



# Fiscal Year 2018 Work Plan



Photo by Clif Read

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



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**Fiscal Year 2018 Work Plan  
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# **1. Annual Work Plans**

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**Department of Conservation and Recreation  
Division of Water Supply Protection  
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**FY18 Annual Work Plan Highlights**

Fiscal Year 2018 is the fifth year in the implementation schedule for the *2013 DCR Watershed System Watershed Protection Plan*. Land protection efforts will continue through purchase in fee and of Watershed Preservation Restrictions. Successful implementation of the gull harassment program enables DCR to meet source water quality standards. The Watershed Protection Act provides the ability to review and comment on projects in proximity of critical water resource areas. Comprehensive emergency response planning is kept up to date. Public access plans and regulations for each watershed are successfully enforced by Watershed Rangers.

**Wachusett/Sudbury Region**

- Develop 5-year Watershed Protection Plan Update and submit to DEP for approval
- Continue acquisition of critical parcels through fee or Watershed Preservation Restriction.
- Finalize and begin implementation of the system-wide *Comprehensive Land Management Plan*.
- Continue forestry operations. Active forest lots will be monitored by Foresters and Environmental Quality staff to ensure there are no short-term water quality issues caused by the work. Continue a long-term water quality monitoring study to investigate impact of silviculture on tributary water quality that began in FY14.
- Maintain lands around the Wachusett Reservoir including mowing of dikes to include expanded areas that are maintained per federal and state dam standards but are available for nesting birds as well. Monitor bluff erosion along Wachusett Reservoir.
- Continue efforts to manage wildlife in the watershed. Conduct the bird control program, including an expanded pilot program of full-reservoir harassment. Pursue measures to reduce food sources and the overall gull population, such as broadening efforts to eliminate public feeding of gulls and working with wastewater treatment plants. Continue analysis of collected gull fecal samples for the presence of *Cryptosporidium* and other potential pathogens. Continue efforts to identify sources of water contamination using genetic microbial source tracking.

- Continue to maintain Ranger presence to monitor and control public access. Enhance enforcement of rules and regulations through targeted patrols and the use of citations. Continue work on illegal activities such as off-road mountain biking in unauthorized areas. Issue written warnings and/or non-criminal citations for repeat offenders and serious violations.
- Continue to implement the Wachusett Internal Road Plan, including routine maintenance and continued upgrades to higher priority roads.
- Monitor and maintain major dams in the system, as well as smaller watershed dams.
- Monitor and analyze water quality, including sampling of 19 tributaries for bacteria, turbidity, temperature, and specific conductance. Continue monthly sampling for nutrients and Total Suspended Solids at 10 tributaries. Continue weekly or more frequent sampling of the reservoir for plankton, pH, temperature, and dissolved oxygen. Conduct extensive hydrologic monitoring (stream flow, groundwater, precipitation, and snow pack) by staff and in cooperation with U.S. Geological Service. Monitor watershed activities in order to ensure compliance with 313 CMR 11.09. Track activities in EQ database.
- Provide automated monthly water quality and quantity reports using EQ water quality and hydrology database.
- Continue efforts in concert with MWRA to control aquatic invasive species, including the DASH (Diver Assisted Suction Harvest) removal of invasive plants in the Stillwater basin. Expand monitoring of watershed ponds and streams for presence of aquatic invasive species.
- Provide consultant services and DCR oversight and assistance to MassDOT for construction of the Phase II Direct Discharge projects of Beaman Street Bridge and Route 140 South Bay.
- Work with watershed communities to implement NPDES Stormwater MS4 requirements, including mapping storm drainage and monitoring outfalls to ensure there are no illicit discharges.
- Improve and update GIS datalayers, including storm drain layer connectivity which will provide staff the ability to determine stormwater routing to receiving waters throughout the system.
- Continue work with MWRA on preparedness for potential railroad spills, including implementing recommendations from Railroad Hazmat Release Drill.
- Complete several facility projects underway including the in-house construction of a new Clinton Labor Crew Headquarters and a contracted project to add a new larger bay to the Clinton Maintenance Garage.

## Quabbin/Ware Region

- Develop 5-year Watershed Protection Plan Update and submit to DEP for approval.
- Work on Ware River Public Access Plan Update.
- Continue acquisition of critical parcels through fee or Watershed Preservation Restriction. Continue on Q2W project.
- Finalize and begin implementation of the system-wide *Comprehensive Land Management Plan*.
- Continue forestry operations. Active forest lots will be monitored by Foresters and Environmental Quality staff to ensure there are no short-term water quality issues caused by the work. Continue a long-term water quality monitoring study to investigate impact of silviculture on tributary water quality that began in FY15.
- Maintain lands around the Quabbin Reservoir, including mowing and monitoring of dam and dike.
- Continue efforts to manage wildlife in the watershed. Conduct the Quabbin Gull Harassment program. Pursue measures to reduce food sources and the overall gull population outside the watershed, such as broadening efforts to eliminate public feeding of gulls and working with wastewater treatment plants. Continue analysis of collected gull fecal samples for the presence of *Cryptosporidium* and other potential pathogens. Purchase new boat for Gull Operations and Water Quality sampling programs.
- Continue to maintain Watershed Ranger presence to monitor and control public access in both the Quabbin and Ware River watersheds. Enhance enforcement of rules and regulations through targeted patrols and the use of citations. Issue written warnings and/or non-criminal citations for repeat offenders and serious violations.
- Monitor and maintain major dams in the system, as well as smaller watershed dams.
- Monitor and analyze water quality, including biweekly sampling of tributaries for bacteria, turbidity, temperature, pH, dissolved oxygen, and specific conductance. Continue biweekly sampling for alkalinity, nutrients and for Environmental Quality Assessments and quarterly sampling for nutrients at core sites. Continue at least monthly sampling of the reservoir for plankton, pH, temperature, dissolved oxygen, specific conductance, bacteria, turbidity, and alkalinity; reservoir sampling for nutrients is completed quarterly. Conduct hydrologic monitoring (monthly groundwater measurements) by staff, in cooperation with U.S. Geological Service.
- Continue monitoring of watershed ponds and streams for presence of aquatic invasive species.

- Continue involvement with MWRA work on Quabbin Screen Replacement Project.
- Implement and oversee construction of the new Quabbin Maintenance facility, including in-house construction of the septic system and contractor construction of the building.
- Work closely with MWRA and others on Quabbin Administrative Complex capital improvement projects.

**Wachusett/Sudbury Region  
FY2018 Work Plan**

Key to Abbreviations

**Wachusett/Sudbury Staff:** A=Administration; CE=Civil Engineers; EP=Environmental Planning; 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

**Other DWSP Staff:** A=Administration and Finance; D= Director; NR= Natural Resources; GIS=Geographic Information Services; P= Environmental Planning

<b>Task</b>	<b>Task Description</b>	<b>Lead</b>	<b>Additional Staff</b>	<b>Product</b>	<b>Due Date</b>
<b>A. Land Procurement</b>					
1.	Coordinate due diligence and other tasks/services from DCR and private contractors to complete survey, appraisal, title, engineering, and environmental assessments for proposed acquisitions. Negotiate WPR language, purchase prices and conditions of sale with sellers of property.	NR	GIS-W, GIS, P, A	Protected land	4 <sup>th</sup> Quarter
2.	Develop individual parcel presentation materials and meet with MWRA Board for approval.	NR	P, GIS-W	Protected land	As needed
3.	Convene LAP meetings to review parcels and prioritize land purchases.	NR		LAP Recommendations	As needed
4.	Work with the North Quabbin Regional Landscape Partnership to acquire land and WPRs with a Quabbin to Wachusett (Q2W) Forest Legacy Grant.	NR		Protected land	Ongoing
5.	Continue to solicit and work with landowners in donating conservation interests in land and assist in advising landowners on the tax incentives available when donating conservation interests.	NR		Ongoing communications	Ongoing
6.	Establish regularly scheduled land/legal meetings to address attorney assignments and project logistics.	NR		Meetings	Ongoing
<b>B. Watershed Preservation Restrictions</b>					
1.	Complete baseline inspections for all new WPRs prior to acquisition or within reasonable time after acquisition using established protocols and modern technologies. Make baseline inspection reports available to appropriate staff	NR		Report	As noted in task
2.	Monitor each WPR every three; monitor high-priority ones annually.	NR	EQ	Monitoring reports Updated hydrology layer	Ongoing
3.	Post WPR boundaries, as time allows.	NR		Posted boundaries	Ongoing



<b>Task</b>	<b>Task Description</b>	<b>Lead</b>	<b>Additional Staff</b>	<b>Product</b>	<b>Due Date</b>
4.	Track changes in land ownership and meet with successor landowners as necessary.	NR		List of landowners and meetings	Ongoing
5.	Write and distribute Watershed Currents, the WPR Landowner newsletter, twice a year.	NR	P	Newsletter	Twice annually
6.	Convene WPR Working Group as needed and confer with legal to respond to enforcement issues and requests to exercise reserved rights.	NR	EQ	Issue resolution and reserved rights decisions	As needed
7.	Maintain an accurate GIS layer and Excel database of WPRs and distribute to appropriate staff.	NR		Excel spreadsheet and GIS layer	Ongoing
8.	Participate in EOEEA-wide stewardship database planning efforts as necessary.	NR		Statewide database	As needed
9.	Continue to implement WPR records procedure with DCR records manager.	NR		Securely stored records	Ongoing
<b>C. Land Management</b>					
1.	Complete and implement the system-wide Comprehensive Land Management Plan (CLMP).	NR, F	RD, P, EQ, GIS, NR	Annual Review	4 <sup>th</sup> Quarter
2.	Conduct periodic reviews and monitoring of land management activities to assure compliance and consistency with Land Management Plan.	NR	F, EQ	Review memo	As needed
3.	Prepare annual summaries of proposed forestry lots for next fiscal year.	F	RD	Lot Summaries	4 <sup>th</sup> Quarter
4.	Review lots to ensure consistency with aspects of the CLMP, including wildlife, forestry objectives, and environmental quality.	NR	EQ, RD	Annual lot reviews, comments	As needed
5.	Hold public meeting(s) on proposed forestry lots. Accept public comment.	RD	F	Meeting minutes	Spring
6.	Prepare, sell and supervise forest management operations in the Wachusett and Sudbury watersheds consistent with the CLMP. Initiate sale of harvest in one of two long-term study subbasins.	F	RD	Annual statistics on harvest area, inspection reports	4 <sup>th</sup> Quarter
7.	Monitor water quality at active logging sites to measure effectiveness of DWSP's Conservation Management Practices (CMPs).	EQ		Water quality data in Forestry Database	Ongoing
8.	Conduct a regeneration survey on DWSP land in the Sudbury watershed	F		Summary report	4 <sup>th</sup> Quarter
9.	Implement restrictions and recommendations by NHESP for forest management operations in habitat of rare plants or animals.	F	NR	Cutting plans and forestry database	Ongoing

<b>Task</b>	<b>Task Description</b>	<b>Lead</b>	<b>Additional Staff</b>	<b>Product</b>	<b>Due Date</b>
10.	Continue work with DCR Asian Longhorned Beetle Program and USDA to oversee beetle eradication in watershed areas.	F	EQ, RD	Meetings, cutting plans	Ongoing
11.	Identify and implement terrestrial invasive management projects. Respond as needed to newly discovered and controllable populations of terrestrial invasive species.	F	NR, EQ, RD	Completed projects	Ongoing
12.	Conduct annual invasive species control on identified priority areas as needed.	NR	WM	Contract, contract work	Annual Report
13.	Inspect all DCR fields with agricultural permits.	F	EQ, RD	Inspection reports	2 <sup>nd</sup> Quarter
14.	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	F	Field notes, reports	Ongoing
15.	Continue boundary line maintenance.	F	CE, RD	Update GIS layers and encroachment database	Ongoing
16.	Seek to resolve known encroachments. Incorporate newly found encroachments into the process.	WR	F, RD	Update encroachment database	Ongoing
17.	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	CE, WM, WR	Update relevant databases and GIS layers	Ongoing
18.	Pursue final disposition of lands surrounding Framingham Reservoirs 1 and 2.	D	RD, P	Disposed property	Ongoing
19.	Maintain DWSP wildlife fields through regular mowing; keep accurate mowing records.	WM	F	Maintained fields	Ongoing
20.	Continue reservoir bluff erosion monitoring; evaluate measures taken to reduce and/or mitigate erosion.	EQ	WM, F, CE, RD	Report with recommendations	4 <sup>th</sup> Quarter
21.	Identify DWSP areas that would benefit from habitat restoration, invasive species control, or periodic maintenance using mulching machine.	NR	WM	Acres of habitat restored	Ongoing
22.	If available, use UAS (unmanned aerial systems) to document forest conditions, map openings, identify invasive plant populations or other activities.	NR	F, WM	Updated forest data	Ongoing
23.	Maintain deer exclosures and sample vegetation periodically to assess impacts of herbivore browsing.	NR	F	Report	Ongoing

Task	Task Description	Lead	Additional Staff	Product	Due Date
<b>D. Wildlife Management</b>					
1.	Conduct program of observation and active harassment of gulls, geese, and other waterfowl.	EQ	All available staff	Birds are moved out of control zone.	Ongoing
2.	Expand full reservoir harassment program, if funding available, to prevent birds from roosting on the reservoir.	EQ	NR, all available staff	No birds are allowed to roost on the reservoir	4 <sup>th</sup> Quarter
3.	Produce weekly report during active Bird Harassment Program season.	EQ		Weekly report	Ongoing during harassment season
4.	Observe and document the nocturnal roost of gulls on the reservoir weekly during the months of September- March.	NR		Data used to guide harassment program	Ongoing during harassment season
5.	Control Canada Geese populations by treating eggs during nesting to prevent hatching.	NR	WM	Annual report	Ongoing
6.	Monitor geese activity on the North and South Dikes. Implement control activities as needed, including coyote decoys, habitat management practices or harassment to limit goose presence.	NR	EQ, WM	Limited number of geese on dikes	As needed
7.	Monitor area landfills for feeding gulls. Work cooperatively with landfill operators to ensure DEP landfill regulations are being followed.	NR		Field reports	As needed
8.	Monitor waste water treatment plants in Massachusetts that have wires installed to prevent feeding to make sure they function and continue to exclude gulls. Identify other wastewater treatment plants in MA with gulls and work to install wires at those plants.	NR	WM	Controlled treatment plants	As needed
9.	Identify parking lots in MA where food is available and work to prevent feeding through educational signage, interaction and enforcement.	NR		Controlled parking lots	As needed
10.	Investigate using social marketing techniques to influence people feeding gulls.	NR			
11.	Work with cities and municipalities in MA to enact regulations to make feeding gulls illegal. Work cooperatively with these communities to educate feeders and/or enforce feeding regulations.	NR		Reduction in feeding of gulls	Ongoing
12.	Continue to identify alternative food sources for gulls in MA and work to eliminate their presence.	NR		Food sources eliminated	As needed
13.	Work with MIT to identify bacteria carried by gulls in central MA.	NR		Publication	Ongoing

<b>Task</b>	<b>Task Description</b>	<b>Lead</b>	<b>Additional Staff</b>	<b>Product</b>	<b>Due Date</b>
14.	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	EQ	Field reports, annual summary	4 <sup>th</sup> Quarter
15.	Analyze all aquatic mammals removed from Pathogen Control Zone for the presence of <i>Giardia</i> and <i>Cryptosporidium</i> by sending stool samples to a private lab for analysis.	NR		Summary report	4 <sup>th</sup> Quarter
16.	Use genetic markers to assist in identifying contamination sources in water samples.	NR	EQ	Sample identification	Ongoing
17.	Respond to beaver complaints from citizens affected by beaver on DWSP property; provide assistance as time allows.	NR	EQ	Assistance to homeowners	Ongoing
18.	Respond to beaver caused flooding issues on DWSP property; assess situation and take appropriate actions.	NR	EQ	Field reports	Ongoing
19.	Respond to problems of burrowing animals on dams and dikes; take appropriate action.	NR	CE, WM	Field report	Ongoing
20.	Continue long-term wildlife resource monitoring program to document wildlife response to forest management.	NR		Data base, Report	Ongoing
21.	Research and manage for common loons on DWSP water bodies in Wachusett watershed; provide nesting platforms, capture and sample birds for contaminants.	NR		Annual Report	4 <sup>th</sup> Quarter
22.	Work with MA Department of Fisheries and Wildlife (DFW) to survey for and document breeding bald eagles on the reservoir.	NR		Field Report	4 <sup>th</sup> Quarter
23.	Work with DFW to collect and tag spawning Lake Trout in the reservoir.	EQ		Field Report	4 <sup>th</sup> Quarter
24.	Conduct pellet surveys on DWSP lands in Wachusett/Sudbury to assess populations of deer and moose.	NR	F	Annual report	4 <sup>th</sup> Quarter
25.	Develop and implement a white-tailed deer management plan for DWSP lands at Wachusett currently not hunted.	NR	F, RD	Deer management plan; annual report	4 <sup>th</sup> Quarter
<b>E. Public Access Management</b>					
1.	Proactively patrol watershed lands to ensure compliance with DCR regulations and policies. Tally visitor contact and produce quarterly and annual summary reports. Conduct trend analysis on visitor statistics and rule violations.	WR		Reports	Ongoing
2.	Continue to cooperate with state, environmental, and local police for help with enforcement when required.	WR	RD	Enforcement Resolution	Ongoing

