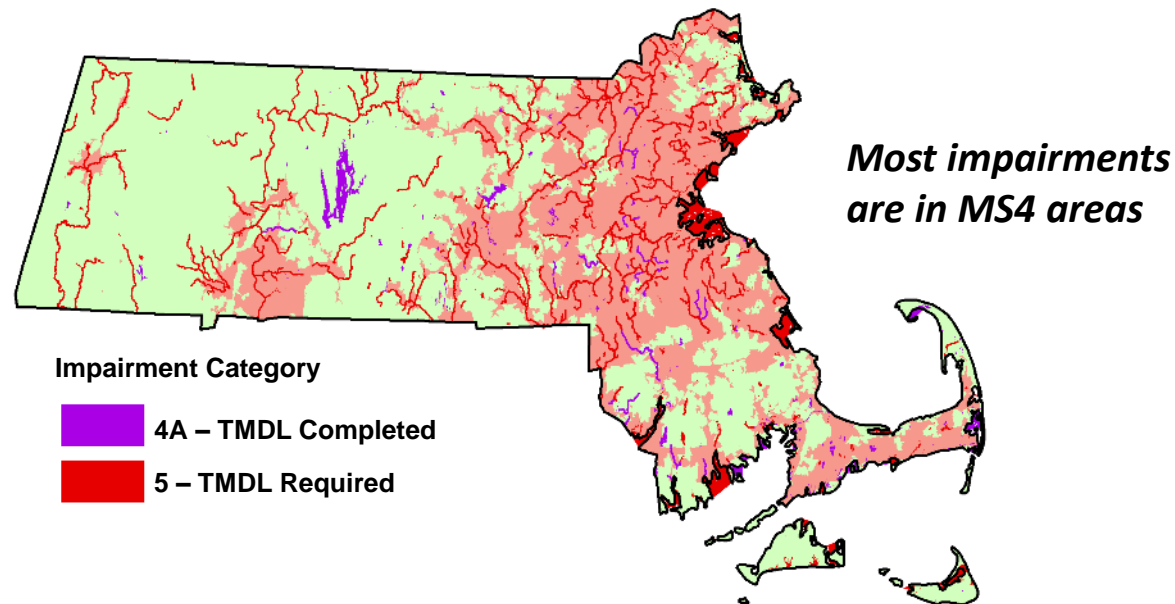


Bob Hartzel, CLM, CPESC
Principal

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



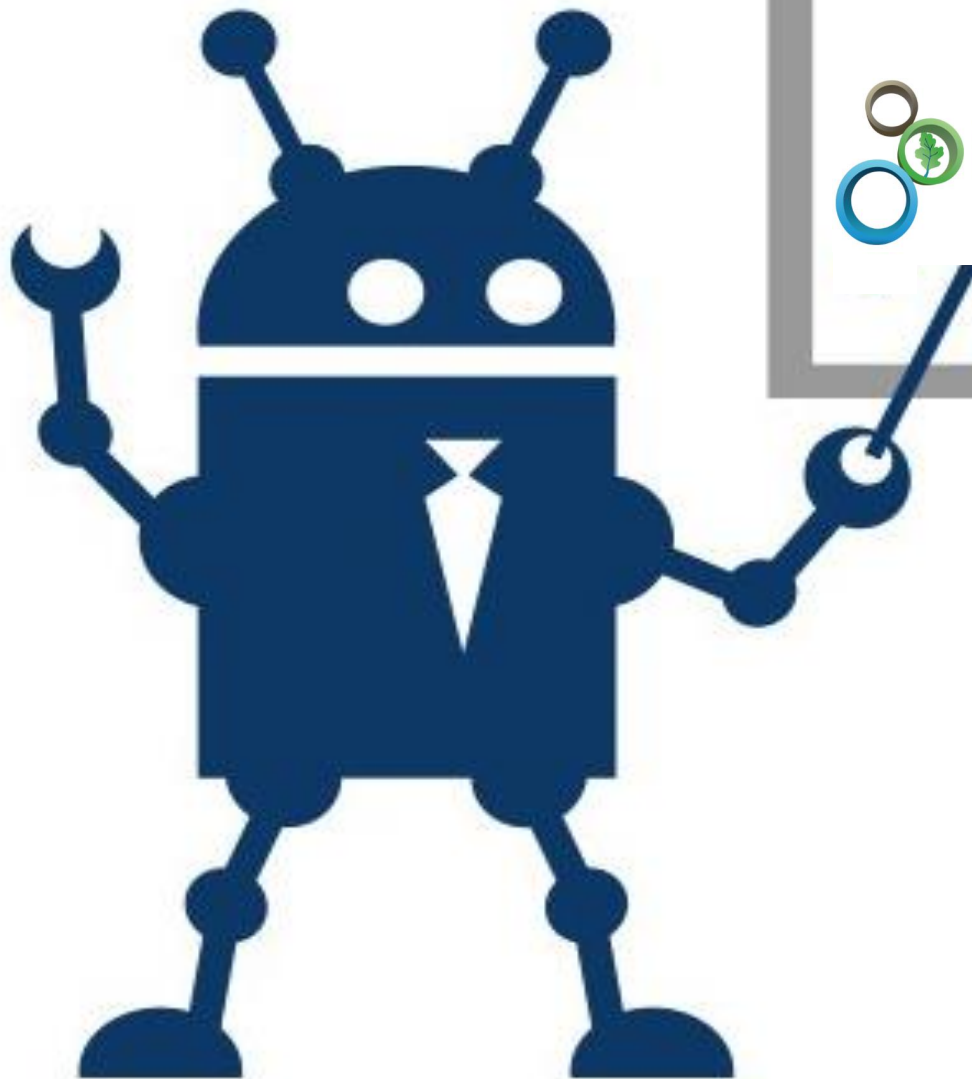
Massachusetts Watershed Based Plans

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.



