

Contingency Plan Report

First Quarter 2010

Ambient Monitoring

MWRA gathers data from the outfall location in Massachusetts Bay on various thresholds in its Deer Island outfall discharge permit. This report shows relevant ambient monitoring results that became available in the January-March 2010 time period. Those results did not exceed any contingency plan thresholds.

FISH AND SHELLFISH TISSUE CONTAMINATION - MUSSELS AND LOBSTER 2009

The fish tissue contamination thresholds are designed to identify unexpected effects on marine life. There were no exceedances of mussel bioaccumulation or lobster tissue contamination thresholds in 2009.

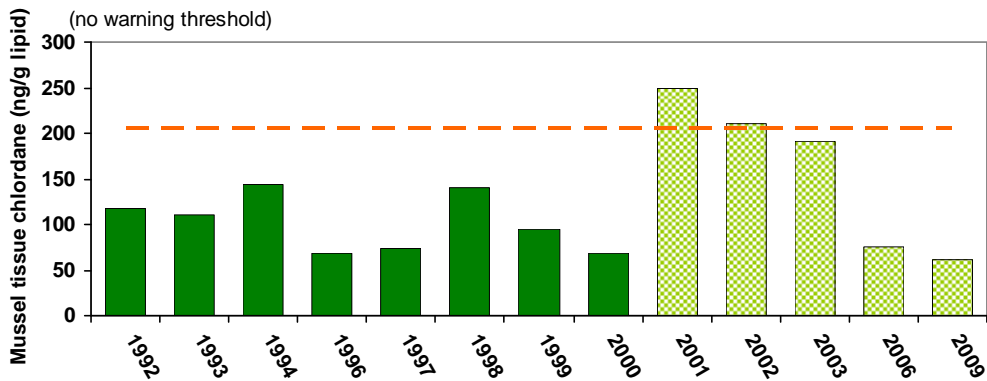
Contaminants are measured in three species of seafood: flounder, lobster, and mussels. For mercury and PCBs in flounder, lobster, and mussels, the caution and warning thresholds are set at 50% and 80% of the FDA action limits. The threshold for lead in mussels is based on EPA risk assessment of lead in drinking water. Other fish/shellfish tissue contamination thresholds are based on change from baseline conditions at the outfall site.

Data available this quarter include tissue contamination in caged mussels and American lobster from the outfall site. (Flounder results were reported last quarter).

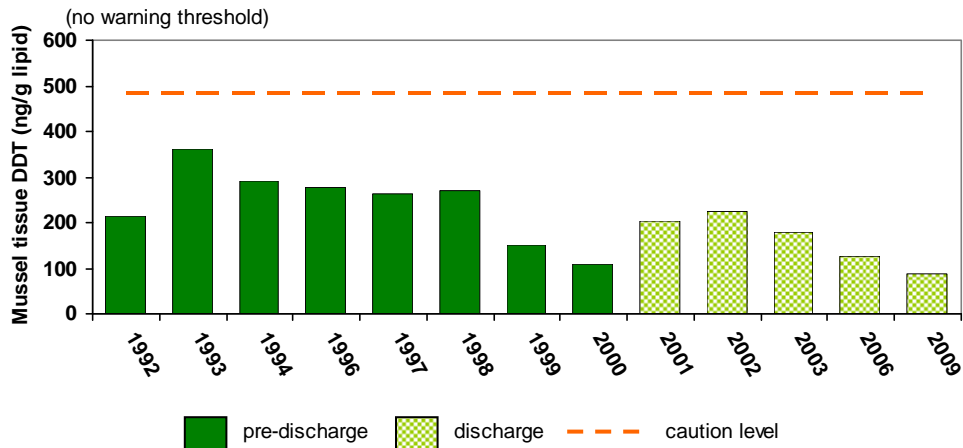
MUSSELS

Mussels from a clean site were deployed in cages near the outfall from June-August 2009. Measured mussel bioaccumulation levels were as low or lower than in previous discharge years.

