Environment Canada Environnement Canada

Canada

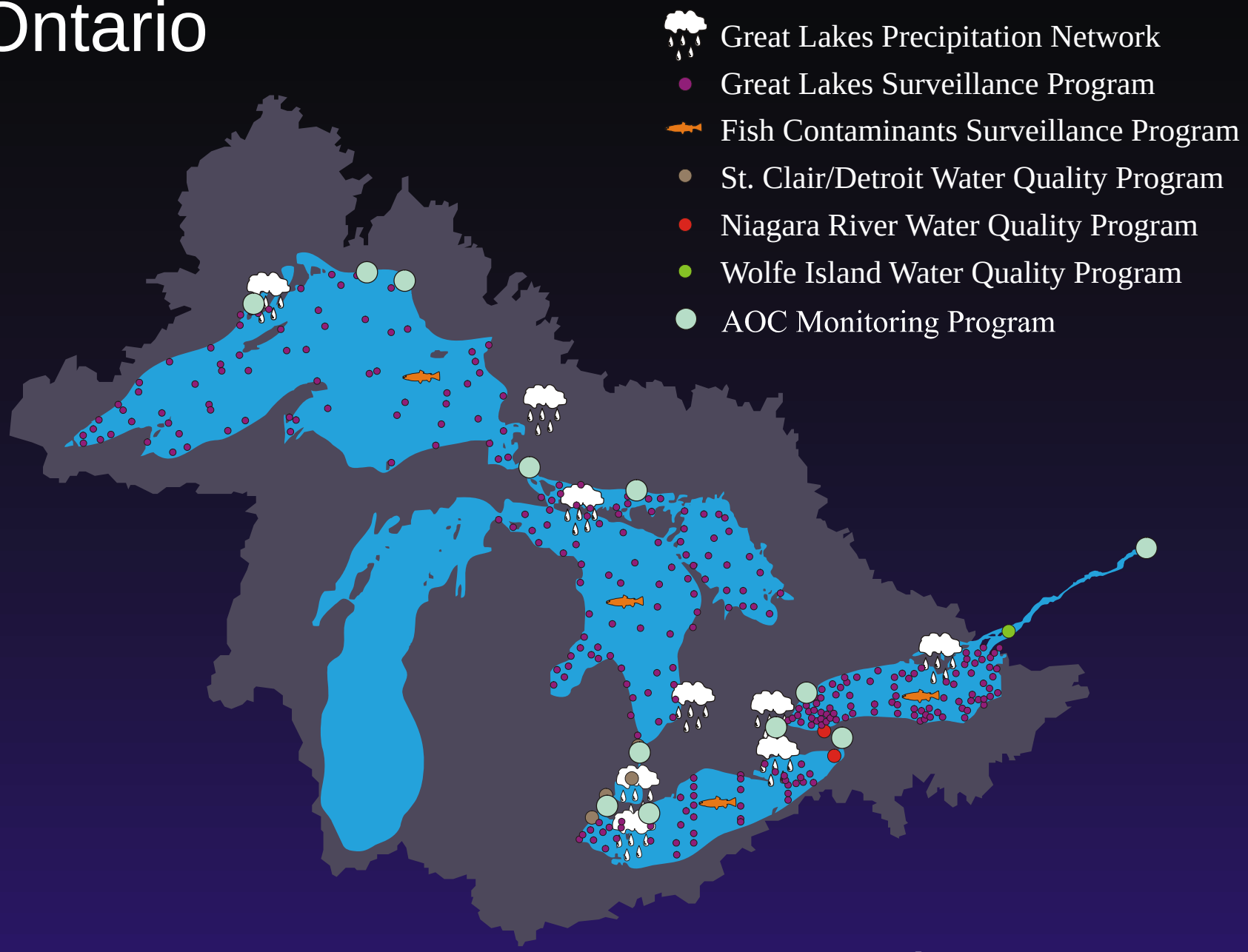
# Status Update of PCB Monitoring Information in the Great Lakes

