



Commonwealth of Massachusetts
Executive Office of Energy and Environmental Affairs

Department of Environmental Protection

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

Maura T. Healey
Governor

Kim Driscoll
Lieutenant Governor

Rebecca Tepper
Secretary

Bonnie Heiple
Commissioner

DRAFT

February 11, 2025

Natick Select Board
Town Hall
135 School Street
Natick, MA 02081

RE: Natick-BWR\WMA
PWS Number: 3198000
WMA Permit #9P3-3-20-198.01
Action: **Draft** Modified Permit Post-
Appeal

Dear Select Board Members:

Please find the attached documents:

- **DRAFT** Findings of Fact in Support of the Modified Permit #9P3-3-20-198.01; and
- **DRAFT** Water Management Act Permit #9P3-3-20-198.01 (Charles River Basin) for the Town of Natick.

Consistent with 310 CMR 36.27 (6)-(8) of the revised Water Management Act Regulations, the Department will now publish notice in the Environmental Monitor that a **DRAFT** Permit is available for review and comment for 30 days following the February 11, 2025 publication in the Environmental Monitor. Notice of the public comment period will also be sent to all registrants, permittees and those having non-consumptive use statements within the Charles River Basin. The Department expects to issue the final permit within 30 days of the close of the public comment period.

The signature on this cover letter indicates formal issuance of the attached document. If you have any questions regarding this information, please contact me at (617) 780-1962 or via e-mail at duane.levangie@mass.gov.

Very truly yours,

Duane LeVangie, Chief
Water Management Program
Bureau of Water Resources

Sharepoint:\DWPWMA\Permit Renewals\Charles\Natick-3198000- DRAFT Permit 9P3-3-20-198.01
X-XX-2025

Sharepoint:\DWPArchive\NERO\Natick-3198000- DRAFT Permit 9P3-3-20-198.01- X-XX-2026

Ecc: Jen Pederson, MWWA

Lydia Olson, Massachusetts Rivers Alliance

Anne Carroll, Department of Conservation and Recreation-Office of Water Resources

Heather Miller, Charles River Watershed Association

Anthony Comeau, Natick Water and Sewer Division

William Spratt, Natick Public Works Department

Brett Hubbard, MassDEP

Gregory Elderidge, Haley Ward

Robert Pickering, Haley Ward

Karis North, Murphy, Hesse, Toomey, and Lehane



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.

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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

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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，应立即翻译。如果您需要翻译这份文件，请用下面列出的电话号码与 MassDEP 的多元化主任联系。

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

ឯកសារនេះគឺសំខាន់ហើយត្រូវត្រូវបានបកប្រែភ្លាមៗ។ ប្រសិនបើអ្នកត្រូវការឱ្យគេបកប្រែឯកសារនេះ សូមទាក់ទងមកនាយកផ្នែកពិធីកម្មរបស់ MassDEP តាមលេខទូរស័ព្ទខាងក្រោម។

Kriolu Kabuverdianu Cape Verdean

Kel dokumentu li é impurtáti y debe ser traduzidu imidiatamenti. 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

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Język Polski Polish

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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

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Findings of Fact in Support of a **DRAFT Permit Issuance **DRAFT** Water Management Permit # 9P3-3-20-198.01 Town of Natick**

The Department of Environmental Protection (the Department or MassDEP) makes the following Findings of Fact in support of the attached Water Management Act (WMA) Permit #9P3-3-20-198.01 and includes herewith its reasons for issuing the Permit and for conditions of approval imposed, as required by M.G.L. c. 21G, § 11.

Natick was issued a Renewed WMA Permit on March 1, 2010, which was subsequently appealed by the Town. The appeal remains unresolved and the 2010 permit has not gone into effect. Therefore, the Town's 1992 permit, amended in 2002 (2002 Permit), remains in effect. The 2002 Permit does not include certain Standard Conditions that the department has been including in permits since 2005. Due to the extensive changes to the WMA regulations since Natick's appeal, Natick continues its withdrawals from the Charles River Basin with significantly less stringent conditions than the other public water suppliers in the basin. A July 25, 2024, Joint Status Report was issued to the Office of Appeals and Dispute Resolution (OADR) by both parties. OADR then gave the following order to both MassDEP and Natick on August 2, 2024: "The Parties' request constitutes good cause for issuance of a 6-month stay of the proceedings in this appeal. Accordingly, these proceedings are stayed until February 1, 2025 to allow for the Parties' ongoing permit process and continued settlement negotiations to proceed." The stay was then extended until May 1, 2025, then November 17th 2025, and then again until February 20, 2026. After many months of communications between the two parties regarding the conditions in the new draft permit, MassDEP proceeded with issuing a draft permit with the information available.

To maintain equity and consistency amongst permittees, the WMA program determined it was critical to issue Natick a modified permit at this time to coincide with the other permit compliance reviews occurring in the Charles River Basin.

The Town of Natick Withdrawal Summary

Natick is registered to withdraw 0.22 MGD from groundwater sources in the Charles River Basin. On June 30, 1992, MassDEP issued the Natick Water Division its original WMA permit to add Elm Bank Wells #2 and #4 as approved permitted sources, and to increase the total authorized withdrawal volume by up to 1.31 MGD for a total withdrawal of up to 1.53 MGD. Natick also holds Water Management Registration #3-14-198.01 in the Concord River Basin for an average daily

withdrawal volume of 4.1 MGD from six sources (Springvale Wells #1 - #4 and Evergreen Wells #1 and #3).

The Permit Extensions

The expiration date for Natick's permit going forward in the Charles River Basin will be June 5, 2034, in accordance with the staggered permitting schedule set forth in the regulations at 310 CMR 36.17.

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

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

- Impact of the withdrawal on other water sources;
- Water available within the safe yield of the water 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, flood plains; 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 the 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* (<http://www.mass.gov/eea/docs/eea/water/swmi-framework-nov-2012.pdf>) was released.

