Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection
100 Cambridge Street Suite 900 Boston, MA 02114 • 617-292-5500

Maura T. Healey
Governor

Kimberley Driscoll
Lieutenant Governor

Rebecca L. Tepper
Secretary

Bonnie Heiple
Commissioner

January 13, 2025

Gary Karpowicz
Chief Water Operator
Spencer Water Department
3 Old Meadow Road
Spencer, MA 01562

RE: Water Management Act Permit Renewal
Permittee: Spencer Water Department
PWS ID: 2280000
WMA Permit ID: 9P-2-08-280.01
Action: Final WMA Permit Renewal

Dear Mr. Karpowicz:

Please find the attached:

- Findings of Fact in Support of the renewal of WMA Permit ID: 9P-2-08-280.01; and,
- Renewed WMA Permit ID: 9P-2-08-280.01 for withdrawals by Spencer Water Department in the Chicopee River Basin.

The Draft Renewal Permit was posted in the Public Notice section of the October 23, 2024 edition of the Massachusetts Environmental Policy Act (MEPA) Environmental Monitor. Notice of the Draft Renewal Permit was also sent to all WMA Registrants and Permittees in the Chicopee River Basin and to other interested parties offering a 30-day comment period. Comments submitted to MassDEP are herein addressed.

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

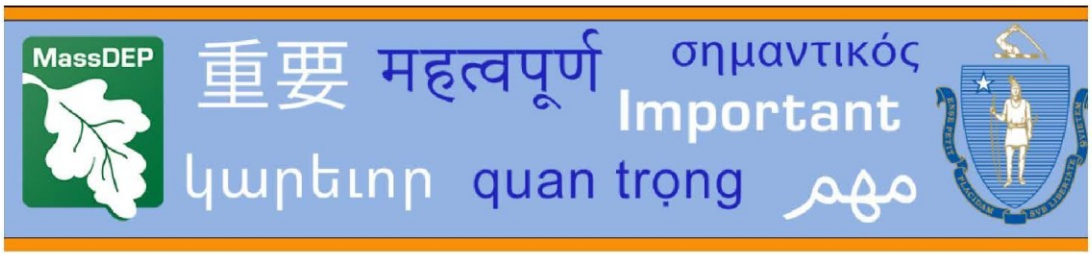
Sincerely,

Duane LeVangie
Water Management Program Chief
Bureau of Water Resources

ecc: Marielle Stone, MassDEP CRO
Julia Blatt, Mass Rivers Alliance
Adam Kautza, DFW
Jennifer Pederson, MA Water Works Association
Duane LeVangie, Water Management Program Chief
Molly Caruso, P.E. Tata & Howard (Consultant)

massgov.sharepoint.com/W:\DWP Archive\WERO\2024\Spencer-2280000-9P20828001- Final WMA Permit Renewal-1-13-2025

massgov.sharepoint.com/W:\DWPWMA\Permit Renewals\Chicopee\Spencer Water Department\Spencer-2280000-9P20828001-Final WMA Permit Renewal-1-13-2025



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 Anviwònmantal 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
ហើយគប្បីតួរត្រូវបានបកប្រែភ្លាមៗ.
ប្រសិនបើអ្នកត្រូវការអោយឯកសារនេះបកប្រែ
សូមទាក់ទងនាយកផ្នែកយុត្តិធម៌បរិស្ថានរបស់
MassDEPតាមរយៈលេខទូរស័ព្ទដែលបានរាយដូចខាងក្រោម។

Kriolu Kabuverdianu Cape Verdean

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

հայերեն 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।

Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection
100 Cambridge Street Suite 900 Boston, MA 02114 • 617-292-5500

Maura T. Healey
Governor

Kimberley Driscoll
Lieutenant Governor

Rebecca L. Tepper
Secretary

Bonnie Heiple
Commissioner

Findings of Fact in Support of FINAL Permit Decision
Town of Spencer Water Management Act Permit ID: 9P-2-08-280.01

The Massachusetts Department of Environmental Protection ("MassDEP" or "the Department") makes the following *Findings of Fact* in support of the attached final renewed Water Management Act (WMA) Permit #9P-2-08-280.01 and herewith includes reasons for issuing the final 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 Spencer's Water Department ("Spencer" or the "applicant"). The Department adopted revised Water Management Regulations at 310 CMR 36.00 on November 7, 2014.

