New Bedford Harbor Superfund Site

Annual Seafood Monitoring Program

by

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MassDEP

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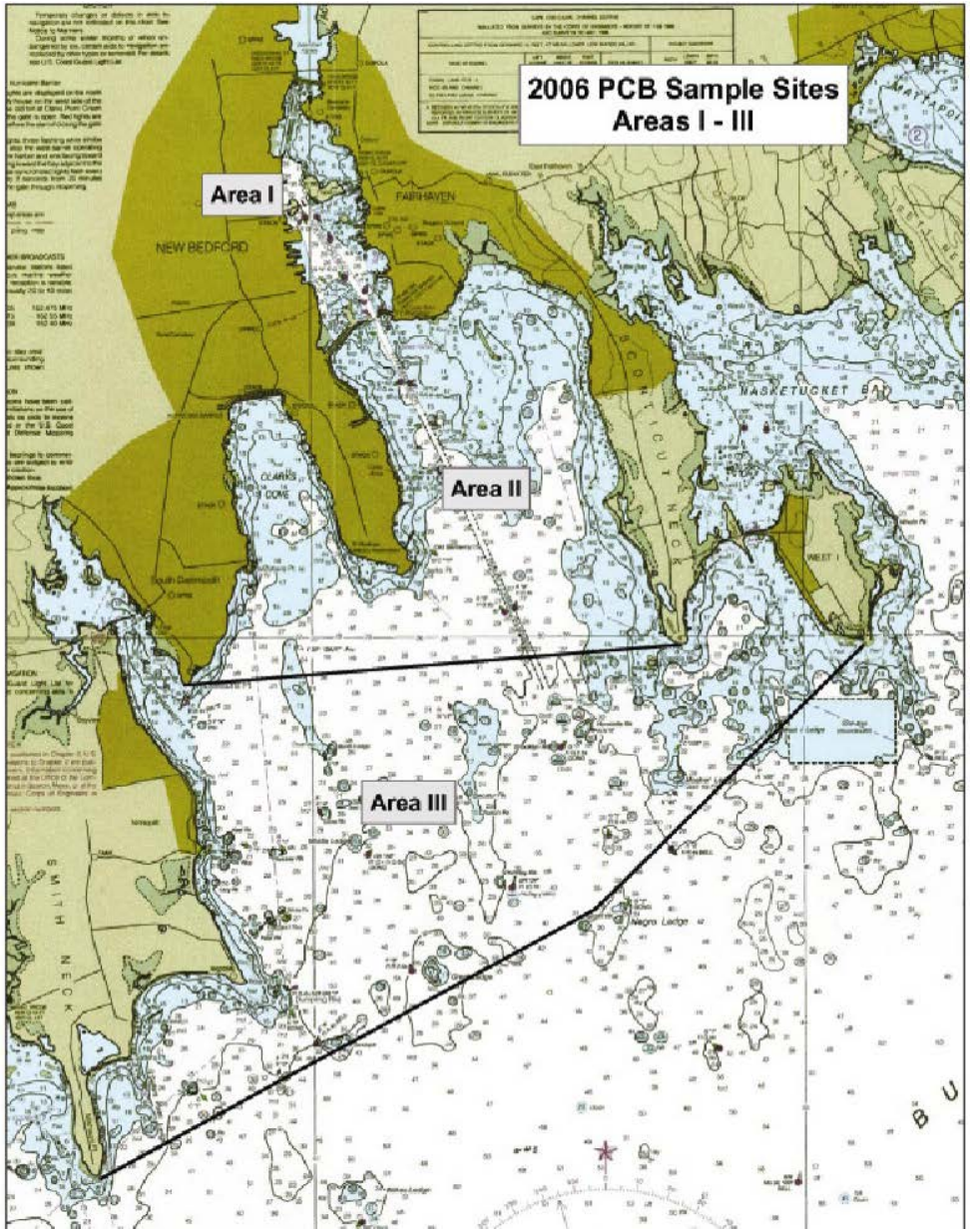
Seafood Monitoring Program Objectives

- **Aid in the evaluation of the overall effectiveness of the harbor cleanup**

- **Assist in the implementation of institutional controls and seafood restrictions**

Annual monitoring started in 2002 and will continue after the Remedial Action is completed



New Bedford Harbor Fish Closure Areas I, II and III

Monitoring Criteria

- **A variety of species were selected that are considered locally caught seafood**
- **Collect legally harvested species samples within Fish Closure Areas I, II, and III**
- **Attempt to sample 5 locations within each Closure Area**
- **Provides sufficient sample size to support future statistical comparison of PCB levels**