On November 7, 2014, MassDEP 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 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, MassDEP 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 Charles River Basin section of this document or for more information on the Safe Yield methodology, go to the November 28, 2012 SWMI Framework Summary and Appendices);
- Water needs forecasts for public water suppliers developed by the DCR, using a methodology reviewed and approved by the Massachusetts WRC;
- 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 standards reviewed and approved by the WRC in July 2018 (<https://www.mass.gov/doc/massachusetts-water-conservation-standards-2/>) including without limitation;
 - performance standard of 65 residential gallons per capita day or less;
 - performance standard of 10% or less unaccounted-for-water;
 - seasonal limits on nonessential outdoor water use; and
 - 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;
 - protection for coldwater fish resources;
 - minimization of withdrawal impacts in areas stressed by groundwater use; and
 - mitigation of the impacts of increasing withdrawals.

Safe Yield in the Charles River Basin

This permit is being issued under the safe yield methodology adopted by the 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 calculation for the Charles River Basin is 65.2 million MGD, and total registered and permitted withdrawals are 43.92 MGD. The maximum withdrawals that are authorized in this permit, and all other permits currently under review by the Department within the Charles River Basin, will be within the safe yield and may be further conditioned as outlined in the regulations.



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Findings of Fact for Special Permit Conditions in the Town of Natick's Water Management Act Permit

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

Special Condition 1, Authorized Annual Average Withdrawal Volume, recognizes the 0.22 MGD Natick is authorized to withdraw from its groundwater sources in the Charles River Basin by WMA Registration #3-20-198.01, and the 4.1 MGD Natick is authorized to withdraw from its groundwater sources in the Concord River Basin by WMA Registration #3-14-198.01.

In a November 25, 2008, letter to the town, the Department of Conservation and Recreation's Office of Water Resources (DCR-OWM) provided their final Water Needs Forecasts (WNF) for Natick. MassDEP policy is to allocate annual withdrawal rates based on the DCR-OWM 65 Residential Gallons per Capita Day (RGPCD) and 10% Unaccounted-for (UAW) WNF. The 65/10 DCR-OWM WNF identified a system wide demand of 3.92 MGD, with the possibility of an additional 5% buffer of 0.20 MGD, for a potential maximum demand of 4.12 MGD through 2028. Based on review of Natick's recent use (see Table 1 below) DCR's 65/10 WNF appears sufficient to meet Natick's demands during the term of this permit, and the WNF is less than Natick is authorized to withdraw from it two registrations. Therefore, this condition limits Natick's total system-wide annual average daily withdrawal from the Charles and Concord River Basins to the combined registered volume of 4.32 MGD.

At this time, Natick has provided 0.14 MGD in direct mitigation to offset the impacts of withdrawals up to 1.36 MGD. While Natick may withdraw up to 4.32 MGD via its registrations, the Department has limited the 1.53 MGD previously allocated in the Charles River Basin to 1.36 MGD (1.14 MGD permitted and 0.22 MGD registered). Natick will be able to apply for, and may receive, a permit amendment (WM02) for withdrawals up to 1.53 MGD from the Charles River Basin provided Natick is meeting all permit requirements including:

- RGPCD of ≤ 65 , or all RGPCD functional equivalence requirements (Appendix A);
- UAW of $\leq 10\%$, or all UAW functional equivalence requirements (Appendix B);

- Water conservation requirements based on Water Conservation Standards for the Commonwealth of Massachusetts adopted by the MA Water Resources Commission in July 2018 (Special Condition 8);
- Seasonal limits on nonessential outdoor water use (Special Condition 9);
- Water use minimization requirements (Special Condition 10); and,
- Water withdrawal mitigation requirements (Special Condition 11)

as included in this permit. MassDEP’s review of a permit amendment application will also include a review of direct mitigation opportunities available at the time of the amendment request and the status of indirect mitigation in place to address the impacts of increased water withdrawals.

In accordance with 310 CMR 36.17(1), the expiration date for Natick’s modified permit in the Charles River Basin will be June 5, 2034.

Table 1: Natick Reported System-Wide Water Withdrawals 2018-2024

Basin	Actual Withdrawals (MGD)							Proposed Authorized Volumes (MGD)		
	2018	2019	2020	2021	2022	2023	2024	Total Allocated Volume	Permitted Volume	Registered Volume
Charles	1.24	0.89	0.74	1.63*	0.92	0.92	0.56	1.36	1.14	0.22
Concord	2.06	2.31	2.43	1.24	2.57	2.09	2.59	4.1	0	4.1
Total	3.30	3.20	3.17	2.87	3.49	3.01	3.15	**4.32 (sum of registrations)	1.36	4.32

* On May 18, 2021, Natick submitted a request for an Emergency Declaration under the provisions of the WMA, M.G.L. c. 21G, § 15, due to the need to remove water supply wells in the Concord River Basin from service to minimize elevated levels of PFAS6. On May 20, 2021, MassDEP issued an Emergency Declaration (UAO No. 00011406) granting the use and increased production from Elm Bank Wells #2 and #4 over their limits in the Charles River Basin, while also requiring the implementation of non-essential outdoor water use restriction while the other wells were off-line. Natick is currently working on short-term and long-term corrective actions to the elevated PFAS levels. The Emergency Declaration expired November 21, 2021.

** System-wide annual average daily withdrawals from the Charles and Concord River basins are not to exceed 4.32 MGD. Any volumes withdrawn from the Charles River basin are to be subtracted from the total volume of 4.32 MGD.

Special Condition 2, Maximum Daily Withdrawals from Groundwater Withdrawal Points,

Natick currently has two permitted groundwater sources in the Charles River Basin. Special Condition 2 specifies maximum approved daily pumping rates for each of these permitted sources, while also including a combined maximum daily rate for the sources and exceptions to that rate.

