

Hudson River PCBs Site

Engineering Performance Standards For Dredging

Presentation to Peer Review Panel



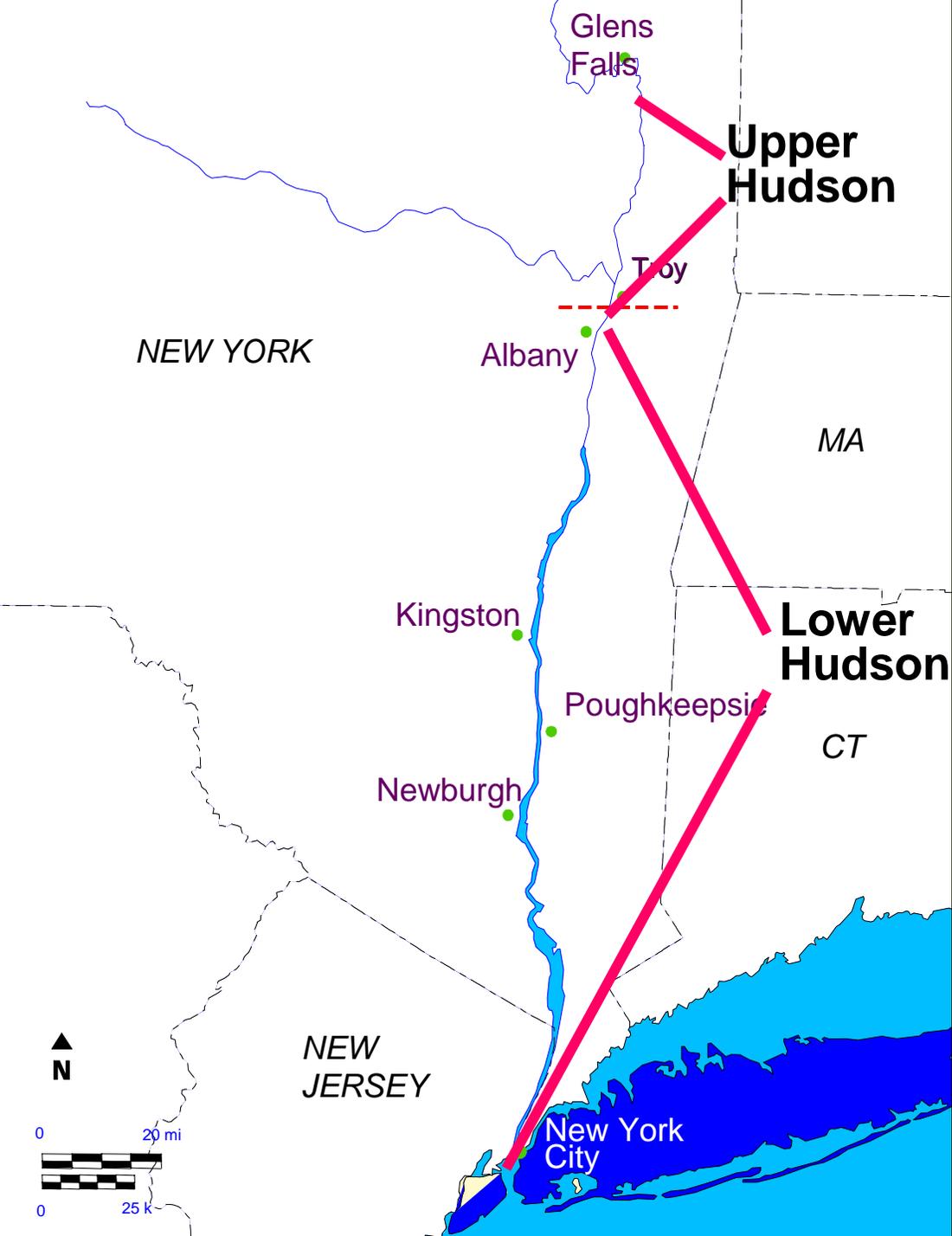
October 15-16, 2003

Site History & Background

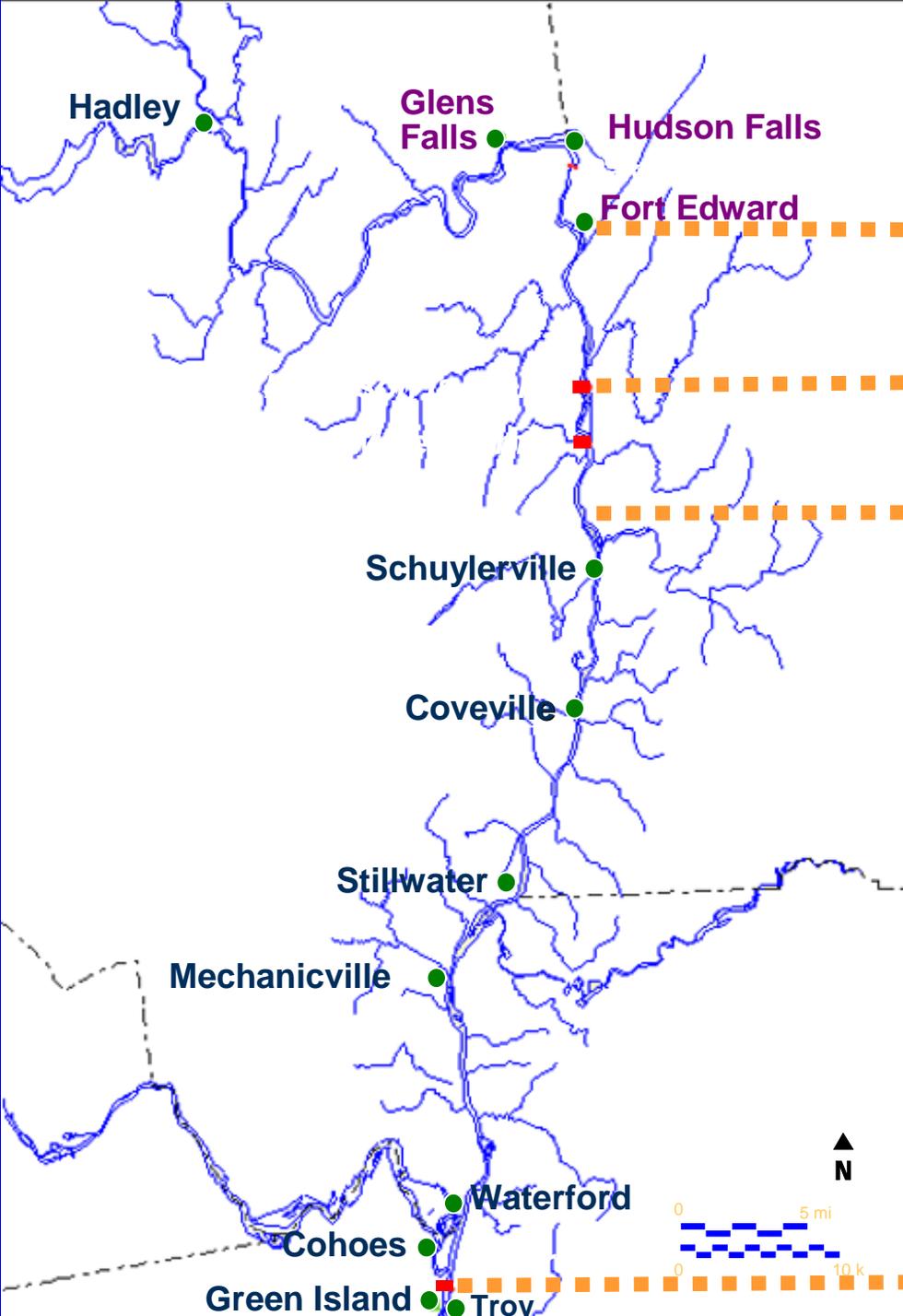
Alison A. Hess, CPG
USEPA



Upper and Lower Hudson River