PCB Contamination Levels

LEGEND

PCB Levels 0 to 12 inch depth

- <= 10 ppm
- 10 - 50 ppm
- 51 - 500 ppm
- 501 - 4,000 ppm
- > 4,000 ppm

Sample Points (0-12" depth)

- PRE 9/98
- POST 9/98

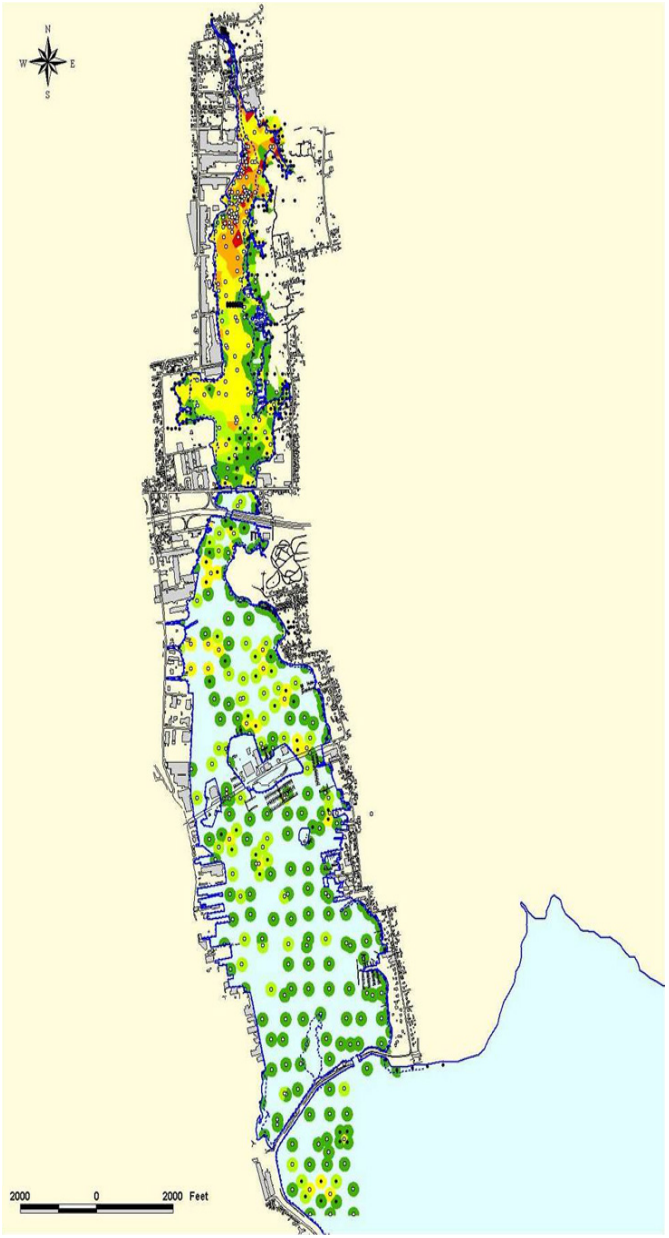
Mean High Water Line
(+ 2.4 ft NGVD)

Mean Lower Low Water Line
(-1.4 ft NGVD)

