

Commonwealth of Massachusetts  
Executive Office of Energy & Environmental Affairs

## 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

August 22, 2018

Board of Selectmen  
Town of Foxborough  
40 South Street  
Foxborough, Massachusetts 02035

**RE:      FOXBOROUGH – BRP/WMA**  
PWS ID#4099000  
WMA Permit #9P419099.01  
Final Permit Amendment

Dear Sirs,

Please find attached the following:

- Findings of Fact in Support of FINAL Amended Permit #9P419099.01, and
- FINAL Amended WMA Permit #9P419099.01 for the Town of Foxborough.

The signature on this cover letter indicates formal issuance of the attached document.

If you have any questions regarding this information, please contact Richard Friend (617) 654-6522 or [richard.friend@mass.gov](mailto:richard.friend@mass.gov).

Very Truly Yours,

Duane LeVangie  
Chief, Water Management Act Program  
Bureau of Water Resources

Y:\DWP Archive\SERO\Foxborough – WMA –Final Permit Amendment 9P419099.01 8-22-2018

cc: Robert Worthley, Foxborough Water Dept.

ecc: Richard Friend, DEP  
Ian Cooke, NepRWA  
Jen Pederson, MWWA  
Julia Blatt, Mass Rivers Alliance

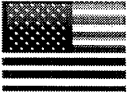


**Communication For Non-English Speaking Parties - 310 CMR 1.03(5)(a)**

Contact Michelle Waters-Ekanem, Diversity Director/Civil Rights: 617-292-5751 TTY#  
MassRelay Service 1-800-439-2370.

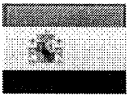
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(Version 3.30.15)



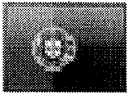
**1 English:**

This document is important and should be translated immediately. If you need this document translated, please contact MassDEP's Diversity Director at the telephone numbers listed below.



**2 Español (Spanish):**

Este documento es importante y debe ser traducido inmediatamente. Si necesita este documento traducido, por favor póngase en contacto con el Director de Diversidad MassDEP a los números de teléfono que aparecen más abajo.



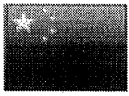
**3 Português (Portuguese):**

Este documento é importante e deve ser traduzida imediatamente. Se você precisa deste documento traduzido, por favor, entre em contato com Diretor de Diversidade da MassDEP para os números de telefone listados abaixo.



**4(a) 中國（傳統）(Chinese (Traditional):**

本文件非常重要，應立即翻譯。如果您需要翻譯這份文件，請用下面列出的電話號碼與 MassDEP 的多樣性總監聯繫。



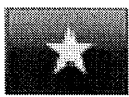
**4(b) 中国（简体中文）(Chinese (Simplified):**

本文件非常重要，应立即翻译。如果您需要翻译这份文件，请用下面列出的电话号码与 MassDEP 的多样性总监联系。



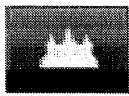
**5 Ayisyen (franse kreyòl) (Haitian) (French Creole):**

Dokiman sa-a se yon bagay enpòtan epi yo ta dwe tradui imedyatman. Si ou bezwen dokiman sa a tradui, tanpri kontakte Divèsite Direktè MassDEP a nan nimewo telefòn ki nan lis pi ba a.



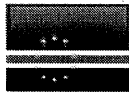
**6 Việt (Vietnamese):**

Tài liệu này là rất quan trọng và cần được dịch ngay lập tức. Nếu bạn cần dịch tài liệu này, xin vui lòng liên hệ với Giám đốc MassDEP đa dạng tại các số điện thoại được liệt kê dưới đây.



**7 ប្រទេសកម្ពុជា (Kmer (Cambodian):**

ឯកសារនេះគឺមានសារៈសំខាន់និងគួរត្រូវបានបកប្រែភ្លាមៗ ប្រសិនបើអ្នកត្រូវបានបកប្រែ  
ឯកសារនេះសូមទំនាក់ទំនងមេត្តាជាមួយ MassDEP នៅលេខទូរស័ព្ទដែលបានរាយ  
ខាងក្រោម។



**8 Kriolu Kabuverdianu (Cape Verdean):**

*Es documento é importante e deve ser traduzido imidiatamente. Se bo precisa des documento traduzido, por favor contacta Director de Diversidade na MassDEP's pa es numero indicode li d'boche.*



**9 Русский язык (Russian):**

Этот документ является важным и должно быть переведено сразу. Если вам нужен этот документ переведенный, пожалуйста, свяжитесь с директором разнообразия MassDEP по адресу телефонных номеров, указанных ниже.

**Communication For Non-English Speaking Parties - 310 CMR 1.03(5)(a)**

Contact Michelle Waters-Ekanem, Diversity Director/Civil Rights: 617-292-5751 TTY#

MassRelay Service 1-800-439-2370.

<http://www.mass.gov/eea/agencies/massdep/service/justice/>

(Version 3.30.15)



**10 العربية (Arabic):**

هذه الوثيقة الهامة وينبغي أن تترجم على الفور. إذا كنت بحاجة إلى هذه الوثيقة المترجمة، يرجى الاتصال مدير التنوع في MassDEP على أرقام الهواتف المدرجة أدناه.



**11 한국어 (Korean):**

이 문서는 중요하고 즉시 번역해야 합니다. 당신이 번역이 문서가 필요하면 아래의 전화 번호로 MassDEP의 다양성 감독에 문의하시기 바랍니다.



**12 հայերեն (Armenian):**

Այս փաստաթուղթը շատ կարևոր է եւ պետք է թարգմանել անմիջապես. Եթե Ձեզ անհրաժեշտ է այս փաստաթուղթը թարգմանվել դիմել MassDEP բազմազանությունը տնօրեն է հեռախոսահամարների թվարկված են ստորև.



**13 فارسی (Farsi (Persian):**

این سند مهم است و باید فوراً ترجمه شده است.  
اگر شما نیاز به این سند ترجمه شده، لطفاً با ما تماس تنوع مدیر MassDEP در شماره تلفن های ذکر شده در زیر.



**14 Français (French):**

Ce document est important et devrait être traduit immédiatement. Si vous avez besoin de ce document traduit, s'il vous plaît communiquer avec le directeur de la diversité MassDEP aux numéros de téléphone indiqués ci-dessous.



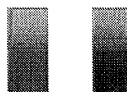
**15 Deutsch (German):**

Dieses Dokument ist wichtig und sollte sofort übersetzt werden. Wenn Sie dieses Dokument übersetzt benötigen, wenden Sie sich bitte Diversity Director MassDEP die in den unten aufgeführten Telefonnummern.



**16 Ελληνική (Greek):**

Το έγγραφο αυτό είναι σημαντικό και θα πρέπει να μεταφραστούν αμέσως. Αν χρειάζεστε αυτό το έγγραφο μεταφράζεται, παρακαλούμε επικοινωνήστε Diversity Director MassDEP κατά τους αριθμούς τηλεφώνου που αναγράφεται πιο κάτω.



