



Commonwealth of Massachusetts
Executive Office of Energy and Environmental Affairs

Department of Environmental Protection

Address: 100 Cambridge Street, Suite 900, Boston MA 02114 | Phone: 617-292-5500

Maura T. Healey
Governor

Kim Driscoll
Lieutenant Governor

Rebecca Tepper
Secretary

Bonnie Heiple
Commissioner

December 23, 2025

Mr. Greg Nuttelman
Director, Department of Public Works
50 Payson Avenue
Easthampton, MA 01027

RE: Water Management Act Permit Renewal

Permittee: Easthampton Water Department

Public Water Supply ID: 1087000

WMA Permit #9P2-1-06-087.01

Action: DRAFT Water Management Act Permit Renewal

Dear Mr. Nuttelman:

Please find the attached:

- Findings of Fact in Support of the renewal of DRAFT WMA Permit #9P2-1-06-087.01; and,
- Renewed DRAFT WMA Permit #9P2-1-06-087.01 for withdrawals by Easthampton Water Department in the Connecticut River Basin.

Pursuant to 310 CMR 36.27(6)(8) of the revised Water Management Act Regulations, the Department of Environmental Protection (MassDEP) will now publish notice in the Environmental Monitor that a DRAFT Permit is available for review and comment for 30 days from the December 23, 2025 publication in the Environmental Monitor. Notice of the comment period will also be sent to all registrants, permittees and those having non-consumptive use statements within the Connecticut River Basin. MassDEP expects to issue the final permit within 30 days of the close of the comment period. The signature on this cover letter indicates formal issuance of the attached document.

If you have any questions regarding the permit, please contact Andrew Brokowski at andrew.brokowski@mass.gov or 857-278-5634.

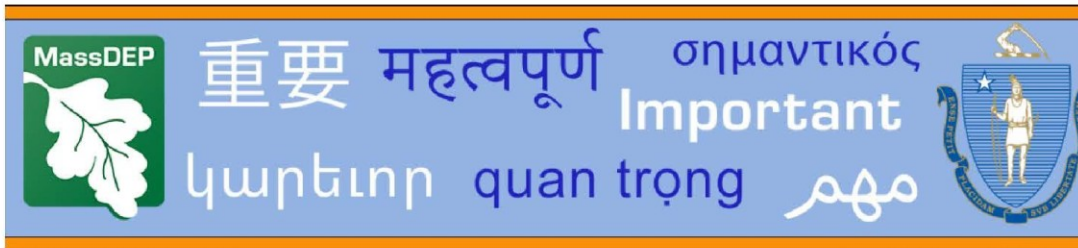
Sincerely,

Duane LeVangie
Water Management Program Chief
Bureau of Water Resources

ecc: Soloe Dennis, MassDEP Springfield
Lydia Olson, Mass Rivers Alliance
Adam Kautza, DFW
Jennifer Pederson, MA Water Works Association
Duane LeVangie, Water Management Program Chief
Joseph Popielarczyk, PE, Tighe & Bond (Consultant)

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Communication for Non-English-Speaking Parties

This document is important and should be translated immediately.

If you need this document translated, please contact MassDEP's Director of Environmental Justice at the telephone number listed below.

Español Spanish

Este documento es importante y debe ser traducido inmediatamente. Si necesita traducir este documento, póngase en contacto con el Director de Justicia Ambiental de MassDEP (*MassDEP's Director of Environmental Justice*) en el número de teléfono que figura más abajo.

Português Portuguese

Este documento é importante e deve ser traduzido imediatamente. Se você precisar traduzir este documento, entre em contato com o Diretor de Justiça Ambiental do MassDEP no número de telefone listado abaixo.

繁體中文 Chinese Traditional

本文檔很重要，需要即刻進行翻譯。
如需對本文檔進行翻譯，請透過如下列示電話號碼與 MassDEP 的環境司法總監聯絡。

简体中文 Chinese Simplified

这份文件非常重要，需要立即翻译。
如果您需要翻译这份文件，请通过下方电话与 MassDEP 环境司法主任联系。

Ayisyen Kreyòl Haitian Creole

Dokiman sa a enpòtan epi yo ta dwe tradui l imedyatman. Si w bezwen tradui dokiman sa a, tanpri kontakte Direktè. Jistis Anviwònmanal MassDEP a nan nimewo telefòn ki endike anba a.

Việt Vietnamese

Tài liệu này và quan trọng và phải được dịch ngay. Nếu quý vị cần bản dịch của tài liệu này, vui lòng liên hệ với Giám Đốc Phòng Công Lý Môi Trường của MassDEP theo số điện thoại được liệt kê bên dưới.

ប្រទេសកម្ពុជា Khmer/Cambodian

ឯកសារនេះមានសារៈសំខាន់
ហើយគួរត្រូវបានបកប្រែឆាប់ៗ,
ប្រសិនបើអ្នកត្រូវការអោយឯកសារនេះបកប្រែ
សូមទាក់ទងនាយកផ្នែកយុត្តិធម៌បរិស្ថានរបស់
MassDEPតាមរយៈលេខទូរស័ព្ទដែលបានរាយនាមខាងក្រោម។

Kriolu Kabuverdianu Cape Verdean

Es dokumentu sta important i tenki ser tradusidu imediatamenti. Se nho ta presisa ke es dokumentu sta tradisidu, por favor kontata O Diretor di Justisia di Environman di DEP ku es numero di telefoni menxionadu di baixo.

Русский Russian

Это чрезвычайно важный документ, и он должен быть немедленно переведен. Если вам нужен перевод этого документа, обратитесь к директору Департамента экологического правосудия MassDEP (MassDEP's Director of Environmental Justice) по телефону, указанному ниже.

العربية Arabic

هذه الوثيقة مهمة ويجب ترجمتها على الفور.

إذا كنت بحاجة إلى ترجمة هذه الوثيقة، فيرجى الاتصال بمدير العدالة البيئية في MassDEP على رقم الهاتف المذكور أدناه.

한국어 Korean

이 문서는 중대하므로 즉시 번역되어야 합니다. 본 문서 번역이 필요하신 경우, 매사추세츠 환경보호부의 "환경정의" 담당자 분께 문의하십시오. 전화번호는 아래와 같습니다.