**BTS – PCB Workgroup**

**Alice Dove and Brad Hill**
**Water Quality Monitoring & Surveillance**

**June 3, 2008**

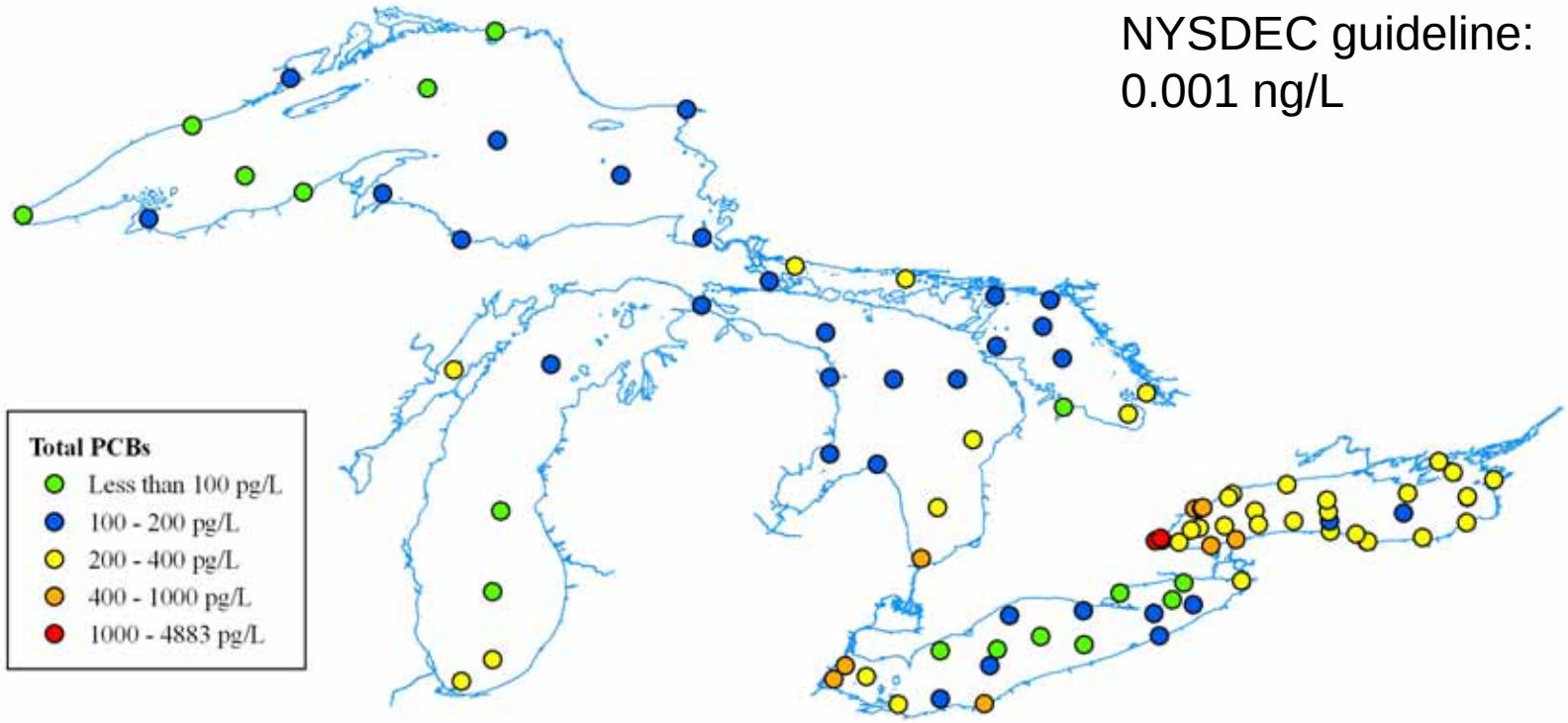
# Ontario



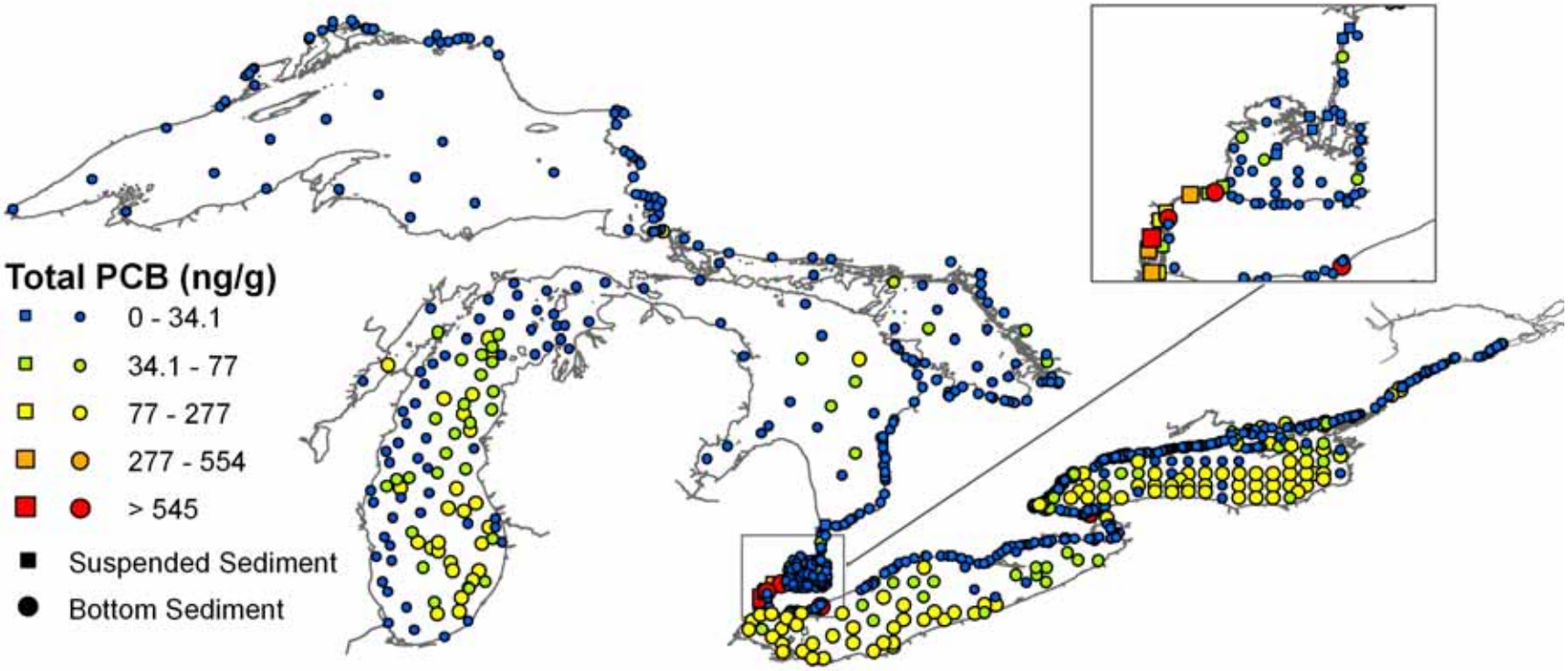

**Monitoring Programs, Environment Canada**
**Water Quality Monitoring and Surveillance, Ontario**

# Total PCBs in Great Lakes Water

NYSDEC guideline:
0.001 ng/L



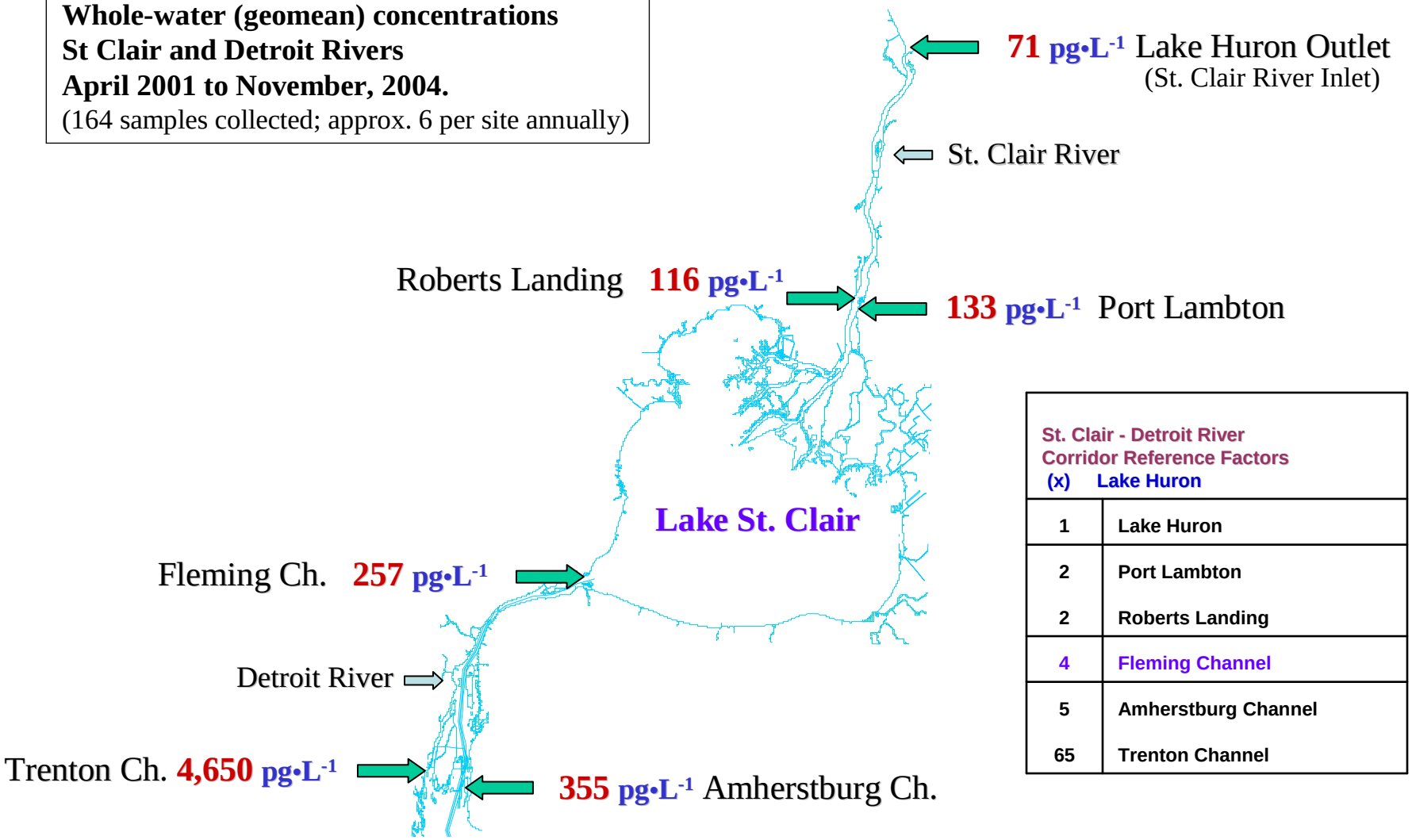
# Total PCBs in Bottom Sediments



# Total PCBs

**Analyses : AXYS Analytical**

**Whole-water (geomean) concentrations**
**St Clair and Detroit Rivers**
**April 2001 to November, 2004.