choose your watershed

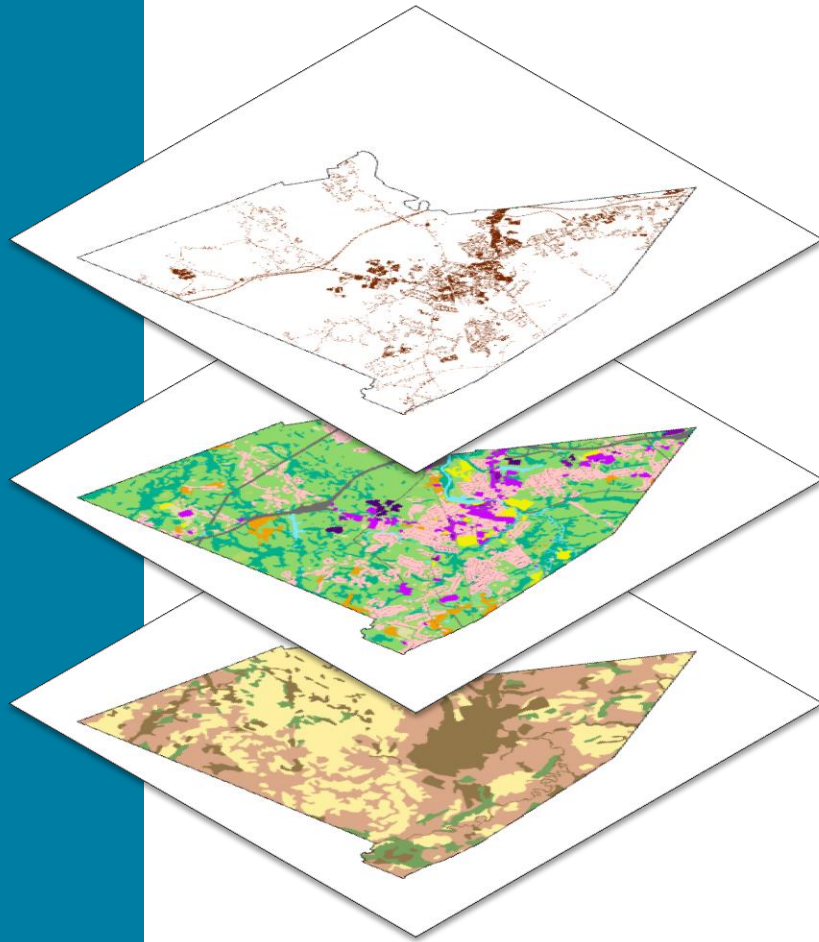


review & add information sources



develop your plan

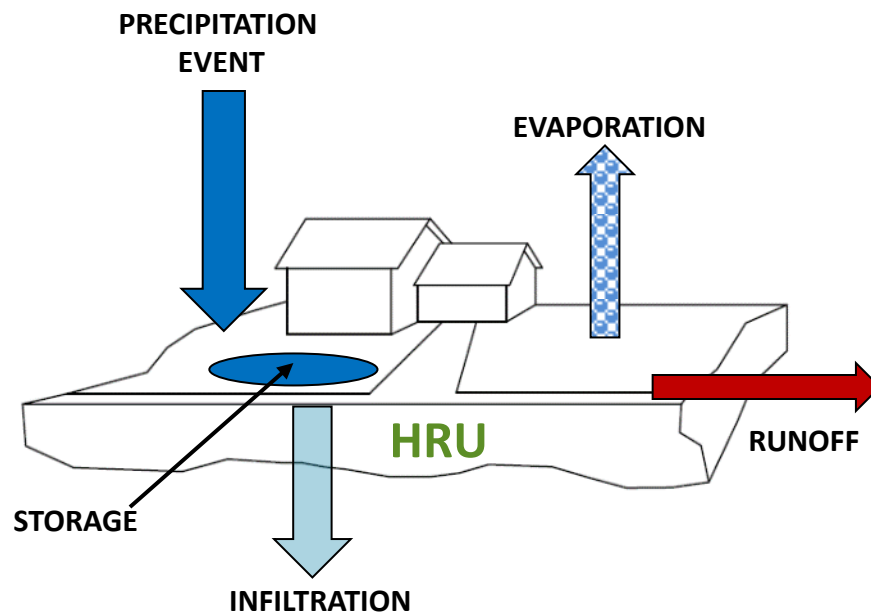
Water Quality Modeling



Hydrologic Response Unit (HRU) Characterization

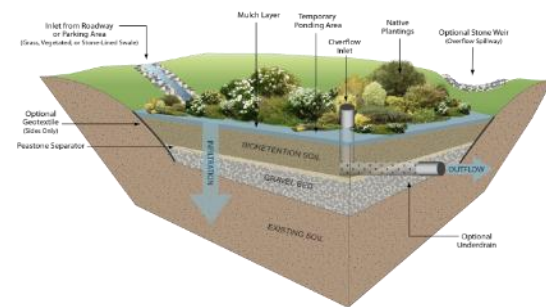
- **Impervious Cover (MassGIS)**
- **Land Use (MassGIS)**
- **Soil Hydrologic Group (USDA)**

Water Quality Modeling



Hydrologic Response Unit (HRU)

Used to calculate annual
pollutant loads



BMP

Estimate performance for
P, N and TSS



MASSACHUSETTS watershed · based plans

Get Started!





Jane Peirce, Deputy Director
Division of Municipal Services
(617) 292-5808
jane.peirce@state.ma.us



Bob Hartzel, CLM, CPESC
Principal
(978) 206-5771
rhartzel@geosyntec.com