



# City of Cambridge

## Executive Department

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City Manager

November 28, 2023

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RE: Comments on Draft Permit No. MA0103284 for the MWRA Deer Island Treatment Plant

Dear Ms. Barden and Ms. Golden:

The City of Cambridge (the “City” or “Cambridge”) appreciates the opportunity to comment on the draft National Pollutant Discharge Elimination System (NPDES) Permit No. MA0103284 (the Draft Permit) for the Massachusetts Water Resources Authority (MWRA) Deer Island Treatment Plant (DITP), which the U.S. Environmental Protection Agency – Region 1 (EPA or the Region) noticed for comment on May 31, 2023.<sup>1</sup> As one of the entities that would be subject to the terms of the Draft Permit if it is finalized as currently structured, the City of Cambridge writes to express its support for the comments submitted by the Massachusetts Water Resources Authority Advisory Board (Advisory Board) (the “MWRA AB Comment Letter”), which as appropriate to the City are incorporated by reference as if set forth herein, and also to write separately to articulate and highlight issues of particular concern to Cambridge. This comment letter is organized by first providing general comments on the Draft Permit and then providing comments on specific sections.

### **GENERAL COMMENTS**

#### **I. Several Responsibility**

As a general comment on the entire Draft Permit, it needs to be clearer that MWRA and each CSO-responsible Co-permittee are individually responsible only for the requirements

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<sup>1</sup> On May 31, 2023, the Massachusetts Department of Environmental Protection (MassDEP) also issued a draft 2023 Draft Massachusetts Permit to Discharge Pollutants to Surface Waters for DITP (the State Permit) that incorporates by reference Parts I.A-K and Part II of the Draft Permit. The comments in this letter are also submitted with regard to the State Permit.

applicable to their own activities, including with respect to its own permitted CSOs. While it appears that EPA and MassDEP intend that the CSO-responsible Co-permittees are indeed severally liable for their activities, EPA and MassDEP are inconsistent in their treatment of the issue. For example, the draft Massachusetts Permit to Discharge Pollutants to Surface Waters (the “MassDEP Draft Permit”) incorporates the Draft Permit by reference, and states that:

The Permittee and co permittees are severally liable under Part IB., Part IE., and Part IF., for their own activities and required reporting with respect to the CSOs that they own or operate. They are not liable for violations of Part IB., Part IE., and Part IF committed by others relative to CSOs owned and operated by others. Nor are they responsible for any reporting that is required of other Permittees under Part IB.

The Draft Permit states that:

The Permittee, CSO-responsible Co-permittees and each Co-permittee are severally liable for their own activities under the Standard Conditions of Part II, Parts C, E, F, and required reporting under Part J with respect to the portions of the sewer system that they own or operate. They are not liable for violations of the Standard Conditions of Part II, Parts C, E, F and Part J committed by others relative to the portions of the collection system owned and operated by others. Nor are they responsible for any reporting that is required of other Permittees under the Standard Conditions of Part II, Part C, Part E, Part F, and Part J

It is unclear to the City why the MassDEP Draft Permit and the Draft Permit are inconsistent and refer to different parts of the Draft Permit. In any case, both permits should be clear that the City of Cambridge is only responsible for its own activities under the MassDEP Draft Permit and the Draft Permit in their entirety, rather than by reference to specific parts. Without limitation to the preceding comment, neither the MassDEP Draft Permit nor the Draft Permit specify that the Permittee and CSO-responsible Co-permittees are severally responsible for compliance with Part I.D., requiring notice of elimination or change in status in any CSO Outfall in Attachment A, or with Part I.I.4, requiring notices of emergency condition, plant upset, bypass, etc. The City should only be responsible for its obligation to provide such notices.

## **II. Major Storm and Flood Events Planning Requirements**

Part I.E.2.(e) of the Draft Permit would impose on the City of Cambridge and other towns novel and onerous long-term obligations to develop and implement a Sewer System O&M Plan including a Sewer System Flood Events Plan to address sewer system climate change resiliency. As discussed in more detail below and in the MWRA AB Comment Letter, while the City supports the goals of building future resilience and protecting against major storm and flood events resulting from climate change, the approach proposed in the Draft Permit provides unrealistic deadlines and impermissibly vague standards for how these goals will be achieved.