Spencer's Water Withdrawal History

Spencer is registered (# 2-08-280.01) to withdraw an average of 0.48 million gallons per day (MGD) from the Cranberry Brook Well (01G) and, Shaw Pond (01S). In addition, the April 8, 2010 permit authorized an additional average daily withdrawal of 0.49 MGD from the Cranberry Brook Well and the Meadow Road Replacement Well (03G), for a total allocation of 0.97 MGD from three (3) sources.

Spencer's original WMA permit, dated February 28, 1994, was issued to increase the authorized volume from registered withdrawal points, and add the recently approved groundwater source, the Meadow Road Well (02G). A November 6, 2003, 5-year permit review modification included the removal of the Shaw Pond (01S) withdrawal point and acknowledgement of the potential addition of the Meadow Brook Replacement Well (03G) as a withdrawal point with the intent of the Department to apply the same maximum average daily withdrawal rate (the source approval rate) as the Meadow Brook Well (02G) following completion of the source approval process. The final WMA permit was issued on April 8, 2010, and added the Meadow Road Replacement Well (03G) and kept the same authorized withdrawal and maximum average daily withdrawal rates.

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 the May 31, 2017 expiration date, in May 2016, Spencer 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),

- 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 final 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 204.43 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 Spencer'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 0.48 MGD Spencer is authorized to withdraw pursuant to WMA Registration ID: 1-08-061.01. Spencer's former WMA permit authorized an annual average daily withdrawal volume of up to an additional 0.49 MGD from two withdrawal points and, in addition to their registered volume, allocated a total of 0.97 MGD of average daily authorized volume. The past 5-years of Spencer's total withdrawal volumes were significantly less than the authorized volume of 0.97 MGD, as shown in **Table 1**.

TABLE 1: SPENCER'S RECENT SYSTEM-WIDE WITHDRAWAL VOLUMES

YEAR	PERMITTED AUTHORIZED DAILY VOLUME (MGD)	TOTAL AUTHORIZED DAILY VOLUME (MGD)*	ACTUAL AVERAGE DAILY VOLUME (MGD)
2019	**0.49**	**0.97**	0.45
2020			0.48
2021			0.43
2022			0.39
2023			0.38
* includes 0.48 MGD of registered volume			

In a February 4, 2016 letter to the town, the Department of Conservation and Recreation's Office of Water Resources (DCR) discussed their Water Needs Forecasts (WNF) for Spencer's projected withdrawal volume calculations and indicated a maximum annual average daily water need of up to 0.70 MGD using the Residential Gallons Per Capita Day (RGPCD) of 65 gallons, 10% Unaccounted for Water (UAW), 5% buffer for growth and, 0.10 MGD withdrawal volume for the potential future use by the town's largest industrial water user. Spencer may roll forward the full authorized withdrawal volume including the additional 5% (0.03 MGD) and the 0.10 MGD needed for Spencer's largest industrial water user for a total water use of up to 255.5 MGY throughout the term of the permit. These additional volumes are to accommodate uncertainty in the growth projections, and/or to accommodate the water demand of a community that has met the 65 RGPCD and 10% UAW performance standards or has not met the performance standards but has met the functional equivalence requirements included in this permit. MassDEP will use its permitting discretion to apply the 5% buffer, and the industrial water use as warranted upon request, during a review of the permit, or through the approval of a permit amendment application.

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. The Department prepared this renewed permit for two (2) groundwater withdrawal points, 01G & 03G and, the Meadow Road Well (02G) has been removed since MassDEP records indicate it has been *abandoned.*

Special Condition 3, Zone of Contribution Delineation, requirements indicate that Spencer's permitted groundwater sources have approved Zone II's. No further Zone II work is required as a condition of this permit.

