

# Monitoring of Biological Integrity in Tributaries to the Lower Fox River, Wisconsin



The Lower Fox River  
Watershed Monitoring Program  
March 9, 2005



## Effects of Urbanization on Stream Biological and Habitat Integrity



- *Increased Peak Flow*
- *Decreased Baseflow*
- *Increased Bank Erosion*
- *Decrease Water Quality*
- *Substrate Degradation*
- *Habitat Loss*
- *Species Loss - Fish, Invertebrates, Plants*

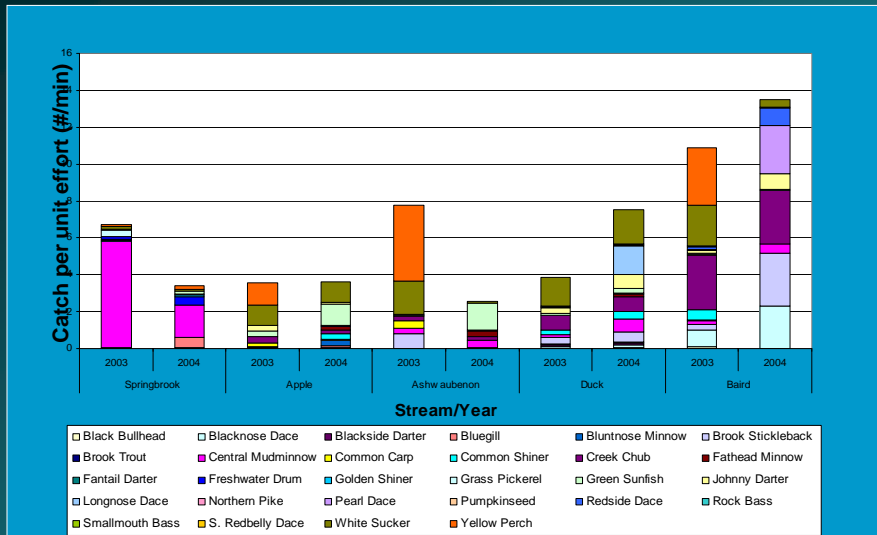


# Data Collected & Analyzed

- Stream Hydrology and Water Quality
- Stream Habitat Quality
- Aquatic Macroinvertebrate Abundance and Diversity
- Fish Abundance and Species Composition



