

**FY 2020 Budget Questions & Answers**  
**Finance Committee**

<b>Dept. Number, Name + Account</b>	<b>Questioner's Name/Question</b>	<b>Response</b>
600 Water Ent.	Greene: Are residents using the online bill payment option? Does the system save or cost the department?	Yes, approximately 25% of customers use the system and the operational savings in processing time is 80%. It takes approximately an hour to batch the bills manually, whereas it takes approximately 12 minutes to batch through the on line system.
600 Water Ent	Greene: Indirect Costs – Please explain how these percentages (FY20 % Allocation) are calculated?	<p>O'Donnell: I have attached the direct and indirect cost policy that we use to calculate direct and indirect costs.</p> <ul style="list-style-type: none"> <li>• The calculation for the allocation for town department indirect costs is: (Water personal services plus expenses less OPEB less direct and indirect costs / Town Operating Budget less CPA budget less debt service less OPEB less water OPEB less all direct and indirect costs.)</li> <li>• Human Resources is water personal services / townwide personal services.</li> <li>• For the general insurances (worker's comp, gen'l liability, etc.), we receive the attached worksheet each year from MIIA that tells us the amount of premium allocated to the enterprise.</li> <li>• Health and life insurance is based off the actual coverage of water employees, including any retirees.</li> <li>• Medicare is based on the FY18 actual amount.</li> <li>• Retirement is based on the FY18 actual</li> </ul>

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		retirement withholdings from the water enterprise vs. the entire town. That percentage is applied to the FY20 assessment from Middlesex Retirement.
600 Water Ent	Greene: Do we have a final agreement with MassDEP for the Water Management Act Permit? If so, what are the new MCD, RGPCD and UAW numbers?	Our current Water Management Act permit was slated to expire November 30, 2018, but due to delays in the WMA permitting process in other regions of the Commonwealth, MassDEP has extended all existing WMA permits in the Merrimack River Basin until 2020. Our Permit Renewal Application is on file and we are anticipating our Draft Renewal Permit to be issued in 2020. Based on the draft water needs forecast provided to the Water Department by the Department of Conservation and Recreation, we expect that the standards for Residential Gallons Per Capita Day and Unaccounted-For-Water will be 65 and 10%. I have attached the water needs forecast for reference.
600 Water Ent – GIS/Project Management Analyst	FitzPatrick/Kost/ Liewei: Why is the GIS/project mgmt Analyst needed and how does this relate to the capital request to update the GIS system	Currently, we receive minor support from the Town’s GIS Department, however, the Water Department, and the industry in general, are becoming increasingly reliant on GIS systems. The Department’s GIS assets require updating. It has been an ongoing goal of the Department to implement a GIS-based Computerized Maintenance Management System (CMMS) to improve efficiency, schedule, track, and analyze distribution system maintenance, streamline the

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		creation and distribution of service records/gate & tie cards, and improve maintenance reporting. This position will assist in the development of a unidirectional flushing program, hydrant inspection and preventative maintenance program, gate valve maintenance program, and field oversight of Capital Improvement Projects.
600 Water Ent – Scheduled overtime	FitzPatrick: Please give an over view of scheduled over time, OT, on call, and stipends (additional 13% of salaries)? How many hours of scheduled and unscheduled OT do employees typically work?	Scheduled Overtime is based on a required 8 hour shift on each Saturday & Sunday and a 8 hour shift for each of the twelve holidays. In addition, 4 hours of weekly cleaning is included in scheduled Overtime. (please refer to page 4 of the Personnel section of the Water Enterprise Budget book for the supporting backup information) Unscheduled Overtime is budgeted at \$35,000 per year which covers emergency overtime for main breaks, water emergencies, and snow plowing. In FY 2018, 740 hours of unscheduled overtime were expended which equaled \$34,812. Stipends are based on the Union contract for specific licenses (back-up is on page six of the Personnel section of the FY 2020 budget book)
600 Water Ent –	FitzPatrick/Kost: is infrastructure maint/ hydrant replacement/well improvements etc tracked in a GIS system? Or are these different types of expenses? Can you explain the increases in these types of expenses from FY 18 – FY 20	Currently, preventative, routine, and emergency maintenance of the water distribution systems is not scheduled or tracked through a GIS based work order system. It is a goal of the Department to implement a Computerized

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		<p>Maintenance Management System in the near future.</p> <p>The Water Infrastructure Maintenance Account is for the maintenance and repair of water production equipment, treatment systems, distribution systems, booster systems, and water storage facilities. Associated costs include the routine, preventative, and emergency maintenance of electrical, mechanical, hydraulic, chemical, and SCADA components of the water infrastructure. We decreased the budget request for this account from 110,000 to 100,000 in FY19 in response to actual expenditures from the account, though we have experienced price increases in some of the goods and services identified in this line item in recent years.</p> <p>The Hydrant Repair and Replacement account is for the scheduled replacement of aging fire hydrants. The Department has standardized on high flow 3-way hydrants that include two 2.5” hose nozzles and one 4.5” pumper nozzle and meet the current American Water Works C502 Standards. Funding at this level will allow for 3-5 hydrants to be replaced per year. We have decreased this account from \$25,000 to 20,000 in FY20.</p> <p>The Well Repairs/Improvement account is for</p>

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		<p>routine and emergency maintenance of nine well fields comprised of eighteen wells and satellite wells. This includes the scheduled redevelopment of groundwater sources, periodic well yield and flow tests, and gravel pack and well screen inspections. Well redevelopments are staggered over a number of years to ensure that there are an adequate number of reliable sources available at any given time. Deferral of this maintenance can result in permanent well fouling and loss of available capacity. In FY18, we supplemented this account with \$40,000 from the Water Enterprise Emergency Reserve for the emergency relining of the Forge #2 Well. Separation of the well screen and well casing was discovered during routine cleaning and redevelopment of the well.</p>
600 Water Ent	Kost: From '18 to '20 why increases in well treatment chemicals, resurface material, pipe and pipe supplies?	<p>The well treatment/chemicals account is for the purchase of chemicals used in the treatment process at the Forge Village and Nutting Road Water Treatment Facilities. Chemical expenses are proportional to the amount of water treated. Due to seasonal outdoor water use restrictions, as a result of the severe drought in the Summer of 2016, water consumption was significantly reduced. Please see the attached Chemical Summary for reference.</p> <p>The increase in the resurface materials and</p>

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		services and the pipe and pipe supplies account is for trench and pavement restoration that will be required for small system improvements projects that the Department plans to complete in Nabnasset, which include the installation of 140' of 8" pipe on Poplar Road to connect two dead ends in the systems and the installation of flushing hydrants in two other areas.
600 Water Ent	FitzPatrick: Is water billed monthly?	Water is billed quarterly.
600 Water Ent	FitzPatrick: The 8% increase is the first rate increase in 12 years. How many years are expected before a subsequent rate increase?	Based on current conditions, we are anticipating An 8% increase is anticipated in 2026. Please note that this is dependent on several factors, including system growth, the impact of the new WMA permit, seasonal weather variation, and unforeseen equipment and infrastructure repair.
600 Water Ent	FitzPatrick: Does the anticipated decrease in authorized withdrawal volume have any impact on the new and much larger prospect hill storage tank?	The anticipated decrease in authorized withdrawal was considered in the sizing of the Prospect Hill Storage Tank. The 2008 Water Master Plan recommended a 750,000 gallon tank. The design of the new tank included a capacity analysis, which factored the impact the new permit would have on maximum and average day demand in the high service area. Ultimately, we decided that a 600,000 gallon tank would be sufficient.
630 water Ent	FitzPatrick: Is the new permit from DEP issued yet? Are there concerns with the allowances? For example, if the 2015 average daily withdrawal of 1.71 million gallons a day and the permitted allowance is expected to be 1.79 MGD, will Westford exceed	We expect the new permit to be issued in 2020. Included in the permit will be enhanced water conservation requirements with new limits on seasonal non-essential outdoor use. Please see