**17 Italiano (Italian):**

Questo documento è importante e dovrebbe essere tradotto immediatamente. Se avete bisogno di questo documento tradotto, si prega di contattare la diversità Direttore di MassDEP ai numeri di telefono elencati di seguito.



**18 Język Polski (Polish):**

Dokument ten jest ważny i powinien być natychmiast przetłumaczone. Jeśli potrzebujesz tego dokumentu tłumaczone, prosimy o kontakt z Dyrektorem MassDEP w różnorodności na numery telefonów wymienionych poniżej.



**19 हिन्दी (Hindi):**

यह दस्तावेज़ महत्वपूर्ण है और तुरंत अनुवाद किया जाना चाहिए. आप अनुवाद इस दस्तावेज़ की जरूरत है, नीचे सूचीबद्ध फोन नंबरों पर MassDEP की विविधता निदेशक से संपर्क करें.

**Findings of Fact in Support of FINAL Permit Amendment  
Water Management Permit # 9P419099.01**

The Department of Environmental Protection (the Department) hereby amends Water Management Act (WMA) Permit #9P419099.01 issued to the Town of Foxborough (Foxborough or the Town) for water withdrawals from the Neponset subbasin of the Boston Harbor Basin. This amendment is made in accordance with the Water Management Act, M.G.L. c.21G.

On February 5, 2018 the Department received from the Town of Foxborough a WMA permit amendment application for the addition of two new groundwater sources and one replacement groundwater source at the location of existing Pumping Station No. 1 near the south end of the Neponset Reservoir. In a June 12, 2018 letter to the town of Foxborough, the Department issued final approval to construct three replacement wells. Well 18, to be constructed at the site of test well 6-15, will replace the pumping capacity of existing Well 1, but is a new source because it is greater than 250 feet from Well 1. Well 16, to be built at the site of Test Well 2-15, will replace existing Well 2A. Well 17, at the site of Test Well 3-15, replaces the pumping capacity of existing Well 3, and is a new source because Well 3 has been off-line since 1969. The construction of Wells 16, 17 and 18 are to restore pumping capacity lost due to deteriorating wells and poor water quality at the site. The town did not request an increase in its capacity to pump more groundwater than it has historically been able to from the site.

The attached amended permit supersedes WMA Permit #9P419099.01 issued to Foxborough on September 23, 2008 for withdrawals from the Boston Harbor Basin. The only changes made to the 2008 permit are related to the addition of the three new groundwater sources and the requirement to submit to the Department an unaccounted for water (UAW) compliance plan within two months of permit issuance. Foxborough's permit along with all those others filing permit renewal applications in the Boston Harbor basin permit are anticipated to be renewed by DEP beginning in 2019. The renewed permit will address all additional regulatory requirements applicable to Foxborough for outdoor water use restrictions, minimization, mitigation, and coldwater fishery resources.

**The Permit Extension Act**

In November 2009 Foxborough submitted a 20-year permit renewal application for their Boston Harbor Basin permit. The Permit Extension Act (PEA), Section 173 of the Chapter 240 of the Acts of 2010, and as amended by Sections 74 and 75 of Chapter 238 of the Acts of 2012, extended all existing WMA permits by four years. Pursuant to M.G.L. c. 30A, Section 13, and 310 CMR 36.18(7), Foxborough's amended permit will continue in force and effect until the Department issues a decision on its renewal application. MassDEP has retained Foxborough's Boston Harbor Basin renewal application on file and will deem it resubmitted prior to any Order to Complete or a Final Permit being issued by the Department. The Department expects to begin reviewing renewal applications in the Boston Harbor in 2019. Note that, in issuing this Amended Permit, the Department is not acting on Foxborough's renewal application.

**FINDINGS OF FACT**

As required by M.G.L. Ch. 21G, §11 and 310 CMR 36.00, the Department makes the following Findings of Fact in support of Foxborough's permit amendment, and includes herewith its reasons for amending the permit and for imposing the amended permit conditions.

The Water Management Act requires the Department to 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;
- Reasonable protection of public drinking water supplies, water quality, wastewater treatment capacity, waste assimilation capacity, groundwater recharge areas, navigation, hydropower resources, water-based recreation, wetland habitat, fish and wildlife, agriculture, flood plains; and
- Reasonable economic development and job creation.

#### Safe Yield Permit Factor

Among the minimum permit factors Section 7 of the WMA requires is a determination by MassDEP that permitted water withdrawals are within the safe yield of the water source from which they are made. Section 2 of the Act defines “safe yield” as: “the maximum dependable withdrawal that can be made continuously from a water source including ground or surface water during a period of years in which the probable driest period or period of greatest water deficiency is likely to occur; provided however, that such dependability is relative and is a function of storage and drought probability”. The calculation of safe yield is further described in Section 36.13 of the Regulations promulgated on November 7, 2014. The calculation takes into account all existing allocated registered and permitted volumes. Foxborough’s permit amendment application requests additional withdrawal points to access the withdrawal volume already allocated through Foxborough’s registration and permit in the Boston Harbor Basin. No additional water has been allocated in this permit; therefore there are no changes to the safe yield of the Boston Harbor River Basin.

For the purposes of the Water Management Program, MassDEP considers a water source to be the river basins delineated by the Water Resources Commission at 31 CMR 4.03. A map of the major river basins delineated by the Commission can be viewed in the Department of Conservation and Recreation guidance document “A Guide to the Interbasin Transfer Act and Regulations”.

#### **Findings of Fact for Special Permit Conditions**

In issuing permits, MassDEP looks primarily at site-specific impacts and other issues specific to the system, such as impacts to nearby streams, wetlands, or other water users, justification of long-term demand projections and the capacity of permitted withdrawal points. The special conditions are intended to ensure the efficient use of water and to mitigate the potential impact of withdrawals. The following Findings of Fact are intended to describe the rationale, and to provide additional detail, for each of the special conditions in the permit. This Findings of Fact also explains any changes to the Special Permit Conditions from prior Permits, when applicable. As noted above, Foxborough’s permit in the Boston Harbor Basin is undergoing a 20 Year Permit renewal that is expected to begin in 2019. For that reason the Special Conditions within this permit have minimal changes and will instead be reviewed and revised during the permit renewal process.

In addition to its sources in the Boston Harbor Basin, Foxborough’s is also authorized to withdraw from the Ten Mile River Basin and the Taunton River Basin.

