



# Fiscal Year 2013 Final Report



Quabbin Reservoir  
Looking North Over Shaft 12 and Baffle Dams  
September 2013  
Photo: Clif Read

September 2013

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Massachusetts Department of Conservation and Recreation  
Division of Water Supply Protection  
Office of Watershed Management

# Dedication

## David M. Worden

September 20, 1952 - July 7, 2013



Dave Worden was dedicated to his profession and took the task of reporting the plankton results seriously right up until the week he was incapacitated. He was a wonderful friend, colleague, and limnologist who taught us a great deal about the phytoplankton and water quality of the Wachusett Reservoir. He was a patient teacher who possessed the wisdom to answer some of our questions but made us figure out the answers to others in order that we would learn for ourselves.

His knowledge and presence will be missed.

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# **FY2013 Accomplishments**

## **Wachusett/Sudbury Watersheds Fiscal Year 2013 Accomplishments**

### **Land Acquisition Program**

Five properties were acquired in FY13, totaling 38.9 acres. Funds expended totaled \$849,000. Included in this total was the acquisition of the R. E. Chapman Company property – an industrial site on the shoreline of the reservoir. Also included was the gift of a 24.4 acre WPR. Due diligence and negotiations continued on approximately 12 additional proposed acquisitions.

### **Land Preservation (Watershed Preservation Restriction Program)**

WPR baseline reports were completed for all new WPRs. Eleven of 56 WPRs were inspected this year. Two newsletters were written, published, and distributed to landowners.

### **Land Management**

The Division continues to follow guidelines set forth in the *2001-2010 Wachusett Land Management Plan*. Six timber sales on 284 acres were active during the fiscal year. These sites were monitored by Forestry and Environmental Quality staff to ensure all measures to protect resources were in place. This monitoring did not show any short-term, adverse impacts on water quality due to forestry operations. A sampling program to assess long-term impact of forestry on water quality was developed. Monthly dry-weather sampling and quarterly storm sampling will begin Fiscal Year 2014.

### **Wildlife Management**

The Bird Harassment Program was successfully implemented during the fiscal year. The program began in September and was conducted continuously through March. The source water standard for fecal coliform was met throughout the year. A total of 30 weekly reports were produced during the harassment season.

Work continued to implement controls at feeding areas in an attempt to reduce the overall regional population. This included work at area wastewater treatment plants and a nearby pig farm. DCR staff continued to survey aquatic wildlife within the Aquatic Wildlife Pathogen Control Zone. Goose eggs were treated at Wachusett and Sudbury Reservoirs in order to reduce the number of eggs that successfully hatched.

### **Public Access Management**

The Watershed Ranger staff patrolled the Wachusett watershed seven days a week, providing education about rules and encouraging good stewardship habits. The Rangers continued to coordinate with the Massachusetts State Police and the Massachusetts Environmental Police. Several popular and well-attended educational/interpretive programs were offered during the year.

### **Watershed Security**

Watershed Rangers provided an active presence in the watershed, and continually scanned for any suspicious activity during their patrols. Incident Command System training was provided to all new staff.

### **Infrastructure and Facility Maintenance**

Monthly assessments of the dams, spillways, and dikes were conducted at Wachusett and Sudbury Reservoirs. Work continues on major projects related to infrastructure and facilities, including: construction of a new Carpenter Shop was moved to FY14 (funds made available by this delay were used to pave the Lower Road at the Wachusett Dam); a new handicap ramp and associated landscaping was completed at John Augustus Hall; and building demolition was completed at several sites.

### **Watershed Protection Act**

Staff fully implemented the Watershed Protection Act through review of applications, conducting site visits, meeting with applicants and their representatives, conducting Variance hearings, and issuing decisions.

### **Technical Assistance and Outreach**

Environmental Quality staff continued to attend meetings of local boards and commissions and provide assistance to the volunteer boards. Staff developed additional brochures on topics to promote water quality and watershed protection. GIS support was provided to the towns and environmental groups.

### **Interpretive Services**

Staff continue to operate Stillwater Farm for public and school programs. Other well attended public programs were offered by the Rangers and Interpretive staff. Four teacher workshops were held, and staff provided support to Mass Envirothon.

### **Watershed Water Quality Monitoring**

Ongoing sampling was conducted for sites on Wachusett and Sudbury tributaries. The water quality program is conducted on a calendar year (CY) schedule. The CY2012 sampling was completed in the first half of the year, and the first half of the CY2013 sampling was completed in June. Weekly tributary sampling was completed in the Wachusett watershed. Data were used to help address problems identified in Water Quality studies and Environmental Quality Assessments previously conducted by DCR staff, as well as to assess ongoing water quality conditions across the watersheds. Wachusett Reservoir was sampled with a regular collection of Temperature/DO/conductivity profiles as well as quarterly nutrient samples. Plankton monitoring was done weekly. *The 2012 Annual Water Quality* report was produced and is available on the DCR webpage.

Efforts continue to control aquatic invasive species in the Wachusett Reservoir and to monitor throughout the watershed. Working with MWRA, removal of invasive species using Diver Assisted Suction Harvesting (DASH) boats began in the summer and will continue into early fall.

Stormwater sampling included collections from four sites to characterize twelve storms. Stream flow and precipitation monitoring, in cooperation with USGS, has been increased and provides much better data for quantification of storm impacts.

### **Environmental Quality Assessments**

Environmental Quality staff is on schedule for the Environmental Quality Assessment (EQA) process. The Reservoir District report was completed.

### **Compliance with Environmental Regulations**

Fifty new files were created during the fiscal year. Thirty seven of these files had WsPA jurisdiction and were processed accordingly. All sites were tracked in the EQ Database. A summary report for this work was prepared.

### **Wastewater Management**

Staff continued to work with watershed Boards of Health to monitor wastewater disposal issues. Connections continue to be made to the expanded Holden and new West Boylston sewer collection systems.

### **Stormwater Management**

Construction of drainage improvements at northern end of the reservoir was completed in the fall of 2012. Two engineering design contracts were advertised and awarded for additional work to remove stormwater drainage from the reservoir. CEI Engineering was awarded a contract to redesign drainage in the area of the Causeway crossing in West Boylston. Tighe and Bond Engineering was awarded a contract to redesign the drainage at the Beaman Street bridge in West Boylston. Both designs will be completed in FY14.

Staff continued work with watershed communities on compliance with MS4 requirements, although the issuance of the new permit is significantly behind schedule. It does not appear that any significant progress has been made on the new permit by EPA this year.

An inventory and inspection of all structural BMPs in the watershed was conducted. 646 individual BMPs on 117 sites were inspected. Thirty percent of these BMPs needed maintenance. Owners of BMPs needing maintenance were notified, and almost all were cooperative and did the required maintenance. The most common maintenance issues were accumulated sediment, vegetation, and debris. Many property owners did not know they were responsible for the BMP maintenance; in some cases they were not even aware that the structures existed on their property.

**Agriculture**

Work is ongoing with agricultural operations in the watershed and coordination with conservation district.

**Hazardous Materials**

DEP databases for hazardous materials and releases were monitored. Underground Storage Tank information was tracked.

**Emergency Response**

Annual training exercises were held in coordination with MWRA.

**Administration and Technical Support**

An update of the Watershed Protection Plan, to cover Fiscal Year 2014 through 2018 is essentially complete.

All Section bills were processed and financial accounts for the Section were maintained. A new electronic self-service payroll system was implemented in January.

Positions filled during the fiscal year included: a Civil Engineer I, a Ranger I, Tractor Driver and three Laborer IIs. The Section ended FY2013 with several vacancies including two Laborer IIs a Carpenter I, a Mechanic IV, a Mechanic II and an Aquatic Biologist III.

GIS staff provided services to other staff for plans, reports, and projects and continued support to municipalities and non-government organizations by providing GIS products and technical assistance.

The Payment in Lieu of Taxes (PILOT) program distributed PILOT payments to watershed communities totaling \$7.65 million. Wachusett towns received \$3.2 million; Sudbury towns received \$807,000.

A number of equipment purchases were made during the fiscal year including a new F550 dump truck, backhoe, and one pick-up truck for Ranger staff.

## **Quabbin/Ware Watersheds Fiscal Year 2013 Accomplishments**

### **Land Acquisition Program**

There were 7 acquisitions in FY13 – approximately 98 acres in fee and 183 acres in WPRs. Four assessments of new acquisitions were completed. The “Quabbin to Wachusett” Forest Legacy project was funded at a \$5 million level, with DWSP as a major partner.

### **Land Preservation (Watershed Preservation Restriction Program)**

One baseline inspection/assessment was completed, and field work was completed on all others. Two landowner newsletters were prepared and distributed.

### **Land Management**

The Land Management Plan (LMP) review by the Science & Technical Advisory Committee (STAC) was completed around mid-fiscal year. In response to the STAC recommendations, DWSP Forestry and NR staff made appropriate revisions to the Land Management Plan and put it, and related information, out for public review. Staff also started the planning and internal review process for several new forestry lots. As of the end of the fiscal year, DWSP was waiting for final approval from the DCR Commissioner’s office to resume forest management operations.

Foresters continued to provide supervision of the several harvest operations that were previously active on the watersheds. The new BMP effectiveness protocols and a new water quality monitoring plan for harvest operations were implemented by EQ staff. Approximately 22 miles of reservation boundary were maintained.

Other components of the LMP, including annual field mowing, brushing out vista areas, rare plant population monitoring, and road repair and maintenance were also completed. Watershed Maintenance crews spend significant amount of time conducting clean-up and repair work following a severe weather event in the fall of 2012 that resulted in many road washouts. They also finished work on a major culvert replacement on the Gate 8 road (leading to Boat Launch Area #1).

The Terrestrial Invasive Plants Strategy was finalized, posted on the DCR website, and implemented.

### **Wildlife Management**

The gull harassment program operated from November 19, 2012 through April 12, 2013 and was effective in preventing violations of water quality standards. A final evaluation of the program was conducted and an annual report prepared. Extensive preparations were made for the FY2014 program.

Work continued on the gull study, with data collected at local landfills, parking lots and wastewater treatment plants.

DCR staff conducted regular wildlife surveys to identify aquatic wildlife within the Aquatic Wildlife Pathogen Control Zone. Two beaver were removed from the control zone. Fecal samples were collected from those two beaver, and from two gulls, and sent to Cornell to be tested for Giardia and Cryptosporidium. Corrective actions were taken on several beaver-caused flooding situations on DWSP lands.

Surveys of reservoir islands were conducted for nesting geese, and eggs in all located nests were treated. A final report was prepared and distributed.

The annual Quabbin Controlled Deerhunt was administered again in FY2013, with 932 hunters participating and 84 deer removed.

Staff continued to monitor Common Loon and Bald Eagle nesting at Quabbin, deployed and monitored loon nesting rafts, and assisted the Mass. Division of Fish & Wildlife in banding operations for eagle chicks.

Natural Resource staff continued to conduct surveys, or cooperate with other researchers on studies of breeding birds, bats, moose, loons, whip-poor-wills and other species. Four additional adult loons were banded as part of a long-term monitoring and research project.

Control work on burrowing animals in both Winsor Dam and Goodnough Dike continued. Thirteen burrows were treated during the year.

### **Public Access Management**

Staff continued to implement the Public Access Management Plan for both Quabbin and Ware River. Information on access policies and regulations was distributed through the Quabbin Visitor Center and through numerous public contacts by the Watershed Rangers. Proposals for the re-route of the New England National Scenic Trail were reviewed and an agreement was reached on a final layout.

The three Quabbin Boat Launch Areas (BLAs) were operated daily through October 13, 2012, and then again starting on April 13, 2013. A final report on the 2012 BLA revenues and usage was produced and distributed. Revenues from the program for the fiscal year were just shy of \$222,000. The boat inspection and decontamination program was implemented again this year, with both boat washings and cold weather quarantines overseen by DWSP staff.

Substantial staff effort again this past year was devoted to Aquatic Invasive Species (AIS) control. This included pond surveys, public presentations, distribution of written educational materials, installation of sediment booms at the regulating dams at BLAs 2 and 3, and posting of information on the various kiosks around the watersheds.

Staff hosted a number of special events during the year, including the monthly “Tuesday Teas” for former valley residents, the fishing event for the Massachusetts Special Olympics, and

Memorial Day services at the Quabbin Park Cemetery. Staff also participated in special “75<sup>th</sup> Year of Remembrance” activities, commemorating 75 years since the disincorporation of the four Swift River Valley towns.

Accessibility projects completed during the year included improving access to portable toilets, and modifying gates and barways to provide better access.

### **Watershed Security**

The Watershed Rangers continued to provide an active presence in the watershed, and logged approximately 17,641 contacts with general public users of the reservations during the year. Violations of rules and regulations were recorded on 271 occasions. Quarterly inspections of all gates and barways on the reservations were completed, and necessary repairs made.

The Quabbin Visitor Center issued short-term access permits to approximately 300 individuals or groups during FY2013. These included permits for school groups, former residents, Long Pond boaters, and for night access and other special use activities. Research permits were issued, renewed and/or monitored for approximately 30 active projects.

### **Infrastructure and Facility Maintenance**

Routine inspections and assessments of the dams, spillways, and dike were conducted by the Civil Engineering staff, and Phase I surveys were completed for Winsor Dam and Goodnough Dike. A compliance inspection report on Brigham Pond Dam was produced. Storm event inspections and flood watch surveys were conducted during a severe weather event.

Major projects completed during the year included boat ramp and shoreline improvements at BLA #1, a major culvert replacement on the Gate 8 road, and surveys and other preparations for the replacement of the electrical line leading to Quabbin Tower. In addition, a number of routine building maintenance projects were completed during the year: septic systems were pumped; heating systems were maintained (or replaced); the emergency generator was serviced; and various electrical and plumbing repairs were made.

Routine grounds maintenance was completed in Quabbin Park and in the Quabbin Park Cemetery, where substantial cleanup work was required following a severe weather event in the Fall of 2012. There were 12 burials, 9 foundations installed, and 3 monuments erected at the Cemetery during the year. Work continued on the comprehensive management plan for the Quabbin Park area.

### **Watershed Protection Act**

Staff fully implemented the Watershed Protection Act through review of applications, conducting site visits, meetings with applicants and their representatives, conducting Variance hearings, and issuing of decisions. During the fiscal year, 46 applications were processed. Several active enforcement cases kept staff busy, including the penalty phase of a long-standing case in Rutland, in which the Commonwealth was successful in getting a significant penalty judgment against a local developer. Staff also continued to meet with local boards and building

inspectors about Watershed Protection Act issues, cycling through the 14 watershed communities every 2 years.

### **Technical Assistance and Outreach**

Staff provided consultation services for zoning by-law changes or related matters to Wendell, Barre, Petersham and Westminster, and continued to attend town board meetings in Rutland and Hubbardston. A factsheet on conservation-friendly zoning was developed and distributed. Staff continued to work on statewide zoning reform efforts and efforts for wider adoption of natural resource zoning bylaws.

### **Interpretive Services**

The Quabbin Visitor Center was operated for 360 days during FY2013, recording approximately 25,500 weekend visitors. The Quabbin Tower was used as a “satellite” visitor center during busy fall weekends. About 108 educational programs were offered to more than 2,785 participants during the year.

New exhibits were produced for the satellite visitor center and related to the 75<sup>th</sup> Year of Remembrance. Staff planned and coordinated trail work by a local Girl Scout Council, and by volunteers with the Student Conservation Association.