հայերէն Armenian

Այս փաստաթուղթը կարևոր է, և պետք է անհապաղ թարգմանել այն: Եթե Ձեզ անհրաժեշտ է թարգմանել այս փաստաթուղթը, դիմեք Մասաչուսեթսի շրջակա միջավայրի պահպանության նախարարության (MassDEP) Բնապահպանական հարցերով արդարադատության ղեկավարին (Director of Environmental Justice)՝ ստորև նշված հեռախոսահամարով

فارسی Farsi Persian

این نوشتار بسیار مهمی است و باید فوراً ترجمه شود. اگر نیاز به ترجمه این نوشتار دارید لطفاً با مدیر عدالت محیط زیستی MassDEP در شماره تلفن ذکر شده زیر تماس بگیرید.

Français French

Ce document est important et doit être traduit immédiatement. Si vous avez besoin d'une traduction de ce document, veuillez contacter le directeur de la justice environnementale du MassDEP au numéro de téléphone indiqué ci-dessous.

Deutsch German

Dieses Dokument ist wichtig und muss sofort übersetzt werden. Wenn Sie eine Übersetzung dieses Dokuments benötigen, wenden Sie sich bitte an MassDEP's Director of Environmental Justice (Direktor für Umweltgerechtigkeit in Massachusetts) unter der unten angegebenen Telefonnummer.

Ελληνική Greek

Το έγγραφο αυτό είναι πολύ σημαντικό και πρέπει να μεταφραστεί αμέσως. Αν χρειάζεστε μετάφραση του εγγράφου αυτού, παρακαλώ επικοινωνήστε με τον Διευθυντή του Τμήματος Περιβαλλοντικής Δικαιοσύνης της Μασαχουσέτης στον αριθμό τηλεφώνου που αναγράφεται παρακάτω

Italiano Italian

Questo documento è importante e deve essere tradotto immediatamente. Se hai bisogno di tradurre questo documento, contatta il Direttore della Giustizia Ambientale di MassDEP al numero di telefono sotto indicato.

Język Polski Polish

Ten dokument jest ważny i powinien zostać niezwłocznie przetłumaczony. Jeśli potrzebne jest tłumaczenie tego dokumentu, należy skontaktować się z dyrektorem ds. sprawiedliwości środowiskowej MassDEP pod numerem telefonu podanym poniżej.

हिन्दी Hindi

यह दस्तावेज महत्वपूर्ण है और इसका अनुवाद तुरंत किया जाना चाहिए। यदि आपको इस दस्तावेज का अनुवाद कराने की जरूरत है, तो कृपया नीचे दिए गए टेलीफोन नंबर पर MassDEP के पर्यावरणीय न्याय निदेशक से संपर्क करें।



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Findings of Fact in Support of DRAFT Permit Decision Town of Easthampton Water Management Act Permit #9P2-1-06-087.01

The Massachusetts Department of Environmental Protection (“MassDEP” or “the Department”) makes the following *Findings of Fact* in support of the attached renewed Water Management Act (WMA) Permit #9P2-1-06-087.01 and herewith includes reasons for issuing the permit and for conditions of approval imposed, as required by M.G.L. c. 21G, § 11.

The issuance of this permit is in response to the timely filing of a water withdrawal permit renewal application by Town of Easthampton’s Water Department (“Easthampton” or the “applicant”). The Department adopted revised Water Management Regulations at 310 CMR 36.00 on November 7, 2014.

The Water Management Act (M.G.L. §21G)

The Water Management Act (Act) requires that MassDEP issue permits that balance a variety of factors including without limitation:

- impact of the withdrawal on other sources of water,
- water availability within the *Safe Yield* of the source,
- reasonable protection of existing water uses, land values, investments, and enterprises,
- proposed use of the water and other existing or projected uses of water from the water source,
- municipal and Massachusetts Water Resources Commission (WRC) water resource management plans,
- 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, floodplains, and,
- reasonable economic development and job creation.

Water Management Regulation Revisions

In 2010 the Executive Office of Energy and Environmental Affairs (EEA) convened the Sustainable Water Management Initiative (SWMI) for the purpose of incorporating best available science into the management of the Commonwealth’s water resources. SWMI was a multi-year process that included a wide range of stakeholders and support from the Departments of Environmental Protection, Fish and Game and, Conservation and Recreation. In November 2012 the *Massachusetts Sustainable Water Management Initiative Framework Summary* was released.

MA Sustainable Water Management Initiative (Framework Summary, November 2012)

On November 7, 2014, and March 17, 2023, the Department adopted revised Water Management Regulations at 310 CMR 36.00 that incorporate elements of the SWMI framework and, the Water Conservation Standards adopted by the Massachusetts Water Resource Commission (WRC). The regulations reflect a carefully developed balance to protect the health of Massachusetts' water bodies while meeting the needs of businesses and communities for water.

Without limitation, the Department has incorporated the following into Water Management permitting:

- safe yield determinations for the major river basins based on a new methodology developed through SWMI (see the Safe Yield in the Connecticut River Basin section of this document). For more information on the Safe Yield methodology, refer to the November 2012 SWMI Framework Summary and Appendices ([SWMI Framework Appendices, November 2012](#)),
- Water supply protection measures for public water supplies including Zone II delineations for groundwater sources, and wellhead and surface water protection measures as required by Massachusetts Drinking Water Regulations (310 CMR 22.00),
- water conservation and performance standards reviewed and approved by the WRC in July 2018 ([Massachusetts Water Conservation Standards](#)) and, including without limitation:
 1. performance standard of 65 residential gallons per capita day or less,
 2. performance standard of 10% or less unaccounted-for-water,
 3. seasonal limits on nonessential outdoor water use, and,
 4. a water conservation program that includes leak detection and repair, full metering of the system and proper maintenance of the meters, periodic review of pricing, and education and outreach to residents and industrial and commercial water users, and,
- environmental protections developed through SWMI, including without limitation:
 1. protection for Coldwater fish resources,
 2. minimization of withdrawal impacts in areas stressed by groundwater use, and,
 3. mitigation of the impacts of increasing withdrawals.

Safe Yield in the Connecticut River Basin

This permit has been issued in accordance with Safe Yield methodology adopted by MassDEP on November 7, 2014, and described in the Regulations at 310 CMR 36.13. As of the date of issuance of this permit, the safe yield for the Connecticut River Basin water source is 1,866.5 million gallons per day (MGD), with total allocated withdrawals of 149.67 MGD. The maximum withdrawals that will be authorized in this permit, and all other permits currently under review by the Department within the Connecticut River Basin, will be within the remaining safe yield and may be further conditioned as outlined in the regulations.

