A scenic view of a river flowing through a wooded area. The water is a deep blue-green color. In the background, there are several houses with white siding and dark roofs, partially obscured by trees. The trees are mostly bare, suggesting a late autumn or winter setting. The sky is a pale blue with some light clouds. The overall scene is peaceful and natural.

Housatonic River Example EFDC Simulations CCC Meeting

**Edward Garland
HydroQual, Inc.
February 22, 2006**



Purpose of Example Simulations

- Qualitative Test of the model
 - Are changes simulated by the model under two alternative hypothetical scenarios reasonable in the context of what is known about the Housatonic River PSA



Example Simulations

26-year Simulation with:

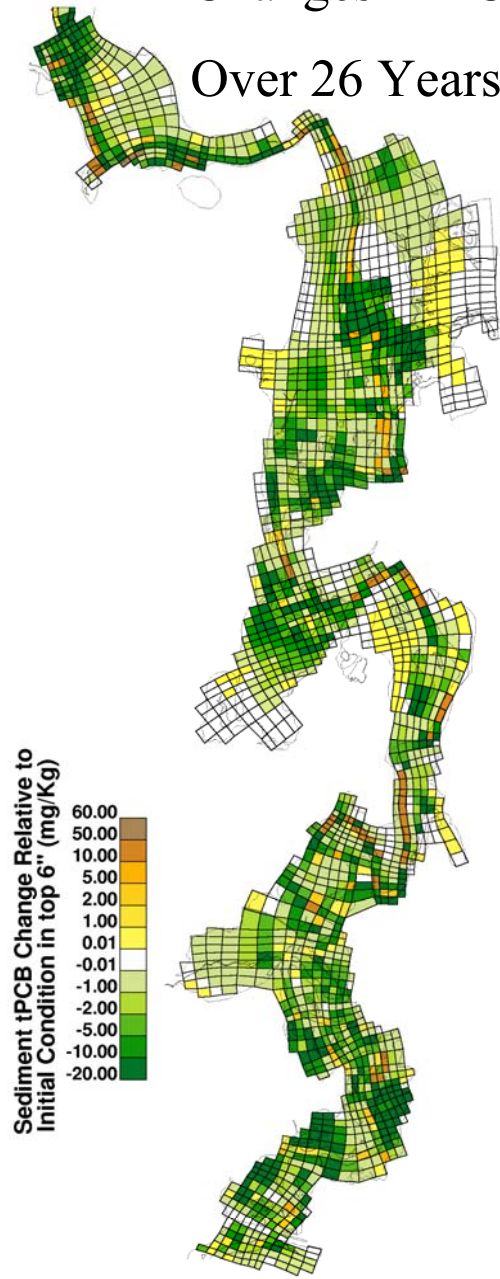
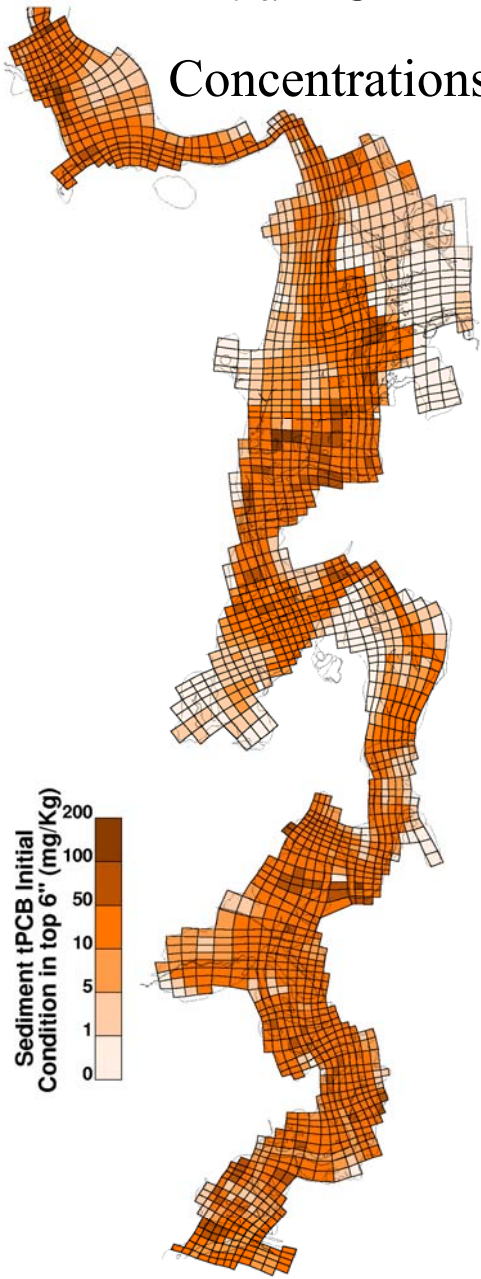
- 1) Zero Concentration of PCBs in East Branch
- 2) Zero Concentration of PCBs in East Branch, zero concentration of PCBs in Reach 5A sediment, no bank erosion in Reach 5A