The following table summarizes Foxborough's WMA authorizations:

Summary of the Town of Foxborough's WMA Authorizations		
Basin	WMA Authorization	Volume Authorized
Neponset River (Boston Harbor)	WMA Registration #419099.01	0.64 MGD (233.60 MGY)
	WMA Permit #9P419099.01	0.73 MGD (266.45 MGY) 3/1/2005 to 2/28/2010
<b>Total Neponset River</b>		1.37 MGD (500.05 MGY)
Taunton River	WMA Registration #425099.01	1.60 MGD (584.00 MGY)
	WMA Permit #9P425099.01	0.22 MGD (80.30 MGY) 3/1/2005 to 2/28/2010
<b>Total Taunton River</b>		1.82 MGD (664.30 MGY)
<b>Ten Mile River</b>	WMA Permit #92P427099.01	0 MGD (0 MGY)* 12/1/2006 to 11/30/2011
<b>Total WMA Authorized Volume</b>		3.19 MGD (1164.35 MGY)

\*In 1993 when Foxborough was issued a WMA permit for its proposed Ten Mile sources, no additional volume was allocated in the Ten Mile permit because the combined 3.19 MGD previously allocated by the Taunton River Basin and the Neponset River Basin registrations and permits was sufficient to meet the projected system-wide demands during the permit period. Foxborough's permits have been conditioned to allow Foxborough flexibility in managing its sources system-wide, and to clarify what may be withdrawn from the Ten Mile sources. Foxborough's cumulative annual average daily withdrawal may not exceed 3.19 MGD from all three basins. Foxborough's annual average daily withdrawal volumes may not exceed 0.96 MGD from the Ten Mile sources, 1.37 MGD from the Boston Harbor sources and 1.82 MGD from the Taunton sources.

**Special Condition 1, Authorized Withdrawal Volumes:** Foxborough may withdraw an annual average daily volume of 1.37 MGD from its Neponset (Boston Harbor) sources, provided withdrawals from the Ten Mile and Taunton Basin sources are adjusted so as not to exceed an annual average of 3.19 MGD from all three basins combined. Foxborough's average daily withdrawal volume from the Boston Harbor basin was 0.51 MGD in 2017.

Please note, Foxborough's system-wide authorized volume of 3.19 MDG will be reviewed when the Neponset and Taunton River Basin permits are renewed, with the Taunton Basin's renewals anticipated to begin in late 2018. The 3.19 MGD volume may be revised based on the new water needs forecast prepared by the Department of Conservation and Recreation (DCR) for the Town of Foxborough.

**Special Condition 2, Maximum Authorized Daily Withdrawal Rate:** reflects the approved Zone II rates for Foxborough's permitted Neponset River Basin wells. Withdrawal in excess of this maximum daily rate requires approval from the Department. The approved rate of Well 16 (TW 2-15) is 350 gallons per minute (gpm), equal to the approved rate of Well 2A that it is replacing. This can be increased to 450 gpm if the town can obtain ownership or control of the Zone I for Well 16.

**Special Condition 3, Zone of Contribution Delineations:** In the new source approval letter dated August 8, 2017, DEP approved a revised zone II delineation submitted by AECOM on behalf of the town. The revised delineation is based on the results of the prolonged pumping test and adjustments made to geologic boundaries. Within six months from the date this amended permit is issued, Foxborough shall revise its watershed protection map to include the DEP-approved Zone II's.

**Special Condition 4, Wellhead Protection:** In the new source approval letter dated August 8, 2017, DEP states that prior to placing the wells in service, Foxborough must implement appropriate wellhead protection zoning or non-zoning controls within the approved Zone IIs as stipulated in 310 CMR 22.21(2).

**Special Condition 5, Performance Standard for Residential Gallons Per Capita Day Water Use:** Foxborough's standard for RGPCD is 65 gpd or less. Foxborough's 2017 RGPCD was 56 gpd. This condition requires Foxborough to continue to meet the Performance Standard of 65 RGPCD.

**Special Condition 6, Performance Standard for Unaccounted for Water:** Foxborough's standard for UAW is 10% or less. Foxborough's 2013, 2014, 2015, 2016, and 2017 UAW values were 12%, 19%, 17%, 23%, and 43%, respectively. Although 2017 may be an outlier, the previous years' UAW are all above the 10% standard and have been rising to unacceptable levels. Due to the elevated and increasing UAW, within two months of the issuance of this permit, Foxborough is required to submit a UAW compliance plan in accordance with Appendix B.

**Special Condition 7, Limits on Nonessential Outdoor Water Use:** defines the limits on nonessential outside water use from May through September. All permittees must limit nonessential outside water use whenever the Massachusetts Drought Management Task Force declares a drought Advisory or higher.

Permittees with a RGPCD above 65 for the previous year shall also choose either calendar-triggered outdoor water restrictions between May 1<sup>st</sup> and September 30<sup>th</sup>, or streamflow-triggered water restrictions that must be enforced whenever gaged mean daily streamflow falls below 0.50 cubic feet per second per square mile for three (3) or more days. Permittees may also choose to implement limits on nonessential outdoor water use that are stricter than those required by the permit. Foxborough has a bylaw regulating outdoor water use and has instituted outdoor water use restrictions in past years. Note that this Special Condition is expected to change with the review and issuance of the renewed permit.

**Special Condition 8, Baseline Withdrawal Volume:** This condition outlines the requirements to develop and implement a plan to offset the impacts of additional withdrawals should Foxborough exceed the baseline volume. Foxborough's system baseline volume is 2.24 MGD which is equal to Foxborough's WMA registered volumes from the Boston Harbor and Taunton basins. Foxborough's renewed permits, beginning with the renewal of Foxborough's Taunton Basin permit, will update this condition based on the revisions to the Water Management Act regulations (310 CMR 36.00) adopted in November 2014. Foxborough has exceeded baseline only once, in 2017.

**Special Condition 9, Water Conservation Requirements:** incorporates the Water Conservation Standards for the Commonwealth of Massachusetts approved by the WRC in July 2006, amended 2012.

**Special Condition 10, Requirement to Report Raw and Finished Water Volumes:** ensures that the information necessary to evaluate compliance with the permit conditions is accurately reported.

**Special Condition 11, General Permit Conditions:** outlines the general conditions applicable to all WMA Permittees.

**Appendix A – Residential Gallons Per Capita Day:** Outlines actions to be taken if the Performance Standard for Residential Per Capita Water Use is not met.

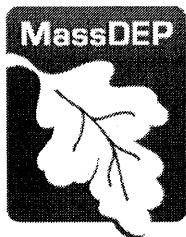


**Appendix B – Unaccounted for Water:** Outlines actions to be taken if the Performance Standard for Unaccounted-for Water is not met.

**Appendix C – Limits on Nonessential Outdoor Water Use:** Provides information regarding implementation of the limits on nonessential outdoor water use.

The Department's Findings of Fact and summary of permit Conditions are not intended to, and should not be construed as, modifying any of the permit conditions. In the event of any conflict or ambiguity between the Findings of Fact and the permit, the permit language shall control.