Special Condition 4, Water Supply Source Protection, requirements indicate that wellhead protections are in place for the permitted wells and meet the requirements of 310 CMR 22.21(2). No further work is required as a condition of this permit.

Special Condition 5, Performance Standard for Residential Gallons Per Capita Day Water Use, requires Spencer to maintain its RGPCD at or below 65 gallons. For all public water suppliers (PWSs), the performance standard for RGPCD has been revised to 65. Since 2019, Spencer has reported RGPCD values ranging from 37 to 40 gallons, as shown below in **Table 2**.

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.*

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

Year	RGPCD	UAW %
2023	37	10.0
2022	39	6.4
2021	40	8.4
2020	40	12.3
2019	39	13.2

Special Condition 6, Performance Standard for Unaccounted for Water (UAW), required Spencer to meet 10% or less UAW by December 31, 2011. For all PWSs, the performance standard for UAW was revised to 10% two out of every three years on a rolling review. As shown above in **Table 2**, Spencer is currently in compliance with this performance standard. Permittees that cannot comply with the 10% UAW Performance Standard within two full calendar years of receiving this condition will be required to develop and implement a water loss control program as set forth in Appendix B: *Functional Equivalence with the 10% UAW Performance Standard.*

Special Condition 7, Seasonal Limits on Nonessential Outdoor Water Use, reflects the 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, Performance Standard for RGPCD). In addition, outdoor water use by suppliers with wells in August net groundwater depleted (August NGD[1]) subbasins[2] (> 25%) is limited to 1 or 2 days per week to minimize withdrawals from depleted subbasins.

Each year Spencer may choose **<u>one of two</u>** 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 <u>meets or exceeds</u> the trigger streamflow value for seven (7) consecutive days.

[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).

If Spencer selects the streamflow trigger approach, it has been assigned **USGS stream gage 01176000**, located on the Quaboag River near West Brimfield, MA. The gage streamflow triggers at this site are a) **130** cubic feet per second (cfs) for May and June, and b) **67** cfs for July, August, and September.

Should the reliability of flow measurement at this station be so impaired as to question its accuracy, Spencer 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.

- **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 01176000** and is triggered **30** cfs.

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

Special Condition 8, Requirement to Report Raw and Finished Water Volumes, requires Annual Statistical Reports filed for PWSs, like Spencer, 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 9, 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.*

Coldwater Fishery Resource (CFR) Protection

Permittees with withdrawal points impacting a CFR (identified on subbasin maps) must evaluate options for shifting withdrawals to other withdrawal points and/or utilizing potential alternative withdrawal sources to minimize impacts to CFRs through feasible optimization. As shown below in **Table 3**, both Spencer's withdrawal points are in a subbasin which includes a CFR.

TABLE 3: SPENCER'S WITHDRAWAL POINTS CFR CHARACTERISTICS

SOURCE NAME	SOURCE ID:	SUBBASIN #	CFR Present	August NGD %
CRANBERRY BROOK WELL	01G	17103	YES	36.0
MEADOW ROAD WELL #2	03G	17005	YES	6.6

Spencer's response to this Permit Renewal *Order To Complete* and actual withdrawal volumes over the past 5-years indicate their primary withdrawal point is the Meadow Road Well #2 (03G), with an average annual withdrawal volume that is approximately 75% of their total system-wide annual withdrawals, including time when their supplemental (backup) source, the Cranberry Brook Well (01G), becomes the primary source. The planned distribution of the withdrawal volumes from each source is included in SWDs *Minimization Plan* (see Minimization below) and reasonably distributes impact to each CFR closest to them. Consultation with the Department of Fisheries and Wildlife recommends maintaining these withdrawal ratios to offset CFR impacts. Therefore, no additional CFR optimization requirements are necessary at this time.

