

# Environmental Markets

## Developing Technical Guidelines

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Office of Environmental Markets

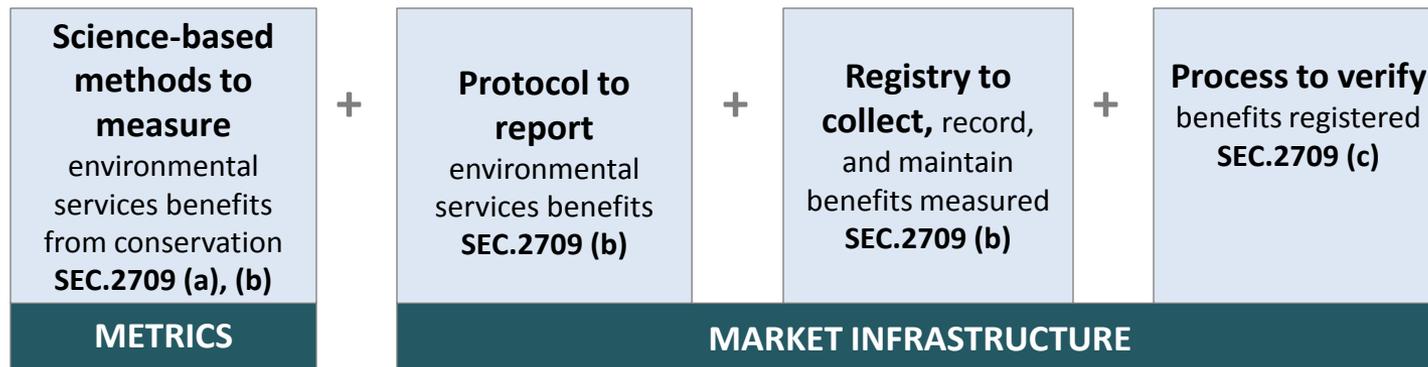
U.S. Department of Agriculture

**NIFA Water Program | Portland, ME | 28 September 2010**

# FARM BILL SECTION 2709: ENVIRONMENTAL SERVICES MARKETS

*“...to facilitate the participation of farmers, ranchers, and forest landowners in emerging environmental services markets.”*

SEC.2709 calls for:



In carrying out this section, SEC.2709 also directs the Secretary to include:

**Use of existing information:** Build on existing activities or information SEC.2709 (d)

**Consultation:** Consult with Federal and State government agencies and nongovernmental interests including farm, ranch and forestry producers; financial institutions involved in environmental services trading; academic institutions; NGO's; and private sector representatives SEC.2709 (e)

**COORDINATION**

# Office of Environmental Markets

## ***CATALYZE MARKET INNOVATION***

Shaping the development of national **market infrastructure** for emerging carbon, water, wetlands, and biodiversity markets

## ***OPERATE AS ONE GOVERNMENT***

Fostering **collaboration** around market-based conservation, within USDA and across government

## ***BUILD AN INFORMATION GATEWAY***

Establishing **informational platforms** and sharing **tools** that facilitate market transparency, landowner participation, and collaborative decision-making

## ***DEFINE AN ECOSYSTEM SERVICES APPROACH***

Helping USDA and other land management agencies use an **ecosystem services approach** that guides their programs, partnerships, and decisions

# Federal Coordination

## *Interagency Dialogues*

***Coordinate market  
framework development  
across federal agencies.***



## *USDA Environmental Markets Coordination Council*

***Coordinate efforts within USDA on technical guidelines,  
protocols, and other market-based mechanisms, as well as  
related issues.***

# Where are we Working.....



- Chesapeake Bay
- Upper Mississippi and Ohio River Basins
- FOF Case Study Areas



# Chesapeake Bay EO Strategy for Environmental Markets

## Objective

Working Collaboratively, USDA, EPA, Bay States and other federal partners will develop environmental markets for the Chesapeake Bay including the management infrastructure for measuring, reporting and verifying environmental performance for a suite of ecosystem services.

## Major Actions

EPA will issue guidelines concerning credits for nutrient and sediment reduction to accompany the TMDL

USDA will lead an interdepartmental Environmental Market Team to coordinate efforts in establishing the environmental market infrastructure in the Chesapeake Bay.



# Nutrient Trading Tool (NTT)

- NRCS/ARS/TIAER partnership
- Combines APEX with user-friendly web interface
- Calculates  $\Delta$  in on-farm N, P, sediment, NO<sub>2</sub>, and C
- Includes an economic module for Crop Yield
- EPA involvement helps validate NTT for regulatory markets
- WRI is integrating NTT with its Nutrient Net Tool and the EPA Bay Watershed Model



# Water Quality Trading Guidelines Development

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## Purpose

*to design a science based process for developing water quality trading guidelines beginning with the Chesapeake Bay states and expanding to a nation-wide protocol*



# Water Quality Trading Guidelines Development

## UMD – Mid Atlantic Water Program

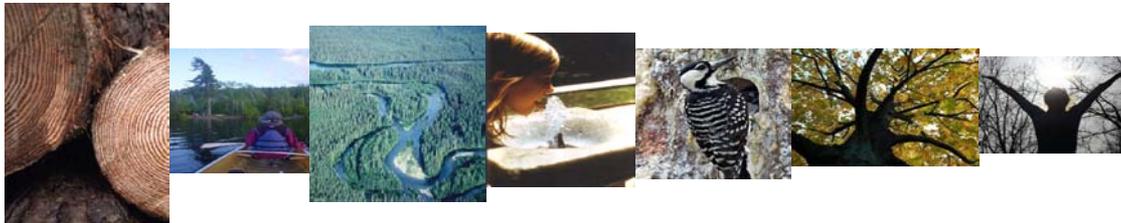
- Evaluate BMP Efficiencies in Chesapeake Bay Region
- Stakeholder Involvement
- Ecosystem Services Valuation Methods



# Guidelines Development continued...

## Process

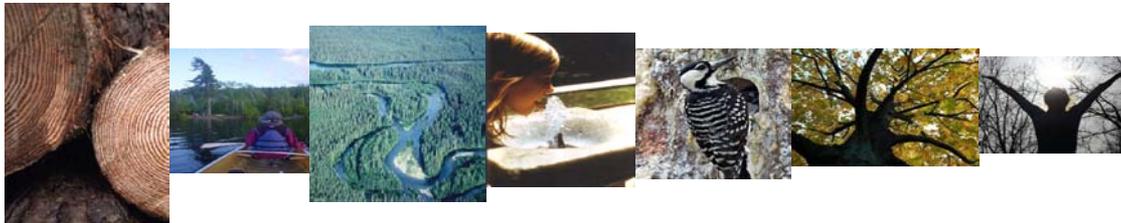
- Analyze existing efforts in Chesapeake Bay Program
- Identify other markets for analysis
- Arrange and conduct listening sessions
- Draft report sections on processes in other markets
- Complete analysis of template for defining, measuring and modeling necessary parameters for water markets
- Complete analysis of template lessons and concerns for other ecosystem service markets



# Guidelines Development continued...

## Focus on BMP Performance

- BMP Effectiveness Estimation: Use the Chesapeake Bay as the foundation but refine to include:
  - Cost effectiveness
  - Lifespan of practices
  - Maintenance requirements
  - Climate change
  - Validation and verification
  - Tracking and reporting procedures



# Guidelines Development continued...

## Finalizing the project - Outputs

- Develop guiding principles for markets that address the political, economic, technical and legal components
- Document the process
- Create a Template for others to take and customize for their geographic region



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