



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
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Bonnie Heiple
Commissioner

April 8, 2026

Wesley Cassavant
Superintendent
West Brookfield Water Department
2 East Main Street
West Brookfield, MA 01585

Re: Water Management Act Permit Renewal
Permittee: West Brookfield Water Department
PWS ID: 2323000
WMA Permit # 9P-2-08-323.01
Action: **DRAFT** WMA Permit Renewal

Dear Mr. Cassavant:

This **DRAFT** renewal permit reflects updated permit requirements. Please find the following attached documents:

- Findings of Fact in Support of the **DRAFT** Permit Decision.
- **DRAFT** Water Management Act Permit for withdrawals by West Brookfield Water Department in the Chicopee River Basin.

Pursuant to 310 CMR 36.27(6)(8), 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 in the **April 8, 2026** publication. Notice of the comment period will also be sent to all registrants, permittees and those having non-consumptive use statements within the Chicopee 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.brolowski@mass.gov or (857) 278-5634.

Sincerely,

Duane LeVangie
Water Management Program Chief
Bureau of Water Resources

ecc: James Lyons, MassDEP CRO
Lydia Olson, Mass Rivers Alliance
Adam Kautza, DFW
Jennifer Pederson, MA Water Works Association
Duane LeVangie, Water Management Program Chief

massgov.sharepoint.com/W:\DWPWMA\Permit Renewals\Chicopee\West Brookfield Water Department\West Brookfield-2323000-DRAFT Renewal Permit-9P-2-08-323.01-2026-4-8



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 EJ at the telephone number listed below.

Español Spanish

Este documento es importante y debe ser traducido de inmediato. Si necesita este documento traducido, comuníquese con la Directora de Diversidad de MassDEP al número de teléfono que aparece más abajo.

Português Portuguese

Este é um documento importante e deve ser traduzido imediatamente. Se precisar de uma tradução deste documento, entre em contato com o Diretor de Diversidade da MassDEP nos números de telefone listados abaixo.

繁體中文 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聯絡 MassDEP 多元化負責人。

简体中文 Chinese Simplified

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 的多元化主任聯繫。

Ayisyen Kreyòl Haitian Creole

Dokiman sa-a se yon bagay enpòtan epi yo ta dwe tradwi l imedyatman. Si ou bezwen dokimar sa a tradwi, tanpri kontakte Direktè Divèsite MassDEP la nan nimewo telefòn endike anba.

Việt Vietnamese

Tài liệu này rất quan trọng và cần được dịch ngay lập tức. Nếu quý vị cần dịch tài liệu này, xin liên lạc với Giám đốc Đa dạng của MassDEP theo các số điện thoại ghi dưới đây.

ប្រទេសកម្ពុជា Khmer/Cambodian

ឯកសារនេះគឺសំខាន់ហើយត្រូវបានបកប្រែភ្លាមៗ។ ប្រសិនបើអ្នកត្រូវការឱ្យគេបកប្រែឯកសារនេះ សូមទាក់ទងមកនាយកផ្នែកពិធីកម្មរបស់ MassDEP តាមលេខទូរស័ព្ទខាងក្រោម។

Kriolu Kabuverdianu Cape Verdean

Kel dokumentu li é inportánti y debe ser traduzidu imediatamenti. Se bu meste di kel dokumentu traduzidu, pur favor kontakta Diretor di Diversidádi di MassDEP na numeru abaxu indikadu.



Contact Deneen Simpson 857-406-0738
Massachusetts Department of Environmental Protection
100 Cambridge Street 9th Floor Boston, MA 02114
TTY# MassRelay Service 1-800-439-2370 • <https://www.mass.gov/environmental-justice>
(Version revised 4.21.2023) 310 CMR 1.03(5)(a)

Русский Russian

Это важный документ, и он должен быть безотлагательно переведен. Если вам нужен перевод данного документа, пожалуйста, свяжитесь с директором по вопросам многообразия (Diversity Director) компании MassDEP по указанному ниже телефону.

العربية Arabic

هذه الوثيقة مهمة ويجب ترجمتها على الفور. إذا كنت بحاجة إلى هذه الوثيقة مترجمة، يرجى الاتصال بمدير التنوع PMassDE على أرقام الهواتف المدرجة أدناه.