Upper Hudson River



Section 1

Section 2

Section 3

GE Hudson Falls Plant Site



Upper Hudson River

Looking Upstream from Fort Edward



Remnant Deposit 5

Location of Former Ft. Edward Dam



River Section 1

Thompson Island Pool



Upper Hudson River / Champlain Canal



Upper Hudson River Advisory: *Eat None*



Site Characterization Issues

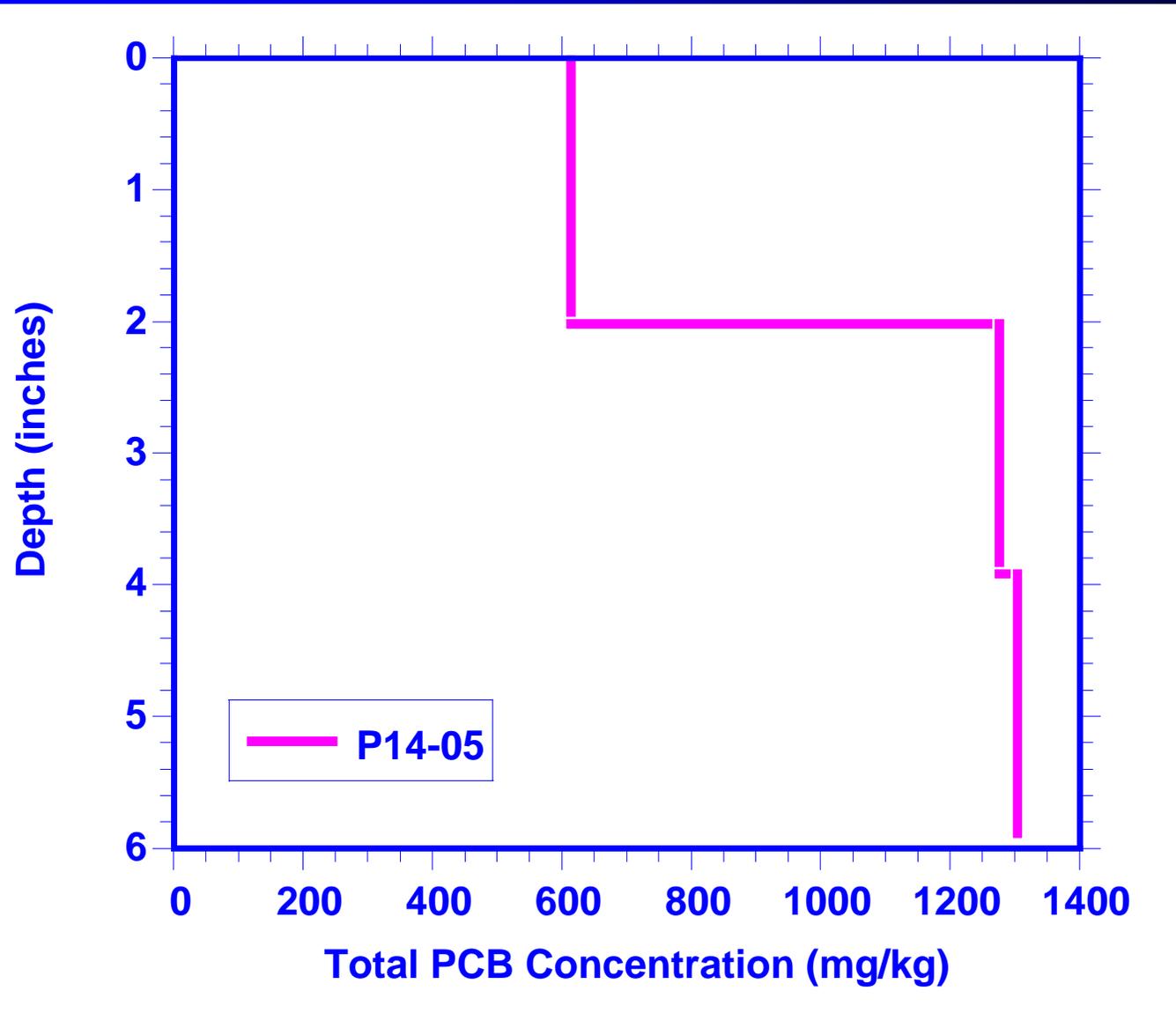
- PCB Analysis
- Combining Data Sets
- PCB Toxicity
- Modeling
- Upstream Source

Peer Reviews

- Preliminary Model Calibration
- Geochemistry
- Baseline Modeling
- Risk Assessments