Paved Road
Unpaved Road

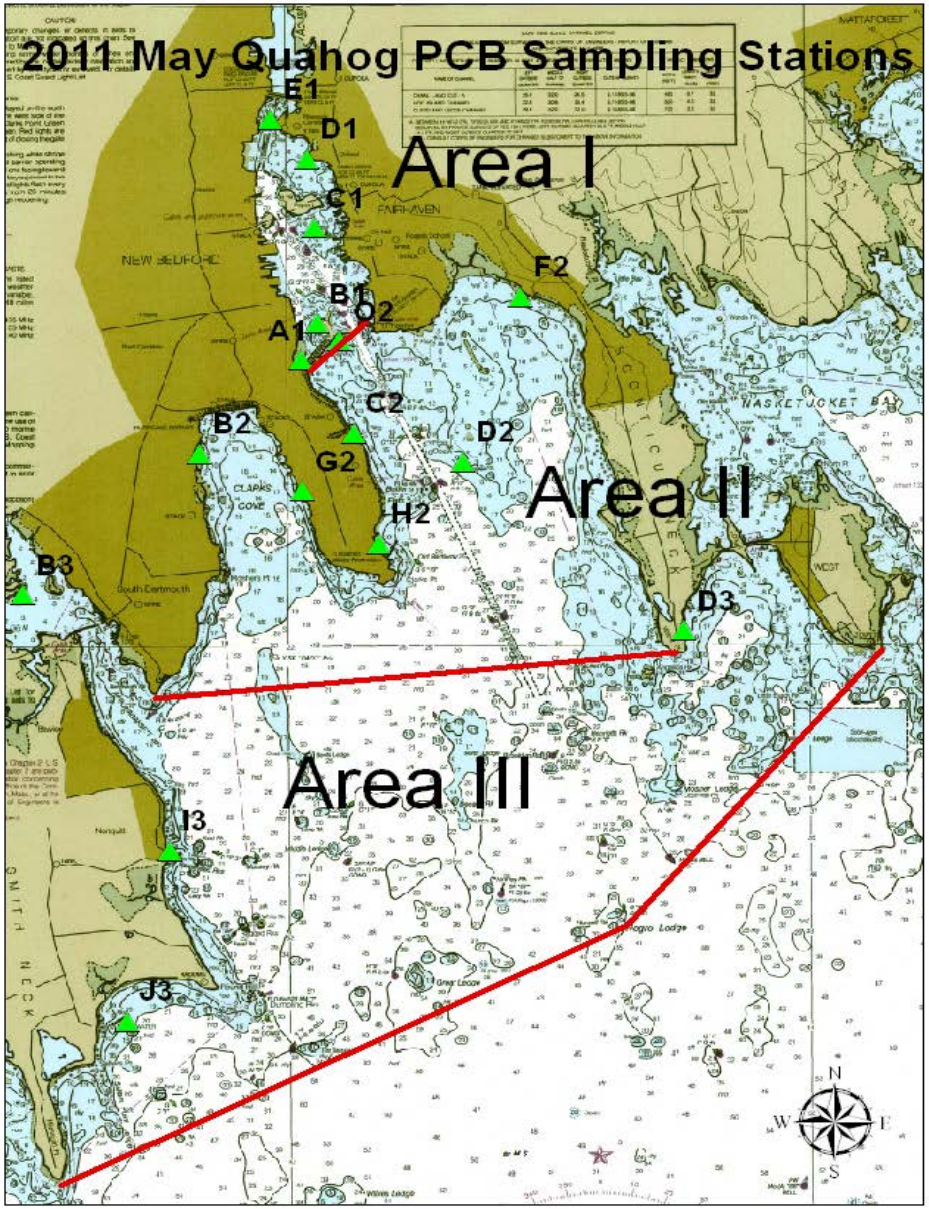
Note:

PCB values were interpolated from the sample points shown on the drawing. PCB values at any location were assumed to be equal to the PCB value of the closest sample point.



Species Collected

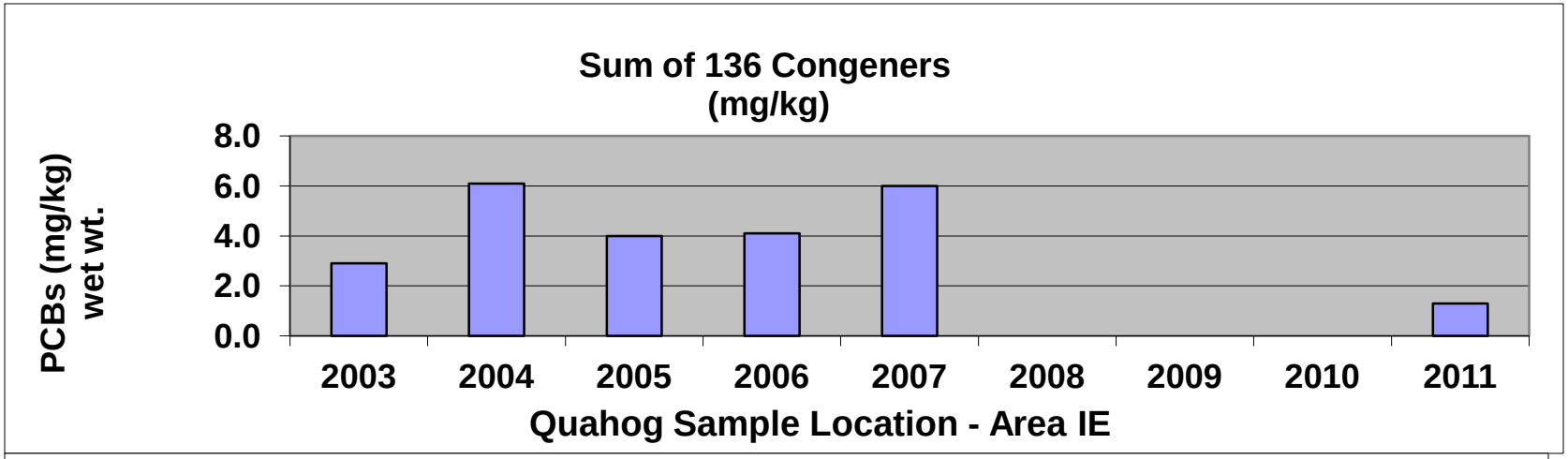
Species	Areas Collected	Years Collected
Flounder	1 to 3	2003 to 2006
Quahog	1 to 3	2002 to 2012
Alewife	1	2005 to 2012
Lobster	1 to 3	2002 to 2007, 2012
American Eel	1 and 2	2002, 2004 to 2007, and 2010
Black Sea Bass	2 and 3	2003 to 2012
Blue Crab	1	2003 to 2007, 2012
Bluefish	2 and 3	2007 to 2012
Scup	2 and 3	2003 to 2012
Conch	2 and 3	2009 to 2012
Striped Bass	2 and 3	2010 to 2012