Minimization. Permittees with groundwater sources in subbasins having an August NGD of 25% or greater are required to develop a plan to minimize the impacts of their withdrawals. Spencer's permitted source, Cranberry Brook Well, is in subbasin 17103, which includes a CFR that also has an August NGD greater than 25%. Therefore, Spencer was required to develop a minimization plan in the permit renewal *Order To Complete.* The Department has accepted Spencer's submitted *Minimization Plan* which included the following elements: 1) continued planned shifting of groundwater withdrawals away from subbasin 17103 (August NGD = 36%) by using the Meadow Road Well #2 (subbasin with August NGD = 6.6%) as their primary source of a water and the Cranberry Brook Well as the supplemental (backup) withdrawal point. 2) additional water conservation measures such as an increasing block water rate pricing structure, 3) enactment of a comprehensive bylaw ensuring efficient operation of automatic sprinkler systems, 4) *The Water Conservation and Restriction Bylaw* which include water savings features, and 5) three (3) *rain gardens* with filter beds which discharge filtered runoff into the river.

Mitigation

The Water Management Regulations, 310 CMR 36.03, define baseline[3] 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:

(a) baseline cannot be less than a permittee's registered volume,
(b) baseline cannot be greater than the permittee's authorized volume for 2005, and
(c) 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.

Based on the average of withdrawal during 2003 through 2005, Spencer's baseline is 0.79 MGD. The Water Management Regulations, 310 CMR 36.22(6) and (7), provide that permittees that seek to withdraw more than their baseline prepare and implement a mitigation plan. MassDEP is not permitting an authorized withdrawal volume to Spencer that exceeds its baseline. Therefore, no mitigation plan is required at this time.

Response to Comments

Comments on the Draft Permit for the Spencer Water Department (Spencer) were received from Massachusetts River Alliance (MRA) in a letter dated 11/25/24. Below is a summary of MassDEP's response to those comments. Comments pertaining to the safe yield methodology used in permitting, data deficiencies, or implementation policies developed as part of the Sustainable Water Management Initiative (SWMI) are not within the scope of individual Water Management permits. MassDEP continues to work with all constituents to review programmatic requirements in forums outside of the development of individual permits. Comments on regulatory and policy issues and comments addressing modifications that are not aligned with current regulations are not included in this Finding of Fact.

[3] The Water Management Regulations, 310 CMR 36.03, defines 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: a) baseline cannot be less than a permittee's registered volume; b) baseline cannot be greater than the permittee's authorized volume for 2005; and c) 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

Comment: Concerns were raised about the "*excessive withdrawals*" by Spencer from their Cranberry Brook Well (01G), in a depleted subbasin (17103) with an August Net Groundwater Depletion (NGD) of 37% and, the other source, the Meadow Road Well #2 (03G) with a NGD of 6% in subbasin 17005. To address these withdrawals MRA requested more stringent "minimization" requirements, including deadlines for completing such activities, to directly improve streamflow and habitat conditions in both of their subbasins.

Response: MassDEP believes Spencer's list of Minimization activities is sufficiently thorough and did not require any deadlines because Spencer is already implementing the activities outlined which help contribute to the fact that Spencer's demand is down significantly enough to reduce their allocation from 0.97 MGD to 0.70 MGD. Those ongoing activities include:

- continued shifting of groundwater withdrawals away from subbasin 17103 (August NGD = 36%) by using the Meadow Road Well #2 (subbasin with August NGD = 6.6%) as their primary source of a water and the Cranberry Brook Well as the supplemental (backup) withdrawal point.
- additional water conservation measures such as an increasing block water rate pricing structure,
- enactment of a comprehensive bylaw ensuring efficient operation of automatic sprinkler systems, and,
- three (3) *rain gardens* with filter beds which discharge filtered runoff into the river.

Currently, MassDEP considers the elements of Spencer's Minimization Plan adequate to satisfy regulatory requirements.

Comment: MRA also request that Spencer be required to conduct a study to determine the impact their withdrawals are having on the Coldwater Fisheries Resources (CFR), to provide a metric for activities to minimize those impacts. MRA also urge MassDEP to consider the use of alternative sources in the Town of Spencer, including privately owned wells that are no longer in service.