## 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

### FINAL WATER WITHDRAWAL PERMIT MGL c 21G

This FINAL permit is approved pursuant to the Massachusetts Water Management Act (WMA) 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:** 9P419099.01 **RIVER BASIN:** Boston Harbor  
(Neponset Subbasin)

**FOXBOROUGH:** Town of Foxborough  
40 South Street  
Foxborough, Massachusetts 02035

**EFFECTIVE DATE:** June 1, 1991

**AMENDMENT DATE:** August 22, 2018

**EXPIRATION DATE:** February 28, 2010<sup>1</sup>

**TYPE AND NUMBER OF WITHDRAWAL POINTS:** Groundwater: 4, Surface Water: 0  
**USE:** Public Water Supply

**DAYS OF OPERATION:** 365

**AUTHORIZED WITHDRAWAL POINTS:**

Table 1: Withdrawal Point Identification	
Source	Source Code
Station 5, Foxborough	4099000-13G
Well 16	4099000-##G*
Well 17	4099000-##G*
Well 18	4099000-##G*

\* PWS Source Codes will be assigned by DEP Drinking Water Program when wells go on-line.

<sup>1</sup> Foxborough's most recent 20-year permit was set to expire on February 28, 2010. In 2010, the permit was extended for 2 years, to February 28, 2012, by Section 173 of the Chapter 240 of the Acts of 2010, (Permit Extension Act). In 2012, the Permit Extension Act was amended by Chapter 238 of the Acts of 2012, and this permit was extended an additional 2 years to February 28, 2014. Pursuant to M.G.L. c. 30A, § 13, and 310 CMR 36.18(7), the amended permit will continue in force and effect until the Department issues a decision on Foxborough's renewal application.

## SPECIAL CONDITIONS – FINAL PERMIT #9P419099.01

### 1. Authorized Annual Average Withdrawal Volume from the Neponset River (Boston Harbor) Basin

This permit authorizes the Town of Foxborough (Foxborough) to withdraw water from the Boston Harbor Basin at the rate described in Table 2 below. The permitted volume is expressed both as an average daily withdrawal rate (million gallons per day or MGD), and as a total annual withdrawal volume (million gallons per year or MGY) for each five-year period of the permit term.

The Department of Environmental Protection (Department) will use the raw water withdrawal volume from all authorized withdrawal points to assess compliance with the registered and permitted withdrawal volumes.

<b>Table 2: Authorized Withdrawal Volumes – Neponset River Basin</b>					
<b>5-Year Periods</b>		<b>Total Raw Water Withdrawal Volumes</b>			
		<b>Permit</b>		<b>Permit + Registration</b>	
		Daily Average (MGD)	Total Annual (MGY)	Daily Average (MGD)	Total Annual (MGY)
Period One Years 1-5	6/1/1991 to 2/28/1995	0.62	226.30	1.26	459.90
Period Two Years 6-10	3/1/1995 to 2/28/2000	0.67	244.55	1.31	478.15
Period Three Years 11-15	3/1/2000 to 2/29/2005	0.73	266.45	1.37	500.05
Period Four Years 16-20	3/1/2005 to 2/28/2010 <sup>2</sup>	0.73	266.45	1.37	500.05

Foxborough may withdraw an annual average daily volume of 1.37 MGD from its Neponset sources, provided withdrawals from the Ten Mile and Taunton Basin sources are adjusted so as not to exceed an annual average of 3.19 MGD from all three basins combined.

### 2. Maximum Daily Withdrawal Rate from the Authorized Neponset River Basin Withdrawal Point

Withdrawal from Foxborough's permitted Boston Harbor Basin sources are not to exceed the approved maximum daily rates listed in Table 3 below without advance approval from the Department.

<b>Table 3: Maximum Daily Withdrawal Volume</b>	
<b>Source</b>	<b>Maximum Daily Rate</b>
Station 5, 4099000-13G	0.73 MGD
Well 16	0.50 MGD
Well 17	0.50 MGD
Well 18	0.65 MGD

<sup>2</sup> Foxborough's most recent 20-year permit was set to expire on February 28, 2010. In 2010, the permit was extended for 2 years, to February 28, 2012, by Section 173 of the Chapter 240 of the Acts of 2010, (Permit Extension Act). In 2012, the Permit Extension Act was amended by Chapter 238 of the Acts of 2012, and this permit was extended an additional 2 years to February 28, 2014. Pursuant to M.G.L. c. 30A, § 13, and 310 CMR 36.18(7), the amended permit will continue in force and effect until the Department issues a decision on Foxborough's renewal application.

### **3. Zone II Delineation**

Within six months of the issuance date of this permit, Foxborough shall revise its watershed protection map by to include the DEP-approved Zone II's for its permitted Boston Harbor wells.

### **4. Wellhead Protection**

Prior to placing the wells in service, Foxborough must implement appropriate wellhead protection zoning or non-zoning controls within the approved Zone IIs as stipulated in 310 CMR 22.21(2).

### **5. Performance Standard for Residential Gallons Per Capita Day Water Use**

Foxborough's performance standard for residential gallons per capita day (RGPCD) is 65 gallons or less. Foxborough shall be in compliance with the RGPCD performance standard by December 31, 2010, and each year thereafter.

Foxborough's RGPCD shall be reported in its Annual Statistical Report (ASR), along with the calculation used to derive the RGPCD, the source of the data used to establish the service population and the year in which this data was developed.

Appendix A provides the additional requirements if the Performance Standard for RGPCD is not met by the compliance deadline, and in any year thereafter.

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

Foxborough's Performance Standard for Unaccounted for Water (UAW) is 10% or less of overall water withdrawal. Foxborough's UAW shall be reported in its Annual Statistical Report (ASR), along with the calculation used to derive the UAW.

Foxborough shall be in compliance with the UAW performance standard by December 31, 2010, and each year thereafter. **Within 60 days of the issuance of this permit**, Foxborough shall submit to the Department a UAW compliance plan in accordance with the requirements outlined in Appendix B. Appendix B provides the additional requirements if the Performance Standard for UAW is not met by the compliance deadline, and in any year thereafter.

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

Foxborough shall limit nonessential outdoor water use, as defined in Appendix C of this permit, during the summer months as outlined below. Foxborough shall implement and enforce the required restrictions starting no later than May 1, 2009, and shall document its compliance with the limits on nonessential outdoor water use annually in its ASR for 2009, and each year thereafter.

Foxborough shall be able to document the legal ability to implement and enforce mandatory water use restrictions.