**
(164 samples collected; approx. 6 per site annually)




| St. Clair - Detroit River Corridor Reference Factors (x) | Lake Huron |
|---|---|
| 1 | Lake Huron |
| 2 | Port Lambton |
| 2 | Roberts Landing |
| 4 | Fleming Channel |
| 5 | Amherstburg Channel |
| 65 | Trenton Channel |

**MDEQ, Wildlife Value: 120 pg•L$^{-1}$ Human Cancer Value (Drink) 26 pg•L$^{-1}$**

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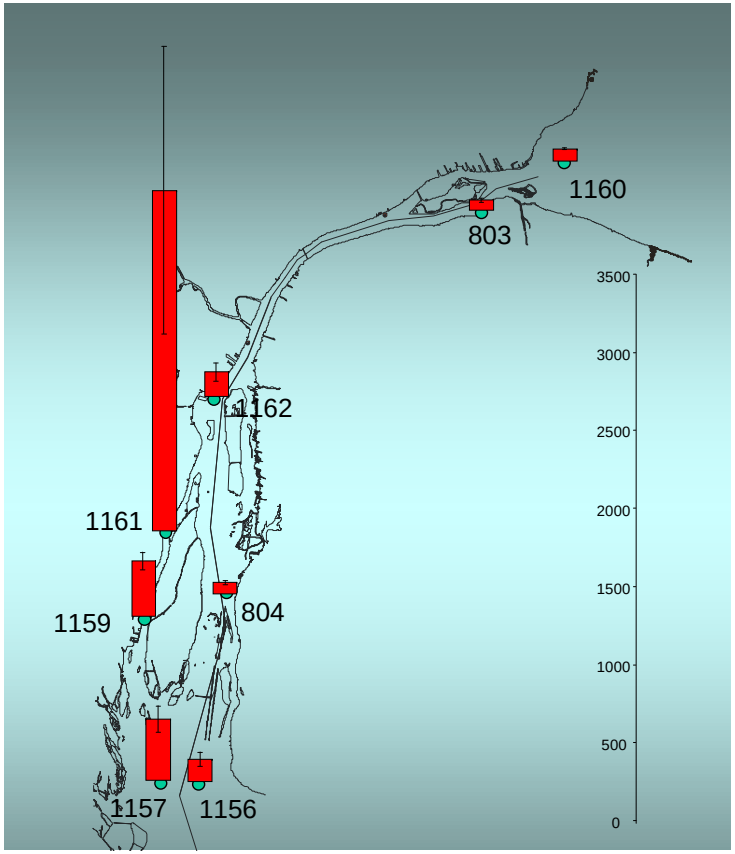
# Total PCBs in Suspended Sediment (1999)



