

*Community Advisory Group (CAG) Meeting
Hudson River PCBs Superfund Site
Saratoga Springs, NY, December 9, 2010*

Update on Hudson River Fish Monitoring Program: 2010 Post-Phase 1 Data

Marc S. Greenberg, Ph.D.

**U.S. EPA OSWER-OSRTI
Environmental Response Team
Edison, NJ**

greenberg.marc@epa.gov



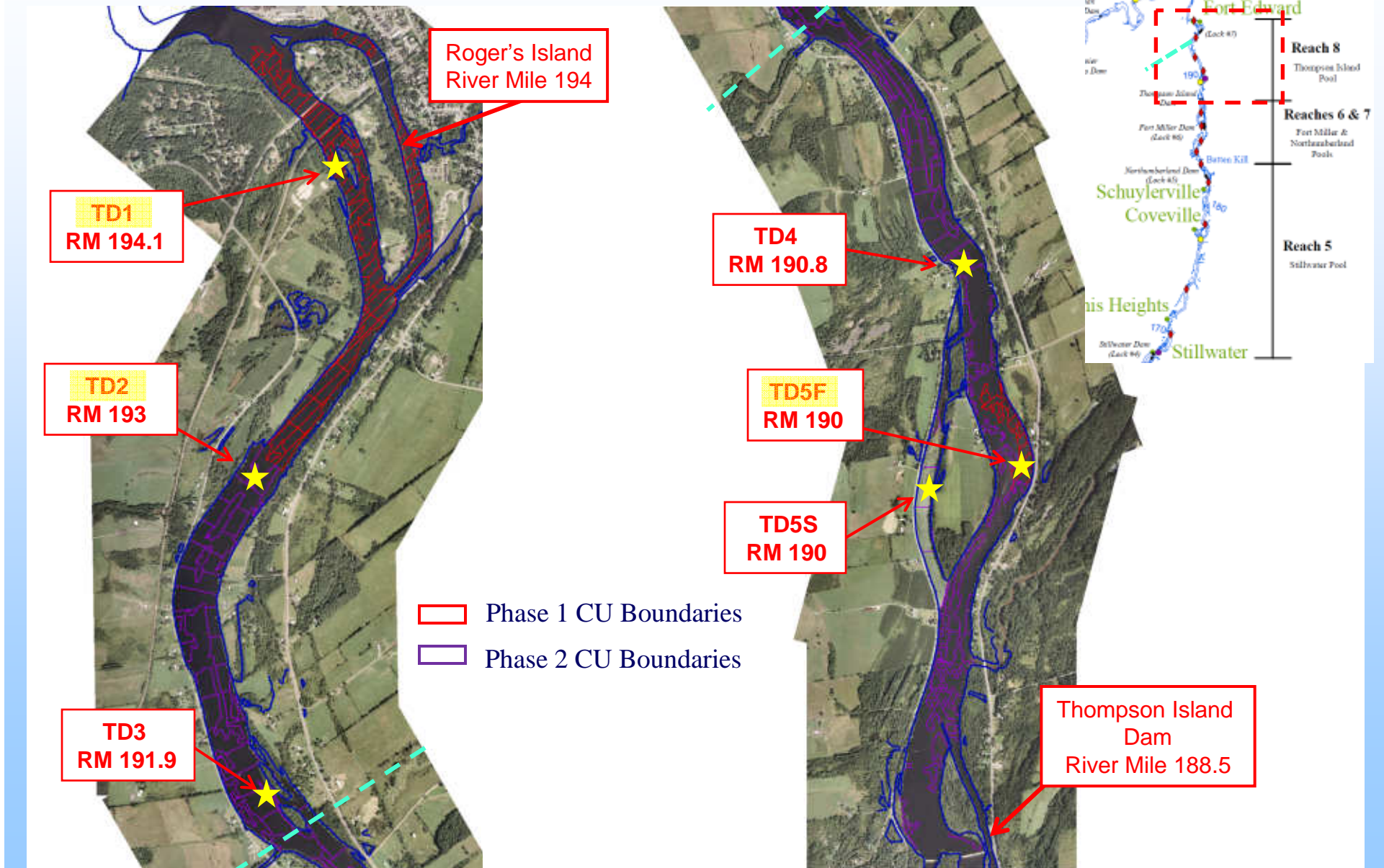


Review of EPA Phase 1 Evaluation Report (March 2010)



