

Markets for Environmental Services



Farm Foundation "Transition to a Bioeconomy"
October 15, 2008



American Farmland Trust



AFT's Mission



- **Stop the loss of farmland and protect it for future generations**
- **Help farmers and ranchers produce a cleaner environment**
- **Maintain economically sustainable agriculture sector**



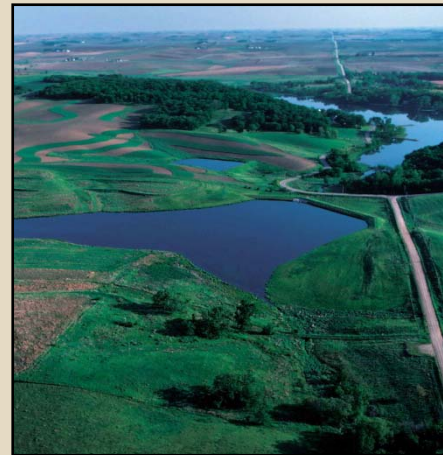


AFT's New Campaign



Agriculture & Environment Campaign

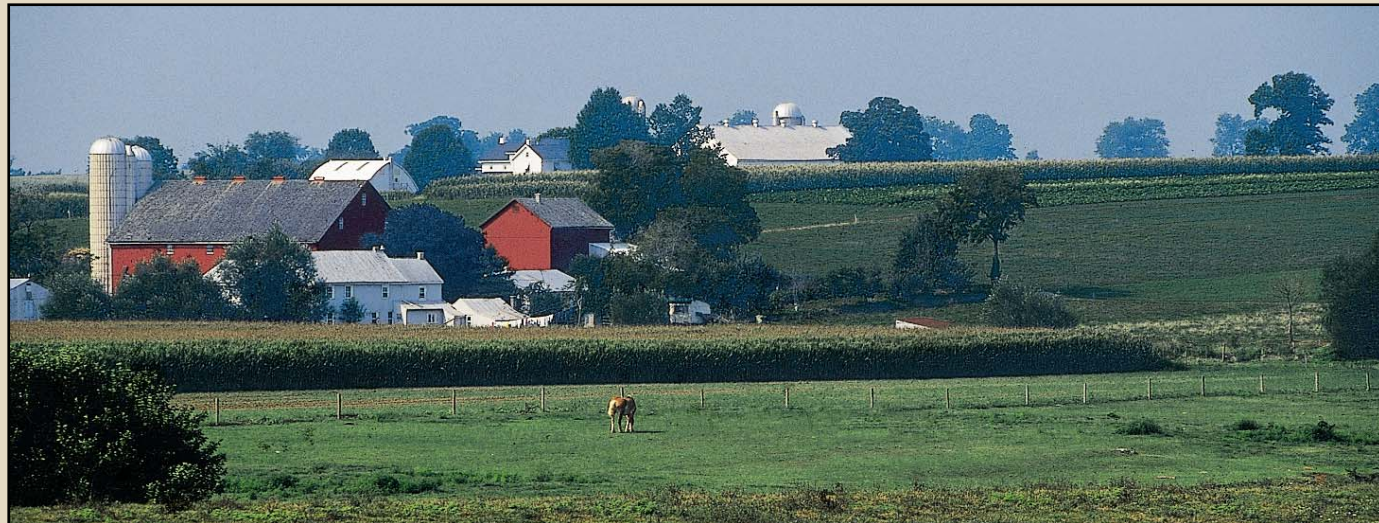
**Helping farmers and ranchers to improve water
quality and combat climate change while
expanding their sources of revenue**





Agriculture is the largest user of land and water in the U.S.

