

**MASSACHUSETTS PERMIT TO DISCHARGE POLLUTANTS TO SURFACE WATERS**

In compliance with the provisions of the Massachusetts Clean Waters Act, as amended (M.G.L. Chap. 21, §§ 26 - 53) and the implementing regulations at 314 CMR 3.00 and 4.00,

New England Aquarium  
Central Wharf  
Boston, MA 02110

is authorized to discharge from the facility located at

New England Aquarium  
Central Wharf  
Boston, MA 02110

to receiving water named

Boston Inner Harbor (MA70-02)  
Boston Harbor Watershed

in accordance with the following effluent limitations, monitoring requirements and additional conditions:

1. This permit shall become effective on February 1, 2023.
2. This permit shall expire five years after the effective date.
3. This permit supersedes the permit issued on August 1, 2013.
4. This permit incorporates by reference Part IA., Effluent Limitations and Monitoring Requirements, Part IB., Unauthorized Discharges, Part IC., Special Conditions, Part ID. Reporting Requirements, and Part II., Standard Conditions, as set forth in the 2022 draft NPDES Permit No. MA0003123, issued by the United States Environmental Protection Agency (EPA), Region 1, to New England Aquarium on November 14, 2022 (the 2022 Final NPDES Permit), <https://www3.epa.gov/region1/npdes/permits/2022/finalma0003123permit.pdf>; provided, however:
  - a. that the notification required by Part IA.8. shall also be provided to MassDEP;
  - b. that the reporting required by Part IB.1 shall be in accordance with 314 CMR 3.19(20)(e) (24 hour reporting);
  - c. that discharges of a new chemical or additive authorized under Part IC.3. are only authorized under this permit 30 days following written notification to MassDEP electronically to [massdep.npdes@mass.gov](mailto:massdep.npdes@mass.gov), unless otherwise notified in writing by MassDEP;
  - d. that a copy of the requests, reports, and information required by Part ID.3. to be submitted to EPA shall also be submitted to MassDEP electronically to [massdep.npdes@mass.gov](mailto:massdep.npdes@mass.gov);
  - e. that, if there is a conflict between the definitions in 314 CMR 3.02 and/or 314 CMR 4.00 and the definitions in Part IIE, the definitions in 314 CMR 3.02 and/or 314 CMR 4.00 shall control, as applicable;
  - f. that the notifications required by 4.a. and 4.c. above shall be provided to [massdep.npdes@mass.gov](mailto:massdep.npdes@mass.gov).
5. This permit incorporates by reference the Standard Permit Conditions set forth in 314 CMR 3.19.
6. This permit includes the following additional conditions:

- a. Within six (6) months of the effective date of the permit, the permittee shall submit to MassDEP an evaluation of whether the facility uses or stores any products containing any per- and polyfluoroalkyl substances (PFAS) and whether use or storage of those products can be reduced or eliminated. The analysis shall be submitted electronically to [massdep.npdes@mass.gov](mailto:massdep.npdes@mass.gov).
- b. Within six (6) months after the permittee has been notified by MassDEP of EPA's multi-lab validated method for wastewater, or two (2) years after the effective date of the 2022 Federal NPDES permit, whichever is earlier, the permittee shall conduct monitoring of the effluent for PFAS compounds as detailed in the table below. Sampling of the intake water is optional and shall be conducted concurrently with sampling of the effluent. If any of the six (6) PFAS compounds are detected in the effluent, the permittee can decide to analyze the intake water sample for all six (6) PFAS compounds. If EPA's multi-lab validated method is not available by twenty (20) months after the effective date of the 2022 Federal NPDES permit, the permittee shall contact MassDEP ([massdep.npdes@mass.gov](mailto:massdep.npdes@mass.gov)) for guidance on an appropriate analytical method. Notwithstanding any other provision of the 2022 Federal NPDES permit to the contrary, monitoring results shall be reported to MassDEP's electronic database (eDEP) in accordance with the information available at the following website: <https://www.mass.gov/info-details/testing-of-pfas-in-wastewater-and-residuals#testing-of-pfas-in-wastewater->, or as otherwise specified, within 30 days after testing is complete. Those results do not need to be reported to EPA through NetDMR unless EPA establishes a requirement through a future permitting action.