Easthampton's Water Withdrawal History

MassDEP issued the original WMA permit on November 23, 1999 to Easthampton to add the Brook Street Well (09G). The permit allocated no additional withdrawal volume beyond their authorized registered withdrawal of 3.31 MGD in registration #1-06-087.01. The permit was issued to add the new groundwater source in addition to the four (4) registered groundwater withdrawal points, Hendrick Street 1&2 artesian wellfield (04G), Pines Well (05G), Maloney well (07G) and Nonotuck Park replacement well (08G). Following approval of the Nonotuck Park replacement well in 1995, Easthampton capped the former Nonotuck well (06G) and classified it as an emergency source. A November 6, 2014, 5-Year Review and Permit Modification did not add new sources or make any changes in the authorized or maximum daily withdrawal volumes. The modification did apply conditions for compliance with new performance standards of 65 residential gallons per capita day (RGPCD) and 10% unaccounted for water (UAW) and seasonal limits on nonessential outdoor water use.

The Permit Extensions

Under the Permit Extension Act, the WMA Permit has an expiration date of November 30, 2017. In November 2016, the Easthampton Water Department filed a permit renewal application. Pursuant to M.G.L. c. 30A, section 13, and 310 CMR 36.18(7), your current withdrawal permit will continue in force and effect until the Department issues a decision on your permit renewal application. Consistent with 310 CMR 36.17(1), the expiration date for withdrawal permits going forward in the Connecticut River Basin will be November 30, 2033.

Findings of Fact for Permit Conditions in Easthampton's Water Management Act Permit

The Findings of Fact for the special conditions included in the permit generally describe the rationale and background for each special condition in the WMA Permit. This summary of permit special conditions is not intended to, and should not be construed as, modifying any of the permit special conditions. In the event of any ambiguity between this summary and the actual permit conditions, the permit language shall control.

Special Condition 1, Maximum Authorized Annual Average Withdrawal Volume. This condition recognizes the 3.31 MGD of authorized withdrawal to Easthampton pursuant to WMA Registration #1-06-087.01 and Easthampton's permit which authorizes no additional withdrawal volume (0.0 MGD) for its one (1) permitted source, the Brook Street Well (09G). Therefore, Easthampton's registered and permitted authorized withdrawal allocates a maximum annual average daily withdrawal volume of 3.31 MGD.

Special Condition 2, Maximum Authorized Daily Withdrawals from each Withdrawal Point. This condition reflects the maximum daily withdrawal rates for each permitted water source. A maximum daily withdrawal rate of 1.454 MGD for the Brook Street Well (09G) is included in this condition based on the June 5, 1995, approved pumping rate.

Special Condition 3, Zone of Contribution Delineation. Easthampton's permitted groundwater source has an approved Zone II. No further delineations are required as a condition of this permit.

Special Condition 4, Water Supply Source Protection. Requires Public Water Systems (PWSs) to implement land use controls protective of its water supply in accordance with 310 CMR 22.21(2) and Best Effort Requirements cited at 310 CMR 22.21(1) for PWSs whose Zone II extends in other municipalities. Easthampton's Zone II extends into Southamptton and Holyoke, therefore, subject to Best Effort Requirements. Refer to [Wellhead Protection Guidance | Best Effort Requirements](#) for guidance.

Special Condition 5, Performance Standard for Residential Gallons Per Capita Day Water Use. This condition requires Easthampton to maintain its RGPCD at or below 65 gallons. MassDEP has conducted detailed reviews of performance standards presented in annual statistical reports (ASRs) for computational errors, consistency with the methodology and guidance provided to public water systems, agreement with published census data, and documentation and validity of confidently estimated municipal use (CEMU) water volumes. When necessary, MassDEP makes calculation corrections, with adjusted RGPCD values for Easthampton ranging below 65 RGPCD since 2013.

Easthampton has not exceeded RGPCD performance standards for at least the past 5 years.

Special Condition 6, Performance Standard for Unaccounted for Water (UAW). This condition requires Easthampton to maintain its UAW at or below 10%. MassDEP has reviewed performance standards presented in 2019 through 2023 ASRs and made calculation corrections when necessary. UAW values for Easthampton have ranged during this period from 15% to 22%, with values consistently exceeding the 10% performance standard (see **Table 1** below).

TABLE 1: UNACCOUNTED FOR WATER %

Year	UAW %
2023	15
2022	18
2021	15
2020	22
2019	15

Due to the 10% UAW exceedance, Easthampton is required to submit a UAW Compliance Plan every year in which an exceedance occurs. Easthampton submitted a UAW Compliance Plan in March 2024 for year 2023 which lacked a schedule of actions to meet the performance standard and details on how the actions would address their failure to meet the performance standard, as outlined in UAW Compliance Plan requirements. Easthampton will be required to submit an UAW Compliance Plan for 2024.

Special Condition 7, Seasonal Limits on Nonessential Outdoor Water Use. This condition is based upon streamflow triggers and Easthampton's RGPCD for the preceding year and reflects updated restrictions on nonessential outdoor water use from May through September. The options outlined in this Special Condition are based on whether reported RGPCD for the previous year was in compliance with the RGPCD Performance Standard (see Special Condition 5). In addition, outdoor water use by suppliers with wells in August net groundwater depleted (August NGD¹) subbasins² with an August NGD greater than 25% is limited to 1 or 2 days per week to minimize withdrawals from depleted subbasins. Easthampton's Well #9 is in subbasin #14069 which has August NGD of 109.5%.

Each year Easthampton may choose **one of two** options for implementing nonessential outdoor watering restrictions.

1. **Calendar triggered restrictions** are in place from May 1st through September 30th. Many public water suppliers find this option easier to implement and enforce than the streamflow triggered approach.
2. **Streamflow triggered restrictions** are implemented at those times when streamflow falls below designated flow triggers measured at an assigned, web-based, real-time U.S. Geologic Survey (USGS) stream gage from May 1st through September 30th. At a minimum, restrictions commence when streamflow falls below the trigger for three consecutive days. Once implemented, the restrictions remain in place until streamflow at the assigned USGS stream gage meets or exceeds the trigger streamflow value for seven (7) consecutive days.