Special Condition 3, Interbasin Transfer Approval, Natick must comply with the following requirements of its Interbasin Transfer Approval:

1. Maintenance of Reasonable Instream Flow

No withdrawals from the Elm Bank Wells shall occur when streamflow, as measured at the USGS Charles River at Dover gauge falls below:

- 96.99 cfs: from September 15 through November 15
- 38.43 cfs: from November 16 through February 28
- 175.68 cfs: from March 1 through June 15
- 38.43 cfs: from June 16 through September 14

An annual report detailing gauge readings and volumes pumped from the Elm Bank wells must be submitted to the Massachusetts Water Resources Commission by February 28th of each year.

2. Four Town Agreement

Natick must abide by the conditions of the Four Town Agreement entered into pursuant to Chapter 624 of the Acts of 1986, and any subsequent modifications thereto, concerning the allocation of water among the Towns of Natick, Dover, Needham, and Wellesley.

Special Condition 4, Zone II Delineations, Natick’s permitted groundwater sources have approved Zone IIs. No further Zone II work is required as a condition of Natick’s WMA Permit.

Special Condition 5, Wellhead Protection, Natick has successfully adopted local zoning and non-zoning controls that prohibit all uses and activities cited in the MA Wellhead Protection Regulations 310 CMR 22.21(2).

Special Condition 6, Performance Standard for Residential Gallons Per Capita Day (RGPCD) Water Use, for all public water suppliers (PWSs) is 65. Natick will be required to meet an annual RGPCD of 65 or less by December 31, 2028. As shown in Table 2, Natick has consistently met this Performance Standard. 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 Water Use

Year	2018	2019	2020	2021	2022	2023	2024
RGPCD	56	53	62	49	54	48	55

Special Condition 7, Performance Standard for Unaccounted for Water (UAW), for all PWSs is 10% or less. Natick is required to meet 10% or less UAW for 2 of the 3 most recent years throughout the permit period by December 31, 2028. See Table 3. Permittees that cannot comply with the UAW Performance Standard are required to develop and implement a water loss control program as set forth in Appendix B Functional Equivalence with the 10% UAW Performance Standard.

Table 3: Unaccounted for Water (%)

Year	2018	2019	2020	2021	2022	2023	2024
UAW %	12	12	9	13	17	14	10

Special Condition 8, Water Conservation Requirements, incorporates the Water Conservation Standards for the Commonwealth of Massachusetts reviewed and approved by the Water Resources Commission in July 2018 (<https://www.mass.gov/doc/massachusetts-water-conservation-standards-2/>).

Special Condition 9, Seasonal Limits on Nonessential Outdoor Water Use in this Permit have been developed giving consideration, as required in the Act, specifically to issues of:

- Reasonable conservation consistent with efficient water use; and
- Reasonable protection of public drinking water supplies, groundwater recharge, wetland habitat, fisheries and wildlife habitat, and fisheries resources in the Commonwealth.

The permit requires seasonal and streamflow-triggered restrictions on nonessential outdoor water use¹ based on Natick’s Residential Gallons Per Capita Day (RGPCD) for the preceding year (see Special Condition 6), and the August Net Groundwater Depletion (Aug NGD)² of the Subbasins³ where Natick’s groundwater wells are located.

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

- **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
- **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.

¹ See the definition of Nonessential Outdoor Water Use in the permit condition and at 310 CMR 36.03.

² 310 CMR 36.03, defines 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* (Weiskel et al., 2010, USGS SIR 2009-5272).

³ 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).

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 Natick selects the streamflow trigger approach, it has been assigned USGS stream gage #01103280, Charles River at Dover, MA. The May-June streamflow trigger is 170 cubic feet per second (cfs), and the July-September streamflow trigger is 62 cfs. Should the reliability of flow measurement at this be so impaired as to question its accuracy, Natick 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 streamflow triggers are derived from Aquatic Base Flow (ABF) values calculated by the Sustainable Yield Estimator (SYE)⁴ for simulated natural flow applied to the assigned local USGS stream gage. The two-tiered trigger values are based on flow levels that are protective of aquatic habitat for fish spawning during the spring bioperiod, designated with the June ABF; and protection flows for fish rearing and growth during the summer bioperiod, designated with the August ABF trigger. Protective flow levels are derived from index gage flow data which represent the least altered stream flows in Massachusetts and are further described in the Department of Conservation and Recreation (DCR)⁵ and USGS Index Reports⁶.

- **The 7-Day Low Flow Trigger**, at which restrictions increase, is incorporated into both Calendar and Streamflow Triggered restrictions in order to provide additional protection to streamflows when flows are very low. The 7-day low flow trigger for Natick is 30 cfs.

This permit condition does not confer enforcement authority to the permittee. For permittees that have not adopted such enforcement authority, MassDEP has developed a Model Outdoor Water Use Bylaw/ Ordinance to help municipalities implement nonessential outdoor water use requirements. The Model Bylaw also includes options for regulating private wells and in-ground irrigation systems. See <http://www.mass.gov/eea/agencies/massdep/water/regulations/model-water-use-restriction-bylaw-ordinance.html>

The Department notes that nothing in the permit prevents permittees from implementing water use restrictions that are more stringent than those set forth in this permit.

⁴ Archfield, S.A., Vogel, R.M., Steves, P.A., Brandt, S.L., Weiskel, P.K., and Garabedian, S.P., 2010, The Massachusetts Sustainable-Yield Estimator: A decision-support tool to assess water availability at ungaged stream locations in Massachusetts: U.S. Geological Survey Scientific Investigations Report 2009-5227.

⁵ Massachusetts Department of Conservation and Recreation (DCR), 2008 Index Streamflows for Massachusetts, May 2008, Prepared by Office of Water Resources for the Massachusetts Water Resources Commission.

⁶ Armstrong, D.W., Parker G. W., and Richards, T.A., 2008, Characteristics and classification of least altered streamflow in Massachusetts: U.S. Geological Survey Scientific Investigation Report 2007-5291.