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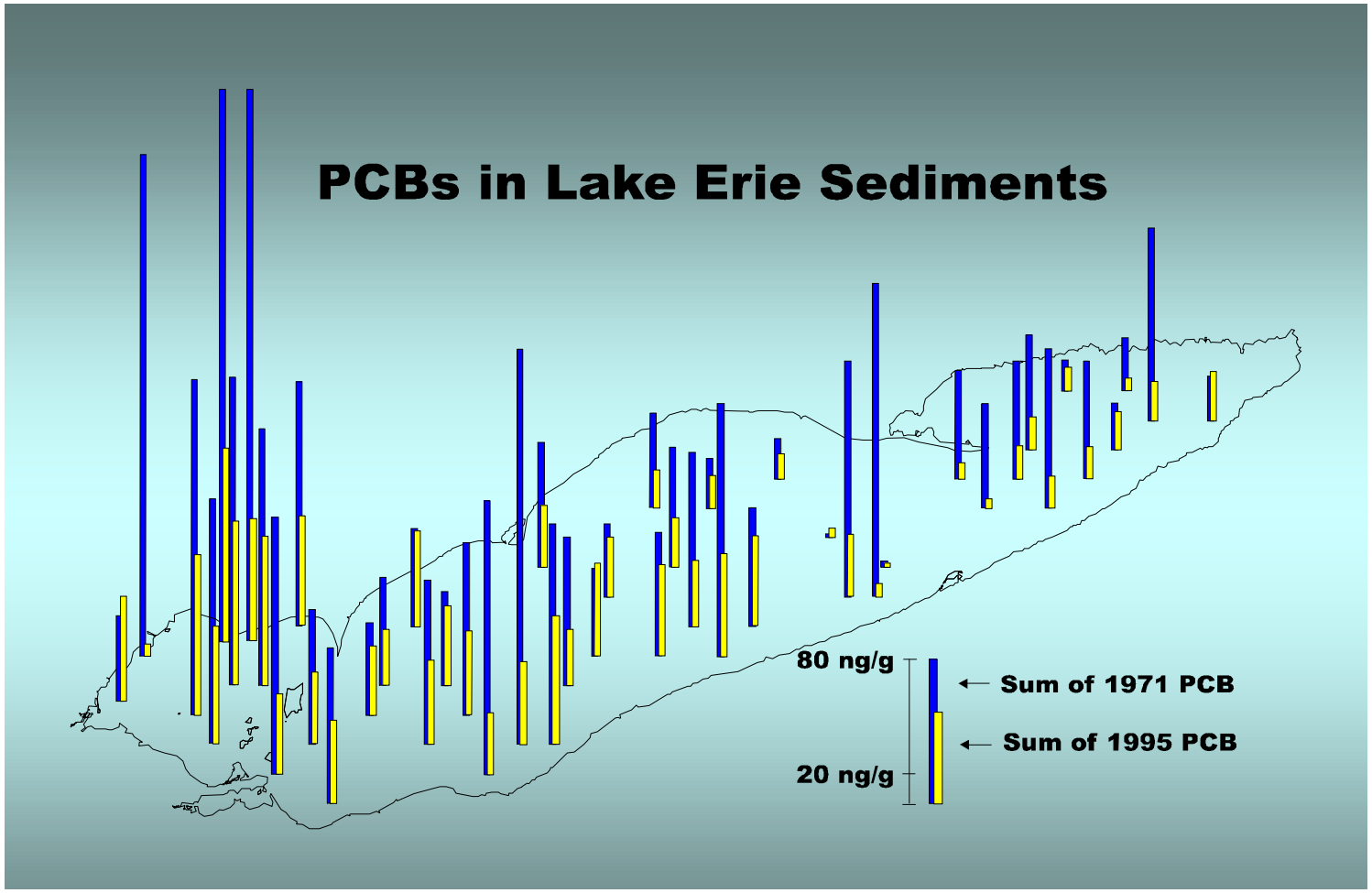
# Temporal Trend in Bottom Sediments



