# Contingency Plan Quarterly Report
# on Ambient Monitoring Results

Second Quarter 2026

MWRA gathers data on various Contingency Plan thresholds near the outfall location in Massachusetts Bay. These thresholds are part of the Deer Island Treatment Plant (DITP) NPDES discharge permit. This report presents ambient monitoring results for Contingency Plan thresholds that became available from April through June 2026.

This report includes the results of April through June 2026 nuisance algae abundances, and 2026 winter/spring water column chlorophyll. There are no exceedances of Contingency Plan thresholds in this report.

## NUISANCE ALGAE

### *PSEUDO-NITZSCHIA – winter/spring (February – April) 2026*

There were no *Pseudo-nitzschia* threshold exceedances for winter/spring 2026. For *Pseudo-nitzschia* nuisance algae species, the caution level threshold values were derived from the 95th percentile of seasonal baseline means, and seasonal mean abundances at nearfield stations are compared against the threshold value.

During winter/spring 2026, the seasonal average *Pseudo-nitzschia* abundance was 589 cells/L, well below the caution level threshold of 17,900 cells per liter.

Figure 1 shows the *Pseudo-nitzschia* caution level threshold for the autumn and the mean abundance data for that season since the start of the monitoring program in 1992.

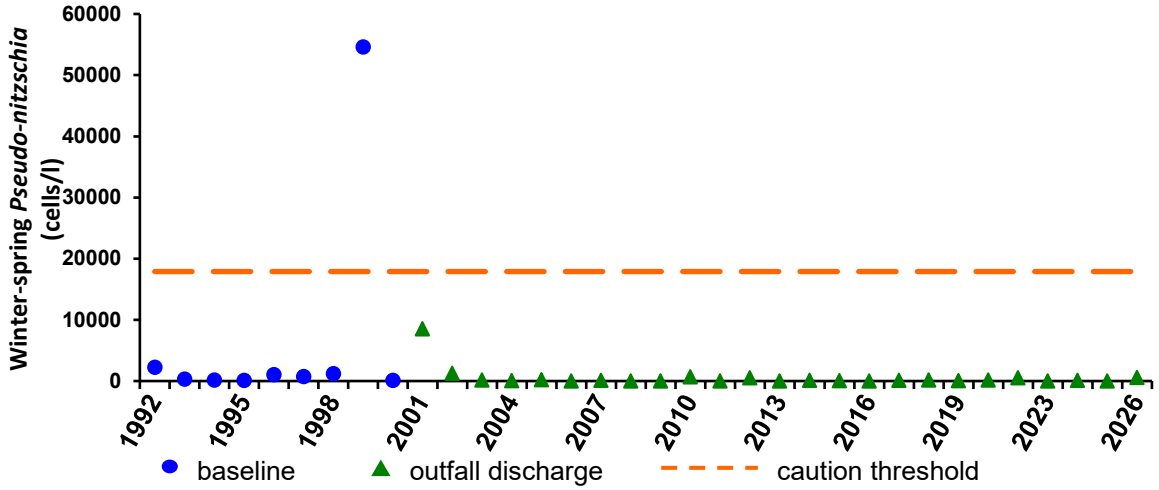


**Figure 1. Nearfield *Pseudo-nitzschia* cell concentrations (winter/spring 1992-2026)**

### *PHAEOCYSTIS* – February – April 2026

In February 2017, EPA approved changes in the Contingency Plan to remove the threshold for the seasonal abundance of the nuisance alga *Phaeocystis pouchetii* in the nearfield water column. During bloom conditions, *Phaeocystis* can form large, gelatinous colonies, which may accumulate as foam as they disintegrate on beaches. Evaluations of prior threshold exceedances for this species have indicated that they resulted from natural fluctuations in Massachusetts Bay, do not represent degradation, were not a result of MWRA's discharge, and have not occurred in concentrations that would pose problems for recreation. MWRA agreed to continue to report each quarter on nearfield survey mean abundances of *P. pouchetii* compared to its historical results.

Figure 2 shows the 2026 survey mean results against the results from all prior years since 1992. Due to reductions in the number of surveys conducted each year, the historical results encompass more time-points than shown for the current year[1].

*P. pouchetii* cells were detected in moderately high abundances thus far in 2026 (Figure 2).

