



Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

100 Cambridge Street 9th Floor Boston, MA 02114 • 617-292-5500

Maura T. Healey
Governor

Kimberly Driscoll
Lieutenant Governor

Rebecca L. Tepper
Secretary

Bonnie Heiple
Commissioner

October 5, 2023

Paul Aronian
Northeast Energy Associates
92 Depot Street
P.O. Box 1213
Bellingham, MA 02109

RE: Northeast Energy Associates– Charles
River Basin
Program: Water Management Act
Action: Final Permit #9P-2-20-025.02

Dear Mr. Aronian:

Please find attached the following:

- Findings of Fact in Support of the Water Management Act Permit Decision; and,
- Water Management Act Permit #9P-2-20-025.02 for Northeast Energy Associates. in Bellingham, Massachusetts.

The signature on this cover letter indicates formal issuance of the attached documents. If you have any questions regarding this information, please contact Madelyn Morris at madelyn.morris@mass.gov.

Sincerely,

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

Enclosures

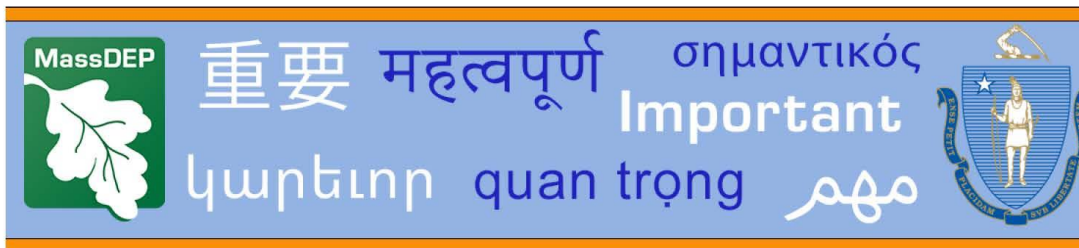
Ecc: Julie Blatt and Sarah Bower, MassRiver Alliance
Zeus Smith, Charles River Watershed Association

[https://massgov.sharepoint.com/:f:/r/sites/DEP-BWR/DWPArchive/CRO/ Bellingham-Northeast Energy Permit-9P22002502-10-5-2023](https://massgov.sharepoint.com/:f:/r/sites/DEP-BWR/DWPArchive/CRO/Bellingham-Northeast%20Energy%20Permit-9P22002502-10-5-2023)

This information is available in alternate format. Call Melixza Esenyie at 617-626-1282 or 1-866-7622

MassDEP Website: www.mass.gov/dep

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Communication for Non-English-Speaking Parties

This document is important and should be translated immediately.

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Español Spanish

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Português Portuguese

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繁體中文 Chinese Traditional

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

简体中文 Chinese Simplified

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

Ayisyen Kreyòl Haitian Creole

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

Việt Vietnamese

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

ប្រទេសកម្ពុជា Khmer/Cambodian

ឯកសារនេះមានសារៈសំខាន់
ហើយកម្មវិធីត្រូវបានបកប្រែភ្លាមៗ។
ប្រសិនបើអ្នកត្រូវការអោយឯកសារនេះបកប្រែ
សូមទាក់ទងនាយកដ្ឋានយុត្តិធម៌បរិស្ថានរបស់
MassDEPតាមរយៈលេខទូរស័ព្ទដែលបានរាយនាមខាងក្រោម។

Kriolu Kabuverdianu Cape Verdean

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

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 8.2.2023) 310 CMR 1.03(5)(a)

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.

հայերէն Armenian

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

فارسی Farsi Persian

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

Français French

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

Deutsch German

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

Ελληνική Greek

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

Italiano Italian

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

Język Polski Polish

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

हिन्दी Hindi

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

Contact Deneen Simpson 857-406-0738

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Findings of Fact in Support of the Final Water Management Permit # 9P-2-20-025.02 Northeast Energy Associates.

The Department of Environmental Protection (the Department or MassDEP) makes the following Findings of Fact in support of the attached Water Management Permit #9P-2-20-025.02 and includes herewith its reasons for issuing the Permit and for conditions of approval imposed, as required by M.G.L. c. 21G, § 11. The issuance of this permit is in response to a water withdrawal permit renewal application by Northeast Energy Associates, (NEA or the Company).