<b>Task</b>	<b>Task Description</b>	<b>Lead</b>	<b>Additional Staff</b>	<b>Product</b>	<b>Due Date</b>
3.	Continue to use DCR social media accounts for advertisement of interpretive programs, including general or emergency information (such as closings).	WR	IS	Press documents	Ongoing
4.	Develop public outreach regarding allowed uses on DCR Wachusett lands.	WR	RD	Plan, signage, outreach	2 <sup>nd</sup> quarter
5.	Continue updates and improvements to access points with signs, gates and improved parking areas. Conduct regular inspections of gates and access barriers.	WR	WM, RD	Signs, barriers	Ongoing
6.	Continue to implement Wachusett and Sudbury Public Access Plan policies, as necessary	WR	RD	Compliance with DWSP regulations	Ongoing
7.	Continue to conduct “special operations” such as night operations, ATV, and snowmobile operations, as needed.	WR	RD	Compliance with DWSP regulations	Ongoing
8.	Enforce rules and regulations of 313 CMR 11.09 through the use of citations. Issue written warnings and/or non-criminal citations for repeat offenders and serious violations.	WR		Compliance with DWSP regulations. Update database.	Ongoing
<b>F. Watershed Security</b>					
1.	Maintain an active presence in the watershed. Monitor watershed lands, roadways, and railways for unusual or suspicious activities; provide appropriate response.	WR	RD	Ranger logs	Ongoing
2.	Continue ongoing communication and coordination with local, state, and federal emergency responders; coordinate with MWRA on all security issues.	WR	RD	Ranger logs	Ongoing
3.	Continue program of enhancing security infrastructure around Wachusett Reservoir.	RD	CE, WR	Implementation	Ongoing
<b>G. Infrastructure</b>					
1.	Assess Wachusett and Sudbury dams, spillways, and dikes monthly. Forward all significant issues to the Regional Director and the MWRA. Coordinate with MWRA on biannual dam safety inspections for compliance with 302 CMR 10.00.	CE	RD	Inspection logs and reports, summary reports	Monthly
2.	Assess DWSP smaller dams semi-annually and develop maintenance plans.	CE	WM	Plans, summary reports	Monthly
3.	Continue maintenance plans for the improvement of the Wachusett and Sudbury dams and dike structures. Monitor conditions and maintenance activities and revise plans, as necessary.	CE	WM	Inspection reports, summary reports	Ongoing
4.	Oversee the implementation of Wachusett Watershed-wide Road Management Plan.	CE	EQ, GIS-W, WM	Road Projects	On-going

<b>Task</b>	<b>Task Description</b>	<b>Lead</b>	<b>Additional Staff</b>	<b>Product</b>	<b>Due Date</b>
5.	Conduct annual inspection/evaluation of Wachusett internal roads, access points, and shoreline; update GIS data layers as needed and develop list of maintenance and repairs needs.	CE	EQ	Maps	4 <sup>th</sup> Quarter
6.	Develop annual plan for larger internal road repair/reconstruction projects.	CE	RD, F, WM, EQ	Plan	3 <sup>rd</sup> Quarter
7.	Monitor the stability of River Road in Clinton.	CE		Report	4 <sup>th</sup> Quarter
8.	Conduct projects using in-house staff and resources. Provide oversight to ensure protection of water resources.	WM	CE, EQ, F	Projects	Ongoing
9.	Oversee regular maintenance of all DWSP BMPs. Monitor construction of stormwater treatment basins at Causeway and develop Operation & Maintenance plan.	CE	EQ, WM	Effective stormwater treatment; maintenance log	Ongoing
10.	Oversee the implementation of Road Management Plan for Sudbury watershed internal roads.	CE	EQ	Inspections, projects	4 <sup>th</sup> Quarter
11.	Provide supervision, coordination, oversight, and technical support or assistance for all engineering, construction, and renovation work in Section.	CE	RD	Inspections, construction and maintenance records	Ongoing
12.	Maintain records regarding reservoir and facility construction and maintenance operations.	CE		Miscellaneous records	Ongoing
13.	Implement annual Major Projects including: <ul style="list-style-type: none"> <li>• Reservoir 2 Toe-drain repair</li> <li>• Clinton Crew Headquarters construction</li> <li>• Wilson St Garage upgrades</li> <li>• Demolition projects</li> </ul>	RD	CE, WM, EQ	Improvements	4 <sup>th</sup> Quarter
<b>H. Watershed Protection Act</b>					
1.	Continue implementation of the WsPA. Review and track all WsPA applications and activity in database. Issue decisions within timeframes as required by the regulations.	EP	RD, GIS-W, P	WsPA Decisions	Ongoing. Decisions made within timeline set by WsPA.
2.	Convene the Watershed Protection Act Working Group regularly to discuss policy and address specific problems related to the WsPA	P	EP, R, D	Coordination, decisions, meeting minutes	As needed
3.	Review permits for watershed towns on a monthly basis with letters sent to property owners of affected parcels.	EP	RD	Letters to Property Owners of Affected Parcels	Ongoing

<b>Task</b>	<b>Task Description</b>	<b>Lead</b>	<b>Additional Staff</b>	<b>Product</b>	<b>Due Date</b>
4.	Review property transfers for seven towns on a monthly basis with letters sent to new property owners of affected parcels informing them of the WsPA and how they may obtain additional information.	EP	RD	Letters to Property Owners of Affected Parcels	Monthly
5.	Review previous files on an ongoing basis, including contact with owners and site visits as needed.	EP	RD	Follow-up Letters	Ongoing
6.	Provide Town Halls with WsPA maps, brochures and applications on a regular basis.	EP		Inventory of needs and inventory of information that was distributed.	Visit each town gets visited twice yearly.
7.	Review previous files in database on an ongoing basis including contact with owners and site visits as needed	EP	EQ	Document inspections/correspondence in database	ongoing
<b>I. Interpretive Services</b>					
1.	Review Interpretive Plan to reflect current issues and resource needs for watershed education.	IS	WR	Plan rewritten	December 2016
2.	Inspect kiosks and brochure boxes quarterly, submit work orders, and update as necessary.	WR	IS, WM	Updates on Kiosks at least quarterly	Quarterly
3.	Analyze and update current brochures. Determine need for new brochure topics and develop as needed.	EQ	WR, EQ	Brochures	Ongoing
4.	Partner with other organizations on watershed programs	IS	WR	Programs	Ongoing
5.	Continue watershed, wildlife, forests, and history educational programs in the local school districts.	IS	WR	School Programs	Ongoing
6.	Continue to provide educational materials and support for Mass Envirothon.	EQ	IS	School Programs	Ongoing
7.	Continue education efforts through visitor contacts and formal presentations.	WR	IS, EQ	Programs, visitor contacts	Ongoing
8.	Publish bi-annual Downstream newsletter.	NR	P, IS, EQ, EP, WR, RD	Newsletter	2 <sup>nd</sup> Quarter and 4 <sup>th</sup> Quarter
9.	Maintain and update website.	P	IS, NR, EQ, WR, RD	Website	Ongoing
<b>J. Water Quality and Quantity Monitoring</b>					
1.	Continue routine sampling of 19 tributaries for bacteria, turbidity, temperature, and specific conductance. Continue monthly sampling for nutrients and TSS at 10 tributaries.	EQ		WQ data entered into database	Ongoing

<b>Task</b>	<b>Task Description</b>	<b>Lead</b>	<b>Additional Staff</b>	<b>Product</b>	<b>Due Date</b>
2.	Continue weekly or more frequent sampling of the reservoir for plankton, pH, temperature, and dissolved oxygen. Conduct reservoir transect sampling, as necessary, in conjunction with gull harassment program.	EQ		WQ data entered into Aquarius software	Ongoing
3.	Produce annual water quality summary and sampling plan.	EQ		Annual WQ report by March 15	3 <sup>rd</sup> Quarter
4.	Maintain continuous stream flow gages in all four watersheds through USGS contract. Coordinate with USGS to ensure proper performance of all gages, and accurate and timely reporting of data. Import gage data to Aquarius.	EQ		Instantaneous hydrology information	Ongoing
5.	Augment hydrologic data in Wachusett watershed through establishment of additional stream gages, rain gages, and snow pack measurements. Enter all data in Aquarius and maintain accurate rating curves.	EQ	CE	Rating curves, data in Aquarius	Ongoing
6.	Maintain gages and gage sites on a regular basis, including removal of sediment and debris	EQ	WM		
7.	Determine needs for stormwater sampling based on analysis of historic data. Sample storm events as determined necessary.	EQ	RD, D	WQ data entered into ACCESS database annual nutrient loading calculations	Ongoing
8.	Continue to work with UMass to use results of water quality models to help to make watershed management decisions.	EQ		Input on DCR projects and issues; data summaries	Ongoing
9.	Identify and outline system-wide water quality issues. Bring to ResOPs and/or WQSAT for discussion and integrate into water quality modeling work with UMass.	EQ		Issues	2 <sup>nd</sup> Quarter
10.	Continue to implement long term monitoring in paired sub-basins in order to assess impact of forestry on water quality. Increase monitoring frequency once harvesting is initiated (also see C.6)	EQ	F	annual report summarizing data and activities	Ongoing
11.	Continue to work with MWRA, Quabbin EQ, NEIWPC and other stakeholders to characterize cyanobacteria and cyanotoxins in the reservoir.	EQ		Info in annual WQ report	Ongoing
12.	Begin data compilation/interpretation for 30-Year Water Quality Report (1988-2017). Include assessment of impacts of climate change on water quality and hydrology.	EQ		Ongoing – completion anticipated in FY19	



<b>Task</b>	<b>Task Description</b>	<b>Lead</b>	<b>Additional Staff</b>	<b>Product</b>	<b>Due Date</b>
<b>K. Watershed Monitoring and Surveillance</b>					
1.	Continue to review local records and conduct watershed surveillance to identify potential issues in the watershed that could impact water quality. Work with local boards and land owners when problems are identified. Document all work in EQ database.	EQ		Document actions in EQ database; compliance with regulations	Ongoing
2.	Review and analyze EQ database records. Compare with other data (water quality, GIS etc.) to evaluate watershed management programs. Develop reports as required	EQ	GIS-W,	Data, analysis, maps, reports	Ongoing
3.	Review files in EQ database and resolve any inconsistencies with paper records. Maintain records of all water quality related issues and EQ actions taken in EQ database. Make improvements to structure and data as needed	EQ		Corrected files, accurate useful data	Ongoing
4.	Re-examine files in EQ database to resolve inconsistencies with paper records.	EQ	RD, EP	Database corrections	Ongoing
<b>L. Aquatic Invasive Species</b>					
1.	Inspect reservoir, lakes, ponds and tributaries for presence of AIS.	EQ		Annual summary in water quality report	3 <sup>rd</sup> Quarter
2.	Conduct surveys, gather information, and make recommendations for management actions on an individual basis if/when new infestations are found.	EQ		Annual summary in water quality report	3 <sup>rd</sup> Quarter
3.	Conduct aquatic vegetation surveys prior to and after aquatic herbicide treatments planned for the Lily Ponds and South Meadow Pond complex.	EQ		Field report	4 <sup>th</sup> Quarter
4.	Investigate physical methods to prevent the spread of pioneering stands of Phragmites along the reservoir shoreline.	EQ	WM	Annual summary in water quality report	3 <sup>rd</sup> Quarter
5.	Assist MWRA with removal efforts in the reservoir.	EQ	RD	Annual summary in water quality report	3 <sup>rd</sup> Quarter
6.	Perform aquatic vegetation survey work prior to Thomas, Oakdale, and cove vegetation management. Provide report to MWRA and contractors to guide 2017 plant removal efforts.	EQ		Field report	4 <sup>th</sup> Quarter
7.	Monitor, advise, and assist contractor with any necessary removal operations.	EQ	WM	Annual summary in water quality report	3 <sup>rd</sup> Quarter
8.	Enforce the decontamination procedures for all watercraft entering the reservoir by inspecting each vessel and collecting completed decontamination certification forms.	EQ		Annual summary in water quality report	3 <sup>rd</sup> Quarter

<b>Task</b>	<b>Task Description</b>	<b>Lead</b>	<b>Additional Staff</b>	<b>Product</b>	<b>Due Date</b>
9.	Continue education efforts through formal presentations and visitor contacts.	EQ	WR	Annual summary in water quality report	3 <sup>rd</sup> Quarter
10.	Distribute AIS brochure.	IS	EQ	Brochure; program	Ongoing
11.	Monitor beaver activity; if necessary make recommendations to NR for removal where contributing to spread of invasive plants.	EQ	NR	Field Reports	Ongoing
12.	Research growth rates and conditions affecting growth of AIS in Wachusett Reservoir, as time allows.	EQ		Annual summary in water quality report	3 <sup>rd</sup> Quarter
<b>M. Environmental Quality Assessments</b>					
1.	Finalize Gates District and Waushacum District EQAs and use recommendations to develop tasks for FY19 Work Plan.	EQ		Final report, FY19 work plan tasks	2 <sup>nd</sup> Quarter
2.	Update status of agriculture sites, hazardous material sites, hazardous materials spills, USTs, and ASTs.	EQ		Updated info in database and EQ files	Ongoing
3.	Develop and implement outreach strategies and programs for topics identified through EQAs.	EQ		Brochures, programs	Ongoing
4.	Maintain and enhance GIS datalayers of stream and wetland network.	EQ		Updated Streams2008 and Wetlands2008 GIS datalayers.	2 <sup>nd</sup> Quarter
<b>N. Wastewater Management</b>					
1.	Provide plan review and interpretation, if requested, to Boards of Health.	EQ		Plan review, recommendations to boards, applicants	Ongoing
2.	Obtain sewer connection information from Holden and West Boylston; add to spreadsheet.	EQ		Updated spreadsheet and GIS datalayer	Ongoing
3.	Continue to provide management support, with the MWRA, of the Rutland-Holden trunk sewer and Rutland Holden Relief trunk sewer. Coordinate inspections and maintenance projects for the sewer lines. Prepare and submit quarterly bills to the user communities in a timely manner.	CE	RD, D	Quarterly bills, correspondence with towns	Quarterly
4.	Research and provide sewer management information for legal issues regarding the Trunk and Relief sewer lines.	CE	RD	Notes, information	Ongoing
5.	Evaluate and manage new trunk line connections. Monitor trunk line for encroachments; resolve any problems.	CE	RD	Permits, regular inspections	Quarterly

<b>Task</b>	<b>Task Description</b>	<b>Lead</b>	<b>Additional Staff</b>	<b>Product</b>	<b>Due Date</b>
6.	Develop and initiate a flow study within key segments of the Rutland-Holden trunk and relief sewers. The purpose is to identify areas where flows are high and need to be monitored to reduce the risk of sanitary sewer overflows.	CE	RD	Report	4 <sup>th</sup> Quarter
7.	Document septic systems with file in database and with linked electronic plan/locus map.	EQ		Septic system datalayer	Ongoing
<b>O. Stormwater Management</b>					
1.	Coordinate with MassDOT for construction of drainage improvements to Beaman St. Bridge and improvements to Rt. 140 along South Bay (MassDOT 608043).	EQ	CE, RD,	Completed project	4 <sup>th</sup> Quarter
2.	Conduct site inspection as needed to insure proper construction practices for MassDOT 608043 (South Bay and Beaman St. Bridge)	CE		Project constructed as designed	4 <sup>th</sup> Quarter
3.	Continue to work with landowners, towns and DCR staff for improved maintenance and performance of watershed BMPs.	EQ	CE, RD	Document actions in SM database	4 <sup>th</sup> Quarter
4.	Work with watershed towns to ensure compliance with MS4 requirements.	EQ		MS4 permit conditions met	4 <sup>th</sup> Quarter
5.	Maintain and enhance GIS datalayer of stormwater and drainage conveyance structures datalayer.	EQ	GIS-W	Updated Drainage Structures 2016 GIS datalayer.	Ongoing
6.	Continue regular inspection of all construction sites greater than one acre.	EQ		ESC maintained and working as designed	Ongoing
7.	Continue to monitor stream erosion along Gates Brook.	EQ		Bank erosion rates at 4 locations	Ongoing
8.	Continue work with local DPWs to identify locations of concern, evaluate options for BMP installation, and ways to cooperatively implement recommendations.	EQ		Installed BMPs	4 <sup>th</sup> Quarter
9.	Continue to work with watershed communities on review and update of local stormwater regulations to comply with MS4 permit.	EP	EQ	Annual report summarizing status	2 <sup>nd</sup> Quarter
<b>P. Emergency Response</b>					
1.	Coordinate Emergency Spill Response training with MWRA and local responders.	CE	WR	Trainings	Ongoing
2.	Update contact list and information in Comprehensive Emergency Management Plan, EAPs, and other emergency response plans.	CE	WR	Plan	Ongoing
3.	Organize and maintain emergency response supplies and services.	CE	WR	Inventory	Ongoing

<b>Task</b>	<b>Task Description</b>	<b>Lead</b>	<b>Additional Staff</b>	<b>Product</b>	<b>Due Date</b>
4.	Develop and implement Comprehensive Exercise and Evaluation Program incorporating Wachusett Reservoir Railroad Incident Exercise After Action Report/Improvement Plan (AAR/IP) recommendations to enhance Emergency Response training.	CE	WR	Trainings	4th Quarter
5.	Provide ICS and Emergency Response training to appropriate staff.	CE	WR	Classes	4 <sup>th</sup> Quarter
6.	Evaluate, monitor and oversee spill clean-ups that impact or threaten water resources of DWSP property. Work with appropriate local, state and federal agencies to ensure that containment, cleanup, and mitigation of the spill are proceeding in a manner that protects drinking water quality.	CE	EQ, WR, WM	Contain and cleanup releases	Ongoing
7.	Implement recommendations from Railroad Hazmat release tabletop exercise AAR/IP, including a field exercise in the fall	CE	RD, WR, EQ	Field exercise; training	2 <sup>nd</sup> Quarter
<b>Q. Support</b>					
1.	Update Watershed Protection Plan to cover FY19-FY23. Make draft available by November for FY19 budgeting.	EQ, P	All	Updated Plan	Draft – Nov 2017; Final - 4 <sup>th</sup> Quarter
2.	Prepare and submit to MWRA and the Water Supply Protection Trust Annual Work Plans, budgets, progress reports, and program goals and objectives. Track Section progress in meeting program goals.	RD	EQ, P, A, D	Completed plans, budgets and reports	Ongoing
3.	Administer the Payment in Lieu of Taxes (PILOT) program.	P	D, A	Payments to watershed communities	4 <sup>th</sup> Quarter
4.	Continue to support all staff projects and reports by providing GIS maps and training.	GIS-W		Maps, analyses, training	Ongoing
5.	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. Begin implementation of ArcGIS Online and Collector applications to selected staff.	GIS-W	GIS	Databases	Ongoing
6.	Continue to use GPS to capture and maintain BMP 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	Ongoing
7.	Continue to create parcel maps for Land Acquisition Coordinator meetings with landowners, LAP meetings, and MWRA Board.	GIS-W		Maps, analyses	Ongoing

<b>Task</b>	<b>Task Description</b>	<b>Lead</b>	<b>Additional Staff</b>	<b>Product</b>	<b>Due Date</b>
8.	Continue to support municipalities and other partners by providing GIS products and technical support.	GIS-W		Maps, analyses, training	Ongoing
9.	Operate administrative offices, including answering phones, greeting visitors, etc.	A	RD	Weekly payroll, HR forms processing	Ongoing
10.	Provide payroll assistance and personnel services for all Section employees.	A	RD	Account set-up, Invoice processing, regular finance reporting	Ongoing
11.	Provide contract administration, financial management, record-keeping, purchasing of goods and services, and other financial support services.	A	RD	Accounting and financial services	Ongoing
12.	Coordinate with EEA IT to provide local MIS support for the Section. Update IT Plan as required addressing technology needs for the coming year.	A	All Sections	Support and troubleshooting services; IT Plan	Ongoing
13.	Administer Logging Permit program, including mailings, bid openings, financial management, database management, permit and key issuance, etc.	A	F	Program administration; annual revenue report; database maintenance	Ongoing
14.	Plan and implement vehicle and equipment purchases and leases.	RD	A, WM	Vehicle purchases and leases	Annual
15.	Inspect, provide regular maintenance, and repair vehicles, boats and other motorized equipment.	WM	RD	Work completion	Ongoing
16.	Provide routine repairs and maintenance to all Wachusett facilities.	WM	RD	Work completion	Ongoing

Due Dates for FY18 Work Plan

1<sup>st</sup> Quarter: September 30, 2017

2<sup>nd</sup> Quarter: December 30, 2017

3<sup>rd</sup> Quarter: March 30, 2018

4<sup>th</sup> Quarter: June 30, 2018

## Quabbin/Ware Region FY2018 Work Plan

**Key to Work Unit Abbreviations:** 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 = GIS staff; IS = Interpretive Services; NR = Natural Resources; P = Planning (Boston); RD = Regional Director; WM = Watershed Maintenance-Regional Coordinator; WM-C = Carpentry; WM-BEL = Belchertown; WM-NS = New Salem; WM-O = Oakham; WM-Mech = Mechanics; WM-BLA = Boat Launch Areas; WR = Watershed Rangers.