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	that allowance imminently with the new growth?	Item 7 on page 5 of the attached draft permit renewal from our current permit. We anticipate these requirements to be included in the new permit, consequently reducing seasonal demand up to 30% and average daily withdrawal. Taking this into consideration, along with planned system expansion, population growth, permitted and proposed projects, and reasonable unanticipated expansion, Westford will be able to operate within the permitted allowance until 2035. Not included in these calculations are the mitigation credit we expect to realize through the Stormwater Management program.
630 Water	FitzPatrick: Are there any public wells that factor into all the usage calculations or are those separately monitored by DEP	None of the other permitted public water supply wells or privately owned wells in Westford are factored into the calculations.
630 Water Comp Reserve	Kost: Explain the need to add comp reserve	Please see attached memo.



## TOWN OF WESTFORD

Office of the Finance Director

Town Hall

55 Main Street

WESTFORD, MA 01886

(978) 399-2573 FAX (978) 399-2556

### **Enterprise Funds**

#### **Chapter 44 Section 53F1/2**

#### **Direct & Indirect Costs**

The Bureau of Accounts recommends that every community with an enterprise fund establish a written, internal policy regarding indirect costs allocation and should review this policy annually. The policy should be reasonable and calculated on a fair and consistent basis. Local financial officials should understand and agree on what indirect costs are appropriated as a part of the general fund operating budget and what percentage of these costs should be allocated to the enterprise fund.

#### **PART 1**

**DIRECT COSTS – Costs clearly identifiable and readily attributable to the service being costed.**

#### **Health Insurance**

The charge for health insurance will be based on the current plans that employees are signed up for after the November 1 open enrollment. The budget will consist of 16 weeks at the current health insurance rates, and 32 weeks at the projected increased rates. The projected increase will be calculated by taking the average increase over the previous five fiscal years. For example, the employer monthly share of all non-retiree health plans effective 11-1-06 was \$5,056.43. The cumulative rate for the same plans effective 11-1-11 is \$6,833.53. The average increase is

$$(\$6,833.53 - \$5,056.43) / \$5,056.43 = 35.15\%$$

$$35.15\% / 5 \text{ years} = 8.79\% / \text{year}$$

The projected increase in health insurance for FY13 is 8.79%.

A copy of this calculation will be provided with the indirect cost analysis. Also, the enterprise is responsible to cover the costs of retirees' health insurance. Lastly, since the charge for health insurance is an estimate, at the end of every current fiscal year the Finance Department will run a report that displays the total amount spent by the enterprise on health insurance. The enterprise will either be charged the additional expense, or credited the difference in the upcoming fiscal year. E.g., the credit from FY11 will be applied to the FY13 indirect costs. The reason for doing so is to charge the enterprise the actual costs that were incurred.

### **Life Insurance**

The Town of Westford provides a life insurance option for employees and contributes 50% of the cost. The enterprise will be charged for employees that take part in the life insurance plan after the November 1 open enrollment. A projected increase will not be charged for life insurance.

### **Medicare**

The Town's share of Medicare will be charged to the enterprise. The calculation will be based on the percentage Medicare eligible wages from the most recently completed fiscal year divided by the gross wages. That percentage will be applied to the town manager recommended budget. For example, the Medicare eligible wages are \$850,000 and the actual gross wages were \$1,000,000. If the following year's payroll is \$1,050,000, the Medicare calculation will be:

$$(\$850,000 / \$1,000,000) \times \$1,050,000 \times 1.45\% = \$12,941.25$$

The actual Medicare costs will be calculated at the end of the current fiscal year. Like health insurance, the enterprise will either be charged the additional expense, or credited the difference in the upcoming fiscal year.

### **Middlesex Retirement**

Each year, the Town is charged a retirement assessment to pay for employee pensions. A portion of the assessment will be allocated to the enterprise funds. The most accurate way to assess the retirement costs is to compare retirement withholdings from active employees. A report will be run by the Finance Department that calculates the total Middlesex Retirement withheld from all town employees in the most recently completed fiscal year. A report will then be run that totals

the Middlesex Retirement withholdings from each enterprise in the same fiscal year. The percentage of retirement withhold from each enterprise will be used to prorate the Town's Retirement Assessment. For example, if the total Middlesex Retirement employee withholdings are \$2,000,000 for a year, and an enterprise had \$60,000 in retirement withholdings, then the enterprise will be responsible for 3% of the pension assessment.

$$\$60,000 / \$2,000,000 = 3\%$$

$$3\% \times \$3,100,000 \text{ (Pension Assessment)} = \$93,000$$

The Enterprise's share of the retirement is \$93,000

To project the future retirement costs, the percentage of retirement withheld in the prior fiscal year will be applied to the following year's assessment. For example, if the retirement assessment increases to 3,200,000, the enterprise in the scenario above will be charged 3% of that amount, or \$96,000. Like health insurance, the enterprise will either be charged the additional expense, or credited the difference in the upcoming fiscal year.

## **PART 2**

**INDIRECT COSTS – Costs not readily attributable to a service or department, because they are shared with other services or departments.**

### **Auto Insurance**

Those enterprise departments with vehicles will be charged for auto insurance coverage. The Town pays for auto insurance out of the general fund. Therefore, a portion of the expense must be charged back to the enterprises. Records are kept of all vehicles in Town in order to go out to bid on insurance each year. If readily available, the insurance cost per vehicle is provided on a spreadsheet which will be provided in the direct and indirect cost analysis.

### **Comprehensive Liability Insurance**

The Town keeps records for insurance purposes of the assessed value of all town owned buildings and property. The enterprises will be charged a percentage of the comprehensive liability insurance based on the assessed value of the property versus the total property held by the Town. For example, the if the total value of the Town owned property is \$200,000,000, and the Water Enterprise is in custody of \$10,000,000 of that property, they will be charged 5% of the overall comprehensive liability bill.

Since the Ambulance Enterprise shares buildings with the Fire Department, the charge for comprehensive liability insurance will also need to be prorated based on total operating budget. For example, if the valuation of all Fire Departments in Town is \$5,000,000, the Fire and Ambulance will be charged for 2.5% of the comprehensive liability insurance. That amount will be further prorated based on the Ambulance portion of the overall departmental costs. If the Ambulance Enterprise has a budget of \$1,000,000 and the overall Fire and Ambulance Budget is \$5,000,000, the Ambulance Enterprise will be charged 20% of the 2.5%, or .5% of the overall comprehensive liability charge.

### **General Liability Insurance**

The charge for general liability will be calculated in the same manner as comprehensive liability.

