



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Region 1

5 Post Office Square, Suite 100

Boston, MA 02109-3912

May 15, 2013

Michael J. Hornbrook, Chief Operating Officer
Massachusetts Water Resources Authority
Charlestown Navy Yard
100 First Avenue, Building 39
Boston, MA 02129

Re: MWRA Permit Number MA 0103284

MWRA Supplemental Ambient Monitoring for *Alexandrium*: Updated Rapid Response
Alexandrium Survey Plan

Dear Mr. Hornbrook:

We received your letter of February 26, 2013 requesting changes to the Rapid Response *Alexandrium* Survey Plan. With this letter, EPA and DEP approves of your proposed changes.

The original Rapid Response *Alexandrium* Survey Plan was established in 2006 after the major 2005 Gulf of Maine *Alexandrium* bloom (red tide) event to satisfy the permit condition Part I.7.e to determine whether the MWRA discharge has an effect on the frequency or extent of red tides caused by *Alexandrium*. This plan, however, has not been updated since the routine water column monitoring stations were significantly modified in the 2010 revisions to the Ambient Monitoring Plan, which were implemented in 2011.

This new Rapid Response *Alexandrium* Plan replaces five monitoring stations with five different stations to better align the Rapid Response *Alexandrium* Plan with the routine monitoring program. The updated survey plan also eliminates a step calling for a smaller, "basic" survey before a full survey. In practice, these smaller surveys have never been implemented. Thus, the triggers for implementing a rapid response survey remain substantially similar:

- Greater than 100 *Alexandrium* cells/liter in samples collected during MWRA's routine water quality monitoring surveys; or
- Levels of paralytic shellfish poisoning (PSP) toxicity in blue mussels exceed 40ug toxin equivalents per 100g shellfish meat at Massachusetts Division of Marine Fisheries (MA DMF) stations in Cohasset, Scituate, or Marshfield; or
- Levels of PSP toxicity in blue mussels at stations between Gloucester MA and Cape Elizabeth ME exceed 40ug toxin equivalents per 100g shellfish meat with

the likelihood that wind and currents will bring the bloom into Massachusetts Bay.

MWRA will conduct weekly monitoring until *Alexandrium* abundances decrease below 100 cells/L and MA DMF mussel toxicity data from Cohasset, Scituate, or Marshfield are no longer above the 80µg toxin equivalents per 100 g shellfish meat action level.

The proposed changes were discussed at the Outfall Monitoring Science Advisory Panel meeting in Boston, MA on April 1, 2013 and during a follow-up conference call on May 10, 2013. In both of these meetings, OMSAP members agreed to recommend that EPA and MassDEP approve the proposed changes. We do note that one concern that was brought up by the OMSAP members: In 2012, the *Alexandrium* bloom in Massachusetts Bay formed from south to north, rather than the more commonly observed north to south direction. OMSAP members would like MWRA to investigate this pattern and report their findings in the 2012 water quality monitoring annual report.

We believe that it is critical that MWRA continue to implement this plan to determine whether the MWRA discharge contributes to or exacerbates the spatial extent or intensity of the red tide.

If you have any questions, feel free to contact Matthew Liebman at 617-918-1626 or by email, or Cathy Vakalopoulos (Environmental Analyst, MassDEP) at 617-348-4026 or by email.

Sincerely,



Matthew Liebman
Environmental Scientist
US EPA Region 1

cc:

Catherine Vakalopoulos, MassDEP
Andrea Rex, ENQUAD
Andy Solow, OMSAP
Brian Pitt, EPA