



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

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Water Management Act Grant Recipients State Fiscal Year 2016

The Water Management Act grant program was designed to assist eligible public water suppliers and municipalities with Water Management Act permits by providing funds for planning assistance, demand management, and withdrawal impact mitigation projects in local communities. The focus of these grants is: 1) planning projects for specific watersheds or subwatersheds to identify implementation projects to improve ecological conditions; 2) demand management projects aimed to improve the efficiency of our use of water within a municipality or a watershed; and 3) mitigation projects in the following categories: improve or increase instream flow, wastewater projects that keep water local including reductions in inflow and infiltration, stormwater management projects that improve recharge, reduce impervious cover and/or improve water quality, water supply operational improvements, habitat improvement, and other projects that can be demonstrated to mitigate the impacts of water withdrawals.

Eligible grant applicants were Massachusetts public water suppliers or municipalities with a valid Water Management Act permit. A 20% funding match was required. Cooperative proposals were encouraged. Particular consideration was given to proposed projects in highly impacted basins or subbasins.

MassDEP received 18 proposals for this grant year totaling just under \$1.3 million dollars. The proposal review committee recommended funding 12 proposals this year. This total grant dollar amount of the recommended projects is \$806,913, which will also leverage an additional \$246,836 in project work, for a total of \$1,053,249.

The proposals receiving funding are below. Brief summaries for these projects are attached.

Project	Title	Applicant	Project Total	Grant Money from State	Match
2	Assessment of Reservoir Storage Capacities & Evaluation of Operational Modifications to Assess Potential Streamflow Impacts in the Adams Brook Watershed	Amherst	\$103,283	\$84,000	\$19,283
3	Evaluation of Permanent Interconnection to Supplement or Replace Existing Sources	Auburn Water District	\$88,900	\$70,900	\$18,000
4	Demand Management	Avon	106,020	\$79,515	\$26,505
5	Water Rate Study	Billerica	\$25,000	\$20,000	\$5,000
6	Mitigation and Minimization Alternatives to Improve Streamflow in the Neponset River Watershed	Canton	\$72,000	\$57,500	\$15,000
7	Alternative Source Study and Mitigation Planning	Groton	\$98,400	\$78,200	\$20,200
11	Third Herring Brook	Norwell	\$102,630	\$80,106	\$22,524
12	Water Loss Control Program	Rutland	\$59,000	\$44,000	\$15,000
14	Stormwater Quality Investigation	Shrewsbury	\$40,000	\$32,000	\$8,000
15	Cost Effective Permit Renewal for West Springfield and Southwick	Southwick	\$132,113	\$103,189	\$28,924
16	UAW Reduction	Wareham Fire District	\$174,500	\$116,500	\$58,000
17	Stormwater Assessment for Recharge Opportunities	Wrentham	\$51,403	\$41,003	\$10,400

**FY 2016 WMA GRANT PROGRAM
FUNDING RECOMMENDATIONS**

NUMBER	TITLE	PROJECT TOTAL	MATCH
	APPLICANT		
02	Assessment or Reservoir Storage Capacities and Evaluation of Operational Modifications to Assess Potential Streamflow Impacts in the Adams Brook Town of Amherst Amherst proposes to assess current operational practices at the Atkins reservoir to determine if water supply obligations can be met in a manner that improves streamflow conditions in Adams Brook, downstream of the diversion to Atkins. This project will also assess restoring reservoir storage to previous levels and/or increasing reservoir storage for operational and environmental improvements throughout our water supply system. Reservoir bathymetry will be conducted, and sediment cores taken. The WEAP or the HSPF model will be used.	\$103,238	\$19,283
03	Evaluation of Permanent Interconnection to Supplement or Replace Existing Sources Auburn Water District This project would help determine the costs, benefits and impacts of the purchase of water by the Auburn Water District from the City of Worcester. The prospective purchase has been identified as a potential alternative to the District's local groundwater withdrawal sources (existing and future). This project includes an evaluation of the critical hydraulics, pertinent regulatory requirements and costs associated with this potential purchase of water from Worcester by the District.	\$88,900	\$18,000
04	Demand Management Town of Avon This project would fund an enhanced water audit and implementation of a continuous water use performance measurement system. The outcome will be a system that schedules the collection of water use related over the year. Goals include: Reviewing and auditing all sources of data used for a first year AWWA M36 Water Audit; Automating the collection and production of ASR reporting, linking the Town's daily field-deployed Work Order system and other sources of data into the ASR report formats and annual M36 Audits; Developing a meter replacement program, a master meter testing and calibration program, a leak detection approach, and a meter replacement approach. This project would also quantify the cost benefit of water loss reduction programs.	\$106,020	\$26,505
05	Water Rate Study Town of Billerica The Town of Billerica would complete a detailed Cost of Service (COS) Water Rate Study to determine the actual costs for current and projected future management and Operation& Maintenance (O&M) programs associated with operation of the Billerica Water Division. Water pricing can help to reduce demand by providing an economic incentive for customers to conserve water. Specifically, the Town would like to review its current water rate schedule and determine the impact of billing four times per year instead of three, review implementing an irrigation meter fee, review the Town's current meter replacement program and its water conservation and demand management recommendations.	\$25,000	\$5,000