### **Excess Umbrella Liability**

Umbrella insurance provides additional protection for the Town over what the comprehensive and general liability insurances provide. The calculation will be as follows:

$$\frac{\text{Enterprise Operating Budget (Net of Direct/Indirect Costs)} \times \text{Umbrella Liability}}{\text{Total Operating Budget (Net of Direct/Indirect Costs)}}$$

### **Police/Fire Liability**

Only the Ambulance Enterprise will be charged for Police/Fire Liability Insurance. The calculation will be as follows:

$$\frac{\text{Ambulance Operating Budget (Net of Direct/Indirect)} \times \text{Police/Fire Liability}}{\text{Police, Fire, \& Ambulance Operating Budget (Net of Direct/Indirect)}}$$

### **Worker's Compensation Insurance**

The billing for worker's compensation is based on percentage of payroll. Therefore the charge to each enterprise will be as follows:

$$\frac{\text{Enterprise Personnel Budget} \times \text{Worker's Compensation Charge}}{\text{Total Town \& School Personal Services}}$$

### **Unemployment Insurance**

The billing for unemployment insurance is based on percentage of payroll. Therefore the charge to each enterprise will be as follows:

$$\frac{\text{Enterprise Personnel Budget} \times \text{Unemployment Charge}}{\text{Total Town \& School Personal Services}}$$

### **Public Officials Liability**

Public Official Liability is based on percentage of payroll. Therefore the charge to each enterprise will be as follows:

$$\frac{\text{Enterprise Personnel Budget} \times \text{Public Officials Liability}}{\text{Total Town \& School Personal Services}}$$

## **PART 3**

**INDIRECT ADMINISTRATIVE COSTS – Shared costs of management and policymaking that cannot be assigned to individual services of departments.**

**123 Town Manager**

**135 Accounting**

**137 Budget Director**

**145 Treasurer/Collector**

**155 Technology**

For the departments listed above, the enterprises will be charged for a portion of personal services which will be based on percentage of operating budget. The calculation below will use the 123 Town Manager budget as an example. The enterprises will be charged for each department listed above.

$$\frac{\text{Enterprise Budget (Net of Direct/Indirect)} \times \text{Town Mgr Personal Services Budget}}{\text{Total Operating Budget (Net of Direct/Indirect)}}$$

### **152 Human Resources**

The enterprise charge for human resources will be based on percentage of payroll. Therefore the calculation is as follows:

$$\frac{\text{Enterprise Budget Personal Services} \times \text{Town Mgr Personal Services Budget}}{\text{Total Personal Services}}$$

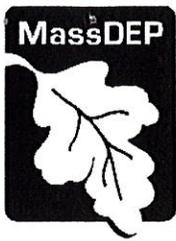
## **220 Fire Admin/Clerical**

The Ambulance Enterprise will be charged for a portion of the Fire Chief's and Office Manager's annual salary. The calculation is as follows:

$$\frac{\text{Ambulance Budget (Net of Direct/Indirect)} \times (\text{Fire Chief} + \text{Office Mgr Salary})}{\text{Total Fire \& Ambulance Budget (Net of Direct/Indirect)}}$$

As with the calculation for health insurance, the above indirect administrative costs charged above are subject to a cost analysis at the end of the fiscal year to determine the actual expense incurred by the department. The purpose is to protect the enterprise. For example, if one of the above positions is vacant for a portion of the year, the enterprise should not have to pay for those services during that time.

The calculations above are subject to review on an annual basis. The Town Accountant processes the direct and indirect charges on a semi-annual basis. The costs are incurred in December and June of the current fiscal year.



# Department of Environmental Protection

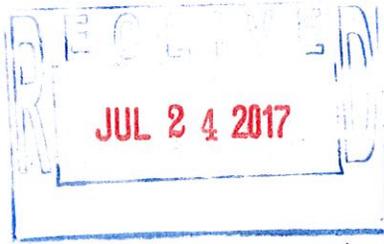
One Winter Street Boston, MA 02108 • 617-292-5500

Charles D. Baker  
Governor

Karyn E. Polito  
Lieutenant Governor

Matthew A. Beaton  
Secretary

Martin Suuberg  
Commissioner



July 21, 2017

Dear Merrimack Basin Water Management Act Permittees:

I am writing to update you on developments that impact the renewal process for your Water Management Act (WMA) permit.

## The Permit Extension Act

As outlined in the letter sent to you on September 15, 2012, the Permit Extension Act (PEA), enacted in 2010 and subsequently amended in 2012, automatically extended all WMA permits.

- In the Merrimack River Basin, the 2010 PEA's provisions extended the term of WMA permits from November 30, 2014, to November 30, 2016, and the 2012 amendment further extended the term of all permits for an additional two years until November 30, 2018.
- Permit renewal applications must be filed between September 30, 2017, and November 30, 2017.

Pursuant to M.G.L. c. 30A, § 13, and 310 CMR 36.18(7), if your permit renewal application is filed by November 30, 2017, your current permit will continue in force and effect until the Department issues a decision on your renewal application. Your renewal application will be reviewed in accordance with the newly amended WMA regulations, which are outlined below and will be presented at the Permit Renewal Outreach Workshop.

## Permit Renewal Workshop

In order to introduce the revised permitting process and new regulatory requirements that might apply to permits in the Merrimack River Basin, MassDEP will be holding an outreach workshop.

### **Water Management Permit Renewal Outreach Workshop, Thursday, September 7, 2017, 10:00 a.m. to 12:00 p.m.**

Community Room  
Visitor's Center  
Lawrence Heritage State Park  
One Jackson Street  
Lawrence, MA 01840  
978 794-1655

For directions see the website: <http://www.mass.gov/eea/agencies/dcr/massparks/region-north/lawrence-heritage-state-park.html>.

Revisions to the Water Management Program Regulations at 310 CMR 36.00

From 2010 to 2014, MassDEP participated in a stakeholder process known as the Sustainable Water Management Initiative (SWMI). SWMI was started in 2010 by the Executive Office of Energy and Environmental Affairs (EEA) for the purpose of incorporating the best available science into the management of the Commonwealth's water resources. The SWMI process is now complete and, effective November 7, 2014, MassDEP has adopted revised WMA Program Regulations at 310 CMR 36.00 that incorporate important elements of the SWMI framework. The regulations can be found at:  
<http://www.mass.gov/eea/agencies/massdep/water/regulations/310-cmr-36-00-the-water-management-act-regulations.html>.

The regulations reflect a carefully developed balance to protect the health of our water bodies while meeting the needs of businesses and communities for water. The amended regulations also clarify WMA permitting requirements and processes. The amended WMA regulations incorporate:

- a new methodology for calculating "safe yield" of the 27 major river basins in Massachusetts;
- "streamflow criteria" and "coldwater fish resources" that will be used to identify environmental conditions within river subbasins;
- 2003-2005 "baseline" water withdrawals ;
- "permit tiers" determined according to the size of each permittee's withdrawal relative to their baseline and potential impact on streamflow criteria and coldwater fish resources;
- "mitigation" to offset increasing withdrawals by improving streamflow or aquatic habitat; and
- "minimization" to protect streamflows in subbasins that are net groundwater depleted during August.

In addition to the Outreach Workshop, MassDEP will be available for individual consultation sessions as needed before and after the application filing date to assist permittees in developing information that addresses all aspects of the new regulations and their individual situation. The attached schedule outlines the permit renewal process in more detail.

Please contact Duane LeVangie in the MassDEP Boston Office at [duane.levangie@state.ma.us](mailto:duane.levangie@state.ma.us) or (617) 292-5706 if you have any questions regarding the status of your permit or the effect of the Permit Extension Act.