Chlordane

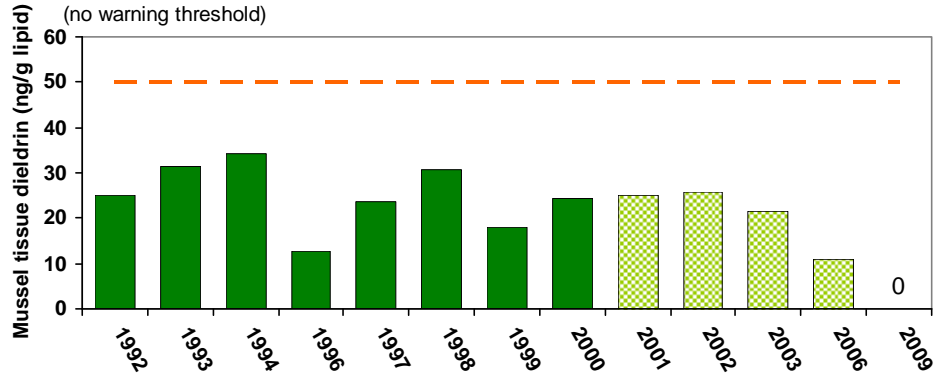


DDT

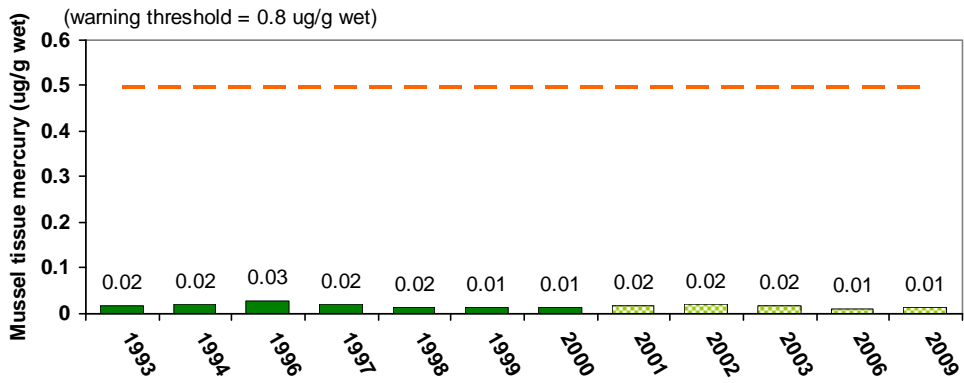


Mussel tissue contaminant levels (continued on next page)