On March 7, 1991, MassDEP issued a Water Management Act Permit (the 1991 WMA Permit) to NEA authorizing the Company to withdraw an annual average volume of 0.66 million gallons per day (MGD) from three groundwater sources in the Charles River Basin. NEA's actual withdrawals from 2001 through 2004 ranged from 0.61 MGD to 0.65 MGD. In 2005, the withdrawal decreased to only 0.16 MGD due to a change in operation. The plant decreased its 24 hour per day, 7 day per week operation to a less routine basis.

Because the 1991 WMA Permit expired on February 28, 2009, MassDEP issued NEA an Interim Water Management Act Permit (the 2009 Interim WMA Permit). The 2009 Interim WMA Permit authorized the Company to continue withdrawing an annual average volume of up to 0.66 MGD from its Charles River Basin groundwater sources. On February 28, 2010, MassDEP issued a Renewed Management Act Permit (the 2010 Renewed WMA Permit) authorizing the Company to continue this withdrawal until February 28, 2029. The 2010 Renewed WMA Permit authorized the Company to withdraw water from two additional sources that have not been constructed.

The 2010 Renewed WMA Permit had an expiration date of February 28, 2029. In 2010, the permit was extended for two years by Section 173 of Chapter 240 of the Acts of 2010, the Permit Extension Act. In 2012, the Permit Extension Act was amended by Chapter 238 of the Acts of 2012, and the 2010 Renewed WMA Permit was again extended an additional two years to February 2033. That date was further extended by 462 days due to COVID-19 Order No. 42, "Order Resuming State Permitting Deadlines and Continuing to Extend the Validity of Certain State Permits," issued on July 2, 2020. Pursuant to M.G.L. c. 30A, § 13, and 310 CMR 36.18(7), NEA's existing Water Management Act Permit remains in full force and effect until MassDEP issues a new Final Water Management Act Permit. The expiration date for all permits going forward in the Charles River Basin is June 5, 2034.

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, 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 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 Charles River Basin section of this document). For more information on the Safe Yield methodology, go to the November 28, 2012 SWMI Framework Summary and Appendices;
- Water conservation and performance standards reviewed and approved by the WRC in July 2018; and
- Environmental protections developed through SWMI, including without limitation;
 - protection for coldwater fish resources;
 - minimization of withdrawal impacts in areas stressed by groundwater use;
 - 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 Department 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 Charles River Basin is 65.2 million gallons per day (MGD), and total registered and permitted withdrawals are 44.12 MGD. The maximum withdrawals that will be 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. No increase in the annual authorized withdrawal volume is provided under this permit and, therefore, this permit has no impact on Safe Yield.

Finding of Fact for Special Permit Conditions

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

Special Condition 1, Maximum Authorized Annual Average Withdrawal Volumes. Special Condition 1 of the 2010 Renewed WMA Permit authorized the Company to withdraw from its permitted sources in the Charles River Basin an annual average daily volume of 0.66 MGD.

The Water Management Regulations, 310 CMR 36.03, define baseline to mean the volume of water withdrawn during calendar year 2005 plus 5%, or the average annual volume withdrawn from 2003 through 2005 plus 5%, whichever is greater provided that:

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

NEA's baseline is the annual average volume withdrawn from 2003 through 2005 plus 5% or 0.50 MGD.

TABLE 1: NEA'S RECENT ACTUAL WITHDRAWAL VOLUMES

YEAR	ANNUAL AVERAGE DAILY WITHDRAWAL VOLUME (MGD)
2022	0.04
2021	0.03
2020	0.01
2019	0.01
2018	0.03
2017	0.15
2016	0.15
2015	0.27
2014	0.10
2013	0.06
2012	0.09
2011	0.14
2010	0.20

As shown in Table 1 above, NEA's recent actual withdrawal volumes have been substantially below the annual average daily withdrawal volume authorized by the 2010 Renewed WMA Permit or 0.66 MGD and substantially below its baseline volume or 0.50 MGD. NEA needs less water because it does not operate 24 hours a day 7 days a week as originally envisioned. NEA has indicated that it does not plan to change its operations at this time and can accept a limit on its authorized volume equal to the baseline volume of 0.50 MGD.