**Plan Acronyms:** AIS = Aquatic Invasive Species; AST = Above-ground Storage Tank; BLA = Boat Launch Area; BMP = Best Management Practices; BoH = Board of Health; CMP = Conservation Management Practices; CVA = Chicopee Valley Aqueduct; DCAM = Division of Capital Asset Management; DCR = Department of Conservation & Recreation; DFW = Division of Fisheries & Wildlife; DWSP = Division of Water Supply Protection; EOEEA = Executive Office of Energy and Environmental Affairs; EPA = Environmental Protection Agency; EQA = Environmental Quality Assessment; GCP = General Construction Permit; GIS = Geographic Information Systems; GPS = Global Positioning System; IT = Information Technology; LAP = Land Acquisition Panel; MassDEP = Massachusetts Department of Environmental Protection; MWRA = Massachusetts Water Resources Authority; NPDES = National Pollution Discharge Elimination System; OWM = Office of Watershed Management; PAMP = Public Access Management Plan; SOP = Standard Operating Procedure; SWPPP = Stormwater Pollution Protection Plan; TIP = Terrestrial Invasive Plant; TIS = Terrestrial Invasive Species; UST = Underground Storage Tank; WPP = Watershed Protection Plan; WPR = Watershed Preservation Restriction; WsPA = Watershed Protection Act.

Task	Task Description	Lead	Additional Staff	Product	Due Date
<b>A. Land Procurement</b>					
1.	Acquire land. Coordinate due diligence and other tasks/services from DCR and private contractors to complete survey, appraisal, title, engineering, and environmental assessments for proposed acquisitions. Negotiate purchase prices and conditions of sale with sellers of property.	NR	P, GIS	Protected land	Ongoing
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	NR, EQ, CE, EP	Completed assessments	Ongoing
3.	Participate in LAP meetings to prioritize land purchases and provide input into land acquisition decisions in Quabbin/Ware Region.	ARD, RD	EQ, EP, F	Prioritized lists by region; input; advice	Ongoing
4.	Continue working with the North Quabbin Regional Landscape Partnership in pursuing a Quabbin to Wachusett (Q2W) protected land corridor and other land protection opportunities.	NR		Protected land	Ongoing
5.	Continue to solicit and work with landowners in donating conservation interests in land and assist in advising landowners on the tax incentives available when donating conservation interests.	NR		Ongoing communications	Ongoing

Task	Task Description	Lead	Additional Staff	Product	Due Date
<b>B. Watershed Preservation Restrictions</b>					
1.	Monitor each WPR every two years; monitor high-priority ones annually.	NR	EQ	28 monitoring reports; updated land ownership and hydrology layers	Ongoing
2.	Ensure all new WPRs have completed baseline documentation reports prior to acquisition or within a reasonable time of acquisition following EOEEA specifications. Baselines will be completed in-house or through appropriate contracts.	NR		WPR baseline reports	Prior to WPR acquisition
3.	Work towards resolving issues found with landowners, along with the WPR Working Group.	NR	EQ, F, EP, P	Issue resolution	Ongoing
4.	Post WPR boundaries as time allows.	NR		Posted boundaries	Ongoing
5.	Track changes in land ownership and meet with successor landowners as necessary.	NR		List of landowners and meetings	Ongoing
<b>C. Land Management</b>					
1.	Complete and begin implementation of the system-wide Comprehensive Land Management Plan (CLMP) in Quabbin/Ware Region.	F	NR, RD, P, EQ, GIS, ARD	Current Plans	Ongoing
2.	Conduct periodic reviews and monitoring of land management activities to assure compliance and consistency with land management plans. Plan and conduct an internal review of proposed logging operations for the coming year, including assessments of silviculture, water quality, wildlife, and other potential impacts/benefits. Continue monthly sampling for nutrients and suspended solids to monitor the effects of both natural and deliberate disturbances on water quantity and quality in first-order streams.	NR	F, EQ	Internal review; Review memos	As needed; 4 <sup>th</sup> Quarter
3.	Collect data and maintain datasets, GIS datalayers and related maps of rare and special plant and animal species or communities. Analyze data on forest structure, composition, and regeneration.	NR	F, ATS	Databases GIS Coverages	Ongoing
4.	Conduct TIP control on current Wildlife Habitat Incentive Program (WHIP) project on the Ware River Watershed and other identified areas as needed.	NR	WM-O	Annual field mowing and brush cutting; contract	4 <sup>th</sup> Quarter
5.	Identify areas in Quabbin/Ware Region that would benefit from habitat restoration, invasive species control, or periodic maintenance using the mulching machine.	NR	RD, ARD WM-NS, WM-O	Acres of habitat restored in Quabbin and Ware.	Ongoing

<b>Task</b>	<b>Task Description</b>	<b>Lead</b>	<b>Additional Staff</b>	<b>Product</b>	<b>Due Date</b>
6.	Prepare lot proposals for next fiscal year including data on proposed harvest areas, characteristics of stands, soils, cultural resources, wetlands, wildlife, unique features, and priority habitats. Proposals also include information on lot layout, landings, stream crossings, wetland crossings, and stonewall crossings.	F	ARD	Lot proposals	2 <sup>nd</sup> Quarter
7.	Prepare, sell, and supervise forest management operations in the Quabbin/Ware Region consistent with land management plans and approved lot proposals, including posting public information on lots and providing public tours of lots as requested.	F	ARD	Permits Timber sales	Ongoing
8.	Provide supervision and oversight of all timber harvesting operations on DWSP property to assure compliance with applicable regulations, approved BMPs/CMPs, and other contract conditions.	F	NR, ARD, EQ	Supervision and oversight of all harvesting operations	Ongoing
9.	Collect regeneration data on past harvests to monitor effects of silvicultural operations on species composition and age structure. Create photo point for select lots and take pictures annually to document forest response to harvest.	F	NR	Regeneration database, maps, and photodocumentation	Ongoing
10.	Continue to implement a GIS-based mapping system of silvicultural operations on the Quabbin and Ware River watersheds. Continue to use LIDAR data. Collect data and maintain GIS datalayers related to forest structure, composition, regeneration, forest roads, boundary information, stone walls, wetlands, and other data to guide the land management program.	F	NR, ATS	GIS datalayer of annual silvicultural operations, Databases, maps	Ongoing
11.	Continue the program of water quality monitoring for harvesting operations. Conduct periodic stream sampling at long-term forestry sites. Modify plan, as needed.	EQ	NR, ARD	Stream sampling; periodic evaluation	Ongoing
12.	Maintain and mark reservation boundaries as needed. Document and pursue resolutions of boundary encroachments.	F	NR, WR, CE, ARD, RD	Clearly marked boundaries; encroachment resolutions	Ongoing
13.	Maintain the non-silvicultural lands described in the land management plan (e.g., fields, viewsheds, gravel pits, etc.).	WM	F, NR, ARD	Acres maintained in Quabbin and Ware watersheds, plan implementation	FY18
14.	Supervise field mowing permits in Ware River Watershed to ensure compliance with permit conditions.	F	ARD	Field mowing in compliance with permit	Ongoing



<b>Task</b>	<b>Task Description</b>	<b>Lead</b>	<b>Additional Staff</b>	<b>Product</b>	<b>Due Date</b>
15.	Administer and supervise maple sugaring permits on Quabbin Reservation.	F	ARD	Compliance with permits	3 <sup>rd</sup> Quarter
16.	If available, use a UAS (unmanned aerial system) to document forest conditions, map openings, identify invasive plant populations, internal road conditions, or other activities.	NR	F, WM	Updated forest data; updated culvert and road data	Ongoing
<b>D. Wildlife Management</b>					
1.	Continue the active harassment of gulls 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. Observe and document the nocturnal roost of gulls on Quabbin Reservoir. If available, use a UAS to photograph/film the gull roost for later identification and counting.	EQ, NR	RD, ARD, other work units	Daily and annual reports; database entries; weekly reports to MWRA	Ongoing
2.	Control Canada geese populations on Quabbin Reservation by treating eggs during nesting season to prevent hatching.	NR	WM	Annual report	Ongoing
3.	Monitor area landfills and wastewater treatment plants (WWTPs) for feeding gulls. Work with landfill operators to ensure compliance with MassDEP solid waste regulations. Work with WWTPs to ensure exclusion wires are installed and maintained over sedimentation tanks to discourage gull feeding.	NR		Field reports and controlled WWTPs	As needed
4.	Continue to identify and eliminate alternative food sources, such as parking lots, for gulls in western and central Massachusetts. Work to prevent feeding through educational signage, interaction, and enforcement.	NR		Food sources eliminated, including parking lots	As needed
5.	Remove beaver and muskrat in the Aquatic Wildlife Pathogen Control Zone at Quabbin, and assist with removal of nuisance individuals in other areas when possible. Utilize habitat modifications to discourage the presence of aquatic mammals. Analyze all aquatic mammals removed from the Pathogen Control Zone at Quabbin Reservoir for the presence of <i>Giardia</i> and <i>Cryptosporidium</i> by sending fecal samples to a laboratory for analysis.	NR, WM	EQ, WM-B, WM-NS, WM-O	Field reports, annual summary	4 <sup>th</sup> Quarter As needed
6.	Respond to beaver complaints caused by beaver on DCR property; provide assistance, as time allows.	NR	EQ, WM	Assistance to state, towns, homeowners	Ongoing
7.	Respond to beaver-caused flooding issues on DWSP property; assess situations and take appropriate actions.	NR, WM	EQ, ARD	Field reports	Ongoing

<b>Task</b>	<b>Task Description</b>	<b>Lead</b>	<b>Additional Staff</b>	<b>Product</b>	<b>Due Date</b>
8.	Respond to problems of burrowing animals on dams and dikes; report problems and take appropriate action.	NR	CE, WM-B	Field reports	Ongoing
9.	Research and manage for common loons on DWSP waterbodies; provide nesting platforms, capture and sample birds for contaminants.	NR	WM-C	Annual report	4 <sup>th</sup> Quarter
10.	Work with DFW to survey and document breeding bald eagles around Quabbin Reservoir.	NR		Field report	4 <sup>th</sup> Quarter
11.	Administer the applications, permits, and orientations for the annual Quabbin Controlled Deer Hunt; analyze results of hunt.	NR	RD, WM, IS, ARD, WR	Completed orientations and scouts; annual report	2nd Quarter
12.	Oversee and operate the annual Quabbin Controlled Deer Scout and Hunt.	WM	IS, ARD, WR	Prepare scout and hunt operations	2 <sup>nd</sup> Quarter
13.	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	F	Field Notes; reports	Ongoing
14.	Continue long-term monitoring and assessment of moose populations and impacts. Work with UMass researchers on moose telemetry and exclosure studies in the Quabbin/Ware Region.	NR		Project reports	Ongoing
15.	Conduct pellet surveys on DWSP lands in the Quabbin/Ware Region to assess populations of deer and moose.	NR	F	Annual report	4 <sup>th</sup> Quarter
<b>E. Public Access Management</b>					
1.	Proactively patrol watershed lands to ensure compliance with DCR regulations and policies. Tally visitor contacts and produce quarterly and annual summary reports. Conduct trend analyses on data collected (e.g., rule violations, access permits, encounters, etc.)	WR	ARD	Reports	Ongoing
2.	Continue to cooperate with state, environmental, and local police for help with enforcement when required.	WR	ARD	Enforcement resolution	Ongoing
3.	Use Agency social media accounts for advertisement of interpretive programs, including general info or emergency info (e.g., closings).	WR	IS	Press documents	Ongoing

<b>Task</b>	<b>Task Description</b>	<b>Lead</b>	<b>Additional Staff</b>	<b>Product</b>	<b>Due Date</b>
4.	Continue public access updates and improvements with signs and gates. Conduct regular inspections of locks, signage, gates, and access barriers. Develop, install, and maintain appropriate signage throughout the watersheds, including walkway signs and signs indicating access restrictions. 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.	WR, IS	WM-M, WM-O, ARD	Signs produced and posted, as needed; fact sheets, brochures; kiosk maintenance; new kiosks	Ongoing, as needed
5.	Continue to implement Quabbin and Ware Public Access Management Plan policies. Enforce rules and regulations of CMR 313 11.09 through the use of citations. Issue written warnings and/or non-criminal citations for repeat offenders and serious violations	WR	ARD	Tracking databases; compliance with DWSP regulations	Ongoing
6.	Continue to conduct “special operations” such as night operations, ATV, and snowmobile operations, as needed.	WR	ARD	Compliance with DWSP regulations	Ongoing
7.	Operate the shoreline and boat fishing program in designated portions of Quabbin Reservoir in a manner that minimizes threats to water quality and accommodates visitors with accessibility needs. Implement the Quabbin Boat Seal program at BLAs and produce annual report.	WM- BLA	WM-C, ATS, WR, IS, ARD, EQ	BLAs opened/closed; six months of program operation; Annual Quabbin Fishing Report	April – Oct. Annual report by December 31
8.	Provide ongoing support and consultation to DCR’s Division of Parks regarding Comet Pond beach. Maintain boat ramp launch at Long Pond and boat ramp launch and parking lot at Comet Pond.	WM-O	WR, RD	Maintain ramp, parking lot, and dam; pick up trash; support and consultation	Seasonal efforts and ongoing, as needed
9.	Coordinate and/or support special programs and events, including Memorial Day services, public meetings, paraplegic hunts, and Tuesday Tea events.	IS	WM, RD, WR, ARD	Public events	Ongoing
10.	Continue to implement universal accessibility projects throughout the Quabbin/Ware Region.	WM	IS, CE	Enhanced accessibility	Ongoing
11.	Continue to control and monitor research and other public access through an internal review process and permit system. Maintain electronic databases for permit issuances, access notification, and any problems.	RD	All Region Staff	Research requests evaluated; permits issued; databases maintained; policy changes as needed	Ongoing
12.	Begin update of Ware River Public Access Management Plan	RD	All Region Staff, P	First draft of updated plan	June 2018

<b>Task</b>	<b>Task Description</b>	<b>Lead</b>	<b>Additional Staff</b>	<b>Product</b>	<b>Due Date</b>
<b>F. Watershed Security</b>					
1.	Continue regular ranger patrols to provide watershed security. Perform regular security checks at key access points and MWRA facilities. Use daily logbooks to record all encounters and violations. Produce periodic reports.	WR	RD, ARD	Daily patrols; daily logbooks and incident report	Ongoing
2.	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, WM	CE, RD	Inspection; repairs; installation	Ongoing
3.	Coordinate security monitoring and related activities at high vulnerability locations with MWRA.	RD	WR, ARD	Enhanced security	Ongoing
<b>G. Infrastructure</b>					
1.	Conduct monthly inspections and issue findings on Winsor Dam and spillway and Goodnough Dike. Implement basic maintenance activities as needed. Coordinate inspections with MWRA and consultants. Plan for or conduct dam repair work as called for in dam inspection reports.	CE	WM, WM-B, RD	Dam repair and maintenance; monthly reports filed and sent to MWRA Western Operations	Ongoing; 1 <sup>st</sup> of Month
2.	Conduct periodic inspections and issue findings on DCR's bridges and small dams in the Quabbin/Ware Region. Assure compliance with all dam safety requirements for small dams on DWSP lands, including the preparation or updating of Emergency Action Plans. Coordinate inspections with consultants.	CE	RD	Inspection reports	June or October
3.	Provide oversight and technical support or assistance for engineering, construction, and renovation work in the Quabbin/Ware Region.	CE, WM	RD	Ongoing project oversight	Ongoing
4.	Maintain records regarding reservoir and facility construction, and maintenance and repair operations. 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	IS	Plans, records	Ongoing
5.	Conduct building maintenance activities, including painting, carpentry, cleaning, and other routine maintenance.	WM	ARD, CE	Ongoing maintenance	Ongoing
6.	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	EQ, RD	Meet MassDEP requirements; monthly and annual reports	Ongoing

