

Watershed Ecologic Sustainability Strategy

Transactions for Agricultural Ecosystem Services

Enabled/Stimulated/Funded by:

Great Lakes Protection Fund

Partnership:

LimnoTech

Michigan State University

The Nature Conservancy

Intensive Agriculture

- System: Coastal waters and rivers/streams
- Stress: Altered hydrology, nutrients, sediments
- Source: Farming and drainage practices
- Strategy: Biological response curves to set watershed goals; use finer-scale applications to create field-scale “transactions”

Defining a Sustainable Agricultural Watershed (Establishing Goals)



\$ Cost

Nature

Desired
"Sustainable"
Condition

Current
Condition

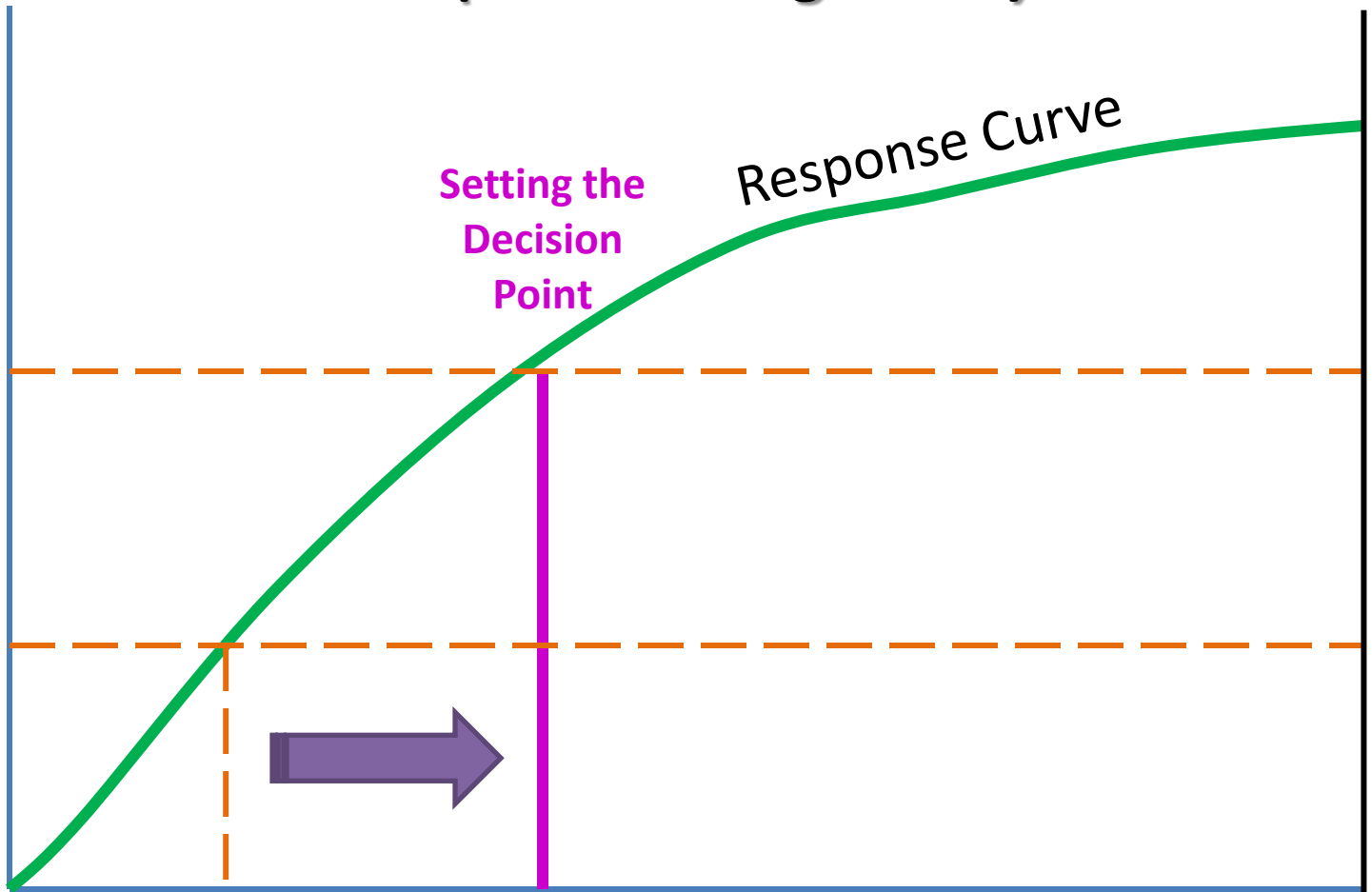
Setting the
Decision
Point

Response Curve



Practices that Improve
Water Quality/Flows

Tools / Calculator



“Wedge Solutions”

- Surface BMPs
 - e.g. conservation tillage
- Flow Management
 - Regulated Ditches
 - Field Tiles
 - Floodplains restoration
- Engineered Treatment

Transactions

- County Drain Management for Agriculture
- Farmer Willingness to Provide Environmental Services
- Supply Chain
 - Product Certification (e.g. cereal grains)
 - Farmer Certification (MAEAP)
 - Agri-retailer Certification (4R Nutrient)

SUMMARY

- Information, watershed goals for ecosystem outcomes
- Suites of practices to meet goals
- Transactions that drive change
 - informed by field-scale models/calculators