Initial PCB

Changes in PCBs

Concentrations

Over 26 Years



Sediment tPCB Initial Condition in top 6" (mg/Kg)

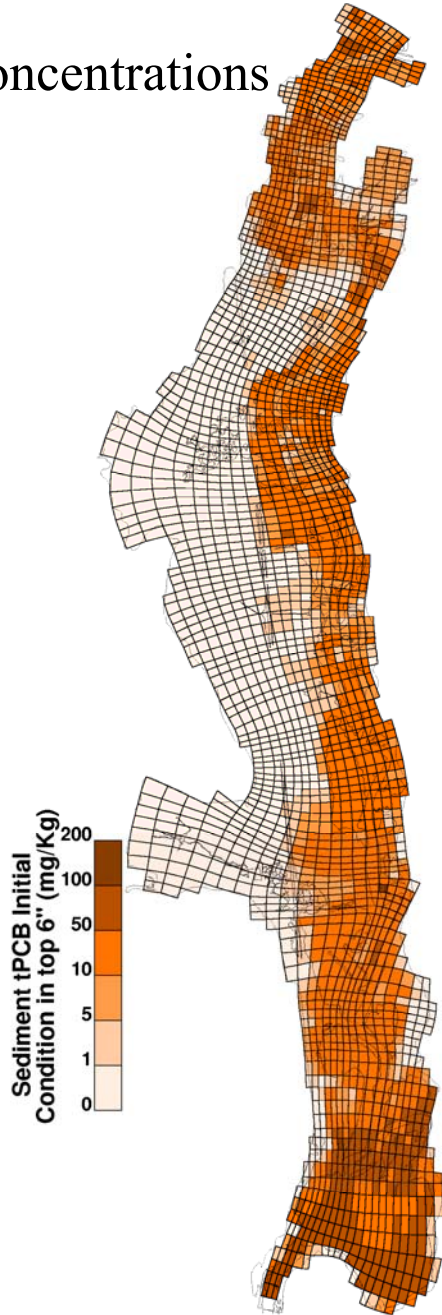
Sediment tPCB Change Relative to Initial Condition in top 6" (mg/Kg)