### **III. The Draft Permit Impermissibly Includes Combined Sewer Communities as CSO-Responsible Co-Permittees.**

As discussed in the MWRA AB Comment Letter, the City of Cambridge historically has operated under an individual NPDES permit, and the Region has not explained why combining its permit with DITP's is beneficial in any respect. Without any explanation in the Fact Sheet, the City of Cambridge loses a meaningful opportunity to comment on EPA's decision. Moreover, EPA's regulations do not allow the Region to consolidate the CSO-Responsible communities' NPDES Permits with the MWRA's permit.

#### **COMMENTS ON SPECIFIC PROVISIONS**

##### **I. Comments on Part I.B. COMBINED SEWER OVERFLOWS (CSOs)**

###### **A. I.B.2 Authorized typical year discharge activations and volumes**

Part I.B.2 limits each CSO outfall to the typical year discharge activations and volumes as shown in Attachment I of the Draft Permit. As set forth in the MWRA AB Comment Letter (and in more detail in the MWRA's comments on the Draft Permit), narrative Technology Based Effluent Limitations ("TBELs") should be used for the CSO outfalls regulated under the Permit, and therefore Attachment I should be removed from the Permit. If Attachment I is nonetheless included, the most recent version should be used, and to the extent that new activation frequency and volume values are developed for any Cambridge CSOs as part of the Massachusetts Water Quality variance process discussed below (the "Variance"), Attachment I should be revised to reflect any such changes.

###### **B. I.B.2.d and e: Variances**

Parts I.B.2.d and I.B.2.e cite the Variances issued in 2019, which expire August 31, 2024. Cambridge recommends that since the Variances will expire during – or possibly before – the term of the draft permit, that the draft permit cite the Variances by reference rather than attaching them to the permit.

###### **C. I.B.3-5 Nine Minimum Controls Implementation Levels**

Consistent with the City's general comment above, these section needs to be clearer that MWRA and each CSO-responsible Co-permittee are individually responsible for the requirements with respect to its own permitted CSOs. The City requests that language such as "The Permittee and CSO-responsible Co-permittees" be replaced with "The Permittee and each CSO-responsible Co-permittee" to clarify the division of responsibilities. For example, the first sentence of I.B.3 should be amended to read "The Permittee, MWRA, and each CSO-responsible Co-permittees: BWSC, City of Cambridge, City of Chelsea and City of Somerville, shall continue to implement their respective Nine Minimum Control Program (NMC) ...."

Notwithstanding the preceding comment, MWRA has worked cooperatively with certain of the CSO-responsible Co-permittees to develop a hydraulic flow model for the purpose of modeling CSO activation frequency and volume. As suggested in the City's comments below, EPA and MassDEP should require that this model be used by MWRA and the CSO-responsible Co-permittees for purposes of compliance with the Permit. Also, consistent with long practice, for purposes of ensuring reporting consistency and evaluation of the CSO-responsible Co-permittee's own modeling results, MWRA should be required to continue to model and report results for all of the CSO's covered by the Permit.

**D. I.B.3.g(3).**

This section should be clarified to state that the City can use reliable and accurate rain gauges other than those operated by the National Weather Service.

**E. I.B.3.j.Signage**

This section requires identification signs at CSO outfalls, as in the current permits. It is unclear if EPA intends for the last paragraph in Section I.B.3.j of the Draft Permit to refer to the CSO identification sign locations, because it references Part I.K.3, which requires compliance with signage requirements of 314 CMR 16.0. If that is EPA's intention, the City requests that EPA provide the "universal wet weather sewage symbol" to be included on the signs. If instead it is intended to refer to the signs at public access locations, the City recommends that the paragraph be removed, as the draft permit already requires compliance with 314 CMR 16.00, which requires signage at public access locations, and it is confusing to add additional and contradictory requirements in this section.

**F. I.B.3.l Activation Outfall CAM401B**

The reference to Outfall CAM401B as an indicator of the onset of CSO outfall discharges is outdated and should be deleted. The Cambridge CSOs are now metered and the City is alerted when a CSO occurs.

**G. I.B.3.m Public Notification Plan**

The City appreciates that the CSO Public Notification requirement in Part I.B.3.m cites 314 CMR 16.00. MWRA and the CSO-responsible Co-Permittees have put forth considerable effort and resources toward developing public notification programs in accordance with 314 CMR 16.00, and this language will ensure consistency with requirements for public notification.

Part I.B.3.m states the Permittee and CSO-responsible Co-permittees must implement their preliminary and final CSO Public Notification Plans as approved by MassDEP. The City recommends that EPA update this section to include only the final CSO Public Notification Plans. The final CSO Notification Plans, with any revisions required by MassDEP, have all

received conditional or final approval and thus should supersede the preliminary notification plans.