If Easthampton selects the streamflow trigger approach, then Easthampton has been assigned **USGS stream gage 01171500**, located on the Mill River at Northampton, MA. The gage streamflow triggers at this site are a) **62** cubic feet per second (cfs) for May and June, and b) **26** cfs for July, August, and September.

Should the reliability of the flow measurement at this station be so impaired as to question its accuracy, Easthampton may request that MassDEP review and approve the transfer to another eligible gage that will trigger restrictions. MassDEP reserves the right to require use of a different gage.

¹ The Water Management Regulations, 310 CMR 36.03, define August net groundwater depletion (NGD) to mean the unimpeded median flow for August minus 2000-2004 groundwater returns described by U.S. Geological Survey in Indicators of Streamflow Alteration, Habitat Fragmentation, Impervious Cover and Water Quality for Massachusetts Stream Basins

² Subbasins used for WMA permitting are the 1,395 subbasins delineated by the U.S. Geological Survey in *Indicators of Streamflow Alteration, Habitat Fragmentation, Impervious Cover, and Water Quality for Massachusetts Stream Basins* (Weiskel et al., 2010, USGS SIR 2009-5272).

- **The 7-Day Low Flow Trigger**, at which point restrictions increase, is incorporated into both Calendar and Streamflow Triggered restrictions to provide additional protection to streamflows when flows are very low. The 7-day low-flow station is also **USGS Gage 01171500** and triggered at **10 cfs**.

Easthampton may choose to implement limits on nonessential outdoor water use that are stricter than those required by the permit. This permit condition does not confer enforcement authority to the permittee. A requirement to ensure Easthampton has authority to enforce the restrictions is included in Special Condition 9, Water Conservation Requirements.

Special Condition 8, Requirement to Report Raw and Finished Water Volumes. This condition ensures the information necessary to evaluate compliance with the conditions included herein as accurately reported.

Special Condition 9, Water Conservation Requirements. This condition incorporates the Water Conservation Standards for the Commonwealth of Massachusetts outlined in the updated July 2018 Massachusetts Water Resources Commission's Water Conservation Standards.

Special Condition 10, Minimization. Permittees with permitted groundwater sources in subbasins having an August NGD of 25% or greater are required submit a plan and timetable to minimize the impacts of their withdrawals. Easthampton's permitted withdrawal point (09G) is in subbasin #14069 which has an August NGD of 109.5% (**Table 2**, below).

MassDEP reviewed Easthampton's Minimization Plan and included applicable elements and timelines of it in Special Condition 10.

Other WMA Considerations

Coldwater Fisheries Resource (CFR) Protection

Permittees with withdrawals point(s) impacting a CFR must evaluate options for shifting withdrawals to other withdrawal points and/or utilizing potentially alternative withdrawal sources to minimize the impacts to CFRs through feasible optimization. **Table 2** below indicates Easthampton has four (4) withdrawal points (04G, 05G, 08G and 09G) located in subbasin #14069 and one (1) withdrawal point (07G) located in subbasin #10467, with both subbasins having CFRs. Therefore, an evaluation of options for shifting withdrawals to the permittee's other withdrawal points, if any, was evaluated in this permit review.

The Department consulted with the Division of Fisheries and Wildlife and identified that shifting withdrawals from the more impacted subbasin (14069) to the lesser impacted subbasin(14067) is not feasible since the only withdrawal point (07G) in subbasin 10467 has not fully operated since 1996 due to high manganese levels and shifting withdrawal volumes between the sources within subbasin 14069 is not expected to change the overall impact to the CFR. Therefore, at this time, shifting withdrawals is not required as a condition of this permit.

TABLE 2: EASTHAMPTON WATER DEPARTMENT WITHDRAWAL POINTS SUBBASIN CHARACTERISTICS

SOURCE NAME	SOURCE ID:	SUBBASIN #	CFR Present	August NGD %
HENDRICK STREET 1 & 2	04G	14069	YES	109.5
PINES WELL	05G			
NONOTUCK PARK	08G			
WELL #9-BROOK STREET	09G			
MALONEY	07G	14067	YES	14.8

Mitigation

The WMA regulations require WMA permits to address mitigation of withdrawals above the baseline volumes. Water Management Act permittees whose total authorized volume exceeds their baseline volume are required to implement mitigation measures to offset impact of their withdrawals above the baseline.

WMA regulations, 310 CMR 36.03, define baseline as the volume of water withdrawn during calendar year 2005 plus 5%, or the average annual volume withdrawn from 2003 through 2005 plus 5%, whichever is greater provided that:

1. baseline cannot be less than a permittee's registered volume,
2. baseline cannot be greater than the permittee's authorized volume for 2005, and
3. if, during the period from 2003 to 2005, the permittee's withdrawals from the water source were interrupted due to contamination of the source or construction of a treatment plant, the Department will use best available data to establish a baseline volume from the water source.

Easthampton's baseline is 3.31 MGD, their registered volume. Easthampton will not be required to mitigate as a condition of this permit since their total authorized withdrawal volume does not exceed baseline.



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DRAFT WATER WITHDRAWAL PERMIT M.G.L. c. 21G

This permit is issued 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: 9P2-1-06-087.01

RIVER BASIN: CONNECTICUT

PERMITTEE: City of Easthampton
Easthampton Water Department
109 Hendrick Street
Easthampton, MA 01027

EFFECTIVE DATE: [Month, Day] 2025

EXPIRATION DATE: November 30, 2033

USE: Public Water Supply (PWS)

DAYS OF OPERATION: 365

LOCATIONS:

TABLE 1: WITHDRAWAL POINT IDENTIFICATION

SOURCE NAME	PWS SOURCE ID
BROOK STREET WELL (#9)	1087000-09G

SPECIAL CONDITIONS

1. Maximum Authorized Annual Average Withdrawal Volume

This permit authorizes the Town of Easthampton to withdraw water from the Connecticut River Basin at the rates described below in **Table 2**. Any permit volume reflected by the rates are in addition to the 3.31 million gallons per day (MGD) previously authorized to Easthampton under WMA registration #1-06-087.01. The permitted volume is expressed as both an annual average daily withdrawal rate (in MGD), and as a total annual withdrawal volume (in million gallons per year, or MGY) for the permit period. The Department of Environmental Protection (MassDEP or “the Department”) will use the raw water withdrawal volume from all authorized withdrawal points to assess compliance with the registered and permitted withdrawal volumes.