한국어 Korean

이 문서는 중요하고 즉시 번역해야 합니다. 이 문서의 번역이 필요하시다면, 아래의 전화 번호로 MassDEP의 다양성 담당 이사에 문의하시기 바랍니다.

հայերեն Armenian

Այս փաստաթուղթը կարևոր է և պետք է անմիջապես թարգմանվի:
Եթե Ձեզ անհրաժեշտ է այս փաստաթուղթը թարգմանել, դիմեք MassDEP-ի բազմազանության տնօրենին ստորև նշված հեռախոսահամարով:

فارسی Farsi Persian

این سند مهم است و باید فوراً ترجمه شود.
اگر به ترجمه این سند نیاز دارید، لطفاً با مدیر بخش تنوع نژادی MassDEP به شماره تلفن ذکر شده در زیر تماس بگیرید.

Français French

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

Deutsch German

Dieses Dokument ist wichtig und sollte sofort übersetzt werden. Sofern Sie eine Übersetzung dieses Dokuments benötigen, wenden Sie sich bitte an den Diversity Director MassDEP unter der unten aufgeführten Telefonnummer.

Ελληνική Greek

Το παρόν έγγραφο είναι σημαντικό και θα πρέπει να μεταφραστεί αμέσως. Αν χρειάζεστε μετάφραση του παρόντος εγγράφου, παρακαλούμε επικοινωνήστε με τον Διευθυντή Διαφορετικότητας του MassDEP στους αριθμούς τηλεφώνου που αναγράφονται παρακάτω.

Italiano Italian

Comunicazione per parti che non parlano inglese. Questo documento è importante e dovrebbe essere tradotto immediatamente. Se avete bisogno di questo documento tradotto, potete contattare il Direttore di Diversità di MassDEP al numero di telefono elencato di seguito.

Język Polski Polish

Dokument ten jest ważny i powinien zostać natychmiast przetłumaczony. Jeśli potrzebujesz przetłumaczonej wersji dokumentu, prosimy o kontakt z dyrektorem ds. różnorodności MassDEP pod jednym z numerów telefonu wymienionych poniżej.

हिन्दी Hindi

यह दस्तावेज़ महत्वपूर्ण है और इसका तुरंत अनुवाद किया जाना चाहिए. यदि आपको इस दस्तावेज़ का अनुवाद करने की आवश्यकता है, तो कृपया नीचे सूचीबद्ध टेलीफोन नंबरों पर मासडेपस डाइवर्सिटी के निदेशक से संपर्क करें.

Contact Deneen Simpson 857-406-0738

Massachusetts Department of Environmental Protection
100 Cambridge Street 9th Floor Boston, MA 02114

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Findings of Fact in Support of **DRAFT** Permit Decision

Town of West Brookfield Water Management Act Permit # 9P-2-08-323.01

The Massachusetts Department of Environmental Protection (“MassDEP” or “the Department”) makes the following Findings of Fact in support of the attached **DRAFT** renewed Water Management Act (WMA) Permit #: 9P-2-08-323.01 (or ID: 9P20832301) and herewith includes reasons for issuing the **DRAFT** 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 May 13, 2016 receipt of the water withdrawal permit renewal application by West Brookfield Water Department (“West Brookfield” or the “applicant”). The Department adopted revised Water Management Regulations at 310 CMR 36.00 January 2023.

West Brookfield’s Water Withdrawal History

West Brookfield’s authorized withdrawal includes the April 7, 2023 renewed registration (#2-08-323.01 or 20832301) to withdraw an average of 0.26 million gallons per day (MGD) of groundwater from withdrawal points, GP Well 1 (01G) and, Well 2R (06G), the replacement for Well 2 (02G) in 2014. In addition to the registration, the most recent (and original), January 23, 2012 issued permit provided no additional allocation volume above the registered volume, but it did add the Leland Road Wellfield, a wellfield which includes three (3) withdrawal points, Well 3 (03G), Well 4 (04G) and, Well 5 (05G). West Brookfield’s authorized volume remains 0.26 MGD from these five (5) groundwater withdrawal points.

The Permit Extensions

WMA permits issued during the first 20-year permitting cycle for the Chicopee River Basin were due to expire on May 31, 2013. The expiration dates for all Water Management permits were extended for four years by Chapter 240 of the Acts of 2010 as amended by Chapter 238 of the Acts of 2012, collectively known as the Permit Extension Act. The expiration date for the applicant’s permit was extended to May 31, 2017.