#### **H. I.B.5 Nine Minimum Controls Reporting Requirement**

1. It is unclear what “updated MWRA model (or equivalent)” as used in Part I.B.5.f means. As discussed above, EPA and MassDEP should require the use of the model that has been jointly developed among MWRA and certain of the CSO-responsible Co-permittees. Also, “future planned conditions” as used in Part I.B.5.f(1) is not a clearly-defined term, since all of the CSO control projects in the Final CSO Facilities Plan were complete by December 2015.

This section should also make clear, that reporting requirements under the NPDES permit apply to Cambridge only with respect to those CSOs for which they are the “CSO-responsible Co-permittee” listed in Attachment A.

2. Sections I.B.5.b through 5.e are intended to be subsections of Section I.B.5.a, and thus should be indented and renumbered.
3. Although the requirements of Part I.B.5.f(1)(iii) should apply to just the MWRA, the meaning of the term “in either document above” is unclear and should be clarified.

#### **II. Comments on Part I.C.2 UNAUTHORIZED DISCHARGES**

- A. **Part I.C.2.** Cambridge requests that EPA strike the words “or the public” in Part I.C.2 so that it reads: The Permittee, CSO-responsible Co-permittee and Co-permittees must provide notification to the public within 24 hours of becoming aware of any unauthorized discharge, except SSOs that do not impact a surface water ~~or the public~~, on a publicly-available website. ....”

#### **III. Comments on Part I.D. NOTICE OF ELIMINATION**

It is unclear in this section whether MWRA and each CSO-responsible Co-permittee is individually responsible for giving notice only for its own permitted CSOs. Part I.D should accordingly be modified so it reads as follows:

The Permittee and CSO-responsible Co-permittees shall give notice of elimination or change in status of any CSO outfall **for which they are the “Responsible Permittee or CSO-responsible Co-permittee”** listed in **Attachment A** as soon as possible in writing to EPA and MassDEP.

#### IV. Comments on Part I.E. OPERATION AND MAINTENANCE

A. **Part I.E.2.e.(1):** EPA is proposing that within six months of the effective date of the Permit, the City will be required to prepare a comprehensive description of the collection system and a schedule for development and implementation of the full Sewer System Operation and Maintenance Plan. Six months is insufficient time to complete this and the City requests that EPA allow at least eighteen months from the effective date of the Draft Permit.

B. **Part I.E.2.e.(2):** EPA is proposing that “within 12 months of the effective date of the Permit, the Permittee, CSO responsible Co-Permittees and Co-permittees shall develop and implement a Sewer System Flood Events Plan as an element of the Sewer System Operations and Maintenance Plan.” Twelve (12) months is insufficient time to complete preparation of these plans due to:

1. The time it takes to secure local funding to address these requirements is at least one year, and likely significantly more.
2. The significant number of assets to inventory could alone easily require a year or more of labor, including site-specific data collection and survey needs.
3. The effort of developing a consistent vulnerability assessment framework and methodology with consensus among the Permittee, CSO responsible co-permittees, and co-permittees is expected to be significant and will likely take between 6 to 12 months to complete.
4. The complexity of completing a vulnerability evaluation for this number of assets that could take a year or more.
5. The time required for adequate public participation.
6. The effort to prepare meaningful alternatives analysis including cost-effectiveness is significant and requires extensive internal coordination and vetting of results.
7. The coordination needed between various entities to evaluate alternatives, as many solutions may require multi-jurisdiction agreement and funding.

In lieu of 12 months, the Sewer System Flood Events Plan should be required to be completed over a 5-10 year period, with interim milestones that are significantly more reasonable.

C. **Part I.E.2.e (2):** EPA is proposing that “At a minimum, the Plan must take future conditions into consideration, specifically midterm (i.e., 20-30 years) and long-term (i.e., 80-100 years) and, in the case of sea level change, the plan must consider extreme sea level change.” EPA should reconsider these planning horizons for the following reasons:

1. The Commonwealth of Massachusetts statewide projections are for the planning horizons 2030, 2050, 2070, and 2090. The 2030 planning horizon corresponds to the years 2020-2039, the 2050 planning horizon corresponds to 2040-2059, the 2070 planning horizon corresponds to 2060-2079 and the 2090 planning horizon corresponds to 2080-2099.
2. Per the draft permit, 20-30 years from present (2023) corresponds closely to the 2050 planning horizon, but 80-100 years (from present) does not correspond to any of the planning horizons adopted by the State.
3. Climate change projections related to extreme precipitation are available only up to the 2090 planning horizons and sea level rise projections are available up to 2100, so no climate change projections are available for the “long-term” planning horizon as required by the Draft Permit.