Agriculture significantly affects our nation's environment





Opportunity

- **Agriculture provides a host of environmental goods**
- **Agriculture can cost effectively improve water quality and mitigate GHG**





Challenge

- **Make it in farmers' economic interests to provide environmental benefits**
- **Develop ecosystem service markets**





Environmental Markets



- **Variety of possible types of markets**
- **Variety of possible environmental benefits**
- **Focus on trading systems**





Water Quality Trading



A Local Waste Water Plant
(point source)
(regulated)
(facing growing demand)



Local Farmer
(non-point source)
(not regulated)
(facing costs for conservation)



Water Quality Trading



A Local Waste Water Plant

**\$9.00 Per Pound of
Nutrients Removed**



Local Grain Farmer

**Cost: \$3.00 Per Pound
of Nutrients Removed**

**\$9.00 - \$3.00 = \$6.00 Per Pound
In Potential Savings**



Water Quality Trading



A Local Waste Water Plant

Pays \$5.00 Per Pound

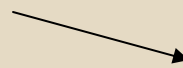
Saving \$4.00 Per Pound



Local Grain Farmer

Gets \$5.00 Per Pound

Earns \$2.00 Per Pound





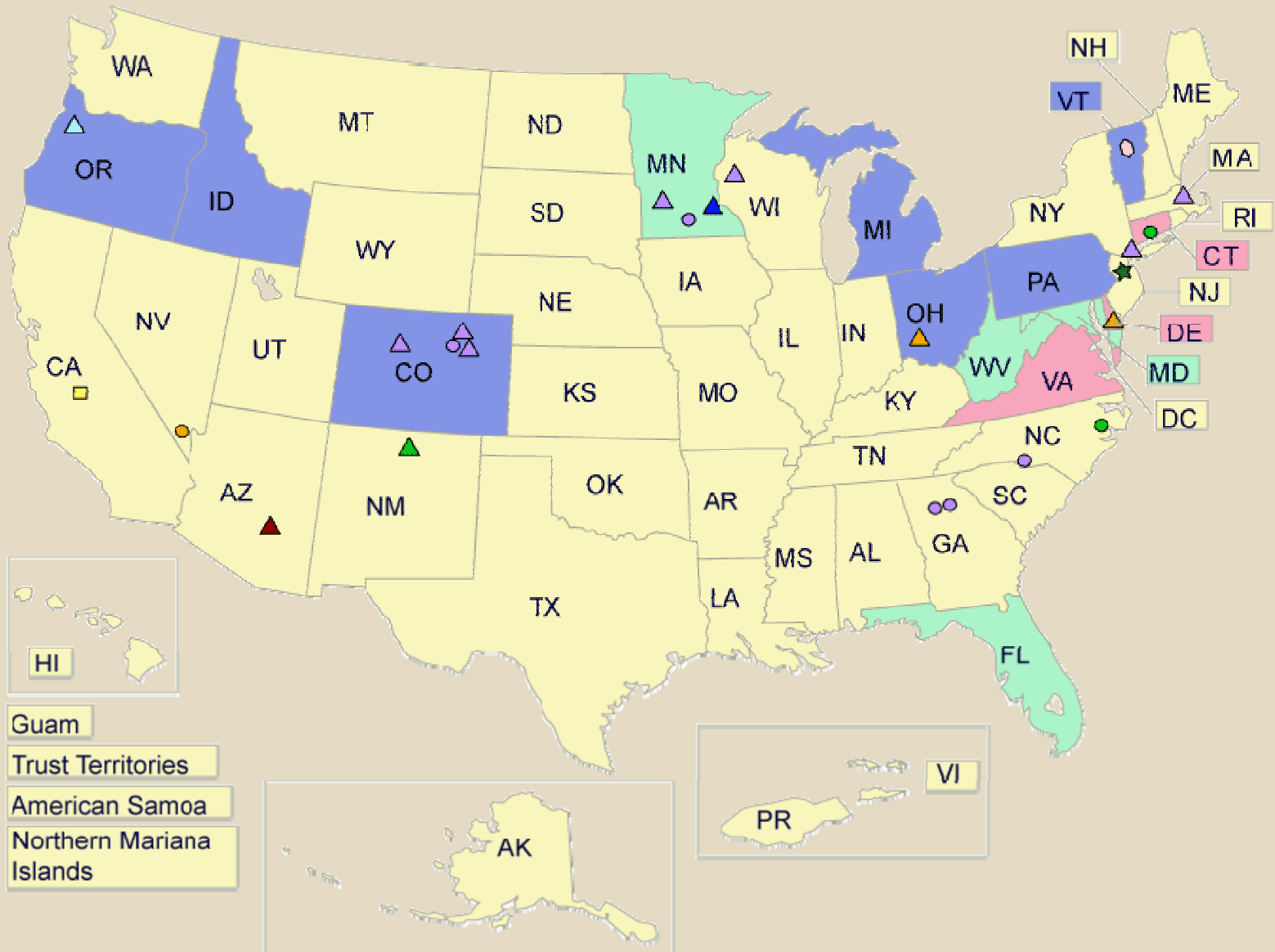
Drivers of Markets

- **Regulatory framework**
- **Differential costs**
- **Willing buyers**
- **Willing suppliers**
- **Willingness of regulators to try innovative approaches**





States with WQT Systems





Greater Miami River, Ohio



