ACES 2014 - Workshop #3
Washington, D.C.
December 8, 2014

Coordinated Approaches To Enhance Ecosystem Services In Watersheds Dominated By Agriculture

Project (Funded by GLPF): Great Lakes Watershed Ecological Sustainability Strategy
Project (funded by NSF and Ohio Sea Grant): Lake Erie human behavior-ecosystem services research

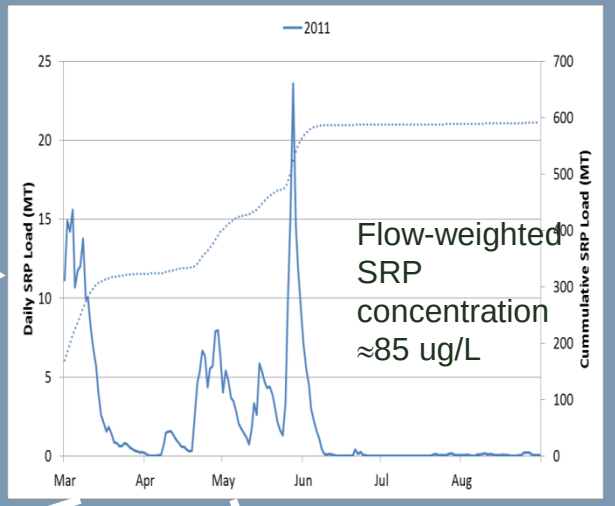
LimnoTech
Water | Environment | Scientists | Engineers

