

## Contingency Plan Report Third Quarter 2012

### Ambient Monitoring

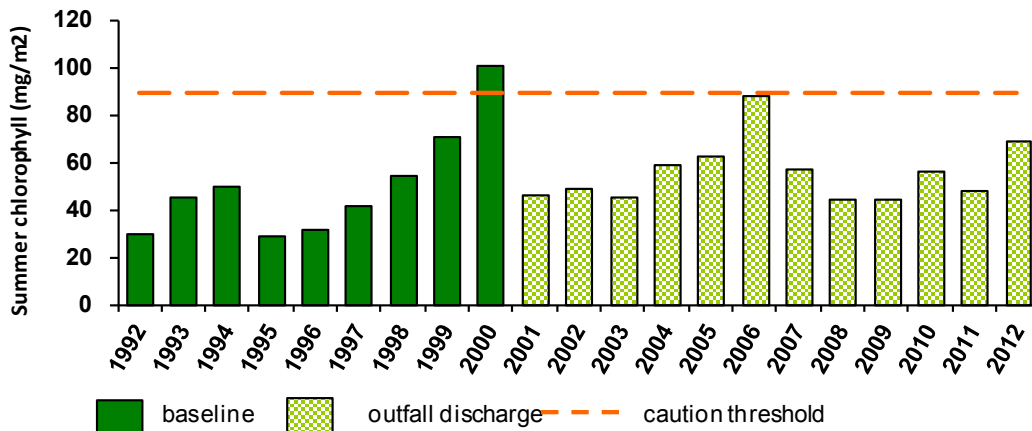
MWRA gathers data from the outfall location in Massachusetts Bay on various thresholds in its Deer Island outfall discharge permit. This Contingency Plan quarterly report shows relevant ambient monitoring results that became available in the July-September 2012 time period. Those results did not exceed any Contingency Plan thresholds.

#### CHLOROPHYLL May-August 2012

There were no [chlorophyll threshold](#) exceedances in this period. The nearfield mean areal average chlorophyll in summer 2012 (May-August) was 69 mg/m<sup>2</sup>, below the caution level threshold for summer of 89 mg/m<sup>2</sup> and in the range typical of other monitoring years.

The figure compares chlorophyll data for summer 2012, which included four surveys, to the corresponding threshold. The graph includes data since the start of the monitoring program in 1992.

#### Summer

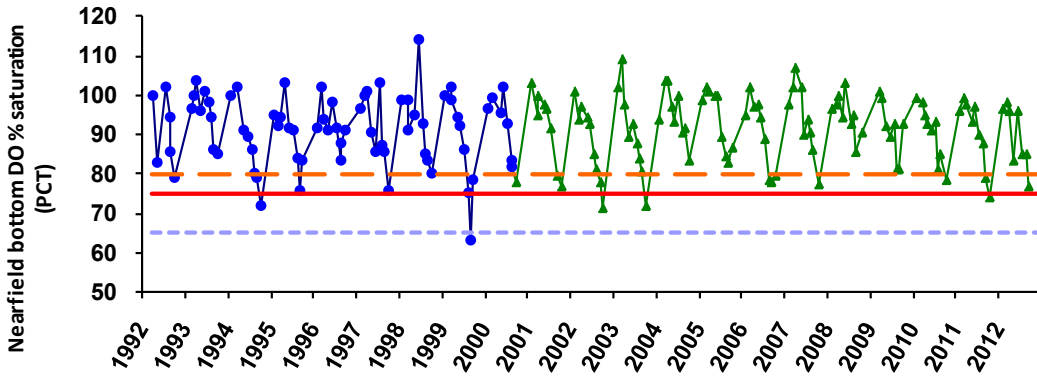
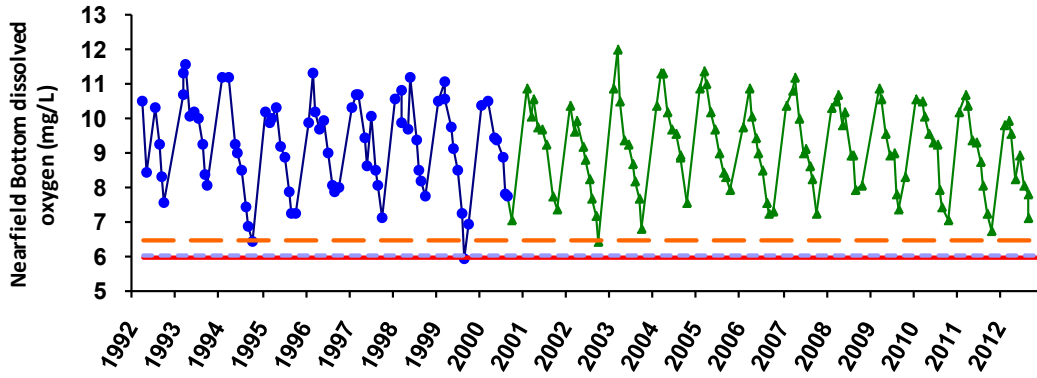


