



Sustainable Water Management Initiative Grant Program

September 11, 2014
Water Resources Commission
Boston, MA



SWMI Assistance: Grants

- Money (state capital fund) available for 5 years (2012-2016)
- Designed to assist WMA PERMIT HOLDERS with proposed SWMI minimization and mitigation requirements.
- Particular consideration is given to projects in impacted basins or subbasins, areas with coldwater fish resources, or basins about to go thru the permitting process.
- Requirements:
 - Applicants must have a valid WMA permit
 - 20% financial match for all projects



2013 Grant Summary

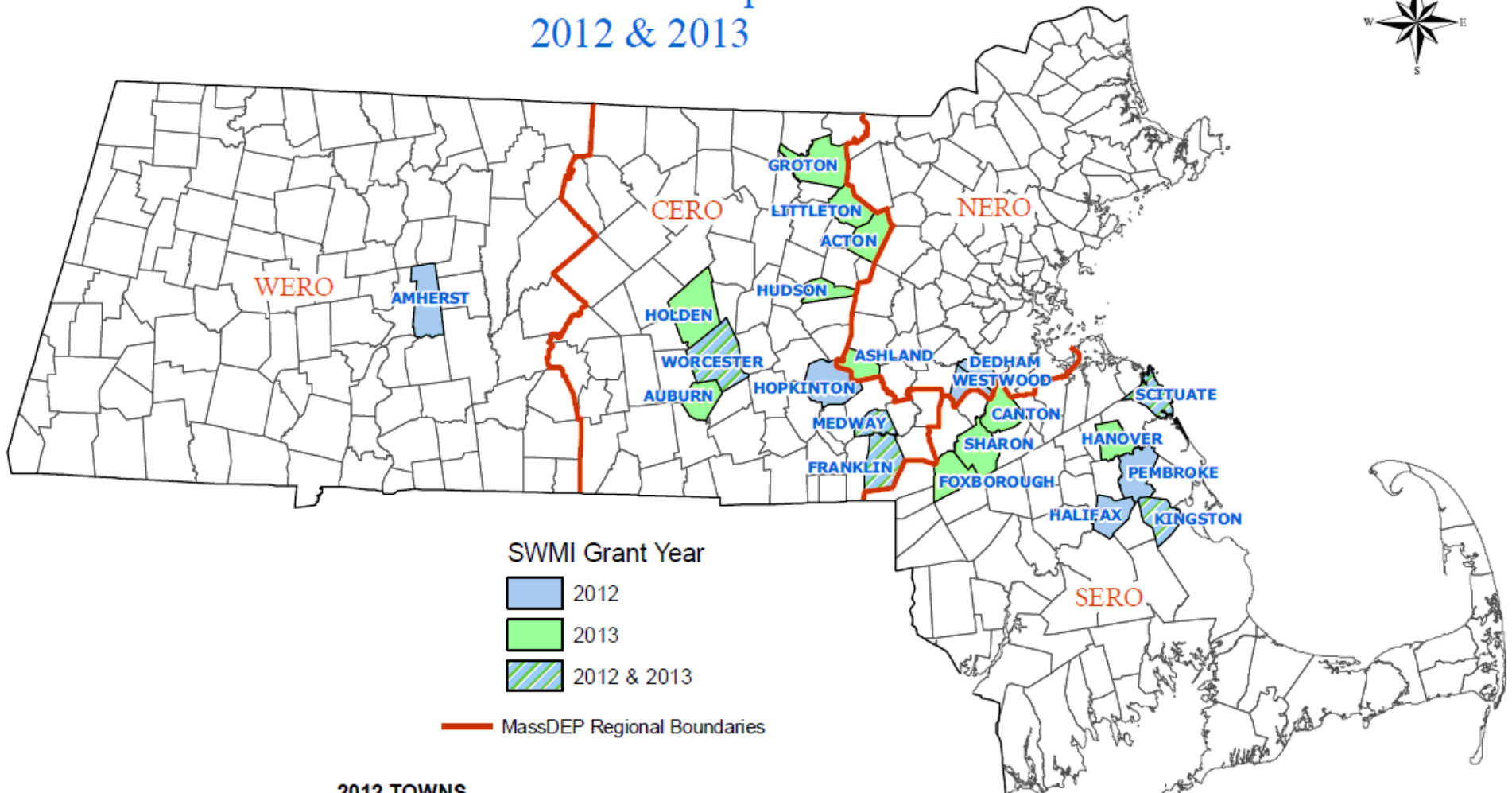
- MassDEP received 26 proposals for FFY13 totaling \$2.3 million dollars. (2012 received 27 proposals totaling \$2.62 million dollars)
- 17 projects were funded, worth a total of \$1.08 million dollars. (2012- 10 projects were funded, totaling \$858,250)
 - Acton, Ashland, Auburn, Canton, Foxboro, Franklin, Groton, Hanover, Holden, Hudson, Kingston (2), Littleton, Medway, Scituate, Sharon, and Worcester.