Information kiosks at the three BLAs and at other locations around the watershed were updated as needed. Staff gave public presentations on various topics, including AIS, wildlife techniques, biodiversity, moose research and forestry. Two editions of the *Downstream* newsletter were produced and distributed.

The DCR website was regularly updated with new information about deerhunt plans, fishing information, EEE, AIS, meeting announcements, and the boat decontamination program.

### **Watershed Water Quality Monitoring**

Routine reservoir and tributary water quality monitoring work continued, data was entered in databases, and reports were produced. Routine plankton, zooplankton and *Didymo* sampling was conducted in various locations throughout the Quabbin watershed. Macrophyte surveys on 27 water bodies in the two watersheds were conducted. A revised sampling plan for 2013 was developed, reviewed with MWRA staff, and implemented.

Surveys in the vicinity of the Shaft 8 Intake were conducted on several occasions, prior to diversions. Staff also conducted an inspection of the Shaft 8 vicinity during a drawdown period.

Data on precipitation, reservoir elevations, water transfers and releases, and runoff were collected and recorded on a daily basis. Staff continued to monitor for AIS infestations throughout the watershed and also continued to administer the boat seal program. The purchase and testing of a barcode scanner should greatly enhance the efficiency of data collection on the boat seal program.

Natural Resources staff continued to collect monthly grab samples at several locations on Prescott Peninsula where they are studying the effects of both natural and deliberate disturbances on water quantity and quality in first-order streams. They also completed a compilation of data from the past 10 years of that sampling effort.

### **Environmental Quality Assessments**

Environmental Quality staff continued work on three EQAs during the year, and continued with mitigation efforts based on assessments completed in prior years. Two special investigations were initiated in response to water quality monitoring results. Weekly inspections of the Chicopee Valley Intact area were conducted.

### **Compliance with Environmental Regulations**

Staff continued to work closely with the Office of the Attorney General on enforcement cases in the Ware River watershed, and regularly attended local town board meetings to keep abreast of projects and other developments in those towns. The Division's enforcement efforts were significantly enhanced by a substantial judgment by the state Superior Court against a repeated violator of environmental regulations in the Ware River watershed. The resulting fine amounted to \$125,000. Staff continued to review the Environmental Monitor and provide comments to MEPA on projects in the watersheds.

### **Wastewater Management**

Staff conducted DEP file reviews related to Templeton Landfill (PCB problem), continued to collect septic system data, and conducted a special investigation of tributary streams after high bacteria readings were detected there. The moratorium on new sewer connections in Rutland continued during the year.

### **Stormwater Management**

The bioretention basin project between the Administration Building and Winsor Dam was completed and planted with native vegetation. This project will collect and treat stormwater runoff from the administration building area and direct it off-watershed.

BMPs are routinely incorporated into all roadwork conducted by DWSP staff and contractors. During FY2013, they were put in place for the construction of the bioretention basin, and also for projects at the Hangar ramp and at BLA #1.

Staff also reviewed plans and provided comments on expansion of the Central Mass. Railtrail near Shaft 8 and the resurfacing of Rt. 122.

### **Agriculture**

Agricultural activities were identified and tracked during EQA inspections. Staff began an inventory of agricultural operations, and continued to work on enforcement cases involving domestic animals in the Quabbin watershed.

### **Hazardous Materials**

Both the UST and the 21e databases from DEP were routinely monitored for new sites in the watersheds. Staff reviewed reports on the Charnock Hill landfill. Substantial time was spent

monitoring National Grid projects in the watersheds, and comments were submitted on the YOPs submitted by National Grid and the P&W railroad.

### **Emergency Response**

No spills requiring response action occurred this year. Minor spills occurred in two locations, but both were well below reportable amounts and were quickly addressed.

One spill response training session was held in conjunction with DEP and MWRA. A joint training session was set up with local FD and EMT personnel, which will be held in Fall 2013. Forestry staff implemented spill response plans for all timber harvesting operations.

### **Administration and Technical Support**

The 5-year Watershed Protection Plans were updated for both Quabbin and Ware River watersheds.

Administrative staff completed weekly payroll and personnel management, forestry program administration, contract administration, procurement paperwork, GIS and IT support, revenue collection and recording, and the development of, and reporting on, annual Work Plans, budgets and staffing plans.

21 Seasonal staff were hired and trained. Approximately 210 encumbrances and 878 invoices were processed. More than \$270,000 in revenue (from fishing program, forestry, cemetery operations, deerhunt, etc.) was processed.

A new backhoe and four new pickup trucks were purchased this year.

Interpretive Services staff fulfilled more than 105 requests for genealogical information, 49 requests for vital records, and 46 other requests for photographic or other materials.

Staff continued to participate in a wide variety of job-related trainings and workshops, interagency planning teams, and professional organizations.

Planning staff continued to administer the Payment in Lieu of Taxes (PILOT) program, which distributed PILOT payments to watershed communities totaling \$7.65 million. Quabbin towns received \$2,531,848 and Ware towns \$1,079,302.

# **FY2013 Work Plan Final Summary**

**Wachusett/Sudbury Operation Section  
FY2013 Final Report**

Key to Abbreviations

**Wachusett/Sudbury Staff:** A=Administration; CE=Civil Engineers; EQ=Environmental Quality; F=Forestry; GIS-W = Geographic Information Services Wachusett; IS=Interpretive Services; RD=Regional Director, Assistant Regional Director; WM=Watershed Maintenance; WR=Watershed Rangers

**Boston/Division Staff:** A=Administration and Finance; D= Director; Director's Staff; NR= Natural Resources; GIS=Geographic Information Services; P= Environmental Planning

Task #	Task Description	Lead	Product	% Complete	Comments
<b>A. Land Procurement</b>					
1	Acquire control, through both fee acquisition and Watershed Preservation Restriction (WPR), of highly rated land based on computer model and staff expertise. Coordinate due diligence and other services from DCR staff to complete survey, title, engineering, and negotiation activities for new parcels.	NR	Protected land	50%	Five properties were acquired totaling 38.9 acres. Funds expended totaled \$849,000. Included was the acquisition of the R.E.Chapman Co property – an industrial site on the shoreline of the reservoir. Also included was the gift of a 24.4 acre WPR. Due diligence and negotiations continued on approximately 12 additional proposed acquisitions.
2	Convene LAP meetings to prioritize land purchases.	NR	Recommendations	100%	LAP met two times.
3	Develop individual parcel presentation materials and meet with MWRA Board for approvals.	NR	Presentation reports	100%	Four new Wachusett parcels were approved at MWRA Board meetings held within this FY.
4	Assess all new fee acquisitions to document the existing condition of forests, roads, and boundary markings. Integrate new properties into existing land management and public access programs.	F	Update relevant databases and GIS layers	100%	Work began to prepare for removing building at Chapman property.
<b>B. Land Preservation (Watershed Preservation Restriction Program)</b>					
5	Complete baseline inspections for all new WPRs within six months of acquisition using established protocols and modern technologies.	NR	WPR baseline reports	100%	All WPRs have completed baseline reports.
6	Inspect all existing WPRs annually to ensure compliance with original agreement.	NR	Inspection reports	20%	11 of our 56 Wachusett WPRs were visited in the last FY. Percentage reflects staffing shortfalls.
7	Work towards resolving issues found with WPR landowners through the WPR Working Group.	NR	conflict resolution	N/A	Ongoing.
8	Continue to develop and distribute a WPR landowner newsletter.	NR	Newsletter	100%	Two newsletters distributed.

<b>Task #</b>	<b>Task Description</b>	<b>Lead</b>	<b>Product</b>	<b>% Complete</b>	<b>Comments</b>
9	Post WPR boundaries as time allows.	NR	Posted boundaries	0%	No boundaries were posted due to staffing shortfalls.
<b>C. Land Management</b>					
10	Completion of update of Wachusett Land Management Plan.	NR	Final Plan	100%	Land Management Plan is in final draft stage, awaiting final incorporations based on forestry approval.
11	Continue to follow Division Conservation Management Practices (CMPs) to ensure timber harvesting is conducted in a manner that does not impair water or natural resources. Inspect all active sites regularly to ensure compliance with CMPs.	F	Annual statistics on harvested areas, inspection reports	100%	Six timber sales on 284 acres were active during FY13
12	Continue work with DCR Asian Longhorned Beetle Program and USDA to oversee beetle eradication in watershed areas.	F	Meetings, cutting plans	100%	Continue to coordinate with DCR and USDA staff
13	Monitor water quality at active logging sites to measure effectiveness of Division CMPs.	EQ	Data collection and interpretation	100%	All active sites monitored regularly throughout the year
14	Inspect all DCR fields with agricultural leases.	F	Inspection Reports, 2nd Qtr	100%	All fields inspected.
15	Work to dispose of South Sudbury non-water supply lands.	D	Disposition	50%	Disposition process paperwork sent to DCAM.
16	Conduct annual inspection/evaluation of Wachusett internal roads, access points, and shoreline; update GIS data layers as needed.	CE	Maps	100%	Inspections completed.
17	Develop annual plan for internal road repair projects. Conduct smaller projects using in-house forces.	CE	Plan	100%	Plan developed.
18	Prepare summaries of proposed forestry lots; review lots to ensure consistency with aspects of the LMP, including wildlife, forestry objectives, and environmental quality.	F	Annual lot reviews/ comments	100%	Lot proposals developed.
19	Identify and implement terrestrial invasive management projects.	F	Completed projects	80%	Inventory and mapping protocol developed. Bittersweet control project in West Boylston incomplete.
<b>D. Wildlife Management</b>					
20	Continue year-round monitoring and active harassment of gulls, geese, and other waterfowl.	EQ	Daily, weekly and annual reports	100%	Successful harassment of birds during FY13.

<b>Task #</b>	<b>Task Description</b>	<b>Lead</b>	<b>Product</b>	<b>% Complete</b>	<b>Comments</b>
21	Continue work with waste water treatment plants in central Massachusetts that are being used as a food source by gulls; work with plant personnel to prevent feeding.	NR	Controlled treatment plants	90%	Wires have been successfully installed at the largest plant in central MA (Blackstone). Gulls, however, still utilize the site to forage on waste collected from plant screens that is spread on site.
22	Continue program of identifying parking lots in central Massachusetts where food is available and work to prevent feeding through educational signage and interaction.	NR	Controlled parking lots	100%	Initial efforts to identify all parking lots are complete, and an assessment of gull numbers and feeding was conducted. Educating feeders was only moderately effective.
23	Continue to identify alternative food sources for gulls in central Massachusetts and work to eliminate their presence.	NR	Food sources eliminated	95%	A large pig farm was identified in central MA as a prominent food source. Efforts are almost complete to exclude gulls from the large quantities of bread on site.
24	Control Canada Geese populations by treating eggs and modifying shoreline habitat to discourage nesting and feeding.	NR	Summary report	100%	Geese controlled and report issued.
25	Remove beaver and muskrat in the Aquatic Wildlife Pathogen Control Zone and assist with removal of nuisance individuals in other areas when possible. Utilize habitat modifications to discourage the presence of aquatic mammals.	NR	Summary report	100%	Zone routinely surveyed and animals removed; report produced.
26	Analyze all aquatic mammals removed from Pathogen Control Zone (and fecal samples from gulls and geese when possible) for the presence of Giardia and Cryptosporidium by sending stool samples to Cornell University for analysis.	NR	Summary report	100%	All fecal samples sent to Cornell for testing.
27	Respond to beaver complaints from citizens affected by beaver on DCR property; provide assistance as time allows.	NR	Summary report	100%	All complaints addressed.
28	Research and manage for common loons on DWSP water bodies in the Wachusett watershed; provide nesting platforms, capture and sample birds for contaminants.	NR	Report	100%	Nesting rafts deployed, population monitored, and loons captured. Annual report was received.
29	Continue long-term wildlife resource monitoring program to document wildlife response to forest management.	NR	Report	10%	Only one plot was surveyed while waiting for forestry operation to restart.

<b>Task #</b>	<b>Task Description</b>	<b>Lead</b>	<b>Product</b>	<b>% Complete</b>	<b>Comments</b>
30	Respond to beaver caused flooding issues on Division property; assess situation and take appropriate actions.	NR	Summary report	100%	Work completed.
31	Respond to problems of burrowing animals on dams and dikes; take appropriate action.	NR	Summary report	100%	Burrows identified and treated.
<b>E. Public Access Management</b>					
32	Continue implementation of the 2011 Wachusett Public Access Plan.	WR	Report	100%	Ongoing. Continued to implement.
33	Continue implementation of the Sudbury Public Access Plan.	WR	Report Final Plan	100%	Ongoing. Continued to implement.
34	Continue to cooperate with state, environmental and local police for help with enforcement when required.	WR	Enforcement Resolution	100%	Ongoing. Frequent patrols and communication efforts with MA State Police and Environmental Police regarding watershed issues.
35	Implement FY 13 recommendations of the 2011 Wachusett Public Access Plan Update.	RD	Work completion;	100%	Continued additional signage and gate access rehabilitation. Overall, most recommendations from five year plan are complete.
36	Tally visitor contact and produce quarterly and annual summary reports. Conduct trend analysis on visitor statistics and rule violations.	WR	Reports	100%	FY13 Total: Visitor Contacts – 20,287 Violations – 1,068
37	Continue updates and improvements to access points with signs, gates and improved parking areas. Conduct regular inspections of gates and access barriers.	WR	Signs	100%	Continued to make improvements. Signs added when necessary. Installed new locks on all interior reservoir gates, securing authorized access.
38	Update/maintain kiosks and bulletin boards to increase visitor education.	WR	Maps, Educational materials	100%	Continue to update and maintain. Posted Security Flyers with Emergency Contact information.
39	Implement measures to educate visitors about threat from Aquatic Invasive Species as outlined in AIS Management Plan	WR	materials	100%	Placed <i>Didymo</i> signs at fishing access points. Continued to educate the public.
40	Continue ongoing efforts to reduce threats from public access through programs (e.g., Earth Day cleanups, fishing line collections, etc.).	WR	Continue programs	100%	Conducted “Cache In-Trash Out” program. Continued to maintain fishing line containers.
<b>F. Watershed Security</b>					
41	Maintain an active presence in the watershed. Monitor watershed lands, roadways, and railways for unusual or suspicious activities; provide appropriate response.	WR	Ranger logs	100%	Continued to conduct proactive patrols. Conducted frequent Night Operations to gain insight on after-hour activity.