The Nature Conservancy
Protecting nature. Preserving life.™

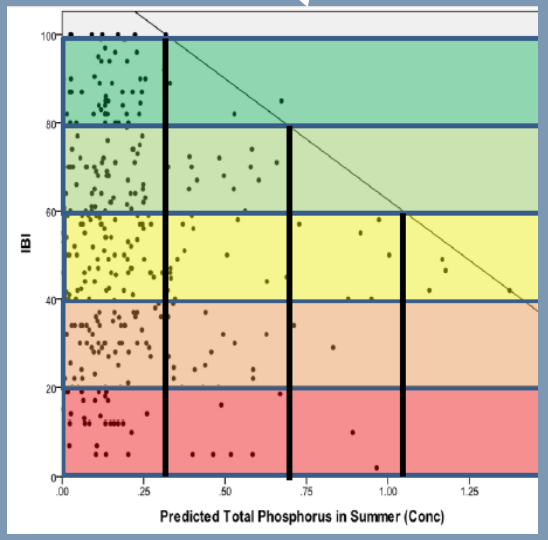
Michigan State University

The Ohio State University

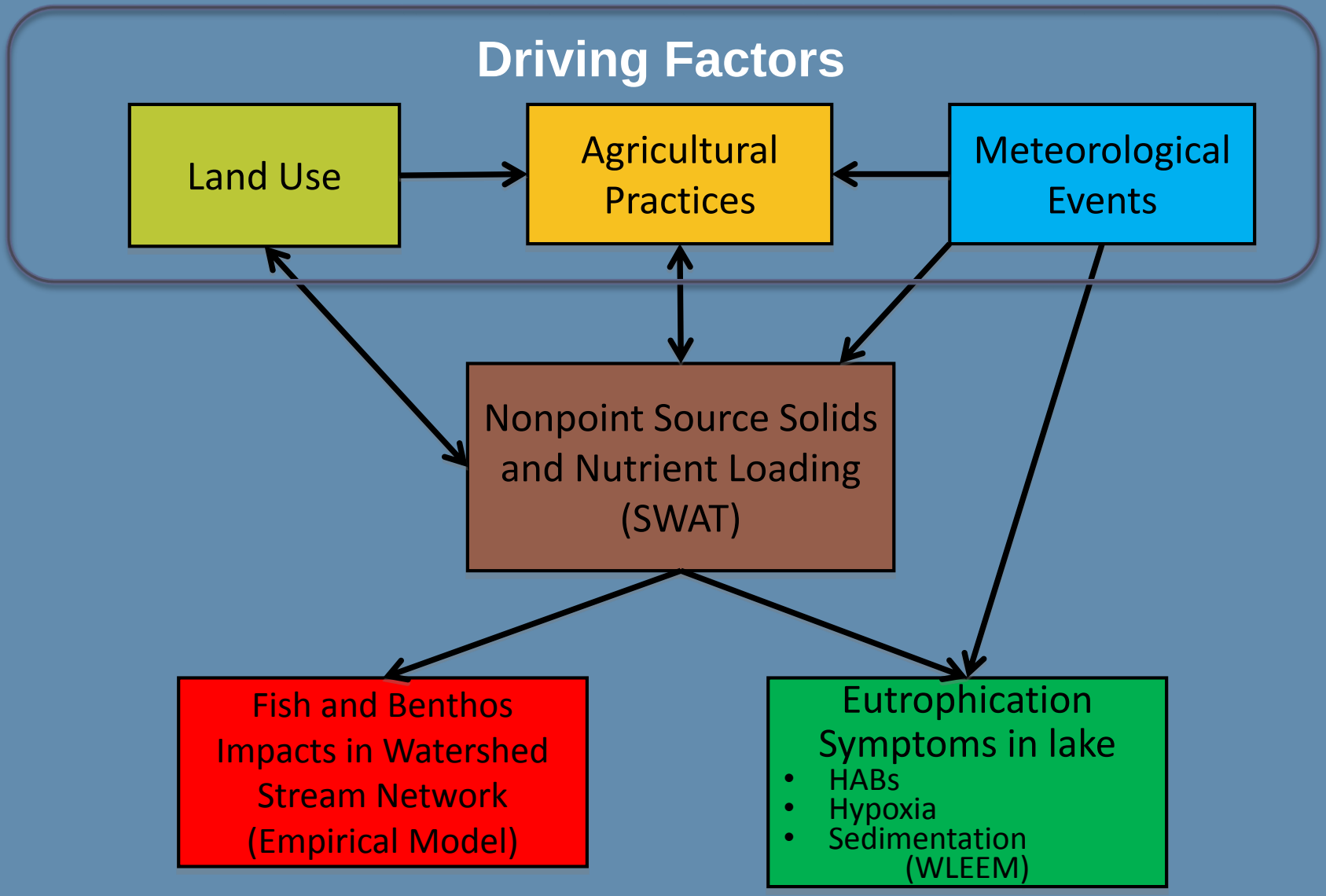
The Problem


2011