**Nothing in this permit shall prevent Foxborough from implementing water use restrictions stricter than those set forth in this permit condition.**

<b>Table 5A: Limits on Nonessential Outdoor Water Use When RGPCD is 65 or Below</b> (based on the previous year's RGPCD as reported on the ASR and accepted by the Department)	
<b>Action Trigger</b>	<b>Required Water Use Restrictions</b>
Drought Advisory or higher declared by the Massachusetts Drought Management Task Force. See: <a href="http://www.mass.gov/dcr/waterSupply/rainfall/drought.htm">http://www.mass.gov/dcr/waterSupply/rainfall/drought.htm</a>	<ul style="list-style-type: none"> <li>No nonessential outdoor water use between 9 a.m. and 5 p.m.</li> <li>Restrictions must be implemented and remain in place until drought level is returned to "Normal".</li> </ul>
<b>In addition, when RGPCD is below 65 for the previous year, Foxborough must choose one of the following options:</b>	
<b>Option 1 – Streamflow Trigger</b> <ul style="list-style-type: none"> <li>At a minimum, implement restrictions whenever stream flow falls below a mean daily streamflow of 0.50 cubic feet per second per square mile (cfsm) for <b>three (3)</b> consecutive days between May 1<sup>st</sup> and September 30<sup>th</sup>.</li> <li>Stream flow shall be measured at the USGS Stream Gage 01109000 – Wading River Near Norton, MA, in the Taunton River Basin. At Gage 01109000, 0.50 cfsm is equal to 21.65 cubic feet per second (cfs).</li> <li>Readings for Gage 01109000 can be accessed at:  <a href="http://waterdata.usgs.gov/ma/nwis/uv/?site_no=01109000&amp;PARAMeter_cd=00065,00060">http://waterdata.usgs.gov/ma/nwis/uv/?site_no=01109000&amp;PARAMeter_cd=00065,00060</a></li> </ul>	<ul style="list-style-type: none"> <li>No nonessential outdoor water use between 9 a.m. and 5 p.m.</li> <li>Once implemented, the restrictions shall remain in place until streamflow at Gage 01109000 meets or exceeds 0.50 cfsm (21.65 cfs) for <b>seven (7)</b> consecutive days.</li> <li>See Appendix C for more detailed instructions on accessing mean daily streamflows.</li> </ul>
<b>Option 2 – Calendar Trigger</b> <ul style="list-style-type: none"> <li>For ease of implementation, communities with RGPCD below 65 may choose to implement calendar based restrictions that, at a minimum, will be in place during times of low streamflow, e.g., water restrictions in place from May 1 through September 30.</li> </ul>	<ul style="list-style-type: none"> <li>No nonessential outdoor water use between 9 a.m. and 5 p.m.</li> </ul>

<b>Table 5B: on Limits Nonessential Outdoor Water Use When RGPCD is Above 65</b> (based on the previous year's RGPCD as reported on the ASR and accepted by the Department)	
<b>Action Trigger</b>	<b>Required Water Use Restrictions</b>
Drought Advisory or higher declared by the Massachusetts Drought Management Task Force. See: <a href="https://www.mass.gov/drought-management">https://www.mass.gov/drought-management</a>	<ul style="list-style-type: none"> <li>No nonessential outdoor water use.</li> <li>Restrictions must be implemented and remain in place until drought level is returned to "Normal".</li> </ul>
<b>In addition, when RGPCD is above 65 for the previous year, Foxborough must choose one of the following options:</b>	
<b>Option 1 – Streamflow Trigger</b> <ul style="list-style-type: none"> <li>At a minimum, implement restrictions whenever stream flow falls below a mean daily streamflow of 0.50 cubic feet per second per square mile (cfs) for <b>three (3)</b> consecutive days between May 1<sup>st</sup> and September 30<sup>th</sup>.</li> <li>Stream flow shall be measured at the USGS Stream Gage 01109000 – Wading River Near Norton, MA, in the Taunton River Basin. At Gage 01109000, 0.50 cfs is equal to 21.65 cubic feet per second (cfs).</li> <li>Readings for Gage 01109000 can be accessed at:  <a href="http://waterdata.usgs.gov/ma/nwis/uv/?site_no=01109000&amp;PARAMeter_cd=00065,00060">http://waterdata.usgs.gov/ma/nwis/uv/?site_no=01109000&amp;PARAMeter_cd=00065,00060</a></li> </ul>	<ul style="list-style-type: none"> <li>No nonessential outdoor water use</li> <li>Once implemented, the restrictions shall remain in place until streamflow at Gage 01109000 meets or exceeds 0.50 cfs (21.65 cfs) for <b>seven (7)</b> consecutive days.</li> <li>See Appendix C for more detailed instructions on accessing mean daily streamflows.</li> </ul>
<b>Option 2 – Calendar Trigger</b> May 1 through September 30	<ul style="list-style-type: none"> <li>Nonessential outdoor water use allowed <b>one day per week</b> before 9 a.m. and after 5 p.m.</li> </ul>

### Option 1: Calendar Trigger

If Foxborough chooses Option 1, then Foxborough shall notify its customers each year by April 15<sup>th</sup> of the restrictions and the consequences for failing to adhere to the restrictions. Notice must include:

- The need to limit water use, especially nonessential outdoor water use, to protect streamflow for aquatic life and to ensure a sustainable drinking water supply;
- Ways individual homeowners can limit water use, especially nonessential outdoor water use;
- A detailed description of the restrictions and penalties for violating the restrictions.

Notice that restrictions have been put in place shall be filed each year with the Department within 14 days of the restriction's effective date. Filing shall be in writing on the Water Use Restrictions Form at:  
<https://www.mass.gov/service-details/outdoor-water-use-restrictions-for-cities-and-towns>

## **Option 2: Stream Flow Trigger**

If Foxborough chooses Option 2, when streamflow falls below 0.50 cfs (21.65 cfs) at Gage 01109000 for three (3) consecutive days, Foxborough shall notify its customers as soon as possible, and in any event no more than three days after implementation, of the restrictions and the consequences for failing to adhere to the restrictions. Notice must include:

- The streamflow value triggering the required notification;
- The need to limit water use, especially nonessential outdoor water use, to protect streamflow for aquatic life and to ensure a sustainable drinking water supply;
- Ways individual homeowners can limit water use, especially nonessential outdoor water use;
- A detailed description of the restrictions and penalties for violating the restrictions.

Notice that restrictions have been put in place shall be filed with the Department within 14 days of the restriction's effective date. Filing shall be in writing on the Water Use Restrictions Form at the webpage listed above under Option 1.

Notice to customers and the Department need not be provided if Foxborough has already implemented water use restrictions that conform to the applicable restrictions and those restrictions are still in force.

Should the reliability of flow measurement at Gage 01109000 be so impaired as to question its accuracy, Foxborough may request the Department's review and approval for the trigger mechanism to be transferred to another gage. The Department reserves the right to require use of a different gage.

## **8. Water Withdrawals that Exceed Baseline Withdrawal Volumes**

Foxborough's system-wide baseline withdrawal volume (Baseline) is 2.24 MGD.

Foxborough shall perform an Offset Feasibility Study the first time its system-wide water withdrawals during a calendar year exceed its Baseline, beginning with calendar year 2010.

