

Massachusetts WPDG Grant Projects

1. Demonstration Project: Assessment of Wetland Mitigation Success
2. Pilot Chicopee Watershed Wetland Assessment
3. Adaptation
4. Wetland Outreach

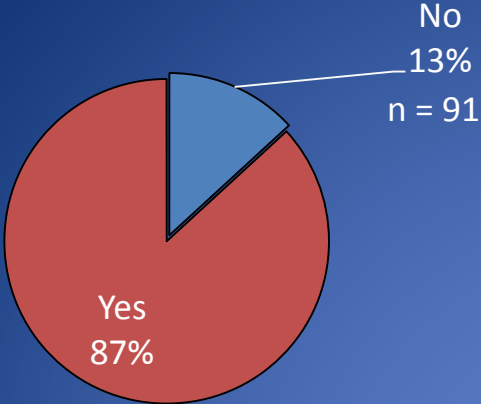
Lisa Rhodes, MassDEP Wetlands Program

- New England Biological Assessment Wetland Workgroup

November 12, 2014

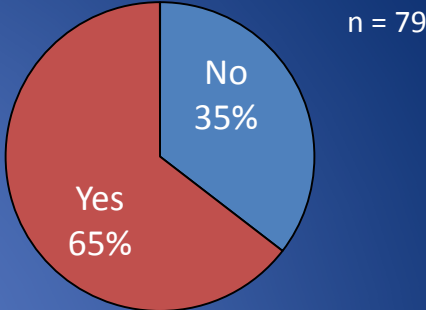
Demonstration Project: Assessment of Wetland Mitigation Success