Sincerely,



Rebecca Weidman  
Director of the Division of Watershed Management  
Bureau of Water Resources

Y:\DWPWMA\Permit Renewal Outreach Meetings\Merrimack\Merrimack-WMA Permit Wkshp Ltr-2017-7-17

ecc: A. Carroll, DCR OWR  
M. Craddock, DFW  
A. Kautza, DFW  
J. Pederson, MWWA  
J. Blatt, Mass Rivers Alliance  
WMA Advisory Committee

MassDEP Water Management Program Permit Renewal Schedule for the Merrimack River Basin						
Water Needs Forecasts	Outreach Workshop	Permit Renewal Filing Period	Consultation Sessions	MassDEP Sends Request for Additional Information	Draft Permit Issued	Final Permit Issued
Summer 2017	September 7, 2017	September 30, 2017 to November 30, 2017	Starting August 2017 to 2019	Following Consultation Sessions	2020	2020
Department of Conservation & Recreation/Office of Water Resources staff will be reviewing population and water withdrawal data, and may be contacting your community to prepare water needs forecasts.	MassDEP will conduct an Outreach Workshop on: <ul style="list-style-type: none"> <li>the SWMI process</li> <li>information required to complete the permit renewal application process</li> <li>consultation process with applicants to develop the required information.</li> </ul>	Initial permit renewal applications are filed. <ul style="list-style-type: none"> <li>Initial application will be supplemented by information developed through consultation and the Request for Additional Information.</li> </ul>	MassDEP and state agency staff meet at the applicant's request to consult on any aspect of permit renewal including projected demand, fisheries protection, minimization or mitigation requirements.	MassDEP will send an individual "Request for Additional Information" needed to complete each permit renewal application. Applicants will have 90 days to develop the necessary information, and may request additional time if, despite reasonable efforts, additional time is needed.	MassDEP will issue draft renewal permits for a 30-day public comment period.	MassDEP will issue final permit renewals for the Merrimack River Basin.



October 19, 2017

Stephen Cronin  
Water Superintendent  
Westford Water Department  
60 Forge Village Road  
Westford, MA 01886

Dear Mr. Cronin,

The Department of Conservation and Recreation's Office of Water Resources (OWR) has developed a **draft** water needs forecast for your water supply system using the methodology adopted by the Water Resources Commission in 2007 and revised in 2009<sup>1</sup>. This forecast is provided to both you and the Massachusetts Department of Environmental Protection (MassDEP). It was developed to assist you in applying to MassDEP to renew your existing Water Management Act (WMA) permit, or to obtain a new permit in the future.

This forecast is based on information contained in the annual statistical reports (ASRs) filed with MassDEP for the years 2012-2016. The forecast also relies on population and employment data from various sources and information obtained through conversations with you.

The forecast is comprised of two scenarios. The first assumes that throughout the permit period the residential water use for your supply system will be 65 gallons per capita per day (RGPCD) and that unaccounted-for water (UAW) will be 10%, conforming to the Massachusetts Water Conservation Standards. The second scenario assumes that future residential water consumption and UAW will continue to reflect current trends for your system. For both scenarios, the methodology allows for a buffer of 5%, to accommodate for uncertainty in growth projections. During the WMA permit renewal process, MassDEP will discuss with you both forecast scenarios in establishing the appropriate withdrawal volumes for your permit. MassDEP will also use its permitting discretion to determine if and when the additional 5% buffer is warranted for your system. *Please note that this forecast indicates estimated water needs for your water supply service area, but do not indicate whether water is available from your current sources.*

**The following key assumptions were used in the development of the draft forecast:**

Current System Metrics:

System Demand	1.51 MGD
RGPCD	63.44 gallons per capita per day
UAW	4.21 %
Service Population	16,699
Non-Residential Demand	0.30 MGD
<b>Source:</b> Volumes reported in the Annual Statistical Reports (ASR) submitted to MassDEP 2012 – 2016. Percent served (70%) was calculated using the 2016 ASR service population (16,903) divided by the 2016 federal census estimate (24,232). Service population was calculated using an average of the federal census estimates 2012-2016	

<sup>1</sup> See full methodology at: <http://www.mass.gov/eea/docs/dcr/watersupply/6f29ed01-water-needs-forecasting0may-2009.pdf>

COMMONWEALTH OF MASSACHUSETTS · EXECUTIVE OFFICE OF ENERGY & ENVIRONMENTAL AFFAIRS

Department of Conservation and Recreation  
251 Causeway Street, Suite 600  
Boston MA 02114-2119  
617-626-1250 617-626-1351 Fax  
www.mass.gov/dcr



Charles D. Baker  
Governor

Karyn E. Polito  
Lt. Governor

Matthew A. Beaton, Secretary, Executive  
Office of Energy & Environmental Affairs

Leo Roy, Commissioner  
Department of Conservation & Recreation

multiplied by 70%.	
Base employment, town-wide (2016)	12,035
<b>Source:</b> Town-wide employment for 2016 was interpolated using the Massachusetts Department of Transportation (DOT) employment projections issued July 2015.	

**Population and Employment Projections:**

	2018	2024	2029	2034
Service Population Projections	16,993	17,759	18,125	18,683
Employment Projections	12,793	13,608	13,678	13,749
<b>Source:</b> For town-wide population projections, OWR used the percent increase from “Westford Water System Master Plan” by Tighe & Bond dated 2017 page 5-8. The Service Population was assumed to be 72% of the town population in the future starting 2024 to take into account service area expansion (see page 5-9 of “Westford Water System Master Plan”). For town-wide employment projections, OWR relied on DOT (2015) projections and interpolations thereof. A demand of 5.7% was added for treatment plant losses (average from 2012-2016).				

**The following two scenarios represent the draft forecast:**

**Assuming 65 RGPCD and 10% UAW:**

	2018	2024	2029	2034
Projection (in MGD)	1.68	1.76	1.79	1.84
Five Percent Buffer:				0.09

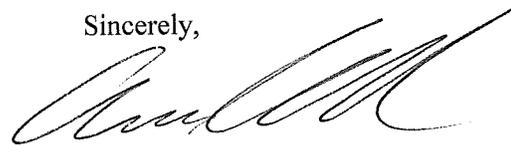
**Assuming water delivery continues at current RGPCD and current UAW:**

	2018	2024	2029	2034
Projection (in MGD)	1.55	1.63	1.66	1.70
Five Percent Buffer:				0.08

The forecast provided in this letter is a draft. If, upon review, you think relevant information was omitted, or additional information has arisen since you spoke with OWR staff, or if you have any concerns or questions about the draft forecast, please contact Erin Graham at (617) 626-1426 as soon as possible.

Thank you for your cooperation in this process.

Sincerely,



Anne Carroll  
 Director  
 Office of Water Resources

cc: Erin Graham, OWR  
 ecc: Vandana Rao, EEA; Duane LeVangie, Elizabeth McCann, MassDEP; Jennifer Pederson, MWWA (per request); Carol Harris, Woodard and Curran (per request); Julia Blatt, Massachusetts Rivers Alliance (per request); Rusty Russell, Merrimack River Watershed Council (per request)





Commonwealth of Massachusetts  
Executive Office of Energy & Environmental Affairs

## Department of Environmental Protection

One Winter Street Boston, MA 02108 • 617-292-5500

DEVAL L. PATRICK  
Governor

MAEVE VALLELY BARTLETT  
Secretary

DAVID W. CASH  
Commissioner

November 6, 2014

Mr. Stephen Cronin  
Westford Water Department  
60 Forge Village Road  
Westford, MA 01886

RE: City/Town: Westford  
PWS Number: 3330000  
WMA Permit #9P-3-13-330.01  
Program: Water Management Act  
Action: 5 Year Review

Dear Mr. Cronin:

Please find the attached documents:

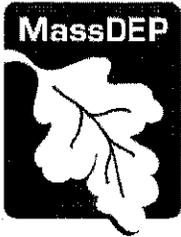
- Findings of Fact in Support of the Modified Permit Decision; and
- Draft Water Management Act Permit #9P-3-13-330.01 (Merrimack River Basin) issued to the Town of Westford, Massachusetts.