<b>Task #</b>	<b>Task Description</b>	<b>Lead</b>	<b>Product</b>	<b>% Complete</b>	<b>Comments</b>
42	Provide ICS training to appropriate staff.	CE	Completed training	100%	Training held with staff and local responders.
43	Continue ongoing communication and coordination with local state, and federal emergency responders; coordinate with MWRA on all security issues.	WR	Ranger logs	100%	Continued to coordinate efforts with local and state agencies.
<b>G. Infrastructure</b>					
44	Assess Wachusett Dam, spillways, and dikes monthly. Coordinate with MWRA on biannual dam safety inspections for compliance with 302 CMR 10.00.	CE	Inspection logs, summary reports	100%	Monthly assessments completed and reports published.
45	Assess Sudbury system dams, spillways, and dikes monthly.	CE	Inspection logs, summary reports	100%	Monthly assessments completed and reports published.
46	Monitor maintenance activities for the improvement of the Wachusett Dam/Dike structures. Evaluate and revise maintenance plan, as necessary	CE	Inspection reports, summary reports	100%	New grass areas continue to improve cover.
47	Provide supervision, coordination, oversight, and technical support or assistance for all engineering, construction, and renovation work in Section.	CE	Inspections, records of construction/maintenance operations	100%	Most significant efforts were the engineering for the carpenter shop and JAH handicap access.
48	Maintain records regarding reservoir and facility construction and maintenance operations.	CE	Misc. records	100%	Ongoing.
49	Provide annual oversight and maintenance of smaller DWSP dams in watershed.	CE	Plan	100%	Annual assessments completed.
50	Continue required dam studies for Framingham Res #1 and #2.	CE	Plan	100%	Project continues with completion in FY14.
51	Investigate alternatives for Tenney Pond Dam.	CE	Plan	10%	Unable to perform survey of site. Waiting on MWRA to bring control points to site.
52	Continue to clean buildings, pick up trash, recycle paper products, and perform routine building repairs as required.	WM	Work completion	100%	Staff worked to maintain all facilities and completed minor repairs.
53	Implement annual Major Projects including: <ul style="list-style-type: none"> <li>• Carpenter Shop replacement</li> <li>• JAH Handicap access</li> <li>• Building Demolition</li> <li>• Wood waste disposal.</li> </ul>	RD	Improvements	75%	Carpenter Shop moved to FY14; replaced by Lower Road paving; JAH handicap ramp complete; building demo included Mazzolini shed and many building at old Kristoff pig farm. Wood waste removed

<b>Task #</b>	<b>Task Description</b>	<b>Lead</b>	<b>Product</b>	<b>% Complete</b>	<b>Comments</b>
<b>H. Watershed Protection Act</b>					
54	Administer the Watershed Protection Act regulations. Review all WsPA applications, respond in a timely manner and track WsPA applications.	EQ	Decisions	100%	All applications were reviewed, tracked, and received a decision in accordance with the regulations.
55	Convene the Watershed Protection Act Working Group quarterly to discuss policy and address specific problems related to the WsPA.	P	Meeting minutes	100%	Meetings held and ongoing communication maintained between field offices.
56	Update WsPA related materials, as needed.	P	Brochures, forms, other documents	90%	Guidance Document was updated but not finalized. Awaiting for final discussion between West Boylston and Boston staff for final version.
57	Continue to educate and interact with local boards in the watersheds about watershed protection regulations. Offer workshops to local boards and other interested groups.	EQ	Workshops	100%	A letter was sent to local building inspectors asking if they wanted a meeting and/or a presentation on WsPA. No response.
58	Review all building permits for watershed towns. Notify property owners who are subject to the act that they need to file with DCR. Review newspapers for change of ownership of properties in watershed; follow up with letter and map to new owners of affected parcels. Distribute general mailing to new watershed residents.	EQ	Letters to Property Owners	100%	Permits for five towns were reviewed every month, with letters sent as needed. Information entered into database for tracking and possible follow-up. Changes in ownership were tracked for seven towns. Letters sent as needed, with letters sent as needed. Information entered into database.
59	Review previous filings for compliance with decisions and conditions.	EQ	Site inspections, Letters to applicants as needed	100%	Discussion on possible enforcement for several properties. Set up notebook to track status.
<b>I. Technical Assistance and Community Outreach</b>					
60	Assist local Boards (conservation, planning and health) through coordination, attendance at meetings, review of plans and joint site inspections.	EQ	Regular communication with local boards; attend meetings as-needed basis	100%	Good working relationships have been established with local boards and commissions.
61	Continue to support municipalities and universities by providing GIS products and technical support	GIS-W	Maps	100%	Provided GIS support to Town of Princeton, Holden, Sterling BOH, Clark University, and Wachusett Greenways.
62	Work with residents, town officials and local groups to distribute educational materials related to AIS, proper disposal of pet waste, PPCPs, and other issues.	EQ	Educational materials	100%	Wide range of materials developed and distributed to a variety of target groups

Task #	Task Description	Lead	Product	% Complete	Comments
<b>J. Interpretive Services</b>					
63	Continue established program of public education, including school programs, interpretive programs on Division properties, ranger contact with visitors, and regular publication of <i>Downstream</i> newsletter as described in Interpretive Services Plan	IS	Programs, newsletter	100%	Continued and expanded public program offerings. Continued interactions with watershed visitors. Provided articles for <i>Downstream</i> .
64	Continue Wachusett Educational Programs, including teacher workshops. Continue to organize and disseminate educational materials for Mass Envirothon.	IS	School Programs	100%	Offered four teacher workshops. Worked with Envirothon teams and attended Envirothon events.
65	Operate Stillwater Farm seasonal interpretive site to expand the educational use of the site.	IS	Operational Plan	100%	Increased number of programs offered at Stillwater Farm.
66	Expand the Wachusett Watershed Project for middle school grades to include additional watershed communities and schools.	IS	Project participants	100%	Continued working on Mass. Frameworks connections.
67	Participate in environmental programs with groups such as SAGEE, EOEEA, MEES, Massachusetts Audubon, TTOR, NAI, and NEEEA.	IS		100%	Attended appropriate meetings and conferences. Offered workshops, presentations, and trainings
68	Update OWM website with information related to all aspects of watershed protection program.	P	Web site updates.	100%	Periodic updates and posted in timely manner. Staff worked closely with DCR and EEA officials in implementation of new website architecture.
<b>K. Water Quality Monitoring</b>					
69	Maintain routine and non-routine tributary sampling, including physical, chemical, and biological parameters. Compile and interpret data in annual report. Continue analysis for nutrients and metals on selected tributaries.	EQ	Annual water quality report	100%	Samples collected weekly from 23 tributary stations. Annual Water Quality report published April 2013.
70	Continue biomonitoring of select tributaries and compare results to historical data.	EQ	Interpreted data included in annual water quality report	50%	Identification and interpretation postponed due to unfortunate loss of senior aquatic biologist.
71	Monitor stream flow using continuous and staff gages. Collect precipitation data. Continue and expand snow pack measurement program for inclusion in hydraulic budget.	EQ	Data summary for WQ report	100%	Stage-discharge relationships developed and updated.
72	Conduct additional stormwater sampling to quantify stormwater loads and evaluate stormwater BMPs.	EQ	Data from at least 10 storms	100%	Samples collected from 11 storms.

<b>Task #</b>	<b>Task Description</b>	<b>Lead</b>	<b>Product</b>	<b>% Complete</b>	<b>Comments</b>
73	Continue routine and non-routine reservoir sampling of physical, chemical, and biological parameters. Compile and interpret data in an annual report. Continue weekly, or more frequent, plankton monitoring, as per current agreement with MWRA.	EQ	Data	100%	Samples collected weekly or twice weekly and information shared with MWRA.
74	Continue program with MWRA for detection and control of invasive alien macrophytes. Continue monthly monitoring for Didymo and routine monitoring for all AIS as identified in FY10 assessment report.	EQ	Data	100%	Continued regular monitoring and close interaction with consultants.
75	Continue cooperative program with UMass CEE program to use reservoir and water quality models to assess watershed management strategies impact on water quality.	EQ	Reports	100%	“Library” of storms for 2-D model updated; complete to 2009. Applications/recommendations for reservoir management decisions updated. Continued work on 3-D model and quantitative assessment of stream data.
<b>L. Environmental Quality Assessments (EQA)</b>					
76	Continue to address recommendations from past EQA reports.	EQ	Completed EQA	100%	Reservoir EQA completed.
77	Conduct field work for Thomas Basin District.	EQ	Field Work	100%	Draft of Thomas Basin EQA nearly completed.
78	Publish an annual assessment of the status of all recommendations from completed EQA reports.	EQ	Annual Status of Recommendations Report	100%	Status of recommendations now included in individual EQAs.
79	Continue to use and improve all data bases to assist staff with tracking and coordination efforts. Utilize GIS information whenever possible.	EQ	Data	100%	Continued database maintenance and improvements.
<b>L-1. EQAs – Compliance with Environmental Regulations</b>					
80	Continue to enforce all DCR Watershed Protection regulations found in 350 CMR 11.00.	EQ	Compliance with regulations; Annual summary report	100%	Fifty new files were created in the compliance tracking database. Thirty seven of these files had 11.04 (WsPA) jurisdiction. EQ staff also worked on sites for which files were established in previous years. A detailed report summarized all files.

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<b>L-2. EQAs – Wastewater Management</b>					
81	Review local records, water quality data, and other pertinent information while conducting EQAs to identify potential problem wastewater sites or areas.	EQ	Plan review, recommendations to boards, applicants	100%	Ongoing.
82	Continue work with all local Boards of Health providing technical assistance, when requested, on wastewater management issues. Continue to monitor and enforce the provisions of Title 5 with Boards of Health and the DEP.	EQ	Plan review, recommendations to boards, applicants	100%	Provided assistance as needed.
83	Track new connections to the municipal sewer and maintain the information in a database that is updated twice per year. Update GIS data layer regularly.	EQ	Database, maps	0%	Task overlooked – will be completed during FY14. Rate of new connections know to be fairly low.
84	Continue to provide management support, with the MWRA, of the Rutland-Holden trunk sewer and Rutland Holden Relief trunk sewer. Prepare and submit quarterly bills to the user communities in a timely manner. Continue to work on a sewer agreement with Holden and Rutland.	CE	Quarterly bills Quarterly meetings with towns	80%	The quarterly meetings have been suspended due to litigation with some towns.
85	Monitor trunk line for encroachments; resolve any problems.	CE	Regular inspections	100%	Ongoing efforts in concert with MWRA.
<b>L-3. EQAs – Stormwater Management</b>					
86	Conduct design for highest priority recommendations from Phase II Direct Discharge study.	EQ	Design	100%	Design of causeway improvements is at 25%; submitted to MassDOT first quarter FY14. Consultant selected and contract executed for design on improvements to Beaman Street bridge; survey work completed.
87	Work with MWRA and MassDOT to investigate funding sources for additional Direct Discharge remediation.	EQ	Report	100%	Discussion with both agencies continued during design process.
88	Continue investigations on priority streams to identify areas impacted by erosion and sedimentation, locate discharges, and develop recommendations to eliminate or minimize negative impacts on stream water quality.	EQ	Report	75%	Field work completed; report in progress. Task will be re-evaluated in FY14.

<b>Task #</b>	<b>Task Description</b>	<b>Lead</b>	<b>Product</b>	<b>% Complete</b>	<b>Comments</b>
89	Continue to inventory and evaluate performance of structural stormwater BMPs owned by towns or private landowners. Develop recommendations for any required maintenance.	EQ	Inventory	100%	Significant project inventoried 646 BMPs.
90	Update GIS data layer of stormwater conveyance structures,  [MS4 Control Measure #3: Illegal Discharge Detection and Elimination]	EQ	Maps	100%	Ongoing.
91	Work with State and local highway departments to monitor and improve infrastructure in areas where reconstruction is proposed, and improve operation and maintenance practices.	EQ	Better designs; Summary of activities conducted	100%	Work focused on projects in Task 87.
92	Continue to work with town officials to implement comprehensive program of public education and outreach related to stormwater.  [MS4 Control Measure #1: Public Education and Outreach] (also tasks 67 - 69)	EQ	Deliver program to each of four target audiences	50%	Task not a priority due to continued delay in approving/implementing updated MS4 permit.
93	Inspect construction sites >1 acre to ensure compliance with SWPPP. Review/summarize town bylaws for relevance to stormwater control.  [MS4 Control Measure #4: Construction Site Runoff]	EQ	Monthly/annual summary of inspections, summary of bylaws	50%	Several hundred inspections completed and documented. Bylaws to be reviewed and summarized in FY14.
94	Assist with development of town ordinances if requested, expand oversight of post-construction development to include all developed areas using stream surveys and BMP design (task 94), project review, and BMP effectiveness monitoring (task 95), assist towns with mapping and impervious surfaces analysis requirements.  [MS4 Control Measure #5: Post-Construction Runoff]	EQ	List of projects reviewed, UMass report, Impervious surfaces analysis	0%	Task not a priority due to continued delay in approving/implementing updated MS4 permit.
95	Continue to provide regional training opportunities for town employees. Provide similar training for all DCR Watershed Maintenance staff.  [MS4 Control Measure #6: Pollution Prevention/Good Housekeeping]	EQ	Provide at least two workshops	100%	Workshops delivered to employees in several local communities and to DCR maintenance staff.

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<b>L-4. EQAs - Agriculture</b>					
96	Inspect all significant agricultural operations annually and others at least once every five years. Maintain an inventory of all agricultural sites and continue to look for others in the field as part of routine watershed inspections.	EQ	Annual inspection report Updated agriculture database	100%	Completed update on activity at every agricultural operation in the watershed.
97	Provide technical assistance to help educate landowners on animal management techniques that protect water quality. Coordinate efforts with other state and federal agencies that focus on both established operations and on prospective landowners.	EQ	Annual summary	100%	Technical assistance provided where necessary.
<b>L-5. EQAs – Hazardous Materials</b>					
98	Monitor DEP databases regularly for new information. Inspect each site once every five years as part of the rotating EQA schedule.	EQ	EQAs, Completed database, annual inspection report	100%	All information included in most recent EQAs.
99	Maintain database of all existing underground and above-ground storage tanks in the watershed. Each site should be contacted once every five years as part of the rotating EQA schedule.	EQ	EQAs, spreadsheet	100%	All information included in most recent EQAs.
100	Operate Wachusett Recycling center in conjunction with Wachusett Earthday. Incorporate use of center for public education.	RD	Operation	100%	Number of collections increased 16% in past year. Participation up 20%. Building constructed
101	Participate on the Pesticide Board's Right of Way Review Committee.	P	Meetings; plan review		Participated in all scheduled meetings of the ROW Review Committee.
<b>M. Emergency Response</b>					
102	Implement Comprehensive Emergency Response Plan and update Wachusett/Sudbury Emergency Spill Response and Prevention Plan, as necessary.	CE	Quarterly report	100%	Plans are updated annually or sooner, if necessary.
103	Attend annual training for boom deployment and petroleum confinement on the reservoir.	RD	Inventory sheets; convene mtg	100%	Annual training occurred in fall.
104	Evaluate, monitor and oversee spills that impact or threaten water resources of Division property. Work with appropriate local, state and federal agencies to ensure that containment, cleanup and mitigation of the spill is proceeding in a manner that protects drinking water quality.	CE	Contain/cleanup releases	100%	No significant efforts needed.
105	Conduct an Emergency Response exercise program to test response capabilities.	CE	Conduct Annual Exercise	100%	Ran exercise in fall with SWREPC.