Special Condition 10, Minimization

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. Natick's permitted sources are in Subbasin 21105 and Subbasin 21109, with an August NGD of 33% and 42% respectively. In addition, Natick's sources in the Concord River Basin are in Subbasin 12016 which has August NGD of 176%. Special Condition 10 therefore requires Natick to implement a Minimization Plan.

Minimization Plans typically include:

1. a Desktop Optimization analysis of shifting withdrawals to other available sources outside the August net groundwater depleted subbasin(s);
2. an evaluation of options for water releases and returns to minimize streamflow impacts; and
3. an evaluation of implementing conservation measure that go beyond the standard WMA permit requirements to minimize the withdrawals and discharges needed to meet demand.

As stated, all of Natick's wells are in subbasins that have an August NGD that is greater than 25%. In this circumstance, the Minimization Plan is not required to include an evaluation of the impact of shifting withdrawals between subbasins since all of Natick's sources are located Groundwater Withdrawal Category 4 and 5s. In addition, Special Condition 3, already requires Natick to cease withdrawals from their Charles River Basin sources when reasonable instream flows are not maintained. Likewise, the Minimization Plan does not need to address surface water releases, because Natick has no surface water supply impoundments. The Minimization Plan is, however, required to identify additional cost-effective conservation measures adopted since 2005 that go beyond the standard WMA conservation requirements. Special Condition 10 requires that at a minimum Natick evaluate the measures listed and implement those deemed feasible by MassDEP.

Special Condition 11, Mitigation of Impacts for Withdrawals that Exceed Baseline⁷, requires mitigation of the impacts of withdrawals above the permittee's baseline. Natick's Baseline in the Charles River Basin is 1.20 MGD, its 2003-2005 withdrawal average volume plus 5%. Mitigation of the impacts of increasing withdrawals can be through:

- Direct mitigation that will result in enhanced streamflow through
 - Purchase and retirement of other registered or permitted withdrawals,
 - Surface water releases,
 - Stormwater recharge, or
 - Infiltration and inflow removal from sewer systems.
- Indirect mitigation activities that will result in streamflow and habitat improvements

⁷ Baseline is the volume of water withdrawn in 2005 plus 5%, or the average volume withdrawn from 2003 to 2005 plus 5%, which is greater. Baseline cannot be less than the registered volume and cannot be more than the authorized volume during the 2003-2005 period. For suppliers with authorizations in multiple major basins, baseline is computed for each basin and for the entire system.

In addition, since the volumes over baseline proposed to be withdrawn are expected to serve areas mostly on the municipal wastewater system, the Department assumes that only 13% of the water withdrawn above the baseline will be returned to on-site groundwater disposal systems. Natick’s total authorized withdrawal in the Charles River Basin is being set at 1.36 MGD, and their permitted volume is being set at 1.14 MGD based on the direct mitigation provided at this time. Natick will be able to apply for, and may receive, a permit amendment (WM02) for withdrawals up to 1.53 MGD from the Charles River Basin provided Natick is meeting all permit requirements including:

- RGPCD of ≤ 65 , or all RGPCD functional equivalence requirements (Appendix A);
- UAW of $\leq 10\%$, or all UAW functional equivalence requirements (Appendix B);
- Water conservation requirements based on Water Conservation Standards for the Commonwealth of Massachusetts adopted by the MA Water Resources Commission in July 2018 (Special Condition 8);
- Seasonal limits on nonessential outdoor water use (Special Condition 9);
- Water use minimization requirements (Special Condition 10); and,
- Water withdrawal mitigation requirements (Special Condition 11)

as included in this permit. MassDEP’s review of a permit amendment application will also include a review of direct mitigation opportunities available at the time of the amendment request and the status of indirect mitigation in place to address the impacts of increased water withdrawals. Please also see Table 5 below for the mitigation calculation based on the 1.36 MGD volume.

Table 5: Mitigation Calculation

<p>Permit request above Baseline = 0.16 MGD</p> <ul style="list-style-type: none"> • Permit amount above Baseline: $1.36 - 1.20 = 0.16$ MGD
<p>Adjustment for Wastewater Discharge to Local Groundwater = 0.018 MGD</p> <ul style="list-style-type: none"> • 13% of increased withdrawals are delivered to areas with on-site groundwater disposal systems: $0.16 \text{ MGD} \times 0.13$ (13%) = 0.021 MGD • 85% of water delivered to areas with on-site groundwater disposal systems returns to groundwater: $0.021 \text{ MGD} \times 0.85$ (85%) = 0.018 MGD <p>Total: 0.018 MGD</p>
<p>Amount to be Mitigated after Adjustment for Wastewater Discharge to Local Groundwater = 0.14 MGD</p> <ul style="list-style-type: none"> • Permitted amount above baseline (0.16 MGD) – adjustment for wastewater discharge to groundwater (0.02 MGD) = 0.14 MGD or 140,000 gallons per day

After accounting for the wastewater return adjustment, 0.14 MGD of future additional withdrawals from the Charles River basin must be mitigated. Natick has provided 0.14 MGD in direct mitigation from Infiltration/Inflow projects. Please see Appendix C of the permit for a list of projects.

Special Condition 12, Reporting Requirements, ensures that the information necessary to evaluate compliance with the conditions included herein is accurately reported.

Cold Water Fish Resources

The Water Management Regulations revised and promulgated in November 2014 also require WMA permits to address protection of Coldwater Fishery Resources (CFR) and mitigation of withdrawals above the baseline withdrawal volume.

Coldwater Fish Resource protection is not a condition of the WMA Permit. A CFR has not been identified in the two permitted subbasins where Natick withdraws in the Charles River Basin. Thus, Natick does not have to perform a Coldwater Fishery Desktop Optimization evaluation at this time.