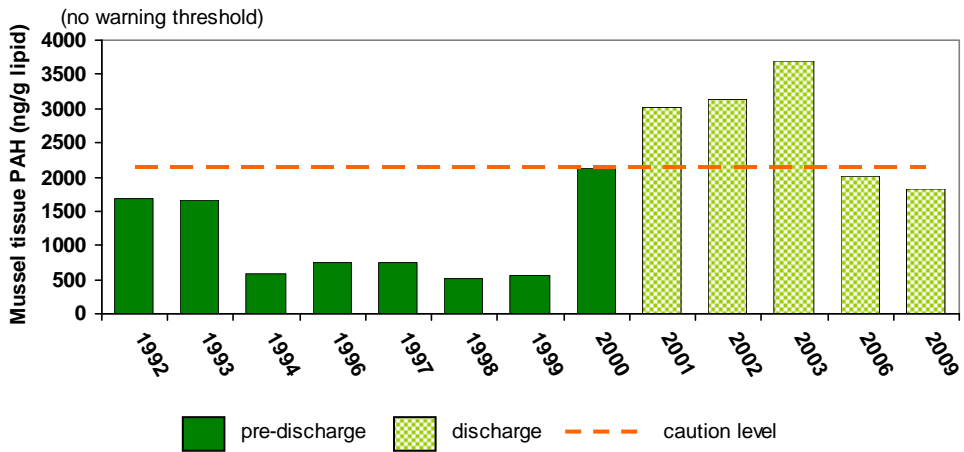
Dieldrin



Mercury

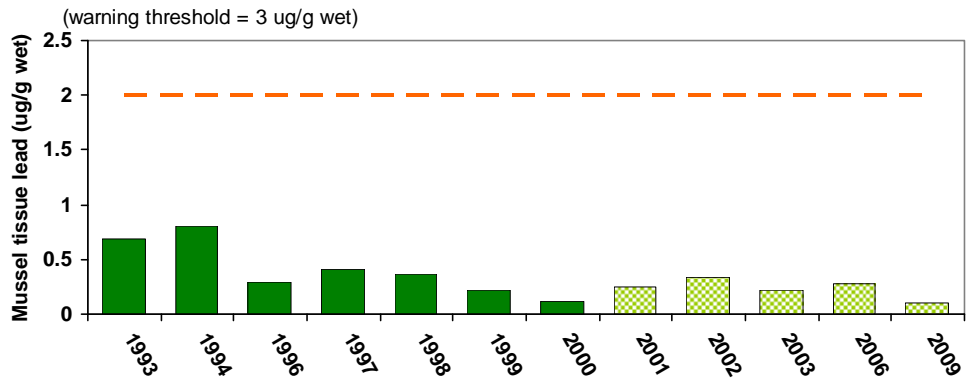


PAHs

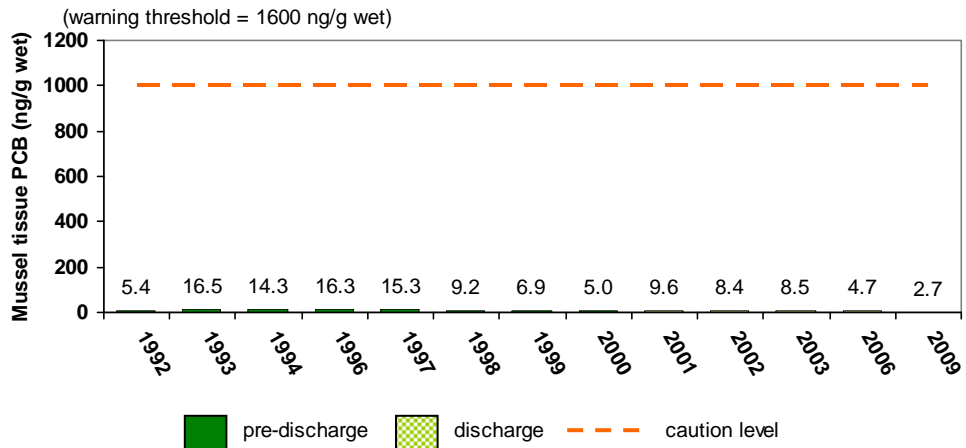


Mussel tissue contaminant levels (continued on next page)

Lead



PCBs

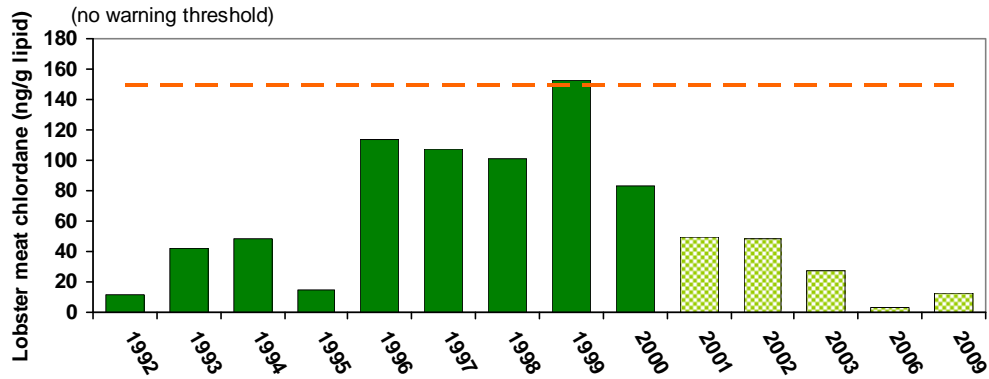


Mussel tissue contaminant levels (continued)

