

**Table 13.** Concentrations of metals and trace elements in environmental and replicate bed-sediment samples collected from the harbors and bays in New Jersey and New York during the Hurricane Sandy reconnaissance study, June–October 2013.

[Map location number refers to figures 2 and 3. Concentrations are in milligrams per kilogram, dry weight. Samples analyzed at the Institute for Integrated Research in Materials, Environments and Society (IIRMES) laboratory in Long Beach, California, and archived in the U.S. Environmental Protection Agency STORage and RETrieval (STORET) Data Warehouse. ND, not detected above reporting limit]

Site code	Sample date	Map location number	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Iron	Lead	Manganese	Mercury	Molybdenum	Nickel	Selenium	Silver	Strontium	Thallium	Tin	Titanium	Vanadium	Zinc	
Cape May region																										
NCA10-1625/BBC/SJ10	8/13/2013	1	37,121	0.100	2.00	407	0.80	0.100	22.3	3.90	2.00	12,746	10.4	326	0.030	0.400	5.90	0.100	0.100	218	0.200	0.900	4,189	32.6	22.3	
BBE/SJ13	8/13/2013	2	47,260	0.100	3.10	484	1.00	0.100	33.7	5.20	4.30	16,996	12.1	378	0.040	0.500	9.90	0.100	0.200	291	0.200	1.30	4,187	43.7	35.3	
BBG/SJ11	8/13/2013	3	45,595	0.100	2.90	467	1.10	0.100	34.3	5.30	3.40	14,384	14.0	301	0.020	0.400	13.1	0.100	0.200	280	0.300	1.20	3,470	43.3	31.8	
BBH/SJ12	8/13/2013	4	45,381	0.200	6.20	393	1.10	0.200	49.1	6.80	10.4	21,029	18.4	287	0.130	1.40	16.1	0.300	0.200	204	0.300	2.20	3,061	57.8	52.9	
BBM/SJ9	8/13/2013	5	38,810	0.200	5.20	382	1.10	0.300	40.4	5.80	9.10	15,393	19.9	243	0.080	1.10	12.5	0.200	0.200	209	0.400	4.80	2,541	48.8	46.4	
Atlantic City region																										
NCA10-1616/BBA/SJ7	8/12/2013	6	39,618	0.200	4.90	419	1.00	0.100	29.9	4.80	4.70	14,229	16.5	289	0.050	0.500	9.40	0.200	0.200	229	0.300	1.40	3,116	38.3	35.4	
NCA10-1623/BBB/SJ6	8/12/2013	7	17,321	1.50	6.70	140	0.60	3.70	91.7	4.70	132	12,795	122	177	0.480	1.70	26.4	0.600	2.50	41.2	0.400	16.7	1,434	34.7	242	
BBL/SJ8	8/12/2013	8	43,483	0.200	4.60	423	1.10	0.200	37.6	5.50	6.90	16,398	18.4	292	0.040	0.800	11.7	0.200	0.200	248	0.400	1.60	2,980	46.0	43.5	
Great Bay region																										
NCA10-2622/BBD/SJ2	8/2/2013	9	94,610	0.400	12.1	851	1.70	0.300	82.3	11.2	14.3	44,324	38.8	960	0.140	2.10	22.5	0.400	0.500	463	0.400	5.10	16,261	118	83.3	
BBF/SJ1	8/2/2013	10	31,495	0.400	8.90	263	0.800	0.200	42.5	5.30	10.4	22,133	24.2	600	0.100	1.50	12.8	0.300	0.300	176	0.200	3.10	9,844	60.0	56.6	
BBI/SJ4	8/2/2013	11	74,564	0.150	5.70	505	1.25	0.200	43.1	6.55	6.00	23,211	16.5	467	0.100	0.850	13.7	0.200	0.200	397	0.300	1.85	4,171	54.7	40.8	
BBJ/SJ3	8/12/2013	12	51,146	0.200	8.60	439	1.40	0.300	59.5	9.00	12.1	27,361	251	426	0.120	1.40	22.9	0.300	0.400	273	0.700	2.70	4,028	69.6	67.2	