Commonwealth of Massachusetts
Executive Office of Energy and Environmental Affairs

Department of Environmental Protection

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

Maura T. Healey
Governor

Kim Driscoll
Lieutenant Governor

Rebecca Tepper
Secretary

Bonnie Heiple
Commissioner

DRAFT WATER WITHDRAWAL PERMIT
#9P3-3-20-198.01
Town of Natick

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: 9P3-3-20-198.01 **RIVER BASIN:** Charles River

PERMITTEE: Town of Natick

EFFECTIVE DATE: XXXXX, 2025

EXPIRATION DATE: June 5, 2034

NUMBER OF PERMITTED WITHDRAWAL POINTS: 2

Groundwater: 2

USE: Public Water Supply

DAYS OF OPERATION: 365

Table 1: Withdrawal Point Identification

Source Name	Source Code	Source Name	Source Code
Elm Bank #2	3198000-11G	Elm Bank #4	3198000-12G

SPECIAL CONDITIONS

1. Maximum Authorized Annual Average Withdrawal Volume

This permit authorizes the Town of Natick (Natick) to withdraw water from the Charles River Basin at the rate described as follows in Table 2. The permitted withdrawal rate is in addition to the 0.22 million gallons per day (MGD) previously authorized for Natick under Water Management Act Registration #3-20-198.01 in the Charles River Basin, and the 4.1 MGD Natick is authorized to withdraw from its groundwater sources in the Concord River Basin by WMA Registration #3-14-198.01. The permitted volume is expressed both as an average daily

withdrawal rate (million gallons per day or MGD), and as a total annual withdrawal volume (million gallons per year or MGY) for each permit period. The Department of Environmental Protection (MassDEP) will use the raw water withdrawal volume from all authorized withdrawal points to assess compliance with the registered and permitted withdrawal volumes.

Table 2: Total Authorized Raw Water Withdrawals

Permit Period	Registration + Permit	
	Daily Average (MGD)	Total Annual (MGY)
X/X/2025 to 6/5/2034	0.22 + 1.14 = 1.36* Or with permit amendment 0.22 + 1.31 = 1.53	496.40 Or with permit amendment 558.45

*Natick may be permitted up to 1.53 MGD provided that prior to making average annual withdrawals greater than 1.36 MGD from the Charles River Basin, Natick is required submit a permit amendment application (WM02) and receive an amended permit authorizing increased withdrawals up to 1.53 MGD. MassDEP’s review of the permit amendment application will include a review of Natick’s compliance with all permit conditions, particularly those designed to minimize water demand, a review of direct mitigation opportunities available at the time of the amendment request and of indirect mitigation in place to address the impacts of increased water withdrawals. Note that should Natick like to withdraw more than 1.53 MGD they will also need to file and obtain a new Water Management Permit (BRPWM03).

In addition, the combined maximum authorized annual withdrawal volumes from the Charles and Concord River Basins are confined to the volumes outlined in Table 3.

Table 3: Summary of Natick Water Department’s WMA Authorizations

WMA Authorization	Volume Authorized
WMA Permit #9P3-3-20-198.01 and Registration #3-20-198.01 (Charles River)	1.36 MGD (496.40 MGY)
WMA Registration #3-14-198.01 (Concord River)	4.10 MGD (1496.50 MGY)
Total WMA Authorization	4.32 MGD (1576.80 MGY)*

*Sum of registrations in both basins.

2. Maximum Authorized Daily Withdrawals from Groundwater Withdrawal Points

Withdrawals from permitted withdrawal points are not to exceed the approved maximum daily volumes listed in Table 4 without specific advance written approval from MassDEP.

Table 4: Maximum Authorized Daily Withdrawal Rates

Source Name	Source Code	Max Day Rate (MGD)
Elm Bank #2	(3198000-11G)	1.70*
Elm Bank #4	(3198000-12G)	1.40*
* Combined withdrawals from these wells shall not exceed 2.20 MGD, except when the Concord Basin sources are unavailable due to temporary loss of capacity and as approved by MassDEP. These withdrawals will be limited further according to the maintenance of reasonable instream flow requirements as stated in Special Condition 3.		

3. Interbasin Transfer Approval

Natick must comply with the following requirements of its Interbasin Transfer Approval:

Maintenance of Reasonable Instream Flow

No withdrawals shall occur when streamflow, as measured at the USGS Charles River at Dover gage, falls below:

96.99 cfs: from September 15 through November 15

38.43 cfs: from November 16 through February 28

175.68 cfs: from March 1 through June 15

38.43 cfs: from June 16 through September 14

An annual report detailing gage readings and volumes pumped from the Elm Bank wells must be submitted to the Massachusetts Water Resources Commission by February 28th of every year.

Four Town Agreement

Natick must abide by the conditions of the Four Town Agreement entered into pursuant to Chapter 624 of the Acts of 1986, and any subsequent modifications thereto, concerning the allocation of water among the Towns of Natick, Dover, Needham, and Wellesley.

4. Zone II Delineation

MassDEP records show that Natick has approved Zone II delineations for its groundwater sources. Therefore, no further Zone II delineation work is required.

5. Wellhead Protection

MassDEP records show that Natick has successfully adopted local zoning and non-zoning controls that prohibit all uses and activities cited in the MA Wellhead Protection Regulations. Therefore, no further wellhead protection work is required.

6. Performance Standard for Residential Gallons Per Capita Day Water Use

Natick's Performance Standard for residential gallons per capita day (RGPCD) is 65 gallons or less. As a condition of the renewed permit Natick will be required to meet 65 RGPCD within 2 full calendar years of the permit's issuance or adopt a plan to bring the system into compliance by the 5th year of the permit. If at any time after December 31, 2028 that Natick does not meet the RGPCD Performance Standard, Natick shall comply with the functional equivalence requirements set forth in Appendix A. Natick shall report its RGPCD annually in its Annual Statistical Report (ASR).