## Fox River Tributary Fish Species 2003 and 2004 Summer Sampling

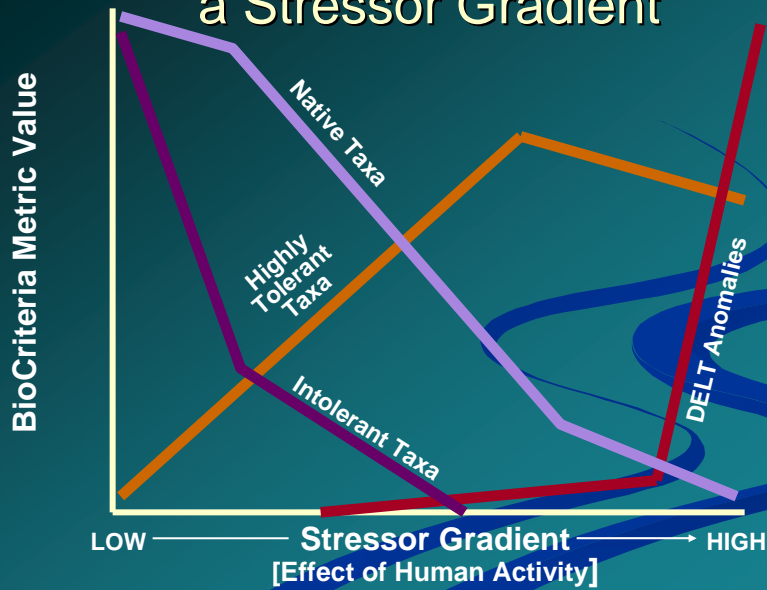


# Some Fishes of the Fox River and It's Tributaries

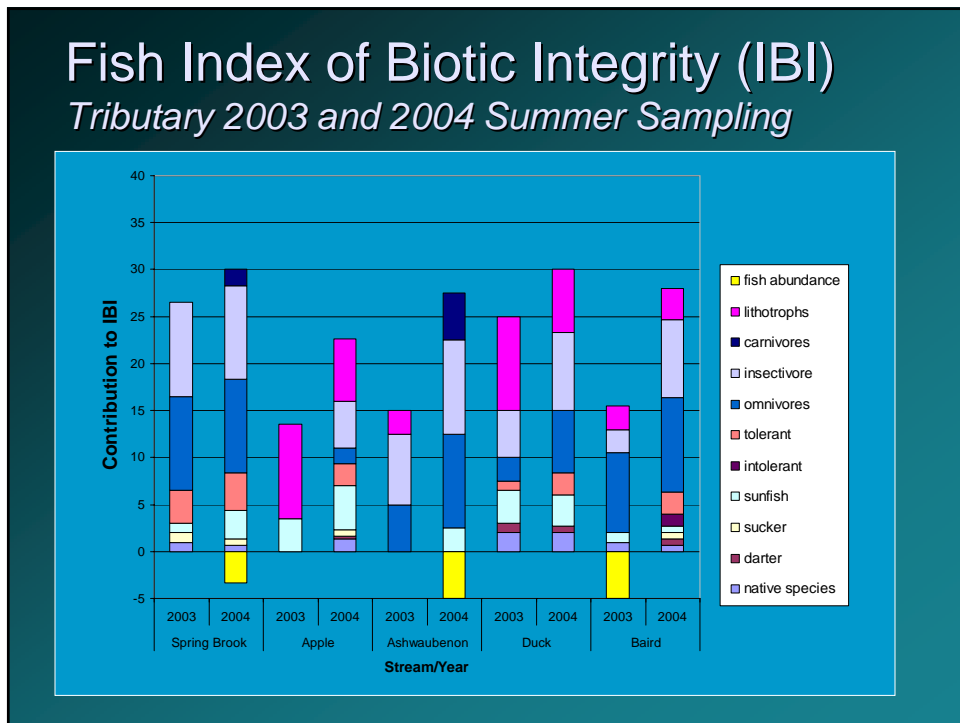
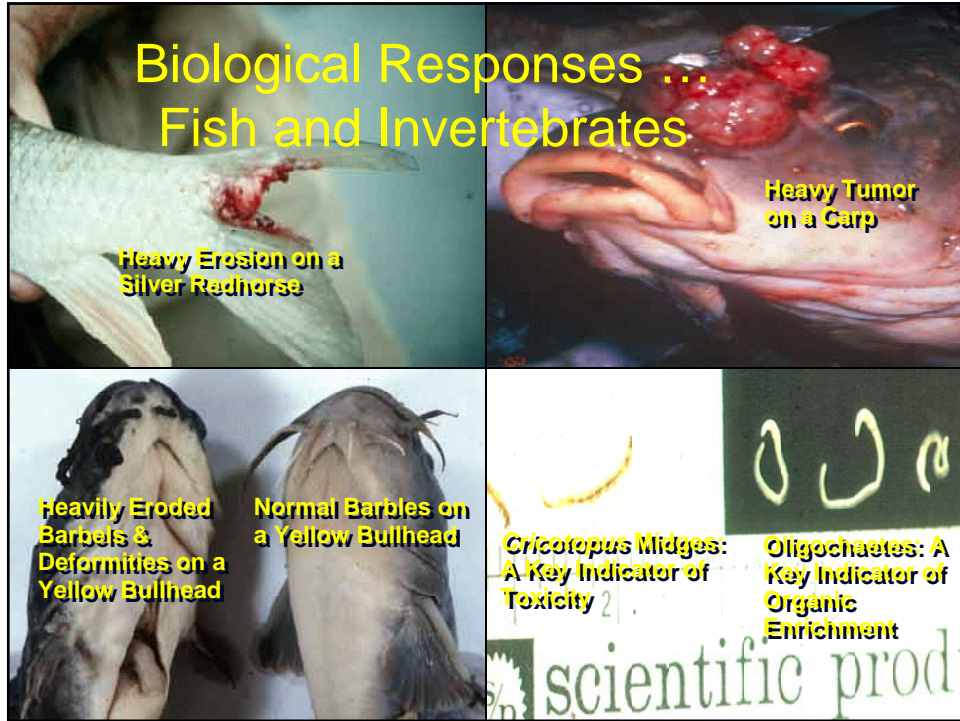


THE LOUPE FOR RIVER  
watershed  
monitoring  
program

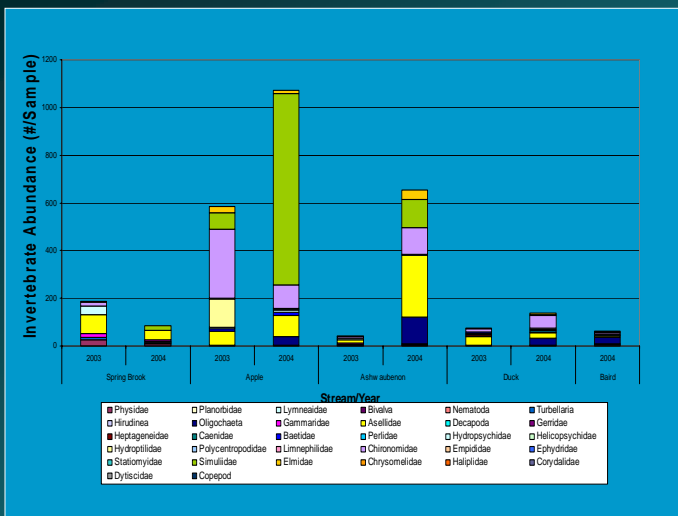
# BioCriteria Metric Behavior Along a Stressor Gradient