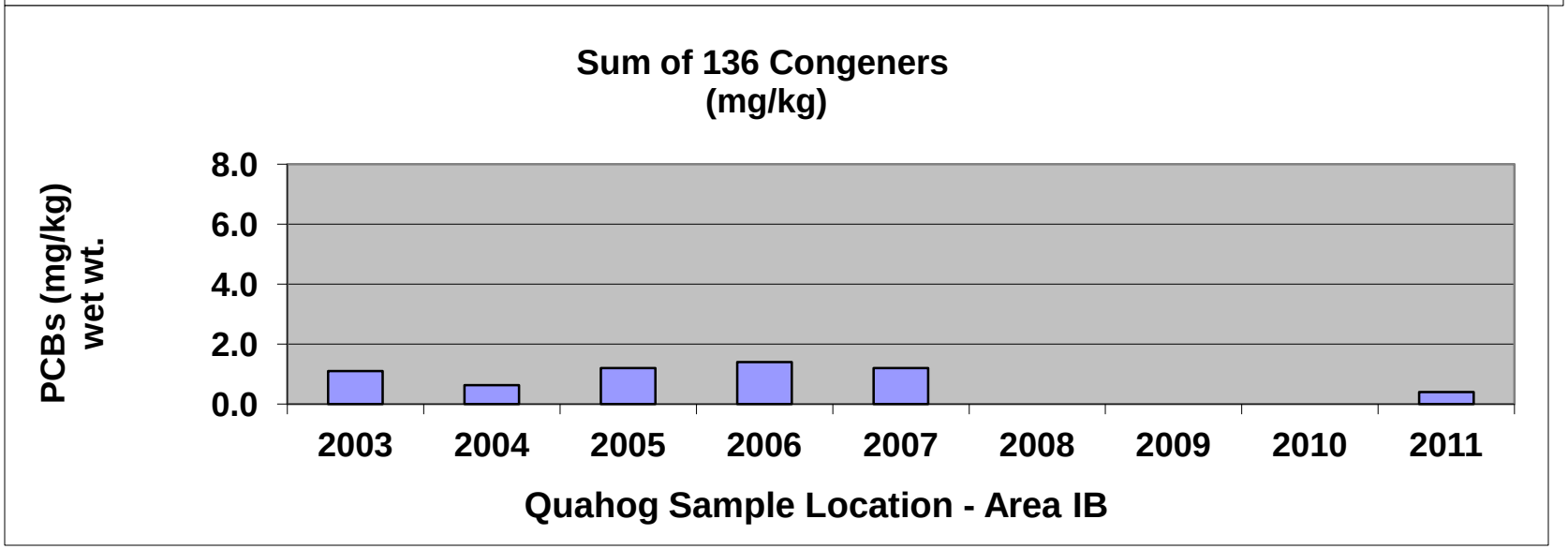


QUAHOG SAMPLE LOCATIONS

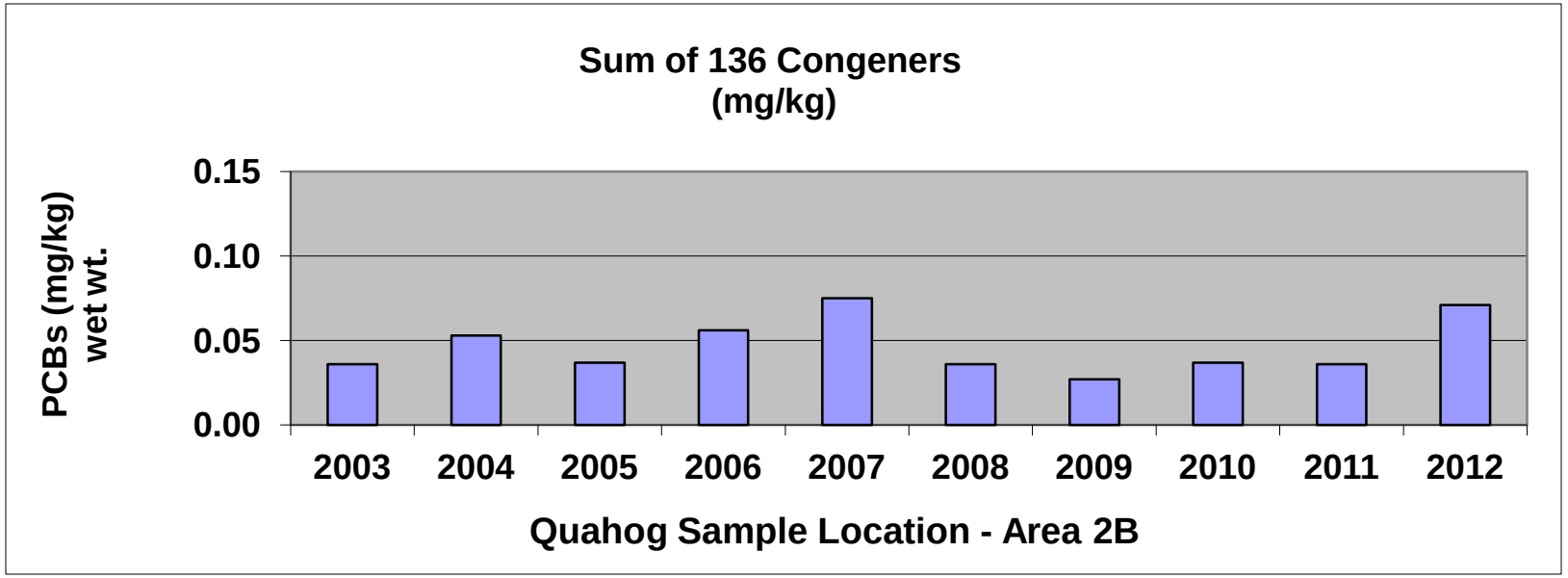