TABLE 2: MAXIMUM AUTHORIZED ANNUAL AVERAGE WITHDRAWAL VOLUMES

PERMIT PERIOD	TOTAL RAW WATER WITHDRAWAL VOLUMES			
	Permit		Registration + Permit	
	Daily Average (MGD)	Total Annual (MGY)	Daily Average (MGD)	Total Annual (MGY)
XX/XX/2025 to 11/30/2033	0.0	0.0	$3.31 + 0.0 = 3.31$	$1,208.83 + 0.0 = 1,208.83$

2. Maximum Authorized Daily Withdrawals from each Withdrawal Point

Withdrawals from individual withdrawal points are not to exceed the approved maximum daily withdrawal rates listed in **Table 3** without specific advance written approval from MassDEP. The authorized maximum daily withdrawal rate listed is the approved rate of the source based on the MassDEP-approved Zone II delineation.

TABLE 3: MAXIMUM DAILY WITHDRAWAL RATES

SOURCE NAME	PWS SOURCE ID	AUTHORIZED MAXIMUM DAILY RATE (MGD)
BROOK STREET WELL (#9)	1087000-09G	1.454

3. Zone of Contribution Delineations

MassDEP records show that Easthampton has approved Zone II delineations for its groundwater sources. Therefore, no further Zone II delineation work is required as a condition of this permit.

4. Water Supply Source Protection

Easthampton Zone II extends into Southampton and Holyoke, therefore, Best Effort Requirement at 310 CMR 22.21(1) may require repeating until full protection of public water drinking supplies at 310 CMR 22.21(2) is met.

5. Performance Standard for Residential Gallons Per Capita Day Water Use (RGPCD)

Easthampton was required to meet an annual RGPCD of 65 by December 31, 2016. Permittees that cannot comply with the RGPCD Performance Standard are required to develop and implement a functional equivalence program as set forth in **Appendix A: Functional Equivalence with the RGPCD Performance Standard**. Easthampton shall report its RGPCD annually in its Annual Statistical Report (ASR).

6. Performance Standard for Unaccounted for Water (UAW)

Easthampton was required to meet an annual UAW of 10% or less by December 31, 2016. The Performance Standard has now changed statewide to a UAW of 10% or less of overall water withdrawal for two (2) out of the three (3) current consecutive years throughout the permit period. Permittees that cannot comply with the UAW Performance Standard are required to develop and implement Functional Equivalence requirements for UAW which are based on the American Water Works Association (AWWA) Water Audits and Loss Control Program, Manual of Water Supply Practices M36, as outlined in **Appendix B**. Easthampton shall report its UAW annually in its Annual Statistical Report (ASR).

Conditions of this permit include the following schedule of compliance actions and dates:

- 1) Pending review of Easthampton's 2024 ASR, Easthampton may be required to submit a UAW Compliance Plan by September 30, 2025, that meets renewed permit requirements set forth in **Appendix A**,
- 2) By the due date of Easthampton's 2025 ASR, as a component of the subsequent implementation of a Municipal Water Loss Control Program acknowledged in Easthampton's response to the Order To Complete (OTC), Easthampton shall conduct and submit a "Top Down" and "Bottom-Up Component Analysis" American Water Works Association (AWWA) M36 Audit (["Top Down" and "Bottom-Up Component Analysis" M36 Audit](#)) providing a water balance of apparent and real water losses, and,
- 3) By December 31, 2026, in accordance with Easthampton's OTC responses, the development and implementation of a Municipal Water Loss Control Program shall be completed.

Nothing in the permit shall prevent a permittee who meets the 10% performance standard from demonstrating compliance with the UAW performance standard by developing and implementing a water loss control program following the AWWA M36 Water Audits and Loss Control Programs. Permittees meeting the Performance Standard for UAW through implementation of a water loss control program based on AWWA M36 annual water audits and guidance shall continue to report UAW annually as required in the Annual Statistical Report for public water suppliers.

7. Seasonal Limits on Nonessential Outdoor Water Use

Easthampton shall limit nonessential outdoor water use through mandatory restrictions from May 1st through September 30th as outlined below in **Table 4**.

Nothing in the permit shall prevent Easthampton from implementing water use restrictions that are more stringent than those set forth in this permit.

**PERMITTEES WITH GROUNDWATER WITHDRAWALS IN SUBBASINS
WITH AUGUST NET GROUNDWATER DEPLETION GREATER THAN 25%**

Previous year's DEP accepted RGPCD is <u>less than or equal</u> to 65 Water Use Only Allowed BEFORE 9 am & AFTER 5 pm (when evapotranspiration is lowest)	
CALENDAR Triggered Restrictions:	<p>a) Two (2) days per week; and, b) One (1) day per week when USGS Gage 01171500 on the Mill River at Northampton, MA falls below 10 cfs for three (3) consecutive days.</p> <p>Once streamflow triggered restrictions are implemented, they shall remain in place until streamflow at gage meets or exceeds 10 cfs for seven (7) consecutive days.</p>
STREAMFLOW Triggered Restrictions:	<p>a) Two (2) days per week: <u>Gage Reference:</u> USGS Gage 01171500 on the Mill River at Northampton, MA falls below: ➤ May 1 – June 30: 62 cfs for three (3) consecutive days ➤ July 1 – September 30: 26 cfs for three (3) consecutive days b) One (1) day per week when USGS Gage 01171500 on the Mill River at Northampton, MA falls below 10 cfs for three (3) consecutive days.</p> <p>Once implemented, restrictions shall remain in place until streamflow at the gage meets or exceeds the trigger streamflow for seven (7) consecutive days.</p>
Previous year's DEP accepted RGPCD is <u>more than</u> 65 Water Use Only Allowed BEFORE 9 am & AFTER 5 pm (when evapotranspiration is lowest)	
CALENDAR Triggered Restrictions:	<p>Nonessential outdoor water is restricted to (1) one day per week</p> <p>Once streamflow triggered restrictions are implemented, they shall remain in place until streamflow at gage meets or exceeds 10 cfs for seven (7) consecutive days.</p>
STREAMFLOW Triggered Restrictions:	<p>a) One (1) day per week: <u>Gage Reference:</u> USGS Gage 01171500 on the Mill River at Northampton, MA falls below: ➤ May 1 – June 30: 62 cfs for three (3) consecutive days ➤ July 1 – September 30: 26 cfs for three (3) consecutive days</p> <p>Once implemented, restrictions shall remain in place until streamflow at the gage meets or exceeds the trigger streamflow for seven (7) consecutive days.</p>