06	Mitigation and Minimization Alternatives to Improve Streamflow in the Neponset River Watershed Town of Canton	\$72,000	\$15,000
	<p>This project will build on work completed for the Neponset Watershed by using a regional analysis to help towns meet their WMA requirements and reduce impacts of water withdrawals on streamflow. The analysis of source optimization opportunities will use a spreadsheet modeling previously applied in the Upper Charles River Watershed. The model incorporates approximate groundwater dynamics based on the USGS Stream Depletion tool, allowing for a site specific evaluation of optimization opportunities. The project involves the following major tasks: investigating alternative pumping strategies; integrating existing and potential demand management strategies; prioritizing potential stormwater recharge volumes; integrating potential reduction in infiltration and inflow to sewers; providing a menu of water management alternatives with associated unit costs; and, quantifying the benefits to streamflow from the above practices.</p>		
07	Alternative Source Study and Mitigation Planning Town of Groton	\$98,400	\$20,200
	<p>This grant project would leverage the work completed under a prior SWMI grant to further the optimization of Groton's existing and future sources, relative to minimizing the potential impact of their groundwater withdrawals. This grant proposal includes the following:</p> <ol style="list-style-type: none"> 1. Development of an Alternative Source Study to provide a roadmap for implementation of future water sources; 2. Identification and quantification of existing mitigation measures implemented in the Town of Groton since 2005 to offset future water sources/withdrawals; 3. Evaluation of water rates considering the potential effect of implementation of future water sources and associated mitigation efforts. 		
11	Third Herring Brook Town of Norwell	\$102,630	\$22,524
	<p>This project proposes to conduct work to better understand Third Herring Brook and its water resources, for both the sustainability of the water supplies of Norwell and Hanover as well as its instream ecology. Project tasks will include using MODFLOW software to model the dynamics of water within the Third Herring Brook watershed, and testing different management scenarios in order to prioritize action.</p>		
12	Water Loss Control Program Town of Rutland	\$59,000	\$15,000
	<p>Rutland has had a UAW of greater than 25% since 2010. This project would utilize the latest AWWA water loss control software to evaluate the Rutland water supply system, and apply results from the water audit to the latest Water Research Foundation real loss control software. Based on the results of loss analysis, the system would perform system analysis which may include nighttime system loss survey, meter calibration/registration checks, and acoustical leak detection on elements of the system not surveyed in the past two years.</p>		
14	Stormwater Quality Investigation Town of Shrewsbury	\$40,000	\$8,000
	<p>Shrewsbury is required to review potential stormwater quality measures at the Bowditch Drive outfall. This project would identify and evaluate potential drainage system improvement and Best Management Practices to improve stormwater quality in the area and in the Poor Farm Brook. This project would also try to identify illicit stormwater connections to the Bowditch Drive outfall.</p>		

- 15 Cost Effective Permit Renewal for West Springfield and Southwick
Town of Southwick** **\$132,113** **\$28,924**
- This project would assess the impact of the Water Management Act Regulations on the planning, operations and management of the water resources used by Southwick and West Springfield, and identify cost-effective ways to meet both human and environmental water needs. The analytical approach may involve using several models and conducting multiple analyses, including: STRMDPL for optimizing withdrawals; Water Efficiency Calculator to estimate the potential for demand reduction in both towns; Stormwater Credit and Cost Calculator to estimate volumetric credit from infiltration practices implemented since; Reservoir release and volume calculator; and a GIS-based analysis to calculate and verify septic recharge with updated data, as applicable. Each of these analyses evaluates actions for meeting optimization, minimization and/or mitigation requirements, as well as their relative cost-effectiveness.
- 16 UAW Reduction
Wareham Fire District** **\$174,000** **\$58,000**
- This project would focus on reducing UAW below 10% in the District; for the last two years it has been at 14% or greater. Components of the project include: conducting a water audit; developing a UAW Compliance Plan; conducting a leak detection survey; performing a billing data review and a leakage component analysis; providing low-flow plumbing fixture to residents; conducting a water rate survey; and providing outreach to the District on current conservation measures.
- 17 Stormwater Assessment for Recharge Opportunities
Town of Wrentham** **\$51,403** **\$10,400**
- This project would assess opportunities for mitigation of streamflow impacts using stormwater recharge in the headwaters of the Charles, Blackstone, Taunton, and Ten Mile Rivers. All retrofit opportunities for stormwater controls in the Town would be assessed and ten conceptual designs for stormwater treatment would be developed. The retrofit sites will prioritize those that result in significant recharge and phosphorus reduction. Lastly, one of the best conceptual designs would be advanced it to the 30% level.