2013 Summary, cont.

- Projects in CE, NE, and SE regions of the state.
- One-third of the projects are for implementation work; the rest are planning projects.
- Projects include:
 - Fishway improvements (*Scituate, part 2 of 2012 grant*)
 - Optimization (*Franklin, Hudson, Littleton, Kingston, part 2 of 2012 grant*)
 - Developing supply management protocol/system analysis (*Groton, Holden*)
 - Stormwater/wastewater/recharge analysis (*Ashland, Hanover, Auburn*)
 - Dam removal feasibility (*Worcester*)
 - Water conservation/demand management (*Sharon, Kingston, Canton*)
 - Water Audits (*Acton, Medway, Foxboro*)

SWMI Grant Recipients 2012 & 2013



SWMI Grant Year

- 2012
- 2013
- 2012 & 2013

MassDEP Regional Boundaries

2012 TOWNS

- Amherst
- Dedham-Westwood Water District
- Franklin
- Halifax
- Hopkinton
- Kingston
- Medway
- Pembroke
- Scituate
- Worcester

2013 TOWNS

- Acton
- Ashland
- Auburn
- Canton
- Foxborough
- Franklin
- Groton
- Hanover
- Holden
- Hudson
- Kingston - 2
- Littleton
- Medway
- Scituate
- Sharon
- Worcester





Sharon - Regional Water Conservation Pilot (\$90,770)

- Neponset River Valley (Canton, Stoughton, Sharon, Foxborough, Dedham-Westwood)
- Integrated rebate and outreach program and evaluation of a long-term collaboration
- Replacement of:
 - 480 toilets
 - 319 clothes washers
 - 1,000 showerheads and aerators



Sharon –con't.

- Estimated savings: 11.4 mgy, 167.4 mg over life of fixtures (toilets – 79.5 mg, washers – 40.5 mg).
- Cost of 167.4 mg from MWRA at current rates is \$501,000.
- Project partners would like to work together again.
- Lessons learned:
 - Distribute devices at public libraries – more foot traffic than the water department.
 - Allow multi-family properties to participate in rebate program.
 - Towns with a program saw a more rapid uptake of rebates/devices.
 - Direct mail was the most effective component of the outreach program.



Scituate – First Herring Brook 2012 (\$60,180)

- Assessment for improving seasonal herring passage at Reservoir Dam Pond.
- Five options with various combinations of normal Reservoir Dam pond levels and fishway exit channel configurations were evaluated. A stage-storage curve was created for Reservoir Dam Pond and a stage-discharge curve was created for its spillway .
- A Hydraulic Analysis, an Ecological Assessment, and an Impact Assessment were also completed.
- Selected Option: fish exit channel lowered to El. 35.4 ft and one foot high flashboard creating a normal pond at El. 41.0 ft.



Scituate – First Herring Brook 2013 (\$54,500)

- Preliminary design for spillway and fishway modification.
- Includes spillway modifications, stormwater system upgrades, roadway improvements, and erosion protection (\$866k).
 - Ogee Crest
 - Spillway extension, abutment wall extension, walkway bridge installation, weir removal.
 - Bottom Hinged Gate
 - Installation with electric motor and handwheel, part of SCADA system

Franklin - Regional Evaluation of Water Management Alternatives to Reduce Streamflow Impacts (\$119,460)

- Bellingham, Franklin, Medway, Milford, & Norfolk
- Approximately 6.2 MGD would be needed to get to a GW₃.
- 15 water management scenarios run.
- Findings:
 - None of the scenarios lowered the August impacts from a GW₄ to a GW₃.
 - Optimizing pumping had the least cost with the biggest improvement in August median flows.
 - I/I reductions had the next largest improvement, but the largest estimated cost.



Acton - Water Audit Evaluation (\$82,187)

- Created case studies to document level of effort for water audits using AWWA Manual 36 procedure and the ASR UAW procedure.
- Findings:
 - M36 process can generate useful results when applied to medium and small suppliers.
 - Water audits based on the M36 process showed real losses to be significantly less than the UAW process.
 - M36 provides specific recommendations based on an evaluation of the certainty of the data and the value of the real and apparent losses.
 - Accuracy of data is very important.
 - M36 process costs approximately double that of a ASR audit (\$7,000 vs. \$15,000).



Lessons Learned

- WMA permit holders are anticipating and planning for increased future water needs.
- Mitigation and minimization options are available to most if not all WMA permit holders.
- WMA permit holders will need considerable lead time to plan for and implement mitigation and minimization options.
- Significant water savings are available thru demand management practices.



Get Informed

- All SWMI Grants RFRs are posted on COMMBUYS, the state's procurement site. <http://www.commbuys.com/>
- Sign up for alerts on COMMBUYS.
- Search under News and Views on DEP's website:
<http://www.mass.gov/eea/agencies/massdep>
- Review previous projects selected on SWMI website:
<http://www.mass.gov/eea/agencies/massdep/water/watersheds/sustainable-water-management-initiative-swmi.html>



Looking Forward

- 2014 SWMI Grant season is underway.
- Approximately \$1 million dollars in funding is available.
- The schedule is as follows:
 - August 14 - RFR posted
 - September 15 - RFR informational meeting
 - October 9 - grant application period is closed
 - End of November - grants are awarded
 - End of December – contracts begin