

# NYSDOH-CEH Contacts

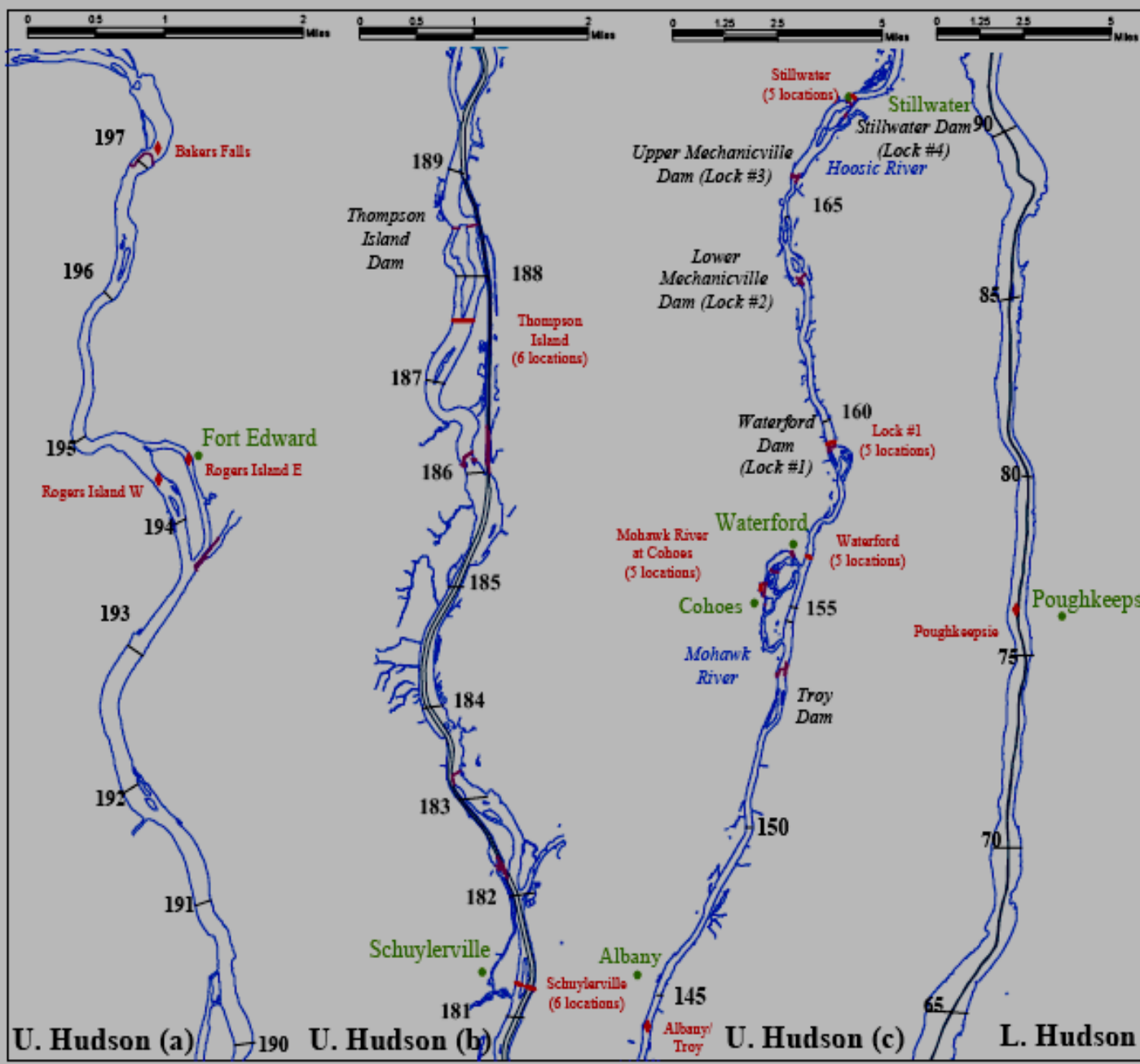
- Lloyd Wilson, Bureau of Water Supply Protection  
518-402-7711
- Deanna Ripstein, Bureau of Environmental  
Exposure Investigation 518-402-7870
- Faith Schottenfeld, Outreach and Education,  
518-402-7530