<b>Task #</b>	<b>Task Description</b>	<b>Lead</b>	<b>Product</b>	<b>% Complete</b>	<b>Comments</b>
<b>N. Support</b>					
106	Update Watershed Protection Plan to cover FY14-FY18.	EQ	Updated WPP	100%	Plan restructured to better reflect priorities and guide future annual Work Plans.
107	Prepare and submit to MWRA and the Water Supply Protection Trust Annual Work Plans, budgets, quarterly progress reports and program goals and objectives; track Section progress in meeting program goals.	RD	Completed plans, budgets and reports	100%	All Work Plans, budgets and reporting were completed as required
108	Administer the Payment in Lieu of Taxes (PILOT) program.	P	Payments to watershed communities	100%	Successfully implemented program, distributing \$7.65 million to watershed communities.
109	Continue to support all staff projects and reports by providing GIS maps and technical assistance.	GIS-W	Maps, analyses, training	100%	Provided GIS products to foresters, rangers, environmental quality staff and engineering staff,
110	Continue to maintain and regularly update all GIS databases including hydrology, infrastructure, open space, parcels, regulated areas, stormwater structures. Ensure all digital data is current and available to staff	GIS-W	Databases	100%	All GPS data has been properly downloaded, processed and maintained
111	Continue to use GPS to capture and maintain BMP and MS4 data for EQ and parcel boundaries for Land Acquisition. Coordinate use of GPS equipment and download and process all GPS data.	GIS-W	Digital Data	100%	Maps were created for all Land Acquisition meetings.
112	Continue to create parcel maps for Land Acquisition Coordinator meetings with landowners, LAP meetings and MWRA Board approval.	GIS-W	Maps	100%	Work completed as needed.
113	Operate administrative offices, including answering phones, greeting visitors, etc.	A	Weekly payroll, HR forms processing	100%	Occurred as required.
114	Provide payroll and personnel services for all Section employees.	A	Account set-up, Invoice processing, regular finance reporting	100%	Occurred as required. New electronic self-service payroll system implemented in January.
115	Provide contract administration, financial management, record-keeping, purchasing of goods and services, and other financial support services.	A	Accounting and financial services	100%	Occurred as required, with prompt pay discounts taken as allowed.
116	Coordinate with EEA IT to provide local MIS support for the Section; update IT Plan as required to address technology needs for the coming year.	A	Support and troubleshooting services; IT Plan	100%	Occurred as required. New leased color copier acquired to replace expired lease.

<b>Task #</b>	<b>Task Description</b>	<b>Lead</b>	<b>Product</b>	<b>% Complete</b>	<b>Comments</b>
117	Administer Logging Permit program, including mailings, bid openings, financial management, database management, permit and key issuance, etc.	A	Program administration; annual revenue report; database maintenance	100%	Work continued on few remaining lots sold before moratorium.
118	Plan and implement vehicle and equipment purchases and leases.	RD	Vehicle purchases and leases	100%	Purchases included a new pickup truck, new backhoe, and a 550 dump truck.
119	Inspect, provide regular maintenance, and repair vehicles, boats and other motorized equipment.	WM	Work completion	100%	Occurred as required.

**Quabbin/Ware Operational Section  
FY2013 Final Report**

**Key to Abbreviations:** AIS = Aquatic Invasive Species; ARD = Asst. Regional Director; ATS = Administrative and Technical Support; CE = Civil Engineering; D = Division of Water Supply Protection Director; EP = Environmental Planning; EQ = Environmental Quality; F = Forestry ; GIS = Boston GIS staff; HACCP = Hazardous Analysis Critical Control Point; IS = Interpretive Services ; NR = Natural Resources; P = Planning (Boston); RD = Quabbin Regional Director; WEQ = Wachusett EQ; WM =Watershed Maintenance; WR = Watershed Rangers.

<b>Task #</b>	<b>Task Description</b>	<b>Lead</b>	<b>Product</b>	<b>% Complete</b>	<b>Comments</b>
<b>A. Land Acquisition</b>					
1	Acquire control, through both fee acquisition and Watershed Preservation Restriction (WPR), of highly rated land that incorporates computer modeling and staff expertise. Coordinate due diligence and other services from DCR staff to complete survey, title, engineering, and negotiation activities for new parcels	NR	Protected Land	100%	Seven acquisitions were recorded in FY13; approximately 98 acres in Fee, plus 183 acres of WPRs.
2	Complete assessments on all new acquisitions, including descriptions of fire/access roads, bridges, restoration needs, and forest conditions. Integrate these lands into existing land management, public access and other watershed management programs.	F	Completed assessments	100%	Four assessments completed. Assessments on the three 4 <sup>th</sup> Quarter acquisitions will be completed early in FY14.
3	Attend LAP meetings to prioritize land purchases and provide input into land acquisition decisions in Quabbin and Ware River watersheds.	RD	Input, advice	100%	Two LAP meetings held.
4	Continue to support watershed land preservation groups (e.g., NQRLP, MGLT) regarding land protection in watershed to acquire land through gifts or through cooperation with other land trusts. Investigate possible funding sources to supplement MWRA resources for land procurement.	NR	Other Protected Land	100%	\$5 million Forest Legacy grant was obtained to pursue "Quabbin to Wachusett" protected land corridor.
<b>B. Land Preservation (Watershed Preservation Restriction Program)</b>					
5	Complete baseline inspections for all new WPRs prior to acquisition or within 6 months of acquisition using established protocols and modern technologies. Make baseline inspection reports available to appropriate staff.	NR	WPR baseline Reports	100%	One baseline inspection/assessment was completed prior to purchase; field work completed on all others.
6	Inspect all existing WPRs bi-annually to ensure compliance with original agreements. Make monitoring inspection reports available to appropriate staff.	NR	Inspection Reports	36%	Nine bi-annual inspections were completed this year of the 50 WPRs in the Quabbin and Ware watersheds.

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7	Work towards resolving issues found with landowners, along with the WPR Working Group.	NR	Issue resolution	100%	Ongoing.
8	Continue to develop and distribute a WPR Landowner newsletter twice a year.	NR	Newsletter	100%	Two newsletters were prepared and distributed.
9	Determine the feasibility of developing a GIS linked Access database for WPR information using in-house resources; If in-house resources are inadequate, initiate a plan to utilize an outside contractor.	NR	Database	100%	Outside contractor will be hired to assist with this project.
10	Mark WPR boundaries, as time permits.	NR	Posted boundaries	0%	No boundaries were marked this year due to staffing limitations.
<b>C. Land Management</b>					
11	Conduct periodic reviews and monitoring of land management activities to assure compliance and consistency with the Plans and DCR policies, and to minimize adverse impacts on water quality. Hold a public meeting in the Spring on plans for the coming year, and on any proposed changes to the Quabbin or Ware River LMPs.	NR	Plan implementation; program reviews Public meeting	0%	No activity this year due to moratorium on new forestry operations.
12	Provide supervision and oversight of all timber harvesting operations on DWSP property to assure compliance with all applicable regulations, approved Best Management Practices/Conservation Management Practices and other contract conditions.	F	Silvicultural operations on approximately 1.5% of actively managed acres annually	20%	Foresters supervised all active logging operations, but unable to reach the 1.5% goal due to continuing moratorium on new lots.
13	Develop and implement a GIS based mapping system of silvicultural operations on the Quabbin and Ware Watersheds.	F	GIS datalayer of annual silvicultural operations	100%	Continued to add past harvest information to the GIS datalayer.
14	Design and begin to implement research and monitoring to verify the effectiveness of the existing statewide and DWSP forestry BMPs/CMPs in protecting the water supply.	NR	Report reviewing effectiveness of current forestry BMPs/CMPs. Peer-reviewed journal article (soil frost).	75%	Monitoring program was designed and planned but implementation delayed due to moratorium on new forestry operations. Journal article was submitted but rejected.
15	Develop and implement a program of expanded water quality monitoring for silvicultural operations.	EQ	Evaluation of options	100%	Planning completed and sampling started.
16	Collect data and maintain GIS datalayers, and related maps on forest structure, composition and regeneration, forest roads, boundary information and other data to guide the land management program.	F	Databases, maps	100%	Information collected on various resources, including soils, stone walls, barways, past land use, regeneration, etc.

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17	Collect data and maintain datasets, GIS datalayers and related maps on deer browsing and rare and special plant communities. Compile and analyze data on forest structure, composition, and regeneration.	NR	Databases	100%	Work continued on CFI data analysis, rare plant monitoring, forest regeneration, etc.
18	Maintain and mark reservation boundaries, as needed. Document and pursue resolutions of boundary encroachments.	F	Maintain 27 miles of boundaries; encroachment resolutions	82%	Maintained 22 miles of boundary.
19	Monitor impacts of silvicultural operations on species composition and age structure.	F	Maps, databases, and photos	100%	Photo-documented changes in forest composition on lots harvested up to 17 years ago.
20	Plan and conduct an interdisciplinary internal review of proposed logging operations for the coming year that includes assessments of silviculture, water quality, wildlife, and other potential impacts/benefits of the planned land management activities.	NR	Lot proposals; Input on proposals	100%	Lot review process was re-commenced following finalization of STAC review. Four lot descriptions were prepared and underwent in-house review.
21	Implement the non-silvicultural land management portions of the Quabbin and Ware River Land Management Plan (e.g., field and viewshed maintenance; gravel pits).	WM	Plan implementation	100%	Completed field mowing, storm cleanup, and gravel screening.
22	Conduct maintenance activities on OWM roads, including grading, culvert and ditch maintenance, mowing sides of forest roads, and snowplowing. Continue to collect data on road conditions, culvert locations, etc. Continue to use BMPs in all road maintenance activities.	WM	Road maintenance	100%	Extensive storm cleanup required work along roads. Completed roadside mowing, road grading, and washout repairs. Replaced culvert on Gate 8 road.
23	Implement a Terrestrial Invasive Plant Management strategy, including monitoring, inventory and control components, especially in sensitive watershed areas.	NR	Strategy implementation	100%	Final strategy document posted online. Continued control work on Japanese Barberry. Completed manual removal of invasives around rare plant populations.
24	Monitor and protect rare plant and animal species and/or their habitats in conjunction with the Natural Heritage and Endangered Species Program and other conservation agencies or organizations.	NR	File reports	100%	Consulted with regional experts on monitoring and management. Conducted field surveys conducted and started report for NHESP.
25	Continue to use a subwatershed based approach to timber harvest planning in the Quabbin and Ware River watersheds, as described in the applicable Land Management Plans.	NR	Subwatershed-based planning	100%	Subwatershed analyses conducted on all new lot proposals.

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<b>D. Wildlife Management</b>					
26	Continue year-round monitoring and active harassment of gulls and geese within the Pathogen Control Zone at Quabbin Reservoir, using human presence, boats, pyrotechnics, passive scare devices, and other techniques. Continue to identify and test new harassment techniques.	EQ	Daily and annual reports; database	100%	Evaluated last year's program and completed annual report. Extensive preparation conducted, including training, equipment repair/replacement, safety checks, etc. Program ran from Nov. 19, 2012 through April 12, 2013.
27	Monitor area landfills and parking lots for feeding gulls. Work with DEP and local officials and businesses to ensure bird control requirements are enacted at regional landfills and other food sources. Provide technical assistance on harassment methods to landfill operators as requested. Identify new opportunities for controlling food sources.	NR	Field reports	100%	Continued monitoring of landfills and parking lots.
28	Identify waste water treatment plants in central Massachusetts that are being used as a food source by gulls; work with plant personnel to install wires to prevent feeding.	NR	Controlled treatment plants	100%	Continued monitoring and control work at regional wastewater treatment plants.
29	Identify parking lots in central Massachusetts where food is available and work to prevent feeding through educational signage and interaction.	NR	Controlled parking lots	100%	Continued monitoring and educational efforts.
30	Continue to identify alternative food sources for gulls in central Massachusetts and work to eliminate their presence.	NR	Food sources eliminated	100%	Ongoing
31	As time allows, continue to trap and tag gulls in order to track their movements.	NR	Information	100%	Worked with MIT to initiate a program to capture, tag and test gulls.
32	Implement the Canada Goose control program by treating laid eggs to prevent hatching and installing physical barriers where appropriate. Monitor results of the program. Research and test new control techniques.	NR	Population control, annual report	100%	Monitoring of nesting activity continued and eggs were treated at all located nests. Report prepared and distributed.
33	Control beaver and muskrat in the Aquatic Wildlife Pathogen Control Zone at Quabbin Reservoir and, when necessary, initiate control in other areas of the watersheds. Routinely evaluate the effectiveness of these controls. Develop and oversee, when appropriate, a contract with a private trapper to remove animals from problem sites.	NR	Survey reports; Executed contract	100%	Monitoring continued; 2 beaver removed from Control Zone.

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34	Respond to complaints of beaver impoundments on DCR property that are affecting private land; provide assistance as time allows.	NR	Assistance to private landowners	100%	Ongoing.
35	Maintain and annually assess the Quabbin Reservation White-tailed Deer Impact Management Program. Administer the application, permit, orientation and biological data collection components of the program.	NR	Hunt completed; report generated	100%	Controlled deer hunt planned and conducted, with 932 hunters participating and 84 deer removed.
36	Monitor and enhance nesting of rare wildlife species through the placement of artificial nesting structures, banding, habitat modification, and other management actions.	NR	File reports	100%	Loon rafts deployed, monitored, and then removed from reservoir.
37	Respond to beaver caused flooding issues on Division property; assess situation and take appropriate actions	NR	Summary report	100%	Corrective actions taken on several problem areas.
38	Analyze all aquatic mammals removed from Pathogen Control Zone (and fecal samples from gulls and geese when possible) for the presence of <i>Giardia</i> and <i>Cryptosporidium</i> by sending fecal samples to Cornell University for analysis.	NR	Summary report	100%	Samples collected and submitted from 2 beaver and 2 gulls during year.
39	Monitor the status, and/or assess impacts, of selected wildlife species, including deer, beaver, migratory birds, water birds and vernal pool inhabitants. Coordinate with the Massachusetts Natural Heritage and Endangered Species Program concerning rare species occurrences and protection.	NR	Wildlife monitoring reports	100%	Staff conducted or participated in surveys of bats, eagles, loons, and whip-poor-wills.
40	Continue long-term monitoring and assessment of moose populations and impacts. Work with UMass researchers on the moose telemetry and enclosure studies.	NR	Project reports	100%	Monitoring and data collection continued on moose habitat use and browse utilization. Vegetation sampling also conducted.
41	Continue banding and research on common loons on Quabbin Reservoir to monitor population status and test for contaminants.	NR	Report from contractor	100%	Four loons banded; final report produced.
42	Respond to problems of burrowing animals on dams and dikes; take appropriate action to mitigate impacts.	NR	Summary report	100%	Thirteen burrows on Winsor Dam and Goodnough Dike were treated.
43	Assess deer impact management options in Quabbin Park	NR	Project report	0%	No activity or report this year.

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<b>E. Public Access Management</b>					
44	Continue implementation, oversight, and annual evaluations of the current public access management plans for the Quabbin and the Ware River watersheds.	RD	Annual evaluation; oversight; plan implementation	100%	Plan implementation monitored. Proposals for New England National Scenic Trail re-route was evaluated and presented to QWAC.
45	Monitor and enhance compliance with DWSP's public access policies through the Watershed Ranger efforts of public education and enforcement of regulations and policies. Ensure inter-departmental cooperation concerning access, recreational impacts, etc.	WR	Field reports; education programs and materials; website; Daily logs	100%	Ongoing activity.
46	Develop, install, and maintain appropriate signage throughout the watersheds, including trail signs and signs indicating access restrictions.	WM	Signs produced as needed	100%	Signs evaluated and repaired or replaced as needed.
47	Operate the shoreline and boat fishing program in designated portions of the reservoir in a manner that minimizes threats to water quality and that accommodates visitors with accessibility needs. Continue to collect, record and analyze data on the program, including revenues and usage figures.	WM	6 months of program operation; Annual report and analysis of BLA usage and revenues.	100%	Fishing program operated, and final report produced. Generated revenue over \$220,000.
48	Continue the boat decontamination program to minimize the risk of AIS infestation of Quabbin Reservoir.	EQ	Boat decontamination	100%	Boat seal program continued and improved. Boat decontaminations and cold weather quarantine days were scheduled and overseen.
49	Evaluate and implement options for minimizing risk of AIS infestation throughout the Quabbin and Ware River watersheds.	EQ	Control programs; Public education	100%	Public education and outreach continued, including public presentation at Visitor Center and brochure distribution. Self certification program continued.
50	Develop and distribute materials to inform visitors of access rules, policies, and general watershed protection information. Update and maintain kiosks and bulletin boards with appropriate visitor information.	IS	Fact sheets, brochures; kiosk maintenance	100%	Developed informational brochure on Visitor Center Loop trail. Kiosks and bulletin boards repaired and/or updated with new information and maps.
51	Analyze and mitigate water quality impacts of recreation or other public access activities through regular watershed inspections.	EQ	Field reports; assessments; sanitary surveys	100%	Ongoing effort, mainly through EQA process.
52	Seasonally evaluate sanitation program (e.g., placement of portable toilets) based on the needs of the Public Access Management program.	EQ	Program modifications	100%	Portable toilet locations evaluated regularly and changes made, as appropriate, in response to public and ADA needs.