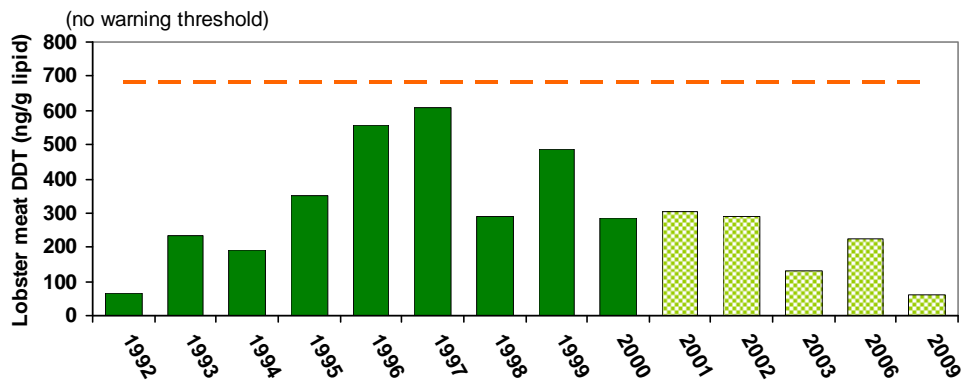
LOBSTER

Lobster were sampled at the outfall site in September 2009. Lobster meat contamination remained low and similar to other years.