MassDEP will provide you 30 days to review and comment. The final permit will be issued after 45 days from the date of the Draft Permit. If you have any questions regarding the Draft Permit, please contact Duane LeVangie at 617-292-5706 or Shi Chen at 617-292-5532.

Sincerely,

Bethany Card,  
Assistant Commissioner  
Bureau of Resource Protection

File Name: Y:\DWP Archive\NERO\Westford-Draft WMA Permit 9P31333001-2014-11-06  
Ecc: Merrimack River Watershed Council  
Jen Pederson, MWWA



## Department of Environmental Protection

One Winter Street Boston, MA 02108 • 617-292-5500

DEVAL L. PATRICK  
Governor

MAEVE VALLELY BARTLETT  
Secretary

DAVID W. CASH  
Commissioner

### **DRAFT Findings of Fact in Support of the Modified Permit Decision Water Management Permit # 9P-3-13-330.01**

The Massachusetts Department of Environmental Protection (MassDEP, or the Department) has completed its 5 Year Review of the Town of Westford's (Westford) Water Management Act Permit in the Merrimack River Basin pursuant to the Water Management Act (WMA), M.G.L. ch.21G. As a result of the review of the Westford's response to the Order to Complete issued on July 31, 2014, MassDEP hereby issues this DRAFT Water Management Permit #9P-3-13-330.01 ("the Permit") in accordance with the "Water Management Act" ("the Act"). MassDEP makes the following Findings of Fact in support of the attached Draft Modified Permit, and includes herewith the reasons for approving the Draft Permit and for the conditions of approval imposed, as required by MGL c 21G, s.11 and the "Massachusetts Water Resources Management Program," 310 CMR 36.00 ("the Regulations").

#### **Westford Water Department's Withdrawal History**

Westford holds a registration statement (3-13-330.01) for an average annual daily withdrawal volume of 1.18 million gallons per day (MGD) from sources in Merrimack River Basin. Westford was first issued a Water Management Act permit in March 6, 1997 to increase the total authorized withdrawal volume. Westford received an amended permit on March 26, 2008, which added the Stepinski Well as an approved withdrawal point. Westford has reported annual withdrawals below their authorized volume for the past 10 years. The average daily withdrawal volume for the Westford Water Department in 2013 was 1.47 MGD. No increase in withdrawal capacity is authorized by this Modified Permit Decision.

#### **The Water Management Act**

##### Permit Factors

Section 7 of the Act requires that MassDEP issue permits that balance a variety of factors including:

- Reasonable protection of existing water uses, land values, investments and enterprises;
- Reasonable conservation consistent with efficient water use;

along with United States Geological Survey (USGS) investigative studies, particularly, *Indicators of Streamflow Alteration, Habitat Fragmentation, Impervious Cover, and Water Quality for Massachusetts Stream Basins* (USGS SIR 2009-5272) which can be viewed at <http://pubs.usgs.gov/sir/2009/5272/>; *Preliminary Assessment of Factors Influencing Riverine Fish Communities in Massachusetts* (USGS OFR 2010-1139), and *Factors Influencing Riverine Fish Assemblages in Massachusetts* (USGS SIR 2011-5193), and other pertinent studies or site-specific analyses that become available. Access to water volumes authorized beyond Period Four of this permit is contingent upon all permitted withdrawals in the basin being within the Long-Term Safe Yield, and on MassDEP completing a permit renewal or a permit amendment incorporating the Long-Term Safe Yield determination.

Westford's permit has been modified in response to a 5-Year Review. No additional water has been allocated in this permit; therefore there are no changes to the remaining allocation by permitting under the ISY.

### **Findings of Fact for the Performance Standards in Westford's Water Management Permit**

MassDEP has determined that there is documented evidence that water withdrawals and an increase in development and impervious area, combined with the out-of-basin export of wastewater, substantially contribute to low flow in the Commonwealth. These low flows impact the ability of rivers and tributaries to adequately serve all of the competing uses described in the Act. To better achieve the balance of competing water uses mandated by the Act, the MassDEP refers to the Water Conservation Standards adopted by the Water Resources Commission.

Specific performance standards and conditions are applied to new Water Management permits and to existing permits at the time they are amended, during 5-year permit review, or permit renewal. Consistent with Section 3 of the Act, the performance standards of 65 residential gallons per capita day or less and 10% or less of unaccounted for water, summer limits on withdrawals, and efforts to offset the impacts of increasing withdrawal volumes are based on the Massachusetts Water Conservation Standards approved by the Water Resources Commission in July 2006 and revised in 2012. These standards can be found at <http://www.mass.gov/eea/docs/dcr/watersupply/intbasin/waterconservationstandards.pdf>

MassDEP believes these standards are reasonable based on studies and data developed throughout the country, the 1996 AWWA Leak Detection and Water Accountability Committee report on water accountability (AWWA Journal; July 1996; pp. 108-111), and the fact that the average values in 2012 for Massachusetts were 59 RGPCD, and 13% UAW. While these performance standards represent the minimum standards required for compliance with the Permit, MassDEP believes that through the implementation of all the terms and conditions of Water Management permits, water suppliers can meet the performance standards for RGPCD and UAW.

Westford was required to meet the 80 residential gallons per capita day (RGPCD) and 15% unaccounted for water performance standards in its 2008 amended permit. Westford will be required to meet the 65 RGPCD and 10% UAW performance standards beginning in the issuance of this modified permit.

**Special Condition 3, Zone of Contribution Delineations**, requirements have been met for the Zone II areas within Westford's municipal boundary for the permitted sources. No further Zone II work is required as a condition of this modified permit.

**Special Condition 4, Wellhead Protection**, requirements are yet to be met. MassDEP sent the Best Effort Requirements to Westford on September 23, 2014. MassDEP has not yet received the reply. Please complete and submit the Best Effort letter to MassDEP within 30 days of the issuance of this modified permit. Westford will be required to repeat the "Best Effort" requirement during the renewal of Merrimack River Basin.

**Formerly Special Condition 5, Wetlands Monitoring**, data was collected in the year of 2010 and 2011 to evaluate the potential effects from pumping Country Road Well No.2 on the water level in the kettle pond. MassDEP's review of the data submitted by Westford indicates that the pumping of the Country Road Well No.2 is not having an impact on the kettle pond's water level. Therefore this condition has been removed as a condition of the modified permit.

**Special Condition 5 (Formerly Special Condition 6), Performance Standard for Residential Gallons Per Capita Day Water Use**, discussed previously. Westford reported an RGPCD of 64 in the 2013 Annual Statistical Report. If Westford's residential water use increases above 65 gallons per person, non-essential outside watering will be reduced to one day per week.

**Special Condition 6 (Formerly Special Condition 7), Performance Standard for Unaccounted for Water**, discussed previously. Westford reported a UAW of 4.1% in the 2013 Annual Statistical Report. Should the Westford's UAW increase above 10%, a UAW Compliance Plan will be required.

