MASSACHUSETTS WATER RESOURCES AUTHORITY
Deer Island
33 Tafts Avenue
Boston, MA 02128

Frederick A. Laskey
Executive Director

Telephone: (617) 242-6000
Fax: (617) 788-4899
TTY: (617) 788-4971

June 10, 2025

Todd Borci
EPA Region 1
5 Post Office Square, Suite 100
Mail Code ECAD4-4
Boston MA, 02109-3912

David Boyer, NPDES Section Chief
Division of Watershed Management
Department of Environmental Protection
100 Cambridge Street, 9th Fl.
Boston, Massachusetts 02114

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

Dear Mr. Borci and Mr. Boyer:

In its outfall ambient monitoring program, MWRA monitors levels of the 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 Plan[1] and Contingency Plan.[2] The Contingency Plan also specifies that MWRA conduct additional targeted rapid response monitoring for *Alexandrium* if any sample exceeds 100 cells per liter.

On May 28, Massachusetts Division of Marine Fisheries (MA DMF) data indicated that PSP toxicity exceeded the 40ug/100g threshold at one of the three stations on the South Shore (Scituate). Exceedance of that PSP threshold triggers weekly *Alexandrium* response surveys but is not a Contingency Plan exceedance. On June 3, MWRA conducted such a response survey; results were received on June 6. Four of the twelve samples collected from nearfield stations had *Alexandrium* in abundances exceeding the Contingency Plan threshold of 100 cells per liter (Figure 1, Table 1). Figure 2 presents the same data graphically. This Contingency Plan 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 most

[1] *Ambient Monitoring Plan for the Massachusetts Water Resources Authority Effluent Outfall Revision 2.1*. 2021. Boston: Massachusetts Water Resources Authority. Report 2021-08.
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

previous blooms, including those that have triggered Contingency Plan threshold exceedances, data evaluations have indicated that the blooms originated in the Gulf of Maine and have not suggested that the effluent discharge played a major role in initiating or sustaining the bloom.

