



Department of Environmental Protection

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2014 SWMI Grant Recipient Project Summaries

The Sustainable Water Management Grant Program has completed its third year. This grant program assists eligible public water suppliers and municipalities with Water Management Act permits by providing funds for planning assistance, demand management, and withdrawal impact mitigation projects. The focus of these grants is for: 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 water use within a municipality or 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 increased water withdrawals.

The funds allocated for grants are distributed under a competitive procurement process. Eligible grant applicants are 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 26 proposals for this grant year totaling \$2.3 million dollars. A summary of the seventeen selected projects is provided below. The total dollar amount of this project list was \$1.1 million dollars.

MassDEP received 20 proposals for this grant year totaling just under \$2.0 million dollars. A summary of the 12 selected project reports is provided below. This total dollar amount of the recommended project list was \$754,700, which leveraged an additional \$210,000 in project work.

**FY 2014 SWMI GRANT PROGRAM
PROJECT SUMMARIES**

NUMBER	TITLE	PROJECT AMOUNT	COST SHARE
WATERSHED/APPLICANT			
02	Alternate Water Supply Study and Rt. 20 Reallocation Study Town of Shrewsbury	\$36,286	\$7,257
	<p>This project identified alternative water supplies to minimize pumping impacts by the existing Shrewsbury well fields, and to allow the reduction of pumping impacts to the Poor Farm Brook. Options evaluated included purchasing water from various sources, re-opening of a well, or a new well. The most cost effective options include the continued use of the current wells, with either supplemental supply from Worcester, or a robust mitigation plan for aquifer recharge allowing current and future increased withdrawals from the aquifer.</p>		
03	Integrated Assessment and Basin-Wide Training Town of Westborough	\$91,315	\$18,263
	<p>This project assessed the implications of the revised Water Management Act regulations on the planning, operations and management of the water resources of the Town of Westborough, and identified cost-effective ways to meet permit requirements. A strategy was identified that included: reducing un-accounted for water, further restricting non-essential outdoor water use, implementing a five-year water efficiency program, connecting the Indian Meadows well to the Fisher plant to provide of discharge offsets, transferring pumping from the Andrews and Otis well fields to the Jackstraw and Sandra subbasins, and surface water discharges. Materials were developed and a training workshop conducted for Westborough and other WMA permittees to enable them to use WMOST and other existing tools to assess requirements applicable to their permits, and to perform analyses to determine cost-effective strategies for meeting those requirements.</p>		
04	Support and Reusable Tools Town of Wrentham	\$122,895	\$24,579
	<p>This project built on prior projects using WMOST to develop strategies for meeting WMA regulations. It created two tools; the first being a stormwater calculator, and the second being a demand management calculator, for use in estimating credits and costs for these actions under the new regulations. Considerations included the potential effects of climate change, data and modeling uncertainty, and other pertinent factors such as regulatory and permitting options. These tools are stand-alone Excel files that can be used by other permittees.</p>		
05	Third Herring Brook Town of Norwell	\$80,240	\$20,330
	<p>This project conducted 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. Water Evaluation and Planning (WEAP) software was used to model the dynamics of water within the Third Herring Brook watershed, and a sediment testing and a bathymetric survey of Jacob's Pond was conducted.</p>		

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07	Path from Screening Analysis to Permit Conditions Town of Littleton	\$59,427	\$11,885

This project included activities recommended in a planning study done by Littleton in the previous grant round: initiating UAW and demand management programs. These efforts are expected to bring Littleton's UAW from 15% down to around 11%. In addition to technical assistance, tools were developed to be generalized templates so that other permittees may perform the same analyses with fewer resources.

09	Stormwater Infiltration Planning Town of Auburn	\$94,300	\$20,200
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A prior SWMI grant project for Auburn evaluated existing stormwater outfalls from Routes I-90, I-395 and I-295 proximate to the Auburn Water District's water supply wells. This project evaluated the ability to implement a roof leader disconnection and infiltration program for three sites – Sword Street Industrial Park, the Auburn Mall, and the Southbridge Street Industrial Park. Sword Street Industrial Park exhibited the most favorable conditions for such a program, but the cost would be high for the mitigation provided. An Alternative Source Study was also done, with a list of recommendation provided.

11	Minimization and Mitigation Planning Town of Lincoln	\$75,292	\$15,392
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This project included four activities to help the Town of Lincoln address WMA compliance. These activities include: (1) An Evaluation of Alternative Sources; (2) An Evaluation of Additional Conservation Measures; (3) An Assessment of Existing Mitigation Measures; and (4) Leak Detection and Meter Calibration. Recommendations included: the installation of a replacement well and a new well at the Tower Rd. site, and use of identified potential mitigation sites and a wastewater adjustment to meet mitigation needs.

15	Culverts and Stormwater Town of Kingston	\$55,000	\$12,000
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This project involved culvert replacement and stormwater upgrades near the headwater of the Jones River to improve fish passage and stream health. The current water allocation system has resulted in the upper Jones River unnaturally drying up seasonally alternating with unnatural flooding. These conditions result in the loss of fish and other aquatic species dependent on those habitats. Wetland resource flagging, a topographic survey, and a soil evaluation were conducted. A 90% design plan was developed, and the acquisition of land easements was begun.

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	WATERSHED/APPLICANT		
16	Targeted Leak Detection Town of Medway	\$18,208	\$3,642
	<p>Medway has completed water audits of both its own system and those of its largest water consumers. These audits have provided a specific set of prioritized recommendations, which the Town has already begun to implement. This year, Medway developed a District Metering Program to help the Town target and prioritize specific areas of the system for more intensive leak detection based on water main age, break history, system pressure and other factors. Digital correlating loggers provided the most cost effective method for enhanced leak detection efforts, and priority areas include the southern and eastern portions of the distribution system.</p>		
17	Implementation Project Town of Westford	\$107,867	\$28,925
	<p>This project implemented a rebate program for water efficient appliances and municipal building retrofits to low-flow toilets, both of which improved the efficiency of water use in town, helped reduce water demands, and helped the town meet the performance standard for RGPCD. Radio-read meters or interfaces were purchased and installed to continue Westford's effort to move from quarterly to monthly reading and eventually billing. This project resulted in the replacement of 61 toilets, 8 clothes washers, 200 shower heads, and 700 aerators, as well as the installation of 500 radio read meters. The project is estimated to have save 9.7 million gallons of water annually, and 142 million gallons over the lifetime of the appliances and devices.</p>		
18	Implementation of Stormwater Recharge Practices Town of Franklin	\$148,890	\$30,000
	<p>This project is a continuation of the work completed in two prior SWMI projects that identified potential sites for installing new stormwater recharge practices or retrofitting existing ones. This project was to design and install stormwater recharge practices at three of the best sites from these two prior studies – Lady Slipper Lane, Hayden Lane, and Jefferson Road. Combined, the three stormwater recharge practices are expected to recharge 7.2 million gallons of water each year.</p>		
19	SCADA Feasibility Town of Halifax	\$74,850	\$17,400
	<p>This project evaluated the feasibility of installing automated controls to remotely manage the water levels of Monponsett Ponds, reducing the man-hours needed to manually visit the dam, operate the infrastructure and monitor the health of the up-stream and down-stream ecosystem. The technology proposed is a series of automated valves and controls installed at strategic locations to monitor and operate, based on constant and controllable settings. These valves and controls would require modification to the existing infrastructure and implementation of a SCADA system.</p>		