



MASSACHUSETTS WATER RESOURCES AUTHORITY

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June 29, 2021

Todd Borci
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Boston MA, 02109-3912

Catherine Vakalopoulos
Department of Environmental Protection
1 Winter Street
Boston, MA 02108

RE: Massachusetts Water Resources Authority
Permit Number MA 0103284
Quarterly Ambient Monitoring Results and Contingency Plan Reporting

Dear Mr. Borci and Ms. Vakalopoulos:

In its outfall ambient monitoring program, MWRA monitors levels of the red-tide alga *Alexandrium catenella* (*Alexandrium*), the cause of paralytic shellfish poisoning ("PSP"). Reporting on per-sample abundances of *Alexandrium* near MWRA's bay outfall (in the "nearfield") is part of MWRA's permit-attached Ambient Monitoring Plan¹ and Contingency Plan.² The Contingency Plan also specifies that MWRA conduct additional targeted monitoring for *Alexandrium* if any sample exceeds 100 cells per liter.

On June 23, 2021, MWRA conducted a routine water column monitoring survey. Results were received on June 26. Three samples collected from two of the four nearfield stations sampled had *Alexandrium* in abundances exceeding the Contingency Plan threshold of 100 cells per liter. (Figure 1, next page). This exceedance for *Alexandrium* requires this regulatory and public notification.

There is currently no evidence this exceedance is related to the Deer Island Treatment Plant outfall discharge. *Alexandrium* is frequently present in Massachusetts waters; it normally appears in late April or early May and peaks in May or June, subsiding in early summer. In all previous blooms, including those that have triggered Contingency Plan threshold exceedances, data evaluations have not suggested that the effluent discharge played a major role in initiating or sustaining the bloom. However, these results are unusual compared to those in previous years

¹ *Ambient Monitoring Plan for the Massachusetts Water Resources Authority Effluent Outfall Revision 2*. July 2010. Boston: Massachusetts Water Resources Authority. Report 2010-04. <http://www.mwra.state.ma.us/harbor/enquad/trlist.html>

² *Massachusetts Water Resources Authority Contingency Plan Revision 1*. 2001. Report 2001-ms-071. <http://www.mwra.state.ma.us/harbor/enquad/trlist.html>

in that *Alexandrium* and its associated toxicity have been nearly absent in waters north of Massachusetts Bay, where the seasonal blooms usually originate before being transported into the bay.

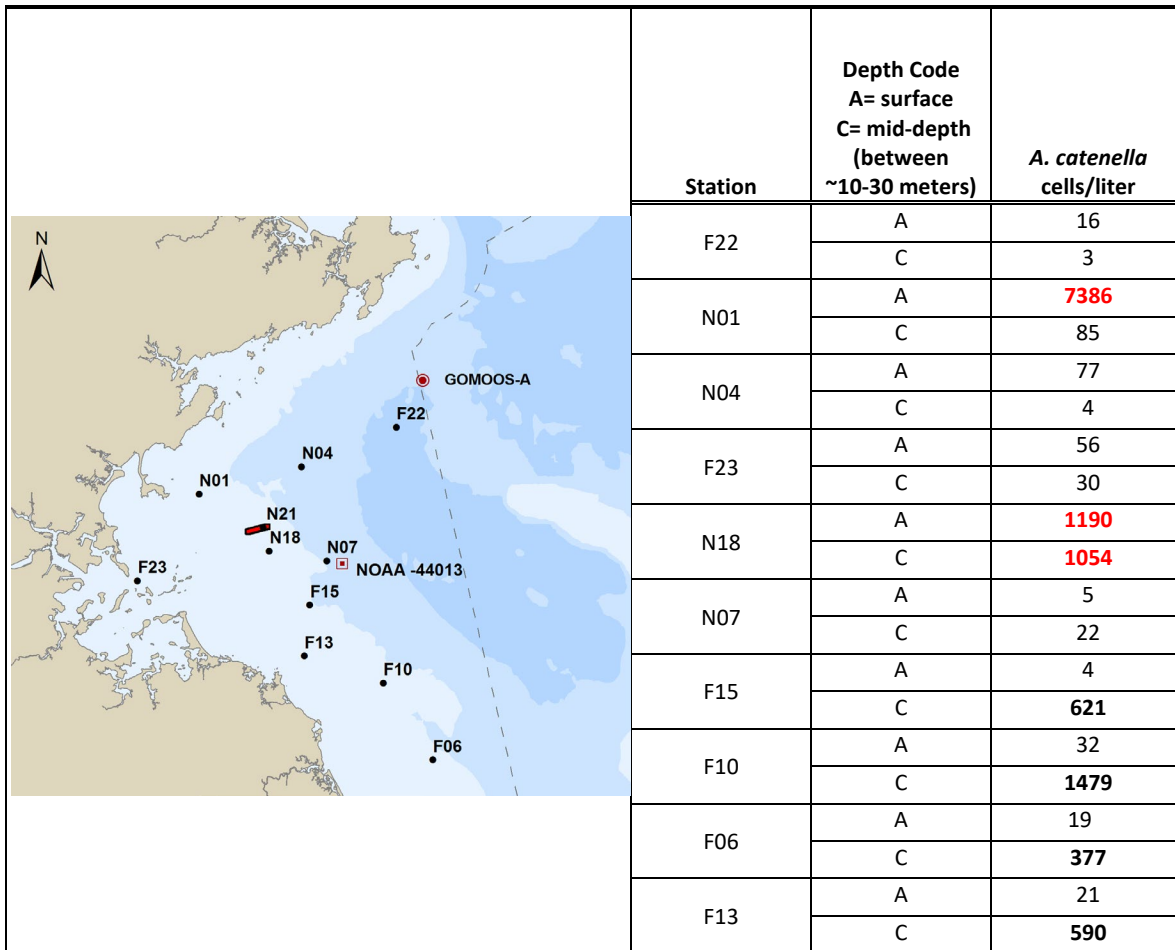


Figure 1. Results of MWRA June 23, 2021 *Alexandrium* testing. GOMOOS-A and NOAA-44013 are instrumented monitoring buoys. The red line on the map marks the MWRA outfall. The nearfield sample counts resulting in the exceedance are in **red** text. All sample results over 100 cells/Liter are **bolded**. Note that station N21 is not sampled for *Alexandrium*.

As described in its rapid response plan,³ MWRA will carry out weekly *Alexandrium* surveys until the cell counts drop below 100 cells/liter in all samples. An update will be provided if observations do not follow the usual pattern.

The results of MWRA’s 2021 *Alexandrium* monitoring will be evaluated in the annual water column monitoring report.

³ Libby S, Rex AC, Keay KE, Mickelson MJ. 2013. *Alexandrium* Rapid Response Study Survey Plan. Revision 1. Boston: Massachusetts Water Resources Authority. Report 2013-06. 13 p. <http://www.mwra.state.ma.us/harbor/enquad/pdf/2013-06.pdf>

MWRA will provide raw monitoring data upon request. If you have any questions regarding this matter, please email Betsy Reilley at betsy.reilley@mwra.com.

Sincerely,

Carolyn M. Fiore
Deputy Chief Operating Officer

Cc:

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