BBK/SJ5	8/12/2013	13	41,347	0.100	2.10	439	0.900	0.100	22.0	3.60	2.50	11,546	11.2	252	0.020	0.300	6.80	0.100	0.100	265	0.300	0.800	2,634	28.8	21.2	
NOAA9	9/13/2013	14	22,163	0.200	5.40	147	0.500	0.100	36.0	4.10	8.40	15,943	13.4	216	0.090	1.00	10.3	0.200	0.100	94.1	0.100	1.50	4,981	44.9	37.0	
Barnegat Bay region																										
BB01	7/26/2013	16	6,395	0.500	4.80	61.7	0.200	0.200	44.8	7.40	10.2	52,471	39.2	1,573	0.010	3.50	2.50	0.100	0.500	25.1	ND	5.10	56,091	156	55.1	
BB02	7/31/2013	17	74,719	0.300	8.60	645	1.40	0.300	52.1	7.80	16.7	31,461	31.6	640	0.220	1.20	14.3	0.300	0.200	323	0.300	3.00	8,135	73.6	79.9	
BB03	7/31/2013	18	75,842	0.400	12.8	0.057	1.80	0.400	73.0	10.0	26.4	36,623	44.1	533	0.650	1.75	21.6	0.500	0.350	312	0.350	4.10	5,875	90.5	115	
BB05A	7/31/2013	19	36,724	0.400	6.00	206	0.400	0.100	22.3	3.60	7.30	18,525	21.9	621	0.09	1.60	6.90	0.100	0.200	73.2	0.100	2.70	19,177	55.8	33.9	
BB06	7/31/2013	20	57,328	0.500	7.80	653	1.20	0.300	44.3	6.00	11.9	24,437	36.4	636	0.120	2.60	10.6	0.300	0.300	280	0.400	3.80	17,762	79.0	87.9	
BB07A	7/31/2013	21	74,814	0.350	9.45	601	1.65	0.450	75.4	9.15	15.6	34,273	30.8	619	0.360	1.40	20.7	0.250	0.350	325	0.350	4.45	6,928	92.5	861	
BB09	7/30/2013	22	66,474	0.250	7.80	565	1.35	0.200	52.2	6.75	11.3	24,994	24.0	464	0.210	1.05	15.1	0.400	0.250	312	0.350	2.70	6,034	67.0	52.9	
BB10	7/24/2013	23	67,361	0.200	7.10	576	1.30	0.200	50.7	6.90	8.70	27,276	20.9	540	0.080	1.30	14.5	0.200	0.200	355	0.300	2.40	8,708	67.4	48.1	
BB11	7/29/2013	24	97,870	0.400	36.9	800	2.10	0.300	1.70	1.10	3.10	38,401	35.4	638	0.180	2.80	1.20	0.300	0.400	452	0.500	3.80	6,196	1.60	2.60	
BB13	7/29/2013	25	83,517	0.250	8.90	613	1.75	0.300	78.9	10.5	14.3	39,355	25.4	723	0.280	1.45	23.8	0.350	0.400	396	0.350	3.50	6,504	96.7	71.3	
MANA1	8/8/2013	26	37,585	0.500	7.90	316	1.40	0.500	60.6	7.00	30.8	27,163	32.9	291	0.180	1.90	17.9	0.400	0.500	145	0.400	4.00	4,211	64.9	103	
MANA2	8/8/2013	27	47,093	0.900	16.3	291	1.60	1.00	101	9.70	86.0	37,699	70.4	291	1.03	3.10	29.0	0.800	1.00	143	0.600	8.30	3,631	92.5	212	
NOAA3	8/26/2013	28	43,365	0.600	20.9	201	1.10	0.700	59.0	6.50	96.0	47,422	59.8	226	0.740	3.60	19.0	1.00	0.400	148	0.300	3.70	4,281	80.8	240	
NOAA3 <sup>1</sup>	8/26/2013	28	42,205	0.560	19.5	234	1.16	0.600	66.9	7.00	93.7	42,736	55.6	220	0.780	2.60	20.2	1.00	0.520	144	0.280	3.60	4,114	82.7	220	
NOAA4	8/26/2013	29	4,614	0.200	3.70	4.10	0.200	0.200	8.60	1.20	14.8	7,130	16.1	22.0	2.47	0.500	3.40	0.300	0.100	23.6	0.100	0.700	430	13.1	33.7	
NOAA10	9/13/2013	30	58,949	0.300	10.6	423	1.10	0.400	67.6	8.20	18.9	30,314	2.10	371	0.190	1.60	20.5	0.300	0.300	256	0.300	2.60	3,537	79.9	74.5	
Northeast New Jersey shore region																										
NAV1	8/6/2013	31	51,372	0.800	19.0	664	1.90	1.00	97.7	8.90	18.4	49,003	46.4	600	0.320	1.40	13.9	0.400	0.400	448	0.500	5.10	5,416	86.2	158	