<b>Task</b>	<b>Task Description</b>	<b>Lead</b>	<b>Additional Staff</b>	<b>Product</b>	<b>Due Date</b>
7.	Conduct periodic inspections, maintenance, or oversight of heating systems, fuel pump operations, and fuel deliveries.	CE, WM	WM-B	Daily maintenance and operation during heating season; inspections	Ongoing
8.	Develop specifications, bid packages and contracts for facility and infrastructure projects scheduled for FY18.	CE	WM, RD, ARD	Specs, bid packages, contracts	Periodic
9.	Conduct maintenance and management activities in Quabbin Park, including roads, roadsides, parking areas, drainage structures, fields, vistas, snowplowing, and other management activities.	WM-B	ATS, NR	Maintenance and management of Quabbin Park	Ongoing
10.	Continue to conduct routine operational and maintenance activities in the Quabbin Park cemetery, coordinate with local funeral homes and other entities for burials, and provide administrative support services. Conduct Quabbin Park Cemetery business and record keeping.	WM-B	CE, ATS, ARD	Cemetery maintenance; burials; record keeping	Ongoing
11.	Conduct maintenance activities on DWSP 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 road maintenance activities.	WM – O, WM-NS	EQ, CE, ARD	Miles graded Miles mowed Miles plowed Gravel used (yards)	Ongoing
12.	Assess gravel pits and gravel resources on DWSP lands in the Quabbin/Ware Region. Develop overall management plan with one-page summaries on each known gravel pit. Annually review and monitor gravel extraction.	EQ	F, RD, ARD, WM	Gravel management plan for DWSP lands.	FY18-FY19
13.	Continue to work with the MWRA by providing support, on-site coordination, and input on planned facility upgrades to Shaft 12, CVA Intake and other reservoir structures.	RD	CE, ARD, WM, EQ	Coordination and support.	Ongoing
<b>H. Watershed Protection Act</b>					
1.	Implement the Watershed Protection Act regulations in 14 Quabbin Reservoir and Ware River Watershed towns. Review and process all WsPA applications, and track the status of applications and associated projects using an Access database. Inspect sites throughout the duration of any activity to ensure compliance. Investigate and resolve violations of WsPA regulations.	EP	P, RD, EQ, ATS	Application processing; decision issuance; field work; database management	Ongoing
2.	Continue to review or evaluate public notices, local board agendas and minutes, and information provided by local sources for additional jurisdictional activities or enforcement actions.	EP	EQ	Local notice review and interactions with contact persons in the watershed towns.	Ongoing

<b>Task</b>	<b>Task Description</b>	<b>Lead</b>	<b>Additional Staff</b>	<b>Product</b>	<b>Due Date</b>
3.	Convene Watershed Protection Act Working Group meetings.	P	RD, EQ, EP	Regular meetings	Quarterly
4.	Educate and interact with local boards and officials in the watersheds about watershed protection regulations. Ensure that local officials have an adequate supply of the current WsPA forms, brochures, guidance documents, and maps. Educate local officials, realtors, prospective buyers, land development consultants, and homeowners on WsPA-affected lands on implications of the Watershed Protection Act regulations and procedures for referring applicants to the DWSP.	P, EP	RD, EQ	Education of local boards, homeowners, consultants, etc.	Ongoing
5.	In cooperation with other sections in Region, provide technical assistance to Watershed towns that promotes public health and water quality.	EP	EQ, CE, RD,	Review of bylaws and regulations.	Ongoing
<b>I. Interpretive Services</b>					
1.	Implement the Interpretive Services Plan for the Quabbin Watershed.	IS	RD	Plan implementation or development	Ongoing
2.	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; count of visitors	Ongoing
3.	Continue established programs of public education, including school programs and field trips on DWSP properties. Expand outreach efforts in Quabbin Park. Expand the Quabbin Reservoir watershed curriculum using materials developed by MWRA, MassDEP, EPA, ProjectWild, Project Learning Tree, Project WET, and other appropriate watershed resources. Continue to support watershed school system teachers through in-service workshops and offerings for school groups.	IS		Curriculum; education materials and services	Ongoing
4.	Collaborate with other organizations and watershed communities to reach more diverse audiences. Identify specific groups and their educational needs.	IS	WR	Programs; public contacts	Ongoing
5.	Develop watershed exhibits and portable displays for use in talks and presentations, both in the Quabbin Visitor Center and in watershed communities.	IS	WM-C, WM-B	Exhibits and displays	Ongoing

<b>Task</b>	<b>Task Description</b>	<b>Lead</b>	<b>Additional Staff</b>	<b>Product</b>	<b>Due Date</b>
6.	Maintain self-guided Quabbin Park interpretive walkways 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 walkway maintenance.	IS	F	Walkway improvement; signage; brochures	Ongoing
7.	Improve the educational signage regarding drinking water protection in the Quabbin Visitor Center and in Quabbin Park.	IS	WM-C	New signs	Ongoing
8.	Contribute information related to all aspects of watershed protection program to DWSP website.	P	All Work Units	Website updates	Periodic, as needed
9.	Continue to support and participate in the Envirothon, America's leading natural resource education program for high school students.	IS	RD, ATS, WR, ARD, EQ	Participation	Ongoing
<b>J. Water Quality and Quantity Monitoring</b>					
1.	Provide environmental oversight for Regional activities to minimize adverse water quality impacts. Conduct pre-project reviews of all DWSP projects and activities within 1002wetland buffers.	EQ	RD, WR, ARD	Field reports; annual inspection	Periodic
2.	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 calcium on selected tributaries. Review water quality data and prepare annual report summarizing changes over time. Modify sampling plan as needed.	EQ	MWRA Lab	Weekly reports; database updates; annual reports; annual sample collection plans.	Ongoing
3.	Perform Shaft 8 Intake Zone Inspections prior to Diversions.	EQ	CE	Inspections	As needed
4.	Monitor plankton in Quabbin Reservoir and selected tributaries.	EQ	RD	Data collection; periodic reports	Ongoing
5.	Collect, interpret, and manage data on reservoir elevations, water transfers and releases. Share data with DWSP staff and MWRA.	CE		Data collection and yield reports	Ongoing
6.	Conduct short-term water sampling of forest harvesting operations on DWSP lands.	EQ	NR	Inspections, sample collections	Ongoing
7.	Investigate re-establishing wind monitoring station.	EQ	WM	Wind database	FY18
<b>K. Watershed Monitoring and Surveillance</b>					
1.	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. Monitor progress and pursue enforcement if needed.	EQ	RD, ARD, All Work Units	Regulation enforcement	Ongoing

<b>Task</b>	<b>Task Description</b>	<b>Lead</b>	<b>Additional Staff</b>	<b>Product</b>	<b>Due Date</b>
2.	Conduct routine inspections of the Winsor basin/CVA intake area. Inspect MWRA CVA screen washing when necessary. Report debris and aquatic organisms trapped on screens.	EQ		Routine inspection summaries; database entries	Ongoing
3.	Coordinate with other agencies to exchange information and review of projects in watershed.	EQ	P, All Work Units	Project reviews and written comments	Ongoing
4.	Monitor MassDEP databases regularly for new 21e information.	EQ		Hazardous waste database; EQA inspections and reports.	Periodic
5.	Review periodic reports on closed landfills in the watersheds. Coordinate with town and/or MassDEP to review monitoring reports.	EQ		Reports	Periodic
6.	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	P	Letter to DFA; brief field reports	Periodic
7.	Work with loggers and Utility Rights-of Way contractors to reduce the risk of introducing invasive species into the watersheds.	EQ, F		Meetings with contractors; DCR permit language to prevent invasives	Ongoing
8.	Monitor utility maintenance, repair, or replacement projects on DCR lands for water quality problems.	EQ		Meetings with contractors; permits; SOPs	Ongoing
9.	Continue to identify, map, and monitor locations of agricultural operations that could impact water quality through the EQA process.	EQ	EP	Maps, reports	Ongoing
<b>L. Aquatic Invasive Species</b>					
1.	Continue program to monitor AIS in tributaries and other water bodies. Review and update the AIS monitoring and emergency AIS action plan.	EQ	RD	Reports; update AIS plan	Ongoing 4 <sup>th</sup> Quarter
2.	Conduct public education about AIS	EQ	IS	Education	Ongoing
3.	Continue the Quabbin Boat Seal program to minimize the risk of AIS infestation of Quabbin Reservoir. Conduct Cold Weather Decontamination Program and Boat Inspection Program. Maintain database	EQ	RD, IS, WR, ARD, WM-BLA	Boat Seal tracking, inspections, decontamination, public education.	Winter, Spring



<b>Task</b>	<b>Task Description</b>	<b>Lead</b>	<b>Additional Staff</b>	<b>Product</b>	<b>Due Date</b>
4.	Implement a program of detection, monitoring and control of invasive aquatic species and other macrophytes in the Quabbin and Ware River watersheds, including education and training of Boat Launch Area attendants and other appropriate staff. Work in conjunction with the DCR Lakes and Ponds, MWRA and MWRA contractors. Evaluate and make changes in program as needed.	EQ	WM-BLA, ARD, RD, MWRA	Monitoring program; training	Ongoing
<b>M. Environmental Quality Assessments (EQAs)</b>					
1.	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. Present EQAs to RD	EQ	All Work Units	EQA reports: Fever Brook District and Burnshirt, Canesto, and Natty District	Ongoing
2.	Prioritize recommendations in completed EQAs as necessary, and short and long term remedial actions.	RD	All Work Units	Quarterly reporting	Ongoing
3.	Update and assess land use/land cover statistics for watershed, sanitary districts, and sub-districts when new GIS coverages are available.	GIS		Updated coverages and analyses	Ongoing
<b>N. Wastewater Management</b>					
1.	Identify potential problem sites or areas through review of local records, water quality data, and other pertinent information.	EQ	EP	EQ file reports; new database	Ongoing
<b>O. Stormwater Management</b>					
1.	Advise local boards on stormwater management issues related to construction activities.	EQ	EP, RD, ARD	Advice as needed.	Ongoing
2.	Continue to collect data on and update maps of culverts and other stormwater conveyance structures in the Quabbin and Ware River watersheds. Catch up on work completed within culvert database.	CE	WM, ATS	Updated database records and photos	Ongoing; database update by February 2018
<b>P. Emergency Response</b>					
1.	Develop and/or update Emergency Response materials for the Quabbin and Ware River watersheds, with up-to-date contact information, emergency procedures and roles/responsibilities.	EQ, WR	RD, ARD	Emergency Response Materials; Contact Lists	Ongoing
2.	Update SOPs for spill response and define DCR staff roles in both assessment and response. Work with MWRA to maintain emergency response trailers and/or other spill response supplies and equipment.	EQ, WR	RD, ARD	Updated SOPs; Equipment procurement.	FY18-FY19
3.	In conjunction with MWRA, coordinate spill response and/or incident command system (ICS) training to staff.	EQ, WR	RD, ARD, WM	Training of staff	Annual

<b>Task</b>	<b>Task Description</b>	<b>Lead</b>	<b>Additional Staff</b>	<b>Product</b>	<b>Due Date</b>
4.	Coordinate 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 is conducted in a manner that protects water quality.	RD, EQ, WR	ARD, WM	Incident notification; emergency response; incident reports	As needed
5.	Develop and implement spill response plans for all timber harvesting operations on DWSP lands.	F	EQ, ARD, RD	Spill Response Plans, updated spill response notification cards	Ongoing
<b>Q. Support</b>					
1.	Operate administrative offices, including answering phones, greeting visitors, etc.	ATS	IS	Main office operation	Daily activity
2.	Provide payroll and personnel benefits support for all Regional employees.	ATS		Payroll reports; Support	Ongoing
3.	Provide contract administration, financial management, record-keeping, purchasing of goods and services, and other financial support services.	ATS	ARD	Accounting and financial services	Ongoing
4.	Coordinate with EOEEA IT to provide local MIS support for the Quabbin/Ware Region. Develop an IT Plan with input from Regional staff that addresses technology needs for the coming year.	ATS	All Work Units	Support and troubleshooting services; IT Plan	Ongoing; IT Plan submitted by end of 1 <sup>st</sup> quarter
5.	Provide orientation for new staff and integrate them into existing operations	ATS	RD, ARD	Training and orientation	Ongoing
6.	Prepare and submit to Division Director, MWRA and the Water Supply Protection Trust Board Annual Work Plans, budgets, quarterly progress reports, and program goals; track progress in meeting program goals.	RD,	ARD, ATS	Completed plans, budgets and reports	Ongoing
7.	Provide GIS and GPS services and associated mapping for all Regional plans, reports and projects, as needed. Keep GIS datalayers updated as new information becomes available. Begin implementation of ArcGIS Online and Collector applications to selected staff.	GIS	F, EQ	Maps; datalayer updates; other services	Ongoing
8.	Update digital information, including all new DWSP land purchases, Watershed Protection Act maps and parcels, and provide analyses for use in DWSP reports and publications.	GIS	P, ATS	Updated maps for all Quabbin communities	Ongoing, as needed
9.	Plan and implement vehicle and equipment purchases.	ARD	WM, RD	Vehicle purchases; up-to-date records	Annual; Ongoing

<b>Task</b>	<b>Task Description</b>	<b>Lead</b>	<b>Additional Staff</b>	<b>Product</b>	<b>Due Date</b>
10.	Conduct truck, boat, and equipment inspections and maintenance as needed, utilizing the Facility Asset Management Information System (FAMIS). Maintain up-to-date records of all vehicles and equipment (in FAMIS and file system).	WM-M	ATS, ARD	Maintenance and repair of vehicles and equipment, updated records	Ongoing
11.	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 Region including photographs, slides, oral history tapes and media coverage of Regional activities and Quabbin related topics.	IS	RD	Record management	Ongoing
12.	Administer the Payment in Lieu of Taxes (PILOT) program	P		Payments to watershed communities	4 <sup>th</sup> Quarter

## **2. Staffing**

### **A. Section Responsibilities and Staffing Levels**

- Office-wide
- Wachusett/Sudbury
- Quabbin/Ware

### **B. Organization Charts**

- Office-wide
- Wachusett/Sudbury
- Quabbin/Ware

DCR Division of Water Supply Protection  
Office of Watershed Management  
Office-Wide Responsibilities and Staffing  
FY 2018

Section	FY17 FTE	New FY18 FTE	Primary Responsibilities
Management – Director, Natural Resources Section Director	1.9	0	<ul style="list-style-type: none"> <li>▪ Supervise all OWM Staff (through Senior staff and direct supervision).</li> <li>▪ Develop program goals and objectives.</li> <li>▪ Ensure program goals and objectives are met.</li> <li>▪ Oversee interagency coordination with MWRA.</li> <li>▪ Coordinate and support programs and policies with other DCR Divisions.</li> <li>▪ Coordinate and support programs and policies with EEA and other EEA agencies.</li> <li>▪ Coordinate and support programs and policies with watershed communities and stakeholders.</li> <li>▪ Consult with Watershed Advisory Committees.</li> </ul>
Budget and Administrative Support	4.9	0	<ul style="list-style-type: none"> <li>▪ Provide personnel and other human resources related support.</li> <li>▪ Provide budget and finance support.</li> <li>▪ Provide contract administration support.</li> <li>▪ Provide office management.</li> </ul>
Natural Resources	7.5  +1 Long Term Seasonal (WPR Program, EOEEA funded)	1  (WPR LTS now FTE, EOEEA funded)	<ul style="list-style-type: none"> <li>▪ Develop, write, and help implement the Comprehensive Land Management Plan.</li> <li>▪ Coordinate Land Acquisition Program.</li> <li>▪ Monitor and enforce Division’s Watershed Preservation Restrictions (WPRs).</li> <li>▪ Provide wildlife management and mitigation.</li> <li>▪ Monitor roosting gulls and provide technical support, guidance, and recommendations to gull harassment program.</li> <li>▪ Develop and distribute <i>Downstream</i> newsletter, Fact Sheets, and provide educational and outreach programming.</li> <li>▪ Provide research and monitoring to support Natural Resource Management Planning.</li> <li>▪ Monitoring and manage land based invasive plants.</li> </ul>
Program Coordination & Technical Support – Environmental Planning	1	0	<ul style="list-style-type: none"> <li>▪ Coordinate implementation of Watershed Protection Act (WsPA).</li> <li>▪ Assist in the development and implementation of Watershed Protection Plans, Public Access Plans, Land Management Plans and other associated plans, policies, and publications.</li> <li>▪ Support interagency coordination with MWRA.</li> <li>▪ Coordinate PILOT program with MWRA, DOR and Watershed towns.</li> <li>▪ Coordinate and support programs and policies with other DCR divisions, EEA and other EEA agencies.</li> <li>▪ Coordinate DCR DWSP web site.</li> </ul>

<b>Section</b>	<b>FY17 FTE</b>	<b>New FY18 FTE</b>	<b>Primary Responsibilities</b>
Program Coordination & Technical Support – GIS	1	0	<ul style="list-style-type: none"> <li>▪ Coordinate GIS for Office of Watershed Mgt.</li> <li>▪ Capture, maintain, administrative Spatial Databases.</li> <li>▪ Integrate Office’s GIS program within EEA system.</li> <li>▪ Provide data analysis for Office of Watershed Mgt.</li> <li>▪ Distribute maps and digital information to Watershed Partners.</li> </ul>
<b>Total</b>	<b>16.3</b>	<b>1</b>	
<b>TOTAL FY18 FTE</b>		<b>17.3</b>	

Note: Partial FTEs due to one half-time position in Natural Resources, and time sharing with DWSP Office of Water Resources in Management and Budget and Administrative Support.