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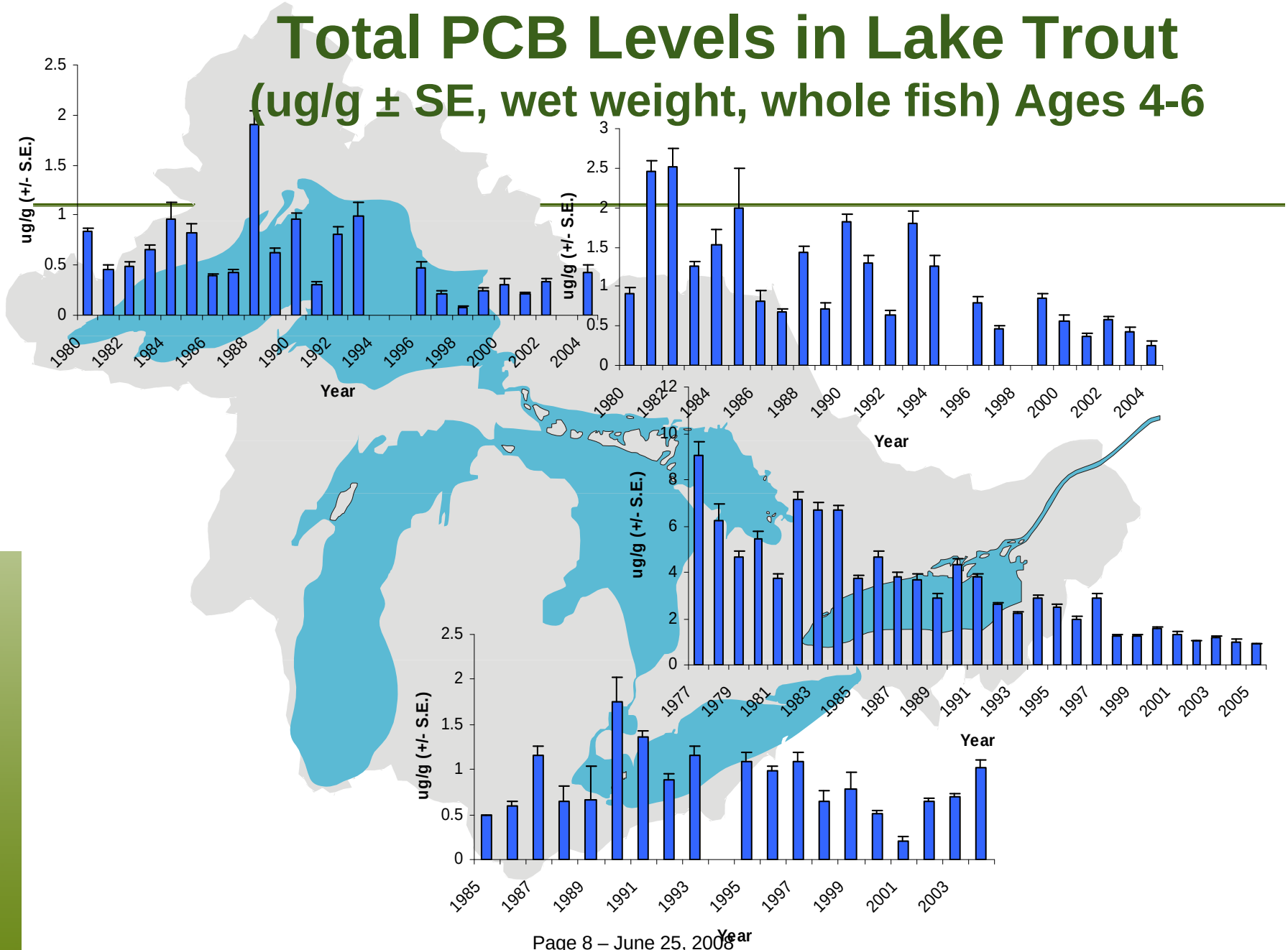
# Total PCB Levels in Lake Trout