7. Performance Standard for Unaccounted for Water

Natick's Performance Standard for Unaccounted for Water (UAW) is 10% or less of overall water withdrawal for 2 of the most recent years 3 throughout the permit period. If Natick does not meet the standard by December 31, 2028, it shall be in compliance with 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. Natick 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 Unaccounted for Water 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.

8. Water Conservation Requirements

At a minimum, Natick shall implement the following conservation measures forthwith. Compliance with the water conservation requirements shall be reported to MassDEP upon request, unless otherwise noted 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.	Natick shall have repair reports available for inspection by MassDEP. Natick shall establish a schedule for repairing leaks that is at least as stringent as the following: <ul style="list-style-type: none"> • 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 that 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 Natick’s priority schedule including leaks up to the property line, curb stop or service meter, as applicable. Natick shall have water use regulations in place that require property owners to expeditiously repair leaks on their property.
Metering	
1.	Natick shall continue to calibrate all source and finished water meters at least annually and report date of calibration on the ASR.
2.	Natick shall maintain its system as 100% metered.
Pricing	
1.	Natick shall continue to operate its Enterprise Fund to cover full-cost pricing factors.
2.	Evaluate rates at a minimum every three to five years and make adjustments as necessary.

3. Natick will continue to implement an increasing block rate structure.
4. Natick shall continue to bill at least quarterly.
Residential and Public Sector Conservation
1. Natick 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. Natick 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. Natick shall continue to inspect industrial facilities and recommend the use of separate meters for process water where appropriate.
Public Education and Outreach
1. Within thirty days of the effective date of this permit, Natick 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: <ul style="list-style-type: none"> • 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, Natick shall develop and implement the water conservation education and outreach plan and schedule as approved by MassDEP. Upon request of MassDEP, Natick shall report on its public education and outreach efforts.

9. Seasonal Limits on Nonessential Outdoor Water Use

The nonessential outdoor water use restrictions in this Permit are based on:

- whether Natick’s reported RGPCD for the previous year met the 65 RGPCD Performance Standard;
- the August Net Groundwater Depletion (Aug NGD) of the Subbasins where Natick’s groundwater wells are located - for communities with wells in subbasins having an Aug NGD of more than 25%, restrictions are set to minimize withdrawals from those depleted subbasins; and

Each year, Natick shall choose one of two options for implementing nonessential outdoor watering restrictions:

1. Calendar triggered restrictions: Restrictions shall be implemented from May 1 through September 30.
2. Streamflow triggered restrictions: Restrictions shall be 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 1 through September 30. At a minimum, restrictions shall commence when streamflow falls below

the trigger for three consecutive days. Once implemented, the restrictions shall remain in place until streamflow at the assigned USGS stream gage meets or exceeds the trigger streamflow for seven consecutive days.

3. **The 7-Day Low Flow Trigger**, at which restrictions increase, is incorporated into both Calendar and Streamflow Triggered restrictions in order to provide additional protection to streamflows when flows are very low.

If Natick selects the streamflow triggered approach, it has been assigned the USGS local stream gage #01103280, Charles River at Dover, MA. The applicable streamflow triggers are in Table 6 below.

Should the reliability of flow measurement at the Charles River at Dover, MA gage be so impaired as to question its accuracy, Natick 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.

**TABLE 6: Natick’s Seasonal Limits on Nonessential Outdoor Water Use
May 1 to September 30**

For Permittees meeting the 65 RGPCD Standard for the preceding year RGPCD ≤ 65 as reported in the ASR and accepted by MassDEP	
Calendar Triggered Restrictions	<p>Nonessential outdoor water use is allowed:</p> <ul style="list-style-type: none"> a) Two (2) days per week before 9 am and after 5 pm; and b) one (1) day per week before 9 am and after 5 pm <p>when USGS stream gage 01103280, Charles River at Dover, MA falls below 30 cfs for three (3) consecutive days.</p> <p>Once streamflow triggered restrictions are implemented, they shall remain in place until streamflow at the gage meets or exceeds 30 cfs for seven (7) consecutive days.</p>
Streamflow Triggered Restrictions	<p>Nonessential outdoor water use is allowed:</p> <ul style="list-style-type: none"> a) Two (2) days per week before 9 am and after 5 pm <p>when USGS stream gage 01103280, Charles River at Dover, MA falls below:</p> <ul style="list-style-type: none"> • May 1 – June 30: 170 cfs for three (3) consecutive days • July 1 – September 30: 62 cfs for three (3) consecutive days <ul style="list-style-type: none"> b) one (1) day per week before 9 am and after 5 pm <p>when USGS stream gage 01103280, Charles River at Dover, MA falls below 30 cfs for three (3) consecutive days.</p> <p>Once implemented, the restrictions shall remain in place until streamflow at the gage meets or exceeds the trigger streamflow for seven (7) consecutive days.</p>
For Permittees NOT meeting the 65 RGPCD standard for the preceding year RGPCD > 65 as reported in the ASR and accepted by MassDEP	
Calendar Triggered Restrictions	<p>Nonessential outdoor water use is allowed one (1) day per week before 9 am and after 5pm;</p>