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53	Provide ongoing support and consultation to DCR's Division of State Parks and Recreation and the Office of Fishing and Boating Access regarding Comet Pond beach and boat ramp operation and management.	WM	Support and consultation	100%	Ongoing. Support and assistance provided as needed.
54	Coordinate and/or support special programs and events, including Memorial Day services, public meetings, Special Olympics, paraplegic hunts, and Tuesday Tea events.	IS	Public events	100%	Provided support or coordination for various events, including Tuesday Teas, Memorial Day Service, Special Olympics, and 75 <sup>th</sup> Year of Remembrance.
55	Evaluate the need for, and implement, Universal Accessibility projects throughout the Quabbin/Ware Region.	WM	Enhanced accessibility	100%	Provided better access to portable toilets. Gates/barways modified, as needed, to provide better access.
<b>F. Watershed Security</b>					
56	Continue regular Ranger patrols to provide watershed security. Provide regular security checks at key access points and MWRA facilities. Use daily logbooks to record all encounters and violations. Produce periodic reports. Provide weekly incident summary email to MWRA.	WR	Daily patrols; daily logbooks and incident report	100%	Daily patrols continued, with approximately 17,641 public interactions recorded. Incident reports completed and filed, with 271 reports of violations of rules and regulations.
57	Enhance the enforcement of public access regulations through partnership with the State Police, Environmental Police and local police departments.	WR	Enhanced enforcement; partnerships	100%	Ongoing.
58	Inspect, maintain and monitor gates, barways and signage throughout the watersheds for security and access control. Install barriers (guardrails, fences) as needed to protect properties and control public access.	WR	Inspection; repairs; installation	100%	Quarterly inspections of all gates/barways completed and improvements or repairs made, as needed.
59	Continue to control and monitor research and other public access through an internal review process and permit system. Maintain an electronic database for permit issuances.	ATS	Permits issued; databases maintained	100%	Ongoing. Visitor Center issued more than 300 access permits. Several new research access permits issued.
60	Continue orientation and training programs for staff (including seasonal staff), and state and local enforcement agencies, to facilitate consistent interpretation and uniform enforcement of DWSP regulations and policies.	IS	Training and orientation materials	100%	Ongoing. Training of new staff completed, as needed.

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<b>G. Infrastructure</b>					
61	Conduct monthly inspections and issue findings on Winsor Dam and spillway, and Goodnough Dike. Implement basic maintenance activities as needed. Coordinate with MWRA and consultants on inspections.	CE	Monthly reports filed and sent to MWRA Western Ops.	100%	Completed monthly inspections and reports. Participated in Phase I surveys of Winsor Dam and Goodnough Dike and with tailwater evaluation at dike. Researched options for dealing with vegetation loss on upper slope of dam.
62	Conduct periodic inspections and issue findings on DCR Quabbin Region bridges and small dams. Assure compliance with all dam safety requirements for small dams on DWSP lands, including the preparation or updating of Emergency Action Plans. Coordinate with consultants on inspections.	CE	Inspection reports	100%	Ongoing. Compliance inspection report produced for Brigham Pond Dam. Pre- and post-storm inspections of all DWSP dams completed during severe weather incident in Fall 2012.
63	Plan for or conduct dam repair work as called for in dam inspection reports. Continue to pursue MWRA funding for Brigham Pond dam work. Implement basic maintenance activities as needed.	CE	Dam repair and maintenance	100%	Ongoing. Slope mowing, brush cutting and other maintenance work conducted on dams. Cleared debris from inlet structure at Brigham Pond Dam.
64	Evaluate the feasibility of removing unsafe or unnecessary small dams in the Ware River watershed including environmental assessment and ecological impact assessment.	CE	Assessment reports; dam removals	100%	Worked with consultant on evaluation and plan preparation for possible removal of Cunningham Pond Dam.
65	Participate in quarterly Reservoir Operations meetings with MWRA.	RD	Staff participation	100%	Ongoing. Staff participated in all scheduled meetings.
66	Provide supervision, coordination, oversight and technical support or assistance for all engineering, construction and renovation work in Region.	CE	Ongoing supervision	100%	Ongoing. Major projects this year included Boat Ramp and Shore Improvement at BLA #1 and preparation for replacement of electrical line to Quabbin Tower.
67	Maintain records regarding reservoir and facility construction, and maintenance and repair operations.	CE	Misc. records	100%	Ongoing.
68	Conduct building maintenance activities, including painting, carpentry, cleaning, and other routine maintenance.	WM	Ongoing maintenance	100%	Ongoing. Several doors replaced this year to improve security.
69	Conduct periodic inspections of drinking water sources and septic systems at the various Regional office buildings. Assure compliance with applicable state and federal regulations.	CE	Meeting DEP requirements; Monthly and annual reports	100%	Completed and reported results of PWS compliance testing at all DWSP office buildings. Septic systems serviced. Prepared RFP for evaluation of water supply system for Administration Building.

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70	Conduct periodic inspections, maintenance, or oversight of heating systems, fuel pump operations, and fuel deliveries.	CE	Inspections; oversight.	100%	Heating system maintenance completed. Completed Woodchip Boiler system repair; staff monitored all fuel deliveries.
71	Provide surveying and drafting services, maintain records, and respond to in-house and other requests for information related to land ownership, property lines, buildings, and construction projects.	CE	Plans, records	100%	Survey work completed on several projects.
72	Develop specifications, bid packages and contracts for facility and infrastructure projects scheduled for FY13.	CE	Specs, bid packages, contracts	100%	Contracts or related documents prepared for various projects, including leak repairs, plumbing work, backflow device testing, and emergency generator servicing.
73	Continue routine maintenance of Quabbin Park and landscapes around administration buildings, including grass mowing, roadway maintenance, snow removal, public access enhancements, vista clearing, etc.	WM	Mowings, plowing; park maintenance	100%	Ongoing and year-round. Conducted mowing, brush-cutting, landscaping, planting, snow plowing, etc.
74	Continue operation, maintenance and administrative tasks related to the Quabbin Park Cemetery.	WM	Cemetery maintenance; burials	100%	Conducted twelve burials, installed 9 foundations, erected 3 monuments, and had 2 plots purchased. Collected a total of \$3,566 in revenue.
75	Remove hazardous trees and/or limbs in Quabbin Park Cemetery, and along Quabbin Park and other roads frequently used by the public.	WM	Elimination of dangerous conditions	100%	Substantial clean-up work required after severe weather event in Fall 2012.
76	Conduct routine maintenance on drainage ditches, catch basins and other stormwater conveyance structures.	WM	Routine maintenance	100%	Ongoing. Structures repaired after washouts from heavy storm event.
77	Finalize and implement the Quabbin Park Management Plan.	ATS	New plan implementation	75%	Substantial progress made; anticipate completion in Fall 2013.
<b>H. Watershed Protection Act</b>					
78	Implement the Watershed Protection Act regulations. Review all WsPA applications, respond in a timely manner, hold official hearings, and track the status of applications and associated projects using a database and GIS data layers. Inspect sites with conditional approval throughout the duration of any activity to ensure compliance. Prosecute violations of the WsPA regulations, as needed. Work with DCR General Counsel on WsPA cases, as appropriate.	EP	Application processing; decision issuance; field work	100%	Applications were processed as follows: Quabbin – 14 Ware River – 27 Wachusett - 5

<b>Task #</b>	<b>Task Description</b>	<b>Lead</b>	<b>Product</b>	<b>% Complete</b>	<b>Comments</b>
79	Continue to review or evaluate public notices, building permits from watershed towns, and local board agendas and minutes for additional jurisdictional activities.	EP	Local notice review	100%	Ongoing in several watershed communities
80	Attend the quarterly Watershed Protection Act Working Group meetings.	EP	Meeting attendance	100%	Staff attended the 2 meetings that were held during the year and maintained ongoing communication with Wachusett and Boston offices.
81	Maintain a database on WsPA cases and activity.	EP	Database maintenance	100%	Overhauled database. Administrative Assistant assigned to assist with database management.
82	Update existing or develop new WsPA related materials, as needed, such as forms, brochures, and guidance document.	P	Brochures, forms, other documents	100%	Final draft of revisions to guidance document was completed.
83	Educate and interact with local boards in the watersheds about watershed protection regulations. Ensure that local officials have an adequate supply of the current WsPA forms and wall maps, and understand the procedures for referring applicants to the DWSP. Educate realtors, prospective buyers, and local homeowners on WsPA affected lands and agricultural activities (e.g., horse property buyers).	EP	Education of local boards, homeowners, etc.	100%	Ongoing on a rotational basis. Staff cycles through 14 towns every 2 years.
<b>I. Technical Assistance and Community Outreach</b>					
84	Provide direct technical assistance support to local boards and community organizations through contact at meetings and/or through regulatory review processes. Upon request, assist communities in obtaining state-sponsored grants for planning projects.	EP	Meetings; technical assistance; drafting of bylaws and regulations; local development project review	100%	Continued to provide assistance to Wendell, Barre, Petersham and Westminster. Distributed notices of conferences and grant opportunities to all watershed communities.
85	Provide direct engineering-related technical support to watershed communities for stormwater, wastewater and other projects that could result in enhanced water quality protection.	EQ	Technical assistance; better water quality protection via better-designed projects	100%	Staff attended meetings in Hubbardston and Rutland and advocated for stormwater improvements.
86	Research, write and distribute information, factsheets, reports and/or guidebooks related to watershed protection to watershed communities	EP EQ	Information dissemination	0%	No activity this year.

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87	Develop an educational plan about Aquatic Invasive Species; develop and distribute related educational materials to watershed groups and users.	EQ	Educational program and materials	100%	Materials distributed via several outlets, including website, to users and organized groups.
88	Research, develop, and assist communities with implementation of planning, zoning, and subdivision control techniques.	EP	Community assistance	100%	Developed and distributed factsheet on conservation-friendly zoning.
89	Continue involvement with statewide efforts to improve the laws and regulations governing land use and development to enhance community planning and watershed protection.	EP	Technical input; meetings in Boston and elsewhere; statutory drafting; informational materials; speaking at conferences	100%	Continued involvement via meetings, bill drafting, preparation of educational materials, and provision of technical assistance.
<b>J. Interpretive Services</b>					
90	Implement the Interpretive Services Plan for the Quabbin Watershed. Develop a similar plan for the Ware River watershed	IS	Plan implementation or development	100%	Ongoing implementation.
91	Staff and operate the Visitor Center at Quabbin to educate visitors about watershed management and related topics. Coordinate with visiting groups to provide orientation at the Visitor Center and in Quabbin Park. Maintain records on Visitor Center activities.	IS	Visitor center operation	100%	Visitor Center open for 360 days; visiting groups numbered more than 25,500 people.
92	Continue established programs of public education, including school programs and field trips on Division properties. Expand outreach efforts in Quabbin Park. Expand the Quabbin Reservoir watershed curriculum using materials developed by MWRA, DEP, EPA, ProjectWild, Project Learning Tree, Project WET, and other appropriate watershed resources. Continue to support watershed school system teachers through in-service workshops and day-long offerings for school groups.	IS	Curriculum; education materials and services	100%	Offered 108 programs, involving approximately 2,785 participants.
93	Collaborate with other organizations and watershed communities to reach more diverse audiences. Identify specific groups and their educational needs.	IS	Programs; public contacts	100%	Staff regularly attended meetings and events of Friends of Quabbin, SRVHS, and Valley Envir. Educ. Collaborative.
94	Develop watershed exhibits and portable displays for use in talks and presentations, both in the Quabbin Visitor Center and in watershed communities.	IS	Exhibits and displays	100%	Displays periodically updated. New displays developed for satellite Visitor Center at Quabbin Tower and for 75 <sup>th</sup> Year of Remembrance events.

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95	Develop and maintain self-guided interpretive trails focusing on natural resource management and water quality protection; include interpretive signs with information related to watershed protection programs, forest succession, history of the reservoir, wildlife. Utilize outside sources of assistance (e.g., Student Conservation Association) for trail maintenance.	IS	Trail improvement; signage; brochures	100%	Planned and coordinated trail work by SCA crew and local Girl Scout Council. Updated displays for Forest Stewardship Trail and Visitor Center Loop Trail.
96	Maintain and expand resource center with materials and educational information on the watershed system, water quality, history and development of the watershed and water supply system, water pollution, and water supply protection and management.	IS	Resource materials	100%	Ongoing collection and inventory of resources.
97	Offer educational programs to visiting groups, including college classes and loggers. Arrange-for staff members with particular expertise in a variety of environmental, water resource, wildlife and watershed protection issues to speak, when appropriate, to outside groups and organizations.	IS	Speakers; educational programs	100%	Coordinated various presentations and workshops, including one on wildlife techniques, biodiversity, moose research, and other forestry topics.
98	Continue to gather data, produce and distribute publications and fact sheets on selected topics relative to watershed protection. Update displays at kiosks and bulletin and include maps that clearly show areas for bicycling, hunting, and fishing. Target educational efforts at non-permitted groups.	IS	Data collection; fact sheets; Downstream newsletter; other publications	100%	Updated information at kiosks and bulletin boards; contributed to Spring edition of Downstream.
99	Improve the educational signage regarding drinking water protection in the Quabbin Visitor Center and in Quabbin Park.	IS	New signs	0%	No activity this year.
100	Provide graphics support to Division staff to increase quality and effectiveness of publications, brochures, and public documents.	IS	Brochures, reports, presentations	100%	Ongoing activity, as required.
101	Contribute to and update OWM website with information related to all aspects of watershed protection program.	P	Website updates	100%	Periodic website updates re: deerhunt, EEE, AIS, boat seal program, access issues, etc. Coordinated with DCR and EEA staff in major changes to website architecture.
102	Continue to support and participate in the Envirothon, America's leading natural resource education program for high school students.	IS	Participation	100%	Staff participated in planning meetings and at event in May.