Example 1 – Upper Half of PSA

Zero PCB Concentration from East Branch

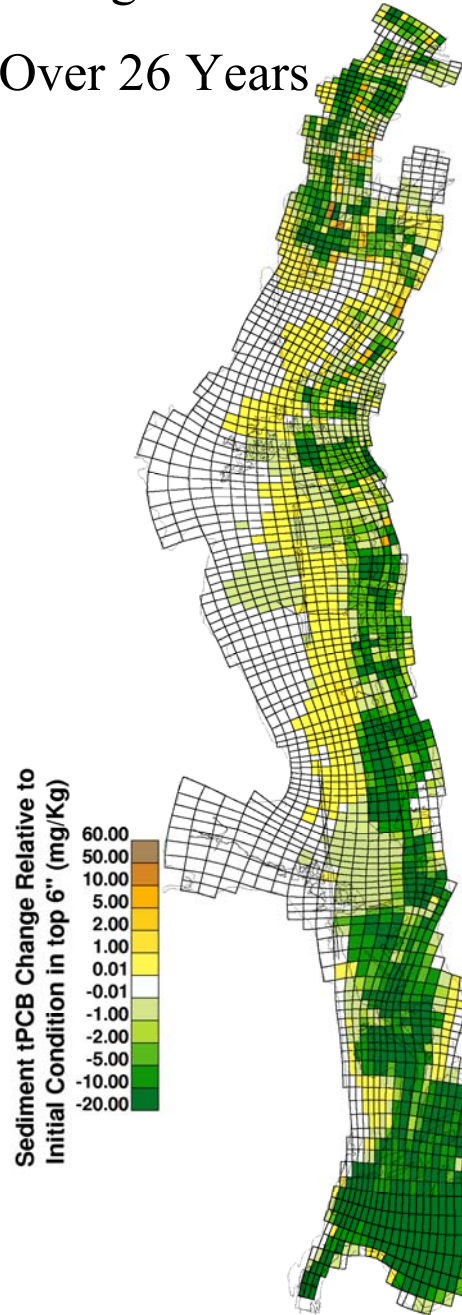
Initial PCB

Concentrations



Changes in PCBs

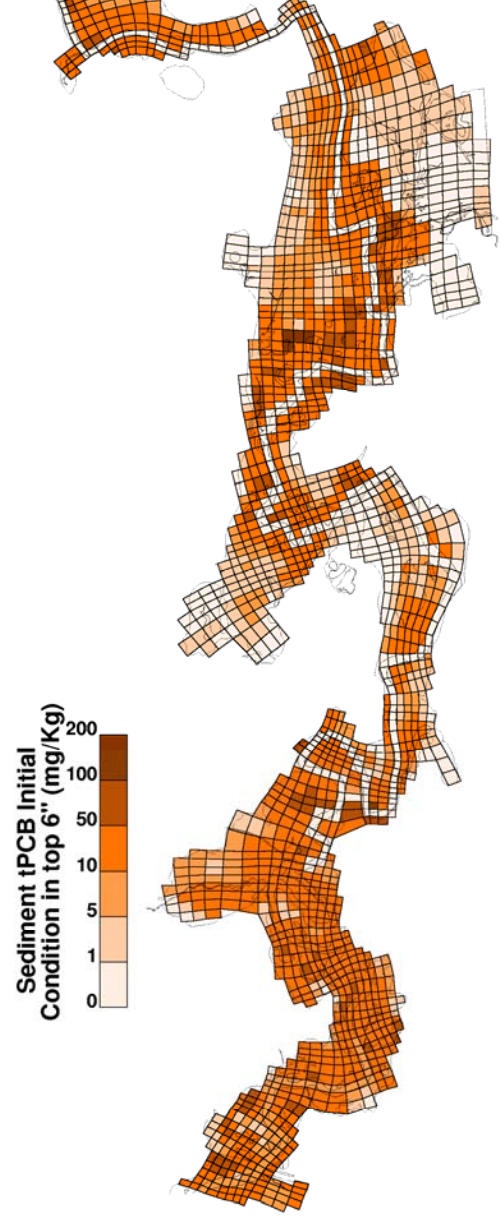
Over 26 Years



Example 1 – Lower
Half of PSA

Zero PCB
Concentration from
East Branch

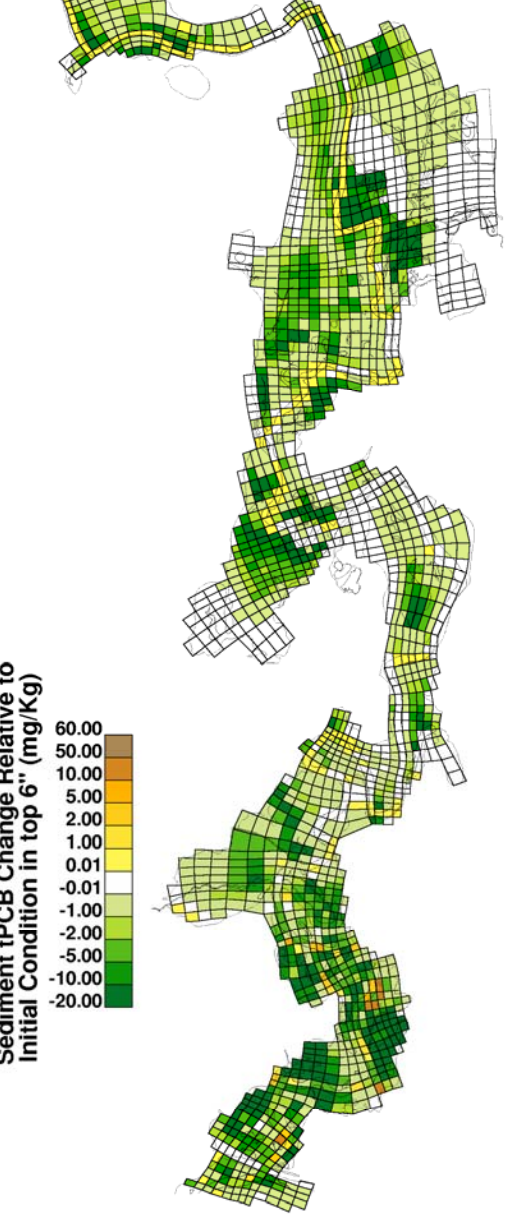
Initial PCB Concentrations



Sediment tPCB Initial Condition in top 6" (mg/Kg)

200
100
50
10
5
1
0

Changes in PCBs Over 26 Years



Sediment tPCB Change Relative to Initial Condition in top 6" (mg/Kg)