Replacement Area Built



Brown & Veneman: 77.1%

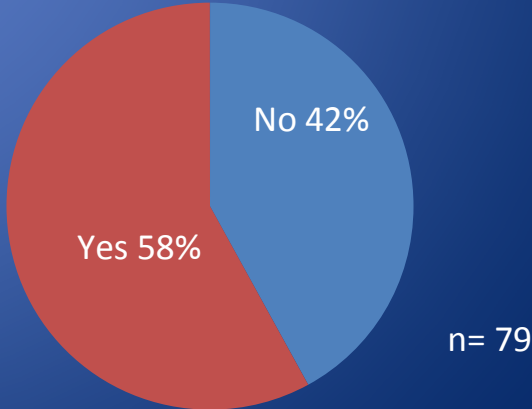
Wetland Created



Brown & Veneman: 87.0%
Adjusted: 57.2%



Regulatory Compliance

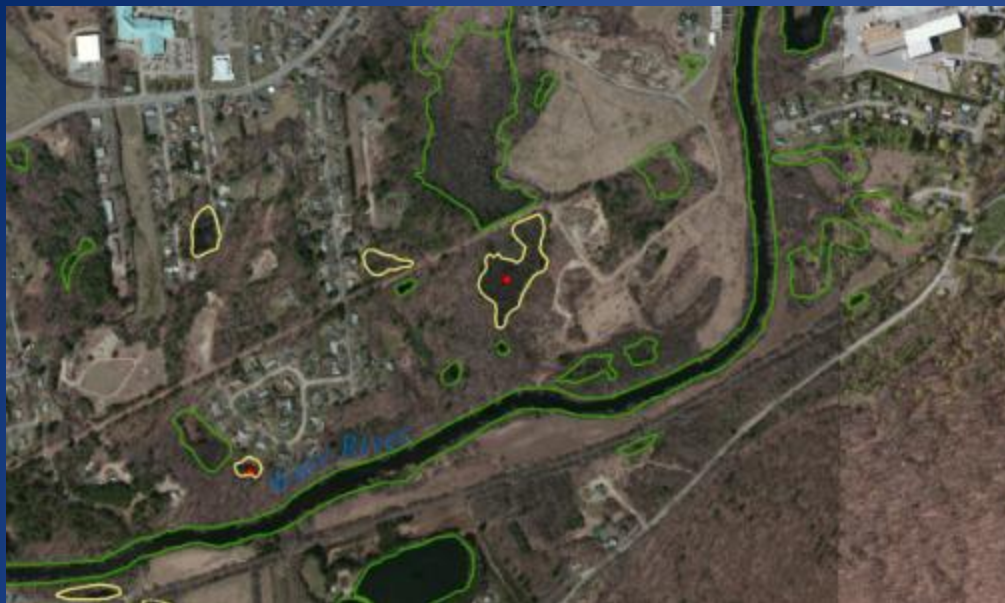


Hydric Soils and Hydrology

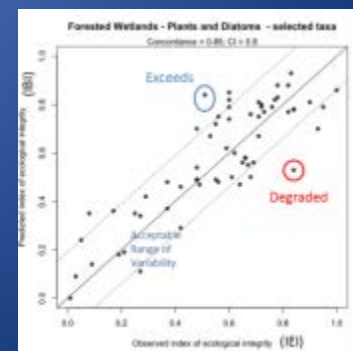
- 100% of sites where wetland not created had no wetland soils or hydrology (28/79)
- All but 3 of those without hydrology met wetland plant criteria only
- 10% of project applications included details about the hydrology of the proposed replacement area



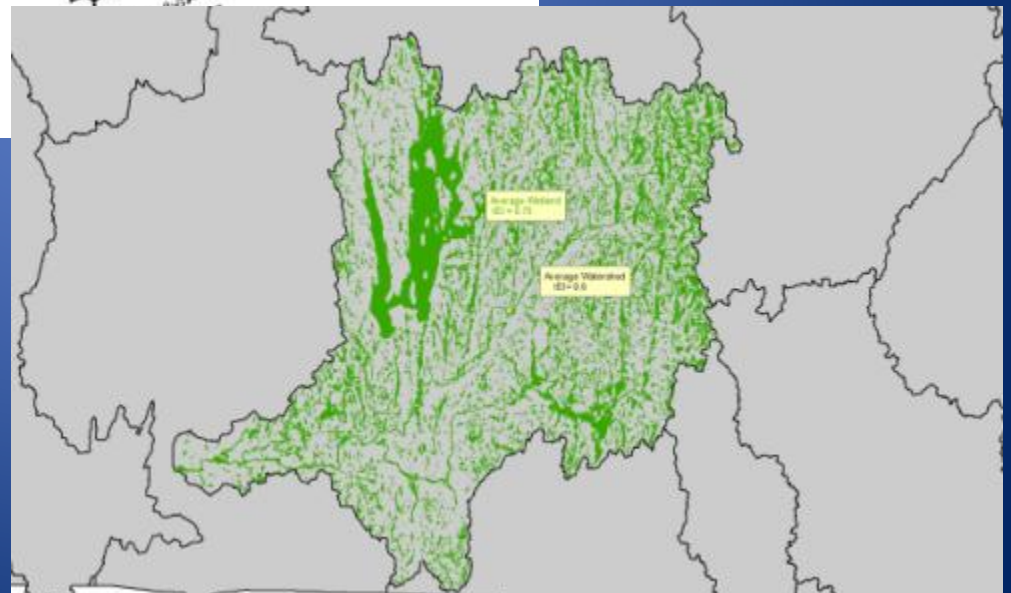
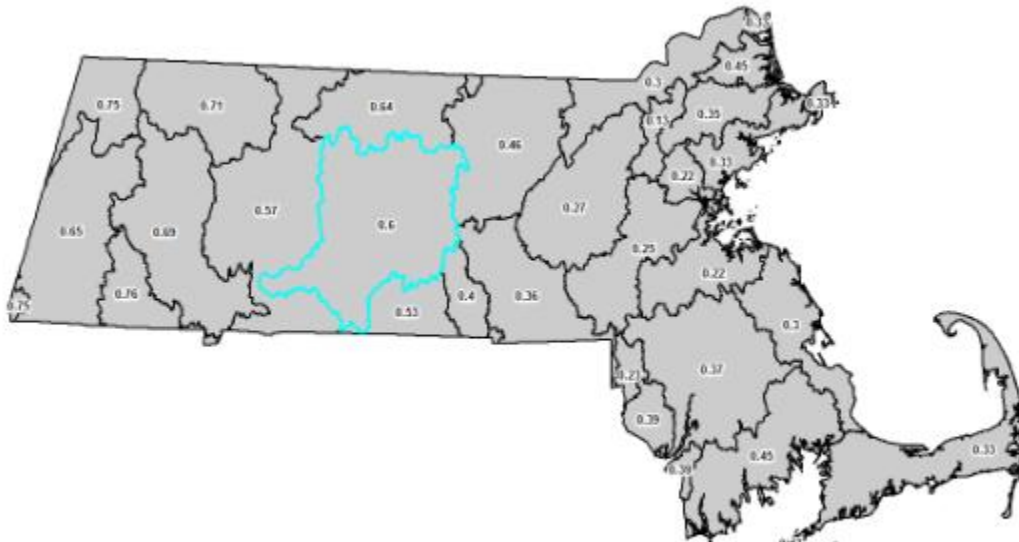
Summer 2014 Sampling: Chicopee Watershed