DCR Division of Water Supply Protection  
Office of Watershed Management  
Wachusett/Sudbury Region Responsibilities and Staffing  
FY 2018

Section	FY17 FTE	New FY18 FTE	Primary Responsibilities
Management -- Regional Director and Assistant Regional Director	2	0	<ul style="list-style-type: none"> <li>▪ Supervise Staff assigned to Wachusett/Sudbury Section</li> <li>▪ Develop/Implement Program Goals and Objectives including Watershed Protection Plans and Annual Work Plans</li> <li>▪ Ensure interagency coordination with MWRA (Reservoir Operations, Water Quality Testing, Consent Order Compliance and Reporting)</li> <li>▪ Coordinate/Support programs &amp; Policies with other DCR divisions</li> <li>▪ Coordinate/Support Programs &amp; Policies with EEA/EEA agencies</li> <li>▪ Coordinate/Support Programs &amp; Policies with watershed communities and stakeholders</li> <li>▪ Consult with Watershed Advisory Committees, Friends Groups</li> </ul>
Administrative Support	6		<ul style="list-style-type: none"> <li>▪ Maintain payroll, employment and other records</li> <li>▪ Provide budget, accounting and contract administration support</li> <li>▪ Assist Regional Director in special projects, as needed</li> <li>▪ Provide contract administration and database management for forestry program</li> <li>▪ Implement GIS program in watershed, providing data analysis, maps and digital information</li> </ul>
Environmental Quality	10  1 seasonal	0	<ul style="list-style-type: none"> <li>▪ Conduct multi-year program planning through development of 5 year Watershed Protection Plans</li> <li>▪ Develop annual work plans and annual progress assessments.</li> <li>▪ Develop and implement water quality monitoring programs in reservoirs &amp; tributaries</li> <li>▪ Interpret water quality data for use in decision making</li> <li>▪ Develop and implement Aquatic Invasive Species Control Plans</li> <li>▪ Conduct Environmental Quality Assessments of watershed sanitary districts to identify potential pollution sources and develop mitigation measures</li> <li>▪ Provide technical assistance to local boards</li> <li>▪ Work with local DPWs to control stormwater through MS4 compliance.</li> <li>▪ Implement Watershed Protection Act and Regulations</li> <li>▪ Supervise and implement Wachusett Bird Control Program</li> <li>▪ Provide assistance for Emergency Response Actions</li> <li>▪ Collect, monitor, and maintain records on weather/precipitation, reservoir elevations, river discharges and releases, water transfers and watershed yield. Conduct Snow Surveys</li> </ul>

<b>Section</b>	<b>FY17 FTE</b>	<b>New FY18 FTE</b>	<b>Primary Responsibilities</b>
Environmental Planning	1	0	<ul style="list-style-type: none"> <li>▪ Administer Watershed Protection Act(WSPA)and Regulations in the Wachusett Watershed</li> <li>▪ Work with local community Boards regarding implementation of WSPA</li> <li>▪ Provide notices to new landowners with parcels affected by WSPA</li> <li>▪ Work with communities on bylaw implementation to satisfy MS4 permits</li> </ul>
Forestry	2	0	<ul style="list-style-type: none"> <li>▪ Implement forest management plan, including planning, tree marking, timber sale preparation and supervision of logging operations</li> <li>▪ Oversee and implement hayfield management permits</li> <li>▪ Conduct various surveys and inventories as needed to provide data to help guide forest management operations</li> <li>▪ Participate in Asian Longhorned Beetle Program Coordination in watershed</li> <li>▪ Conduct or participate in other watershed management activities (e.g. boundary maintenance)</li> </ul>
Civil Engineering	4  1 seasonal	0	<ul style="list-style-type: none"> <li>▪ Provide management oversight of DCR-owned sewers, preparing municipal bills and resolving easement issues</li> <li>▪ Coordinate and maintain records of all surveying required to determine property lines and boundaries, investigate encroachments and maintain records of all agency owned lands including new acquisitions</li> <li>▪ Develop Road Plan and annual work plan; oversee maintenance of DCR access roads</li> <li>▪ Conduct monthly inspections of Wachusett Dam, Sudbury Dam and other dams in the Wachusett and Sudbury watersheds; plan and oversee maintenance of dams and dikes</li> <li>▪ Oversee repairs and renovation projects at facilities in the Wachusett and Sudbury Watersheds</li> <li>▪ Coordinate emergency response planning, preparedness and operations in the Wachusett and Sudbury Watersheds</li> </ul>
Watershed Rangers	9	0	<ul style="list-style-type: none"> <li>▪ Maintain a positive visual presence in watersheds</li> <li>▪ Observe activities on watershed lands &amp; waters</li> <li>▪ Ensure Rules Compliance through education/public interaction</li> <li>▪ Coordinate enforcement of watershed rules with State/Environmental Police</li> <li>▪ Conduct or participate in other watershed management activities (e.g. encroachment surveys and resolution)</li> <li>▪ Assist with Emergency Response Planning and Preparedness and general Watershed Security</li> <li>▪ Develop and Conduct environment-based public education programs</li> </ul>



<b>Section</b>	<b>FY17 FTE</b>	<b>New FY18 FTE</b>	<b>Primary Responsibilities</b>
Interpretive Services	1	0	<ul style="list-style-type: none"> <li>▪ Develop and conduct watershed system school based programs</li> <li>▪ Conduct Programs at Stillwater Farm Interpretive Site</li> <li>▪ Conduct Environmental Education teacher training</li> <li>▪ Develop and Conduct environment-based public education programs</li> </ul>
Watershed Maintenance	33  4 seasonals		<ul style="list-style-type: none"> <li>▪ Maintain water supply dams</li> <li>▪ Perform primary land and facility maintenance activities on all watershed lands and resources</li> <li>▪ Maintain physical security barriers around reservoir and watershed facilities</li> <li>▪ Control shoreline vegetation and maintain fire roads</li> <li>▪ Maintain and repair all division equipment (motor vehicles, trucks, boats and heavy Equipment)</li> <li>▪ Participate in Bird Control Program</li> </ul>
<b>Total FTEs</b>	<b>68</b>	<b>0</b>	
<b>Total Seasonals</b>	<b>6</b>	<b>0</b>	
<b>Total FY18 FTEs</b>		<b>68</b>	
<b>Total FY18 Seasonals</b>		<b>6</b>	

DCR Division of Water Supply Protection  
Office of Watershed Management  
Quabbin/Ware Operational Section Responsibilities and Staffing  
FY 2018

Section	FY17 FTE	New FY18 FTE	Primary Responsibilities
Management – Regional Director; Assistant Regional Director	2	0	<ul style="list-style-type: none"> <li>▪ Supervise staff assigned to Quabbin/Ware River Region and oversee hirings, training, and other personnel-related issues</li> <li>▪ Develop and implement program goals and objectives, annual work plans and budgets</li> <li>▪ Oversee policy and plan development and implementation</li> <li>▪ Oversee day-to-day operations in the Region and supervision of staff</li> <li>▪ Ensure interagency coordination with MWRA (re: Reservoir Operations, Water Quality Testing, Consent Order Compliance and Reporting)</li> <li>▪ Coordinate/Support programs and policies with other DCR divisions, EEA and other EEA agencies</li> <li>▪ Coordinate/Support programs, policies and/or technical assistance with watershed communities and stakeholders</li> <li>▪ Consult with Watershed Advisory Committees</li> <li>▪ Oversee fleet management and procurement activities</li> <li>▪ Manage Union issues</li> </ul>
Administrative and Technical Support	5	0	<ul style="list-style-type: none"> <li>▪ Coordinate the preparation of quarterly reports and annual work plans and budgets</li> <li>▪ Administer research access permit and gate key issuances</li> <li>▪ Process revenues and provide accounting for boat fishing program.</li> <li>▪ Provide administrative services for cemetery, including deed preparation, funeral scheduling, and marker/monument settings.</li> <li>▪ Provide GIS and GPS support and services to Regional staff</li> <li>▪ Provide IT support and other technical assistance to the Region</li> <li>▪ Assist Regional Director with special projects, as needed</li> <li>▪ Maintain payroll, employment and related records</li> <li>▪ Assist employees with benefit questions and applications</li> <li>▪ Provide budget, accounting and contract administration and support</li> <li>▪ Provide staffing and operational support for main office</li> <li>▪ Maintain vehicle files and FAMIS entries</li> </ul>

Section	FY17 FTE	New FY18 FTE	Primary Responsibilities
Environmental Quality	9	0	<ul style="list-style-type: none"> <li>▪ Conduct water quality monitoring in reservoir and tributaries</li> <li>▪ Maintain and analyze water quality data to monitor the health of the watershed and reservoirs, and prepare periodic reports</li> <li>▪ Conduct Environmental Quality Assessments (“Sanitary Surveys”)</li> <li>▪ Develop and implement aquatic invasive species control programs</li> <li>▪ Identify pollution sources and seek mitigation</li> <li>▪ Implement and oversee the Quabbin gull harassment program</li> <li>▪ Provide environmental oversight for all Section activities that could impact water quality</li> <li>▪ Assist with the design and implementation of water quality research conducted by the University of Massachusetts</li> <li>▪ Provide technical review of proposed projects, as necessary</li> <li>▪ Provide technical assistance to watershed communities and organizations regarding water quality issues</li> <li>▪ Assist with public education efforts aimed at enhancing water quality protection on watershed lands</li> <li>▪ Assist with WsPA administration, as necessary</li> <li>▪ Assist with development and implementation of Watershed Protection Plans, Public Access Plans, and Land Management Plans</li> <li>▪ Maintain Spill Response trailers</li> <li>▪ Assist with Emergency Response</li> <li>▪ Monitor streamflow, pathogens, algae, stormwater flows and macrophytes</li> <li>▪ Monitor environmental compliance in building (e.g., drinking water testing)</li> <li>▪ Assist with interagency coordination and information exchange with MWRA, DEP, MHD, other DCR divisions, EEA and other EEA agencies and NYC DEP</li> </ul>
Environmental Planning	1	0	<ul style="list-style-type: none"> <li>▪ Administer WsPA on Quabbin and Ware River watersheds.</li> <li>▪ Provide technical assistance to town boards and commissions in watershed communities</li> <li>▪ Research or develop technical tools and/or written materials on regulatory implementation, land use planning and other watershed protection topics</li> <li>▪ Coordinate with other agencies and local boards to enhance the development and enforcement of environmental protection regulations on watershed lands</li> </ul>

Section	FY17 FTE	New FY18 FTE	Primary Responsibilities
Forestry	7	0	<ul style="list-style-type: none"> <li>▪ Implement Forestry Program including planning, tree marking, timber sale preparation and supervision of logging operations</li> <li>▪ Conduct regeneration surveys and continuous forest inventories (CFI) to provide data to help guide forest management operations</li> <li>▪ Oversee field maintenance contracts, and the purchase and planting of tree seedlings and other nursery stock</li> <li>▪ Assist with development of the Comprehensive Land Management Plan</li> <li>▪ Coordinate with other state and federal agencies regarding forestry and other land management operations</li> <li>▪ Assist with public education programs related to watershed management</li> <li>▪ Conduct or participate in other watershed management activities (e.g., boundary maintenance, encroachment issues)</li> <li>▪ Provide administrative and revenue processing functions</li> </ul>
Civil Engineering	4 + 1 LTS	0	<ul style="list-style-type: none"> <li>▪ Collect, monitor and maintain records on weather/precipitation, reservoir elevations, river discharges and releases, water transfers and watershed yield</li> <li>▪ Conduct Snow Survey and calculate runoff potential in Quabbin Watershed</li> <li>▪ Conduct monthly inspections of Winsor Dam, Goodnough Dike and other dams in the Quabbin and Ware River watersheds; take necessary Piezometer readings when appropriate and maintain records</li> <li>▪ Conduct inspections and maintain records on all buildings and bridges in the Quabbin and Ware River watersheds</li> <li>▪ Coordinate and maintain records of all surveying required to determine property lines and boundaries; investigate encroachments and maintain records of all agency owned lands including new acquisitions; provide assistance to private surveyors requesting historic surveying data on agency lands</li> <li>▪ Provide technical support and engineering assistance to other Quabbin units</li> <li>▪ Maintain all historical records consisting of the construction of dams, roads, bridges and buildings in the Quabbin and Ware River Watersheds</li> <li>▪ Assist in Cemetery operation and maintenance including drafting burial plot plans, locating burial lots, maintaining records and facility maintenance and repair</li> <li>▪ Maintain, operate or oversee administration complex boiler system, fuel deliveries and weekly fuel tank inspections</li> <li>▪ Oversee and maintain Photovoltaic Systems at Quabbin Fishing Areas</li> </ul>

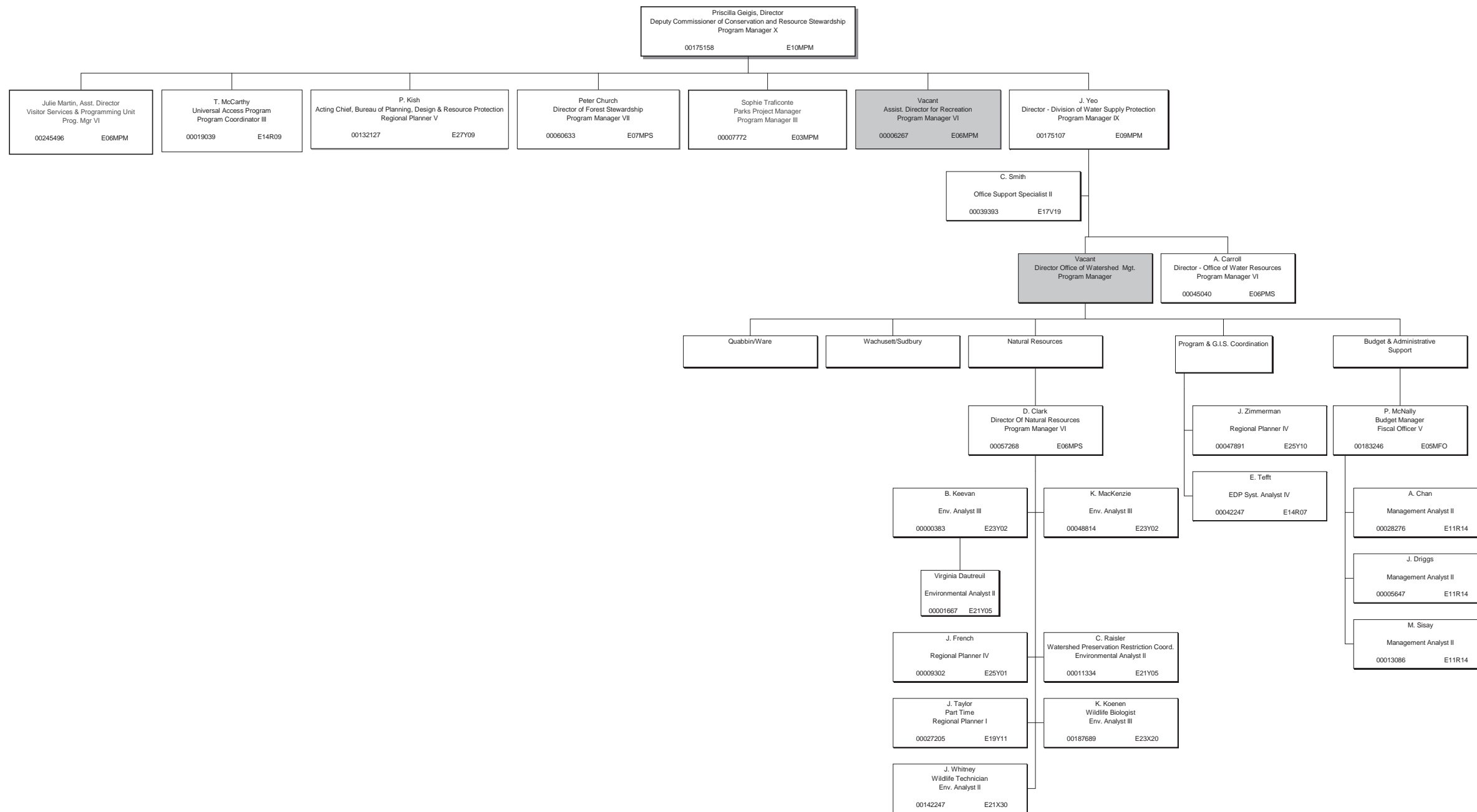
Section	FY17 FTE	New FY18 FTE	Primary Responsibilities
Watershed Rangers	7 + 4 LTS	2 (4 LTS converted to 2 FTEs)	<ul style="list-style-type: none"> <li>▪ Maintain a positive visual presence in watersheds</li> <li>▪ Monitor public activities on watershed lands and waters</li> <li>▪ Ensure Rules Compliance through education/public interaction/signage</li> <li>▪ Coordinate enforcement of watershed rules with State/Environmental Police</li> <li>▪ Assist with Emergency Response planning and preparedness</li> <li>▪ Provide Emergency Response and general watershed security</li> <li>▪ Maintain records of violations and public interactions</li> </ul>
Interpretive Services	3 + 1 LTS	1 (1 converted LTS)	<ul style="list-style-type: none"> <li>▪ Develop and conduct watershed based programs, displays and curricula for visitors and school groups</li> <li>▪ Maintain and operate the Quabbin Visitors Center</li> <li>▪ Participate in other EOEEA Environmental Education programs (e.g., Envirothon)</li> <li>▪ Serve as press liaison for Section activities and events, in conjunction with DCR and EOEEA public information offices</li> <li>▪ Organize special events (e.g., Memorial Day services)</li> <li>▪ Maintain vital records collection for the 4 disincorporated Quabbin towns, and issue official records upon request; Assist visitors with genealogical research.</li> <li>▪ Manage and issue access permit requests for groups, special events, former residents and short-term research projects</li> <li>▪ Administer Quabbin controlled deer hunt application process, including data entry, database management, and orientations</li> <li>▪ Maintain recorded telephone information on access, programs and watershed management activities</li> <li>▪ Serve as liaison with other organizations, including Friends of Quabbin, Swift River Valley Historical Society, Valley Environmental Education Collaborative, Massachusetts Drinking Water Education Partnership, and Envirothon steering committee.</li> <li>▪ Develop informational materials on Quabbin fishing program, access issues and management activities</li> <li>▪ Provide graphics and other support to other Section programs for the development of brochures, publications and presentations</li> <li>▪ Maintain audio-visual collection for Quabbin Section, including photographs, slides and oral history tapes</li> </ul>