Prior to May 31, 2017 expiration date, in May 2016, West Brookfield Water Department filed a permit renewal application. Pursuant to M.G.L. c. 30A, §13, and 310 CMR 36.18(7), your current withdrawal permit will continue in force and effect until the Department issues a final decision on your permit renewal application. Consistent with 310 CMR 36.17(1), the expiration date for withdrawal permits going forward in the Chicopee River Basin will be May 31, 2033.

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, 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 Chicopee 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](#)),

DRAFT Findings of Fact WMA Permit # **9P-2-08-323.01**

- 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 Chicopee River Basin

This **DRAFT** 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 Chicopee River Basin water source is 353.10 million gallons per day (MGD), and total allocated withdrawals are 203.72 MGD. The maximum withdrawals that will be authorized in this permit, and all other permits currently under review by the Department within the Chicopee River Basin, will be within the remaining safe yield and may be further conditioned as outlined in the regulations.

Findings of Fact for Permit Conditions in West Brookfield'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 CONDITIONS

Special Condition 1, Maximum Authorized Annual Withdrawal Volume recognizes the 0.26 MGD West Brookfield is authorized to withdraw pursuant to WMA Registration #20832301. West Brookfield's former WMA permit authorized no additional withdrawal volume above their registered volume. The registered and permitted total authorized annual average daily rate is 0.26 MGD and the total annual volume is 94.26 MGY. The past 5 years of West Brookfield's authorized verses actual daily withdrawal volumes are shown below in **Table 1**.

TABLE 1: WEST BROOKFIELD’S RECENT SYSTEM-WIDE WITHDRAWAL VOLUMES

YEAR	PERMITTED AUTHORIZED DAILY VOLUME (MGD)	TOTAL AUTHORIZED DAILY VOLUME (MGD)*	ACTUAL AVERAGE DAILY VOLUME (MGD)
2019	0.0	0.26	0.19
2020			0.18
2021			0.20
2022			0.19
2023			0.23

* includes 0.26 MGD of registered volume

Since West Brookfield has no permitted withdrawal volume, a DCR WNF was not prepared.

Special Condition 2, Maximum Authorized Daily Withdrawals from each Withdrawal Point reflects the maximum daily withdrawal rates by source, according to MassDEP approved Zone II rates.

Special Condition 3, Performance Standard for Residential Gallons Per Capita Day Water Use requires West Brookfield to maintain their RGPCD at or below 65 gallons. For all public water suppliers (PWSs), the performance standard for RGPCD has been revised to 65. West Brookfield has been required to comply with this performance standard since December 31, 2014. Since 2019, West Brookfield has reported RGPCD values ranging from 35 to 50 gallons, and is in compliance with this standard, as shown below in **Table 2**.

TABLE 2: RESIDENTIAL GALLONS PER CAPITA DAY AND UNACCOUNTED FOR WATER

Year	RGPCD	UAW %
2024	35	9
2023	36	7
2022	50	1
2021	47	2
2020	46	1

Special Condition 4, Performance Standard for Unaccounted for Water (UAW) requires West Brookfield to maintain a 10% or less UAW. West Brookfield has been required to comply with this performance standard since December 31, 2014. For all PWSs, this performance standard was revised to a 10% UAW two out of every three years on a rolling review. As shown above in **Table 2**, West Brookfield is in compliance with this performance standard.

Special Condition 5, Seasonal Limits on Nonessential Outdoor Water Use sets West Brookfield’s Nonessential Outdoor Water Use Restrictions (“Restrictions”) based on whether the permittee’s reported RGPCD for the previous year met the RGPCD Performance Standard of 65 residential gallons per capita day or less (see Special Condition 3).

An additional consideration in Water Management permitting is whether a permittee has a well in a subbasin[1] that is 25% or more August net groundwater depleted (Aug NGD[2]). Restrictions for PWSs with well(s) in such subbasins are set to minimize withdrawals from depleted subbasins. Because West Brookfield’s well(s) is not located in a subbasin which is Aug NGD by 25% or more, the more stringent nonessential outdoor water use restrictions have not been included in this permit.