## (ug/g ± SE, wet weight, whole fish) Ages 4-6



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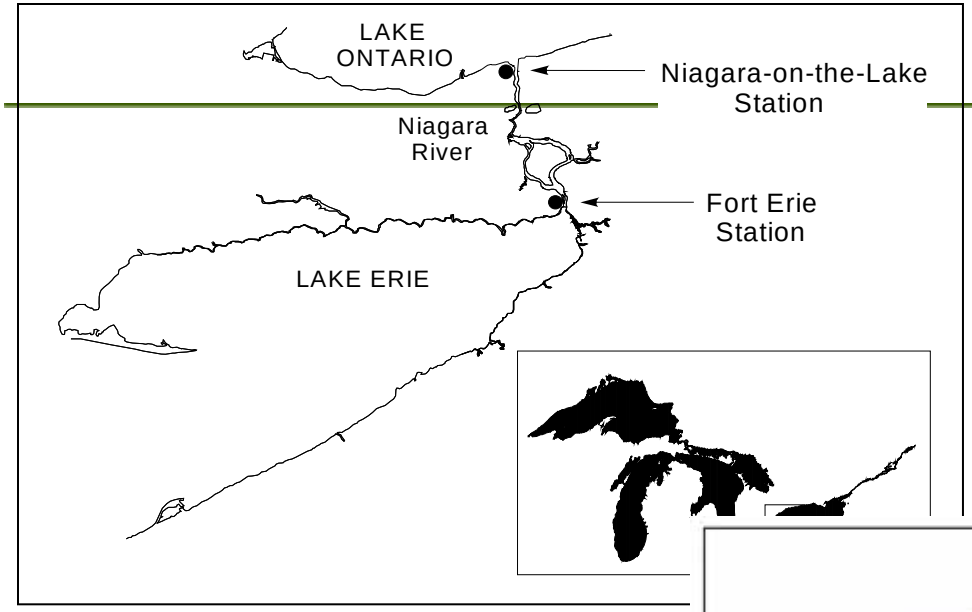