<b>Section</b>	<b>FY17 FTE</b>	<b>New FY18 FTE</b>	<b>Primary Responsibilities</b>
Watershed Maintenance	30 + 15 LTS + 2 STS	0	<ul style="list-style-type: none"> <li>▪ Perform primary maintenance activities on watershed lands, roads, facilities and other resources</li> <li>▪ Maintain physical security around reservoir and watershed facilities</li> <li>▪ Maintain roads, gates, barways, drainage structures, signs and other access controls</li> <li>▪ Maintain and repair all division equipment (motor vehicles, trucks, boats and heavy Equipment)</li> <li>▪ Provide staffing for the Gull Harassment and Controlled Deerhunt programs</li> <li>▪ Maintain Quabbin Park</li> <li>▪ Operate and maintain Quabbin Park Cemetery</li> <li>▪ Operate and maintain the three Boat Launch Areas at Quabbin Reservoir</li> </ul>
<b>Total FTEs</b>	<b>68</b>	<b>3</b>	
<b>Total Seasonals</b>	<b>23</b>	<b>-5</b>	
<b>Total FY18 FTEs</b>		<b>71</b>	
<b>Total FY18 Seasonals</b>		<b>18</b>	

LTS = Long-term Seasonal  
STS = Short-term Seasonal

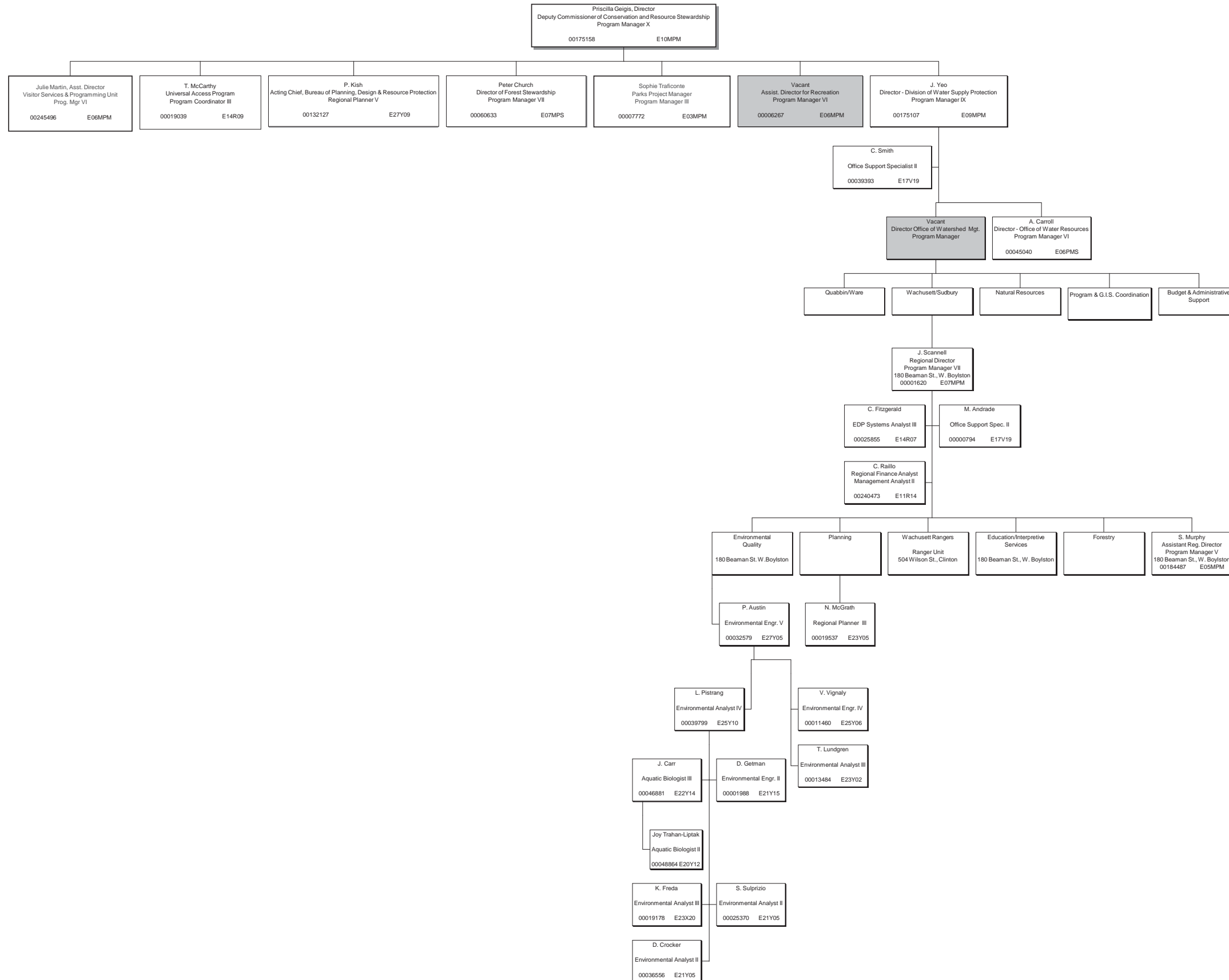


Department of Conservation and Recreation  
 Conservation and Resource Stewardship  
 Water Supply Protection - Administration & Natural Resources





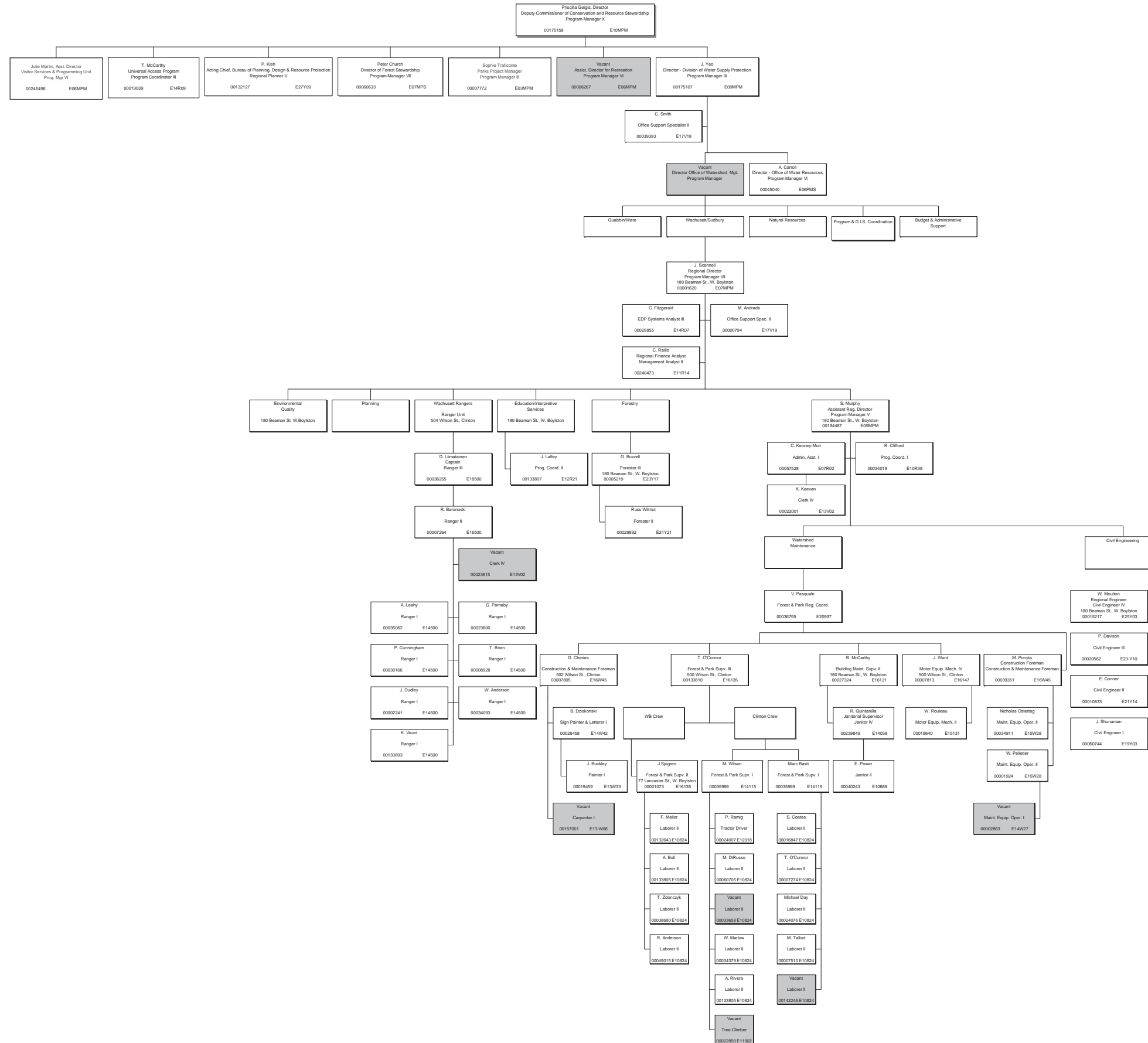
Department of Conservation and Recreation Conservation  
and Resource Stewardship  
Water Supply Protection - Wachusett/Sudbury Region





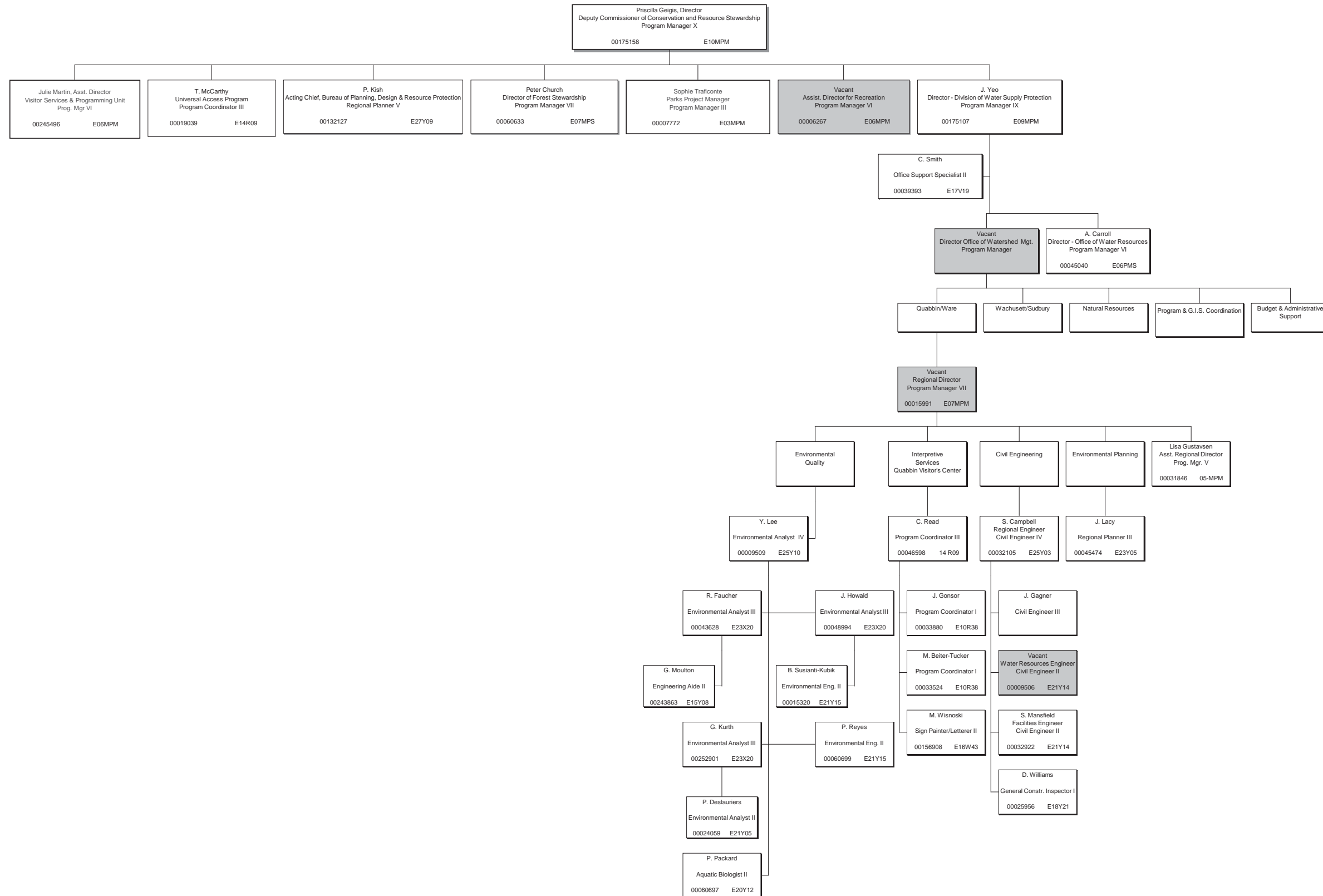


Department of Conservation and Recreation  
Conservation and Resource Stewardship  
Water Supply Protection - Wachusett/Sudbury Region



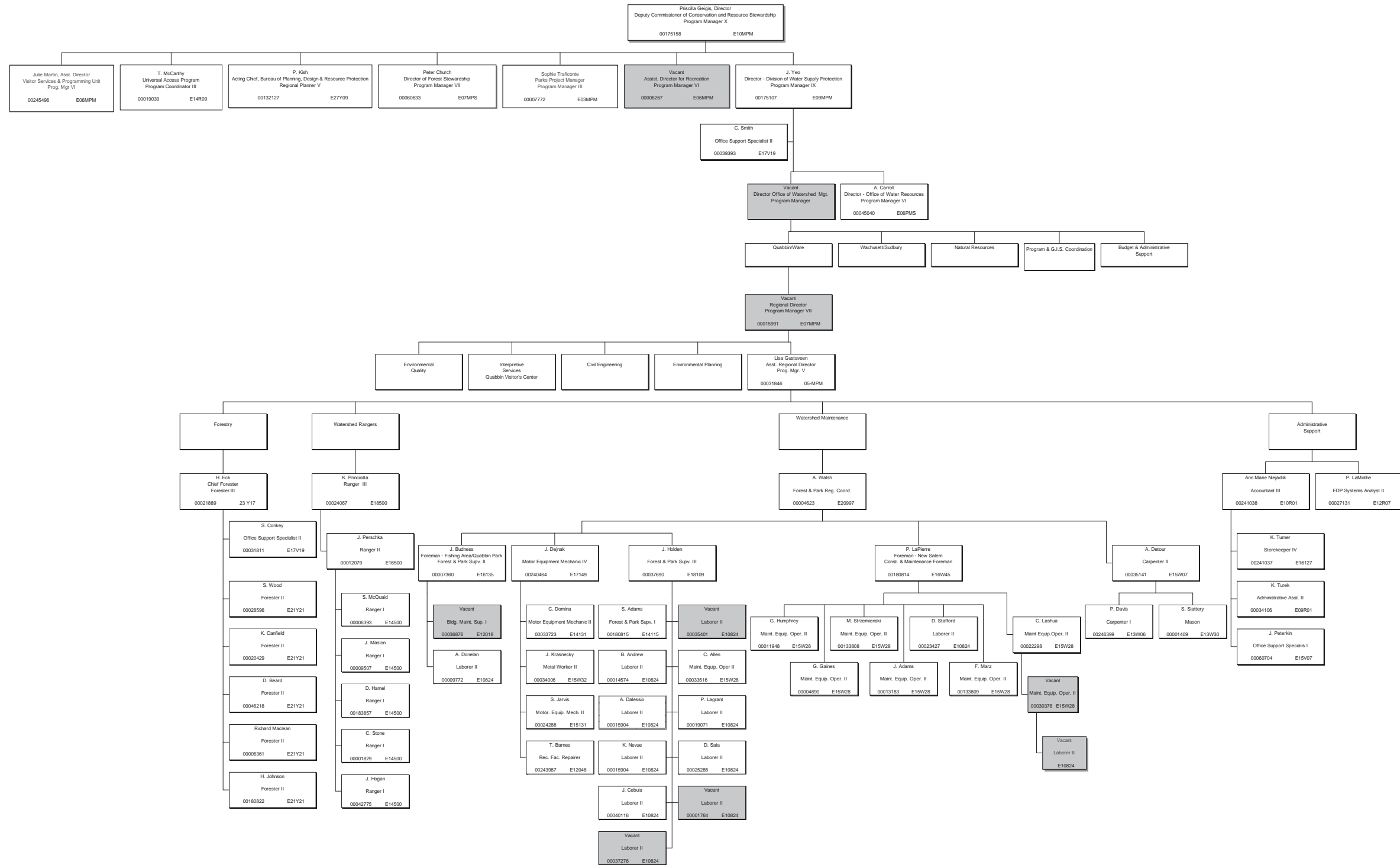


Department of Conservation and Recreation  
 Conservation and Resource Stewardship  
 Water Supply Protection - Quabbin/ Ware Region





Department of Conservation and Recreation  
 Conservation and Resource Stewardship  
 Water Supply Protection - Quabbin/ Ware Region



### **3. Annual Budget Summary**

**WATER SUPPLY PROTECTION TRUST  
Expenditures and Revenues Report  
FY18 Work Plan Budget**

		FY18	
		Projected	% of Total
<b>A. Revenues</b>			
<b>OWM Revenues</b>			
	Hydro + Transmission	\$500,000	3.0%
	Forestry	\$200,000	1.2%
	Fishing & Recreation	\$240,000	1.4%
	Misc.	\$50,000	0.3%
	<b>OWM Revenues Subtotal</b>	<b>\$990,000</b>	<b>5.9%</b>
	<b>MWRA Payments to Trust *</b>	<b>\$15,674,006</b>	<b>94.1%</b>
	<b>Total Revenues</b>	<b>\$16,664,006</b>	<b>100.0%</b>
<b>B. Expenditures (not inc. Phase 1 Capital Projects)</b>			
AA	Personnel	\$10,225,408	61.4%
BB	Employee Expenses	\$11,150	0.1%
CC	Contracted Services	\$77,000	0.5%
DD	Pensions/Insurance	\$3,723,748	22.3%
EE	Admin Expenses	\$100,000	0.6%
FF	Facility Operational Supplies	\$148,200	0.9%
GG	Energy Costs	\$336,000	2.0%
HH	Consultant Contracts	\$231,000	1.4%
JJ	Operational Services	\$44,000	0.3%
KK	Equipment	\$518,000	3.1%
LL	Leases, Rentals	\$127,000	0.8%
NN	Construction Improvements	\$795,000	4.8%
PP	Grants to Public Entities	\$0	0.0%
TT	Specials Payments	\$125,000	0.8%
UU	IT Expenses	\$202,500	1.2%
	<b>Total Expenditures</b>	<b>\$16,664,006</b>	