**Effluent (Outfall 001)**

Parameter	Units	Measurement Frequency	Sample Type
Perfluorohexanesulfonic acid (PFHxS)	ng/L	2/year <sup>1</sup>	Grab
Perfluoroheptanoic acid (PFHpA)	ng/L	2/year	Grab
Perfluorononanoic acid (PFNA)	ng/L	2/year	Grab
Perfluorooctanesulfonic acid (PFOS)	ng/L	2/year	Grab
Perfluorooctanoic acid (PFOA)	ng/L	2/year	Grab
Perfluorodecanoic acid (PFDA)	ng/L	2/year	Grab

- c. After completing two years of monitoring, if four (4) consecutive samples are reported as non-detect for all forty PFAS compounds, then the permittee may submit a request to discontinue PFAS monitoring. After completing two years of optional monitoring of intake water, if the permittee sufficiently demonstrates that the detected PFAS compounds in the effluent are from the intake water from the Boston Inner Harbor and not from the animal holding operations, the permittee may submit a request to MassDEP to modify the effluent monitoring requirements. Any such request shall be made in writing and sent to: [massdep.npdes@mass.gov](mailto:massdep.npdes@mass.gov). The permittee shall continue such monitoring pending written approval from MassDEP to discontinue it.

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<sup>1</sup> Twice yearly samples shall be taken in the third (July to September) and fourth (October to December) calendar quarters and shall be taken 3 months apart (e.g., an example sampling schedule could be July and October).

Signed this 2<sup>nd</sup> day of January, 2023

A handwritten signature in black ink, appearing to read "Lealdon Langley", written in a cursive style.

Lealdon Langley, Director  
Division of Watershed Management  
Department of Environmental Protection

**RESPONSE TO COMMENTS****MA Permit No. MA0003123  
New England Aquarium  
Central Wharf, Boston, Massachusetts**

The Massachusetts Department of Environmental Protection (MassDEP or the "Department") is issuing a Surface Water Discharge (SWD) Permit to the New England Aquarium (the permittee) for the facility (the facility) located in Boston, Massachusetts. The permit is being issued under the Massachusetts Clean Waters Act, as amended (M.G.L. Chap. 21, §§ 26 - 53) and the implementing regulations at 314 CMR 3.00 and 4.00.

In accordance with the provisions of 314 CMR 2.09, MassDEP is obligated to prepare a response to comments received on the draft SWD Permit No. MA0003123 (the "Draft Permit"). The Response to Comments explains and supports MassDEP's determinations that form the basis of the final permit (the "Final Permit"). From July 12, 2022 through August 11, 2022, MassDEP solicited public comments on the Draft Permit for the reissuance of a permit to discharge wastewater from aquatic animal holding tanks through Outfall Serial Number 001 to Boston Inner Harbor and the associated Draft WQC.

During the public comment period for the draft NPDES permit (July 12, 2022 through August 11, 2022), EPA received comments from:

1. Leigh Ann Clayton, Vice President of Animal Care and Nina Fischer, Environmental Quality Director, New England Aquarium, dated August 11, 2022.

MassDEP has reviewed EPA's Response to Comments, issued concurrent with the final NPDES permit on November 14, 2022, and concurs with their responses and the associated adjustments made to the final NPDES permit. MassDEP hereby incorporates by reference EPA's Response to Comments into this Response.

During the public comment period for the draft SWD Permit, MassDEP received comments from:

1. Leigh Ann Clayton, Vice President of Animal Care and Nina Fischer, Environmental Quality Director, New England Aquarium, dated August 11, 2022.

MassDEP's knowledge of the facility has benefited from the various comments and additional information submitted during the public comment period but the information and arguments presented did not raise any substantial new questions concerning the Permit that warranted MassDEP exercising the discretion to reopen the public comment period. MassDEP does, however, make certain clarifications in response to comments. Any improvements and changes are explained in this document and reflected in the Final Permit. Below, MassDEP

provides a summary of the changes made in the Final Permit. The analyses underlying these changes are contained in the responses to individual comments that follow.

A copy of the Final Permit and this Response to Comments document will be posted on the MassDEP website: <https://www.mass.gov/info-details/massachusetts-final-individual-surface-water-discharge-permits-and-associated-documents>.

A copy of the Final Permit may be also obtained by writing or calling Xiaodan Ruan, MassDEP, Surface Water Discharge Permitting Program, 100 Cambridge Street, Suite 800, Boston, MA 02114; telephone: 857-256-4172; email: [xiaodan.ruan@mass.gov](mailto:xiaodan.ruan@mass.gov).

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### I. Summary of Changes to the Final Permit

1. Paragraph 6.b. has been revised to reflect current guidance regarding the PFAS analytical method and the State's reporting requirement for PFAS monitoring.
2. Paragraph 6.b and 6.c. have been revised to clarify the information related to the optional PFAS monitoring for the intake water.
3. Footnote 1 has been revised to correct the sampling schedule due to a typographical error.
4. Paragraph 6.b. the Sample Type in the table has been modified from "24-hour composite" to "Grab".
5. Paragraph 6.b. and 6.c have been revised to reflect current guidance for PFAS sampling PFAS compounds.

### II. Responses to Comments

Comments are reproduced below as received; they have not been edited, corrected or otherwise modified.

#### A. Comments from Leigh Ann Clayton, Vice President of Animal Care and Nina Fischer, Environmental Quality Director, New England Aquarium, dated August 11, 2022.