**New Special Condition 7, Seasonal Limits on Nonessential Outdoor Water Use** is based upon Westford's Residential Gallons per Capita Day (RGPCD) for the preceding year, and will be implemented according to either: 1) calendar triggered restrictions; or 2) streamflow triggered restrictions. The restrictions have been modified from your prior permit based on both the technical and policy decisions by MassDEP. Due to groundwater depletion in the subbasins in which your sources are located, this modified permit will require that more stringent restrictions than your existing permit be imposed, regardless of your compliance with the RGPCD Standard for the preceding year. In addition, the Drought Trigger has been replaced with a new Low-Flow statistic that triggers tighter restrictions during unusually dry weather.

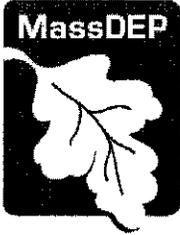
**1. Calendar triggered restrictions:** Restrictions shall be implemented from May 1<sup>st</sup> through September 30<sup>th</sup>. Many public water suppliers will find this option easier to implement and enforce than the streamflow triggered approach.

**2. Streamflow triggered restrictions:** Restrictions shall be implemented at those times from May 1<sup>st</sup> through September 30<sup>th</sup> when streamflow falls below designated flow triggers measured at an assigned, web-based, real-time U.S. Geologic Survey (USGS) stream gage. At a minimum, restrictions shall commence when streamflow falls below the trigger for three consecutive days. Once implemented, the restrictions shall remain in place until streamflow

**New Special Condition 8, Requirement to Report Raw and Finished Water Volumes,** ensures that the information necessary to evaluate compliance with the conditions included herein is accurately reported.

**Special Condition 9 (Formerly Special Condition 8), Water Conservation Requirements,** incorporates the Water Conservation Standards for the Commonwealth of Massachusetts reviewed and approved by the Water Resources Commission in July 2006 and revised in June 2012.

Westford was required in the March 26, 2008 permit to retrofit all the municipally owned public buildings in the service area of the Westford Water Department on or before January 1, 2012. That retrofit project has yet to be completed. We now require an update of the remaining retrofit status within 180 days of the issuance of this final modified permit. A written notice on the status of completing the retrofits shall be submitted to MassDEP within one full calendar year of the issuance of the modified permit.



Commonwealth of Massachusetts  
Executive Office of Energy & Environmental Affairs

## Department of Environmental Protection

One Winter Street Boston, MA 02108 • 617-292-5500

DEVAL L. PATRICK  
Governor

MAEVE VALLELY BARTLETT  
Secretary

DAVID W. CASH  
Commissioner

### WATER WITHDRAWAL PERMIT MGL c 21G

This permit is issued pursuant to the Massachusetts Water Management Act for the sole purpose of authorizing the withdrawal of a volume of water as stated below and subject to the following special and general conditions. This permit conveys no right in or to any property beyond the right to withdraw the volume of water for which it is issued.

**PERMIT NUMBER:** 9P-3-13-330.01

**RIVER BASIN:** Merrimack

**PERMITTEE:** Town of Westford

**EFFECTIVE DATE:** November 6, 2014

**EXPIRATION DATE:** November 30, 2018\*

**NUMBER OF WITHDRAWAL POINTS:**

Groundwater: 13

Surface Water: 0

**USE:** Public Water Supply

**DAYS OF OPERATION:** 365

**Table 2: Maximum Authorized Withdrawal Volumes**

5-Year Periods		Total Raw Water Withdrawal Volumes			
		Permit		Permit + Registration	
		Daily Average (MGD)	Total Annual (MGY)	Daily Average (MGD)	Total Annual (MGY)
Period One Years 2-5	3/6/1997 to 11/30/1999	0.66	240.9	1.84	671.6
Period Two Years 6-10	12/1/1999 to 11/30/2004	0.98	357.7	2.16	788.4
Period Three Years 11-15	12/1/2004 to 11/30/2009	1.18	430.7	2.36	861.4
Period Four* Years 16-20	12/1/2009 to 11/30/2018	1.26	459.9	2.44	890.6

\* This permit is issued under the Interim Safe Yield methodology adopted by MassDEP on December 14, 2009. Under MGL c 21G, §11 MassDEP cannot issue permits when the combined existing, permitted, and proposed withdrawal volumes exceed the safe yield of the water source. If MassDEP determines that the Long-Term Safe Yield is less than the Interim Safe Yield calculated for this basin, the volumes authorized in all Water Management permits in this basin shall be reviewed and the permitted volumes adjusted accordingly. MassDEP is currently developing the final long-term Safe Yield for the Merrimack River basin. Access to water volumes authorized beyond Period Four of this permit is contingent upon all permitted withdrawals in the basin being within the Long-Term Safe Yield, and on MassDEP completing a permit renewal or a permit amendment incorporating the Long-Term Safe Yield determination.

**2. Maximum Authorized Daily Withdrawals from Each Withdrawal Point**

Withdrawals from individual withdrawal points are not to exceed the approved maximum daily volumes listed below without specific advance written approval from MassDEP (Table 3). The authorized maximum daily volume is the approved rate of each source. In no event shall the combined withdrawals from the individual withdrawal points exceed the withdrawal volumes authorized above in Special Condition 1.

Westford shall report its RGPCD and the calculation used to derive that figure as part of its ASR including, without limitation, the source of the data used to establish the service population and the year in which this data was developed. See Appendix A for additional information on the requirements if the Performance Standard for RGPCD is not met.

## **6. Performance Standard for Unaccounted for Water**

Westford's Performance Standard for Unaccounted for Water (UAW) is 10% of overall water withdrawal. Westford has been reporting a UAW under 10% since 2009. Westford shall report its UAW annually in its Annual Statistical Report (ASR) and document compliance with this Performance Standard each year. See Appendix B for additional information on requirements if in the future, the Performance Standard for UAW is not met.

## **7. Seasonal Limits on Nonessential Outdoor Water Use**

Westford shall limit nonessential outdoor water use through mandatory restrictions from May 1<sup>st</sup> through September 30<sup>th</sup> as outlined in Table 4 below.

Westford shall be responsible for tracking streamflows and drought advisories and recording when restrictions are implemented if streamflow triggered restrictions are implemented. See *Accessing Streamflow and Drought Advisory Website Information* in Table 4 for instructions.

Westford shall document compliance with the seasonal limits on nonessential outdoor water use annually in its Annual Statistical Report (ASR), and indicate whether it anticipates implementing calendar triggered restrictions or streamflow triggered restrictions during the next year. Nothing in this permit shall prevent Westford from implementing water use restrictions that are more restrictive than those set forth in this permit.

### **Water Uses Restrictions**

**Nonessential outdoor water uses that are subject to mandatory restrictions** include:

- irrigation of lawns via sprinklers or automatic irrigation systems;
- washing of vehicles, except in a commercial car wash or as necessary for operator safety; and
- washing of exterior building surfaces, parking lots, driveways or sidewalks, except as necessary to apply surface treatments such as paint, preservatives, stucco, pavement or cement.

**The following uses may be allowed** when mandatory restrictions are in place:

- irrigation to establish a new lawn and new plantings during the months of May and September;
- irrigation of public parks and recreational fields by means of automatic sprinklers outside the hours of 9 am to 5 pm; and
- irrigation of lawns, gardens, flowers and ornamental plants by means of a hand-held hose.