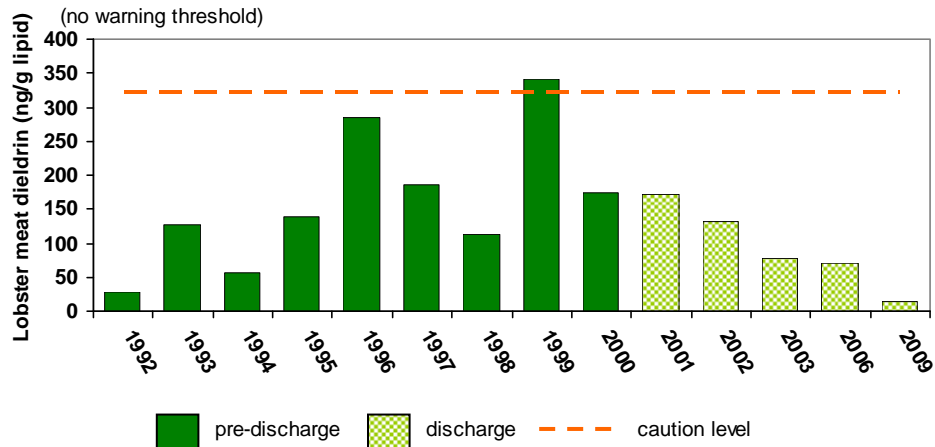
Chlordane



DDT

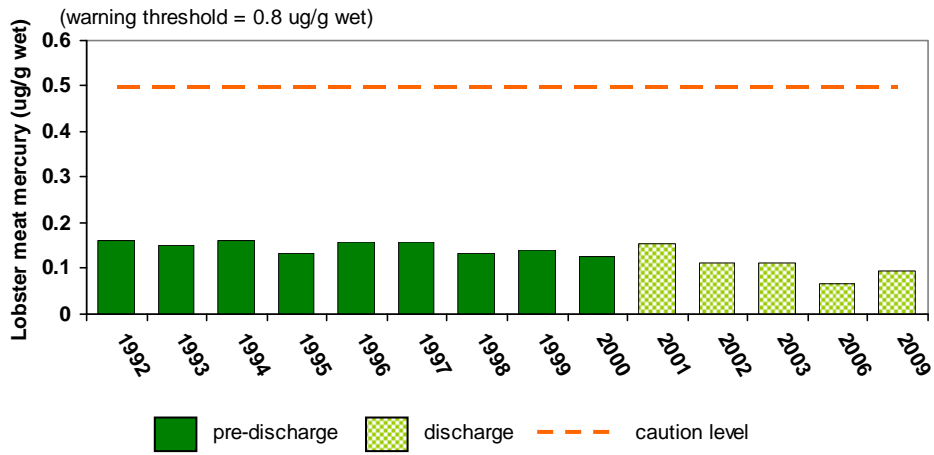


Dieldrin

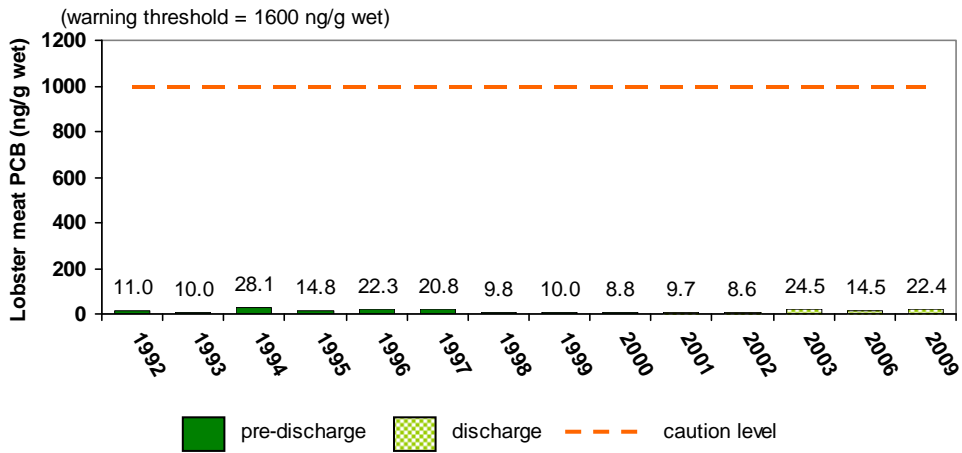


Lobster tissue contaminant levels (continued on next page)

Mercury



PCBs¹



Lobster tissue contaminant levels (continued)

¹ Although the value was still well below the threshold, one of three replicates from the outfall site (and also one from Deer Island) had elevated concentrations of PCBs in both the meat and hepatopancreas, compared to other replicates from those sites. The concentrations are similar to those observed in 2003, when analysis of tissue from individual lobsters from the replicate indicated that the source was one lobster with high tissue burdens.

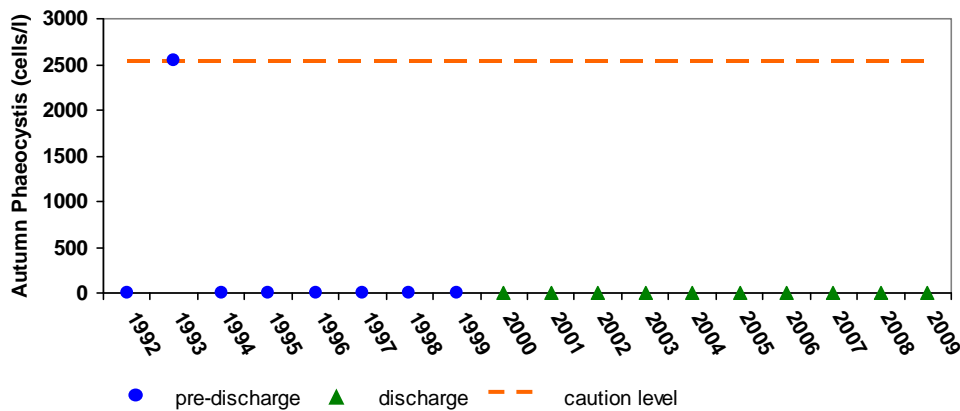
NUISANCE ALGAE – Autumn 2009

In the figures below, we compare *Phaeocystis* and *Pseudonitzschia* data to the seasonal [nuisance algae thresholds](#) for autumn 2009 (September through November), which included four surveys. We also compare *Alexandrium* data to the per-sample threshold for each sample in September through November 2009.