Task #	Task Description	Lead	Product	% Complete	Comments
<b>K. Water Quality Monitoring</b>					
103	Continue routine and non-routine water quality sampling and analysis (including algae and nutrients) in order to track water quality parameters and trends in the reservoir and tributaries. Continue analyses for nutrients and metals on selected tributaries. Revise and update baselines of chemical, physical, biological, and flow parameters to better monitor reservoir changes over time using monthly and quarterly water samples collected from established historic sites on the Reservoir. Modify sampling plan to include analyses for AIS. Investigate affects of Climate Change.	EQ	Weekly reports; Annual reports	100%	Ongoing sampling of reservoir and tributary stations. Completed annual report and a 10-yr Data Review report.
104	Increase inspections and/or monitoring activities in the vicinity of the Shaft 8 Intake Works prior to and during periods of water diversions.	EQ	Increased monitoring	100%	Conducted several surveys at Shaft 8 intake prior to diversions. Inspection of Shaft 8 area conducted during drawdown.
105	Monitor plankton in Quabbin Reservoir and selected tributaries. Expand program to include monitoring of AIS in tributaries and other water bodies.	EQ	Data collection; periodic reports	100%	Conducted regular sampling of plankton, zooplankton, and <i>Didymo</i> .
106	Collect, interpret, and manage data on weather, reservoir elevations, water transfers and releases, and runoff. Develop a working group to guide weather and other environmental data collection and analysis. Share data with MWRA.	CE	Data collection and yield reports; working group	100%	Ongoing daily activity. Produced monthly data summaries and conducted 8 snow surveys.
107	Participate in Water Quality Sampling and Analysis Coordination Team (WQ-SAT) meetings; review and evaluate the Division's routine water quality monitoring schedule and make appropriate modifications.	EQ	Updated sample collection schedule	100%	Ongoing coordination. Staff reviewed the revised 2013 sampling plan with MWRA staff.
108	Coordinate water sample analysis and data sharing with MWRA and the Quabbin Water Quality Lab.	EQ	Coordination	100%	Ongoing coordination. Lab data incorporated into Water Quality database.
109	Implement a program of detection, monitoring and control of invasive aquatic species and other macrophytes in Quabbin Reservoir, including education and training of Boat Launch Area attendants and other appropriate staff. Work in conjunction with the DCR Lakes and Ponds Program. Evaluate and make changes in program as needed.	EQ	Monitoring program; training	100%	Continued implementation of Boat Seal Program. Acquired and tested barcode scanner to enhance data collection. Conducted training of BLA attendants.

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110	Conduct assessments for AIS in targeted areas (both Quabbin and Ware River).	EQ	Assessment report	100%	Conducted macrophyte surveys in 27 water bodies. Produced reports on 2012 sampling. Coordinated with MWRA and consultant on upcoming system-wide survey.
111	Keep abreast of emerging contaminants and other potential water quality threats. Investigate further when necessary.	EQ	Update information	100%	Ongoing. Staff attended international conference on <i>Didymosphenia</i> .
112	Continue to build instrumentation and inventory information, and monthly nutrient sampling, to monitor the effects of both natural and deliberate disturbances on water quantity and quality in first-order streams.	NR	Data collection	100%	Monthly data collection continued. Completed compilation of data from past 10 years.
<b>L. Environmental Quality Assessments (EQAs)</b>					
113	Complete Environmental Quality Assessments in the Quabbin Reservoir and Ware River watersheds according to a prescribed schedule. Include AIS surveys of lakes, ponds and tributaries in EQAs	EQ	EQA reports	100%	Continued data collection for Coldbrook and Longmeadow EQAs in Ware River watershed. Began Quabbin Northwest EQA. Completed 2 special investigations triggered by water quality monitoring results.
114	Implement recommendations in completed EQAs and oversee, as necessary, remedial actions. Develop a Mitigation Policy encompassing enforcement and education.	EQ	Annual Status of Recommendation Report	100%	Recommendations submitted from Quabbin Reservoir EQA. Provided recommendations to LAP from EQAs.
115	Revise and update the Environmental Quality Assessment database.	EQ	Updated database	40%	Staff attempted to revise the Wachusett database for use at Quabbin, but determined that additional technical assistance is required.
116	Coordinate with other agencies to exchange information and review of projects in watershed (e.g., through MEPA announcements).	EQ	Project summaries	100%	Ongoing. Staff continued to monitor projects via MEPA's Environmental Monitor.
117	Update and assess land use/land cover statistics for watershed, sanitary districts, and sub-districts when new GIS coverage is available. Include impervious surface analysis.	ATS	Updated coverages and analyses	100%	Updates completed as new information became available.
118	Continue to incorporate wildlife observations (that could affect water quality) into EQA field work.	EQ	Report information	100%	Ongoing coordination and communication.

Task #	Task Description	Lead	Product	% Complete	Comments
<b>L-1. EQAs - Compliance with Environmental Regulations</b>					
119	Enforce the DCR Watershed Protection regulations found in 350 CMR 11.00. Coordinate, as necessary, with DCR Office of General Counsel, DEP, EPA, and other agencies, to promote compliance with 350 CMR 11.00 and other environmental regulations.	EQ	Regulation enforcement	100%	Staff continued monitoring work and coordination with DEP and OAG on enforcement case in Rutland. Continued work on 2 cases involving domestic animals in Quabbin Watershed. Continued to monitor Nat'l Grid work.
120	Use site inspections, environmental quality assessments, local board meetings, and information from Watershed Rangers to identify and mitigate possible violations of state and federal regulations. Conduct a weekly inspection of the Winsor basin/CVA intake area. Monitor progress using the EQ file tracking system.	EQ	Regulation enforcement	100%	Conducted 40 CVA inspections. Attended ConCom meetings in Ware to monitor projects.
121	Check the <i>Environmental Monitor</i> (MEPA) each month and investigate and comment on projects when applicable.	EQ		100%	Ongoing.
<b>L-2. EQAs - Wastewater Management</b>					
122	Identify potential problem sites or areas through review of local records, water quality data, and other pertinent information; follow up with owners, local BoH, and DEP. Develop database of septic systems in sensitive portions of watersheds.	EQ	EQ file reports; new database	100%	Ongoing. Conducted special investigations following high coliform count in routine tributary samples.
123	Monitor and enforce the provisions of Title 5 with Boards of Health and the DEP. Maintain a good working relationship with all local Boards of Health and provide technical assistance, when requested, on wastewater management issues. Monitor septic system research. Advocate for newer, more efficient technology for replacement systems (e.g., pressure dosing), as appropriate.	EQ	EQ file reports	100%	Ongoing monitoring. Little other action needed. Staff attended a Title 5 training.
124	Monitor expansions and local plans for new sewer connections in watershed communities.	EP	File reports	100%	Ongoing.

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<b>L-3. EQAs – Stormwater Management</b>					
125	Coordinate with DEP on compliance with NPDES GCP regulations in watershed communities. Review applicable stormwater permitting applications. Advise local boards on stormwater management issues related to construction activities.	EQ	Reviewed applications; Advice as needed; brief annual report	100%	Reviewed applications as received. Met with town boards in Rutland and Hubbardston.
126	Design and implement stormwater BMPs around the reservoir to address erosion and sedimentation due to public access, stormwater runoff, and shoreline erosion. Construct stormwater BMPs on DWSP property in accordance with set priorities. Integrate stormwater management controls into DWSP road paving projects.	CE	File reports; BMP construction and maintenance	100%	Drainage improvements completed around Quabbin Administration Building, including construction of a vegetated bioretention basin. BMPs put in place for projects at Hangar ramp and BLA#1.
127	Work with State and local highway departments and railroad companies to improve stormwater infrastructure in areas where reconstruction is proposed. Improve operation and maintenance practices near the Shaft 8 Intake, Quabbin Reservoir and its tributaries.	EQ	Field reports	100%	Staff reviewed plans and provided comments on rail trail expansion near Shaft 8 and resurfacing of Rt. 122.
128	Continue to collect data on and update maps on culverts and other stormwater conveyance structures in the Quabbin and Ware River watersheds.	CE	Database and maps	20%	Information on new structures (e.g., along Gate 8 road; around Administration Building) was collected and filed. No additional surveys were conducted this year.
<b>L-4. EQAs - Agriculture</b>					
129	Identify, map, and monitor locations of agricultural operations (including hobby horse farms, and other small-scale operations) that could impact water quality. Inspect all significant agricultural operations annually and others at least once every five years through the EQA process.	EQ	Periodic reviews; Updated agriculture database	100%	Ongoing. Began inventory update on agricultural operations in Quabbin Northwest EQA area. Began review of wood ash usage.
130	Meet with owners of agricultural operations that threaten water quality to discuss the problems and possible solutions, on a case by case basis. Provide technical assistance and/or information (e.g., on funding), when appropriate, aimed at mitigating potential impacts.	EQ	EQA reports; technical assistance	100%	Staff continued to work on enforcement cases involving domestic animals in Quabbin watershed. Had periodic consultations with prospective horse farm purchasers.

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<b>L-5. EQAs - Hazardous Materials</b>					
131	Complete and update a database of all facilities using, storing, or generating hazardous materials or wastes (including transfer stations and UST/AST) in the watersheds. Inspect each site once every five years as part of the rotating EQA schedule. Monitor DEP databases regularly for new 21e information.	EQ	Hazardous waste database; Annual EQA	100%	Ongoing. DEP databases monitored for new sites in both Quabbin and Ware watersheds.
132	Investigate contaminated sites and hazardous waste generators through coordination with DEP/WSC and the environmental quality assessment process.	EQ	Environmental Quality Assessment reports	100%	Continued to advocate for assistance from DEP with abandoned landfill in Templeton.
133	Review periodic reports on closed landfills in the watersheds.	EQ	Reports	100%	Ongoing. Staff reviewed reports for Charnock Hill landfill.
134	Review and comment on Yearly Operational Plans related to herbicide use. Monitor and inspect no-spray and limited spray zones along Rights-of-Way.	EQ	Letter to DAR; brief field reports	100%	Substantial time spent monitoring National Grid projects on watersheds. Reviewed and submitted comments on YOPs by National Grid and P&W Railroad.
<b>M. Emergency Response</b>					
135	Continue to develop an <i>Emergency Response Handbook</i> for the Ware River watershed, with up-to-date contact information, emergency procedures and roles/responsibilities. Formalize SOPs for spill cleanups and define DCR staff roles in both assessment and cleanup. Work with MWRA to obtain emergency response trailers and other spill response supplies and equipment.	ATS	Emergency Response Handbook; Contact Lists Updated Response Plan	50%	Initiated communications equipment and supply needs for emergency response at Ware River watershed.
136	Maintain an updated emergency response handbook for Quabbin Reservoir with contact information, emergency procedures and roles/responsibilities. Maintain emergency response trailers and other supplies and equipment.	ATS	Emergency Response Handbook; Contact Lists	75%	Developed wish list for MWRA regarding emergency response supplies. Updated contact lists following security breach in May.
137	Install and/or maintain subwatershed signage along the highways around Quabbin Reservoir.	ATS	Map, database and new signs	50%	Surveyed existing markers along Rt. 202 to determine status and replacement needs. No new signs were installed.

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138	Evaluate, monitor and oversee cleanup operations for any spills that impact or threaten water resources or DWSP property. Work with the appropriate local, state and federal agencies to ensure that the containment, cleanup and mitigation of the spill proceeds in a manner that protects water quality.	ARD	Emergency response; incident reports	100%	Staff responded to several small spills or reports of possible spills in both Quabbin and Ware River watersheds.
139	Follow all responses to an accidental or dumping release of hazardous materials with a coordinated monitoring effort in cooperation with DEP and local officials to ensure that appropriate cleanup and assessment protocols are followed.	EQ	File reports	0%	No follow-up action was required due to the small amounts involved in the 2 reported spills.
140	In conjunction with MWRA, provide emergency response and/or incident command system (ICS) training to staff, local emergency officials, loggers, and others. Conduct occasional mock hazardous materials release events for training purposes.	ATS	Training of staff and local officials	100%	Conducted logger training with DEP and MWRA. Set up training with local FD/EMT for fall 2013. Reviewed MWRA RFR for FY2014 training sessions.
141	Develop and implement Spill Response Plans for all Timber Harvesting operations on DWSP lands.	F	Spill Response Plans	100%	All active operations have spill plans in place.
<b>N. Support</b>					
142	Update Watershed Protection Plan to cover FY14-FY18.	RD	Updated WPP	100%	Plans updated for all watersheds.
143	Operate administrative offices, including answering phones, greeting visitors, etc.	ATS	Main office operation	100%	Ongoing. Main office was staffed during regular work hours 5 days/week.
144	Provide payroll and personnel services for all Section employees.	ATS	Weekly payroll reports; maintenance of personnel files	100%	Most employees switched over to computerized payroll system (SSTA) this year. Ongoing personnel services provided.
145	Provide contract administration, financial management, record-keeping, purchasing of goods and services, and other financial support services.	ATS	Accounting and financial services	100%	Ongoing. Accountant processed approximately 210 encumbrances and 878 invoices during the year.
146	Coordinate with EOEEA IT to provide local MIS support for the Section. Develop an IT Plan with input from selected Regional staff that addresses technology needs for the coming year.	ATS	Support and troubleshooting services; IT Plan	100%	IT support services were provided. Equipment was purchased and backup systems were maintained.
147	Provide administrative support for the Logging Permit program, including mailings, bid openings, financial management, database management, permit and key issuance, etc.	ATS	Program administration; annual revenue report; database maintenance	100%	Logging program activity was still limited as the moratorium on new lots continued throughout the year. Revenues from the few ongoing lots amounted to \$37,221.

<b>Task #</b>	<b>Task Description</b>	<b>Lead</b>	<b>Product</b>	<b>% Complete</b>	<b>Comments</b>
148	Provide overall planning, administrative and supervisory oversight for all Regional activities and programs, including office operations, policy and plan development and implementation, staff assignments, hirings, and other personnel issues.	RD	Ongoing support and oversight	100%	Ongoing.
149	Provide orientation for new staff and integrate them into existing operations.	RD	Training and orientation	100%	Training and orientation were provided for all new and returning Seasonal employees.
150	Participate in staff meetings, discussions and other activities related to the operation of the Section.	All supervisory staff	Participation	100%	Senior staff meetings were held every other week; other meetings held, as required.
151	Prepare and submit to MWRA and the Water Supply Protection Trust Annual Work Plans, budgets, quarterly progress reports and program goals and objectives; track Section progress in meeting program goals.	ATS	Completed plans, budgets and reports	100%	All plans, reports and budget deadlines were met.
152	Attend meetings, and coordinate Regional activities, with the Division Director, Wachusett/Sudbury Region, MWRA, DEP, watershed advisory committees, watershed communities, EOEEA and other agencies and organizations.	RD	Coordination; correspondence and communication	100%	Regional Director attended coordination meetings with MWRA, advisory committees, etc. throughout the year.
153	Provide environmental oversight for all Section activities to minimize adverse water quality impacts. Conduct a risk assessment using HACCP methodology for AIS.	EQ	Field reports; Working HACCP document	100%	Ongoing. HAACP document updated, as necessary.
154	Continue to evaluate current Section operations from a sustainability and energy efficiency standpoint and implement appropriate measures to improve those practices.	ATS	New initiatives; reports	100%	Several meetings and communications were held regarding energy efficiency initiatives, building audits, and grant opportunities for alternative heating systems.
155	Provide GIS and GPS services and associated mapping for all Section plans, reports and projects, as needed.	ATS	Maps; other services	100%	GIS Specialist provided mapping and related services for deerhunt, WsPA cases, Ranger operations, forestry operations, and others. Training sessions for ArcMAP users also conducted.
156	Update digital information, including all new OWM land purchases, Watershed Protection Act maps and parcels, and provide analyses for use in OWM reports and publications.	GIS	Updated maps for all Quabbin communities	100%	Updates produced as new information became available.