THE LOUPE FOR RIVER  
watershed  
monitoring  
program

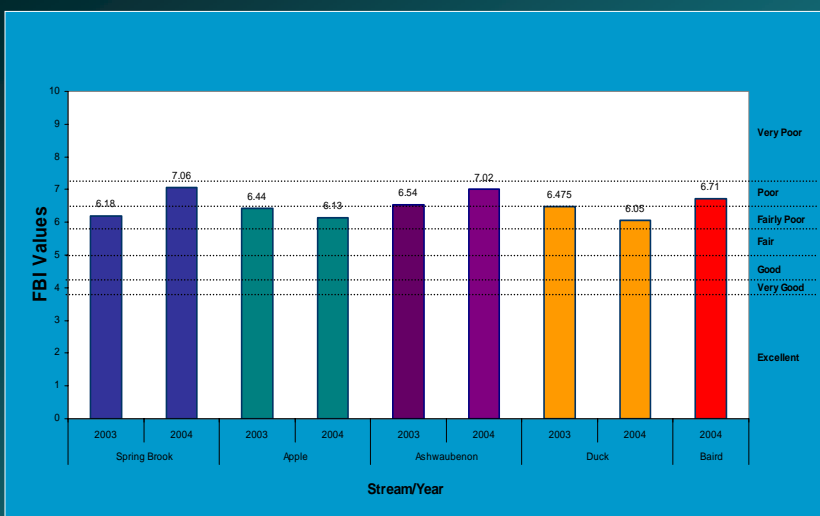


# Aquatic Macroinvertebrates



THE LEADER FOR RIVERS  
watershed  
monitoring  
program

# Aquatic Macroinvertebrates



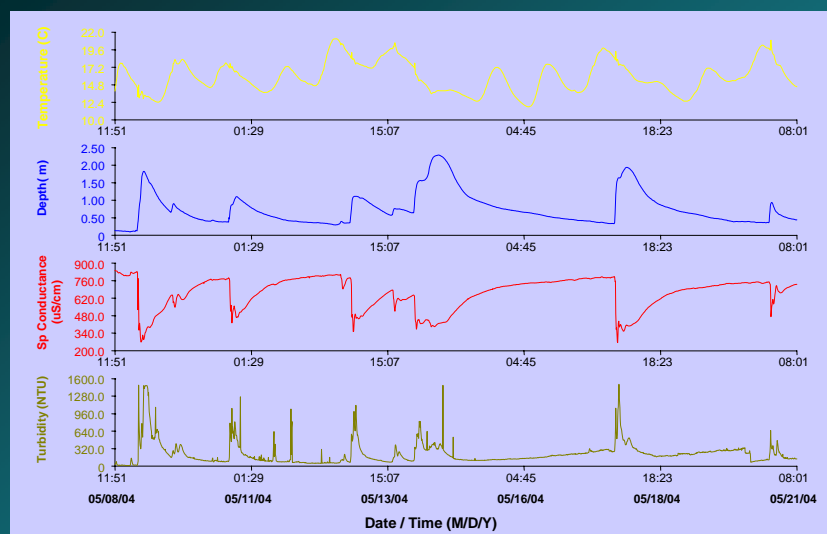
THE LEADER FOR RIVERS  
watershed  
monitoring  
program

# Stream Monitoring Station YSI 6200 DCP Monitoring Equipment



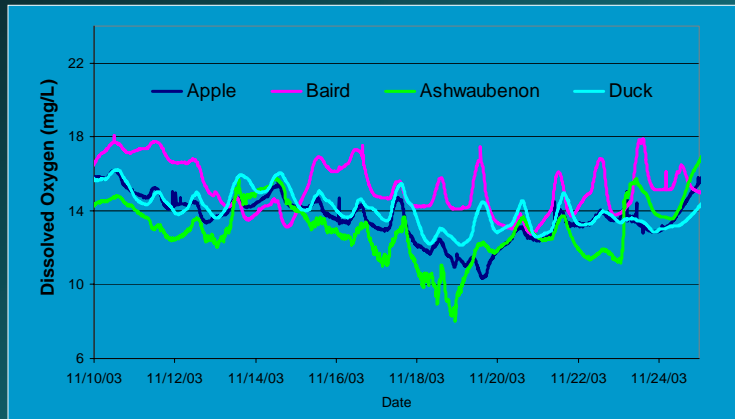
THE LOVER FOR RIVER  
watershed  
monitoring  
program