Streamflow Triggered Restrictions	<p>Nonessential outdoor water use is allowed one (1) day per week before 9 am and after 5 pm when USGS stream 01103280, Charles River at Dover, MA, MA falls below:</p> <ul style="list-style-type: none"> • May 1 – June 30: 170 cfs for three (3) consecutive days • July 1 – September 30: 62 cfs for three (3) consecutive days <p>Once implemented, the restrictions shall remain in place until streamflow at the gage meets or exceeds the trigger streamflow for seven (7) consecutive days.</p>
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Instructions for Accessing Streamflow Website Information
If Natick chooses Streamflow Triggered Restrictions, Natick shall be responsible for tracking streamflows and recording and reporting to MassDEP when restrictions are implemented.
<p>Streamflow information is available at the USGS National Water Information System (NWIS): Web Interface. The USGS NWIS default shows Massachusetts streamflows in real time, i.e., the most recent, usually quarterly hourly, reading made at each USGS stream gage.</p> <p>Seasonal Limits on Nonessential Outdoor Water Use are implemented when the mean daily streamflow falls below the designated trigger 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, Natick must use the mean daily streamflow from the preceding day when tracking streamflows.</p> <p>Mean daily streamflow gage readings are available at the USGS NWIS Web Interface at http://waterdata.usgs.gov/ma/nwis/current/?type=flow.</p> <ul style="list-style-type: none"> • Scroll down to USGS stream gage 01103280, on the Charles River near Dover, MA. • Click on “View Monitoring Location Page”. • Click on “Legacy Real Time Page”. • Click on “Data Inventory” at the top of the page. • Click on “Daily Data” in the dropdown menu. • 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. • Scroll down to “Daily Mean Discharge, cubic feet per second” table and find the current date on the table. • Compare the cubic feet per second (cfs) measurement shown on the table to the cfs shown under Streamflow Triggered Restrictions above.
Natick shall document compliance with the Seasonal Nonessential Outdoor Water Use Restrictions annually in its Annual Statistical Report (ASR) and indicate whether it anticipates implementing calendar triggered restrictions or streamflow triggered restrictions during the next year.

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 Nonessential Outdoor Water Use Restrictions

Natick shall notify its customers of all provisions, including all restrictions, requirements and conditions imposed as soon as possible, but not later than 48 hours after the implementation of said restrictions. The Notice shall include a detailed description of the restrictions and penalties for violations.

Notification from May 1st - September 30th shall be by at least two methods reasonably calculated to reach and inform all customers (water users), and may include any of the following methods: publication in a newspaper of general circulation within the service area of the PWS, by signage on major roadways or intersections within said service area, in writing, by email, on web sites, by public service announcements on local media, by reverse 911 calls or other such means.

Notify MassDEP

Notice that restrictions have been put in place shall be filed with MassDEP within 14 days of the restriction's initial effective date and each time the restriction is changed from April 1 through September 30. Filing shall be in writing on the form "Notification of Water Use Restrictions" available on MassDEP website here under Additional Resources: [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 Natick does not have appropriate enforcement authority, then beginning as soon as possible, but no later than 24 months after issuance of the Permit, Natick 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.

10. Minimization of Groundwater Withdrawal Impacts in Stressed Subbasins

Natick shall minimize the impacts of its groundwater withdrawals from sources in 21105 and Subbasin 21109 by evaluating the feasibility of implementing the following measures:

- A retrofit/rebate program on water efficient plumbing fixtures and appliances for customers.
- A Town Bylaw that requires the use of Massachusetts Specialized Building Code approved products and Energy Star appliances in projects. These approved products meet high standards water efficiency and performance.
- On water bills or via a customer interface software, provide customers with water consumption information in gallons and show consumption history.
- Provide educational and outreach materials to water users on their responsibility to conserve water.

By December 31, 2026, Natick must provide MassDEP with the results of their evaluation and provide a proposed implementation schedule. Thereafter, Natick shall implement those minimizations measures deemed feasible by MassDEP.

Natick shall continue to implement the following:

- Continue to offer Natick 360 or a different customer interface software to residents for tracking water use.
- An increasing block water rate structure to encourage water conservation.
- An evaluation of the town rate structure every two years with an increase in rate for the highest rate block.

11. Mitigation

Natick is required to mitigate 0.14 MGD for its permitted withdrawals over baseline in the Charles River Basin. The Charles River mitigation requirement will be met with 0.14 MGD in direct mitigation achieved via I/I projects. Please see Appendix C.

If Natick submits a permit amendment application (WM02) and receives an amended permit authorizing increased withdrawals up to 1.53 MGD, additional mitigation will be required. MassDEP's review of a permit amendment application will include a review of Natick's compliance with all permit conditions, particularly those designed to minimize water demand, a review of direct mitigation opportunities available at the time of the amendment request and of indirect mitigation in place to address the impacts of increased water withdrawals.

12. Reporting Requirements

Natick shall report annually as required by completing the electronic Annual Statistical Report (eASR) for public water suppliers and shall provide other reporting as specified in the Special Conditions above.

General Permit Conditions (applicable to all Permittees)

1. **Duty to Comply** The Permittee shall comply at all times with the terms and conditions of this permit, the Act and all applicable State and Federal statutes and regulations.
2. **Operation and Maintenance** The Permittee shall at all times properly operate and maintain all facilities and equipment installed or used to withdraw up to the authorized volume so as not to impair the purposes and interests of the Act.

- 3. Entry and Inspections** The Permittee or the Permittee's agent shall allow personnel or authorized agents or employees of MassDEP to enter and examine any property, inspect and monitor the withdrawal, and inspect and copy any relevant records, for the purpose of determining compliance with this permit, the Act or the regulations published pursuant thereto, upon presentation of proper identification and an oral statement of purpose.
- 4. Water Emergency** Withdrawal volumes authorized by this permit are subject to restriction in any water emergency declared by MassDEP pursuant to M.G.L. c. 21G, §§ 15-17, M.G.L. c. 111, § 160, or any other enabling authority.
- 5. Transfer of Permits** This permit shall not be transferred in whole or in part unless and until MassDEP approves such transfer in writing, pursuant to a transfer application on forms provided by MassDEP requesting such approval, received by MassDEP at least thirty (30) days before the effective date of the proposed transfer, and otherwise complying with the requirements of 310 CMR 36.33. 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 MassDEP, a certified statement of the withdrawal. Such report is to be received by MassDEP by the date specified by MassDEP. Such report must be mailed or hand delivered to the address specified on the report form.
- 7. Duty to Maintain Records** The Permittee shall be responsible for maintaining withdrawal records as specified by this permit.
- 8. Metering** Withdrawal points shall be metered. Meters shall be calibrated annually. Meter shall be maintained and replaced as necessary to ensure the accuracy of the withdrawal records.
- 9. Amendment, Suspension or Termination** The Department may amend, suspend or terminate this permit in accordance with M.G.L. c. 21G or 310 CMR 36.29.