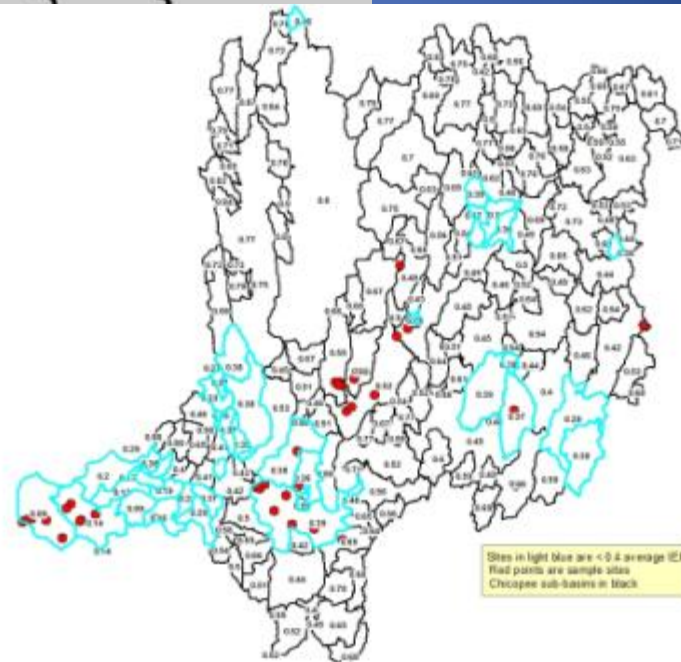
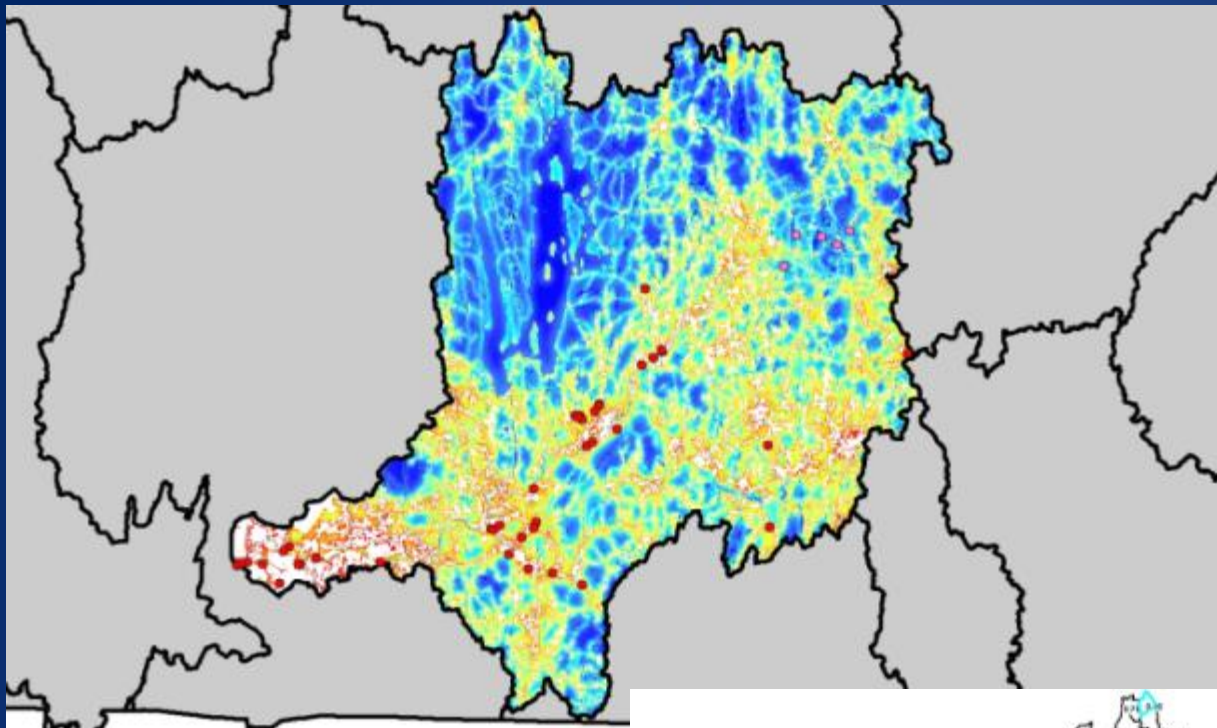