The planning horizons as required in the Draft Permit should be updated to establish consistency with the Commonwealth’s plan. At a minimum, the Draft Permit must align with the future planning horizons that the Commonwealth has adopted and used in 2018 State Hazard Mitigation Climate Adaptation Plan (SHMCAP), Climate Change Assessment, and the Climate Resilience Design Standards Tool championed by the Resilient Massachusetts Action Team (RMAT).

- D. Part I.E.2.e(2):** The Draft Permit needs to define “extreme sea level change, “ and should be updated to state that the required Sewer System Flood Events Plan should consider the sea level change/rise scenario that has been adopted by the Commonwealth of Massachusetts, which corresponds to the “High” scenario as published in the 2018 SHMCAP and is the same scenario that has been used in the Massachusetts Coast Flood Risk Model (MC-FRM). This “High” sea level rise scenario has also been integrated as part of the Climate Resilience Design Standards Tool. For this “High” scenario, related sea level change data, such as water surface elevation, wave heights, wave action water elevation and future tidal datums elevation are available for the Commonwealth, which can be used for developing the Sewer System Flood Events Plan. The “High” scenario corresponds to an exceedance probability of 0.5% given the high emissions pathway (RCP 8.5) and is a fairly conservative sea level change/rise scenario that has been adopted by the State. The “Extreme” sea level change/rise scenario as published in the 2018 SHMCAP corresponds to an exceedance probability of 0.1% given the same RCP 8.5 emissions pathway, which seems to be a very low probabilistic and more conservative scenario. Also, for this “Extreme” scenario, related data, such as water surface elevation, wave heights, wave action water elevation and future tidal datums elevation are not available across the Commonwealth, and hence will limit the use of this scenario to inform the Sewer System Flood Events Plan.
- E. Part I.E.2.e(2), Footnote 18:** Footnote 18 describes the factors that must be considered to determine vulnerabilities from major storm and flood events. Cambridge has the following comments regarding footnote 18:

1. Federal data should not be a priority, as federal data are too broad and do not provide the local specificity and site conditions that other data can provide.
2. In addition, the Draft Permit is ignoring site-specific data prepared by localized evaluation, and thus should specifically allow for the use of such site-specific data.
3. The Draft Permit should be updated to recommend the data source be climate data generated by the Commonwealth of Massachusetts and clarify that if local data are more recent than State data and/or if State data has been used to generate localized site-specific climate data related to extreme precipitation, sea level change, and/or extreme weather events, that those data should be used.
4. EPA needs to define “control measures” in footnote 18. Is this meant to be mitigation measures? The Draft Permit should define what control or mitigation means or should state that the permittee needs to define what their appropriate level of control should be.
5. EPA needs to define “precautionary and sufficiently protective” in footnote 18.
6. EPA needs to define “qualified person” in footnote 18, including describing what qualifications this person must have.

**F. Part I.E.2.c(2), Footnote 19:** Footnote 19 provides a description of what EPA considers “Major storm and flood events.” Cambridge has the following comments regarding footnote 19:

1. EPA needs to define “high-water events.”
2. Please clarify the definition of “high-tide flooding.” This could be Highest Astronomical Tide, Mean Higher High Water, Mean High Water, etc. [https://tidesandcurrents.noaa.gov/datum\\_options.html](https://tidesandcurrents.noaa.gov/datum_options.html). The Draft Permit should be updated to use tidal flooding and future tidal datums consistent with those adopted by the Commonwealth and available as part of the Climate Resilience Design Standards Tool.
3. “Extreme/heavy precipitation” requires additional definition to clarify recurrence intervals, storm duration and storm distribution that should be used. For example, is this a 1-year 6-month storm, a 2-year 24-hour storm, a 10-year 48-hour storm, a 100-year 24-hour storm or a range of these events? This is important in creating consistency for analysis between the WWTF and the collection system, given the extensive list of Co-permittees. It should also be noted that the extreme/heavy precipitation event(s) used to evaluate the collection system may be different from those used to evaluate the WWTF, which relates to their level of control and are likely to be different between the collection system and the WWTF.