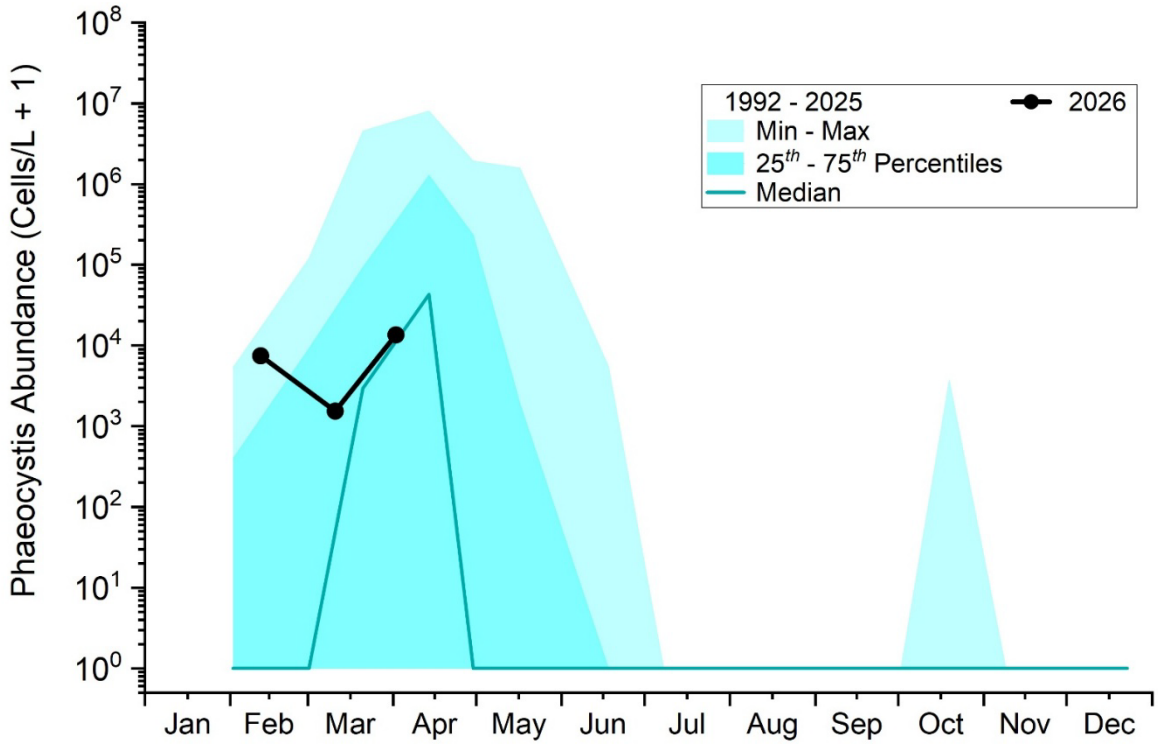


**Figure 2. Nearfield Survey Mean abundance of *Phaeocystis* (1992 – 2026)**

[1] There were two major modifications to the ambient monitoring plan for the outfall in 2004 and 2010; the numbers of surveys and monitoring stations were reduced through these revisions. More information can be found at: https://www.mwra.com/harbor/enquad/pdf/2010-04.pdf and https://www.mwra.com/harbor/enquad/pdf/2004-ms-92.pdf.

### *ALEXANDRIUM – April - June 2026*

The nuisance algae *Alexandrium catenella* ("*Alexandrium*") can cause paralytic shellfish poisoning (PSP, or "red tide") in Massachusetts Bay. MWRA measures *Alexandrium* abundance using a molecular probe (NA1) thought to be specific to the *Alexandrium* red tide species *tamarense*, *catenella*, and *fundyense*[2].

MWRA also checks observations of shellfish PSP toxicity from state fisheries agencies and other regional monitoring programs to track *Alexandrium* blooms in Massachusetts Bay and the Gulf of Maine region.

During the surveys conducted in April through June 2026, preliminary analysis shows that no *Alexandrium* results were above 1 cell/L in samples collected from nearfield stations (stations within 7.5 kilometers from the outfall) and farfield stations (reference stations). Only a sample with 100 or more cells of *Alexandrium* per liter from a nearfield station would constitute an exceedance under the Contingency Plan.

In Figure 3 below, we compare the preliminary results of *Alexandrium* abundance in samples collected from nearfield stations in 2026 against those from all prior years since 1992. Due to reductions in the number of surveys conducted each year, the historical results encompass more time-points than shown for the current year.[3]