Daily SRP Load (MT)
Cummulative SRP Load (MT)
Mar
Apr
May
Jun
Jul
Aug
Flow-weighted SRP concentration ≈85 ug/L

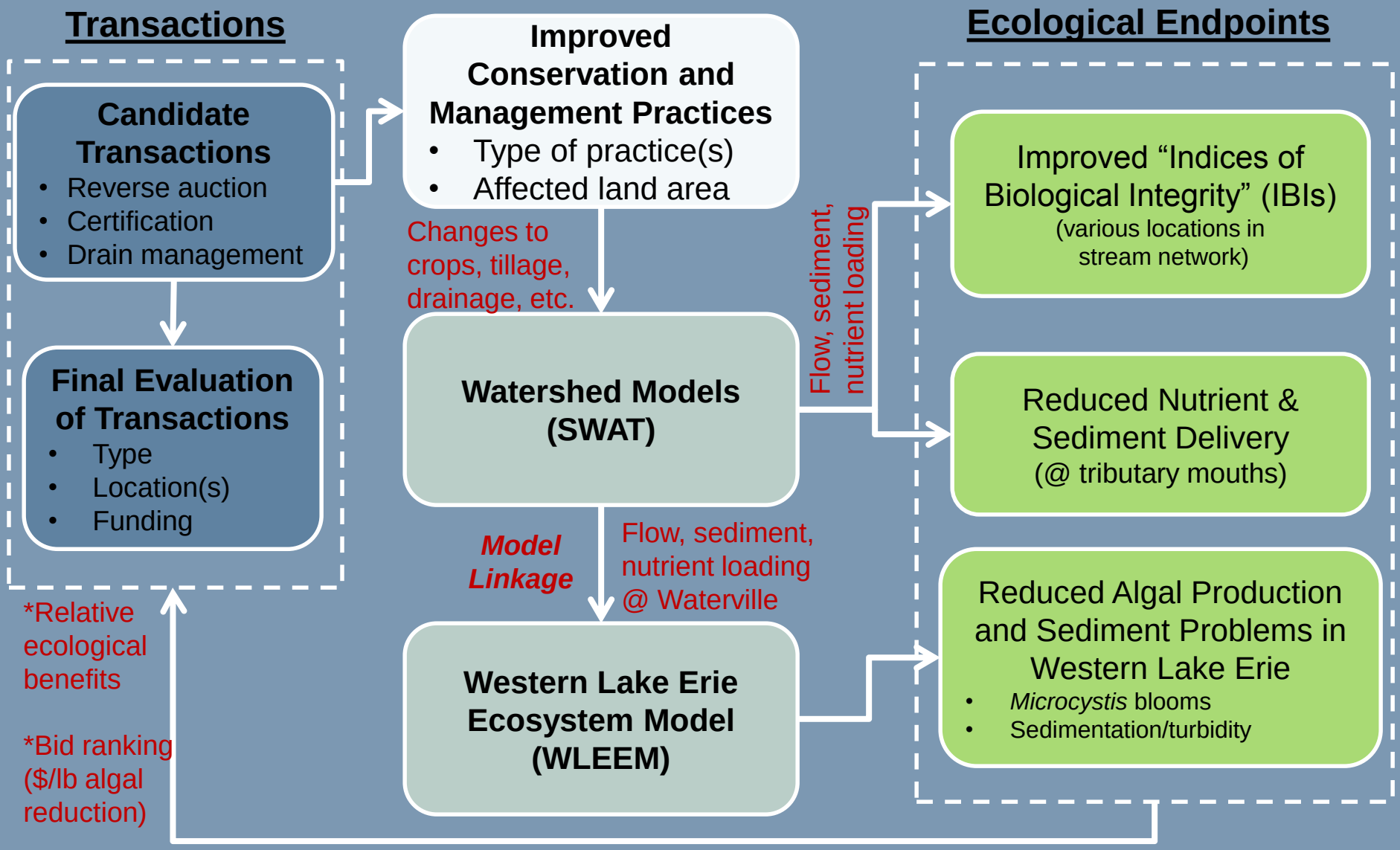

September 3, 2011


IBI
Predicted Total Phosphorus in Summer (Conc)