4. In addition to clarification of sea level change, high-water events, high tide flooding and extreme/heavy precipitation, another critical element for consideration is the phasing or timing between the peak of the tide/high-water elevation and the peak of the extreme/heavy precipitation. The Draft Permit should state that these conditions should be considered and evaluated as part of developing the Sewer System Flood Events Plan.
- G. Part I.E.2.e(2)i.(a):** Part I.E.2.e(2)i.(a) provides that “The Asset Vulnerability Evaluation shall include, at a minimum, the following: (a) Description of planning priorities related to the location of the sewer system;” This language is far too vague. Is this related to goals, past storm events, service needs, etc.? EPA should update the Draft Permit to clarify what “planning priorities” it is intending the Permittee and CSO-responsible Co-Permittees describe here.
- H. Part I.E.2.e(2)i.(b):** Part I.E.2.e(2)i.(b) provides that “...and if the asset falls into the 100-year flood map or the 500-year flood map,” FEMA Flood Maps are effectively representative of present-day flood extents and elevations. After the analysis about potential future flood impacts, the City does not understand why EPA is requiring an examination of just present-day flood extent and elevation information. Also, FEMA does not factor in future climate change projections, include sea level rise, extreme precipitation, does not factor the impacts of piped infrastructure flooding and also does not address compound flooding from coastal and precipitation driven flooding. If a community has mapping that shows future anticipated flood area and extent, that should be taken into consideration in addition to FEMA data. The Draft Permit should be revised to reflect this.
- I. Part I.E.2.e(2)i.(c):** Part I.E.2.e(2)i.(c) provides that “Description of structural improvements, and/or other mitigation measures to minimize the impacts of major storm and flood events to each specific asset identified in Part I.E.2.e.(2).i.(b) above. The Permittee, CSO-responsible Co-Permittees, and Co-permittees shall consider, at a minimum, the following measures:” The last two subsections, (xii) and (xiii), are not mitigation measures and should be deleted.
- J. Part I.E.2.e(3):** EPA is proposing that within twenty-four months from the effective date of the Permit, the City of Cambridge will be required to have completed, implemented and submitted to EPA the full Sewer System O&M Plan. This is far too little time to complete this task. The final Sewer System O&M Plan cannot be completed until the Sewer System Flood Events Plan required by Part I.E.2.(e)(2) is finished. The Sewer O&M Plan should not be required until at least eighteen months after completion of the Sewer System Flood Events Plan.
- K. Part I.E.3.f:** Part I.E.3 purports to require summary reports of activities relating to the implementation of the Permittee’s, the CSO-responsible Co-permittee’s and the Co-permittee’s O&M Plan. Part I.E.3.f requires certain reporting if the average annual flow in the preceding year “exceeded 80% of the facility’s 361 MGD design flow ....” This

requirement only applies to the MWRA so should not be included in the annual report requirements for the CSO-responsible Co-permittees and the Co-permittees.

- L. **General Comment Regarding Definitions of “Risk” and “Vulnerability.”** EPA uses the terms “risk” and define “vulnerability” throughout these sections of the Draft Permit, without defining them. Both terms need to be defined., e.g., “vulnerability” means “a person’s or asset’s exposure, sensitivity and capacity to adapt,” and “risk” means “the extent and probability of an event occurring.”

#### V. Comments on Part I.J. REPORTING REQUIREMENTS

- A. **Part I.J.5:** This section requires the submittal of certain reports to the EPA Water Division. The Draft Permit should clarify that these reports are required to be submitted by the Permittee only.

#### VI. Comments on Part I.K. STATE 401 CERTIFICATION CONDITIONS

- A. **Part I.K.2:** This section provides that certain requirements must be met with regard to a pH Adjustment Demonstration Project. The Draft Permit should clarify that these requirements apply to the Permittee only.

#### VII. Comments on Attachments

- A. **Attachments J and K:** as noted above, these attachments are water quality standards variances issued in 2019, which expire August 31, 2024. The City recommends that since the variances will expire during (or possibly before) the term of the draft permit, the draft permit cite the variances by reference rather than attaching them to the Permit.

Thank you for the opportunity to submit these comments. Please feel free to contact me if you have any questions or would like additional information.

Sincerely,



Owen O’Riordan  
Deputy City Manager

Cc: Kathy Watkins, Commissioner of Public Works  
James Wilcox, Assistant Commissioner of Engineering/City Engineer  
Catherine Woodbury, Project Manager, Department of Public Works  
Megan B. Bayer, Acting City Solicitor