INSTRUCTIONS FOR ACCESSING STREAMFLOW WEBSITE INFORMATION
<p>If Easthampton chooses Streamflow Triggered Restrictions, Easthampton shall be responsible for tracking streamflows and recording and reporting to MassDEP when restrictions are implemented. 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.</p>
<p>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.</p>
<p>Mean daily streamflow gage readings are available at the USGS NWIS Web Interface at: USGS NWIS Web Interface</p> <ol style="list-style-type: none"> 1. Scroll down to your county and locate gage# 01171500 on the Mill River at Northampton, MA. 2. Click on its link, "View Monitoring location page". 3. Click on drop-down heading "Data Inventory" and choose "Daily Data". 4. Scroll down to "Available Parameters" heading and make sure box next to "00060 Discharge (Mean)" is checked 5. In same area, under "Output Format" heading, click "Table" and then click "GO". 6. Scroll down to "Daily Mean Discharge, cubic feet per second" table and find the current date on the table. 7. Compare the cubic feet per second (cfs) measurement shown on the table to the cfs shown under Streamflow Triggered Restrictions above.

Public Notice of Seasonal Nonessential Outdoor Water Use Restrictions

Easthampton 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 15th 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.
- Notice that restrictions have been put in place shall be filed each year with MassDEP within 14 days of the restriction's effective date.
- Filing shall be in writing on the form "Notification of Water Use Restrictions" available on MassDEP's website.

Should the reliability of flow measurement at the Mill River gage be so impaired as to question its accuracy, Easthampton may request MassDEP's review and approval to transfer to another gage to trigger restrictions. MassDEP reserves the right to require use of a different gage.

Nonessential Outdoor Water Use

Nonessential Outdoor Water Use means a use that is not required:

- (a) for health or safety reasons, including public facilities used for cooling such as splash pads and swimming pools, and for washing of boats, engines, or marine equipment to prevent negative saltwater impacts or the transfer of invasive aquatic species;
- (b) by permit, license, statute or regulation;
- (c) for the production of food, including vegetable gardens, and fiber;
- (d) for the maintenance of livestock;
- (e) to meet the core functions (those functions essential to the commercial operations) of a business, including but not limited to:
 - 1. plant nurseries as necessary to maintain stock;
 - 2. golf courses as necessary to maintain greens and tees, and limited fairway watering per 310 CMR 36.07(2)(c)2.a. through c.;
 - 3. venues used for weddings or similar special events that limit watering to hand-held hose or drip irrigation as necessary to maintain gardens, flowers and ornamental plants;
 - 4. professional washing of exterior building surfaces, parking lots, driveways and/or sidewalks as necessary to apply surface treatments such as paint, preservatives, stucco, pavement, or cement in the course of construction, reconstruction or renovation work;
- (f) for irrigation of public parks before 9:00 a.m. and after 5:00 p.m.,
- (g) for irrigation of public and private recreation fields, including those operated by schools, colleges, universities and athletic associations, before 9:00 a.m. and after 5:00 p.m.,
- (h) for irrigation of publicly funded shade trees and trees in the public right-of-way; or
- (i) to establish a new lawn as necessary to stabilize soil in response to new construction or following the repair or replacement of a Title 5 system.

8. Requirement to Report Raw and Finished Water Volumes

Easthampton shall report the raw and finished water volumes for the entire water system and the raw water volumes for each individual withdrawal point on the Annual Statistical report.

9. Water Conservation Requirements

At a minimum, Easthampton shall implement the following conservation measures forthwith. Compliance with the water conservation requirements shall be reported to MassDEP upon request, unless otherwise noted below in **Table 5**.

TABLE 5: MINIMUM WATER CONSERVATION REQUIREMENTS

System Water Audits and Leak Detection

1. At a minimum, conduct a full leak detection survey every three years. The first full leak detection survey shall be completed no later than 3 years from the date of the last documented leak detection survey.
2. 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, submit to the Department a report detailing the survey, any leaks uncovered as a result of the survey or otherwise, dates of repair and the estimated water savings as a result of the repairs.
3. Conduct field surveys for leaks and repair programs in accordance with the AWWA Manual 36.
4. Easthampton shall have repair reports available for inspection by MassDEP. Easthampton shall establish a schedule for repairing leaks that is at least as stringent as the following:
 - Leaks of 3 gallons per minute or more shall be repaired within 3 months of detection.
 - Leaks of less than 3 gallons per minute at hydrants and appurtenances shall be repaired as soon as possible.
 - Leaks of less than 3 gallons per minute shall be repaired in a timely manner, but in no event more than 6 months from detection, except leaks in freeway, arterial or collector roadways shall be repaired when other roadwork is being performed on the roadway.

Leaks shall be repaired in accordance with Easthampton's priority schedule including leaks up to the property line, curb stop or service meter, as applicable. Easthampton shall have water use regulations in place that require property owners to expeditiously repair leaks on their property.

Metering

1. Easthampton shall continue to calibrate all source and finished water meters at least annually and report date of calibration on the ASR.
2. Easthampton shall maintain its system as 100% metered.
3. Easthampton shall continue implementation of their *Standard Operating Practices and Procedures for Water Meter Maintenance and Replacement for the City of Easthampton MA (Appendix C)* and annually submit a list of meters replaced as an attachment to the ASR.

Pricing

1. Easthampton shall have a plan and schedule for establishing and maintaining a water pricing structure that includes the full cost of operating the water supply system. Thereafter, Easthampton shall implement the plan and schedule as approved by MassDEP. Full cost pricing factors all costs - operations, maintenance, capital, and indirect costs (environmental impacts, watershed protection) - into prices.
2. Evaluate rates at a minimum every three to five years and adjust costs as needed.
3. Easthampton will continue to implement an increasing block rate structure.
4. Easthampton shall continue to bill at least quarterly.