DRAFT Findings of Fact WMA Permit # **9P-2-08-323.01**

Each year, West Brookfield shall choose one of two options for implementing nonessential outdoor water use restrictions:

- **Calendar triggered restrictions** are in place from May 1 through September 30. Many public water suppliers find this option easier to implement and enforce than the streamflow triggered approach.
- **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 local stream gage meets or exceeds the trigger streamflow for seven consecutive days.

If West Brookfield selects the streamflow trigger approach, it has been assigned **USGS gage 01176000**, located on the Quaboag River near West Brimfield, MA. The May-June streamflow trigger is **130** cubic feet per second (cfs), and the July-September streamflow trigger is **67** cfs. Should the reliability of flow measurement at this gage be so impaired as to question its accuracy, the permittee may request that MassDEP review and approve the transfer to another gage that will trigger restrictions. MassDEP reserves the right to require use of a different gage.

- **The 7-Day Low-flow Trigger**, at which restrictions increase, is incorporated into both Calendar and Streamflow Triggered restrictions to provide additional protection when flows are very low. The 7-day low flow trigger is based on the median value of the annual 7-day low flows for the period of record. The 7-day low-flow trigger for **USGS gage 01176000** is **30** cfs.

The permittee may choose to implement limits on nonessential outdoor water use that are stricter than those required by the permit.

To the extent feasible all summer outdoor water use should take place before 9 a.m. and after 5 p.m. when evaporation and evapotranspiration rates are lower.

Note that if the permittee holds a Water Management registration, **the nonessential outdoor water use restrictions in this permit supersede restrictions in the permittee's registration.**

Special Condition 6, Requirement to Report Raw and Finished Water Volumes requires Annual Statistical Reports filed for PWSs, like West Brookfield, to report, in part, raw and finished water volumes for the entire water system and the raw water volumes for individual water withdrawal points to enable compliance evaluation with conditions herein stated.

Special Condition 7, Water Conservation Requirements incorporates the Water Conservation Standards for the Commonwealth of Massachusetts outlined in the July 2018 Massachusetts Water Resources Commission's Water Conservation Standards. Special Condition 7 of West Brookfield's 2012 Permit required all municipally owned buildings in the service area to be retrofitted with water saving devices by January 1, 2018. West Brookfield's Water Conservation Questionnaire completed in 2024 indicated that West Brookfield has not completed this conservation measure. This condition has been updated to require a new assessment and schedule for West Brookfield to complete the retrofitting of municipally owned buildings.

Coldwater Fishery Resource (CFR) Protection

Permit renewal applicants with withdrawals that impact CFRs must evaluate reducing impacts to CFRs through feasible optimization. Permittees with CFRs identified on basin maps[3] 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. West Brookfield Water Department's permitted Leland Road Wellfield is in a subbasin (#17104) that does not include a CFR. Therefore, no further assessment of feasible optimization will be required.

Minimization

Groundwater withdrawal impacts in subbasins having August net groundwater depletion of 25% or greater was incorporated into the Water Management Regulations in November 2014. Permittees with groundwater sources in subbasins having an August net groundwater depletion (NGD) of 25% or greater are required to develop a plan to minimize the impacts of their withdrawals.

West Brookfield's Leland Road Wellfield (03G, 04G and 05G) and Well 2R (06G) are in subbasin 17104 with an August NGD of 3.9% and they have one withdrawal point GP Well 1 (01G) in subbasin 17099 with an NGD of -1.2%. Since both subbasins have an August NGD less than 25%, West Brookfield will not be required to develop and implement a Minimization Plan.

Mitigation

The WMA regulations revised and promulgated in November 2014 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 develop and implement a plan to mitigate the impact of their withdrawals above their baseline volume by adjustment through the calculating of the volume of wastewater returned to the basin.

WMA regulations, 310 CMR 36.03, define baseline to mean 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.

West Brookfield's baseline volume is 0.26 MGD, their registered volume. Since no additional allocated volumes are authorized by this permit mitigation is not required.