## Continuous Sonde Data May 2004 – Dissolved and Suspended solids



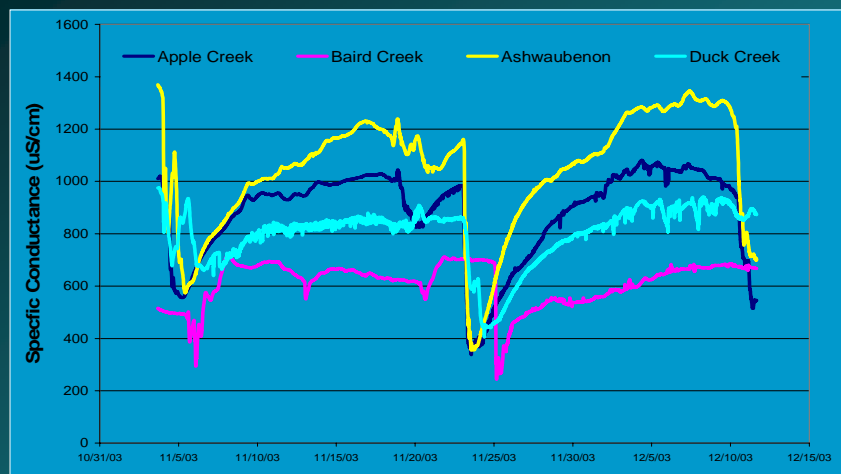
THE LOVER FOR RIVER  
watershed  
monitoring  
program

# Dissolved Oxygen Fluctuations



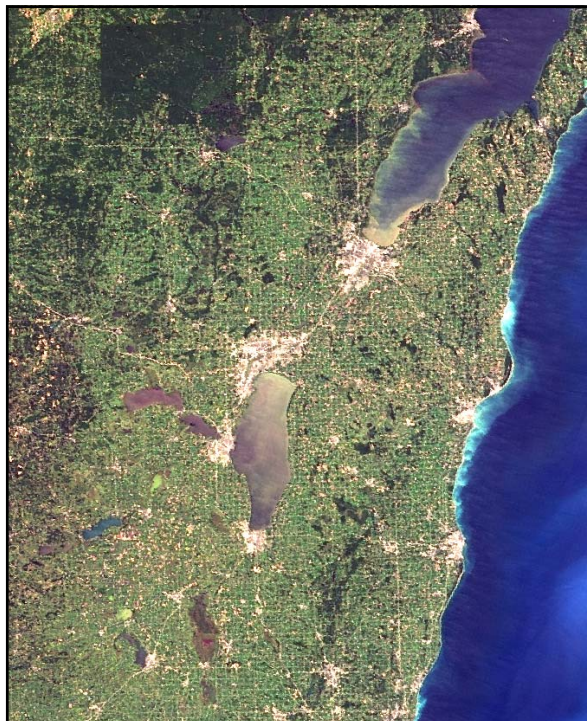
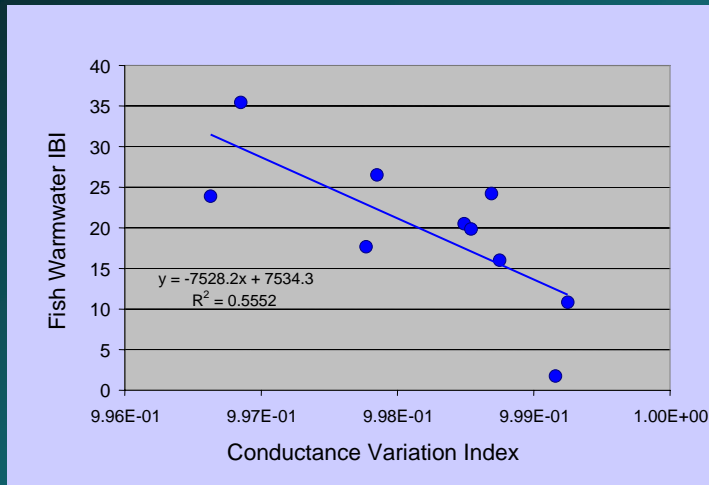
THE LEADER FOR RIVERS  
watershed  
monitoring  
program

# Dissolved Solids (conductance)



THE LEADER FOR RIVERS  
watershed  
monitoring  
program

# Effect of Conductance Variation on Fish Biotic Integrity



## The Fox River Valley