Response: WMA regulations require applicants with withdrawals impacting a CFR to consult with MassDEP and other Executive Office of Energy and Environmental Affairs agencies to evaluate options to minimize withdrawal impacts on the CFR by shifting withdrawals to their other withdrawal points. MassDEP consulted with the Division of Fisheries and Wildlife (DFW) relative to shifting withdrawal volumes and sources by Spencer since their withdrawal sources are in separate subbasins both containing a CFR. MassDEP's consultation with DFW concluded that additional feasible optimization was not necessary since existing withdrawal practices already shift the balance of annual withdrawal rates of their two (2) sources away from the depleted subbasin source (Cranberry Brook Well) to the source (Meadow Road Well) with a contributing drainage area 5X greater than the far more depleted subbasin's drainage area, which has nearly 5X less the August NGD of the depleted subbasin and, which utilizes an average of more than twice the well capacity of the depleted subbasin's source. Spencer relies more on the Meadow Road Well, therefore regular maintenance activities conducted on it require it to be shut down or drastically reduced in withdrawal volumes for months, causing withdrawal demands to shift to the Cranberry Brook Well during this time. Despite this shift, the Meadow Brook Well, located in the larger and least impacted CFR subbasin, historically withdraws more than twice its capacity than the source (Cranberry Brook Well) located in the depleted subbasin.

36.22(4) Coldwater Fish Resource Optimization Review requires an applicant to submit an evaluation of options for shifting withdrawals to the applicant's other withdrawal points, if any, to minimize impacts at the CFR. Therefore, MassDEP did not require Spencer to evaluate the use of private wells to minimize the impacts on the CFR as requested by MRA.

Spencer has forfeited more than 50% of their entire renewed permit authorized withdrawal volume, from 0.49 MGD to a maximum of 0.22 MGD, in addition to having reduced their actual annual withdrawal volume by over an average of 40% in the past 5-years since SWMI baseline data was processed. The summary of changes to the history of Spencer's withdrawal volume, decrease in renewal permit authorized volume and practice of shifting well withdrawal volumes at this time are considered cumulatively positive contributions to environmental improvements and are sufficient to make unnecessary additional compliance deadlines or an environmental impact study.

Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection
100 Cambridge Street Suite 900 Boston, MA 02114 • 617-292-5500

Maura T. Healey
Governor

Kimberley Driscoll
Lieutenant Governor

Rebecca L. Tepper
Secretary

Bonnie Heiple
Commissioner

FINAL 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-2-08-280.01 **RIVER BASIN:** CHICOPEE

PERMITTEE: Town of Spencer
3 Old Meadow Road
Spencer, Massachusetts 01562

EFFECTIVE DATE: January 13, 2025

EXPIRATION DATE: May 31, 2033

USE: Public Water Supply (PWS)

DAYS OF OPERATION: 365

LOCATIONS:

TABLE 1: WITHDRAWAL POINT IDENTIFICATION

SOURCE NAME	PWS SOURCE ID
CRANBERRY BROOK WELL	2280000-01G
MEADOW ROAD WELL #2 (REPLACEMENT WELL)	2280000-03G

SPECIAL CONDITIONS

1. Authorized Annual Withdrawal Volume

This permit authorizes the Town of Spencer to withdraw water from the Chicopee River Basin at the rates described below in **Table 2**. Volumes reflected by these rates are in addition to the 0.48 million gallons per day (MGD) previously authorized to Spencer under the WMA registration #2-08-280.01 for withdrawal from the Chicopee River Basin. 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 WITHDRAWAL VOLUMES

PERMIT PERIOD	TOTAL RAW WATER WITHDRAWAL VOLUMES			
	Permit		Registration + Permit	
	Daily Average (MGD)	Total Annual (MGY)	Daily Average (MGD)	Total Annual (MGY)
1/13/2025 to 5/31/2028	0.08	29.2	0.48 + 0.08 = 0.56	175.2 + 29.2 = 204.4
6/1/2028 to 5/31/2033	0.09 (0.22*)	32.85 (80.3*)	0.48 + 0.09 = 0.57 (0.48 + 0.22 = 0.70*)	175.2 + 32.85 = 208.05 (175.2 + 80.3 = 255.5*)