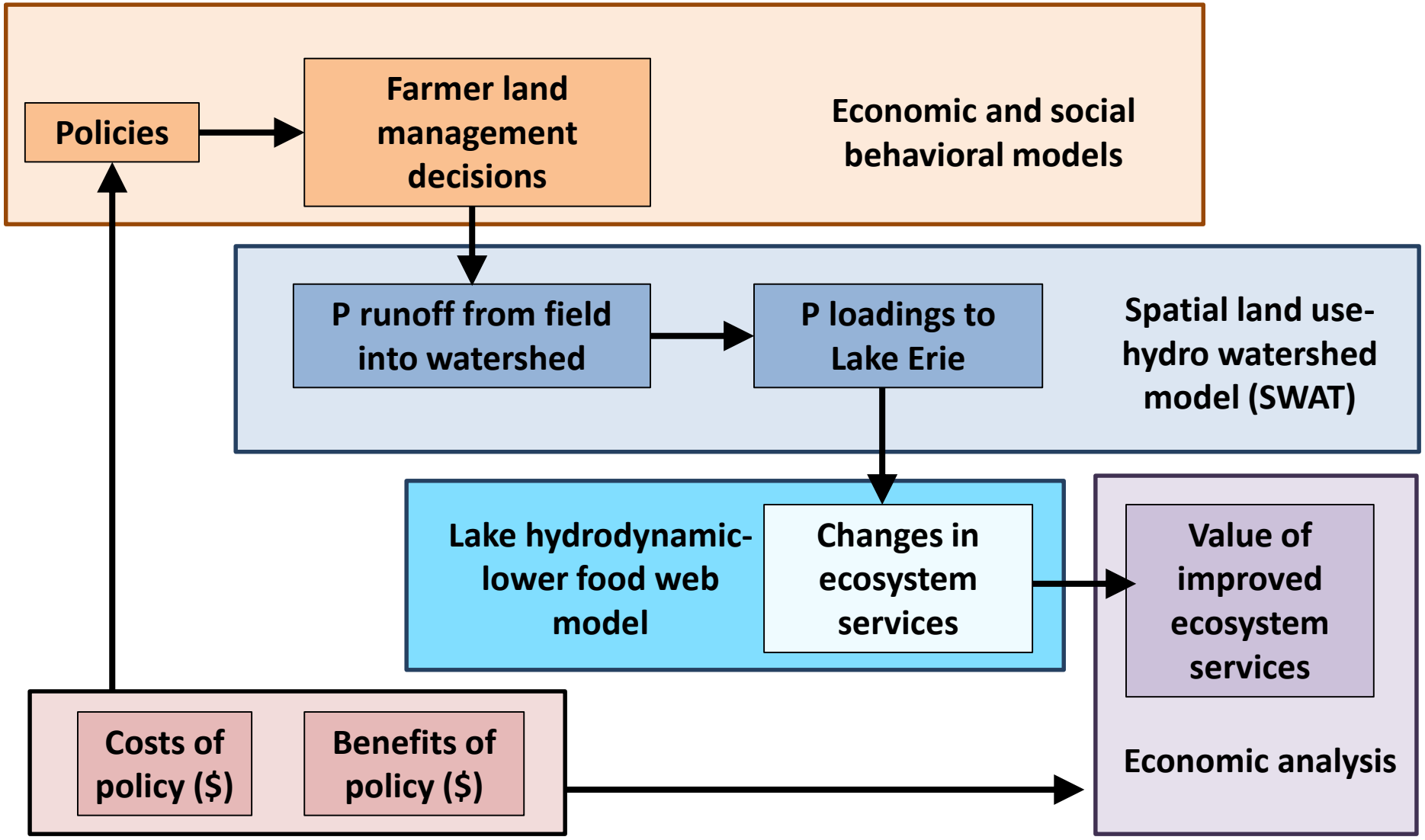
The Cause-Effect Analysis



The Solution: Transactions↔Ecological Endpoints



OSU Analysis: Lake Erie-land coupled human-natural systems model



Workshop Talks

1. Dennis McGrath, The Nature Conservancy. *Overview of Achievements from the Great Lakes Watershed Ecological Sustainability Strategy for Agricultural Watersheds in the Great Lakes Basin*
2. Todd Redder, LimnoTech. *Linking Watershed and Coastal Ecosystem Models to Assess Harmful Algal Bloom Production in the Western Lake Erie Basin*
3. Leah H. Palm-Forster, Michigan State University. *Designing Conservation Auctions for Aquatic Ecosystem Services in Agricultural Watersheds*
4. Randy Dell, The Nature Conservancy. *Public Drain Fee Reduction Program to Support Biological Watershed Outcomes*
5. Carrie Vollmer-Sanders, The Nature Conservancy. *Lake Erie 4R Nutrient Stewardship Certification: Water Quality Markets*
6. Wendong Zhang, The Ohio State University. *Linking agricultural land management decisions and Lake Erie ecosystem services using integrated ecological economic modeling*

Roundtable Discussion with Panelists

- Discussion Questions:
  1. **What are the top research areas/questions to focus on in the next 2 years? 5 years? 10 years?**
  2. **What kinds of programs do we need to encourage landowners to manage cropland in a way that improves water quality?**
  3. **Who (which organizations) should be engaging with farmers to increase land stewardship?**
  4. **How should incentives be structured to maximize participation in voluntary stewardship programs?**