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Secretary

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Commissioner

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: 9P-2-08-323.01

RIVER BASIN: CHICOPEE

PERMITTEE: Town of West Brookfield
3 Old Meadow Road
West Brookfield, Massachusetts 01562

EFFECTIVE DATE: **DRAFT**

EXPIRATION DATE: May 31, 2033

USE: Public Water Supply (PWS)

DAYS OF OPERATION: 365

NUMBER OF SOURCES: Groundwater: 3

LOCATIONS:

TABLE 1: WITHDRAWAL POINT IDENTIFICATION

SOURCE NAME	ADDRESS	PWS SOURCE ID
WELL 3	LELAND ROAD WELLFIELD	2323000-03G
WELL 4		2323000-04G
WELL 5		2323000-05G

“G”= Groundwater source

SPECIAL CONDITIONS

1. Authorized Annual Withdrawal Volume

This permit authorizes the Town of West Brookfield to withdraw water from the Chicopee River Basin at the rates described below in **Table 2**. No additional withdrawal volumes are authorized by this permit beyond the 0.26 million gallons per day (MGD) authorized to West Brookfield under the WMA registration #20832301 for withdrawal from the Chicopee River Basin. The volumes are expressed as both an annual average daily withdrawal rate (in MGD), and as a total annual withdrawal volume (in million gallons per year, or MGD) 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 RAW WATER WITHDRAWAL VOLUMES

PERMIT PERIOD	PERMIT		REGISTRATION + PERMIT	
	Daily Average (MGD)	Total Annual (MGY)	Daily Average (MGD)	Total Annual (MGY)
X/XX/2026 to 5/31/2033	0.0	0.0	0.26 + 0.0 = 0.26	94.26 + 0.0 = 94.26

2. Maximum Authorized Daily Withdrawals from each Withdrawal Point

West Brookfield’s combined withdrawals from the individual withdrawal points are not to exceed the volumes listed below in **Table 3** without specific advance written approval from MassDEP. The authorized maximum daily withdrawal rate is the approved rate for each source. In no event shall the combined annual withdrawals from individual withdrawal points exceed the annual authorized withdrawal volume in Special Condition 1.

TABLE 3: MAXIMUM DAILY WITHDRAWAL RATES (MGD)

SOURCE NAME	PWS SOURCE ID	AUTHORIZED MAXIMUM DAILY RATE
WELL 3	2323000-03G	0.72
WELL 4	2323000-04G	
WELL 5	2323000-05G	

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

West Brookfield was required to meet an annual RGPCD of 65 by December 31, 2014. 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**. West Brookfield shall report its RGPCD annually in its Annual Statistical Report (ASR).

4. Performance Standard for Unaccounted for Water (UAW)

West Brookfield was required to meet an annual UAW of 10% or less by December 31, 2014. 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. West Brookfield has until **December 31, 2026** to meet this performance standard. Permittees that cannot comply with the UAW Performance Standard are required to develop and implement the functional equivalence requirements based on the American Water Works Association (AWWA) Water Audits and Loss Control Programs, Manual of Water Supply Practices M36, as outlined in **Appendix B**. West Brookfield shall report its UAW annually in its Annual Statistical Report (ASR).

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.

5. Seasonal Limits on Nonessential Outdoor Water Use

West Brookfield shall limit nonessential outdoor water use through mandatory restrictions from May 1 through September 30, as outlined in **Table 4** below. West Brookfield shall be responsible for tracking streamflow gages and recording and reporting when restrictions are implemented (see **Table 5**). The permittee shall document compliance with the limits on nonessential outdoor water use annually in its ASR.