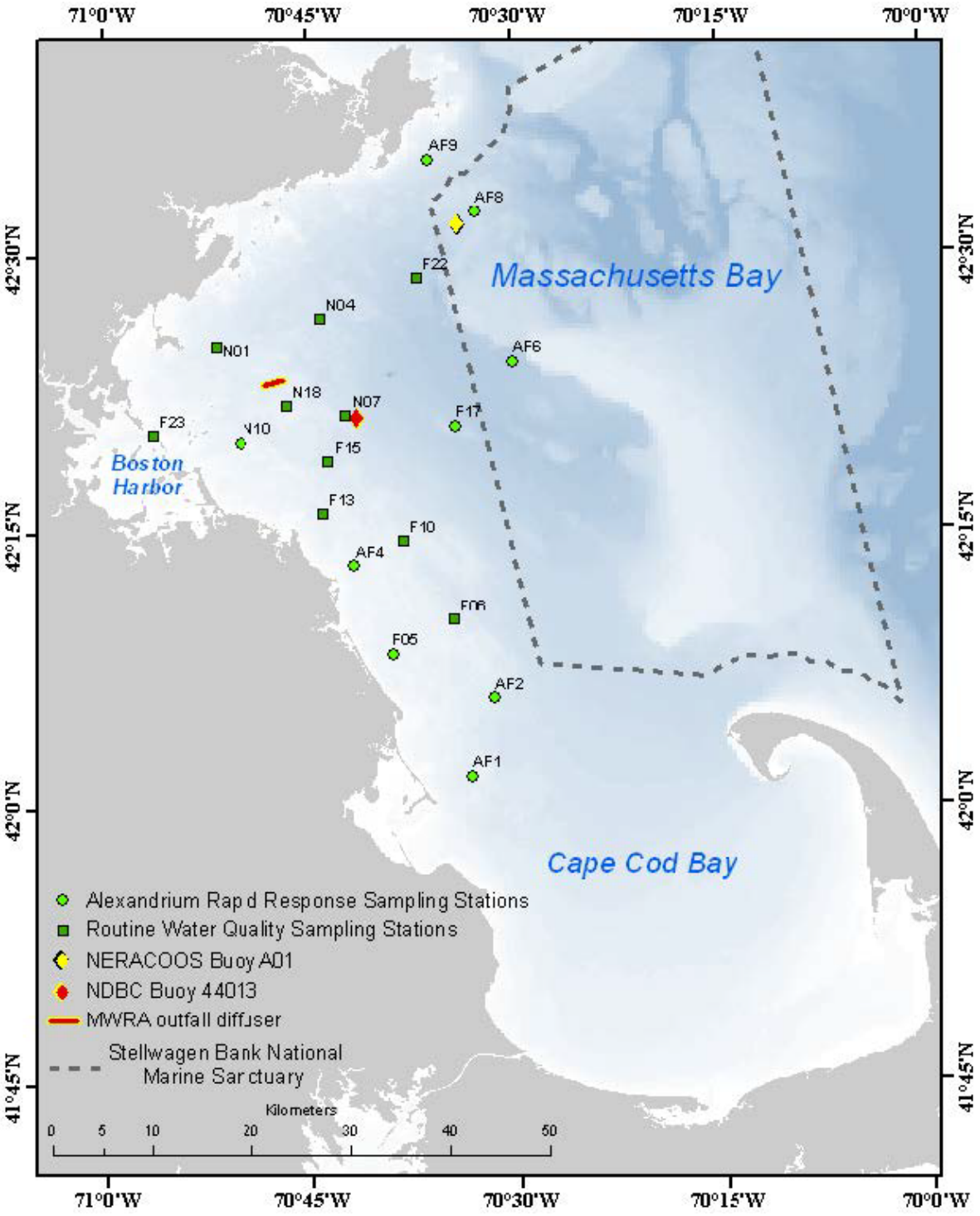

Figure 1. **Planned station locations for Alexandrium Rapid Respone Surveys (ARRS).** The red line on the map marks the MWRA outfall.

Station	Depth Code A= surface B= ~10 meters C= mid-depth (between ~10-30 meters)	*A. catenella* cells/liter
AF2	A	**162**
	B	**510**
F06	A	**1338**
	B	**6111**
F10	A	**2013**
	B	**2541**
F17	A	**3349**
	B	**6709**
AF6	A	**1904**
	B	**3**
AF8	A	55
	B	**344**
AF9	A	83
	B	25
F22	A	**145**
	B	0
	C	0
N04	A	72
	B	0
	C	0
N01	A	15
	B	0
F23	A	3
	B	5
N10	A	**109**
	B	2
N18	A	**2695**
	B	59
	C	3
N07	A	**2018**
	B	**4305**
F15	A	**544**
	B	**1479**
F13	A	**548**
	B	7
	C	9
AF4	A	**1207**
	B	**218**
F05	A	**197**
	B	**1691**
AF1	A	18
	B	**106**
	C	1

Table 1. Results of MWRA June 3, 2025 *Alexandrium* testing. The nearfield sample counts resulting in the exceedance are in **red** text. All sample results over 100 cells/liter are **bolded.**