##### Comment 1

##### **Per- and polyfluoroalkyl (PFAS) Substances**

The Draft Permits require NEAq to conduct monitoring of the effluent for six different PFAS substances. NEAq requests that this condition is removed from the Draft Permits because we currently are unable to test for PFAS, do not have access to accurate data regarding PFAS concentrations of our intake water, and have demonstrated a commitment to the goals of the state's Surface Water Quality Standards (314 CMR 4):

- NEAq is unable to test for PFAS, so will need to outsource these samples twice a year.
- As further outlined below, NEAq lacks access to intake water sample data for concentrations of all six PFAS compounds the Draft Permit requires NEAq to report on. NEAq has concerns that these tests are required yet lack clear guidance in relation to interpretation and baseline data from our source water. As results are available to the

general public, we want to ensure that reported data are meaningful and contextualized by intake data.

- By definition, NEAq is in the business of protecting aquatic life from toxic pollutants. As an ocean conservation organization, we work every day to meet the goals of the state's Surface Water Quality Standards (314 CMR 4), including maintaining our facilities' waters to be free of pollutants that are toxic to humans, aquatic life, or wildlife (314 CMR 4.05(5)(e)).

## Response 1

MassDEP understands that the permittee is unable to conduct the PFAS analysis on-site. In fact, analysis of PFAS compounds in the wastewater as required in the State Permit shall be performed by a laboratory approved by MassDEP. Information related to the approved laboratories and procedures are available here: <https://www.mass.gov/info-details/testing-of-pfas-in-wastewater-and-residuals#testing-of-pfas-in-wastewater->.

MassDEP recognizes NEAq's concern about the interpretation of the intake water data. MassDEP clarifies that the permittee is required to sample and analyze the PFAS in the effluent only; sampling and analyzing the intake water is optional. To clarify further, if intake water sampling is desired, the intake water sampling shall be conducted concurrently with the sampling of the effluent so the data can be interpreted. With the intake water data, after completing four (4) consecutive samples, if the permittee sufficiently demonstrates that the detected PFAS compounds in the effluent are from the intake water from the Boston Inner Harbor and not from the animal holding tanks, the permittee may submit a request to MassDEP to modify the effluent water monitoring requirements. MassDEP will make a determination based on the review and evaluation of the monitoring data.

MassDEP acknowledges the permittee's effort to meet the State Water Quality Standards.

## Comment 2

### Outsourcing

The Draft Permits require NEAq to increase the frequency and type of testing it conducts. NEAq currently does not possess the equipment to test for several effluent characteristics – including TN, PFAS, and some pharmaceuticals – or conduct the required dilution studies. The required equipment is priced at upwards of \$100,000. Because NEAq cannot complete many of the required tests on-site, we will need to find outside laboratories to analyze our water discharge to comply with the Draft Permits. This increased reliance on outsourcing increases the overall costs of our operations and presents new administrative challenges:

- *Operational Costs:* Because the Draft Permits increase the type and frequency of testing, the aggregate expense of outsourcing increase operational costs. For example, NEAq currently is required to conduct toxicity testing once during the duration of the permit for our Central Wharf Facility; however, the Draft Permit (No. MA0003123 only) increases the frequency to annually. We estimate that this change alone will cost approximately \$10,000 over the duration of the permit. In total, NEAq estimates that the required

outsourcing will total at a minimum \$23,000 over the life of the permits. This estimate excludes the required dilution studies, for which a cost estimate is currently lacking.

- *Administrative Challenges:* Although testing will be completed off-site, outsourcing still substantially adds to staff workloads. Additional staff responsibilities include researching, hiring, and managing numerous outside vendors and appropriately packing, shipping, and tracking outsourced samples. NEAq currently employs two environmental quality employees, but as the institution continues to recover from the economic impacts of the COVID-19 pandemic, its ability to add to staff workloads or hire new environmental quality employees currently is limited.
- *Laboratories:* Environmental testing for sea water is not as widely available as for drinking water. To assist with NEAq's compliance of the Draft Permits, we request a list of laboratories that can conduct the required tests and meet the standards of the EPA or MassDEP.

## Response 2

In addition to EPA's Response to Comments here:

<https://www3.epa.gov/region1/npdes/permits/2022/finalma0003123permit.pdf>, MassDEP responds to the comment related to PFAS.

MassDEP recognizes that the new PFAS monitoring requirements require additional costs and operational resources. However, MassDEP believes that PFAS monitoring is necessary to help MassDEP understand the potential impact of PFAS discharges on the receiving water. EPA's Region 1 Small Wastewater Treatment Facilities General Permit requires twice per year PFAS monitoring for marine dischargers with a design flow greater than 0.1 MGD. MassDEP included a similar requirement for NEAq to conduct sampling for PFAS for the effluent twice per year, and this requirement remains the same in the Final Permit.