In these circumstances, Special Condition 1 of the Water Management Act (WMA) Permit limits the Company's authorized volume to its baseline volume of 0.50 MGD. If NEA seeks to change the way it operates, Special Condition 1 allows the Company to request that the Department amend the permit to increase its volume up to 0.66 MGD, the volume authorized by the 2010 Renewed WMA Permit, provided that NEA is in compliance with Special Condition 3, Water Conservation Requirements, including without limitation the requirement to update its current water conservation plan and

implement the updated water conservation as approved by MassDEP and provided further that the Company prepares a plan to mitigate the total volume requested in excess of its baseline volume of 0.50 MGD and implements the mitigation plan.

Special Condition 2, Maximum Authorized Daily Withdrawal Rate The 2010 Renewed WMA Permit lists five groundwater Sources: NEA 1, NEA 2, and NEA 3 located at what is known as the Town Well No. 9 Site as well as NEA 4 and NEA 5 located at the Depot Site. Special Condition 2 of the 2010 Renewed WMA Permit specifies a maximum approved pumping rate for each of the Company's permitted sources. The Company has not exceeded the maximum approved rate.

At the time that MassDEP issued the 2010 Renewed WMA Permit, the Company had not put NEA 4 and NEA 5 into operation. Based on information submitted in the Company's Annual reports and in their response to the Order to Complete (OTC), the Company identified that it has not built NEA 4 and NEA 5 and has no plans to do so. As a result, the WMA Permit does not include NEA 4 and NEA 5 in the list of sources. The maximum approved pumping rate for NEA 1, NEA 2 and NEA 3 is a combined rate of 1.27 MGD. In no event shall the combined withdrawals from these individual withdrawal points exceed the annual withdrawal rate authorized in Special Condition 1.

Special Condition 3, Water Conservation Requirements The Water Conservation Requirements set forth in Special Condition 3 of the WMA Permit are the same requirements that appear in the 2010 Renewed WMA Permit. These requirements include the use of air cooling a process that requires less water than wet cooling and use of water to run the air pollution control equipment and ensure compliance with the Company's air permit. Special Condition 3 also provides that the Company may not change its mode of operation from a plant that operates solely to meet peak demand unless and until the Company has submitted to MassDEP for its review and approval an Updated Water Conservation Plan and the Company has commenced implementation of the Updated Water Conservation Plan as approved by MassDEP. Special Condition 3 further provides that the Company shall thereafter continue to implement the Updated Water Conservation Plan.

Special Condition 4, Metering Requirements Special Condition 4 the WMA Permit are the same are the same metering requirements set forth in the 2010 Renewed WMA Permit. These requirements are the minimum requirements for metering. NEA 1, NEA 2, and NEA 3 must be metered, and the meters are required to be calibrated annually.

NEW PERMIT CONDITIONS

COLDWATER FISHERY RESOURCE, MINIMIZATION AND MITIGATION

The Water Management Regulations revised and promulgated in November 2014 require WMA permits to address protection of Coldwater Fishery Resources (CFR), minimization of the impact of pumping, mitigation of pumping above the baseline rates, and potential changes in Biological Category (BC)¹ and

¹ The Water Management Regulations, 310 CMR 36.14(1)(a), establish a biological category (BC) for each subbasin based on the simulated 2000 to 2004 existing condition of aquatic habitat using fluvial fish community characteristics as the surrogate indicator variable. Each biological category represents the percent alteration within the range of these fluvial fish

Groundwater Withdrawal Categories (GWC)². Below is an outline of these requirements as they apply to NEA.

Coldwater Fishery Resource (CFR) Protection

Permittees with withdrawals that impact streamflow at a CFR (identified on basin maps³) must evaluate strategies for reducing impacts to CFRs through feasible optimization. The Company has no sources that have been determined to impact an area identified as a CFR at this time. Accordingly, the WMA Permit does not require the Company to evaluate strategies for reducing CFR impacts from its groundwater withdrawals.