APPEAL RIGHTS AND TIME LIMITS

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 1.00 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 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 permit applicant, unless such person notifies the permit applicant of the appeal in writing by certified mail or by hand within five (5) days of mailing the appeal to the Department.

The Notice of Claim and supporting documentation must be sent to:

Case Administrator
Office of Appeals and Dispute Resolution
Department of Environmental Protection
100 Cambridge Street, 9th floor

Boston, MA 02114

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

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

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

Duane LeVangie
Water Management Program Chief
Bureau of Water Resources

Date

Appendix A – Functional Equivalence with the 65 Residential Gallons Per Capita Day Performance Standard

MassDEP will consider PWS permittees who cannot meet the 65 RGPCD performance standard to be functionally equivalent, and in compliance with their permit, if they have an on-going program in place that ensures “best practices” for controlling residential water use as described below.

If the permittee fails to document compliance with the RGPCD performance standard by December 31, 2028, in its Annual Statistical Report (ASR), or in any ASR thereafter, then the permittee must file with that ASR a Residential Gallons Per Capita Day Compliance Plan (RGPCD Plan) which shall include, at a minimum:

1. A description of the actions taken during the prior calendar year to meet the performance standard;
2. An analysis of the cause of the failure to meet the performance standard;
3. A description of the actions that will be taken to meet the performance standard which must include, at a minimum, at least one of the following:
 - 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, by-law or regulation to require the installation of moisture sensors or similar climate related control technology on all automatic irrigation systems;and may include, without limitation, the following:
 - d) the use of an increasing block water rate or a seasonal water rate structure as a tool to encourage water conservation;
 - e) a program that provides rebates or other incentives for the installation of moisture sensors or similar climate related control technology on automatic irrigation systems;
 - f) the adoption and enforcement of an ordinance, by-law or regulation to require that all new construction include water saving devices and low water use appliances;
 - g) the adoption and enforcement of an ordinance, by-law or regulation to require that all new construction minimize lawn area and/or irrigated lawn area, maximize the use of drought resistant landscaping, and maximize the use of topsoil with a high water-retention rate;
 - h) the implementation of a program to encourage the use of cisterns or rain barrels for outside watering;
 - i) the implementation of monthly or quarterly billing.
4. A schedule for implementation; and
5. An analysis of how the planned actions will address the specific circumstances that resulted in the failure to meet the performance standard.

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

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

If a RGPCD plan is required, the permittee must:

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

Appendix B – Functional Equivalence: 10% Unaccounted for Water Performance Standard

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 on-going program in place that ensures “best practices” for controlling water loss. The water loss control program will be based on annual water audits and guidance as described in the *AWWA/IWA Manual of Water Supply Practices – M36, Water Audits and Loss Control Programs* (AWWA M36).

If the permittee fails to document compliance with the Unaccounted for Water performance standard (UAW of 10% or less for 2 of the 3 most recent years throughout the permit period), then the permittee shall develop and implement a water loss control program following the *AWWA M36 Water Audits and Loss Control Programs* within 5 full calendar years of failing to meet the standard as follows:

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 with its 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 long-term program to reduce real and apparent water losses.
 - 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.
 - 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. Within 5 full calendar years of failing to meet the standard, submit the component analysis and water loss control program with a proposed implementation schedule to the Department.
4. Continued implementation will be a condition of the permit in place of meeting the 10% UAW performance standard.
5. Upon request of the Department, the permittee shall report on its implementation of the water loss control program.

A PWS permittee may choose to discontinue the water loss 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 UAW Water Loss Control Measures: If the permittee is required to develop a Functional Equivalence Plan for the 10% Unaccounted for Water Performance Standard, and the permittee does not have a MassDEP-approved Water Loss Control Program in place within 5 full calendar years of failing to meet the standard, the permittee will be required to implement the MassDEP UAW Water Loss Control Measures outlined below:

- An annual water audit and leak detection survey, as described in the AWWA M36 Manual, of 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.
- Water pricing structure 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 UAW Water Loss Control Measures 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 Measures.

MassDEP will review a permittee’s detailed, written analysis to determine whether unique circumstances make specific Best Management Practices (BMPs) less cost-effective than alternatives, or infeasible for the permittee.

Appendix C – Mitigation Provided

Natick’s I/I Removal Summary Table for Direct Mitigation Credit

<i>Major Basin</i>	<i>Year completed</i>	<i>Data Source¹</i>	<i>Activity Type</i>	<i>Activity²</i>	<i>Method³</i>	<i>Flow Estimate (mgd)</i>	<i>Measured or Removable I/I?⁴</i>	<i>Peak or Average Annual Flow?⁵</i>	<i>Credit (MGD)</i>
Charles	2014-2015	2007 SSES data	Infiltration	SMH Repairs	Hydraulic cement; Chemical grouting; Cementitious lining	0.224	Measured	Peak	0.056
Charles	2014-2017	2007 SSES data	Infiltration	Main Line Repairs	Mainline/Lateral CIPP; Mainline Joint/Lateral Grouting; Point Repairs	0.352	Measured	Peak	0.088

Total = 0.14 MGD

¹SSES reports and/or post-rehab monitoring data should be the primary data sources for completing this table. Please consult with DEP if using an alternate data source.

²Example I/I removal activities include main line repairs, service connection repairs, manhole repairs, and sump pump disconnections.

³Example I/I removal methods include CIPP lining for pipe repairs and frame & cover replacements for manhole repairs.

⁴Please indicate whether the value provided in the SSES report is the estimated volume or the estimated *removable* volume.

⁵Please indicate whether the value provided in the SSES report reflects peak flow (i.e. based on springtime measurements) or annual average flow conditions.