<b>Task #</b>	<b>Task Description</b>	<b>Lead</b>	<b>Product</b>	<b>% Complete</b>	<b>Comments</b>
157	Plan and implement vehicle and equipment purchases and leases.	ARD	Vehicle purchases and leases	100%	A new backhoe and four new pickup trucks were purchased.
158	Conduct truck, boat, and equipment inspections and maintenance as needed, utilizing the Facility Asset Management Information System (FAMIS). Continue to switch to the use of vegetable-based hydraulic fluids whenever feasible.	WM	Vehicle and equipment maintenance and repair	100%	Ongoing. Boats and vehicles maintained on a regular basis.
159	Maintain vital records collection for former Quabbin valley towns, issue official records and conduct genealogical and historical research upon request. Manage audio-visual collection of the section including photographs, slides, oral history tapes and media coverage of Section activities and Quabbin related topics.	IS	Record management	100%	Staff responded to 105 requests for genealogical information, 46 requests for photographic records, and 49 requests for vital records. Ongoing maintenance of records and related materials.
160	Continue to review and evaluate, as needed, the major EQ programs such as the EQAs, Gull program, Water quality testing, technical assistance and other EQ functions to assure compliance with pollution prevention protocols.	EQ	Program review; 5-year program plan	100%	Gull program review was completed and appropriate changes in the program were made.
161	Administer the Payment in Lieu of Taxes program	P	Payments to watershed communities	100%	PILOT payments were calculated and processed for all watershed communities. More than \$7.6 million was distributed.
162	Attend appropriate trainings, workshops and other professional development offerings, with priority on safety training.	All Work Units	Training	100%	Staff attended a variety of training sessions during the year, including procurement, boating safety, ethics, ArcMAP, stream crossing design, stormwater management, and dam safety.
163	Maintain professional currentness through continued involvement with professional organizations, task forces, working groups, conferences and other appropriate means.	All Work Units	Participation and input; professional currentness	100%	Staff maintained memberships in appropriate professional organizations, and kept required licenses current.
164	Continue to network with other water supply agencies to share watershed management information.	EQ	Information sharing	100%	Staff networked with employees of the Cambridge Water Dept. and with the New England Watershed Managers group.

**DCR Division of Water Supply Protection  
Public Access Plan Rules Infractions by Type (FY07-FY13)**

Infraction Types for Wachusett and Quabbin Access Plans Combined

Infraction Type	FY07	FY08	FY09	FY10	FY11	FY12	FY13				% of Total (12-13)	
	FY07 Total	FY08 Total	FY09 Total	FY10 Total	FY11 Total	FY12 Total	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter		FY13 Total
<b>Domestic Animals</b>	240	301	449	346	321	300	100	44	29	86	259	23%
Quabbin	107	167	254	179	156	122	41	15	11	33	100	50%
Wachusett	133	134	195	167	165	178	59	29	18	53	159	16%
<b>Fishing</b>	96	69	140	186	176	432	104	23	20	58	205	22%
Quabbin	12	13	31	35	41	63	18	4	0	13	35	4%
Wachusett	84	56	109	151	135	369	86	19	20	45	170	25%
<b>Swimming/Wading/On Ice</b>	200	97	157	42	305	212	116	1	0	103	220	19%
Quabbin	11	10	11	20	15	24	5	0	0	9	14	1%
Wachusett	189	87	146	22	290	188	111	1	0	94	206	18%
<b>Trespass</b>	127	289	137	396	344	240	149	21	4	131	305	21%
Quabbin	48	66	17	31	19	16	3	2	0	10	15	1%
Wachusett	79	223	120	365	325	224	146	19	4	121	290	24%
<b>Bicycling</b>	42	62	52	42	53	56	18	7	0	19	44	4%
Quabbin	10	14	0	10	0	16	0	1	0	0	1	1%
Wachusett	32	48	52	32	53	40	18	6	0	19	43	4%
<b>Snowmobiles/ATVs</b>	54	19	10	19	33	11	14	2	0	8	24	2%
Quabbin	3	1	1	2	1	1	0	0	0	0	0	0%
Wachusett	51	18	9	17	32	10	14	2	0	8	24	2%
<b>Dumping</b>	37	44	37	6	24	8	3	0	0	7	10	1%
Quabbin	4	13	13	5	8	2	0	0	0	0	0	0%
Wachusett	33	31	24	1	16	6	3	0	0	7	10	1%
<b>Others</b>	115	152	136	100	93	135	34	13	27	83	157	8%
Quabbin	56	91	95	47	26	19	1	0	1	15	17	2%
Wachusett	59	61	41	53	67	116	33	13	26	68	140	12%
<b>TOTAL</b>	913	1032	1118	1137	1349	1394	538	111	80	495	1224	100%
Quabbin	251	374	422	329	266	263	68	22	12	80	182	100%
Wachusett	662	658	696	808	1083	1131	470	89	68	415	1042	100%

"Other" at Quabbin includes wildlife feeding, other recreation not allowed, motor vehicle violations

"Other" at Wachusett includes bird feeding, walking on ice, fires, hunting without permit, low-flying planes, and commercial signs

# **FY2013 Final Expenditures**

**DCR Division of Water Supply Protection  
Office of Watershed Management  
FY13 Final Expenditures**

<b>Object Class</b>	<b>Object</b>	<b>Object Name</b>	<b>Total</b>
AA	A01	Salaries: Inclusive	\$8,310,345
	A07	Shift Differential Pay	\$20,448
	A08	Overtime Pay	\$184,460
	A10	Holiday Pay	\$14,224
	A12	Sick-Leave Buy Back	\$12,659
	A13	Vacation-In-Lieu	\$22,714
<b>AA Total</b>			<b>\$8,564,850</b>
BB	B01	Other Out Of State Travel - INCLUSIVE: AIRFARE, HOTEL, LODGI	\$1,022
	B02	In-State Travel	\$2,393
	B03	Overtime Meals	\$4
	B05	Conference, Training, Registration and Membership Dues and L	\$3,996
	B10	Exigent Job Related Expenses	\$26
	B11	Employer Refund of Non-Tax Benefits	\$60
	B91	Employee Reimbursement Accounts Payable -Non-Tax	\$388
<b>BB Total</b>			<b>\$7,888</b>
CC	C04	Contracted Seasonal Employees	\$128,314
	C31	National Defense & Public Order & Security & Safety	\$2,199
<b>CC Total</b>			<b>\$130,513</b>
DD	D09	Fringe Benefit Cost Recoupment	\$2,276,316
	D15	Workers' Compensation Chargebacks	\$100,000
	D21	Health Ins Costs of Employ/Leave in Excess of 1 Yr Chgback	\$8,786
<b>DD Total</b>			<b>\$2,385,102</b>
EE	E01	Office & Administrative Supplies	\$9,188
	E02	Printing Expenses & Supplies	\$10,632
	E04	Central Reprographic Chargeback	\$179
	E06	Postage	\$6,000
	E12	Subscriptions, Memberships & Licensing Fees	\$1,375
	E13	Advertising Expenses	\$71
	E14	Exhibits/Displays	\$2,686
	E15	Bottled Water	\$886
	E19	Fees, Fines, Licenses, Permits & Chargebacks	\$23,962
	E20	Motor Vehicle Chargeback	\$31,100
	E22	Temp Use Space/Confer-Incidental Includes Reservation Fees	\$1,916
	E53	S&J:Non-reportable to claimant, sole payee	\$10,000
EE2	Conference, Training and Registration Fees	\$3,090	
<b>EE Total</b>			<b>\$101,086</b>
FF	F05	Laboratory Supplies	\$2,279
	F06	Medical & Surgical Supplies	\$703
	F09	Clothing & Footwear	\$22,951
	F11	Laundry & Cleaning Supplies	\$8,063
	F13	Live Animals & Related Supplies	\$3,963
	F18	Recreation, Religious & Social Supplies & Materials	\$8,566
	F21	Navigational & Nautical Supplies	\$5,457
	F24	Motor Vehicle Maintenance and Repair Parts	\$94,785
	F27	Law Enforcement & Security Supplies	\$180
<b>FF Total</b>			<b>\$146,949</b>
GG	G03	Electricity	\$14,527
	G05	Fuel For Vehicles	\$267,391
	G06	Fuel For Buildings	\$169,901
	G08	Sewage Disposal & Water	\$5,434
	G11	Natural Gas	\$434
<b>GG Total</b>			<b>\$457,688</b>
HH	H09	Attorneys/Legal Services	\$5,500
	HH1	Financial Services	\$54,463
	HH2	Engineering, Research and Scientific Services	\$176,827
	HH4	Health and Safety Services	\$5,288
<b>HH Total</b>			<b>\$242,078</b>

**DCR Division of Water Supply Protection  
Office of Watershed Management  
FY13 Final Expenditures**

<b>Object Class</b>	<b>Object</b>	<b>Object Name</b>	<b>Total</b>
JJ	J27	Laundry Services	\$4,617
	J44	Surveyors	\$41,102
	JJ1	Legal Support Services	\$15,325
<b>JJ Total</b>			<b>\$61,044</b>
KK	K02	Educational Equipment	\$22,426
	K03	Programmatic Facility Equipment	\$41,570
	K04	Motorized Vehicle Equipment	\$197,590
	K05	Office Equipment	\$390
	K06	Printing, Photocopying, & Micrographics Equipment	\$627
	K07	Office Furnishings	\$3,112
	K10	Law Enforcement & Security Equipment	\$924
K11	Heavy Equipment	\$246,569	
<b>KK Total</b>			<b>\$513,208</b>
LL	L23	Programmatic Facility Equipment Rental or Lease	\$24,252
	L25	Office Equipment Rental or Lease	\$2,620
	L26	Printing/Photocopy & Micrographics Equip Rent/Lease	\$5,095
	L31	Heavy Equipment Rental/Lease	\$4,846
	L44	Motorized Vehicle Equipment Maintenance & Repair	\$33,781
	L45	Office Equipment Maintenance & Repair	\$251
	L46	Print, Photocopying & Micrograph Equipment Maint/Repair	\$197
	L50	Law Enforcemt/Security Equipment Maintenance/Repair	\$546
	L51	Heavy Equipment Maintenance/Repair	\$36,188
L63	Programmatic Equipment Maintenance and Repair	\$3,189	
<b>LL Total</b>			<b>\$110,964</b>
NN	N16	Major Constr, Renovation, Bldg Alteration & Land Imprvmnts	\$28,198
	N17	Major Building Maintenance and Land Improvements	\$45,125
	N19	Land Acquisition and Eminent Domain	\$2,241
	N22	Highway Horizontal/Lateral Maintenance & Improvements	\$296,148
	N23	Highway Horizontal/Lateral Maintenance Materials	\$462
	N50	Non-Major Facility Infrastructure Maintenance and Repair	\$113,979
	N52	Facility Infrastructure Maintenance & Repair Tools & Supplie	\$76,967
	N60	Lawn and Grounds Equipment Maintenance and Repair	\$547
	N61	Lawn and Grounds Equipment	\$48,706
	N64	Garden Expenses, Tools and Supplies	\$11,044
	N71	Exterminators/Integrated Pest Management	\$2,493
	N72	Hazardous Waste Removal Services	\$6,753
	N73	Non-Hazardous Waste Removal Services	\$42,257
	N74	Snow Removal and Groundskeeping Services	\$19,174
N98	Reimbursement for Travel/Other Expense Infrs Projects	\$611	
NN1	Engineering, Research and Scientific Services	\$180,233	
<b>NN Total</b>			<b>\$874,938</b>
TT	T04	Payments & Refunds	\$128,680
<b>TT Total</b>			<b>\$128,680</b>
UU	U01	Telecommunications Services Data	\$8,267
	U02	Telecommunications Services - Voice	\$42,254
	U03	Software & Information Technology Licenses (IT)	\$12,916
	U04	Information Technology Chargeback	\$1,314
	U07	Information Technology (IT) Equipment	\$27,206
	U09	Information Technology (IT) Equip Rental Or Lease	\$30,187
	U10	Information Tech (IT) Equipment Maintenance & Repair	\$619
<b>UU Total</b>			<b>\$122,763</b>
<b>Grand Total</b>			<b>\$13,847,749</b>

DPS - ISA	\$2,500
<b>FY2013 DWSP Expenditures</b>	<b>\$13,850,249</b>
<b>FY2013 Budget</b>	<b>\$14,163,342</b>
<b>% of Budget Expended</b>	<b>97.8%</b>

# **FY2013 Final Revenue**

**DCR Division of Water Supply Protection  
Office of Watershed Management  
FY13 Final Revenue**

**FY 2013 Revenue Summary**

Revenue Budget	Description	AP 1	AP 2	AP 3	AP 4	AP 5	AP 6	Total Collected Revenue Period 1-6
2010/0300/WMP1/DCR/0500	INTERMENT FEES	\$770.00	\$270.00	\$30.00	\$280.00	\$0.00	\$775.00	\$2,125.00
2010/0300/WMP1/DCR/3148	FISH & BOATING/DEER HUNT	\$37,167.00	\$36,427.00	\$20,528.00	\$8,639.00	\$0.00	\$0.00	\$102,761.00
2010/0300/WMP1/DCR/4000	RENTS	\$0.00		\$134.22		\$0.00	\$0.00	\$134.22
2010/0300/WMP1/DCR/4500	FORESTRY SALES	\$0.00	\$31,339.00			\$0.00	\$330.00	\$31,669.00
2010/0300/WMP1/DCR/6900	MISCELLANEOUS	\$30.77	\$100.00	\$89.23	\$59.99	\$0.00	\$0.00	\$279.99
2010/0300/WMP1/DCR/6901	PRIOR YEAR REFUNDS	\$0.00					\$0.00	\$0.00
2010/0300/WMP1/DCR/6995	HYDROPOWER/TR LINES	\$117,267.53			\$145,979.21	\$0.00	\$241,724.79	\$504,971.53
<b>TOTALS</b>		<b>\$155,235.30</b>	<b>\$68,136.00</b>	<b>\$20,781.45</b>	<b>\$154,958.20</b>	<b>\$0.00</b>	<b>\$242,829.79</b>	<b>\$641,940.74</b>

Revenue Budget	Description	AP 7	AP 8	AP 9	AP 10	AP 11	AP 12	Total Collected Revenue
2010/0300/WMP1/DCR/0500	INTERMENT FEES	\$175.00	\$0.00		\$400.00	\$400.00	\$466.00	\$3,566.00
2010/0300/WMP1/DCR/3148	FISH & BOATING/DEER HUNT	\$0.00	\$0.00	\$1,975.00	\$31,279.00	\$49,351.00	\$38,228.00	\$223,594.00
2010/0300/WMP1/DCR/4000	RENTS	\$335.30	\$0.00	\$0.00	\$0.00	\$4,610.13	\$108.48	\$5,188.13
2010/0300/WMP1/DCR/4500	FORESTRY SALES	\$0.00	\$1,127.40		\$0.00	-\$475.00		\$32,321.40
2010/0300/WMP1/DCR/6900	MISCELLANEOUS	\$0.00	\$50.00	\$2,350.00	\$505.00	\$600.00		\$3,784.99
2010/0300/WMP1/DCR/6901	PRIOR YEAR REFUNDS	\$0.00			\$0.00	\$0.00		\$0.00
2010/0300/WMP1/DCR/6995	HYDROPOWER/TR LINES	\$61,640.12	\$30,061.71	\$48,976.91	\$0.00	\$0.00		\$645,650.27
<b>TOTALS</b>		<b>\$62,150.42</b>	<b>\$31,239.11</b>	<b>\$53,301.91</b>	<b>\$32,184.00</b>	<b>\$54,486.13</b>	<b>\$38,802.48</b>	<b>\$914,104.79</b>

**Notes: Does not include Special Assessment Revenues-MWRA Assessment & Debt Service Reimbursement.**

	Budgeted Amt	YTD Receipts		
INTERMENT FEES/				
RENTS/MISCELLANEOUS	\$15,000	\$12,539		
FISH & BOATING/DEER HUNT	\$270,000	\$223,594	FY 2013 Projected Revenue	\$959,000
FORESTRY SALES	\$150,000	\$32,321	FY2013 YTD	\$914,105
HYDROPOWER/TR LINES	\$524,000	\$645,650	Percent of YTD of Projection	95.32%
	<u>\$959,000</u>	<u>\$914,105</u>		

# **FY2013 Final Major Projects**

A separate report will be prepared for the Water Supply Protection Trust on FY2013 Major Projects.