Minimization

Permittees with groundwater sources in subbasins having an August Net Groundwater Depletion (NGD)⁴ of 25% or greater are required to develop a plan to minimize the impacts of their withdrawals. The Company currently uses only three groundwater sources- NEA 1, NEA 2, and NEA 3. These sources are in Charles River Subbasin 21028, a subbasin that has an August NGD of 5.3%⁵. As a result, the WMA Permit will not require the Company to develop and implement a minimization plan.

Mitigation

Permittees requesting an increase above their baseline withdrawal must undertake mitigation commensurate with the impact of their increased withdrawals on the basins where the permittees' sources are located. These impacts also include the cumulative impacts of all increased withdrawals that may result in adverse downstream BC or GWC category changes. As stated earlier, the WMA Permit limits the Company's total authorized volume to 0.50 MGD, its baseline volume. Given this limit, the WMA Permit does not require mitigation at this time. If the Company files a permit amendment application seeking to increase its total authorized volume as provided in Special Condition 1, NEA will

community characteristics as a function of the following subbasin parameters: 1. Impervious cover; 2. Cumulative groundwater withdrawal as a portion of the unimpacted August median flow; 3. Stream channel slope; and 4. Percent wetland within the stream buffer area. The percent alteration for each BC is as follows: BC 1, 0% to 5%; BC 2, > 5% to 15%; BC 3, >15% to 35%; BC 4, > 35% to 65%; BC 5, >65%.

² The Water Management Regulations 310 CMR 36.14(1)(b), establishes a groundwater withdrawal category (GWC) based on the ratio of 2000 to 2004 groundwater withdrawal volume to the unimpacted median monthly flow for August and represents conditions during the late summer bioperiod (July thru September). Each GWC represents the range of this ratio that would result in the BC of the same number under conditions of low (15%) impervious cover. The GWC for each withdrawal ratio for the late summer bioperiod is as follows: GWC 1, 0% to 3%; GWC 2, >3% to 10%; GWC 3, >10% to 25%; GWC 4, >25% to 55%; and GWC 5, >55%.

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).

⁴ The Water Management Regulations, 310 CMR 36.03, define August net groundwater depletion to mean the unimpeded median flow for August minus 2000-2004 groundwater withdrawals plus 2000-2004 groundwater returns described by U.S. Geological Survey in *Indicators of Streamflow Alteration, Habitat Fragmentation, Impervious Cover and Water Quality for Massachusetts Stream Basins*.

⁵ The 2010 Renewed WMA Permit lists two sources, NEA 4 and NEA 5, that are in Subbasin 21029, a subbasin with an August NGD of 78.3%. Before the Company may use NEA 4 and NEA 5, it must develop and implement a plan to minimize the impact of withdrawing water from these sources.

be required to submit a mitigation plan along with its permit amendment application and to implement the mitigation plan as approved by MassDEP prior to withdrawing more than its baseline volume of 0.50 MGD.

Response to Comments

MassDEP received comments from the Charles River Watershed Association (CRWA) and the Massachusetts Rivers Alliance. These comments note that this WMA Permit substantially reduces the Company's total authorized volume from the 0.66 MGD in the 2010 Renewed WMA Permit to the 0.50 MGD set forth in Special Condition 1 of this WMA Permit, a volume equal to the Company's baseline. The Comments further note that although substantially reduced, the total volume authorized herein is still significantly in excess of the Company's recent water use. These comments ask that MassDEP recalculate baseline based on more recent usage and lower the total allocation in a similar manner. They also request that NEA prepare an updated Water Conservation Plan.

As previously noted, NEA needs less water than authorized in the 2010 WMA Permit because it does not operate 24 hours a day 7 days a week as originally envisioned. The Water Management Act Program's regulations (310 CMR 36.00) define the baseline period as 2003-2005. NEA has indicated that it does not currently plan to change its operations and the Department sees no reason to reduce their 20-year permitted allocation beyond the holding of volumes to the baseline as outlined. In response to the Comments, MassDEP has modified Special Condition 3 to provide that the Company may not change its mode of operation from a plant that operates solely to meet peak demand unless and until the Company has submitted to MassDEP for its review and approval an Updated Water Conservation Plan and the Company has commenced implementation of the Updated Water Conservation Plan as approved by MassDEP. Special Condition 3 further provides that the Company shall thereafter continue to implement the Updated Water Conservation Plan.