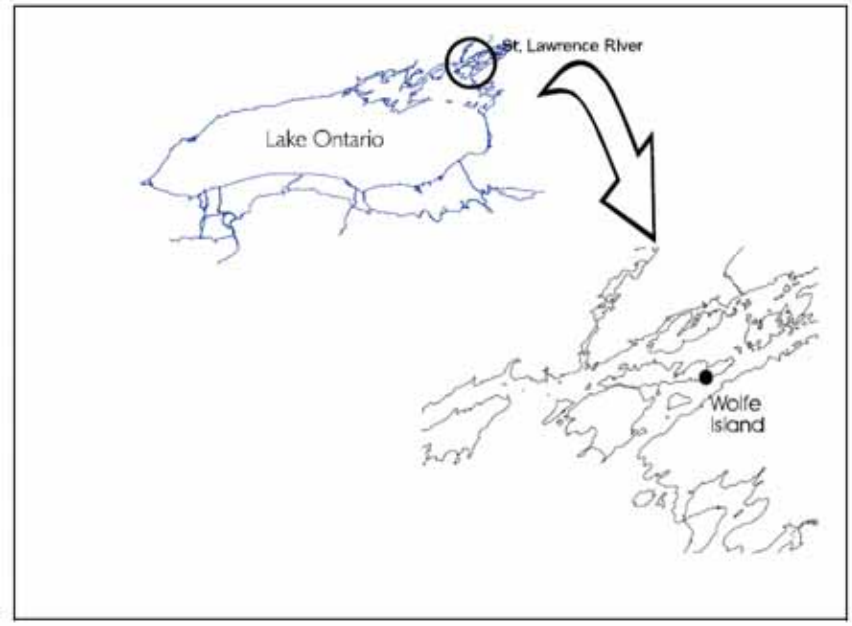
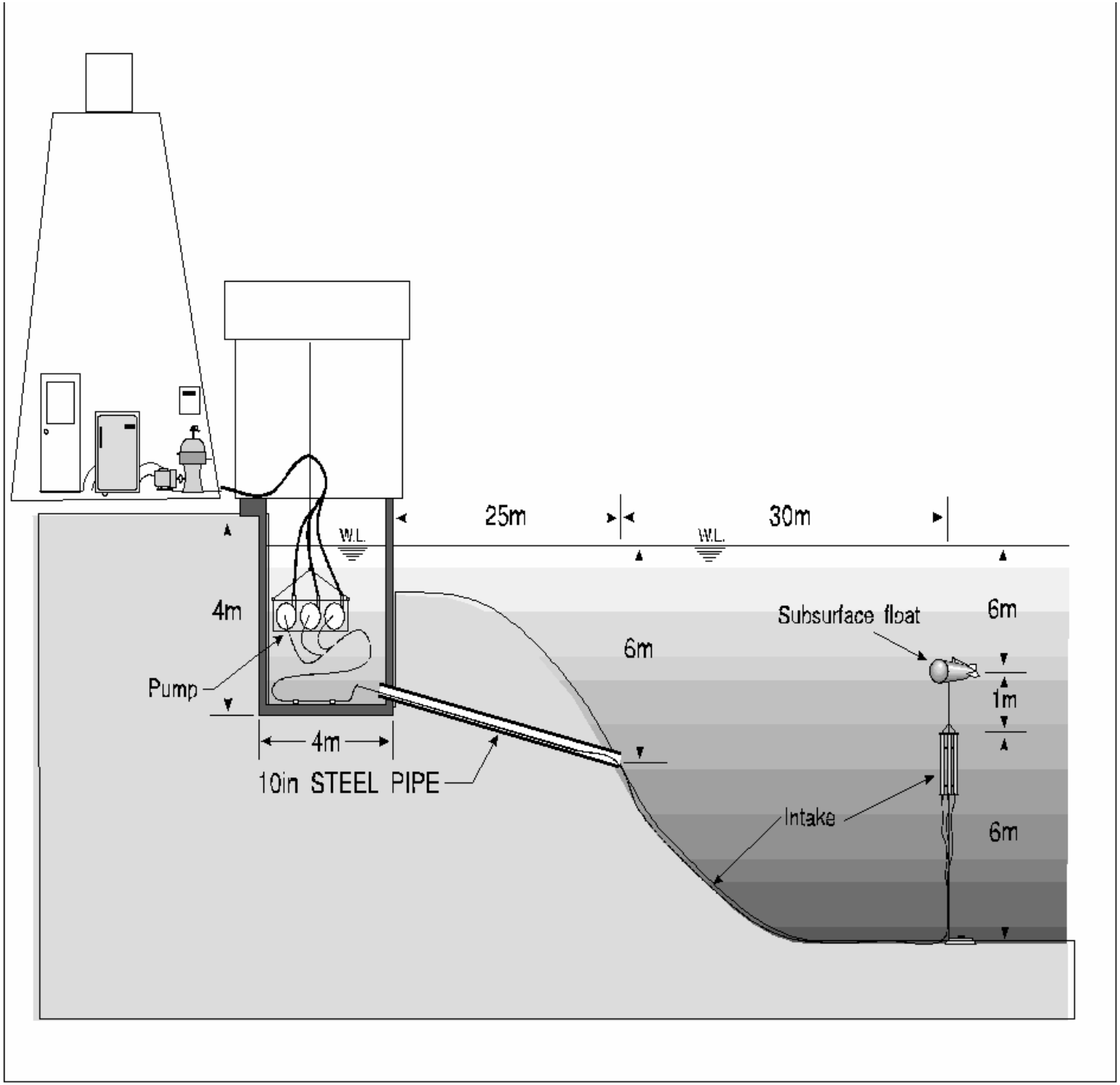
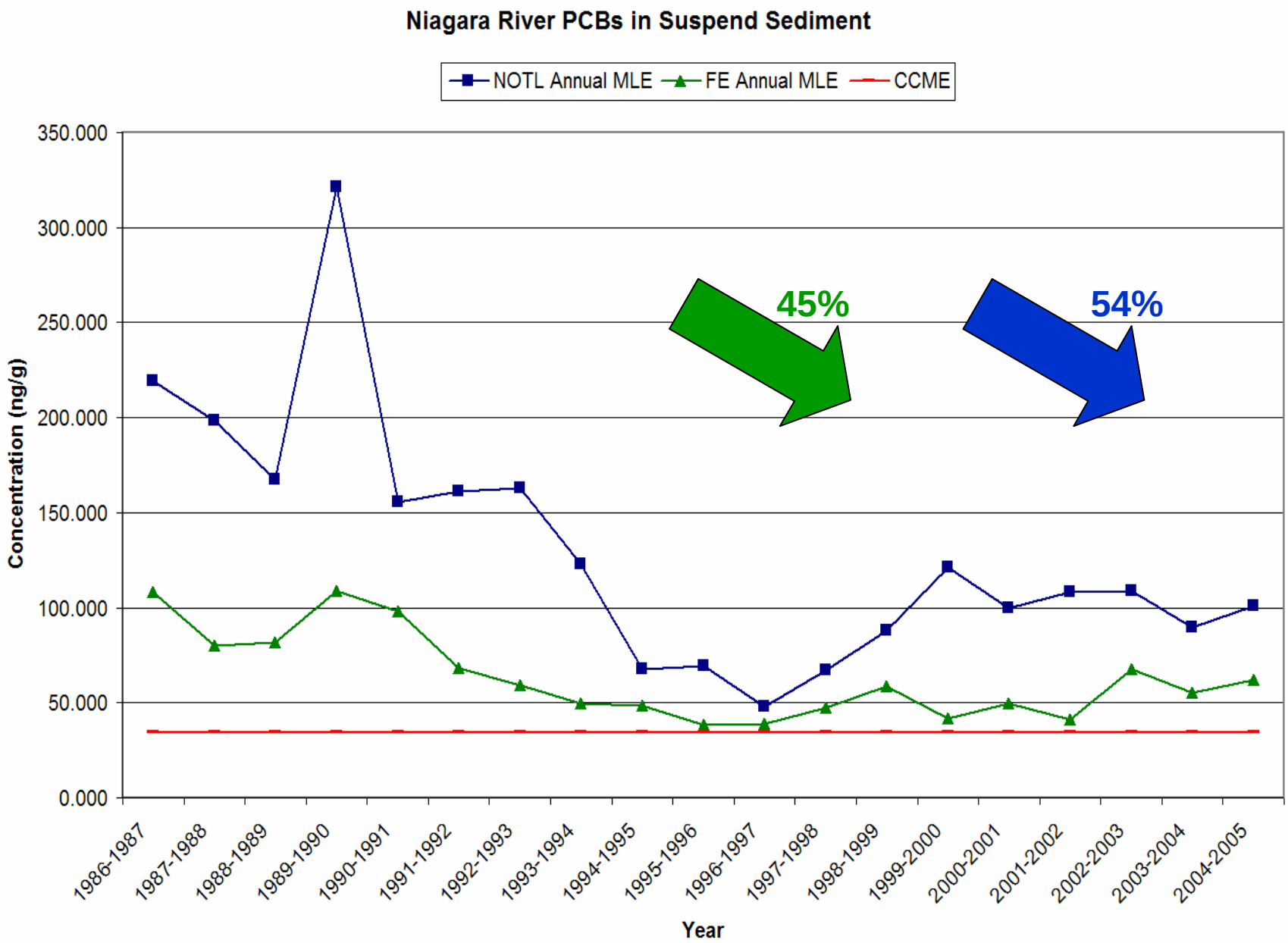