# Today's Presentation

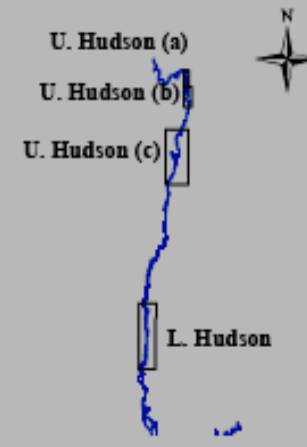
- Monitoring plan
  - Background on the Hudson River
  - PCB measurements
  - Frequency and location of samples
  - Status (funding, responsibilities)
- Outreach
  - Provide initial thoughts and seek feedback about best ways to share sample results

# Purpose of Monitoring

- Understand what effects the dredging may have on PCB levels at intakes of supplies
- Ensure compliance with MCLs
- Provide data that is directly comparable to the in-river monitoring data
- Provide data to help develop contingency plans



### LOCATOR MAP OF THE HUDSON RIVER



### LEGEND

- ◆ Monitoring Stations
- Monitoring Transects
- Navigational Channel
- Dams and Locks
- River Miles

General Electric Company  
Hudson River Project

**Figure A-2. Water Monitoring Stations and Transects.**

*Note: River miles measured from the Battery (0.0).*

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Bakers Falls RM197

Ft. Edward RM194

Dredging RM194-190

Thompson Island RM188

Stillwater RM163

Halfmoon RM159

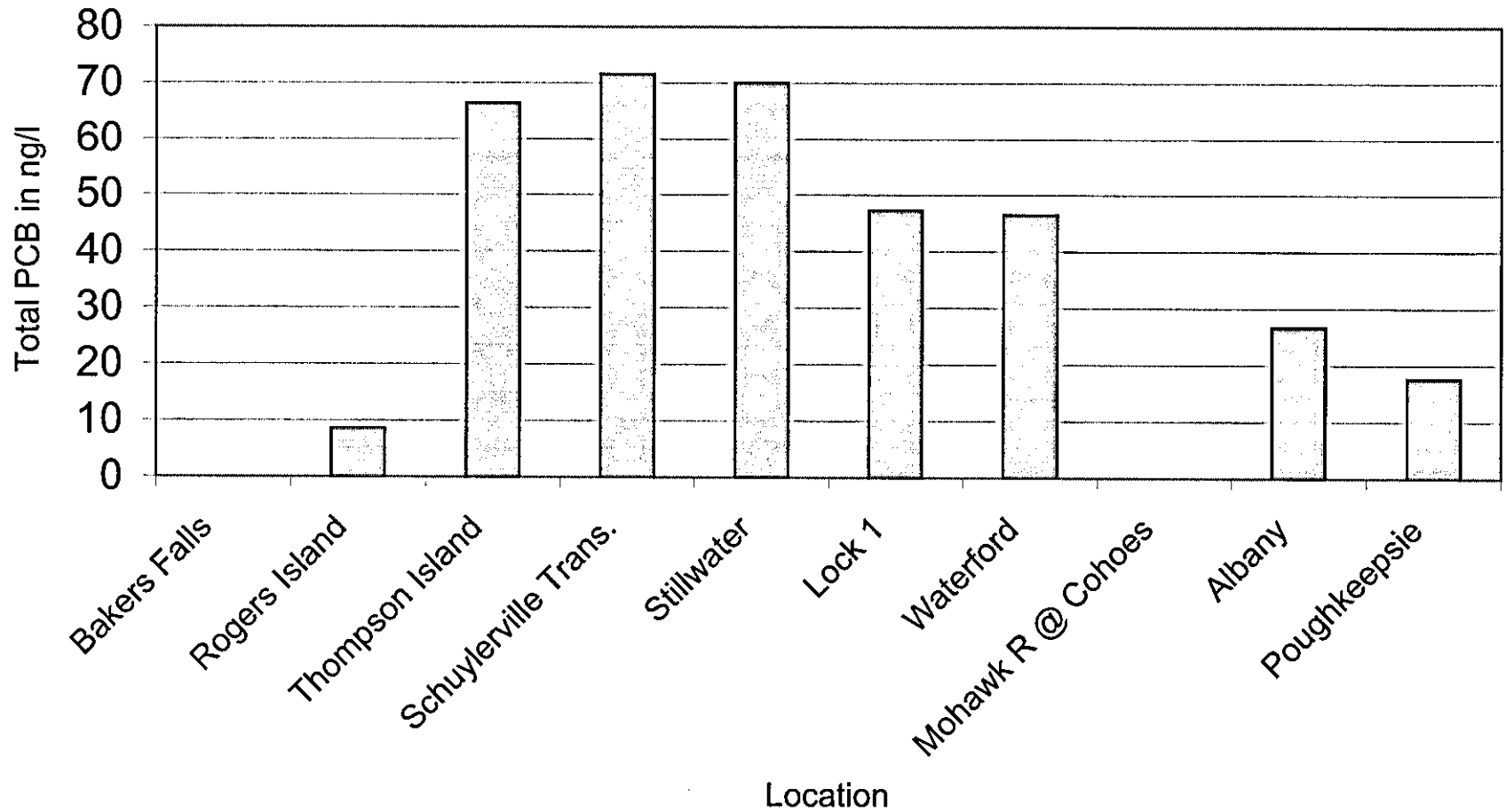
Waterford RM 157

Waterford RM156

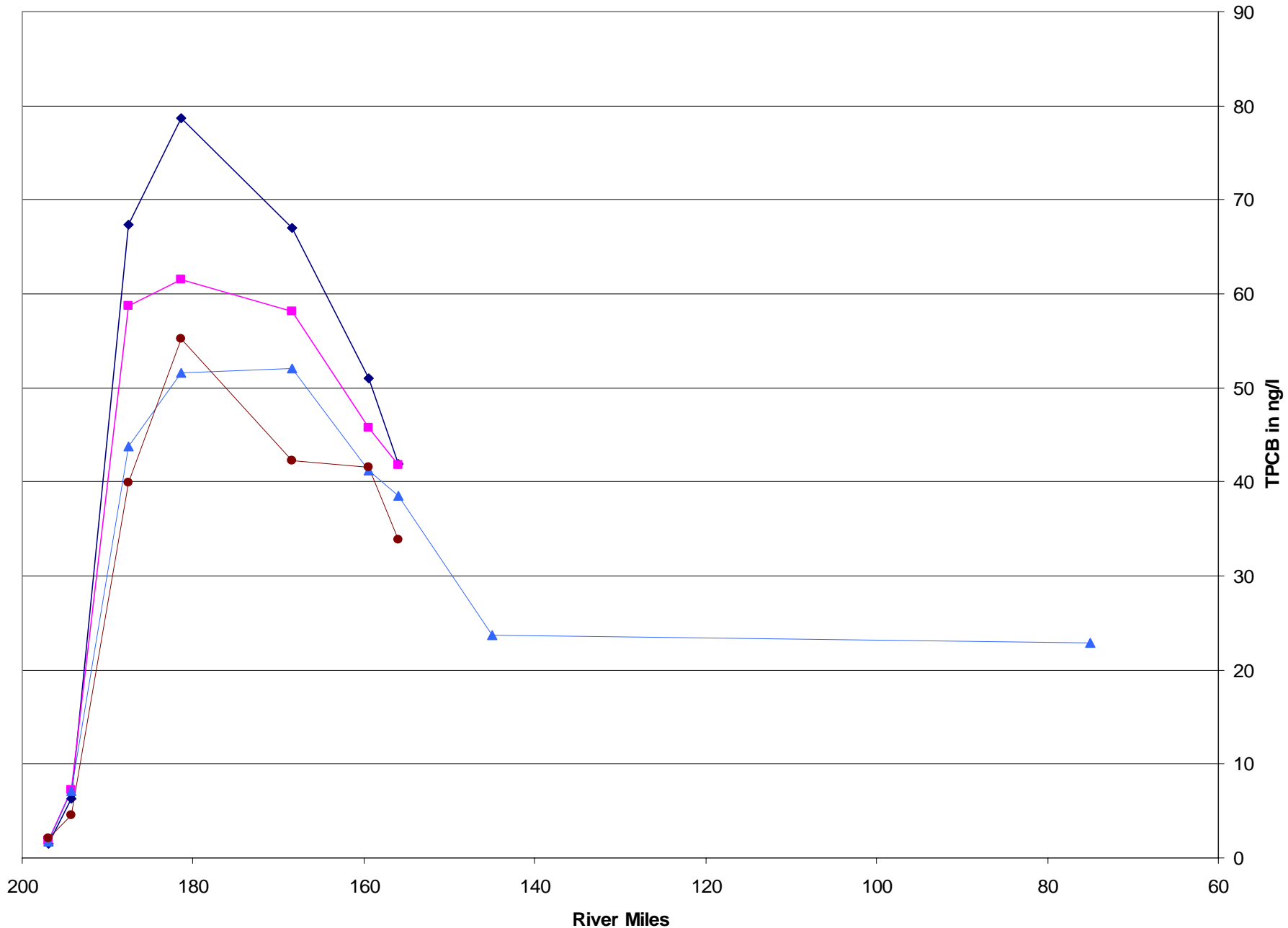
Poughkeepsie RM75

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## GE Baseline Water Sampling Results June 21, 2004



GE Hudson River BMP Surface Water Total PCB July 2004 by River Mile Above the Battery