Department of Environmental Protection

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Secretary

Bonnie Heiple
Commissioner

WATER WITHDRAWAL PERMIT MGL c 21G

This permit is issued pursuant to the Massachusetts Water Management Act 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-2-20-025.02

RIVER BASIN: Charles

PERMITTEE: Northeast Energy Associates
92 Depot Street
P.O. Box 1213
Bellingham, MA 02109

EFFECTIVE DATE: October 5, 2023

PERMIT EXPIRATION DATE: June 5, 2034

NUMBER OF WITHDRAWAL POINTS: 3

Groundwater: 3
Surface Water: 0

USE: Industrial

DAYS OF OPERATION: 365

WITHDRAWAL POINT IDENTIFICATION:

Table 1. Withdrawal Point Identification

Source Name	WMA Source #	Location	Latitude	Longitude
NEA 1	WM4643-01G	Town Well No. 9 Site	42.096849	71.481604
NEA 2	WM4643-02G	Town Well No. 9 Site	42.096849	71.481604
NEA 3	WM4643-03G	Town Well No. 9 Site	42.096849	71.481604

SPECIAL CONDITIONS

Special Condition 1: Maximum Authorized Annual Average Withdrawal Volume

This WMA Permit authorizes the withdrawal of water on average over a calendar year at the rate described below (Table 2). The permitted volume is expressed in millions of gallons both as an average daily withdrawal rate per year and as a total annual withdrawal volume for each five-year period term.

Permittees whose authorized volume exceeds their baseline volume are required to develop a plan to mitigate the authorized volume above the baseline volume as adjusted by the volume of wastewater returned to the groundwater within the basin and to implement that plan prior to withdrawing more than the baseline volume. To allow the Northeast Energy Associates (NEA or the Company) to avoid this mitigation requirement, the permit provides that NEA shall limit its withdrawal volume to its baseline volume of 0.50 MGD, 182.50 MGY, unless and until:

- a. NEA is in compliance with Special Condition 3: Water Conservation Requirements including the requirement to update its Water Conservation Plan and to implement the Updated Water Conservation Plan as approved by MassDEP.
- b. NEA submits to MassDEP an application for a permit amendment requesting authorization to withdraw more than its baseline volume of 0.50 MGD up to a total authorized volume of 0.66 MGD, and a plan to mitigate the amount of the total requested authorized withdrawal volume that exceeds the baseline volume of 0.50 MGD, as adjusted for any wastewater returned via groundwater disposal to the basin;
- c. MassDEP issues a permit amendment in response to that application; and
- d. NEA, in accordance with the amended permit, implements the mitigation plan as approved by MassDEP prior to withdrawing more than its baseline volume of 0.50 MGD.

Table 2: Maximum Authorized Withdrawal Volumes

Permit Periods	Total Authorized Raw Water Withdrawal Volumes Prior to Permit Amendment and Mitigation Plan	
	Daily Average (MGD)	Total Annual (MGY)
10/5/2023 to 6/5/2029	0.50	182.50
6/6/2029 to 6/5/2034	0.50	182.50
Permit Periods	Maximum Authorized Total Raw Water Withdrawal Volumes After Permit Amendment and Mitigation Plan	
	Daily Average (MGD)	Total Annual (MGY)
TBD to 6/5/2029	0.66	240.90
6/6/2029 to 6/5/2034	0.66	240.90

Special Condition 2: Maximum Authorized Daily Withdrawals From Each Withdrawal Point

Withdrawals from individual withdrawal points are not to exceed the approved daily volume listed below (Table 3) without specific advance written approval from the Department. The authorized maximum daily volume is the approved rate of each source. In no event shall the combined withdrawals from the individual withdrawal points exceed the annual withdrawal rate authorized above in Special Condition 1.