* With specific advance written approval from MassDEP, Spencer is authorized to increase the maximum authorized annual withdrawal volume to 0.70 MGD during either Permit Period provided that Spencer is meeting, or functionally equivalent, with the following Special Permit Conditions:

- Residential Gallons Per Capita Day,
- Unaccounted for Water or all UAW functional equivalence requirements,
- Seasonal Limits on Nonessential Outdoor Water Use, and
- Water Conservation Requirements

2. Maximum Authorized Daily Withdrawals from each Withdrawal Point

Spencer's individual source approved maximum daily withdrawal rates are not to exceed the maximum daily pumping rates listed below in **Table 3** without specific advance written approval from MassDEP.

TABLE 3: MAXIMUM DAILY WITHDRAWAL RATES

SOURCE NAME	PWS SOURCE ID	AUTHORIZED MAXIMUM DAILY RATE (MGD)
CRANBERRY BROOK WELL	2280000-01G	1.15
MEADOW ROAD REAPLCEMENT WELL (#2)	2280000-03G	1.736

3. Zone of Contribution Delineations

MassDEP records show that Spencer 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

Department records indicate that the protections in place for the permitted wells meet the requirements of 310 CMR 22.21(2). Therefore, no further wellhead protection work is required as a condition of this permit.

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

Spencer was required to meet an annual RGPCD of 65 by December 31, 2011. 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.* Spencer shall report its RGPCD annually in its Annual Statistical Report (ASR).

6. Performance Standard for Unaccounted for Water (UAW)

Spencer was required to meet an annual UAW of 10% or less by December 31, 2011. 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. Spencer 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 *AWWA/IWA Water Audits and Loss Control Programs, Manual of Water Supply Practices M36,* as outlined in **Appendix B**. Spencer 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.

7. Seasonal Limits on Nonessential Outdoor Water Use

Spencer shall limit nonessential outdoor water use through mandatory restrictions from May 1st through September 30th as outlined below in **Table 4**. To the extent feasible all summer outdoor water use should take place before 9 am and after 5 pm when evaporation and evapotranspiration rates are lower.

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

Nonessential Outdoor Water Use and Water Use Restrictions

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.

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

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

The following uses may be allowed, before 9 am and after 5 pm, when mandatory restrictions are in place:

- irrigation to establish a new lawn and new plantings during the months of May and September; and
- irrigation of lawns, gardens, flowers, and ornamental plants by means of a hand-held hose.

TABLE 4:
SEASONAL LIMITS ON NONESSENTIAL OUTDOOR WATER USE
EFFECTIVE: May 1st through September 30th
PERMITTEES WITH GROUNDWATER WITHDRAWALS IN SUBBASINS
WITH AUGUST NET GROUNDWATER DEPLETION < or = 25%