\* not accounting for FY17 roll-over, which is credited

## **4. Annual Operating Budget**

DCR Division of Water Supply Protection  
Office of Watershed Management  
FY18 Budget Details

Budget_Fiscal_Year	2018		<b>FY18 Budget</b>				
Appropriation	28300100		MAY 2017				
Object_Class	Object	Object_Name	FY16 Actuals	FY2017 Final	FY2018 Final Proposed	PFY18 vs FY17 Budget	%
AA	A01	Salaries-Inclusive	8,873,579	9,580,000	9,838,408	258,408	2.7%
	A06	Stand-By Pay				-	
	A07	Shift Differential Pay	22,905	21,000	23,000	2,000	9.5%
	A08	Overtime Pay	190,388	175,000	230,000	55,000	31.4%
	A10	Holiday Pay	32,600	24,000	24,000	-	0.0%
	A11	Employment Related Settlements and Judgements	18,500			-	
	A12	Sick-Leave Buy Back	33,765	30,000	30,000	-	0.0%
	A13	Vacation-In-Lieu	64,886	60,000	60,000	-	0.0%
	A14	Stipends, Bonus Pay and Awards	39			-	
	AA1	Out of Title Pay	16,171		20,000	20,000	
<b>AA Total</b>			<b>9,252,833</b>	<b>9,890,000</b>	<b>10,225,408</b>	<b>335,408</b>	<b>3.4%</b>
BB	B01	Out Of State Travel - Inclusive	3,380	2,500	2,500	-	0.0%
	B02	In-State Travel	1,355	3,000	3,000	-	0.0%
	B03	Overtime Meals				-	
	B05	Conference, Trng & Reg, Membership Dues, Licensing Fees	5,327	5,000	5,000	-	0.0%
	B10	Exigent Job-Related Expenses		100	100	-	0.0%
	B11	Employer Refund of Non-Tax Benefits	13	50	50	-	0.0%
	B91	Employee Reimbursement Accounts Payable	28	500	500	-	0.0%
<b>BB Total</b>			<b>10,102</b>	<b>11,150</b>	<b>11,150</b>	<b>-</b>	<b>0.0%</b>
CC	C04	Contracted Seasonal Employees	72,932	85,000	77,000	(8,000)	-9.4%
	C22	Engineering, Research & Scientific Services				-	
	C98	Reimb Travel/Other Expenses CC Special Contract/Employee				-	
<b>CC Total</b>			<b>72,932</b>	<b>85,000</b>	<b>77,000</b>	<b>(8,000)</b>	<b>-9.4%</b>
DD	D09	Non Fringe Benefits Reimbursement (Payroll Tax)		166,583	174,111	7,528	4.5%
	D09	Fringe Benefits Reimbursement	2,753,696	3,216,335	3,439,637	223,302	6.9%
	D15	Worker's Comp Chargeback	100,000	100,000	100,000	-	0.0%
	D21	Health Ins Costs of Employ/Leave in Excess of 1 Yr Chqback	16,802	10,000	10,000	-	0.0%
<b>DD Total</b>			<b>2,870,498</b>	<b>3,492,918</b>	<b>3,723,748</b>	<b>230,830</b>	<b>6.6%</b>
EE	E01	Office & Administrative Supplies	8,269	7,500	7,500	-	0.0%
	E02	Printing Expenses & Supplies	10,226	12,000	12,000	-	0.0%
	E04	Central Reprographics Chargeback		500	500	-	0.0%
	E06	Postage	3,508	5,500	5,500	-	0.0%
	E12	Subscriptions, Memberships & Licensing Fees	1,487	1,600	1,600	-	0.0%
	E13	Advertising Expenses	1,229			-	
	E14	Exhibits/Displays	1,105	2,000	2,000	-	0.0%
	E15	Office Tap Water Treatment	754	900	900	-	0.0%
	E19	Fees, Fines, Licenses, Permits & Chargebacks	28,662	28,000	28,000	-	0.0%
	E20	Motor Vehicle Chargeback	24,460	29,000	29,000	-	0.0%
	E22	Temp Use Space/Confer-Incidental Includes Reservation Fees	269	1,000	1,000	-	0.0%
	E32	Tort Claims Liab Mnt Reduc Fd				-	
	E53	S&J: Non-reportable to claiment, sole payee	10,000	10,000	10,000	-	0.0%
	E75	Advances - Administrative Expenses	60			-	
	E82	Conference, Training and Registration Fees		2,000	2,000	-	0.0%
<b>EE Total</b>			<b>90,028</b>	<b>100,000</b>	<b>100,000</b>	<b>-</b>	<b>0.0%</b>
FF	F01	Food, Beverages, & Preservation	8			-	
	F03	Laundry and Cleaning Supplies	86			-	
	F05	Laboratory Supplies	4,980	1,500	1,500	-	0.0%
	F06	Medical & Surgical Supplies	2,995	1,000	1,000	-	0.0%
	F08	Toiletries and Personal Supplies				-	
	F09	Clothing & Footwear	30,205	20,000	20,000	-	0.0%
	F11	Laundry & Cleaning Supplies	11,516	9,000	9,000	-	0.0%
	F13	Live Animals & Related Supplies	3,187	1,000	1,000	-	0.0%
	F16	Library and Teaching Supplies and Materials	16,424	200	200	-	0.0%
	F18	Recreation, Religious & Social Supplies & Materials	1,059	13,000	13,000	-	0.0%
	F19	Manufacturing Supply & Materials & Raw Materials	8,440			-	
	F21	Navigational & Nautical Supplies	93,342	15,000	15,000	-	0.0%
	F22	Municipal Taxes				-	
	F24	Motor Vehicle Maintenance & Repair Parts	3,815	85,000	85,000	-	0.0%
	F27	Law Enforcement & Security Supplies		2,500	2,500	-	0.0%
<b>FF Total</b>			<b>176,059</b>	<b>148,200</b>	<b>148,200</b>	<b>-</b>	<b>0.0%</b>
GG	G03	Electricity	20,095	24,000	24,000	-	0.0%
	G05	Fuel For Vehicles	128,820	180,000	185,000	5,000	2.8%
	G06	Fuel For Buildings	73,028	115,000	120,000	5,000	4.3%
	G08	Sewage Disposal & Water	5,433	6,500	6,500	-	0.0%
	G11	Natural Gas	400	500	500	-	0.0%
<b>GG Total</b>			<b>227,776</b>	<b>326,000</b>	<b>336,000</b>	<b>10,000</b>	<b>3.1%</b>
HH	H05	Arbitrators/Mediators/Dispute Resolution Services				-	
	H09	Attorneys/Legal Services	5,500	6,000	6,000	-	0.0%
	H23	Program Coordinators				-	
	HH1	Financial Services	48,652	45,000	45,000	-	0.0%
	HH2	Engineering, Research & Scientific Services	145,804			-	
		UMass - Water Quality and Spill Response Modeling		120,000	135,000	15,000	12.5%
		Moose Impact Study (UMass)		14,000	14,000	-	0.0%
		Biodiversity Research Inst (loon capture and banding)		15,000	15,000	-	0.0%
		Boise State Univ (gull study - data analysis)				-	
		CLS America Inc (gull study - data collection)				-	
		Analytical Services		5,000	5,000	-	0.0%
		New Forestry Research				-	
		South Meadow Pond Hydrilla Control Project		8,000	8,000	-	0.0%
	HH4	Health and Safety Services	5,518	3,000	3,000	-	0.0%
<b>HH Total</b>			<b>205,474</b>	<b>216,000</b>	<b>231,000</b>	<b>15,000</b>	<b>6.9%</b>
JJ	J21	Hazardous Waste Removal Services				-	
	J27	Laundry Services	8,808	8,000	8,000	-	0.0%
	J33	Photographic & Micrographic Services		500	500	-	0.0%
	J44	Surveyors	9,000	10,000	10,000	-	0.0%
	J50	Instructors/Lecturers/Trainers		500	500	-	0.0%
	JJ1	Legal Support Services	21,775	25,000	25,000	-	0.0%
	JJ2	Auxiliary Services				-	
<b>JJ Total</b>			<b>39,583</b>	<b>44,000</b>	<b>44,000</b>	<b>-</b>	<b>0.0%</b>

DCR Division of Water Supply Protection  
Office of Watershed Management  
FY18 Budget Details

Budget_Fiscal_Year	2018		FY18 Budget					
Appropriation	28300100		MAY 2017					
Object_Class	Object	Object_Name	FY16 Actuals	FY2017 Final	FY2018 Final Proposed	PFY17 vs FY17 Budget	%	
KK	K02	Educational Equipment		3,000	3,000	-	0.0%	
	K03	Facility Equipment	66,737	45,000	65,000	20,000	44.4%	
	K04	Motorized Vehicle Equipment	297,029	415,000	415,000	-	0.0%	
	K05	Office Equipment	1,788	5,000	5,000	-	0.0%	
	K07	Office Furnishings	4,526	3,000	3,000	-	0.0%	
			6,346					
	K10	Law Enforcement & Security Supplies		4,000	4,000	-	0.0%	
K11	Heavv Equipment		89,807	23,000	23,000	-	0.0%	
<b>KK Total</b>			<b>466,232</b>	<b>498,000</b>	<b>518,000</b>	<b>20,000</b>	<b>4.0%</b>	
LL	L11	Heavv Equipment Lease-Purchase	2,441	33,000	33,000	-	0.0%	
	L23	Facility Equipment Rental or Lease	30,478			-		
	L24	Motorized Vehicle Equipment Rental or Lease	70			-		
	L25	Office Equipment Rental or Lease	2,265	2,500	2,500	-	0.0%	
	L26	Printing/Photocopy & Micrographics Equip Rent/Lease	13,385	15,000	15,000	-	0.0%	
	L31	Heavy Equipment Rental or Lease	19,600	2,000	2,000	-	0.0%	
	L42	Educational Equipment Maintenance & Repair	2,494	2,000	2,000	-	0.0%	
	L43	Facility Equipment Maintenance & Repair				-		
	L44	Motorized Vehicle Equipment Maintenance & Repair	12,660	31,000	28,000	(3,000)	-9.7%	
	L45	Office Equipment Maintenance and Repair	225	1,000	1,000	-	0.0%	
	L46	Print, Photocopying & Micrograph Equipment Maint/Repair	3,765	3,000	3,000	-	0.0%	
	L50	Law Enforcement/Security Equipment Maintenance/Repair		500	500	-	0.0%	
	L51	Heavv Equipment Maintenance/Repair	3,972	25,000	25,000	-	0.0%	
L63	Programmatic Equipment Maintenance and Repair	7,428	15,000	15,000	-	0.0%		
<b>LL Total</b>			<b>98,782</b>	<b>130,000</b>	<b>127,000</b>	<b>(3,000)</b>	<b>-2.3%</b>	
NN	N15	Building/Vertical Structure Construction				-		
	N16	Maj Construction, Mai Renovation, Bldg Alteration, Land Impr	75,210	110,000	100,000	(10,000)	-9.1%	
	N17	Major Building Maintenance and Land Improvements	53,899	95,000	95,000	-	0.0%	
	N18	Initial Furnishings & Equipment Purchases				-		
	N19	Land Acquisition and Eminent Domain	2,181			-		
	N22	Highway Horizontal/Lateral Maintenance and Improvements	241,896	115,000	130,000	15,000	13.0%	
	N23	Highway Horizontal/Lateral Maintenance Materials	12,281	50,000	50,000	-	0.0%	
	N41	State Park & Recreation Facilities Construction		15,000	15,000	-	0.0%	
	N50	Non-Major Facility Infrastructure Maintenance & Repair	27,820	50,000	55,000	5,000	10.0%	
	N52	Facility Infrastructure Maint & Repair Tools & Supplies	116,655	110,000	110,000	-	0.0%	
	N60	Lawn and Grounds Equipment Maint & Repair	89	5,000	5,000	-	0.0%	
	N61	Lawn and Grounds Equipment	13,412	70,000	75,000	5,000	7.1%	
	N64	Garden Expenses, Tools and Supplies	16,104	25,000	25,000	-	0.0%	
	N71	Exterminators/Integrated Pest Management	2,660	4,000	4,000	-	0.0%	
	N72	Hazardous Waste Removal Services	162,296	15,000	15,000	-	0.0%	
	N73	Non-Hazardous Waste Removal Services	18,823	21,000	21,000	-	0.0%	
	N74	Snow Removal&Groundskeeping Svcs (inc. haz. tree removal)	14,820	5,000	5,000	-	0.0%	
N98	Reimbursement for Travel/Other Expense Infrastructure Projects				-			
NN1	Engineering, Research and Scientific Services	372,091	75,000	90,000	15,000	20.0%		
<b>NN Total</b>			<b>1,130,238</b>	<b>765,000</b>	<b>795,000</b>	<b>30,000</b>	<b>3.9%</b>	
PP	P01	Grants to Public Entities				-		
<b>PP Total</b>			-	-	-	-		
TT	T04	Payments & Refunds (USGS qages)	124,460	125,000	125,000	-	0.0%	
<b>TT Total</b>			<b>124,460</b>	<b>125,000</b>	<b>125,000</b>	-	<b>0.0%</b>	
UU	U01	Telecommunications Services Data		2,000	10,500	8,500	425.0%	
	U02	Telecommunications Services - Voice	46,346	50,000	55,000	5,000	10.0%	
	U03	Software and Information Technology (IT) Licenses	76	15,000	15,000	-	0.0%	
	U04	Information Technology Chargeback	5,653	2,000	2,000	-	0.0%	
	U05	Information Tech (IT) Professionals		6,000	6,000	-	0.0%	
	U07	Information Tech (IT) Equipment Purchase	109,439	90,000	110,000	20,000	22.2%	
	U09	Information Technology (IT) Equip Rental Or Lease	776	24,000	-	(24,000)	-100.0%	
U10	Information Tech (IT) Equipment Maintenance & Repair	23,000	4,000	4,000	-	0.0%		
<b>UU Total</b>			<b>185,290</b>	<b>193,000</b>	<b>202,500</b>	<b>9,500</b>	<b>4.9%</b>	
<b>Total Baseline Cost</b>			<b>14,950,286</b>	<b>16,024,268</b>	<b>16,664,006</b>	<b>639,738</b>	<b>4.0%</b>	



DCR Division of Water Supply Protection  
Office of Watershed Management  
FY18 Budget Details

Budget_Fiscal_Year	2018	<b>FY18 Budget</b>						
Appropriation	28300100	MAY 2017						
Object_Class	Object	Object_Name	FY16 Actuals	FY2017 Final	FY2018 Final Proposed	PFY18 vs FY17 Budget	%	
<b>Capital Projects Funded by Water Supply Protection Trust ("PHASE 1")</b>								
<b>Wachusett/Sudbury Region Projects</b>								
KK	K11	Heavy Equipment (items over \$100k)		125,000	150,000	25,000	20.0%	
<b>KK Total</b>			-	<b>125,000</b>	<b>150,000</b>	<b>25,000</b>	<b>20.0%</b>	
NN	N41	Reservoir 2 Toe Drain repairs		210,000		(210,000)	-100.0%	
	NN1	Engineering, Research and Scientific Services (Clinton Crew Headquarters)		60,000	440,000	380,000	633.3%	
	NN1	Engineering, Research and Scientific Services (Design Clinton Garage Maintenance Addition)		40,000	310,000	270,000	675.0%	
<b>NN Total</b>			-	<b>310,000</b>	<b>750,000</b>	<b>440,000</b>	<b>141.9%</b>	
<b>Wachusett/Sudbury Total</b>			-	<b>435,000</b>	<b>900,000</b>	<b>465,000</b>	<b>106.9%</b>	
<b>Quabbin/Ware Region Projects</b>								
KK	K04	Motorized Vehicle Equipment (boats over \$100k)		125,000	150,000	25,000	20.0%	
<b>KK Total</b>			-	<b>125,000</b>	<b>150,000</b>	<b>25,000</b>	<b>20.0%</b>	
NN Total	N16	Modular Maintenance Garage/Washbay		50,000		(50,000)	-100.0%	
	N17	Boiler Room Floor Drain Elim./Industrial WW Tank/Water Line				-		
	N22	Highway Horizontal/Lateral Maintenance and Improvements		250,000		(250,000)	-100.0%	
	N74	Dam Area/Spillway Channel Hazard Tree, Vegetation Removal				-		
	NN1	Horseshoe Dam Bridge at FA-3 Consultant Design		50,000		(50,000)	-100.0%	
	MWRA	Quabbin Admin Complex Rehab Project				-		
<b>NN Total</b>			-	<b>350,000</b>	-	<b>(350,000)</b>	<b>-100.0%</b>	
<b>Quabbin/Ware Total</b>			-	<b>475,000</b>	<b>150,000</b>	<b>(325,000)</b>	<b>-68.4%</b>	
<b>Capital Projects to be Allocated Total</b>			-	-	-	-		
<b>Capital Projects Total</b>			-	<b>910,000</b>	<b>1,050,000</b>	<b>140,000</b>	<b>15.4%</b>	
<b>Grand Total Expenses</b>			<b>14,950,286</b>	<b>16,934,268</b>	<b>17,714,006</b>	<b>779,738</b>	<b>4.6%</b>	
<b>Revenues</b>								
	6995	Hydro & Transmission	394,964	540,000	500,000	(40,000)	-7.4%	
	4500	Forestry	197,327	185,000	200,000	15,000	8.1%	
	3148	Fishing & Recreation	234,394	240,000	240,000	-	0.0%	
	6900	Misc.	76,728	50,000	50,000	-	0.0%	
		Additional DCAM Payment	103,000			-		
<b>Revenue Total</b>			<b>1,006,413</b>	<b>1,015,000</b>	<b>990,000</b>	<b>(25,000)</b>	<b>-2.5%</b>	
<b>Net Reimbursement</b>			<b>13,943,873</b>	<b>15,919,268</b>	<b>16,724,006</b>	<b>804,738</b>	<b>5.1%</b>	
<b>PILOT</b>			<b>8,128,726</b>	<b>8,372,000</b>	<b>8,440,000</b>	<b>68,000</b>	<b>0.8%</b>	
<b>DEBT</b>			<b>5,608,833</b>	-	-	-		
<b>Prepay Debt for FY17-22</b>								
<small>(In FY16 MWRA prepaid \$32 M to the Commonwealth for the remaining debt service payments for FY17-22)</small>								
<b>Total DCR Budget</b>			<b>27,681,432</b>	<b>24,291,268</b>	<b>25,164,006</b>	<b>872,738</b>	<b>3.6%</b>	