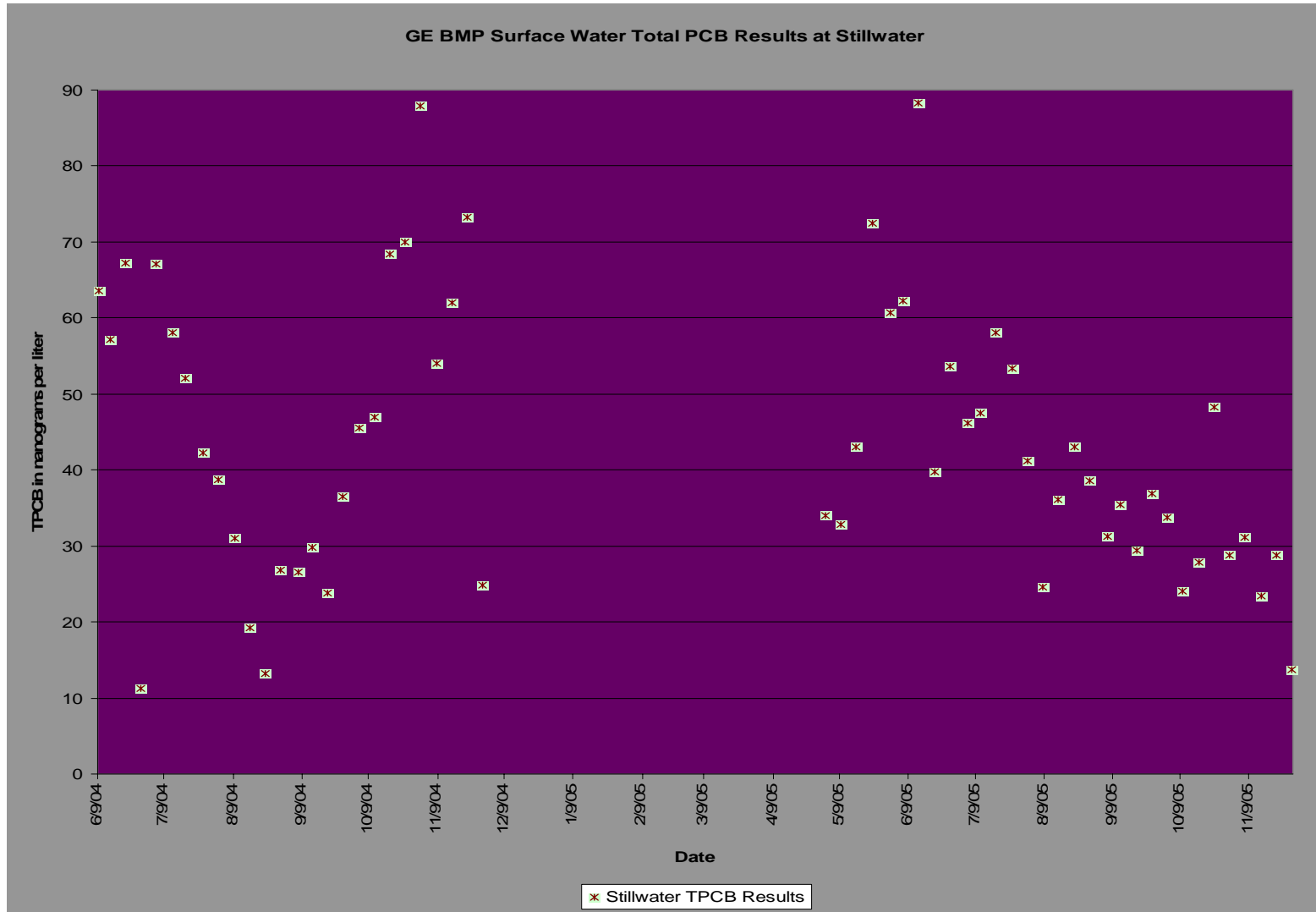


# GENERAL TRENDS/CONCLUSIONS

- The PCB levels at downstream locations all the way to Poughkeepsie are higher than Bakers Falls (bar graph)
- Waterford Location - a finding of 50 ppt is not unexpected (bar graph)
- Variability between days (line graph)



# Changes with Time at One Location

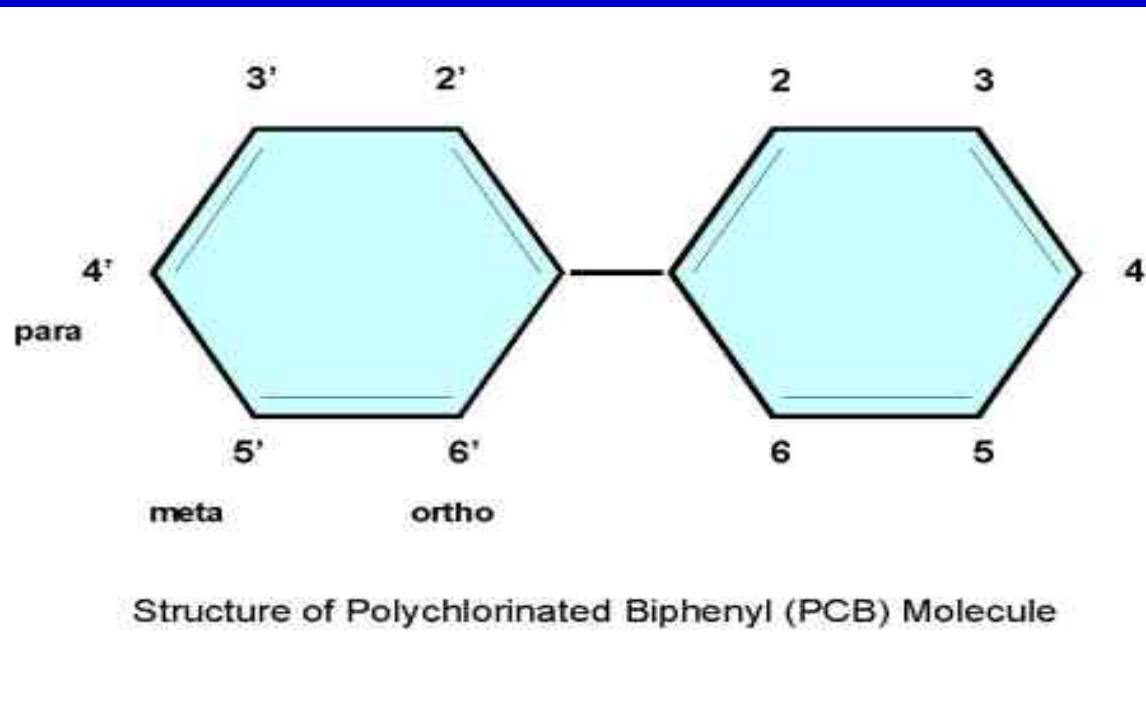


# GENERAL TRENDS/CONCLUSIONS

## *Seasonal changes in water concentrations*

- Warmer months dissolved phase can increase (bioturbation)
- Total PCBs increase during high flows associated with higher suspended solids loads

# PCB CHEMICAL STRUCTURE



# PCB MEASUREMENT

## *Two Methods of Analysis*

- Part 5-1 lists Method 508, and if detected, requires Method 508a for quantification, for Public Water Supply Compliance Monitoring Aroclor Method
- GE has been using NEA labs to do what is known as the Green Bay Method which is a congener-specific measurement