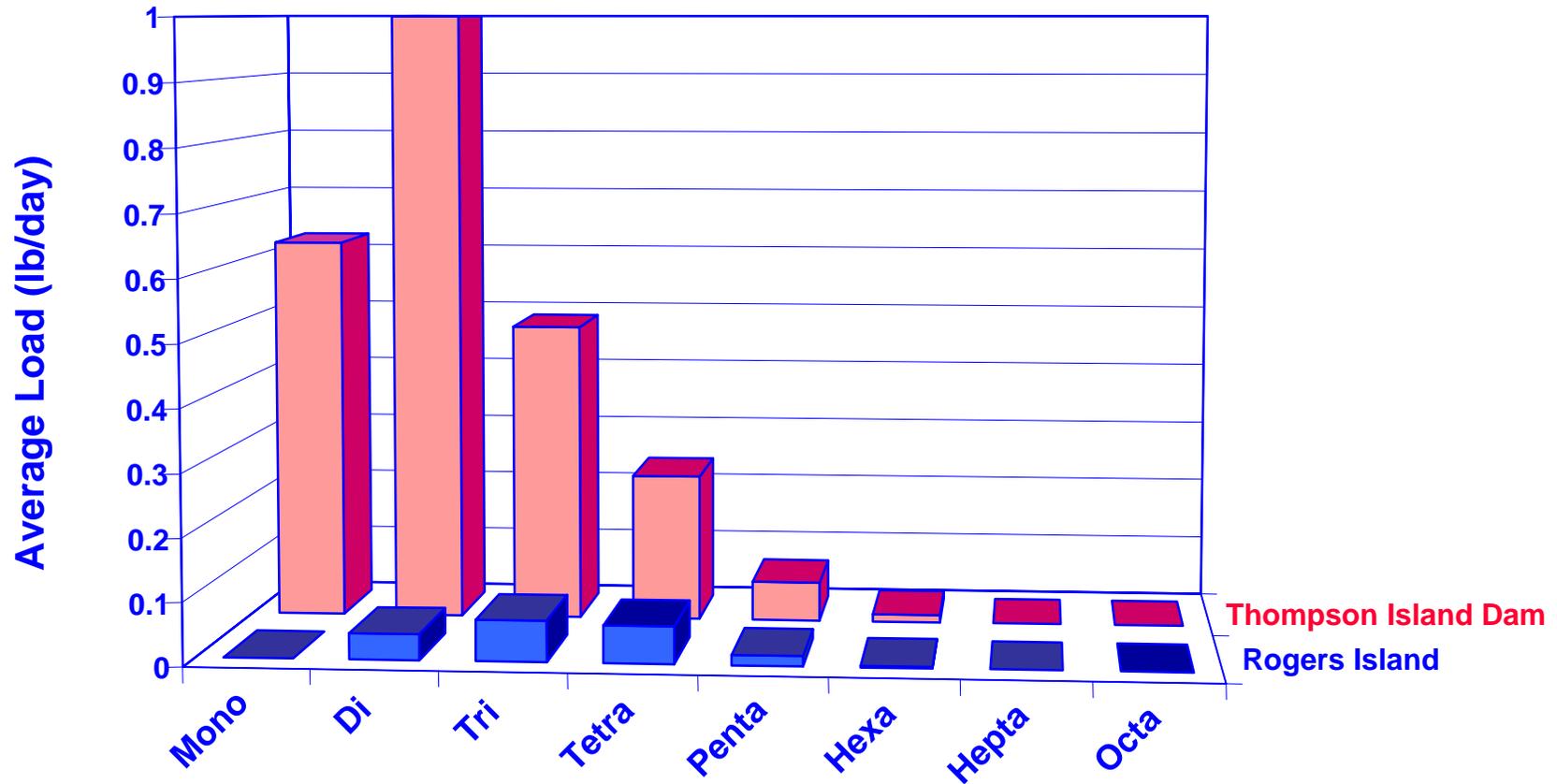
PCBs in Sediment

GE 1999 Sediment Core



PCBs in Water Column

Water Column PCB Load *Summer 2000*



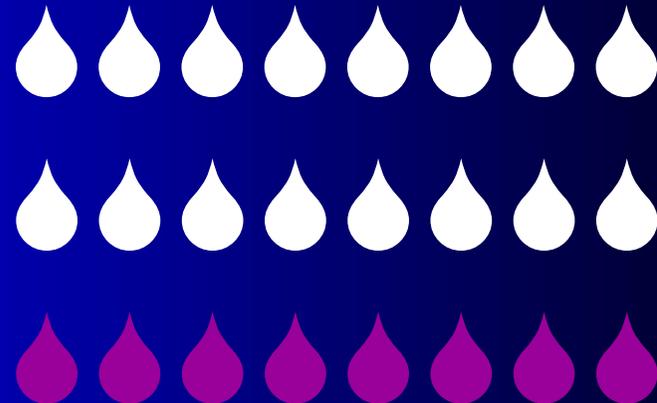
Source Control v. Sediment PCBs

Hudson Falls



5.6

Thompson Island Pool

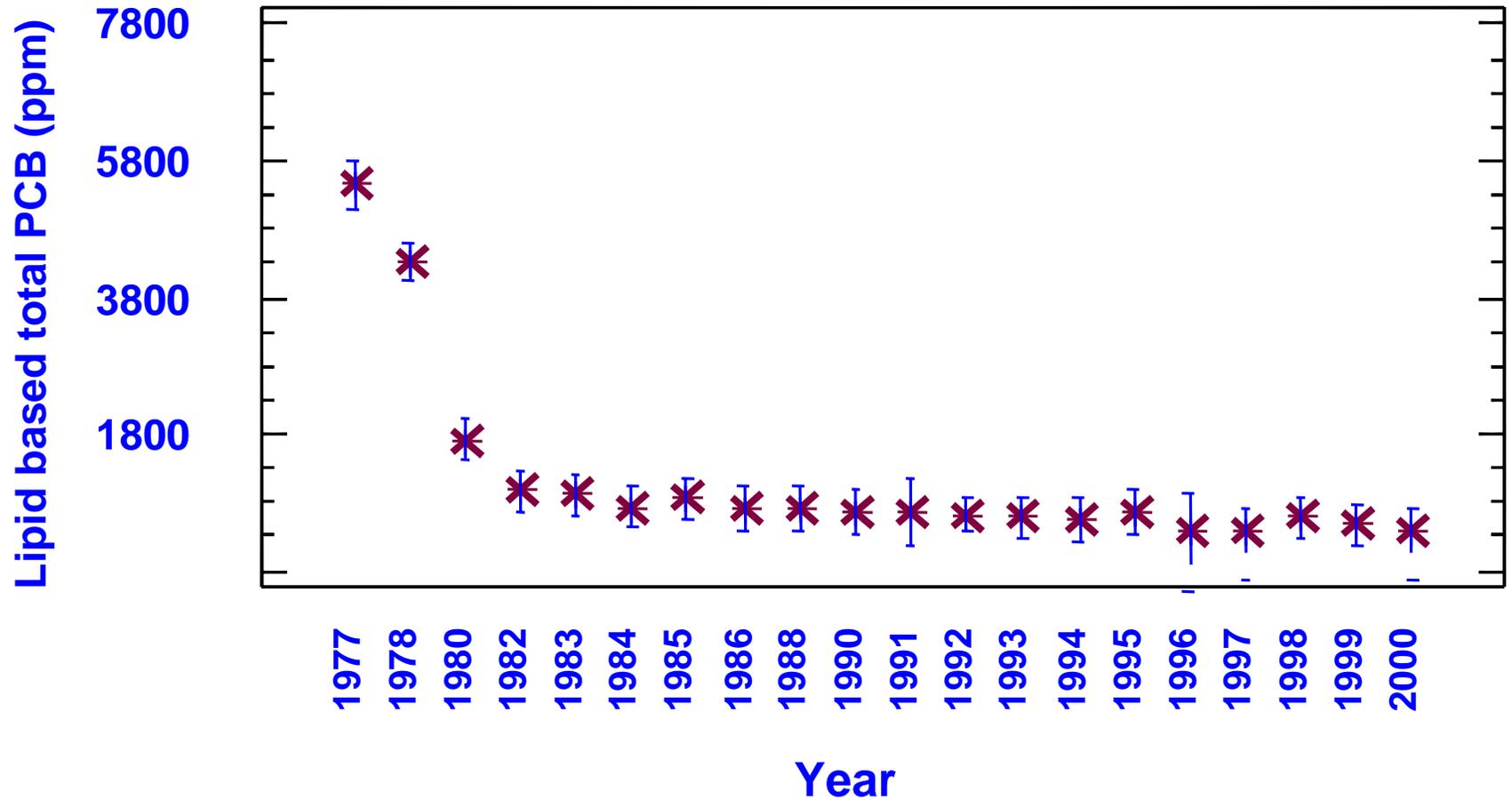


16 to 24

Ounces of PCBs per day

PCBs in Fish

Black Bass from Stillwater Pool



PCBs Levels in Fish

Source: 2000 GE Data

	<i>Average</i>	<i>Maximum</i>
<i>TI Pool: LMB</i>	<i>7.7 ppm</i>	<i>41 ppm</i>
<i>BB</i>	<i>8.7 ppm</i>	<i>17 ppm</i>
<i>Coveville: LMB</i>	<i>3 ppm</i>	<i>10 ppm</i>
<i>BB</i>	<i>3 ppm</i>	<i>13 ppm</i>