See Response 1 for the list of laboratories.

## Comment 3

### Water Intake Data

Intake water for NEAq's facilities comes from both Boston Harbor (No. MA0003123) and Quincy Bay (No. MA0040380). NEAq has limited knowledge of the concentrations of many regulated compounds in its intake water. To better understand the impacts of our operations, such as our contribution to TN or PFAS levels, NEAq needs to obtain baseline data for our water intake from Boston Harbor and Quincy Bay. Currently, NEAq can research data from buoys that remotely measure, but these buoys do not measure all parameters.

NEAq requests assistance from EPA and/or MassDEP in obtaining more accurate intake data regarding concentrations of regulated compounds. Obtaining source data on TN, copper and PFAS, for instance, would help to contextualize our discharge concentrations, improve our operations, and facilitate compliance with the Draft Permit.



Response 3

In addition to EPA's Response to Comments here:

<https://www3.epa.gov/region1/npdes/permits/2022/finalma0003123permit.pdf>, MassDEP responds to the comment related to PFAS.

See Response 1 regarding the information related to the intake water sampling.



Massachusetts Department of Environmental Protection  
One Winter Street, Boston MA 02108 • Phone: 617-292-5751

## Communication for Non-English Speaking Parties - 310 CMR 1.03(5)(a)



### 1 English:

This document is important and should be translated immediately. If you need this document translated, please contact MassDEP's Diversity Director at the telephone numbers listed below.



### 2 Español (Spanish):

Este documento es importante y debe ser traducido inmediatamente. Si necesita este documento traducido, comuníquese con el Director de Diversidad de MassDEP a los números de teléfono que aparecen más abajo.



### 3 Português (Portuguese):

Este documento é importante e deve ser traduzido imediatamente. Se você precisa deste documento traduzido, entre em contato com Diretor de Diversidade da MassDEP para os números de telefone listados abaixo.



### 4(a) 中國（傳統）(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與 MassDEP 的多元化總監聯繫。



### 4(b) 中国（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 的多元化总监联系。



### 5 Ayisyen (franse kreyòl) (Haitian) (French Creole):

Dokiman sa-a se yon bagay enpòtan epi yo ta dwe tradui imedyatman. Si ou bezwen dokiman sa a tradui, tanpri kontakte Divèsite Direktè MassDEP a nan nimewo telefòn ki nan lis pi ba a.



### 6 Việt (Vietnamese):

Tài liệu này rất quan trọng và cần được dịch ngay lập tức. Nếu bạn cần dịch tài liệu này, xin vui lòng liên hệ với Giám đốc Đa dạng của MassDEP theo các số điện thoại được liệt kê dưới đây.



### 7 ប្រទេសកម្ពុជា (Kmer (Cambodian)):

ឯកសារនេះគឺមានសារៈសំខាន់និងត្រូវបានបកប្រែភាសា ប្រសិនបើអ្នកត្រូវបានបកប្រែ ឯកសារនេះសូមទំនាក់ទំនងឆ្នោតជានាយក MassDEP នៅលេខទូរស័ព្ទដែលបានរាយខាងក្រោម។



### 8 Kriolu Kabuverdianu (Cape Verdean):

*Es documento é importante e deve ser traduzido imidiatamente. Se bo precisa des documento traduzido, por favor contacta Diretor de Diversidade na MassDEP's pa es numero indicode li d'boche.*



### 9 Русский язык (Russian):

Это важный документ и он должен быть безотлагательно переведен. Если вам нужен перевод данного документа, пожалуйста, свяжитесь с директором по разнообразию компании MassDEP по телефону указанному ниже

**10 العربية (Arabic):**

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

**11 한국어 (Korean):**

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

**12 հայերեն (Armenian):**

Այս փաստաթուղթը շատ կարևոր է և պետք է թարգմանել անմիջապես. Եթե Ձեզ անհրաժեշտ է այս փաստաթուղթը թարգմանվել դիմել MassDEP բազմազանությունը տնօրեն է հեռախոսահամարների թվարկված են ստորև.

**13 فارسی (Farsi [Persian]):**

این سند مهم است و باید فوراً ترجمه شده است. اگر شما نیاز به این سند ترجمه شده، لطفاً با ما تماس تنوع مدیر MassDEP در شماره تلفن های ذکر شده در زیر.

**14 Français (French):**

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

**15 Deutsch (German):**

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

**16 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.

**17 Italiano (Italian):**

Questo documento è importante e dovrebbe essere tradotto immediatamente. Se avete bisogno di questo documento tradotto, si prega di contattare il Direttore di Diversità di MassDEP ai numeri di telefono elencati di seguito.

**18 Język Polski (Polish):**

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

**19 हिन्दी (Hindi):**

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