QUAHOG TREND 2003-2011 AREA 1

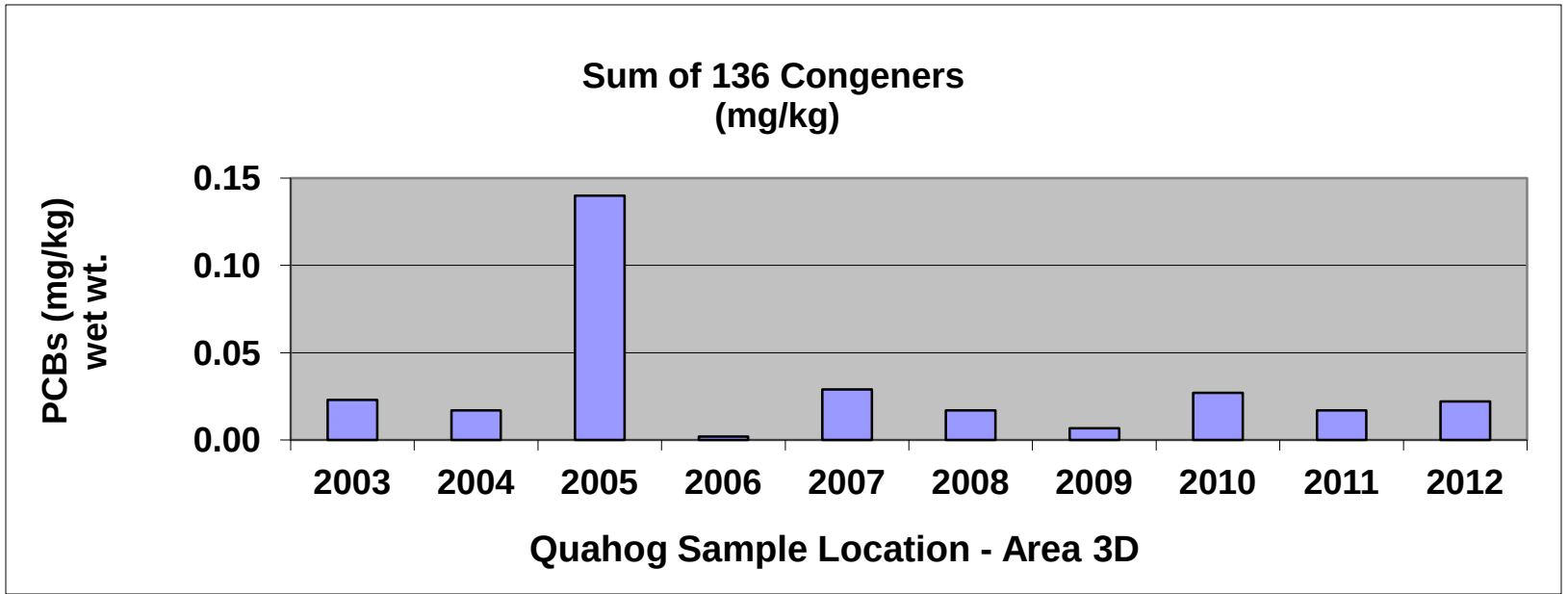
NO SAMPLES IN AREA 1 - YEARS 2008 TO 2010