60.00
50.00
10.00
5.00
2.00
1.00
0.01
-0.01
-1.00
-2.00
-5.00
-10.00
-20.00

Example 2 – Upper Half of PSA

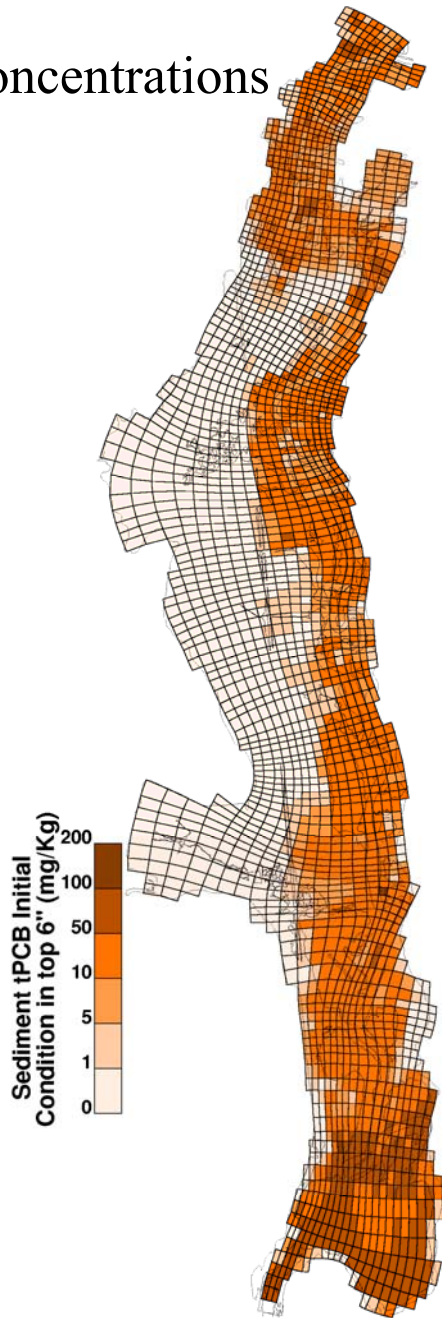
Zero PCB Concentration from East Branch

Zero PCB in Reach 5A Sediment

No Bank Erosion in Reach 5A

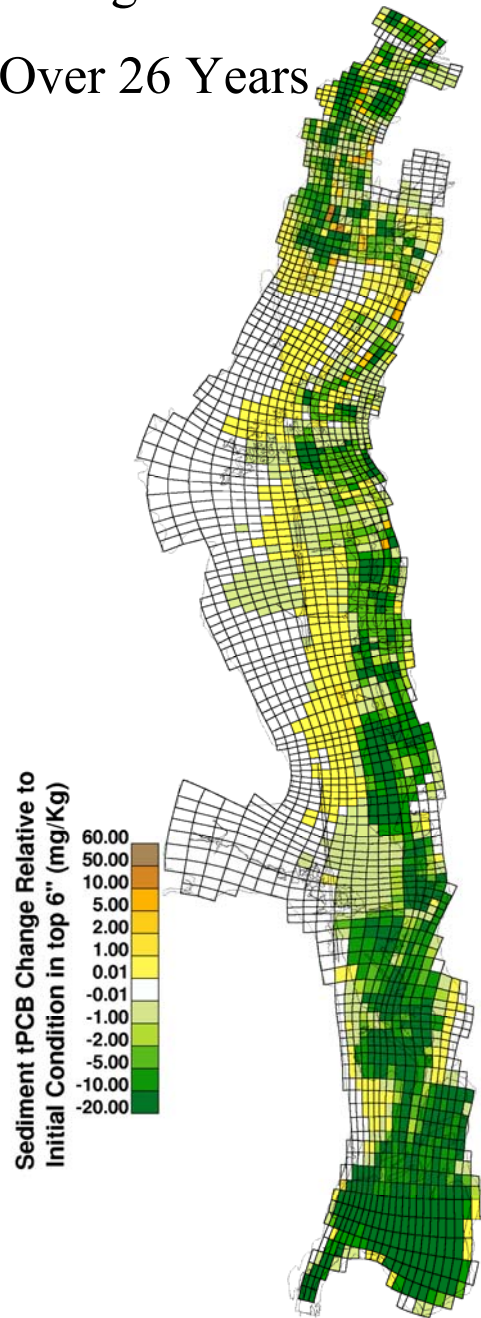
Initial PCB

Concentrations



Changes in PCBs

Over 26 Years



Example 2 – Upper Half of PSA

Zero PCB Concentration from East Branch

Zero PCB in Reach 5A Sediment

No Bank Erosion in Reach 5A