There were no threshold exceedances for *Phaeocystis*, *Pseudonitzschia*, or *Alexandrium*.

PHAEOCYSTIS

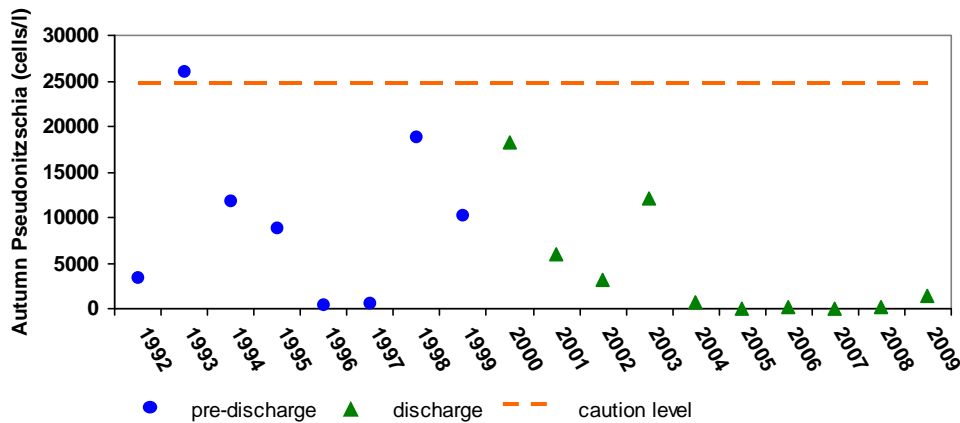
Phaeocystis was not observed in the nearfield in autumn 2009.



Autumn <i>Phaeocystis</i> mean abundance (cells/liter)	
Caution threshold	2,540
Autumn 2009	0

PSEUDONITZSCHIA

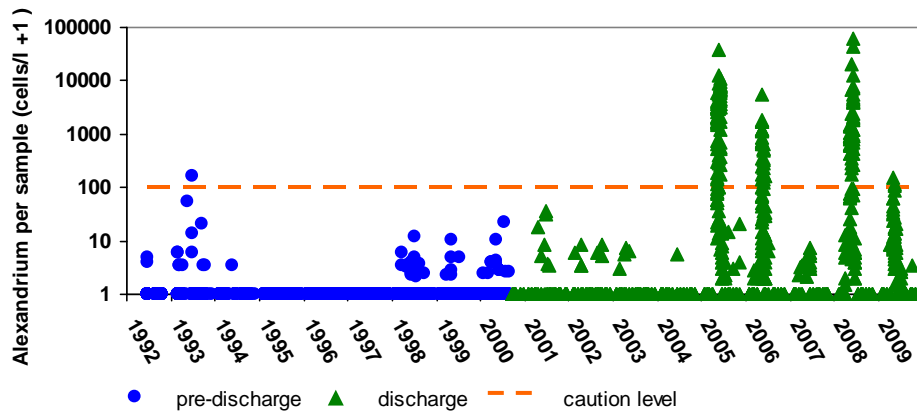
Pseudonitzschia was observed at very low levels in the nearfield in autumn 2009.



Autumn <i>Pseudonitzschia</i> mean abundance (cells/liter)	
Caution threshold	24,700
Autumn 2009	1,460

ALEXANDRIUM

Alexandrium was observed in one nearfield sample in autumn 2009, at low abundance well below the threshold.



Autumn <i>Alexandrium</i> per-sample abundance (cells/liter)	
Caution threshold	100
Autumn 2009	2.4*

* maximum of all samples collected between September 1, 2009 and December 31, 2009