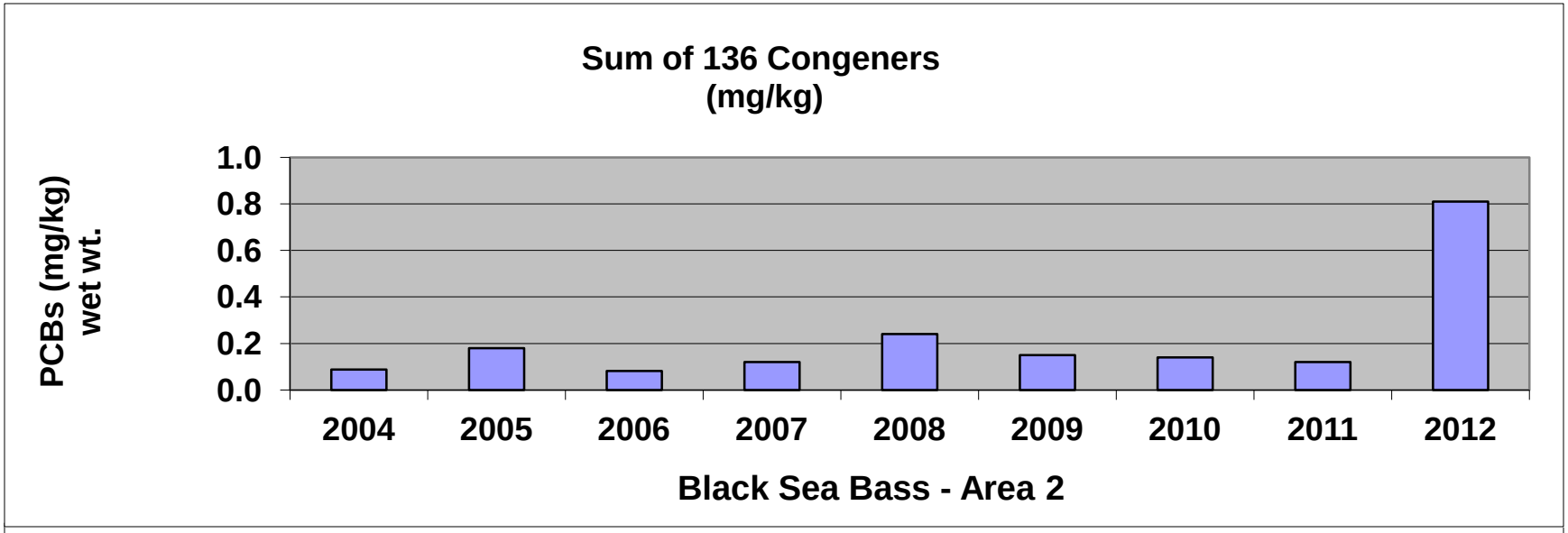


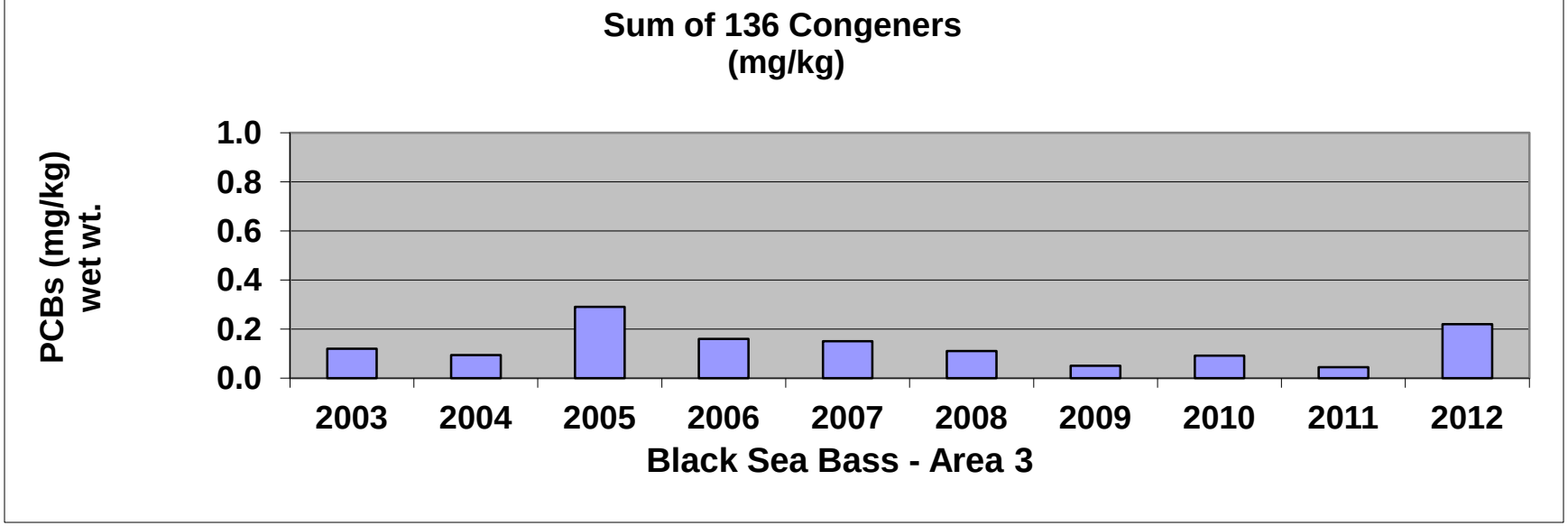
QUAHOG TREND 2003-2011 Area 2 & 3



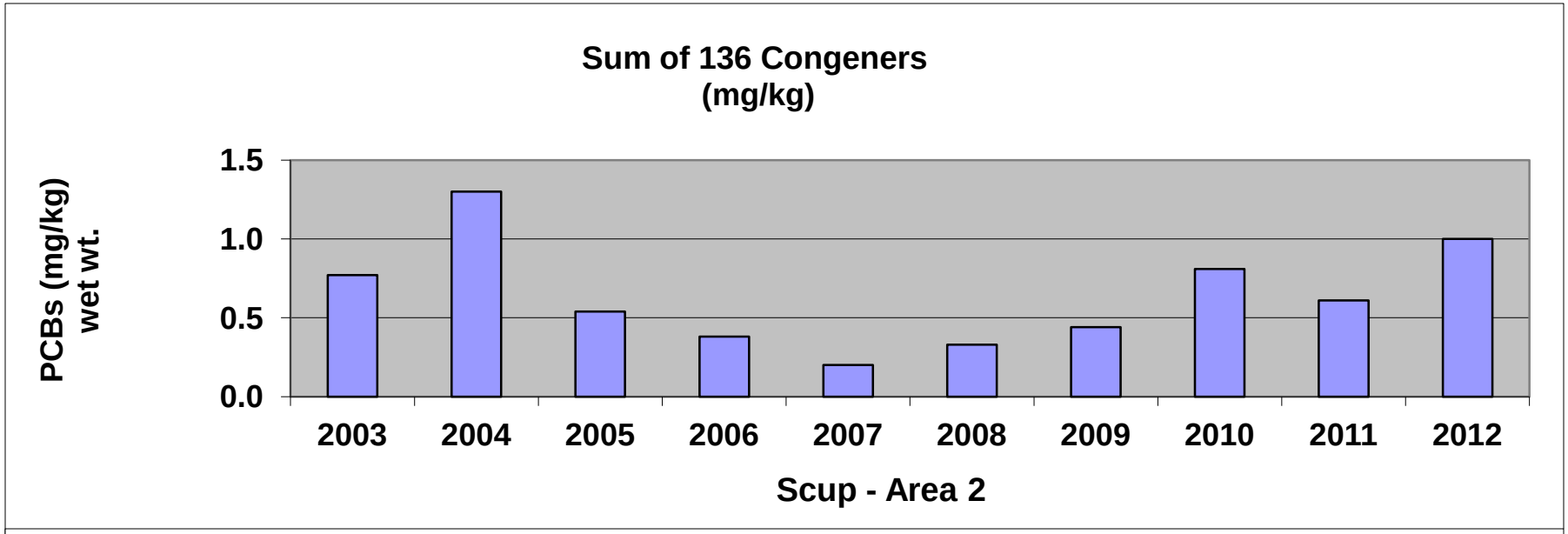


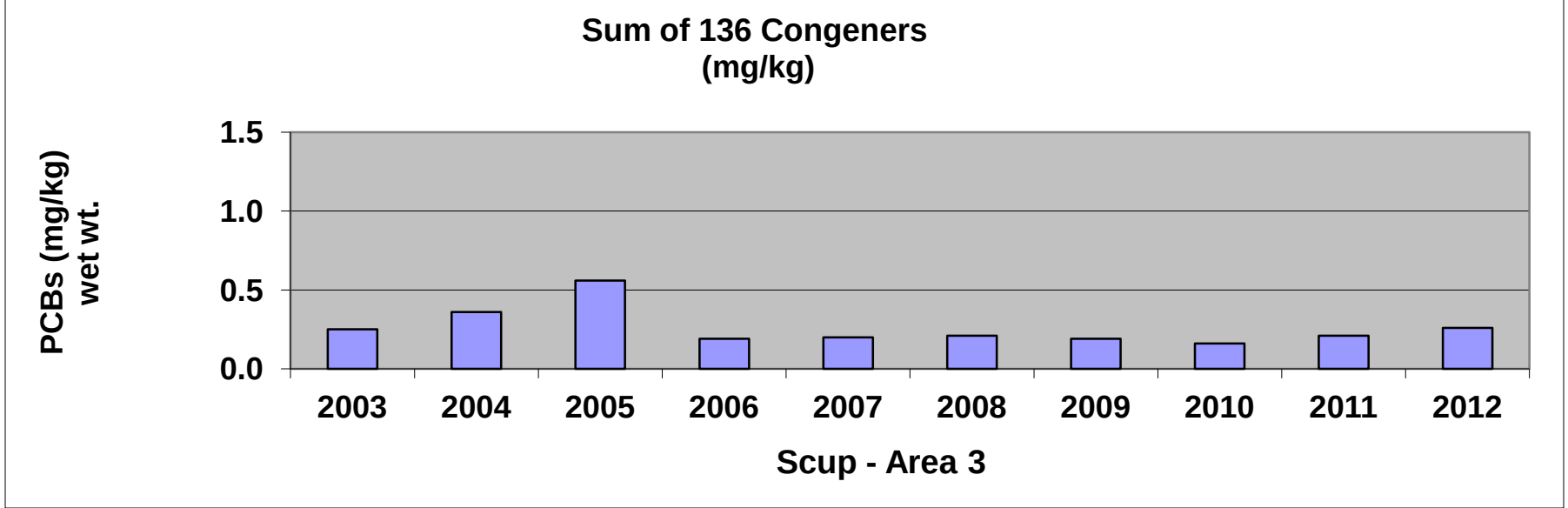
BLACK SEA BASS TREND 2003 – 2012





SCUP TREND 2003 - 2012





PCB CONCENTRATION RANGES ON-SITE

Species	Areas	Area Concentration Range (mg/kg)	Approximate Number of Fish Collected per Year	Years Collected
Flounder	1	2.8	2	1
Flounder	2	0.042 to 2	1	1
Flounder	3	0.35	13	1
Alewife	1	0.17 to 9.5	5	8
American Eel	1	25 to 62	15	5
American Eel	2	7 to 83	3	4
Blue Crab	1	1 to 7	12	6
Bluefish	2	0.11 to 1.3	10	5
Bluefish	3	0.13 to 0.32	10	5
Striped Bass	2	11	3	1
Striped Bass	3	2 to 5.3	1	2