If Foxborough is required to perform an Offset Feasibility Study (Study), Foxborough shall:

- Within 60 days of the filing of an ASR indicating that a Study is required, submit a Study Scope of Work to the Department for approval;
- Within 6 months of the Department's approval of the Study Scope of Work, submit the completed Study to the Department for approval;
- The Department's approval of the Study Scope of Work and the completed Study will be presumed if the Department does not issue a written approval or denial of such submission within 60 days of the date submitted to the Department for approval.

If Foxborough files a subsequent ASR indicating that withdrawals for a calendar year again have exceeded its Baseline, then Foxborough shall:

- Implement the results of the Study;
- Document such implementation annually at the time it files its ASR; and
- Continue to implement the results of the Study as long as withdrawals exceed Baseline.



## 9. Water Conservation Requirements

At a minimum, Foxborough shall implement the following conservation measures forthwith and shall be in compliance with these measures on or before the end date of this permit, February 28, 2010, or as identified in Table 5. The Department recognizes that Foxborough is currently implementing a number of these requirements. Compliance with the water conservation requirements shall be reported to the Department upon request, unless otherwise noted below.

**Table 6: Minimum Water Conservation Requirements**

<b><i>Metering</i></b>
<ol style="list-style-type: none"> <li>1. Foxborough shall calibrate all source and finished water meters at least annually and report date of calibration on the ASR.</li> <li>2. Foxborough reports its system is 100% metered. By November 30, 2011, all water distribution system users shall have properly sized meters that meet AWWA calibration and accuracy performance standards. AWWA References: <u>AWWA Manual M6 – Water Meters</u> (or as amended). <u>AWWA Manual M22 – Sizing Water Service Lines and Meters</u>.</li> <li>3. Foxborough shall have 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 Foxborough's annual water budget to calibrate, repair, or replace meters as necessary.</li> </ol>
<b><i>Industrial, Commercial and Institutional Water Conservation</i></b>
<ol style="list-style-type: none"> <li>1. Foxborough shall review the use records for its industrial, commercial and institutional water users and develop an inventory of the largest water users.  Foxborough shall develop and implement an outreach program designed to inform and (where appropriate) work with its largest industrial, commercial and institutional water users on ways to reduce their water use by the permit end date of November 30, 2011. Such outreach plans can include, but are not limited to: information on water audits, meter sizing, water reuse, low-flow plumbing fixtures, mandatory outdoor water use restrictions, suggestions for contacting trade associations for process specific information on water use reductions, and information on contacting the Executive Office of Environmental Affairs Office of Technical Assistance for Toxics Use Reduction (OTA). OTA offers a range of assistance and information to help facilities improve water use efficiency and reduce wastewater discharge. OTA can be contacted at (617) 626-1060 or at <a href="http://www.mass.gov/envir/ota">www.mass.gov/envir/ota</a>.</li> <li>2. Upon request by the Department, Foxborough shall report on industrial, commercial and institutional water conservation including the results of its review of water use records for industrial, commercial and institutional water users, the inventory of the largest water users, copies of any outreach materials distributed to industrial, commercial and institutional water users, and to the extent practical, a summary of water use reductions or savings that have resulted.  Upon receipt of this report, the Department will take whatever action it deems appropriate to promote the interests of the Water Management Act, including without limitation requiring Foxborough to take additional actions to reduce industrial, commercial and institutional water use.</li> </ol>
<b><i>System Audits and Leak Detection</i></b>
<ol style="list-style-type: none"> <li>1. At a minimum, Foxborough shall conduct leak detection of the entire system every three years.</li> <li>2. Foxborough shall conduct leak detection of the entire distribution system within one year whenever the percentage of UAW increases by 5% or more (for example an increase from 3% to 8%) over the percentage reported on the ASR for the prior calendar year. Within 60 days of completing the leak detection survey, Foxborough shall submit to the Department a report detailing the survey, any leaks</li> </ol>

**Table 6: Minimum Water Conservation Requirements**

uncovered as a result of the survey or otherwise, dates of repair and the estimated water savings as a result of the repairs.

3. Foxborough shall conduct field surveys for leaks and repair programs in accordance with the AWWA Manual 36.

4. Foxborough shall have repair reports available for inspection by the Department. Foxborough 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 no later than one (1) month after detection of the leak.
  - Leaks of less than 15 gallons per minute, but greater than 5 gallons per minute, shall be repaired as soon as possible, but no later than two (2) months after detection.
  - Leaks of 5 gallons per minute or less shall be repaired as soon as possible, but no later than six (6) months after detection, except that hydrants leaks of one (1) gallon or less per minute shall be repaired as soon as possible.
  - Leaks shall be repaired in accordance with Foxborough's priority schedule including leaks up to the property line, curb stop or service meter, as applicable.
  - Foxborough shall have water use regulations in place that require property owners to expeditiously repair leaks on their property.

The following exceptions are considered:

- Repair of leaks detected during winter months can be delayed until weather conditions become favorable for conducting repairs
- Leaks in freeway, arterial or collector roadways may be delayed until other roadwork is being performed on the roadway.
- MassHighway or local regulations may restrict the timing of tearing up pavement on roads to repair leaks.

Reference: MWRA Regulations 360 CMR 12.09.

Foxborough shall conduct a water audit of the Town's water system every seven years. The water audit shall follow the general guidelines in the Department's *Water Audit Leak Detection Project Guidance Manual* (July 1, 2005), or updates thereof, except that the Town should not postpone undertaking the leak detection work until the conclusion of the water audit. The first water audit report shall contain the results of the program to reduce water use by the ten (10) largest customers (see requirements below regarding Industrial, Commercial and Institutional Water Conservation).

***Residential and Public Sector Conservation***

1. Foxborough shall meet the standards set forth in the Federal Energy Policy Act, 1992 and the Massachusetts Plumbing Code.
2. Foxborough shall meter or estimate water used by contractors using fire hydrants for pipe flushing and construction.