TABLE 4: LIMITS ON NONESSENTIAL OUTDOOR WATER USE

<p>For Permittees Meeting the 65 RGPCD Standard for the Preceding Year</p> <p>When RGPCD was 65 or below as reported in the ASR and accepted by MassDEP, choose either Calendar Triggered Restrictions or Streamflow Triggered Restrictions from this section of the Table.</p>
<p>CALENDAR Triggered Restrictions:</p> <p>Nonessential outdoor water use is allowed before 9 a.m. and after 5 p.m.:</p> <ul style="list-style-type: none"> a) Seven (7) days per week, unless, b) USGS gage 01176000, located on the Quaboag River near West Brimfield, MA falls below 30 cfs for three (3) consecutive days, then one (1) day per week is allowed. <p>Once implemented, restrictions shall remain in place until streamflow at the gage meets or exceeds 30 cfs for seven (7) consecutive days.</p>
<p>STREAMFLOW Triggered Restrictions:</p> <p>Nonessential outdoor water use is allowed before 9 a.m. and after 5 p.m.:</p> <ul style="list-style-type: none"> a) Seven (7) days per week, unless, b) USGS gage 01176000, located on the Quaboag River near West Brimfield, MA falls below 30 cfs for three (3) consecutive days, then one (1) day per week is allowed. <p>Once implemented, restrictions shall remain in place until streamflow at the gage meets or exceeds 30 cfs for seven (7) consecutive days.</p>
<p>For Permittees NOT Meeting the 65 RGPCD Standard for the Preceding Year</p> <p>When RGPCD was above 65 as reported in the ASR and accepted by MassDEP, choose either Calendar Triggered Restrictions or Streamflow Triggered Restrictions from this section of the Table</p>
<p>CALENDAR Triggered Restrictions:</p> <p>Nonessential outdoor water use is allowed before 9 a.m. and after 5 p.m.</p> <ul style="list-style-type: none"> a) Two (2) days per week, unless, b) USGS gage 01176000, located on the Quaboag River near West Brimfield, MA falls below 30 cfs for three (3) consecutive days, then one (1) day per week is allowed. <p>Once implemented, restrictions shall remain in place until streamflow at the gage meets or exceeds 30 cfs for seven (7) consecutive days.</p>
<p>STREAMFLOW Triggered Restrictions:</p> <p>Nonessential outdoor water use is allowed before 9 a.m. and after 5 p.m.:</p> <ul style="list-style-type: none"> a) Two (2) days per week when USGS gage 01176000, located on the Quaboag River near West Brimfield, MA falls below: <ul style="list-style-type: none"> ➤ 130 cfs for three (3) consecutive days from May 1 – June 30, and ➤ 67 cfs for three (3) consecutive days from July 1 – September 30, unless, b) USGS gage 01176000 falls below 30 cfs for three (3) consecutive days, at any time from May 1 – September 30, then one (1) day per week is allowed. <p>Once implemented, restrictions shall remain in place until streamflow at the gage meets or exceeds the triggering streamflow for seven (7) consecutive days.</p>

TABLE 5: TRACKING STREAMFLOWS THROUGH THE USGS WEBSITE**Instructions for Accessing Streamflow Website Information**

If the Permittee chooses Streamflow Triggered Restrictions, the Permittee 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.

Seasonal Limits on Nonessential Outdoor Water Use are implemented when the mean daily streamflow falls below the designated trigger for 3 consecutive days. 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, the Permittee must use the mean daily streamflow from the preceding day when tracking streamflows.

For additional questions or for additional support, contact the MassDEP Water Management Program at DEP.WMA@mass.gov (preferred), or the WMA Program contact identified in this permit.

Should the reliability of flow measurement at the **USGS gage 01176000**, located on the Quaboag River near West Brimfield, MA be so impaired as to question its accuracy, West Brookfield may request MassDEP's review and approval to transfer to another gage to trigger restrictions.

MassDEP reserves the right to require the use of a different gage.

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.

Public Notice of Seasonal Nonessential Outdoor Water Use Restrictions

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

- **For calendar-triggered restrictions**, customers shall be notified by April 15 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 link [Outdoor Water Use Restrictions for Cities, Towns, and Golf Courses | Mass.gov](#).

Enforcement Authority

This permit condition does not confer enforcement authority to the permittee. If West Brookfield does not have appropriate enforcement authority, then beginning as soon as possible, but no later than 24 months after issuance of the permit, the permittee shall establish enforceable restrictions limiting nonessential outdoor water use.

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

6. Requirement to Report Raw and Finished Water Volumes

West Brookfield 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.

7. Water Conservation Requirements

At a minimum, West Brookfield 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 6**.

TABLE 6: 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. West Brookfield shall have repair reports available for inspection by MassDEP. West Brookfield 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 West Brookfield’s priority schedule including leaks up to the property line, curb stop or service meter, as applicable. West Brookfield shall have water use regulations in place that require property owners to expeditiously repair leaks on their property.

Metering

1. West Brookfield shall continue to calibrate all source and finished water meters at least annually and report date of calibration on the ASR.
2. West Brookfield shall maintain its 100% metered system.
3. West Brookfield shall continue their meter replacement program that is based on AWWA standards.

Pricing

1. West Brookfield 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, West Brookfield 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. West Brookfield will continue to implement an increasing block rate structure.
4. West Brookfield shall continue to bill at least quarterly.