PCB CONCENTRATION RANGES ON-SITE

Species	Areas or Location	Area Concentration Range (mg/kg)	Number of Fish Collected per Year	Years Collected
Quahog	1E	1.3 to 6.1	60	6
Quahog	2B	0.027 to 0.071	60	10
Quahog	3D	0.002 to 0.14	60	10
Lobster	1	0.08 to 0.79	1	4
Lobster	2	0.085 to 0.17	5	6
Lobster	3	0.062 to 0.13	5	6
Black Sea Bass	2	0.088 to 0.81	25	10
Black Sea Bass	3	0.044 to 0.29	25	10
Scup	2	0.2 to 1.3	25	10
Scup	3	0.16 to 0.56	25	10
Conch	2	0.093 to 0.58	35	4
Conch	3	0.031 to 0.26	35	4

PCB CONCENTRATION COMPARISON

ON-SITE (Areas 1 to 3) vs. Off-SITE (Marion)

Species	Concentration (mg/kg)
Quahog On-Site	0.014 to 2.1
Quahog Off-Site	0.0053
Conch On-Site	0.03 to 0.58
Conch Off-Site	0.03
Lobster On-Site	0.08 to 0.17
Lobster Off-Site	0.004
Scup On-Site	0.2 to 1.3
Scup Off-Site	0.1
Striped Bass On-Site	2 to 11
Striped Bass Off-Site	0.1

CONCLUSIONS

As in the past, the current data set demonstrates PCB levels in locally caught seafood tissue generally decreases as the sediment PCB gradient does from north to south.

Dredging has not cause an increase in PCB concentrations in the Seafood tested.

Residents and commercial fishers should continue to avoid consumption of fish and shellfish in accordance with public health advice.


New Bedford Harbor Seafood monitoring reports can be found at:
http://www2.epa.gov/new-bedford-harbor
2002 thru 2011 available