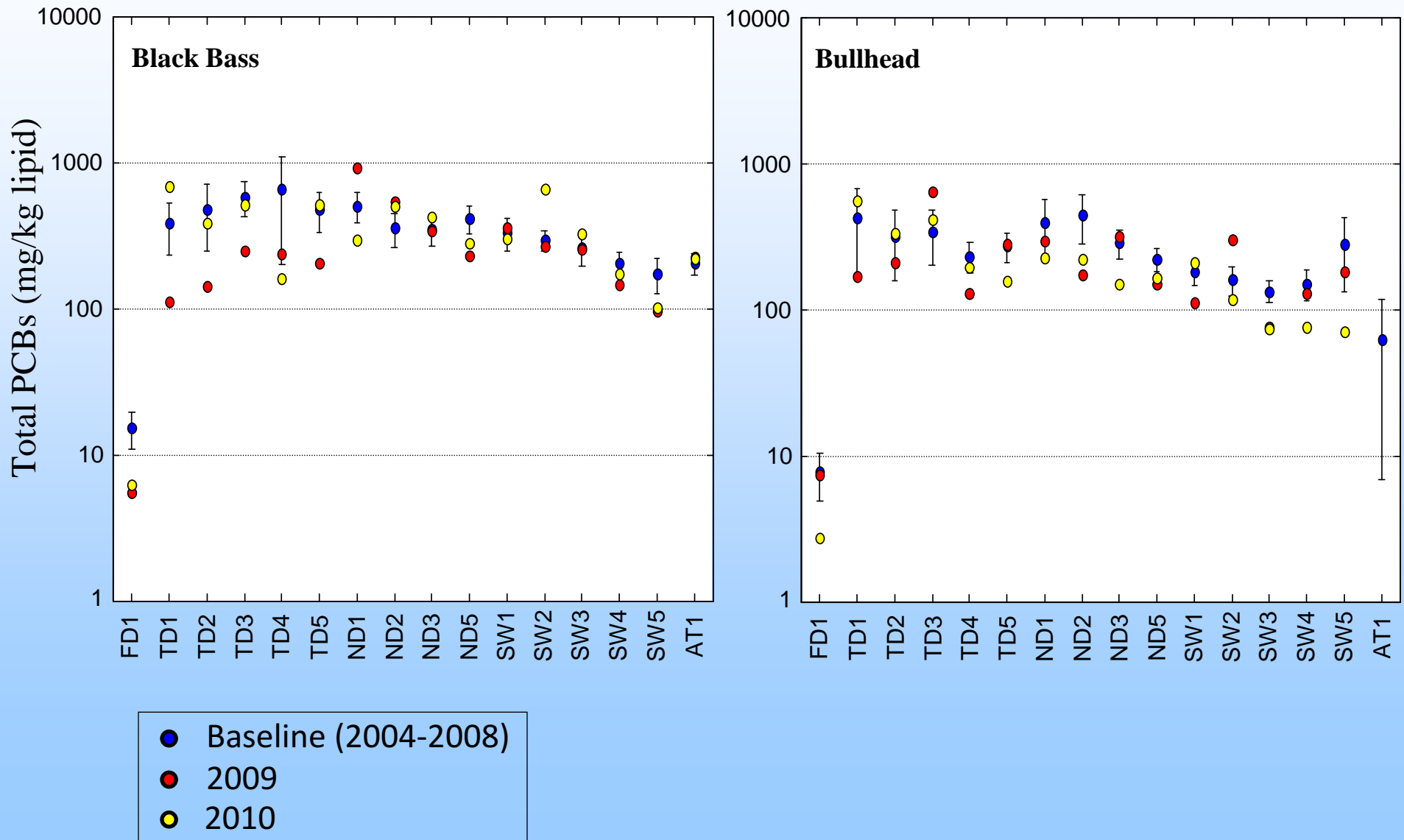
- **We reported some increases in fall 2009 whole body pumpkinseed and forage fish tissue PCB levels in the UHR compared to baseline (2004-2008).**
- **We stated the expectation that any dredging-related increases in PCB concentrations in adult sport fish would be observed in fish collected in spring 2010**
- **We concluded that:**
 - **Resuspension of PCBs from sediments during dredging affected fish locally, with greatest impact in the immediate vicinity of the dredging activity;**
 - **The data did not support the idea that dredging had an effect on PCB levels in fish more than 2-3 miles downstream of the Thompson Island Pool.**