TABLE 6 (continued): MINIMUM WATER CONSERVATION REQUIREMENTS**Residential and Public Sector Conservation**

1. West Brookfield shall ensure that the standards set forth in the Federal Energy Policy Act, 1992 and the Massachusetts Plumbing Code are met when buildings are constructed or renovated.
2. West Brookfield reports metering water used by contractors using fire hydrants for pipe flushing and construction and shall continue to do so.
3. Municipal buildings:
 - By April 30, 2027, submit to MassDEP a status report detailing which municipally owned public buildings in the Permittee's service area have been retrofitted with water saving devices (faucet aerators, low-flow shower heads and low-flow toilets) and which of those buildings have yet to be retrofitted, along with a cost estimate and reasonably phased work schedule to complete retrofitting.

Note: Municipally owned buildings scheduled for rehabilitation or demolition may with MassDEP's approval, be exempted from this condition based on the schedule of work. Status report required above shall identify those buildings and schedule for repairs/demolition.

Industrial and Commercial Water Conservation

1. West Brookfield 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, West Brookfield 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, West Brookfield shall develop and implement the water conservation education and outreach plan and schedule as approved by MassDEP. Upon request of MassDEP, West Brookfield shall report on its public education and outreach efforts.

GENERAL PERMIT CONDITIONS (applicable to all permittees except Cranberry permits)

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

1. **Duty to Comply:** The permittee shall comply at all times with the terms and conditions of this permit, the Act, the Water Management Act regulations at 310 CMR 36.00, and all other applicable State and Federal statutes and regulations.
2. **Operation and Maintenance:** The permittee shall at all times properly operate and maintain all facilities and equipment installed or used to withdraw water so as not to impair the purposes and interests of the Act.
3. **Entry and Inspections:** The permittee or the permittee's agent shall allow personnel or authorized agents or employees of the Department to enter and examine at reasonable times any property, facility, operation, equipment or activity involving the withdrawal of water, and to 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 the Department 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 the Department approves such transfer in writing, pursuant to the submittal of a transfer application in accordance with 310 CMR 36.33 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 as set forth in 310 CMR 4.00.
6. **Duty to Report:** The permittee shall complete and submit annually, on a form provided by the Department, all of the information required by said form including, without limitation, a certified statement of the withdrawal. Such report shall be received by the Department by the date specified on the form each year. For public water supplier permittees, the report form is the MassDEP Drinking Water Program Public Water Supply Annual Statistical Report.
7. **Annual Compliance Fee:** The permittee shall submit any applicable annual compliance fee as established in 310 CMR 4.00.
8. **Duty to Maintain Records:** The permittee shall maintain withdrawal records and other information in sufficient detail to demonstrate compliance with this permit.
9. **Metering:** All withdrawal points included within the permit shall be metered. Meters are to be calibrated annually. Meters shall be maintained and replaced as necessary to ensure the accuracy of the withdrawal records.
10. **Amendment, Suspension or Termination:** The Department may amend, suspend or terminate the permit in accordance with M.G.L. c. 21G and 310 CMR 36.29.

NOTICE OF APPEAL RIGHTS

Any person aggrieved by this decision may request an adjudicatory hearing 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 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 the 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, including a copy of the fee transmittal form and a copy of the check, 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 or money order 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:** Endnotes
Appendix A: Functional Equivalence with the RGPCD Performance Standard
Appendix B: Functional Equivalence with the 10% UAW Performance Standard

ENDNOTES

- [1] 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) at [USGS Publication | sir20095272](#). 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 withdrawals plus 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. A subbasin is groundwater, depleted if it has an August NGD of greater than 25%.
- [2] The Water Management Regulations, 310 CMR 36.03, define August net groundwater depletion to mean the unimpeded median flow for August minus 2000-2004 groundwater withdrawals plus 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.
- [3] The Permittee’s three permitted withdrawal points, 03G, 04G, and 05G (Leeland Wellfield) are in Subbasin 17104, in the Chicopee River Basin, as depicted in the link of the *Map of Massachusetts Watersheds* [Massachusetts 28 Watersheds](#).

APPENDIX A
Functional Equivalence with the
Residential Gallons Per Capita Day (RGPCD) Performance Standard

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.