NAV2	8/6/2013	32	42,685	1.40	28.8	246	2.20	1.40	118	10.8	97.6	86,176	132	225	0.810	1.90	81.4	1.30	0.900	87.1	0.500	10.0	2,819	115	348	
NOAA1	8/6/2013	33	62,010	1.50	27.1	238	2.20	1.20	143	14.1	108	82,308	113	558	1.27	2.60	38.6	1.60	1.60	135	0.500	10.9	3,044	149	364	

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[Map location number refers to figures 2 and 3. Concentrations are in milligrams per kilogram, dry weight. Samples analyzed at the Institute for Integrated Research in Materials, Environments and Society (IIRMES) laboratory in Long Beach, California, and archived in the U.S. Environmental Protection Agency STORage and RETrieval (STORET) Data Warehouse. ND, not detected above reporting limit]

Site code	Sample date	Map location number	Aluminum	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Iron	Lead	Manganese	Mercury	Molybdenum	Nickel	Selenium	Silver	Strontium	Thallium	Tin	Titanium	Vanadium	Zinc	
Northeast New Jersey shore region—Continued																										
NOAA2	8/15/2013	34	9,851	0.200	6.40	49.0	0.900	ND	35.3	3.00	2.20	33,475	6.00	300	0.020	0.200	4.50	0.100	ND	29.5	ND	0.500	1,057	27.0	30.0	
NOAA2 <sup>1</sup>	8/15/2013	34	14,403	0.200	5.30	62.8	0.600	0.100	27.1	2.40	3.10	35,350	6.70	252	0.050	0.200	3.60	0.100	0.100	30.0	0.100	0.600	1,188	23.6	31.7	
SHARK1	8/15/2013	35	57,447	0.700	14.7	346	1.70	1.50	117	10.5	70.0	44,158	72.2	342	1.13	5.50	32.0	0.900	1.30	136	0.700	11.1	3,843	111	206	
SHARK1 <sup>1</sup>	8/15/2013	35	58,302	0.800	16.4	290	1.70	1.20	119	10.2	67.5	43,683	69.6	347	0.970	3.80	34.1	1.10	1.20	143	0.500	7.90	2,963	119	195	
SHREW1	8/7/2013	36	34,183	1.10	21.4	261	1.60	0.700	99.4	9.40	73.4	45,072	69.1	323	0.490	2.70	21.9	1.00	0.600	128	0.400	6.20	3,322	91.9	231	
SHREW2	8/7/2013	37	12,546	0.400	5.20	111	0.500	0.400	32.3	2.70	26.2	14,522	36.3	83.7	0.170	0.800	7.20	0.400	0.200	38.3	0.200	2.50	1,172	27.3	93.8	
Jamaica Bay region																										
NOAA5	9/4/2013	144	30,843	0.100	3.60	232	0.700	0.200	30.0	3.60	7.40	16,540	11.5	449	0.030	1.00	7.80	0.100	0.100	155	0.100	1.20	3,851	37.5	35.2	
NOAA6	9/4/2013	145	22,638	0.100	2.80	170	0.600	0.200	20.6	2.70	5.40	9,060	14.6	292	0.060	0.400	5.30	0.100	0.100	127	0.100	1.40	2,671	28.1	30.2	
Western Bays region																										
BHB01	9/5/2013	146	39,200	ND	1.50	252	0.300	ND	31.8	2.50	11.6	17,790	17.1	449	0.170	ND	7.00	ND	0.300	117	ND	1.50	5,128	36.9	45.5	
BMB01	9/12/2013	147	57,850	0.500	12.9	356	1.70	0.650	71.9	8.40	42.9	33,367	46.2	586	0.610	2.25	21.1	0.900	0.450	169	0.400	6.40	4,831	88.7	110	
HHB01	9/9/2013	148	37,314	0.400	7.90	282	1.50	0.500	57.8	6.40	33.8	20,571	34.8	400	0.220	2.50	15.6	0.700	0.600	138	0.300	5.30	4,016	65.4	84.9	
HHB01 <sup>1</sup>	9/9/2013	148	42,149	0.400	9.70	258	1.70	0.500	73.1	8.00	43.6	31,421	39.9	431	0.320	2.80	19.8	0.600	0.800	134	0.300	4.50	3,906	81.3	112	