**Water uses NOT subject to mandatory restrictions** are those required:

<b>Streamflow Triggered Restrictions</b>	<p>Non-essential outdoor water use is allowed <b>one (1) day per week</b> before 9 am and after 5 pm when USGS stream gage 01097300 - Nashoba Brook near Acton, MA falls below:</p> <p>May 1 – June 30: <b>10 cfs</b> for three (3) consecutive days July 1 – September 30: <b>3 cfs</b> for three (3) consecutive days</p> <p>Once implemented, the restrictions shall remain in place until streamflow at the gage meets or exceeds the trigger streamflow for seven (7) consecutive days.</p>
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#### **Instructions for Accessing Streamflow Website Information**

**Streamflow information** is available at the USGS National Water Information System (NWIS): Web Interface. The USGS NWIS default shows Massachusetts streamflows in real time, i.e., the most recent, usually quarterly hourly, reading made at each USGS stream gage.

Seasonal Limits on Nonessential Outdoor Water Use are implemented when the mean daily streamflow falls below the designated trigger. The mean daily flow is not calculated until after midnight each day when the USGS computes the hourly data into a mean daily streamflow. As a result, permittees must use the mean daily streamflow from the preceding day when tracking streamflows.

**Mean daily streamflow gage** readings are available at the USGS NWIS Web Interface at <http://waterdata.usgs.gov/ma/nwis/current/?type=flow>.

- Scroll down to 01097300 – Nashoba Brook near Acton, MA.
- Click on the gage number.
- Scroll down to “Provisional Date Subject to Revision – Summary of all available data for this site” and click on the drop down menu.
- Click on “Time-series: Daily data” and hit GO.
- Scroll down to the “Available Parameters” box. Within the box, be sure “Discharge (mean)” is checked, then, under “Output Format” click “Table” and hit GO.
- Scroll down to “Daily Mean Discharge, cubic feet per second” table and find the current date on the table.
- Compare the cubic feet per second (cfs) measurement shown on the table to the cfs shown under Streamflow Triggered Restrictions above.

#### **Public Notice of Water Use Restrictions**

Permittee shall notify its customers of the restrictions and the consequences of failing to adhere to the restrictions.

- For calendar-triggered restrictions, customers shall be notified by April 15<sup>th</sup> each year.
- For streamflow-triggered restrictions, when streamflow at the assigned USGS local stream gage falls below a streamflow trigger for three consecutive days, customers shall be notified as soon as possible, but within three days of implementing the restrictions.

4. Westford shall have repair reports available for inspection by the Department. Westford shall establish a schedule for repairing leaks that is at least as stringent as the following:
- Leaks of 15 gallons per minute or more shall be repaired as soon as possible but not later than one month after leak detection.\*
  - Leaks of less than 15 gallons per minute, but greater than 5 gallons per minute, shall be repaired as soon as possible but not later than two months after leak detection.\*
  - Leaks of 5 gallons per minute or less shall be repaired as soon as possible but not later than six months after leak detection, except that hydrant leaks of one gallon or less per minute shall be repaired as soon as possible.\*
  - Leaks shall be repaired in accordance with the priority schedule including leaks up to the property line, curb stop or service meter, as applicable.
  - Have water use regulations in place that require property owners to expeditiously repair leaks on their property.
  - The following exceptions can be considered:
  - Repair of leakage detected during winter months can be delayed until weather conditions become favorable for conducting repairs;\* and
  - Leaks in freeway, arterial or collector roadways may be coordinated with other scheduled projects being performed on the roadway.\*\*
- \*Reference: MWRA regulations 360 CMR 12.09  
\*\*Mass Highway or local regulations may regulate the timing of tearing up pavement on roads to repair leaks.

#### **Metering**

1. Calibrate all source and finished water meters at least annually and report date of calibration on the ASR.
2. Westford reports its system is 100% metered. All water distribution system users shall have properly sized service lines and meters that meet AWWA calibration and accuracy performance standards.  
AWWA References:  
AWWA Manual M22 – Sizing Water Service Lines and Meters  
AWWA Manual M6 – Water Meters, or as amended
3. Westford reports an ongoing program to inspect individual service meters to ensure that all service meters accurately measure the volume of water used by your customers. The metering program shall include regular meter maintenance, including testing, calibration, repair, replacement and checks for tampering to identify and correct illegal connections. The plan shall continue to include placement of sufficient funds in Westford’s annual water budget to calibrate, repair, or replace meters as necessary.

#### **Pricing**

1. Westford must continue to implement a water revenue structure that includes the full cost of operating the water supply system. Evaluate revenues every three to five years and adjust rates as needed. Full cost pricing factors all costs - operations, maintenance, capital, and indirect costs (environmental impacts, watershed protection) - into the revenue structure  
AWWA References for Additional Information on Pricing:  
AWWA Manual 1- Principals of Water Rates, Fees and Charges

**Public Education and Outreach**

1. Continue to implement a Water Conservation Education Plan. Westford's Water Conservation Education Plan shall be designed to educate Westford's water customers of ways to conserve water. Without limitation, Westford's plan may include the following actions:
  - Include in bill stuffers and/or bills, a work sheet to enable customers to track water use and conservation efforts and estimate the dollar savings;
  - Public space advertising/media stories on successes (and failures);
  - Conservation information centers perhaps run jointly with electric or gas company;
  - Speakers for community organizations;
  - Public service announcements; radio/T.V./audio-visual presentations;
  - Joint advertising with hardware stores to promote conservation devices;
  - Use of civic and professional organization resources;
  - Special events such as Conservation Fairs;
  - Develop materials that are targeted to schools with media that appeals to children, including materials on water resource projects and field trips; and
  - Make multilingual materials available as needed.
2. Upon request of the Department, Westford shall report on its public education and outreach effort, including a summary of activities developed for specific target audiences, any events or activities sponsored to promote water conservation and copies of written materials.

**GENERAL PERMIT CONDITIONS (applicable to all Permittees)**

No withdrawal in excess of 100,000 gallons per day over the registered volume (if any) shall be made following the expiration of this permit, unless before that date the Department has received a renewal permit application pursuant to 310 CMR 36.00.

1. **Duty to Comply** The permittee shall comply at all times with the terms and conditions of this permit, the Act and all applicable State and Federal statutes and regulations.
2. **Operation and Maintenance** The permittee shall at all times properly operate and maintain all facilities and equipment installed or used to withdraw water so as not to impair the purposes and interests of the Act.
3. **Entry and Inspections** The permittee or the permittee's agent shall allow personnel or authorized agents or employees of MassDEP to enter and examine any property for the purpose of determining compliance with this permit, the Act or the regulations published pursuant thereto, upon presentation of proper identification and an oral statement of purpose.
4. **Water Emergency** Withdrawal volumes authorized by this permit are subject to restriction in any water emergency declared by MassDEP pursuant to MGL c 21G as 15-17, MGL c 150 ss 111, or any other enabling authority.
5. **Transfer of Permits** This permit shall not be transferred in whole or in part unless and until MassDEP approves such transfer in writing, pursuant to a transfer application on forms

The request shall be dismissed if the filing fee is not paid, unless the appellant is exempt or granted a waiver as described below.

**EXEMPTIONS**

The filing fee is not required if the appellant is a city or town (or municipal agency), county, district of the Commonwealth of Massachusetts, or a municipal housing authority.

**WAIVER**

MassDEP may waive the adjudicatory hearing filing fee for any person who demonstrates to the satisfaction of MassDEP that the fee will create an undue financial hardship. A person, seeking a waiver must file, together with the hearing request, an affidavit setting forth the facts, which support the claim of undue hardship.

**Individual RGPCD Plan**

Individual RGPCD Plan will document a plan to adopt and implement measures tailored to the specific needs of the water supply system that the permittee believes will be sufficient to bring the system into compliance with the performance standard within three years.