Risk-based goal = 0.05 ppm

Remedial Objectives

- Reduce risks and hazards to people eating fish
- Reduce risks to ecological receptors
- Reduce PCB levels in surface water
- Reduce bio-available PCBs
- Minimize long-term downstream transport of PCBs

Selected Remedy

- Targeted Environmental Dredging
 - 2.65 million cubic yards
 - 150,000 pounds PCBs
- Transport by Rail
- Off-site Landfill or Beneficial Reuse
- MNA Until Reach Acceptable Levels
- Separate Source Control at GE Hudson Falls Facility

Community Considerations

- No local landfill
- Rail and/or barge to minimize truck traffic
- Navigational dredging and coordination to allow normal flow of river traffic
- Public involvement through design and construction

Changes After Public Comments

- Phasing over 6 years
- Backfill by rail or barge
- Performance standards
 - dredging resuspension
 - PCB residuals
 - dredging production rates
 - quality of life (noise, odor, lights, etc.)
- Peer review
- Field office

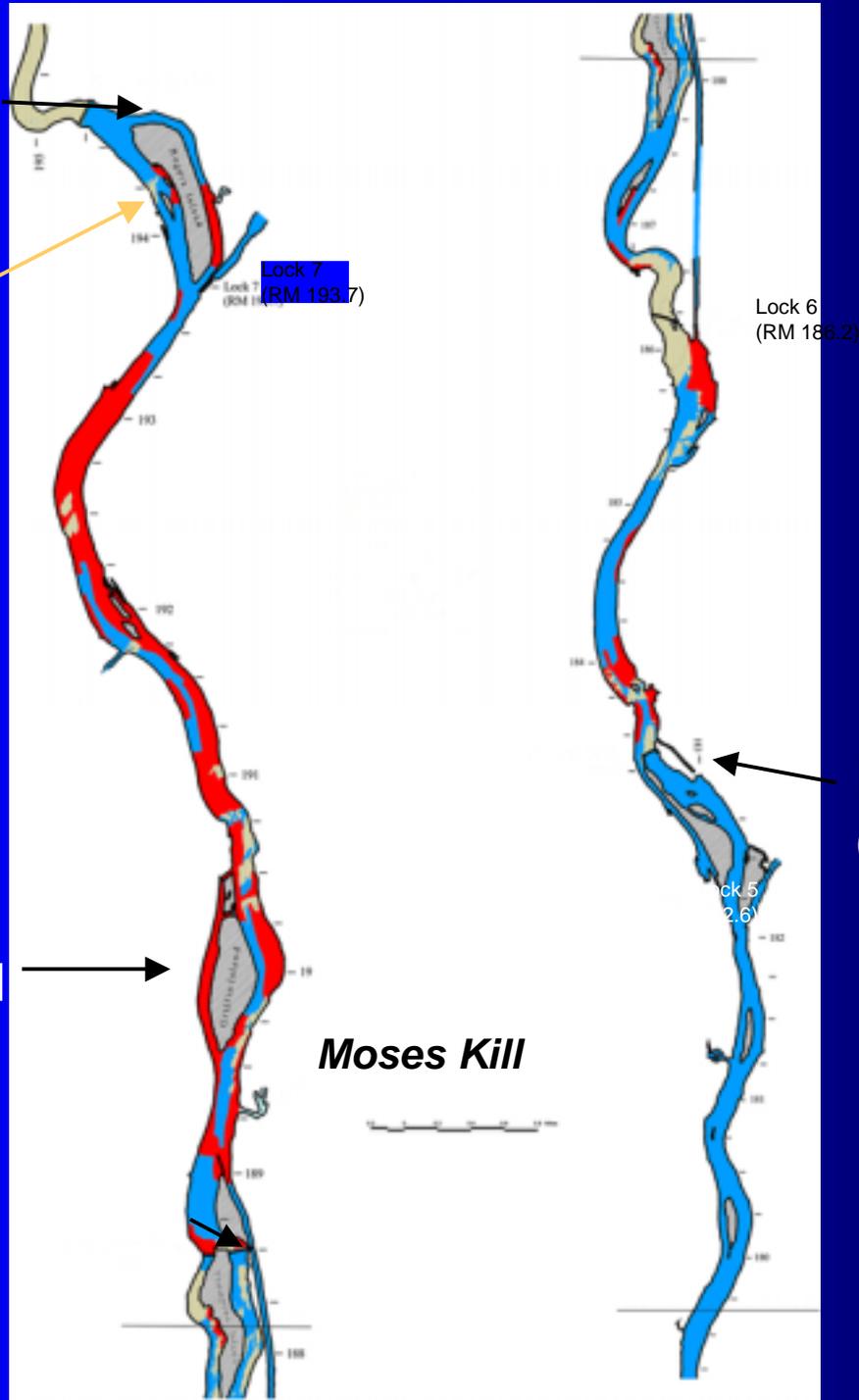
**Former Fort
Edward Dam
(RM 194.8)**

Rogers Island

Snook Kill

Griffin Island

**Thompson
Island Dam
(RM 188.5)**

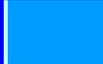


REM - 3/10/Select

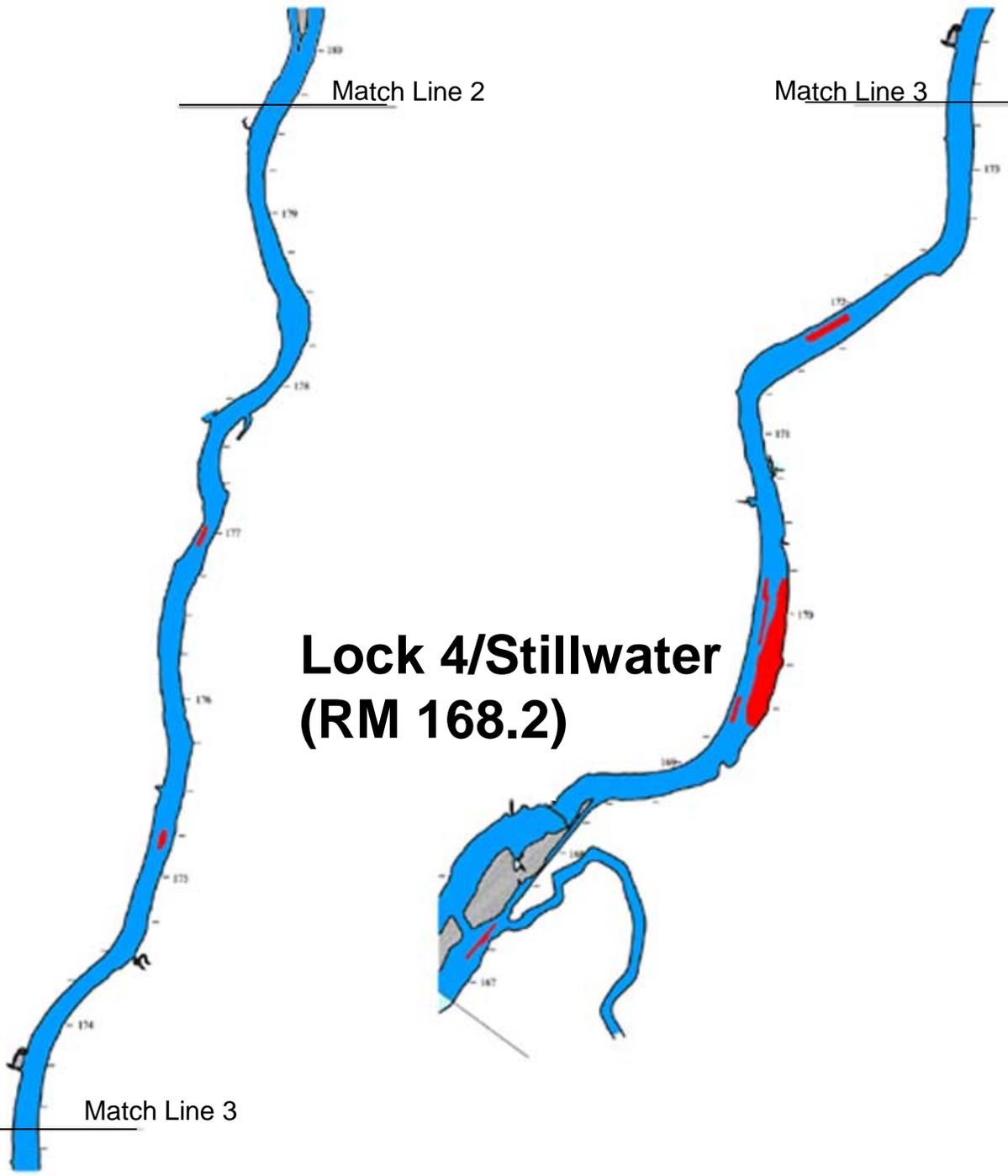


**Northumberland Dam
(RM 183.4)**

REM - 3/10/Select

-  Rocky
-  Island
-  Dam and Lock
-  River Mile Marker
-  Shoreline at 8,471 cfs
-  Remediation Areas
-  Areas Not Remediated