LAKE
ONTARIO
Niagara-on-the-Lake
Station
Niagara
River
Fort Erie
Station
LAKE ERIE


St. Lawrence River
Lake Ontario
Wolfe
Island


25m
30m
W.L.
W.L.
4m
Pump
4m
10in STEEL PIPE
6m
Subsurface float
6m
1m
Intake
6m



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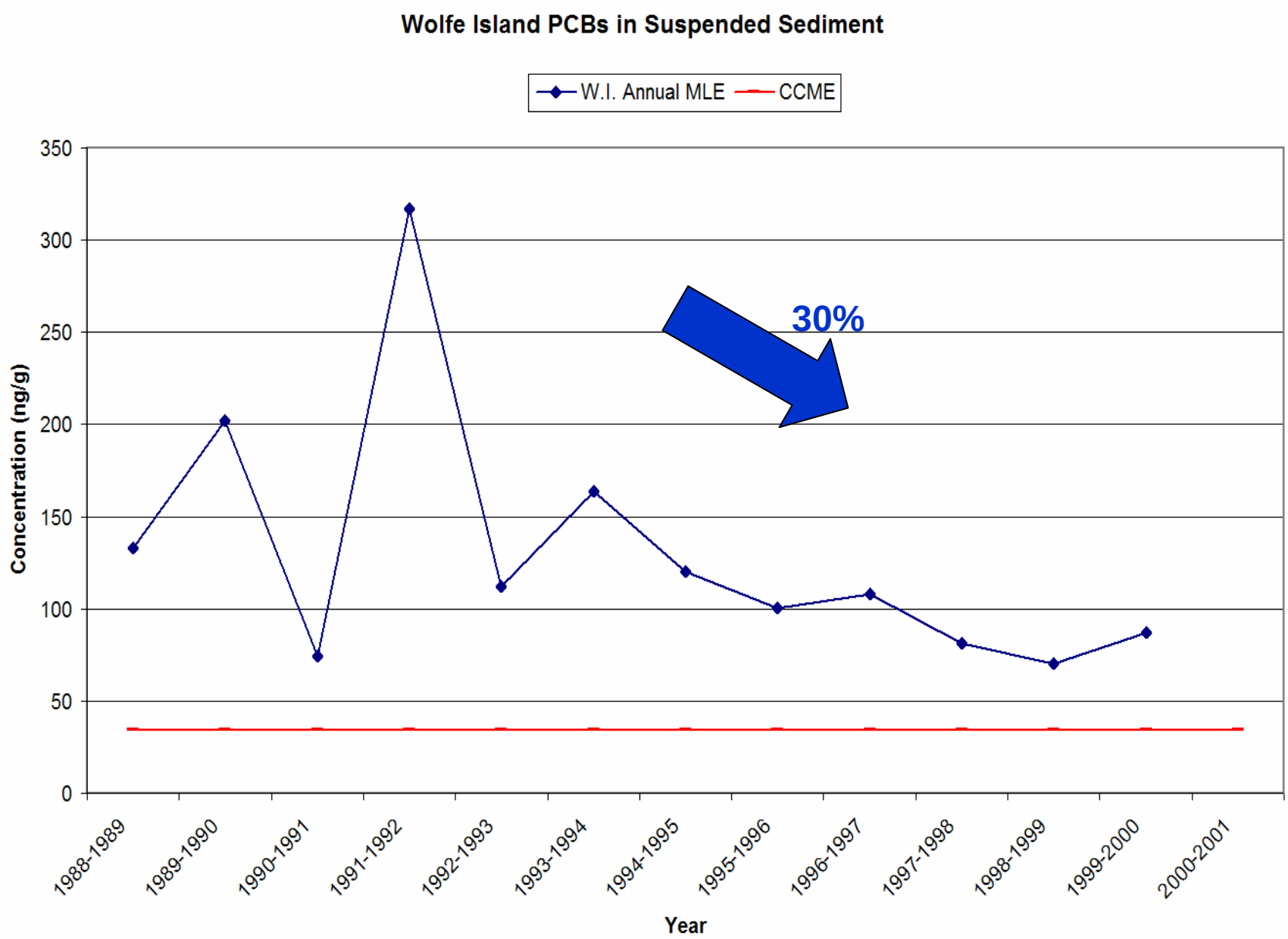
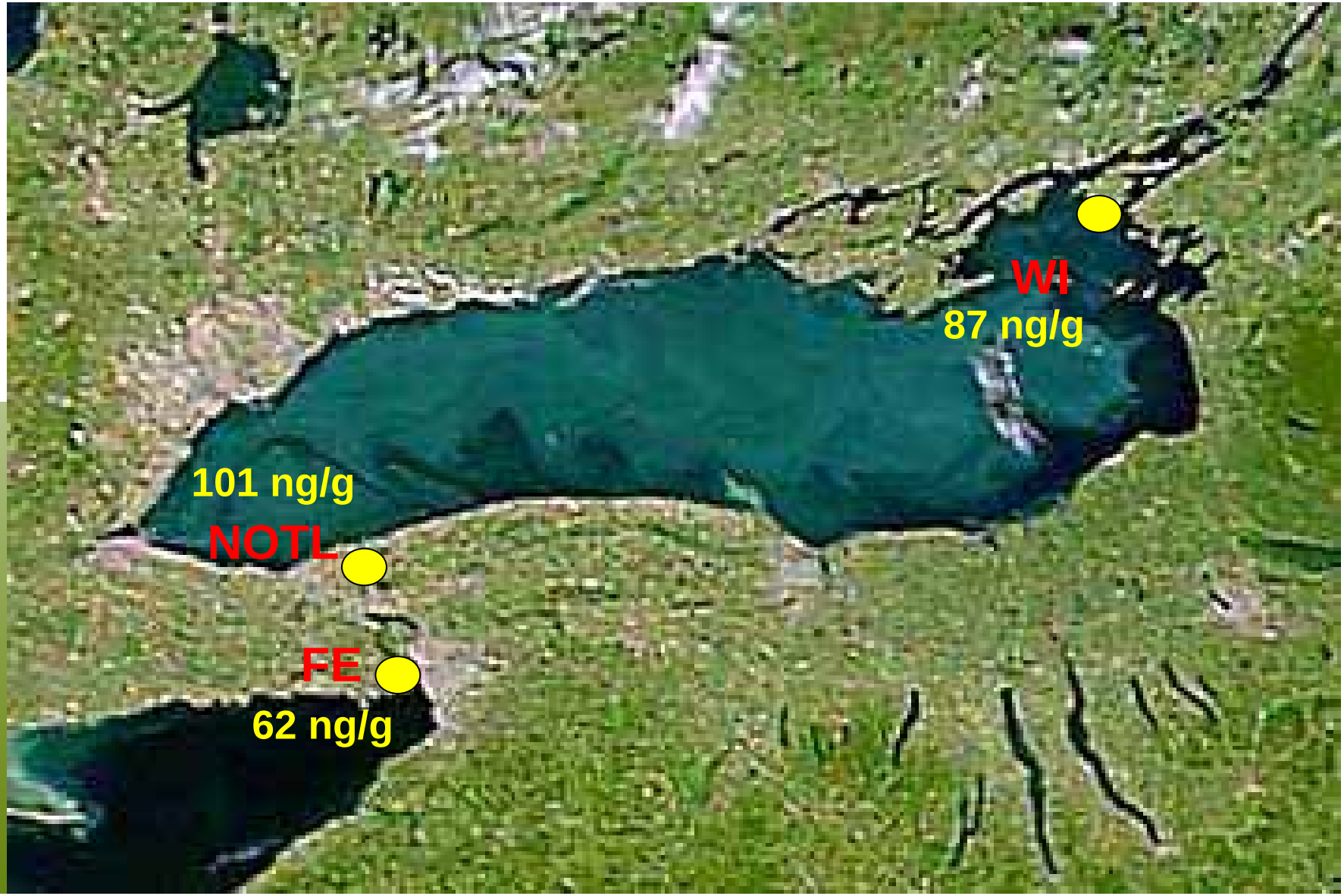

Wolfe Island PCBs in Suspended Sediment
W.I. Annual MLE
CCME
30%
Concentration (ng/g)
350
300
250
200
150
100
50
0
1988-1989
1989-1990
1990-1991
1991-1992
1992-1993
1993-1994
1994-1995
1995-1996
1996-1997
1997-1998
1998-1999
1999-2000
2000-2001
Year

# PCBs in Suspended Sediments