# PCB MEASUREMENT AROCLOR MEASUREMENT METHOD

- Looks for patterns of PCBs using 2-11 peaks for quantification
- Sums selected peaks to get the quantity
- Faster than congener-specific method
- Detection limit is determined for the mixture

# PCB MEASUREMENT GREEN BAY METHOD

- Green Bay Method looks at the individual congeners and sums the total detected
- Detection limit is determined per congener
- PCB total is from sum of congeners

# UNDERSTANDING PCB RESULTS FROM TWO METHODS

- *What may happen?*

A sample can have a non-detect for the Aroclor method and a detect from the congener-specific method

- *Why might it happen?*

One is counting apples, one is counting oranges

- *How to interpret?*

Compare results from each method independently to “standard”; not to each other

# Past Results

- Both Waterford and Halfmoon have a history of non-detects using Method 508
- Raw water and finished water sample 2/4/03
  - Aroclor method non-detect
  - also analyzed congener method -- non-detect



# Proposed Water Supply Monitoring Plan

- Page 99 of the Record of Decision states, “EPA will increase monitoring of water Supply intakes during each construction Phase”.
- The State has advocated for the above.
- EPA agreed to fund the proposal being described.  
Funding pending.
- GE funding increased monitoring to a weekly basis (Method 508)

# Proposed Water Supply Monitoring Plan/In-River Monitoring During Dredging

- Routine Monitoring from April 2004  
Performance Standards-Malcome Pirnie and  
TAMS

	Turnaround	Days
• RM 197.0 Bakers Falls	72	1
• RM 194.2 Ft. Edward	72	7
• RM 188.5 TI DAM	24	7
• RM 181.4 Schuylerville	24	7
• RM 163.5 Stillwater	72	7
• RM 156.5 Waterford	72	7

# RESPONSIBILITIES

- NYS DOH is coordinating this activity
- US EPA is funding
- NEA is performing the laboratory analysis
- GE is conducting in-river sampling , increased weekly sampling with Method 508

# PROPOSED WATER SUPPLY MONITORING PLAN

- Four Supplies: Rhinebeck, Poughkeepsie, Halfmoon and Waterford
- Baseline (pre-dredging)
- Phase 1 (during dredging year 1)
- Includes samples of both raw and finished water

# PROPOSED WATER SUPPLY MONITORING PLAN, cont'd.

## Baseline

- Limited Sampling (the year before dredging; earliest start summer 2006)
  - Waterford, Halfmoon, Rhinebeck and Poughkeepsie
- Samples for both Aroclor and congener- specific analyses
- Raw and finished water



# PROPOSED WATER SUPPLY MONITORING PLAN, cont'd.

## PHASE 1

- Sampling every day at Waterford and Halfmoon; analysis of every 4th day sample
  - samples not analyzed will be archived for two weeks; discarded if no problems are identified
- Limited sampling at Poughkeepsie and Rhinebeck
- As with baseline, raw and finished water and Aroclor and congener-specific analyses used





# STATUS OF ACTIVITIES

- Documentation in progress (sole source approved, QAPP drafted, contract pending)
- Logistics of securing EPA funding pending
- Meetings scheduled with water suppliers/town officials/local health departments in upper River, lower River and CAG to discuss monitoring and outreach

# FUTURE WORK

- As data are gained, the plan may be amended to either decrease or increase monitoring
- The data will be evaluated to determine what monitoring is needed beyond Phase 1 (year 1) of the dredging.
- Data will help to develop the contingency plans

## FUTURE WORK, cont'd.

- Sample results to be shared with DEC, EPA, Water Suppliers, Town Officials, CAG, and directly to communities (the latter based on local feedback)
- Suggested timeframe for sharing results:
  - outreach at the beginning of baseline
  - update halfway through the baseline and Phase 1
  - update at the end of baseline and Phase 1
  - final report

# QUESTIONS FOR LOCAL WATER SUPPLIERS, TOWN OFFICIALS AND HEALTH DEPARTMENTS

- ❶ What are your existing strategies for sharing information about water quality?
- ❷ What are your ideas for sharing sample results from different methods of analysis?
- ❸ How do people in your community find out what's going on (word-of-mouth, local papers, retail establishments, etc.)?