RC01	9/5/2013	149	33,020	ND	4.00	274	0.500	ND	42.9	4.00	17.1	17,700	21.5	548	0.180	ND	10.7	ND	0.400	138	ND	2.90	4,099	50.0	67.7	
RC02	9/12/2013	150	29,135	0.200	4.60	234	1.20	0.200	28.2	3.80	6.80	14,618	17.4	684	0.050	0.800	5.90	0.200	0.200	108	0.200	1.80	5,739	43.1	32.6	
RC03	9/12/2013	151	70,735	0.900	14.6	449	2.05	0.950	88.6	10.5	41.3	40,509	54.3	784	0.720	3.40	26.8	0.950	0.700	219	0.550	9.85	6,449	110	120	
Great South Bay region																										
GSB01	8/26/2013	152	10,680	ND	0.300	123	0.200	ND	5.20	0.200	1.50	2,118	5.70	465	0.010	ND	0.800	ND	ND	49.3	ND	ND	960	7.70	6.80	
GSB02	8/26/2013	153	35,570	ND	9.20	289	0.800	ND	45.0	5.20	25.8	20,360	33.8	594	0.150	0.700	13.6	ND	0.300	143	ND	3.20	2,358	65.5	85.7	
GSB03	8/27/2013	154	40,420	ND	9.00	297	0.900	ND	48.5	6.20	31.8	22,500	36.5	1,867	0.250	ND	13.7	ND	0.300	162	ND	3.80	3,203	63.0	120	
GSB04	8/9/2013	155	11,460	ND	0.300	112	ND	ND	7.40	0.100	1.70	3,680	5.10	230	0.010	ND	0.600	ND	ND	46.7	ND	ND	1,483	10.2	7.80	
GSB05	8/16/2013	156	17,480	ND	0.600	128	0.100	ND	9.20	0.400	2.50	5,454	6.50	349	0.030	ND	1.20	ND	0.100	54.2	ND	ND	2,510	13.2	12.1	
GSB05 <sup>1</sup>	8/16/2013	156	15,020	ND	1.10	150	0.100	ND	10.6	0.700	3.60	4,690	8.10	378	0.030	ND	3.60	ND	0.100	62.2	ND	ND	1,888	14.8	14.8	
GSB06	8/16/2013	157	22,750	ND	7.30	147	0.100	ND	21.3	2.10	18.6	14,320	13.7	1,160	0.090	ND	5.40	ND	0.100	99.9	ND	0.600	2,024	29.8	59.3	
GSB07	8/7/2013	158	9,833	ND	0.100	219	ND	ND	16.0	0.400	4.20	3,453	9.50	371	0.030	ND	2.20	ND	0.100	91.4	ND	ND	1,335	22.8	21.2	
MB01	8/6/2013	159	8,154	ND	ND	83.2	ND	ND	4.50	ND	0.800	4,243	2.00	258	ND	ND	0.100	ND	ND	42.9	ND	ND	1,280	7.30	3.90	
MB02	8/6/2013	160	12,010	ND	1.10	93.4	0.100	ND	9.80	0.700	3.10	5,748	6.60	145	0.030	ND	2.30	ND	0.100	39.1	ND	0.100	1,335	13.9	13.2	
NOAA7	9/11/2013	161	10,432	0.100	2.10	77.4	0.400	0.100	10.5	1.50	4.70	4,270	9.20	142	0.040	0.500	2.90	0.100	0.100	69.5	0.100	0.700	948	15.6	18.0	
NOAA8	9/11/2013	162	9,760	ND	1.20	78.3	0.300	ND	5.60	0.800	1.60	3,825	4.30	162	0.010	0.200	1.20	ND	ND	38.5	ND	0.300	1,442	8.70	6.60	
SOB01	8/7/2013	163	28,950	ND	1.80	226	0.300	ND	22.1	1.90	5.50	12,980	10.4	548	0.050	ND	4.10	ND	0.100	110	ND	0.400	4,626	31.7	32.0	
Peconic Bay region																										
FB01	8/2/2013	164	2,994	ND	ND	40.1	ND	ND	1.20	ND	0.600	1,287	0.460	84.1	ND	ND	ND	ND	ND	11.7	ND	ND	333	2.00	16.0	
FB02	8/5/2013	165	31,030	ND	3.5	143	0.3	ND	25.4	3.10	13.0	23,590	13.2	270	0.070	ND	15.9	ND	0.200	51.9	ND	0.400	2,122	38.1	45.5	
FB02 <sup>1</sup>	8/5/2013	165	32,450	ND	3.9	154	0.3	ND	29.3	3.40	15.6	24,780	14.9	325	0.070	ND	9.70	ND	0.200	61.6	ND	0.400	2,281	42.5	50.4	
FB03	8/5/2013	166	4,495	ND	ND	48.5	ND	ND	3.80	ND	2.10	2,931	2.20	215	0.010	ND	0.700	ND	ND	69.5	ND	ND	456	6.00	7.90	
PB01	8/2/2013	167	29,550	ND	2.4	202	0.5	ND	26.4	4.20	9.00	16,880	13.4	572	0.040	ND	10.1	ND	0.100	100	ND	0.700	1,812	35.8	41.7	

<sup>1</sup>Field replicate.