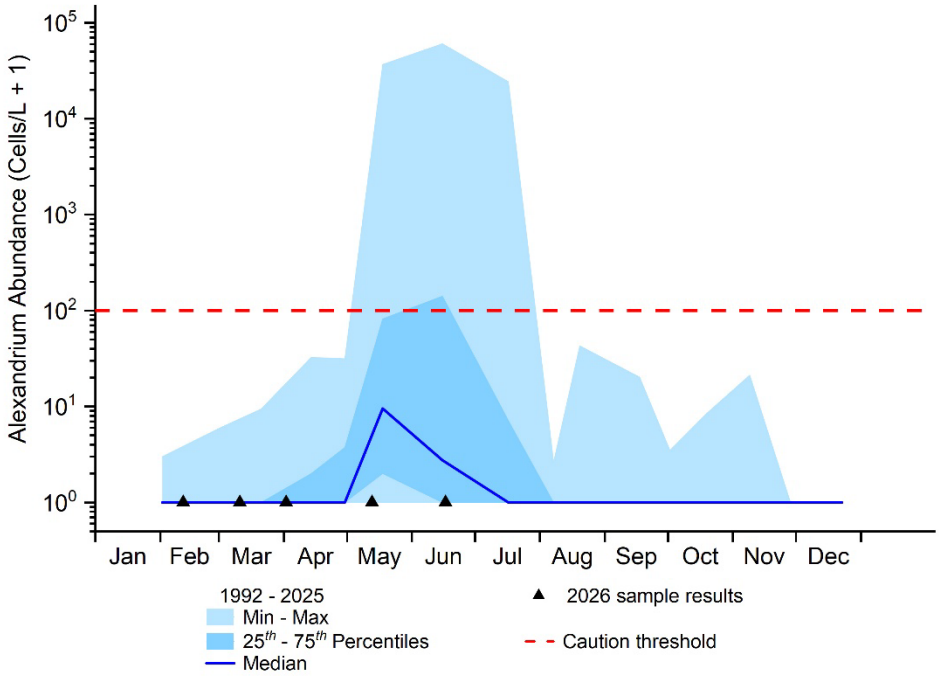


**Figure 3. Nearfield *Alexandrium* cell concentrations (1992-2026)**

[2] https://doi.org/10.1016/j.dsr2.2005.06.015

[3] There were two major modifications to the ambient monitoring plan for the outfall in 2004 and 2010; the numbers of surveys and monitoring stations were reduced through these revisions. More information can be found at: https://www.mwra.com/harbor/enquad/pdf/2010-04.pdf and https://www.mwra.com/harbor/enquad/pdf/2004-ms-92.pdf

## CHLOROPHYLL – winter/spring (February - April) 2026

The chlorophyll seasonal caution level threshold value was derived from the 95th percentile of seasonal baseline means. Seasonal mean chlorophyll concentration at nearfield stations are compared against threshold values. The caution level threshold is 199 mg/m$^2$ for the winter/spring season.

There was no exceedance of the 2026 winter/spring chlorophyll caution level threshold. The 2026 winter/spring nearfield mean areal chlorophyll was 80.5 mg/m$^2$, which was well below the winter/spring caution level threshold (Figure 4).

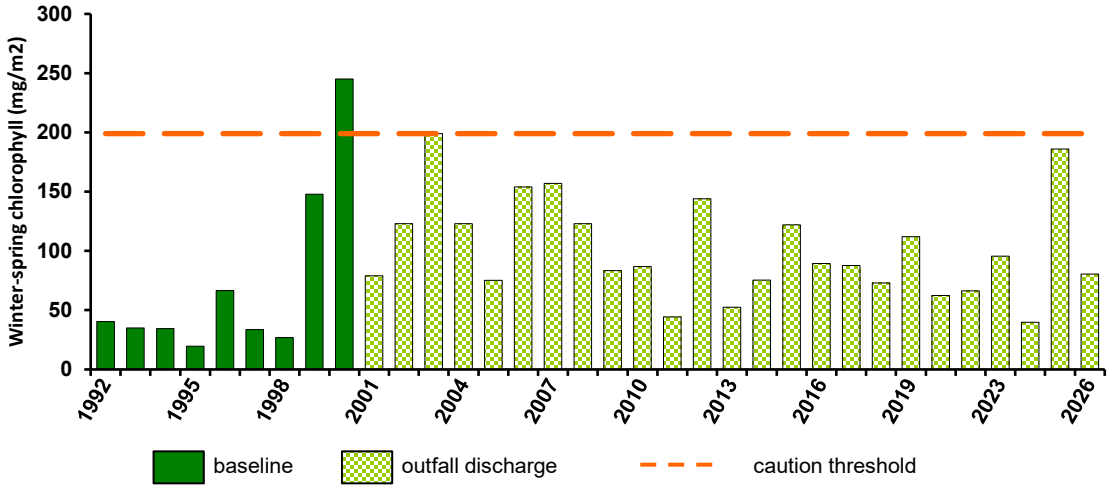


**Figure 4. Nearfield winter/spring mean areal chlorophyll-a concentrations (1992-2026)**