#### DISSOLVED OXYGEN – June - September 2012

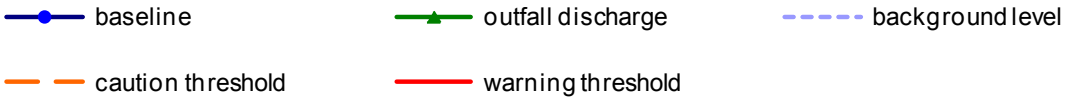
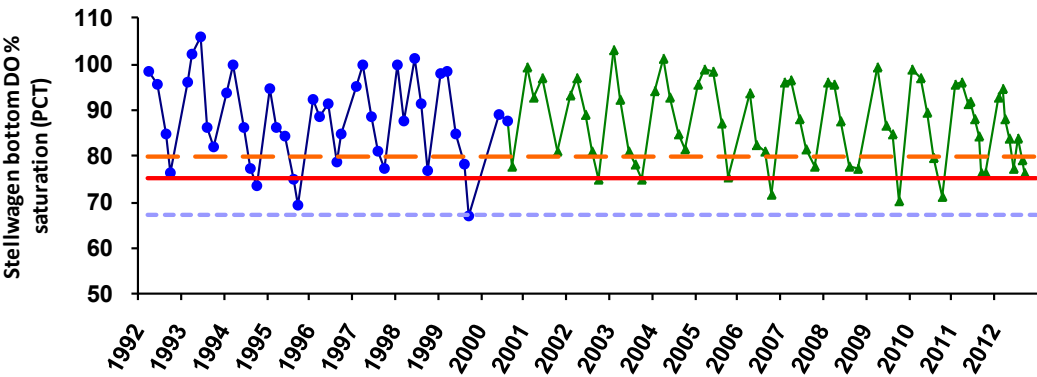
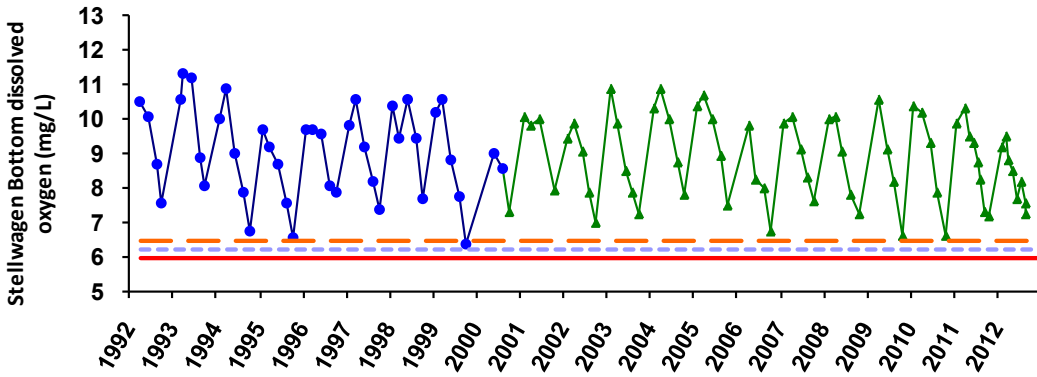
Measurements of dissolved oxygen (DO) concentration and percent saturation in summer 2012 did not fall below background levels and thus did not exceed thresholds.

The current reporting period for [dissolved oxygen thresholds](#) is June-September 2012. During this period there were five surveys. Oxygen levels were similar to those seen in most baseline years. The graphs below show the natural annual fluctuation of DO and percent saturation, which is typically lowest in early autumn. The 1992-2010 data shown are a subset of all data reflecting the modified design that began in 2011, *i.e.* nine surveys per year, and one station rather than four in Stellwagen Basin. This enables us to better compare the threshold results across years. The previous reports are at <http://www.mwra.state.ma.us/harbor/html/archive.htm#cpqamb>.

**NEARFIELD**



**STELLWAGEN BASIN**

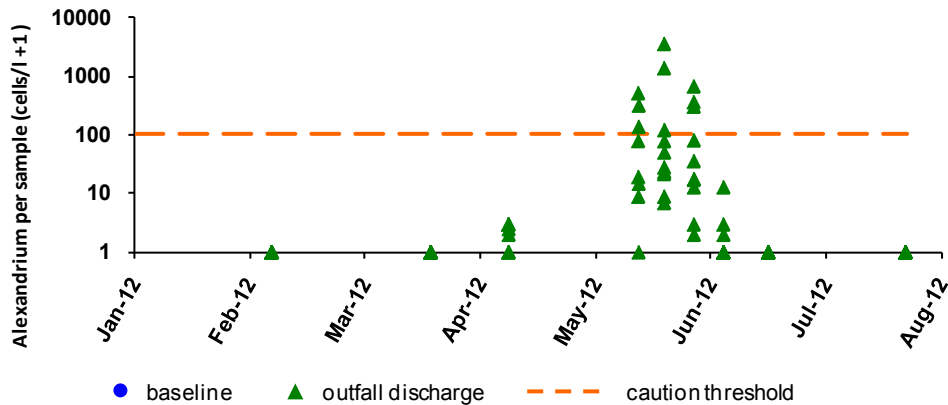


## NUISANCE ALGAE – July 2012

### ALEXANDRIUM

The [nuisance algae](#) *Alexandrium* (“red tide”) can cause paralytic shellfish poisoning (PSP) in Massachusetts Bay. MWRA measures *Alexandrium* abundance in its monitoring program, and also checks state fisheries agency observations of shellfish PSP toxicity to keep track of the course of Gulf of Maine *Alexandrium* blooms.

As reported previously, in 2012 there was an *Alexandrium* bloom in the spring, which subsided during June. Data not previously reported include those from July 2012. (Note logarithmic scale for graph.)



<b>July results for <i>Alexandrium</i> per-sample abundance (cells/liter)</b>	
Caution threshold	100
July 2012	0*

\* maximum of DNA probe samples collected in nearfield in July, 2012.