***Industrial, Commercial and Institutional Water Conservation***

1. Foxborough shall review the use records for its industrial, commercial and institutional water users and develop an inventory of the largest water users. Foxborough shall develop and implement an outreach program designed to inform and (where appropriate) work with its largest industrial, commercial and institutional water users on ways to reduce their water use by the permit end date of November 30, 2011. Such outreach plans can include, but are not limited to: information on water audits, meter sizing, water reuse, low-flow plumbing fixtures, mandatory outdoor water use restrictions, suggestions for contacting trade associations for process specific information on water use reductions, and information on contacting the Executive Office of Environmental Affairs Office of Technical Assistance for Toxics Use Reduction (OTA). OTA offers a range of assistance and information to help facilities improve water use efficiency and reduce wastewater discharge. OTA can be contacted at (617) 626-1060 or at

<b>Table 6: Minimum Water Conservation Requirements</b>	
<a href="http://www.mass.gov/envir/ota">www.mass.gov/envir/ota</a> .	
2. Upon request by the Department, Foxborough shall report on industrial, commercial and institutional water conservation including the results of its review of water use records for industrial, commercial and institutional water users, the inventory of the largest water users, copies of any outreach materials distributed to industrial, commercial and institutional water users, and to the extent practical, a summary of water use reductions or savings that have resulted.	
Upon receipt of this report, the Department will take whatever action it deems appropriate to promote the interests of the Water Management Act, including without limitation requiring Foxborough to take additional actions to reduce industrial, commercial and institutional water use.	
<b><i>Lawn and Landscape</i></b>	
Foxborough shall continue to implement and enforce its water use ordinance as necessary. In accordance with 310 CMR 22.15(8)(a), Foxborough shall notify the Department in writing within 14 business days of implementing mandatory water use restrictions.	
<b><i>Pricing</i></b>	
1. Foxborough shall maintain a water pricing structure that includes the full cost of operating the water supply system and shall evaluate rates at a minimum every three to five years and adjust costs as needed. Full cost pricing factors all costs - operations, maintenance, capital, and indirect costs (environmental impacts, watershed protection) - into prices.	
2. Foxborough shall not use decreasing block rates. Decreasing block rates which charge lower prices as water use increases during the billing period, are not allowed by M.G.L. Chapter 40 Section 39L.	
<b><i>Public Education and Outreach</i></b>	
1. By May 1, 2009, Foxborough shall develop and implement a Water Conservation Education Plan designed to educate the Town's water customers on ways to conserve water. Without limitation, Foxborough's plan may include the following actions:	
<ul style="list-style-type: none"> <li>• 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;</li> <li>• Public space advertising/media stories on successes (and failures);</li> <li>• Conservation information centers perhaps run jointly with electric or gas company;</li> <li>• Speakers for community organizations;</li> <li>• Public service announcements; radio/T.V./audio-visual presentations;</li> <li>• Joint advertising with hardware stores to promote conservation devices;</li> <li>• Use of civic and professional organization resources;</li> <li>• Special events such as Conservation Fairs;</li> <li>• Develop materials that are targeted to schools with media that appeals to children, including materials on water resource projects and field trips; and</li> <li>• Provide multilingual materials as needed.</li> </ul>	
2. Upon request of the Department, Foxborough 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.	

## 10. Reporting Requirements

Foxborough shall report annually on its ASR the raw water volumes and finished water volumes for the entire water system and the raw water volumes for individual water withdrawal points.

## **11. General Permit Conditions (applicable to all Permittees)**

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 up to the authorized volume 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, inspect and monitor the withdrawal, and inspect and copy any relevant records, 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 M.G.L. c. 21G, §§ 15-17, M.G.L. c. 111, § 160, 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 provided by MassDEP requesting such approval and received by MassDEP at least thirty (30) days before the effective date of the proposed transfer. No transfer application shall be deemed filed unless it is accompanied by the applicable transfer fee established by 310 CMR 36.37.
6. **Duty to Report** The Permittee shall submit annually, on a form provided by MassDEP, a certified statement of the withdrawal. Such report is to be received by MassDEP by the date specified by MassDEP. Such report must be mailed or hand delivered to the address specified on the report form.
7. **Duty to Maintain Records** The Permittee shall be responsible for maintaining withdrawal records as specified by this permit.
8. **Metering** Withdrawal points shall be metered. Meters shall be calibrated annually. Meter shall be maintained and replaced as necessary to ensure the accuracy of the withdrawal records.
9. **Amendment, Suspension or Termination** The Department may amend, suspend or terminate this permit in accordance with M.G.L. c. 21G or 310 CMR 36.29.

### **APPEAL RIGHTS AND TIME LIMITS**

This permit is a decision of MassDEP. Any person aggrieved by this decision may request an adjudicatory hearing. Any such request must be made in writing, by certified mail and received by MassDEP within twenty-one (21) days of the date of receipt of this permit.

No request for an appeal of this permit shall be validly filed unless a copy of the request is sent by certified mail, or delivered by hand to the local water resources management official in the community in which the withdrawal point is located; and for any person appealing this decision, who is not the applicant, unless such person notifies the permit applicant of the appeal in writing by certified mail or by hand within five (5) days of mailing the appeal to MassDEP.

### CONTENTS OF HEARING REQUEST

310 CMR 1.01(6)(b) requires the request to include a clear and concise statement of the facts which are the grounds for the request and the relief sought. In addition, the request must include a statement of the reasons why the decision of MassDEP is not consistent with applicable rules and regulations, and for any person appealing this decision who is not the applicant, a clear and concise statement of how that person is aggrieved by the issuance of his permit.

### FILING FEE AND ADDRESS

The hearing request, together with a valid check, payable to the Commonwealth of Massachusetts in the amount of \$100 must be mailed to:

Commonwealth of Massachusetts  
Department of Environmental Protection  
P.O. Box 4062  
Boston, MA 02211

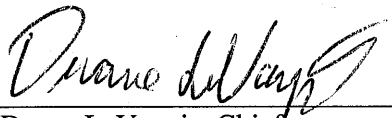
The request shall be dismissed if the filing fee is not paid, unless the appellant is exempt or granted a waiver as described below.

### EXEMPTIONS

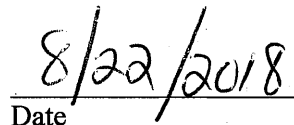
The filing fee is not required if the appellant is a municipality (or municipal agency), county, district of the Commonwealth of Massachusetts, or a municipal housing authority.

### 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.



Duane LeVangie, Chief  
Water Management Act Program  
Bureau of Water Resources



Date

## **Appendix A – Residential Gallons Per Capita Day**

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

If Foxborough fails to document compliance with the RGPCD performance standard in its 2010 ASR, or in any year's ASR thereafter, then Foxborough must file with that ASR a Residential Gallons Per Capita Day Compliance Plan (RGPCD Plan) which shall:

1. meet the requirement set forth below in Section II;
2. include measures to be implemented to meet the performance standard, and
3. include the schedule for implementing such measures.

The filing of a RGPCD plan shall not constitute a return to compliance, nor shall it affect the Department's authority to take action in response to Foxborough's failure to meet the performance standard.

If a RGPCD plan is required, Foxborough must:

1. submit information and supporting documentation sufficient to demonstrate compliance with its RGPCD plan annually at the time it files its ASR, and
2. continue to implement the RGPCD plan until it complies with the performance standard and such compliance is documented in Foxborough's ASR for the calendar year in which the standard is met.

### **II. Contents of a Residential Gallons Per Capita Day Compliance Plan**

At a minimum, all RGPCD compliance plans must include a detailed:

1. description of the actions taken during the prior calendar year to meet the performance standard;
2. analysis of the cause of the failure to meet the performance standard;
3. description and schedule of the actions that will be taken to meet the performance standard, and
4. analysis of how the actions described in c. will address the specific circumstances that resulted in the failure to meet the performance standard.