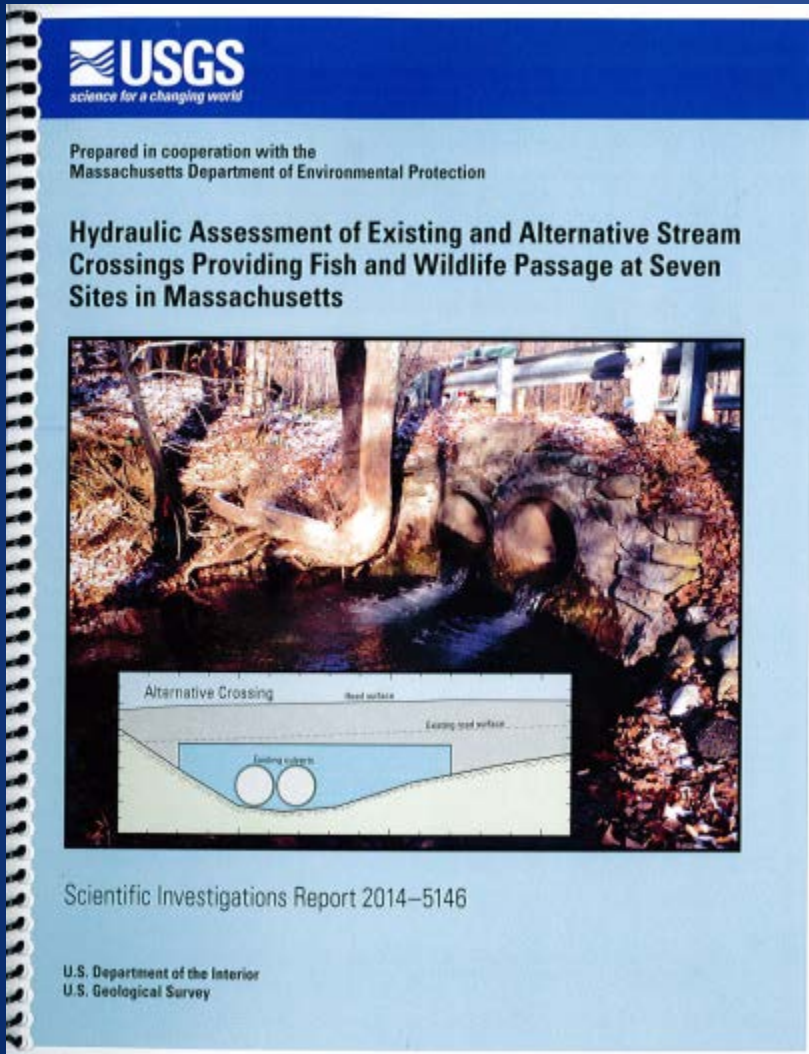
Primary Target:
Forested wetlands with low IEI
that drain to impaired waters



Pilot Chicopee Watershed Wetland Assessment







- Published August 2014
- Looked at 7 stream crossings in MA
- Hydraulic simulations for flood flows 20 to 0.2% annual exceedance probability (AEP)
- Existing culverts at full capacity for many AEP floods, causing upstream backwater and roads to overflow
- Existing culverts impede Aquatic Organism Passage per MA River Continuity Partnership (AOP) standards (e.g. 1.2 bankfull width, 0.8 openness ratio)
- Simulated structures meeting AOP standards conveyed most AEP flows; also more resilient to large floods and greater buffer to uncertainties of flows with climate change

Available at <http://pubs.usgs.gov/sir/2014/5146/>

Wetlands

Our Common Wealth



Massachusetts Department of Environmental Protection
Bureau of Resource Protection, Wetlands Program
1 Winter Street
Boston, MA
www.mass.gov/eea/agencies/massdep/water/waterbody/wetlands-protection.html

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Credits:
Songs: Michael McHugh & Derek Sandell, MassDEP
Photos: © Ponds in Progress, by Angela Bunn