TABLE 5: MINIMUM WATER CONSERVATION REQUIREMENTS (continued)

Residential and Public Sector Conservation

1. Easthampton shall ensure that the standards set forth in the Federal Energy Policy Act of 1992 and the Massachusetts Plumbing Code are met when buildings are constructed or renovated.
2. Easthampton reports metering water used by contractors using fire hydrants for pipe flushing and construction and shall continue to do so.
3. Within 24 months of issuance of this permit, Easthampton shall ensure that it has enforcement authority in place for the specific Seasonal Limits on Nonessential Outdoor Water Use contained in Special Condition 7 of this permit.

Industrial and Commercial Water Conservation

1. Easthampton shall continue to inspect industrial facilities and recommend the use of separate meters for process water where appropriate.

Public Education and Outreach

1. Within six months of the effective date of this permit, Easthampton shall submit to MassDEP a plan and schedule for the development and implementation of a water conservation education and outreach plan designed to educate customers on ways to conserve water.

Without limitation, the 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
 - Provide multilingual materials as needed.
2. Thereafter, Easthampton shall develop and implement the water conservation education and outreach plan and schedule as approved by MassDEP. Upon request of MassDEP, Easthampton shall report on its public education and outreach efforts.

10. Minimization

Easthampton's permitted withdrawal point (09G) is in a depleted subbasin with an August NGD of 109.5%. Therefore, in accordance with 310 CMR 22(5), Easthampton shall implement the following elements of the Minimization Plan developed as part of this permit renewal process:

1. continue at least quarterly water billing, if not more frequent,
2. continue to enforce penalties for stealing water,
3. By December 31, 2026, adopt and implement requirements that require private wells users to comply with Special Condition 7, nonessential outdoor water use restrictions, and,
4. By December 31, 2026, require registration of automatic irrigation systems.

GENERAL CONDITIONS (applicable to all permittees)

No withdrawal above 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 and in compliance with 310 CMR 36.00.

1. **Duty to Comply:** The Permittee shall always comply 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 always 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 the Department to enter and examine any property over which Permittee has authority, title, or control, 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 the Department pursuant to M.G.L. c. 21G, §§ 15-17, M.G.L. c. 150, § 111, or any other enabling authority.
5. **Transfer of Permits:** This permit shall not be transferred in whole or in part unless and until the Department approves such transfer in writing, pursuant to a transfer application on forms provided by the Department requesting such approval and received by the Department 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 36.33.
6. **Duty to Report:** The Permittee shall submit annually, on a form provided by the Department, a certified statement of the withdrawal. Such report is to be received by the Department by the date specified by the Department. Such report must be submitted as specified on the report form.
7. **Duty to Maintain Records:** The Permittee shall be responsible for maintaining withdrawal and all other records as specified by this permit.
8. **Metering:** (If Applicable). Transferring cranberry withdrawals to another use requires the authorized volume be verified based on actual water use at the bog(s) to be transferred.
9. **Right to Amend, Suspend or Terminate:** The Department may amend, suspend, or terminate the permit in accordance with M.G.L. c. 21G and 310 CMR 36.29.

APPEALS

Any person aggrieved by this decision may request an adjudicatory hearing on this Permit by timely filing a Notice of Claim for an Adjudicatory Appeal ("Notice of Claim") in accordance with 310 CMR 36.37 and 310 CMR 1.01 within twenty-one (21) days of its receipt of this Permit. The Notice of Claim shall state specifically, clearly, and concisely the facts that are grounds for the appeal, the relief sought, and any additional information required by applicable law or regulation. A copy of this Permit shall be included with a Notice of Claim. No request for an appeal of this Permit shall be validly filed unless a copy of the request is sent at the same time 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 Permittee, unless such person notifies the Permittee of the appeal in writing by certified mail or by hand within five (5) days of mailing the appeal to the Department.

The Notice of Claim and supporting documentation must be sent by certified mail or hand delivered to:

Case Administrator
Office of Appeals and Dispute Resolution
Department of Environmental Protection
100 Cambridge Street, Suite 900
Boston, MA 02114

In addition, the Department's fee transmittal form, together with a valid check made payable to the Commonwealth of Massachusetts in the amount of \$100 for the appeal filing fee, if required, must be mailed to:

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

The Notice of Claim may be dismissed if the filing fee is not paid unless the appellant is exempt or granted a waiver. The filing fee is not required if the appellant is a city, town (or municipal agency), county, district of the Commonwealth of Massachusetts, or a municipal housing authority. The Department may waive the adjudicatory filing fee for a person who shows that paying the fee will create an undue financial hardship. A person seeking a waiver must file, along with the hearing request, an affidavit setting forth the facts believed to support the claim of undue financial hardship.

Duane LeVangie
Water Management Program Chief
Bureau of Water Resources

Date

Attachments: Appendix A: Functional Equivalence with the RGPCD Performance Standard
 Appendix B: Functional Equivalence with the 10% UAW Performance Standard
 Appendix C: Standard Operating Practices and Procedures for Water Meter
 Maintenance and Replacement for the City of Easthampton MA

APPENDIX A

Functional Equivalence with Residential Gallons Per Capita Day (RGPCD)

I. Compliance Plan Requirement

If the permittee fails to achieve and document compliance with the RGPCD performance standard in its Annual Statistical Report (ASR), then the permittee must file with that ASR a Residential Gallons Per Capita Day Compliance Plan (RGPCD Plan) which shall:

- a. meet the requirement 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 an RGPCD 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 an RGPCD Plan is required, the permittee must:

- a. submit information and supporting documentation sufficient to demonstrate compliance with its RGPCD Plan annually at the time it files its ASR, and
- b. continue to implement the RGPCD 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 an RGPCD Plan

A permittee that does not meet the 65 RGPCD performance standard within 2 years, has the choice to file an RGPCD Plan containing measures that the permittee believes will be sufficient to bring the system into compliance with the performance standard (Individual RGPCD Plan) or may adopt the MassDEP RGPCD Functional Equivalence Plan that includes mandated Best Management Practices (BMPs).

A permittee that has been unable to meet the 65 RGPCD performance standard within 5 years must implement the MassDEP RGPCD Functional Equivalence Plan to be considered functionally equivalent with the performance standard.

At a minimum, all RGPCD Compliance Plans must include a detailed:

- a. description of the actions taken during the prior calendar year to meet the performance standard,
- b. analysis of the cause of the failure to meet the performance standard,
- c. description and schedule of the actions that will be taken to meet the performance standard, and
- d. 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.