Increases in pumpkinseed & forage fish in 2009 were predominantly focused to the Thompson Island Pool (i.e., section where Phase 1 dredging occurred)



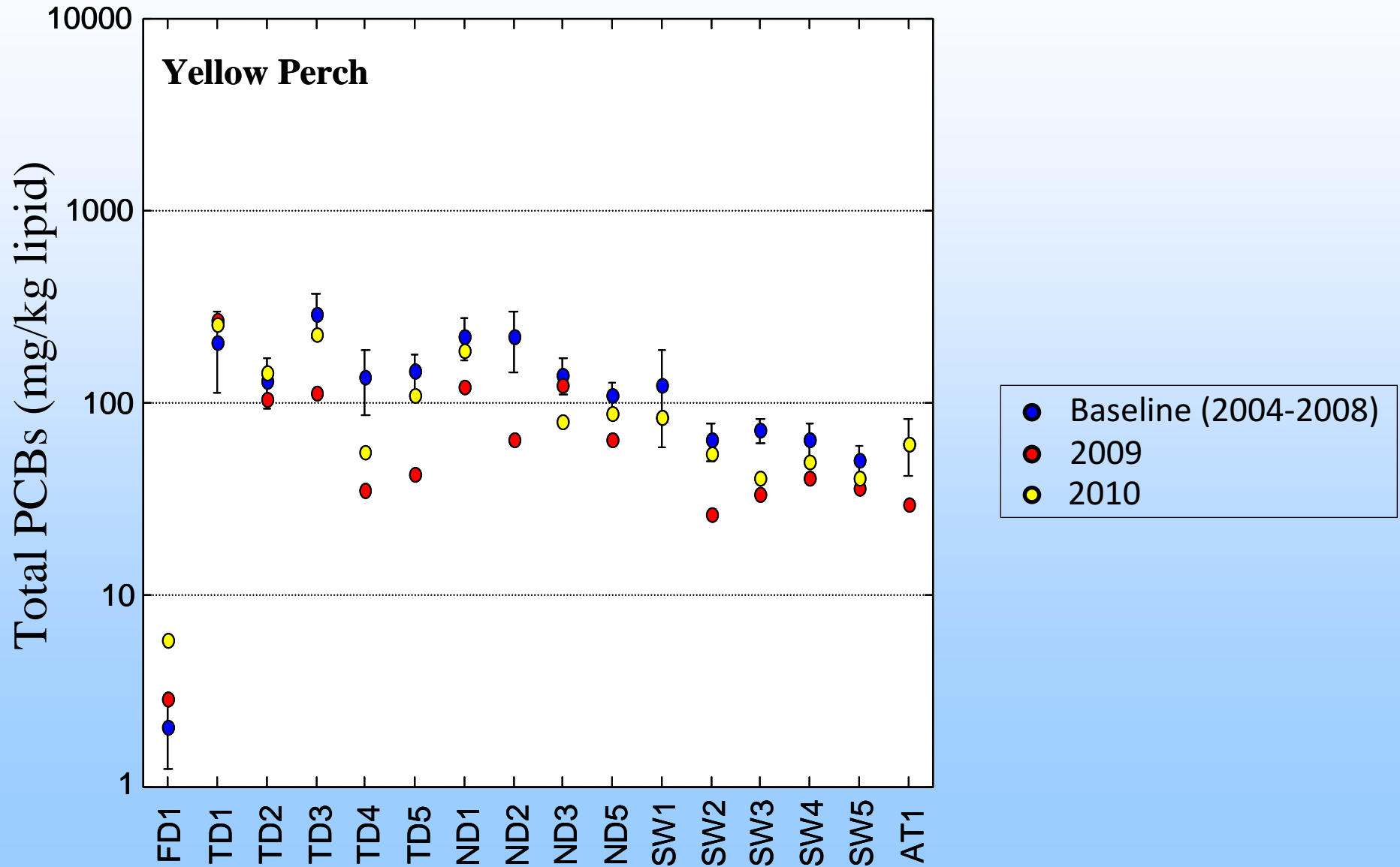


Hudson River Black Bass & Bullhead: Baseline vs. 2009 and 2010



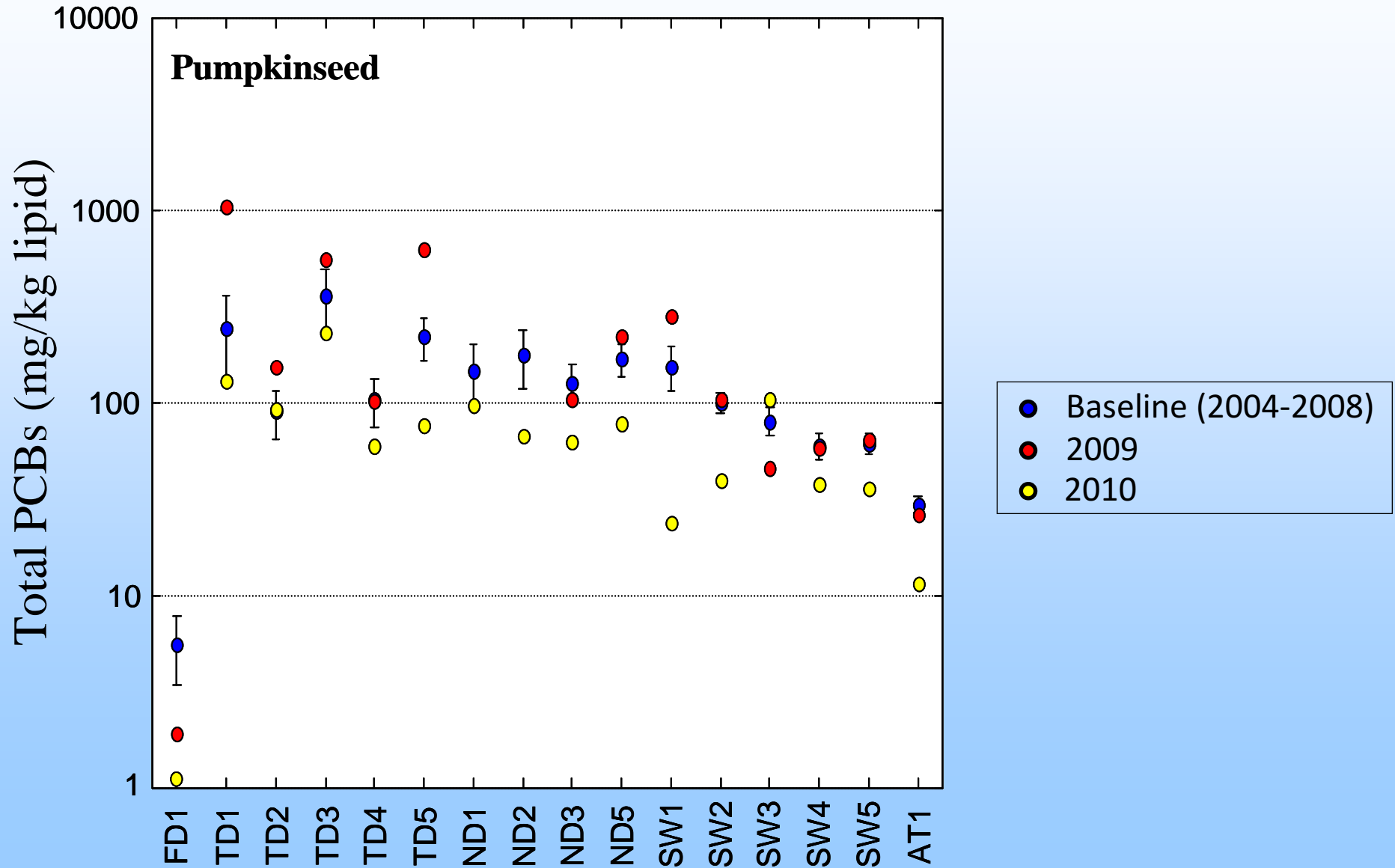


Hudson River Yellow Perch: Baseline vs. 2009 and 2010





Hudson River Pumpkinseed: Baseline vs. 2009 and 2010





Total PCBs in Fish Tissues: 2009 vs. 2010



Section	Station	Approx River Mile	Black Bass	Bullhead	Yellow Perch	Pumpkin-seed
1	All	188.5-195	+		+	-
2	All	183.4-188.5	(+)		(+)	-
3	All	168.2-183.2	(+)	(-)		-
Section	Station					
---	FD1	201.1	+		+	
1	TD1	194	+	(+)		(-)
1	TD2	193	+			-
1	TD3	192			+	
1	TD4	190-191				-
1	TD5	189.3	(+)	-	+	-
2	ND1	187		(-)		-
2	ND2	186.4			NA	-
2	ND3	185.5		-	-	
2	ND5	183.5	+			-
3	SW1	181.2				-
3	SW2	178.2			+	-
3	SW3	177.3	(+)			(+)
3	SW4	172.1				-
3	SW5	167.8				-
---	AT1	153.2 & 142		NA	NA	-

	Neutral $p > 0.10$