- **Successful trading system**
- **Point – Nonpoint trading**
- **Upgrade cost = \$422M**
- **No-till & fertilizer reduction = \$109M**
- **Multiple benefits**

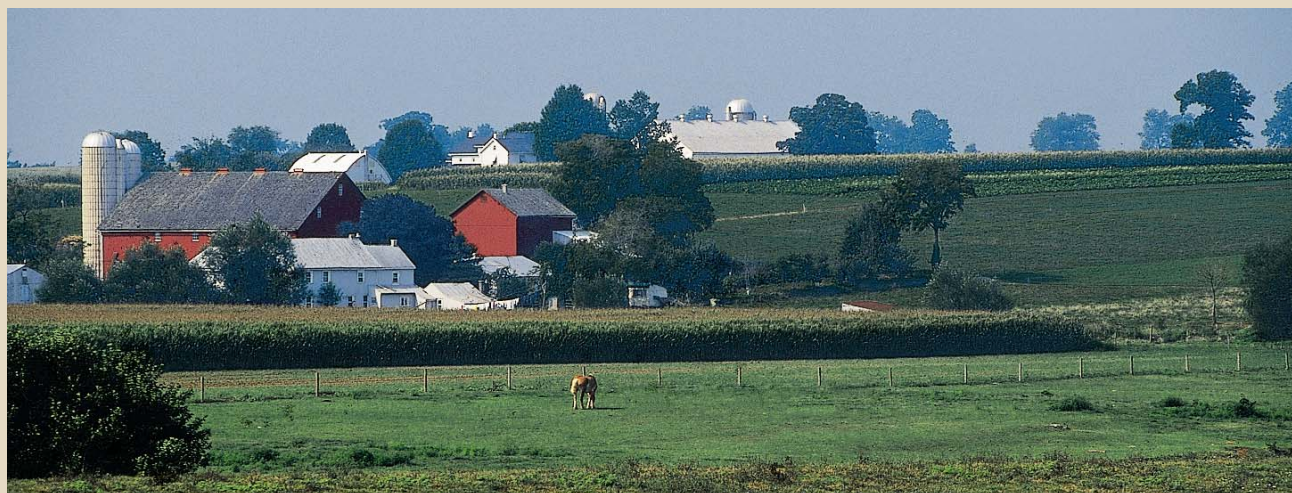




Pennsylvania



- **Chesapeake 2000 Program requires all 6 states to cut N, P and sediment by 2011**
- **184 treatment plants regulated**
- **Potential cost = \$1 billion**
- **Farmers can do it less expensively**





Ohio River Basin



- **First regional, multi-state trading system**
- **EPRI study documents opportunity**
- **Strong partnerships**





Farmers' Perspective: Water Quality & Carbon Mkts



- **Reward early actors**
- **Make it simple, flexible**
- **Integrate with conservation programs and markets**
- **Acknowledge ancillary benefits of practices**
- **Rely on dept of ag to administer and private sector to verify**
- **Don't regulate agriculture**





Farmers Perspective: water



- **Need for technical assistance**
- **Don't reward poor past actions**
- **Emphasis on working lands not retirement of lands**
- **Fear WQT would lead to regulatory requirements**





Farmers' Perspective: carbon



- **Create a single, uniform carbon credit**
- **Early actors are eligible for future actions**
- **Include a hybrid of actions based on certainty of benefits**
- **Increase funding for research**
- **Avoid unlimited international offsets**






American Farmland Trust



www.farmland.org