**Lock 4/Stillwater
(RM 168.2)**



REM - 3/10/Select



**Lock3
(RM 166.4)**

**Quack
Island**

**Lock 2
(RM 163.5)**

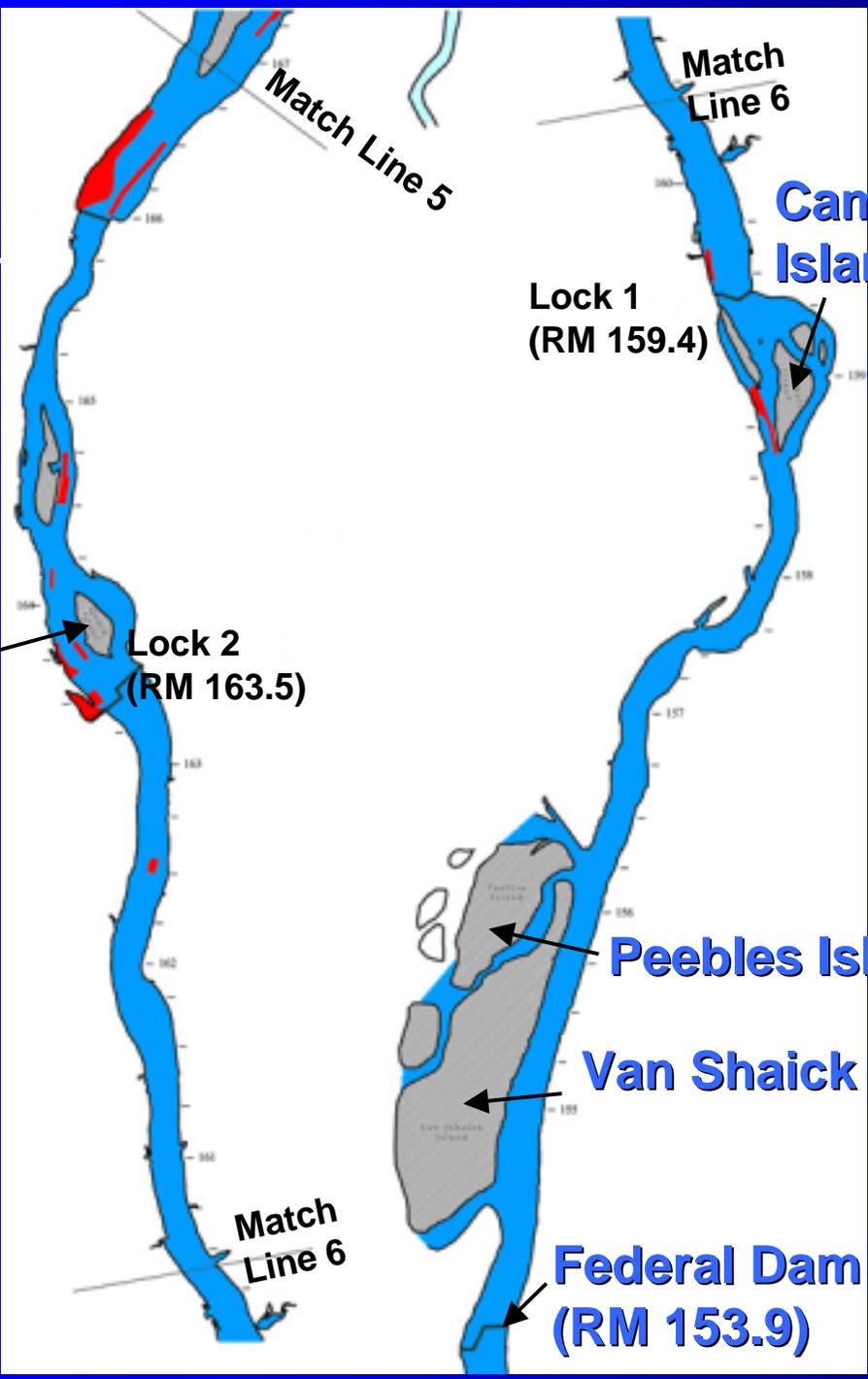
**Lock 1
(RM 159.4)**

**Campbell
Island**

Peebles Island

Van Shaick Island

**Federal Dam
(RM 153.9)**





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