At a minimum, all Individual RGPCD Plans for failure to meet the RGPCD performance standard must include implementation of at least one of the following residential conservation programs:

- a. a program that provides water saving devices such as faucet aerators and low flow shower heads at cost;
- b. a program that provides rebates or other incentives for the purchase of low water use appliances (washing machines, dishwashers, and toilets); or
- c. the adoption and enforcement of an ordinance, bylaw or regulation to require the installation of moisture sensors or similar climate related control technology on all automatic irrigation systems.

If the permittee is already implementing one or more of these programs, it must include in its Individual RGPCD Plan the continued implementation of such program(s), as well as implementation of at least one additional program. All programs must include a public information component designed to inform customers of the program and to encourage participation in the program.

Without limitation, the Individual RGPCD Plan for failure to meet the RGPCD performance standard may include any of the actions set forth in the MassDEP RGPCD Functional Equivalence Plan below.

**MassDEP RGPCD Functional Equivalence Plan**

In order to be considered functionally equivalent with the RGPCD performance standard, the permittee must be in compliance with the permit Special Condition, Seasonal Limits on Nonessential Outdoor Water Use, and must adopt and implement the MassDEP RGPCD Functional Equivalence Plan that requires all the following residential conservation programs:

- a. a program that provides water saving devices such as faucet aerators and low flow shower heads at cost;
- b. a program that provides rebates or other incentives for the purchase of low water use appliances (washing machines, dishwashers, and toilets);
- c. the adoption and enforcement of an ordinance, bylaw or regulation to require the installation of soil moisture sensors or similar climate related control technology on all automatic irrigation systems;
- d. the use of an increasing block water rate or a seasonal water rate structure as a tool to encourage water conservation;
- e. the adoption and enforcement of an ordinance, bylaw or regulation to require that all new construction include water saving devices and low water use appliances; and
- f. the implementation of monthly or quarterly billing.

**Hardship**

## **Appendix B – Unaccounted for Water (UAW)**

UAW is defined as the residual resulting from the total amount of water supplied to a distribution system as measured by master meters, minus the sum of all amounts of water measured by consumption meters in the distribution systems, and minus confidently estimated and documented amounts used for certain necessary purposes.

UAW shall include, without limitation: unavoidable leakage, recoverable leakage, meter inaccuracies (unless they fall under the category of source meter calibration which allows for adjustment per results of source meter calibration); errors in estimation of stopped meters, unauthorized hydrant openings, illegal connections, stand pipe overflows, data processing errors; and undocumented fire fighting uses. The need for water main flushing and the use of water in construction or meter calibration shall be metered or estimated as appropriate to assist in determining actual demand. Volumes flushed to waste shall be reported on permittee's ASR.

Uses that can be confidently estimated and documented in writing include: storage tank overflow and drainage; water main flushing and flow testing; fire fighting; bleeding or blow-offs; sewer and storm water system flushing; and cleaning and street cleaning. Any adjustments made as a result of the properly documented source meter calibration shall be provided as required by the ASR. Any adjustment in the calculation of UAW made as a result of confidently estimated uses shall be fully documented as required in the ASR.

### **I. Compliance Plan Requirement**

If the permittee fails to document compliance with the UAW performance standard in its Annual Statistical Report (ASR), then the permittee must file with that ASR an Unaccounted for Water Compliance Plan (UAW Plan) which shall:

- a. meet the requirements set forth below in Section II;
- b. include measures to be implemented to meet the performance standard; and
- c. include the schedule for implementing such measures.

The filing of a UAW Plan shall not constitute a return to compliance, nor shall it affect MassDEP's authority to take action in response to the permittee's failure to meet the performance standard.

If a UAW Plan is required, the permittee must:

- a. submit information and supporting documentation sufficient to demonstrate compliance with its UAW Plan annually at the time it files its ASR; and
- b. continue to implement the UAW Plan until it complies with the performance standard and such compliance is documented in the permittee's ASR for the calendar year in which the standard is met.

### **II. Contents of a UAW Compliance Plan**

A permittee that does not meet the 10% UAW performance standard within 2 years has the choice to file a UAW Plan containing measures that the permittee believes will be sufficient to

Medium Meters (1" or greater and less than 2") - within two years of filing the MassDEP UAW Functional Equivalence Plan

Small Meters (less than 1") - within three years of filing the MassDEP UAW Functional Equivalence Plan;

- d. implementation of monthly or quarterly billing within three years of filing the MassDEP UAW Functional Equivalence Plan; and
- e. within one year of filing the MassDEP UAW Functional Equivalence Plan, implementation of a water pricing structure that achieves sufficient revenues to pay the full cost of operating the system including, without limitation, the costs of repairs under paragraph a., the costs of meter repairs, replacements and calibrations under paragraph c., the costs of employees and equipment, and ongoing maintenance and capital costs.

### **Hardship**

A permittee may present an analysis of the cost effectiveness of implementing certain conservation measures included in the MassDEP UAW Functional Equivalence Plan and offer alternative measures. Any analysis must explicitly consider environmental impacts and must produce equal or greater environmental benefits. Suppliers will be able to present:

- a. Reasons why specific measures are not cost effective because the cost would exceed the costs of alternative methods of achieving the appropriate standard;
- b. Alternative specific conservation measures that would result in equal or greater system-wide water savings or equal or greater environmental benefits than the conservation measures included in the MassDEP UAW Functional Equivalence Plan; and
- c. When applicable, an analysis demonstrating that implementation of specific measures will cause or exacerbate significant economic hardship



## Westford Water Department

Stephen Cronin, Superintendent  
Board of Water Commissioners:  
Hugh C. Maguire  
Titus Palmer  
Chauncey Chu

December 7, 2018

FY 2020 Budget Question for establishing Comp Reserve Account

Each fiscal year merit increases are granted to non-union positions in the Town of Westford based on employee performance reviews. The Town Manager presents her recommended budget to the Board of Selectman for approval and then it goes to the voters at the annual Town Meeting for approval. Each year the town Manager recommends a budget for a Compensation reserve account in a separate department for the General Fund. The Town's comp reserve account does not include any funding for the Water Department Enterprise. The Water Enterprise does not have a corresponding comp reserve account for merit increases or salary adjustments.

Each year after the budget is voted on at the Town's annual meeting, merit increases are issued in the first quarter of the fiscal year based on performance reviews. The Water Department was then instructed to change the appropriated budget for each non-union salary position reflecting the new salary after the merit increases went into effect and to adjust the Unscheduled Overtime line item budget lower in order to balance the Personnel Services section of the budget to the previously approved Town Meeting appropriation total.

The Water Department has been fortunate in the past eight years that the actual spending in the Unscheduled Overtime has been low enough to offset the merit increases; however, in FY 2018 the actual spending in the Unscheduled Overtime was at the budget level and in FY 2019 we are expected to run over the allotted Unscheduled OT budget which requires an additional appropriation of \$8,000 at the Special Town meeting in order to accommodate the merit increases in FY 2019.

Another consideration for needing a Comp reserve account in the Water Budget is for temporary contract positions for unanticipated emergency situations. A budgeted comp reserve would provide a safety net for unanticipated events if needed. Whatever is not spent in a comp reserve account would fall into free cash at the end of the year.

I hope this clearly addresses the reasons for needing a comp reserve account.

Respectfully,

Larry Panaro  
Business Manager  
The Westford Water Department (Tel: 979-399-2453)

Cc: Stephen Cronin  
Westford Water Superintendent