SCHEDULE A: Previous year ≤ 65 RGPCD Standard • **Permittee meets 65 RGPCD Standard per MassDEP accepted ASR records.** • **Water Use Allowed BEFORE 9 am & AFTER 5 pm (when evapotranspiration is lowest)**	
CALENDAR Triggered Restrictions:	**a) Two (2) days per week; and,** **b) One (1) day per week** when **USGS Gage 01176000** on the Quaboag River near West Brimfield, MA falls below **30 cfs** for three **(3)** consecutive days. Once streamflow triggered restrictions are implemented, they shall remain in place until streamflow at gage meets or exceeds **30 cfs** for seven **(7)** consecutive days.
STREAMFLOW Triggered Restrictions:	**a) Two (2) days per week:** Gage Reference: **USGS Gage 01176000** on the Quaboag River near West Brimfield, MA falls below: ➢ May 1 – June 30: **130 cfs** for three **(3)** consecutive days ➢ July 1 – September 30: **67 cfs** for three **(3)** consecutive days **b) One (1) day per week** when **USGS Gage 01176000** on the Quaboag River near West Brimfield, MA falls below **30 cfs** for three **(3)** consecutive days. Once implemented, restrictions shall remain in place until streamflow at the gage meets or exceeds the trigger streamflow for seven **(7)** consecutive days.
SCHEDULE B: Previous year > 65 RGPCD Standard • **Permittee does not meet 65 RGPCD Standard per MassDEP accepted ASR records.** • **Water Use Allowed BEFORE 9 am & AFTER 5 pm (when evapotranspiration is lowest)**	
CALENDAR Triggered Restrictions:	**Nonessential outdoor water is restricted to (1) one day per week** Once streamflow triggered restrictions are implemented, they shall remain in place until streamflow at gage meets or exceeds **30 cfs** for seven **(7)** consecutive days.
STREAMFLOW Triggered Restrictions:	**a) One (1) day per week:** Gage Reference: **USGS Gage 01176000** on the Quaboag River near West Brimfield, MA falls below: ➢ May 1 – June 30: **130 cfs** for three **(3)** consecutive days ➢ July 1 – September 30: **67 cfs** for three **(3)** consecutive days Once implemented, restrictions shall remain in place until streamflow at the gage meets or exceeds the trigger streamflow for seven **(7)** consecutive days.)
Notes: ASR = Annual Statistical Reports; **RGCPD** = Residential Gallons / Capita Day	

INSTRUCTIONS FOR ACCESSING STREAMFLOW WEBSITE INFORMATION
If Spencer chooses Streamflow Triggered Restrictions, Spencer 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. The mean daily flow is not calculated until after midnight each day when the USGS computes the hourly data into a mean daily streamflow. As a result, permittees must use the mean daily streamflow from the preceding day when tracking streamflows.
Mean daily streamflow gage readings are available at the USGS NWIS Web Interface at: USGS NWIS Web Interface **1.** Scroll down to **01176000** on the Quaboag River near West Brimfield, MA. **2.** Click on the gage number. **3.** Scroll down to "Provisional Date Subject to Revision – Available data for this site" and click on the drop-down menu. **4.** Click on "Time-series: Daily data" and hit GO. **5.** Scroll down to the "Available Parameters" box. Within the box, be sure "00060 Discharge (Mean)" is checked, then, under "Output Format" click "Table" and hit 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

Spencer 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.
- 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 Quaboag River gage be so impaired as to question its accuracy, Spencer 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.

8. Requirement to Report Raw and Finished Water Volumes

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

Metering

1. Spencer shall continue to calibrate all source and finished water meters at least annually and report date of calibration on the ASR.

2. Spencer shall maintain its system as 100% metered.

3. Spencer shall continue the meter replacement program that began in 2021 until all residential, industrial, and commercial, meters have been replaced, with a completion date no later than May 30, 2026.

Pricing

1. Spencer 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, Spencer 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. Spencer will continue to implement an increasing block rate structure.

4. Spencer shall continue to bill at least quarterly.

Residential and Public Sector Conservation

1. Spencer 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. Spencer reports metering water used by contractors using fire hydrants for pipe flushing and construction and shall continue to do so.

Industrial and Commercial Water Conservation

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

10. Minimization

As required by 310 CMR 22(5), Spencer shall implement the following elements identified in their 7/31/2024 dated *Minimization Plan* to minimize impacts to the depleted subbasin containing the withdrawal point, Cranberry Brook Well (01G):

1. Continue shifting of groundwater withdrawals away from depleted subbasin #17103 by using the Meadow Road Well #2 as their primary source of a water and the Cranberry Brook Well as the supplemental (backup) withdrawal point.
2. Maintain increasing block water rate pricing structure.
3. Maintain enactment of a comprehensive bylaw ensuring efficient operation of automatic sprinkler systems.
4. Maintain their *Water Conservation and Restriction Bylaw* which include water savings features.
5. Maintain three (3) *rain gardens* with filter beds which discharge filtered runoff into the river.

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

January 13, 2025

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 A

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 to 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.