RGPCD plans may be amended to revise the actions that will be taken to meet the performance standard. Amended RGPCD plans must include the information set forth in paragraph above.

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

1. a program that provides water saving devices such as faucet aerators and low flow shower heads at cost;
2. a program that provides rebates or other incentives for the purchase of low water use appliances (washing machines, dishwashers, and toilets), or
3. 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 Foxborough is already implementing one or more of these programs, it must include in its 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, RGPCD plans for failure to meet the RGPCD performance standard may include the following actions in addition to those outlined in the paragraph above:

1. the use of an increasing block water rate or a seasonal water rate structure as a tool to encourage water conservation;
2. a program that provides rebates or other incentives for the installation of moisture sensors or similar climate related control technology on automatic irrigation systems;
3. 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;
4. the adoption and enforcement of an ordinance, bylaw or regulation to require that all new construction minimize lawn area and/or irrigated lawn area, maximize the use of drought resistant landscaping, and maximize the use of top soil with a high water retention rate;
5. the implementation of a program to encourage the use of cisterns or rain barrels for outside watering, and
6. the implementation of monthly or quarterly billing.

### **Appendix B – Unaccounted for Water**

Unaccounted-for Water (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.

Examples of UAW include, but are not limited to: leakage, meter inaccuracies (unless they fall under the category of adjustment per results of source meter calibration described in the ASR), errors in estimation of stopped meters, unauthorized hydrant openings, illegal connections, data processing errors, and undocumented fire fighting uses.

Examples of 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 stormwater system flushing; and cleaning and street cleaning. Generally, leakage is considered to be UAW, however, individual water main breaks can be discounted on a case-by-case basis. Any adjustment in the calculation of UAW made as a result of confidently estimated uses shall be documented as required in the ASR.

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

If Foxborough fails to document compliance with the UAW performance standard in its 2010 ASR, or in any year's ASR thereafter, then Foxborough must file with that ASR a UAW Compliance Plan (UAW Plan) which shall:

1. meet the requirements set forth below in Section II;
2. include measures to be implemented to meet the performance standard, and
3. include the schedule for implementing such measures.

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

If a UAW plan is required, Foxborough must:

1. submit information and supporting documentation sufficient to demonstrate compliance with its UAW plan annually at the time it files its ASR, and
2. continue to implement the UAW plan until it complies with the performance standard and such compliance is documented in Foxborough's ASR for the calendar year in which the standard is met.

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

Foxborough has the choice to file a UAW plan with measures tailored to the specific needs of its water supply system (Individualized UAW plan) or a UAW plan that includes Best Management Practices (BMP UAW plan).

At a minimum, all UAW plans must include a detailed:

1. description of the actions taken during the prior calendar year to meet the applicable performance standard;
2. analysis of the cause of the failure to meet the performance standard;
3. description and schedule of the actions that will be taken to meet the performance standard, and
4. analysis of how the actions described in c. will address the specific circumstances that resulted in the failure to meet the performance standard.

UAW plans may be amended to revise the actions that will be taken to meet the performance standard. Amended UAW plans must include the information set forth in the paragraph above.



Individualized UAW Compliance Plan

Without limitation, individualized UAW compliance plans for failure to meet the UAW performance standard may include any of the actions set forth in the BMP UAW compliance plan below.

BMP UAW Compliance Plan

At a minimum, all BMP UAW plans for failure to meet the UAW performance standard must include all of the following actions:

1. within one year of filing the UAW plan, complete a water audit and leak detection survey of the entire system and submit completed audit and survey to the Department;
2. within one year of completing the audit and leak detection survey, conduct sufficient repairs to reduce by 75% (by water volume) all leaks detected in the survey; and within one year of completing such repairs, conduct additional repairs of leaks detected in the survey as may be necessary to reduce Foxborough's UAW to 10% or less;
3. implementation of a program that ensures the inspection and evaluation of all water meters and, as appropriate, the repair, replacement and calibration of water meters in accordance with the following schedule:
  - Large Meters (2" or greater) - within one year of filing the BMP UAW plan
  - Medium Meters (1" or greater and less than 2") - within two years of filing the BMP UAW plan
  - Small Meters (less than 1") - -- within three years of filing the BMP UAW Plan;
4. implementation of monthly or quarterly billing within three years of filing the BMP UAW Plan, and
5. within one year of filing the UAW 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 b., the costs of employees and equipment, and ongoing maintenance and capital costs.

## **Appendix C – Limits on Nonessential Outdoor Water Use**

### **I. Nonessential Outdoor Water Use**

Nonessential outdoor water use includes uses that are not required:

1. for health or safety reasons;
2. by regulation;
3. for the production of food and fiber;
4. for the maintenance of livestock, or
5. to meet the core functions of a business (for example, irrigation by golf courses as necessary to maintain tees, greens, and limited fairway watering, or irrigation by plant nurseries as necessary to maintain stock).

Examples of **nonessential** outdoor water uses include:

1. irrigation of lawns via sprinklers or automatic irrigation systems;
2. washing of vehicles other than by means of a commercial car wash, except as necessary for operator safety, and
3. washing of exterior building surfaces, parking lots, driveways or sidewalks, except as necessary to apply paint, preservatives, stucco, pavement or cement.

Examples of **acceptable** outdoor water uses before 9 a.m. and after 5 p.m. include:

1. irrigation to establish a new lawn during the months of May and September;
2. irrigation of public parks and recreational fields, and
3. irrigation of lawns, gardens, flowers, and ornamental plants via hand held hoses only.

### **II. Accessing Mean Daily Streamflows for Gage 01109000 Via the USGS Website**

The USGS Steamflow website default shows Massachusetts streamflows in real time, i.e., the most recent periodic, usually quarterly hourly, reading made at each USGS stream gage. This real-time data can vary widely over the course of a day and is not used to trigger the Limits on Nonessential Outdoor Water Use.

To trigger the limits nonessential outdoor water use, the Department relies on the mean daily streamflows. The mean daily cannot be calculated until after midnight each day when USGS computes the hourly data into a mean daily streamflow.

Go to:

[http://waterdata.usgs.gov/ma/nwis/uv/?site\\_no=01109000&PARAMeter\\_cd=00065,00060](http://waterdata.usgs.gov/ma/nwis/uv/?site_no=01109000&PARAMeter_cd=00065,00060)

for daily mean streamflow data at Gage 01109000. If you need assistance navigating the USGS web site to find the mean daily streamflow, contact Tom Lamonte, Water Management Program staff hydrologist, at (617) 292-5532, or Leslie O'Shea at (508) 946-2837.

The USGS web site for streamflow gages in Massachusetts can be accessed at:

<http://waterdata.usgs.gov/ma/nwis/current/?type=flow>