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

A permittee may present an analysis of the cost effectiveness of implementing certain conservation measures included in the MassDEP RGPCD 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 RGPCD Functional Equivalence Plan, and
- c. When applicable, an analysis demonstrating that implementation of specific measures will cause or exacerbate significant economic hardship.

APPENDIX B

Functional Equivalence with the 10% Unaccounted for Water (UAW) Performance Standard

Water Loss Control Program: MassDEP will consider PWS permittees who cannot meet the 10% UAW performance standard to be functionally equivalent, and in compliance with their permit, if they have an ongoing Water Loss Control Program in place that ensures best practices for controlling water loss.

Developing a Municipal Water Loss Control Program: A permittee who fails to document compliance with the 10% UAW performance standard for 2 out of the 3 years during the permit period, shall develop a Municipal Water Loss Control Program in accordance with the *AWWA M36 Water Audits and Loss Control Program*. Within 5 full calendar years of failing to meet the standard, the permittee shall:

1. Conduct an annual “top down” water audit, calculate the data validity level/score using AWWA Water Loss Control Committee’s Free Water Audit Software, and submit the AWWA WLCC Free Water Audit Software Reporting Worksheet and data validity score annually as an attachment to the Annual Statistical Report (ASR).
 - If a PWS’s data validity level/score is less than Level III (51-70), steps recommended through the audit(s) shall be taken to improve the reliability of the data prior to developing a component analysis and long-term program to reduce real and apparent water losses.
 - i. Data with a validity score of 50 or less are considered too weak to be used to develop a component analysis or for infrastructure planning and maintenance.
 - ii. Developing data with an acceptably strong validity score can be a multi-year process.
2. When the data validity score meets the Level III (51-70) requirement, conduct a component analysis to identify causes of real and apparent water loss and develop a program to control losses based on the results of the component analysis.
3. Submit the Municipal Water Loss Control Program that includes an M36 component analysis and implementation schedule and identifies implementation funding to the Department.
4. Upon request of the Department, the permittee shall report on its implementation of the water loss control program.
5. Continued implementation of the Program will be required for the permittee to be considered functionally equivalent with the 10% UAW performance standard and in compliance with their permit.

A PWS permittee may choose to discontinue the Municipal Water Loss Control Program implementation if UAW, as reported on the ASR and approved by the Department, is below 10% for four consecutive years, and the water audit data validity scores are at least Level III (51-70) for the same four years.

NOTE FOR SMALL SYSTEMS: For small systems with less than 3,000 service connections or a service connection density of less than 16 connections per mile of pipeline, the Unavoidable Annual Real Loss (UARL) calculation and the Infrastructure Leak Index (ILI) developed as the final steps of the top down water audit may not result in valid performance indicators and may not be comparable to the UARL and ILI calculations for larger systems.

However, these small systems can benefit from developing reliable data and conducting an annual top-down water audit. Small systems can rely on the real losses (gallons per mile of main per day) performance indicator developed in the water audit as a measure of real water loss when developing a water loss control program. The M36 Manual discusses the audit process for small systems and includes a chapter to guide small systems in understanding the results of their audits and in developing a water loss control program (*Manual of Water Supply Practices – M36, Fourth Edition, Chapter 9: Considerations for Small Systems*, pp. 293-305).

MassDEP Water Loss Control Program: If the permittee is required to develop a Water Loss Control Program in order to be functionally equivalent with the 10% Unaccounted for Water Performance Standard, and the permittee has not developed a Municipal Water Loss Control Program that includes a component analysis and identifies implementation funding after 5 full calendar years of failing to meet the standard, the permittee will be required to implement the MassDEP UAW Water Loss Control Program measures outlined below:

- Complete an annual water audit and leak detection survey, as described in the AWWA M36 Manual, for the entire system.
 - Within one year, repair 75% (by water volume) of all leaks detected in the survey that are under the control of the public water system.
 - Thereafter, repair leaks as necessary to reduce permittee's UAW to 10% or the minimum level possible.
- Meter inspection and, as appropriate, repair, replace and calibrate water meters:
 - Large Meters (2" or greater) – within one year.
 - Medium Meters (1" or greater and less than 2") – within 2 years.
 - Small Meters (less than 1") - within three years
 - Thereafter, calibrate and or replace all meters according to type and specification.
- Bill at least quarterly within three years.
- Review the permittee's water pricing structure and ensure revenues are sufficient to pay the full cost of operating the system.

Hardship: A permittee may present an analysis of the cost-effectiveness of implementing certain conservation measures included in the MassDEP Water Loss Control Program and offer alternative measures. Any analysis must explicitly consider environmental impacts and must produce equal or greater environmental benefits.

A permittee's hardship analysis shall:

- Document economic hardship and present an analysis demonstrating that implementation of specific measures will cause or exacerbate significant economic hardship.
- Present reasons why specific measures are not cost-effective because the cost would exceed the costs of alternative methods of achieving the appropriate standard, and
- Propose 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 Water Loss Control Program.

MassDEP will review a permittee's detailed, written analysis to determine whether unique circumstances make specific water loss control measures less cost-effective than alternatives, or infeasible for the permittee.

APPENDIX C



EASTHAMPTON

MASSACHUSETTS

50 Payson Ave
Easthampton, MA 01027
413-529-1400

Gregory Nuttelman
Director of Public Works

Nicole Lachapelle
Mayor

Standard operating practices and procedures for water meter maintenance and replacement for the City of Easthampton Ma.

Any water meter found to be 15 to 20 years old or older shall be replaced immediately. This policy aligns with current AWWA standards and will ensure accurate reading and billing.

The City shall continue to read all meters quarterly. We have also begun talks to study the viability of monthly reading.

Quarterly readings will be monitored for irregularities in usage and billing. These irregularities will be investigated for possible inaccuracies and meters will be changed out if deemed necessary.

Quarterly reading will be monitored for "no reads". These issues will be immediately investigated and repairs or replacements will be conducted as needed.

Our goal number will remain at 250 meters replaced annually.

The City shall remain committed to a policy of being 100% metered. Any source that is discovered to be unmetered shall be addressed immediately.

The City shall continue to monitor appropriate meter sizing when replacing meters. This will ensure the proper size meter will be installed according to usage.

Clayton Weglarz
Utilities Supervisor
Easthampton Ma. 01027