-	Decrease btwn 2009 and 2010; $p < 0.05$
+	Increase btwn 2009 and 2010; $p < 0.05$
()	$0.05 < p < 0.10$



Total PCBs in Fish Tissues: Baseline vs. 2010



Section	Station	Approx River Mile	Black Bass	Bullhead	Yellow Perch	Pumpkin-seed
1	All	188.5-195				-
2	All	183.4-188.5		-		-
3	All	168.2-183.2		-		-
Section	Station					
---	FD1	201.1			+	(-)
1	TD1	194		+		
1	TD2	193				
1	TD3	192				
1	TD4	190-191				
1	TD5	189.3		-		-
2	ND1	187				
2	ND2	186.4			NA	-
2	ND3	185.5		-	(-)	(-)
2	ND5	183.5				-
3	SW1	181.2				-
3	SW2	178.2	(+)	-		-
3	SW3	177.3		-		
3	SW4	172.1		-		-
3	SW5	167.8		-		-
---	AT1	153.2 & 142		NA		-

Neutral p > 0.10
- Decrease btwn 2004-8 and 2010; p<0.05
+ Increase btwn 2004-8 and 2010; p<0.05
() p<0.10



Conclusions from 2010 Upper Hudson River Fish Monitoring Data



➤ **Adult sport fish:**

- **No appreciable increases in the spring 2010 tissue concentrations of PCBs relative to the five-year baseline (2004-2008) period.**

➤ **Pumpkinseed:**

- **Fall 2010 data indicate that the tissue concentrations have already nearly recovered from the apparent dredging impacts that were reported in 2009.**



EPA's Perspective



- **We expected that short-term, localized increases in fish PCB levels would occur during Phase 1**
 - **These apparent dredging impacts were clearly observed within or immediately below the Phase 1 dredging areas**

- **We anticipate, throughout the remainder of the project, that any dredging-related, localized body burden increases of PCBs in fish observed in the short-term will rapidly return to baseline levels, and will continue to decline thereafter following remediation**
 - **Localized exposures related to dredging expected to be brief**
 - **Dredging only occurs in a given area for single dredging season, or a portion thereof (weeks to months)**
 - **Tissue concentrations of PCBs in fish have been shown to decrease rapidly following spikes related to exposure events and environmental dredging**