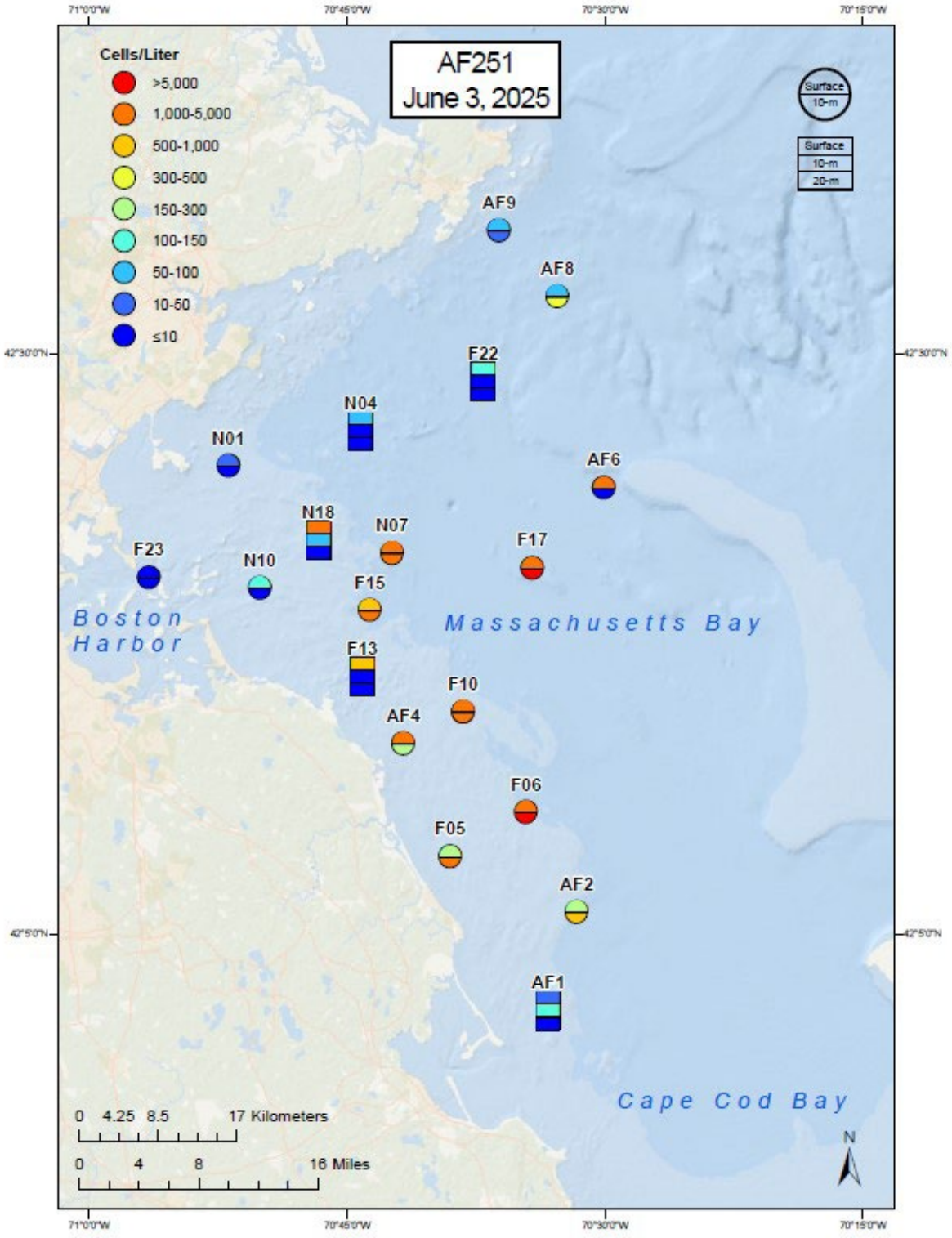

Figure 2. Results of MWRA June 3, 2025 *Alexandrium* testing. A circle or a box represents each station; the top half of the circle and top row of the box shows the surface measurement; the bottom half of the circle and middle row of the box shows the subsurface measurement at 10 meters; the last row of the box shows the subsurface measurement at 20 meters.

As noted above, the MA DMF PSP data has already triggered the MWRA's rapid response plan.[3] This Contingency Plan exceedance also triggers the response plan. To fulfill the rapid response plan, MWRA will carry out weekly *Alexandrium* surveys until the cell counts drop below 100 cells/liter in all samples. The results of MWRA's 2025 *Alexandrium* monitoring will be evaluated in the annual water column monitoring report.

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

Sincerely,

Rebecca Weidman
Deputy Chief Operating Officer

[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

Cc:

Environmental Protection Agency, Region I
Alexa Sterling
Steve Wolf

National Marine Fisheries Service
Christine Vaccaro

Stellwagen Bank National Marine Sanctuary
Peter DeCola

US Food and Drug Administration
David Lamoureux

MA Executive Office of Energy and Environmental Affairs
Vandana M. Rao

MA Department of Environmental Protection
Kevin Brander
Catherine Coniaris
Susannah King
Lealdon Langley

MA Division of Marine Fisheries
Terry O'Neil
Christine Petitpas

MA Dept of Public Health
Michael Moore

Cape Cod Commission
Timothy Pasakarnis

Outfall Monitoring Science Advisory Panel
Peter Burn
Virginia Edgcomb
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Robert Kenney
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Judith Pederson
Jeffrey Rosen
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Antonia Stephens

MWRA Library
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