Table 3 Maximum Authorized Withdrawal Volume

Sources	Maximum Daily Rate
NEA 1, NEA 2, NEA 3	Combined withdrawal rate of NEA 1, NEA 2, and NEA 3 cannot exceed 1.27 MGD.

Special Condition 3: Water Conservation Requirements

Based on the minimum water conservation requirements, the Department has accepted NEA's Water Conservation Plan and Plan of Action a permit condition (Attachment A). A Copy of the Water Conservation Plan is attached to this WMA Permit. The Company may not change its mode of operation from a plant that operates solely to meet peak demand unless and until the Company has submitted to MassDEP for its review and approval an Updated Water Conservation Plan and the Company has commenced implementation of the Updated Water Conservation Plan as approved by MassDEP. NEA shall thereafter continue to implement the Updated Water Conservation Plan as approved by MassDEP.

Special Condition 4: Metering Requirements

Wells NEA 1, 2 and 3 are metered. Continue to calibrate each meter annually.

GENERAL PERMIT CONDITIONS (applicable to all permittees)

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

- 1. Duty to Comply** The permittee shall comply at all times with the terms and conditions of this permit, the Act 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 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 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 MGL c 21G ss 15-17, MGL c 111 ss 160, or any other enabling authority.

5. **Transfer of Permits** This permit shall not be transferred in whole or in part unless and until the Department approves such transfer in writing, pursuant to 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 36.37.
6. **Duty to Report** The permittee shall complete and submit annually, on a form provided by the Department, all of the information required by said form including, without limitation, a certified statement of the withdrawal. Such report shall be received by the Department by the date specified on the form each year. Such report must be submitted as specified in the report form.
7. **Duty to Maintain Records** The permittee shall maintain withdrawal records and other information in sufficient detail to demonstrate compliance with this permit.
8. **Metering** If the withdrawal point included within the permit is not yet metered, it shall be metered within one year of the date of issuance of the permit. Meters shall be maintained and replaced as necessary to ensure the accuracy of the withdrawal records.

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.



October 5, 2023

Duane LeVangie
Water Management Program Chief
Bureau of Water Resources

Date

Northeast Energy Associates Permit #9P2-20-025.02
Attachment A

CONSERVATION PLAN AND PLAN OF ACTION

(Excerpted from Water Management Act Permit Application dated November 1989)

FOR WATER WITHDRAWAL PERMIT

The Bellingham Facility was designed with minimum water consumption as one of the principal criteria. NEA was advised by the Charles River Watershed Association, the Box Pond Association, and the Town of Bellingham in this matter. As a consequence of concerns raised by these parties, NEA made fundamental design choices which limit water usage: first, the facility will use an air-cooled condenser instead of wet cooling towers; and, second, the facility will use a "zero-discharge" water recycling system.

The use of an air-cooled condenser is unusual in power plants of the size of the Bellingham Facility. That is because of the significantly higher cost of an air-cooled condenser as opposed to a wet tower. An air-cooled condenser does, however, reduce water usage by several fold. The second water saving measure was taken for two reasons: the zero-discharge system recycles water, reducing consumption, and eliminates all process water discharges, minimizing water pollution risk. As with the air-cooled condenser, the zero-discharge system represented a significant increase in the cost of the Bellingham Facility. It necessitates a larger process water treatment facility on-site to clean water before reusing which affects both the capital cost of the facility as well as operating expenses. The benefits of the system are that it reduces water consumption and ensures that no water which is used in the process is discharged to the Charles River, Box Pond or the local groundwater. The only liquid discharge from the facility is stormwater runoff. According to Westinghouse Electric Corporation, the turnkey design and build contractor of the Bellingham Facility, if the facility was built with wet cooling towers and no zero-discharge system, maximum daily water consumption would be approximately 4,100,000 gallons when burning natural gas and 4,400,000 gallons when burning oil, a huge increase over actual facility demands.

The principal water consumer in the facility is the air pollution control system. To control the formation of nitrogen oxide, steam is injected during the combustion of natural gas. This steam, which is released into the atmosphere from the Facility's stack, accounts for 96% of the water consumed in the facility. That quantity cannot be reduced without adversely affecting air quality (and violating NEA's air permit).