## **5. Major Projects**

**Department of Conservation and Recreation  
Division of Water Supply Protection  
Office of Watershed Management  
FY18 Major Projects**

**FY18 NN Spending Proposal Dividing Projects Between Operating Funds, Trust Capital and MWRA Capital Budgets**

**Wachusett**

<b>Project</b>	<b>Operating</b>	<b>Trust Capital</b>	<b>MWRA Capital</b>	<b>Notes</b>	<b>Obj. Code</b>
Structure demolition (including lead/asbestos removal contracts)	\$60,000			Reed Road	N16
Hazardous Tree Removal	\$5,000			various sites	N74
Direct Discharge Elimination Design/Construction Management	\$50,000			DOT construction	NN1
Required Dam Studies (Phase 1s and 2s)	\$10,000			reg-required reports	NN1
Dike Maintenance	\$40,000			liming, seeding regularly	
BMP Maintenance	\$30,000			contract for stormwater BMP cleaning	
Reservoir 2 fencing; access road	\$60,000				
Watershed Gravel Road Reconstruction Supplies	\$20,000			purchase materials for in-house work	N23
Dock Replacement	\$75,000			Replace eroding concrete docks in boat cove	
Construction of New Clinton Crew Headquarters		\$440,000		Design for crew building replacement	NN1 (Cap)
Construction of Maintenance Garage Addition and Building Repairs		\$310,000		Design for tall bay addition	NN1 (Cap)
Regular NN Spending	\$125,000				Multiple
<b>Subtotal</b>	<b>\$475,000</b>	<b>\$750,000</b>			

**Quabbin**

<b>Project</b>	<b>Operating</b>	<b>Trust Capital</b>	<b>MWRA Capital</b>	<b>Notes</b>	<b>Obj. Code</b>
Road Paving and Drainage Improvements				Some road work may be done through savings	NN
Mechanical Repairs, HQ and other locations	\$25,000				NN
Water System Repairs and Upgrades, HQ and other locations	\$45,000				NN
Boat Launch Area 1 Improvements	\$35,000				NN
Quabbin Maintenance Building Equipment	\$50,000			equipment needed for new building	NN
Quabbin Maintenance Building Construction			\$1,600,000		NN
Quabbin Projects (Dam improvements, asbestos plan, Well work)	\$25,000			various projects	NN
Regular NN Spending	\$140,000				Multiple NN
<b>Subtotal</b>	<b>\$320,000</b>	<b>\$0</b>	<b>\$1,600,000</b>		

**NR**

\$10,000

**Total**

\$795,000      \$750,000      \$1,600,000

**Major Equipment Purchases (KK)\***

<b>Wachusett</b>	\$150,000			Dump Truck	KK
<b>Quabbin</b>	\$150,000			Excavator	KK
<b>Total</b>	<b>\$300,000</b>				

**Trust Workplan Budget**

**\$795,000      \$1,050,000      \$1,600,000**

\*\*Does not include passenger vehicle replacements typically funded through Operating Budget

## **6. Annual Land Acquisition Capital Spending Plan**

**Department of Conservation and Recreation  
Division of Water Supply Protection**

**FY18 Proposed Watershed Land Acquisitions**

A major tenet of watershed management is protection through ownership of interests in watershed lands. Owning and managing watershed lands surrounding a water supply source is recognized as the most direct and proven method of protecting the water source's long-term quality because:

- A forested watershed provides the best quality water.
- The purchase of undeveloped lands protects water sources from development, which can alter vegetation and drainage, and add impervious areas that move pollutants quickly towards streams.
- The purchase of vegetated buffers provides natural "treatment" or protection to lessen water quality impacts of future development.
- The purchase of problem properties effectively halts the problem of activity or use, and ensures proper clean-up or re-vegetation of the site.

Landowners continually solicit DCR interest in purchasing their land for watershed protection. DCR also approaches selected landowners holding acreages which are determined applicable to watershed acquisition criteria. Priority is given to those projects which:

- Rate favorably on the Wachusett Watershed Land Acquisition Model Map.
- Are situated within the primary (West Branch Swift) and secondary (Hop Brook, Fever Brook) Quabbin Priority Zones.
- Are determined important for an administrative and/or strategic purpose (agency access, boundary consolidation, prevention of assemblage threat).

Additional priority is given to landowners with holdings meeting the above criteria and who are willing to consider the placement of a Watershed Protection Restriction on their land in place of a fee transfer. Accordingly, the "Land List" remains fluid as proposed projects are brought before the Land Acquisition Panel (LAP) for approval to proceed with due diligence. All proposed acquisitions are subsequently approved by the MWRA Board of Directors.

**The projected budget for watershed land acquisition in FY18 is estimated to be \$2 million.**

## **7. Projected Revenue**

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

**Actual and Projected Revenue FY15-18**

<b>Category</b>	<b>FY15 Actual</b>	<b>FY16 Actual</b>	<b>FY17 Projected</b>	<b>FY18 Projected</b>
Hydroelectric Power / Transmission Lines	\$548,476	\$394,964	\$540,000	\$500,000
Fishing and Recreation	\$234,411	\$234,394	\$240,000	\$240,000
Forestry	\$102,585	\$197,327	\$185,000	\$200,000
Miscellaneous (Interment fees, rents)	\$66,205	\$76,727	\$50,000	\$50,000
<b>TOTAL</b>	<b>\$951,677</b>	<b>\$903,412</b>	<b>\$1,015,000</b>	<b>\$990,000</b>

Projected FY18 revenue is based on hydroelectric history/fluctuations in MWRA contract, new watershed forestry projects, and fishing program history. Actual reservoir transfers and hydroelectric contract price fluctuations will determine real hydro revenue. Fishing program revenue depends greatly on weather conditions during peak weeks and weekends. Forestry revenue will depend on market conditions and when contractors decide to start projects.

## **8. Annual Payments in Lieu of Taxes**



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

**FY18 Payments in Lieu of Taxes Estimate**

Payments in Lieu of Taxes (PILOT), required under MGL c.59 s.5G, are based upon the valuation set every four years by the Department of Revenue (DOR) and the local commercial tax rate. The law dictates that the payment can never be less than the previous year. The law also requires that during the four years in-between the DOR's revaluations a "redetermination" formula must be used to derive the land valuation the year after the local revaluation. The land value is then calculated by the tax rate the year of the local revaluation and the PILOT the year before the local revaluation.

The FY17 PILOT was \$8,190,986. This figure is a 0.8 % increase from the FY16 PILOT paid of \$8,128,913. Several towns' tax rates did not grow as much as in recent years, so this increase was lower than the estimated 3% potential increase stated in the FY17 Work Plan.

FY2018 PILOT will be based on DOR's State Owned Land revaluation that will take place in the first half of Calendar Year 2017. The revaluation will take into account lands purchased in fee over the past four years. Initial reports from DOR stated that valuations should be around the same amount as 2013. Utilizing a generic estimated increase of 5% to all towns' tax rates from FY17 to FY18 and a relatively stable valuations, **it is estimated that PILOT will increase by approximately 3% from FY17 to \$8,436,715.**



**Department of Conservation and Recreation**  
**Division of Water Supply Protection**  
**Office of Watershed Management**  
**FY17 Payments in Lieu of Taxes**  
 Final January 2017

Community	Local Revaluation Year	2013 DOR Property Valuation	FY15 PILOT	FY16 Property Valuation	FY16 Tax Rate	FY16 PILOT	FY17 Property Valuation	Difference 2017-2013 Valuation	% Valuation Difference	FY17 Tax Rate	Minimum FY17 PILOT	FY17 PILOT	Increase	% Increase	Hold Harmless
Barre	2016	\$9,506,900	\$177,209	\$9,506,900	\$17.80	\$177,209	\$9,955,540	\$448,640	4.7%	\$18.70	\$186,168.60	\$186,168.60	\$8,960	5.1%	\$0
Belchertown	2018	\$11,598,400	\$252,696	\$14,124,967	\$17.97	\$253,826	\$14,124,967	\$2,526,567	21.8%	\$18.20	\$257,074.40	\$257,074.40	\$3,249	1.3%	\$0
Belchertown - Annexed Lands	2018	\$1,491,400	\$49,763	\$2,781,599	\$17.97	\$49,985	\$2,781,599	\$1,290,199	86.5%	\$18.20	\$50,625.10	\$50,625.10	\$640	1.3%	\$0
Berlin	2017	\$1,804,700	\$46,426	\$1,941,695	\$23.47	\$46,426	\$1,941,695	\$136,995	7.6%	\$24.21	\$47,008.43	\$47,008.43	\$583	1.3%	\$0
Boylston	2017	\$29,168,700	\$595,939	\$34,229,679	\$16.37	\$595,939	\$34,229,679	\$5,060,979	17.4%	\$16.12	\$551,782.42	\$595,938.71	\$0	0.0%	\$44,156
Clinton	2016	\$6,489,300	\$202,726	\$6,489,300	\$31.45	\$204,088	\$6,445,969	-\$43,331	-0.7%	\$31.95	\$205,948.72	\$205,948.72	\$1,860	0.9%	\$0
Framingham	2018	\$4,993,300	\$261,931	\$6,717,900	\$37.98	\$261,931	\$6,717,900	\$1,724,600	34.5%	\$36.52	\$245,337.70	\$261,930.91	\$0	0.0%	\$16,593
Hardwick	2016	\$7,281,200	\$115,771	\$7,281,200	\$15.77	\$115,771	\$7,341,223	\$60,023	0.8%	\$16.00	\$117,459.56	\$117,459.56	\$1,688	1.5%	\$0
Hardwick - Annexed Lands	2016	\$36,900	\$928	\$36,900	\$15.77	\$928	\$58,838	\$21,938	59.5%	\$16.00	\$941.41	\$941.41	\$14	1.5%	\$0
Holden	2017	\$30,321,600	\$919,616	\$50,751,411	\$17.25	\$919,616	\$50,751,411	\$20,429,811	67.4%	\$17.59	\$892,717.32	\$919,615.57	\$0	0.0%	\$26,898
Hubbardston	2016	\$18,954,300	\$318,970	\$18,954,300	\$15.90	\$318,970	\$20,060,988	\$1,106,688	5.8%	\$15.23	\$305,528.85	\$318,969.72	\$0	0.0%	\$13,441
Leominster	2018	\$142,400	\$8,561	\$440,369	\$19.58	\$8,622	\$440,369	\$297,969	209.2%	\$19.73	\$8,688.49	\$8,688.49	\$66	0.8%	\$0
Ludlow	2018	\$197,900	\$9,820	\$567,947	\$18.13	\$10,297	\$567,947	\$370,047	187.0%	\$18.53	\$10,524.06	\$10,524.06	\$227	2.2%	\$0
Marlborough	2016	\$1,367,000	\$109,727	\$1,367,000	\$25.69	\$109,727	\$4,271,202	\$2,904,202	212.5%	\$26.41	\$112,802.46	\$112,802.46	\$3,075	2.8%	\$0
New Salem	2016	\$22,639,000	\$455,044	\$22,639,000	\$22.99	\$520,471	\$19,793,123	-\$2,845,877	-12.6%	\$21.90	\$433,469.40	\$520,470.61	\$0	0.0%	\$87,001
New Salem - Annexed Lands	2016	\$8,769,200	\$176,261	\$8,769,200	\$22.99	\$201,604	\$7,666,852	-\$1,102,348	-12.6%	\$21.90	\$167,904.05	\$201,603.91	\$0	0.0%	\$33,700
Northborough	2016	\$5,855,800	\$102,158	\$5,855,800	\$17.17	\$102,158	\$5,949,792	\$93,992	1.6%	\$17.39	\$103,466.89	\$103,466.89	\$1,309	1.3%	\$0
Oakham	2017	\$8,930,200	\$128,162	\$9,368,581	\$13.90	\$130,223	\$9,368,581	\$438,381	4.9%	\$14.25	\$133,502.28	\$133,502.28	\$3,279	2.5%	\$0
Orange	2017	\$125,500	\$4,188	\$201,635	\$21.70	\$4,375	\$201,635	\$76,135	60.7%	\$21.23	\$4,280.70	\$4,375.47	\$0	0.0%	\$95
Pelham	2018	\$11,306,000	\$331,392	\$15,939,952	\$21.21	\$338,086	\$15,939,952	\$4,633,952	41.0%	\$21.00	\$334,739.00	\$338,086.39	\$0	0.0%	\$3,347
Pelham - Annexed Lands	2018	\$813,200	\$37,342	\$1,796,163	\$21.21	\$38,097	\$1,796,163	\$982,963	120.9%	\$21.00	\$37,719.41	\$38,096.61	\$0	0.0%	\$377
Petersham	2016	\$10,036,800	\$296,722	\$10,036,800	\$16.42	\$296,722	\$18,070,744	\$8,033,944	80.0%	\$16.19	\$292,565.34	\$296,721.61	\$0	0.0%	\$4,156
Petersham - Annexed Lands	2016	\$5,291,700	\$203,306	\$5,291,700	\$16.42	\$203,306	\$12,381,594	\$7,089,894	134.0%	\$16.19	\$200,458.01	\$203,305.78	\$0	0.0%	\$2,848
Phillipston	2016	\$171,600	\$11,913	\$171,600	\$16.89	\$11,913	\$705,313	\$533,713	311.0%	\$16.68	\$11,764.63	\$11,912.74	\$0	0.0%	\$148
Princeton	2016	\$13,562,700	\$255,315	\$13,562,700	\$17.80	\$255,315	\$14,343,517	\$780,817	5.8%	\$17.78	\$255,027.74	\$255,314.61	\$0	0.0%	\$287
Rutland	2017	\$30,734,100	\$525,860	\$26,821,624	\$17.37	\$525,860	\$26,821,624	-\$3,912,476	-12.7%	\$18.32	\$491,372.16	\$525,860.45	\$0	0.0%	\$34,488
Shutesbury	2018	\$6,056,800	\$283,212	\$13,154,285	\$22.08	\$290,447	\$13,154,285	\$7,097,485	117.2%	\$22.76	\$299,391.54	\$299,391.54	\$8,945	3.1%	\$0
Southborough	2016	\$14,119,400	\$284,149	\$14,119,400	\$15.82	\$284,149	\$17,961,373	\$3,841,973	27.2%	\$16.38	\$294,207.30	\$294,207.30	\$10,058	3.5%	\$0
Sterling	2016	\$40,938,300	\$707,823	\$40,938,300	\$18.33	\$750,399	\$38,615,560	-\$2,322,740	-5.7%	\$18.03	\$696,238.54	\$750,399.04	\$0	0.0%	\$54,160
Templeton	2016	\$48,900	\$1,082	\$48,900	\$16.47	\$1,082	\$65,706	\$16,806	34.4%	\$16.12	\$1,059.18	\$1,082.18	\$0	0.0%	\$23
Ware	2018	\$9,795,000	\$192,472	\$9,304,834	\$20.21	\$192,472	\$9,304,834	-\$490,166	-5.0%	\$20.77	\$193,261.40	\$193,261.40	\$790	0.4%	\$0
Ware - Annexed Lands	2018	\$6,388,500	\$158,544	\$8,068,398	\$20.21	\$163,062	\$8,068,398	\$1,679,898	26.3%	\$20.77	\$167,580.62	\$167,580.62	\$4,518	2.8%	\$0
Wendell	2016	\$1,255,300	\$24,077	\$1,255,300	\$19.38	\$24,328	\$1,242,345	-\$12,955	-1.0%	\$19.31	\$23,989.69	\$24,327.71	\$0	0.0%	\$338
West Boylston	2017	\$18,595,600	\$666,856	\$36,360,723	\$18.45	\$670,855	\$36,360,723	\$17,765,123	95.5%	\$18.80	\$683,581.59	\$683,581.59	\$12,726	1.9%	\$0
Westborough	2016	\$2,626,000	\$50,656	\$2,626,000	\$17.77	\$50,656	\$2,850,621	\$224,621	8.6%	\$17.80	\$50,741.06	\$50,741.06	\$86	0.2%	\$0
<b>TOTAL</b>		\$341,413,600	\$7,966,612			\$8,128,913	\$420,352,064	\$78,938,464	23.1%		\$7,868,928.04	\$8,190,985.91	\$62,073	0.8%	\$322,058

NOTES:

- MA Department of Revenue (DOR), per MGL c. 58, revalues all State Owned Land (SOL) every four years. DOR determines a valuation based upon what each agency owns that is legally reimbursable by either the legislature through municipal aid or by DCR/MWRA through the watershed PILOT program. DOR must complete these revaluations by June with a subsequent short period for appeals; any issue not resolved in this appeal period then goes to the Appellate Tax Board. Watershed PILOT utilizes the DOR revaluation figure in the subsequent fiscal year from the year they are determined. In other words, the 2013 SOL Revaluation was utilized starting in FY2014. The next SOL Revaluation is set for January 1, 2017, which will be effective in FY18.
- Watershed PILOT, per MGL c. 59 s.5G, is determined by multiplying the DOR valuation by the local commercial tax rate. There are two important provisions that subsequently impact these calculations and payments: Hold Harmless and Redetermination.
- "Hold Harmless" is a provision in the legislation that requires any payment never to be less than the previous year's payment. Therefore, if either valuations or tax rates drop, the municipality is guaranteed a consistent payment.
- The "Redetermination Formula" is a provision in the legislation that requires the municipal valuation to be calculated based on a formula the year after a local revaluation. Local revaluations occur every three years and do not necessarily align with the DOR's quadrennial SOL revaluation. Therefore, in the years between the SOL revaluations, if a town has a local revaluation, then a specified formula must be used to derive the valuation for PILOT calculations. This "redetermination formula" takes the PILOT amount from the year before the local revaluation and divides it by the local tax rate from the year of the local revaluation multiplied by 1,000. If a local revaluation occurred in 2016, then for FY17, the valuation is: (2015 PILOT/2016 Tax Rate)\*1000.