# **FY2013 Final Land Acquisition**

**DCR Division of Water Supply Protection  
FY2013 Office of Watershed Management Land Acquisitions**

<b>Owner</b>	<b>Town</b>	<b>File#</b>	<b>Acres</b>	<b>Price</b>	<b>Fee/WPR</b>	<b>Model Rating/ Comment</b>
<b><i>Quabbin Reservoir Watershed</i></b>						
Overing	New Salem & Wendell	W-1069/70	45	\$85,000	Fee	Met Quabbin Acquisition Standards
Ellsworth	Petersham	W-1062	13.2	\$8,400	Fee	Met Quabbin Acquisition Standards
Ellsworth	Petersham	W-1063	44.4	\$225,000	Fee	Met Quabbin Acquisition Standards
Goodnow	Petersham	W-1057	12.6	\$80,000	Fee	Met Quabbin Acquisition Standards
Harvard Univ.	Petersham	W-1098	126	\$0	WPR	Met Quabbin Acquisition Standards
Lundquist, M.	Petersham	W-1072	23.4	\$61,000	WPR	Met Quabbin Acquisition Standards
Lundquist, R.	Petersham	W-1071	14.2	\$58,000	WPR	Met Quabbin Acquisition Standards
Moulton	Petersham	W-1047	3.5	\$30,000	Fee	Met Quabbin Acquisition Standards
Perry	Petersham	W-1054	36.6	\$89,000	Fee	Met Quabbin Acquisition Standards
Pugleisi	Petersham	W-1058	37.1	\$206,000	WPR	Met Quabbin Acquisition Standards
Overing	Wendell	W-1068	20	\$87,500	WPR	Met Quabbin Acquisition Standards
<b><i>Sub-Total Quabbin Watershed</i></b>			<b>376</b>	<b>\$929,900</b>		
<b><i>Wachusett Reservoir Watershed</i></b>						
Hamilton	Boylston	W-1090	2.3	\$80,000	WPR	7
Lemay/Lawson	Holden	W-1049	5.3	\$200,000	Fee	6
Ferrie/RLC	Rutland	W-1071	24.4	\$0	WPR	3 (gift)
Powers	Sterling	W-1088	4.6	\$119,000	Fee	4
Chapman	West Boylston	W-1050	2.3	\$450,000	Fee	4
<b><i>Sub-Total Wachusett Watershed</i></b>			<b>38.9</b>	<b>\$849,000</b>		
<b>TOTAL FY13 LAND ACQUISITIONS</b>			<b>414.9</b>	<b>\$1,778,900</b>		

**FY2013 Final**

**Payments in Lieu of Taxes**

**DCR Division of Water Supply Protection  
Office of Watershed Management**

**FY2013 Payments in Lieu of Taxes (PILOT)**

**The total PILOT paid under MGL c. 59, s. 5G for Fiscal Year 2013 was \$7,653,312.32.**

FY2013 PILOT was \$332,032 greater than the FY2012 PILOT, a 4.5% increase. Two main factors for this increase are local tax rates and the required “redetermination formula” for calculating property valuation.

Watershed PILOT is based upon each community’s commercial tax rate. Tax rates across the watershed system increased on average by 5%. These jumps in tax rates impacted practically every community that receives watershed PILOT. New Salem’s tax rate increase of 17% accounted for over one quarter of the PILOT increase. The higher tax rates in Rutland and Holden were responsible for another quarter of the increase in PILOT.

Ten towns (Belchertown, Clinton, Framingham, Hardwick, Leominster, Pelham, Princeton, Shutesbury, Ware, and Wendell) went through the local revaluation process in 2012. PILOT legislation requires that a formula be used to derive the property valuation after the local revaluation in the years between Department of Revenue revaluations. These ten towns’ property valuation was thus derived by the following formula: (2011 PILOT/2012 Tax Rate)\*1000. Any property value lost in the 2009 DOR revaluation was regained, as the “hold harmless” requirement that a payment can never be less than the previous year is factored into this equation. Combined with the towns that went through a similar calculation in FY11 and FY12, most communities receive an increase in their property valuation which ultimately increases their PILOT calculation. In FY13, however, there were several towns that actually lost value (Belchertown, Clinton, Framingham, Pelham, Princeton, and Ware) through this formula, which limited the impact of the tax increases.

The “hold harmless” clause, which requires a payment never to be less than the previous year, totaled just \$113,029, and effected nine communities and one towns’ annexed lands payments.

The Department of Revenue completed the required quadrennial State Owned Land Revaluation in June 2013, deriving values for state property as of January 1, 2013. DCR staff worked closely with DOR to ensure data accuracy. The new values will be utilized for all towns in the FY14 PILOT calculations.



Department of Conservation and Recreation  
 Division of Water Supply Protection  
 Office of Watershed Management

**FY2013 Payments in Lieu of Taxes (PILOT)**

Final

Community	Local Revaluation Year	2009 DOR Property Revaluation	PILOT FY2011	2012 Property Valuation	FY12 Tax Rate	PILOT FY2012	2013 Property Valuation	FY13 Tax Rate	Minimum PILOT Due	PILOT FY2013	PILOT Increase	Hold Harmless Value	% Change in PILOT	% Change in Tax Rate
Barre	2013	\$11,082,400	\$147,297.80	\$10,886,756	\$14.42	\$156,987.02	\$10,886,756	\$15.34	\$167,002.83	\$167,002.83	\$10,015.82	\$0.00	6%	6%
Belchertown	2012	\$15,259,400	\$238,809.61	\$15,259,400	\$16.56	\$252,695.66	\$14,420,870	\$17.11	\$246,741.09	\$252,695.66	\$0.00	\$5,954.58	0%	3%
Belchertown - Annexed Lands	2012	\$3,005,000	\$47,028.25	\$3,005,000	\$16.56	\$49,762.80	\$2,839,870	\$17.11	\$48,590.18	\$49,762.80	\$0.00	\$1,172.62	0%	3%
Berlin	2013	\$2,363,600	\$32,714.18	\$2,204,460	\$17.47	\$38,511.91	\$2,204,460	\$21.06	\$46,425.93	\$46,425.93	\$7,914.01	\$0.00	21%	21%
Boylston	2014	\$34,112,400	\$541,958.11	\$34,607,797	\$17.02	\$589,024.71	\$34,607,797	\$17.20	\$595,254.11	\$595,254.11	\$6,229.40	\$0.00	1%	1%
Clinton	2012	\$6,360,500	\$174,023.28	\$6,360,500	\$29.77	\$189,352.09	\$5,845,592	\$29.18	\$170,574.38	\$189,352.09	\$0.00	\$18,777.70	0%	-2%
Framingham*	2012	\$6,717,500	\$249,286.43	\$6,717,500	\$38.05	\$255,600.88	\$6,551,549	\$39.98	\$261,930.91	\$261,930.91	\$6,330.04	\$0.00	2%	5%
Hardwick	2012	\$8,689,500	\$107,749.80	\$8,689,500	\$13.32	\$115,744.14	\$8,089,324	\$13.94	\$112,765.18	\$115,744.14	\$0.00	\$2,978.96	0%	5%
Hardwick - Annexed Lands	2012	\$59,500	\$886.61	\$59,500	\$13.32	\$886.61	\$66,562	\$13.94	\$927.88	\$927.88	\$41.27	\$0.00	5%	5%
Holden	2013	\$28,975,700	\$811,635.44	\$51,861,690	\$16.53	\$857,273.73	\$51,861,690	\$17.37	\$900,837.55	\$900,837.55	\$43,563.82	\$0.00	5%	5%
Hubbardston	2013	\$22,448,557	\$264,950.65	\$23,384,877	\$12.70	\$296,987.93	\$23,384,877	\$13.64	\$318,969.72	\$318,969.72	\$21,981.78	\$0.00	7%	7%
Leominster	2012	\$188,900	\$7,969.72	\$188,900	\$16.72	\$7,969.72	\$476,658	\$17.96	\$8,560.78	\$8,560.78	\$591.06	\$0.00	7%	7%
Ludlow	2014	\$240,700	\$8,979.09	\$571,916	\$16.98	\$9,711.14	\$571,916	\$17.17	\$9,819.80	\$9,819.80	\$108.66	\$0.00	1%	1%
Marlborough	2013	\$1,778,200	\$109,727.19	\$1,778,200	\$29.04	\$109,727.19	\$1,778,200	\$28.46	\$50,607.57	\$109,727.19	\$0.00	\$59,119.62	0%	-2%
New Salem	2013	\$22,857,000	\$349,712.10	\$22,857,000	\$16.02	\$366,169.14	\$22,857,000	\$18.74	\$428,340.18	\$428,340.18	\$62,171.04	\$0.00	17%	17%
New Salem - Annexed Lands	2013	\$8,769,200	\$134,168.76	\$8,769,200	\$16.02	\$140,482.58	\$8,769,200	\$18.74	\$164,334.81	\$164,334.81	\$23,852.22	\$0.00	17%	17%
Northborough	2013	\$6,521,500	\$95,816.66	\$6,341,275	\$15.49	\$98,226.35	\$6,341,275	\$16.11	\$102,157.94	\$102,157.94	\$3,931.59	\$0.00	4%	4%
Oakham	2014	\$10,377,700	\$113,324.48	\$9,807,497	\$11.34	\$113,324.48	\$9,807,497	\$12.38	\$121,416.81	\$121,416.81	\$8,092.33	\$0.00	7%	9%
Orange	2014	\$172,100	\$3,343.10	\$201,635	\$17.69	\$3,566.91	\$201,635	\$18.80	\$3,790.73	\$3,790.73	\$223.81	\$0.00	6%	6%
Pelham	2012	\$16,873,300	\$309,456.32	\$16,873,300	\$19.64	\$331,391.61	\$15,756,432	\$20.03	\$315,601.33	\$331,391.61	\$0.00	\$15,790.28	0%	2%
Pelham - Annexed Lands	2012	\$1,524,700	\$36,615.14	\$1,524,700	\$19.64	\$36,615.14	\$1,864,315	\$20.03	\$37,342.22	\$37,342.22	\$727.08	\$0.00	2%	2%
Petersham	2013	\$14,306,400	\$259,860.64	\$18,338,789	\$15.51	\$284,434.62	\$18,338,789	\$16.18	\$296,721.61	\$296,721.61	\$12,286.99	\$0.00	4%	4%
Petersham - Annexed Lands	2013	\$8,729,600	\$178,049.62	\$12,565,252	\$15.51	\$194,887.06	\$12,565,252	\$16.18	\$203,305.78	\$203,305.78	\$8,418.72	\$0.00	4%	4%
Phillipston	2013	\$171,600	\$10,465.76	\$765,600	\$14.62	\$11,193.08	\$765,600	\$15.56	\$11,912.74	\$11,912.74	\$719.66	\$0.00	6%	6%
Princeton	2012	\$15,161,200	\$240,153.41	\$15,161,200	\$16.84	\$255,314.61	\$14,260,891	\$17.50	\$249,565.60	\$255,314.61	\$0.00	\$5,749.01	0%	4%
Rutland	2014	\$30,147,200	\$426,281.41	\$27,546,098	\$15.30	\$426,281.41	\$27,546,098	\$16.66	\$458,917.99	\$458,917.99	\$32,636.58	\$0.00	8%	9%
Shutesbury	2012	\$4,976,100	\$273,291.67	\$4,976,100	\$19.56	\$273,291.67	\$13,971,967	\$20.27	\$283,211.76	\$283,211.76	\$9,920.10	\$0.00	4%	4%
Southborough	2013	\$14,820,000	\$267,656.61	\$17,179,500	\$16.14	\$277,277.13	\$17,179,500	\$16.54	\$284,148.93	\$284,148.93	\$6,871.80	\$0.00	2%	2%
Sterling	2013	\$39,679,600	\$567,021.48	\$35,945,832	\$15.65	\$567,021.48	\$35,945,832	\$16.35	\$587,714.36	\$587,714.36	\$20,692.88	\$0.00	4%	4%
Templeton	2013	\$92,100	\$1,082.18	\$54,242	\$14.60	\$1,082.18	\$54,242	\$14.12	\$765.90	\$1,082.18	\$0.00	\$316.28	0%	-3%
Ware	2012	\$10,073,800	\$171,506.93	\$10,073,800	\$15.89	\$171,506.93	\$10,793,388	\$16.94	\$182,839.99	\$182,839.99	\$11,333.06	\$0.00	7%	7%
Ware - Annexed Lands	2012	\$6,789,500	\$148,716.91	\$6,789,500	\$15.89	\$148,716.91	\$9,359,151	\$16.94	\$158,544.02	\$158,544.02	\$9,827.11	\$0.00	7%	7%
Wendell	2012	\$1,208,800	\$21,746.31	\$1,208,800	\$18.94	\$22,894.67	\$1,148,169	\$17.71	\$20,334.06	\$22,894.67	\$0.00	\$2,560.61	0%	-6%
West Boylston	2014	\$18,179,100	\$602,756.18	\$36,798,302	\$16.81	\$618,579.45	\$36,798,302	\$17.45	\$642,130.36	\$642,130.36	\$23,550.91	\$0.00	4%	4%
Westborough	2013	\$2,539,700	\$46,324.13	\$2,539,700	\$19.21	\$48,787.64	\$2,539,700	\$18.97	\$48,178.11	\$48,787.64	\$0.00	\$609.53	0%	-1%
<b>TOTAL</b>		\$375,252,057	\$7,000,365.96	\$421,893,317		\$7,321,280.58	\$430,450,354		\$7,540,283.14	\$7,653,312.32	\$332,031.74	\$113,029.18	4.5%	

The Department of Revenue revalues state property once every four years. FY2010 PILOT was calculated using the figure derived by DOR reflecting all Office of Watershed Management property as of 1/1/2009 and multiplying it by the local commercial tax rate. MGL Ch. 59, s. 5G requires that in the years between DOR revaluations, a formula be used to derive the property valuation after the local revaluation. For FY2013 PILOT calculations, if the Year of Local Revaluation was 2012, then Property Valuation is determined by the following formula: (2011 PILOT/2012 Tax Rate)\*1000. A similar equation was used in FY11 (for towns with a revaluation in FY10) and FY12 (for those towns with a revaluation in FY11). The law also states that the PILOT payment is never less than the previous year's amount.

\*North Sudbury Basin Only