

**Contingency Plan Quarterly Report  
on Ambient Monitoring Results  
First Quarter 2018**

MWRA gathers data near the outfall discharge location in Massachusetts Bay on various thresholds in the Contingency Plan related to its Deer Island Treatment Plant (DITP) NPDES discharge permit. This report includes ambient Contingency Plan threshold results for monitoring data that became available January through March 2018. These include results for nearfield sediment contaminant chemistry from samples collected in August 2017. There were no Contingency Plan threshold exceedances for any of these results. No threshold-related data from 2018 were available at the time of this report.

Previous Contingency Plan reports are available at:

<http://www.mwra.state.ma.us/harbor/html/archive.htm#cpq>.

**SEDIMENT CONTAMINATION - 2017**

Sediment contamination levels at the outfall site in 2017 were well below the thresholds.

The sediment contamination thresholds would indicate any unexpected accumulation of toxic contaminants in soft sediments near the outfall. Contaminant levels are compared to sediment guidelines issued by the National Oceanic and Atmospheric Administration (NOAA). These NOAA "Effects Range-Medium" (ER-M) levels indicate toxic contaminant concentrations above which adverse effects on marine life are often detected. Baseline sediment contamination levels are all well below the ER-M levels for all contaminants.

In 2017, contaminant levels were within or below the baseline (pre-discharge) range. This continues the pattern consistently seen since the outfall went on-line: little to no change in sediment contaminant levels at sites potentially affected by the discharge.

	Parameter	Baseline Range	Warning Level Threshold	2017 Result
<b>Polycyclic Aromatic Hydrocarbons (PAHs) (ng/g dry weight)</b>	acenaphthene	22.7 - 43.5	500	24.8
	acenaphthylene	30.3 - 43.1	640	24.5
	anthracene	101 - 159	1,100	86.2
	benz(a)anthracene	206 - 302	1,600	230
	benzo(a)pyrene	204 - 298	1,600	145
	chrysene	164 - 296	2,800	191
	dibenzo(a,h)anthracene	27.8 - 38.3	260	34.1
	fluoranthene	422 - 621	5,100	308
	fluorene	35.5 - 66.6	540	29.1
	naphthalene	53.6 - 103	2,100	36.4
	phenanthrene	273 - 431	1,500	220
	pyrene	412 - 579	2,600	281
	sum high molecular-weight PAH	2,790 - 3,850	9,600	2,450
	sum low molecular-weight PAH	1,390 - 1,630	3,160	870
	total PAH	4,180 - 5,400	44,792	3,320
<b>Other Organic Contaminants (ng/g dry weight)</b>	p,p'-DDE <sup>1</sup>	0.386 - 1	27	0.209
	total DDT <sup>2</sup>	2.51 - 5.69	46.1	0.321
	total PCB <sup>3</sup>	10.2 - 20.2	180	4.78
<b>Metals (µg/g dry weight)</b>	cadmium	0.073 - 0.185	9.6	0.0547
	chromium	59.2 - 79.9	370	27
	copper	19.1 - 25.2	270	11
	lead	41.1 - 46.3	218	23
	mercury	0.159 - 0.353	0.71	0.153
	nickel	15.7 - 17.2	51.6	9.4
	silver	0.335 - 0.485	3.7	0.142
	zinc	49.5 - 57.5	410	33.3

<sup>1</sup> dichloro-diphenyl-dichloroethylene

<sup>2</sup> dichloro-diphenyl-trichloroethane

<sup>3</sup> Poly-chlorinated biphenyl