Critical Issues in Implementing Trading Programs in the Chesapeake Bay Watershed

STAC Workshop

May 14, 2013

Annapolis, MD

United States Department of Agriculture
Economic Research Service

Major Issues

- How do we know that nonpoint source practices deliver as contracted and that water quality is being protected?
- How does baseline choice affect markets?
- What are alternatives or supplements to trading?

Presentations

- What have we learned from current trading programs? (Jim Shortle)
- What have we learned from watershed-scale programs to protect water quality in agricultural watersheds? (Don Meals)
- Measuring conservation practice implementation and maintenance (Doug Jackson-Smith)
- Impact of baseline on trading markets and meeting nonpoint source abatement goals (Marc Ribaudo)
- Summaries of State trading program design (EPA, VA, PA, MD)
- What's an alternative approach? (Dan Nees)

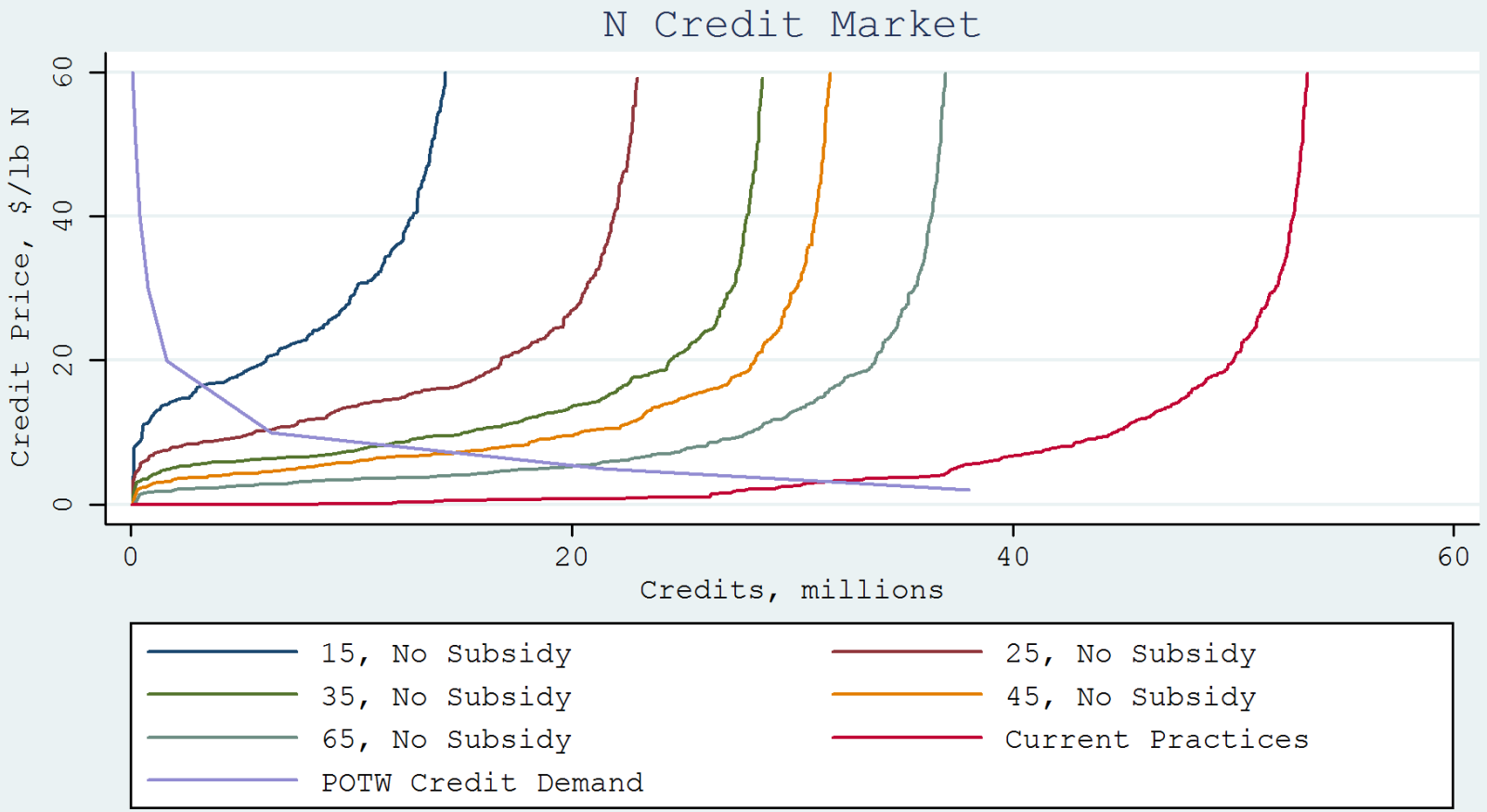
Workshop summary

- PS-NPS trading requires many conditions and much oversight to provide expected benefits.
- Some recommendations to state agencies regarding PS-NPS trading in the context of all policy approaches for reducing NPS loadings to the Bay are:

Focus on the economic benefits of trading

- Limit PS-NPS goals to reducing the costs to regulated sources of meeting their permit requirements or to offset future growth.
- Using trading to encourage additional, voluntary nonpoint source abatement (i.e., via stringent eligibility baselines) can be counterproductive to achieving environmental goals.

Nitrogen credit supply curves



Based on data from NRCS Conservation Effects Assessment Project

Abatement going to market and load allocation

Baseline lbs N/acre	Equilibrium price ($/lb N)	Equilibrium quantity (1 million lbs N)	Abatement towards ag nonpoint load allocation (1 million lbs N)	Total ag nonpoint abatement (1 million lbs N)
Current practices	3.13	31.65	0	31.65
15	16.49	3.29	3.54	6.83
25	10.28	6.25	7.49	13.74
35	8.26	11.62	12.59	24.21
45	7.23	14.72	18.13	32.85
65	5.41	20.19	26.42	46.61

Implement trading where conditions are right

Limit the use of PS-NPS trading to situations where adequate information and financial resources are available to minimize performance uncertainty and to support the administrative requirements for trading.

Validate, validate, validate

- Validation is a critical step in reducing uncertainty in both trading and traditional conservation programs.
- When possible, incentivize on-site validation of nonpoint source practices, either through inspections or water quality monitoring (depending on practice).

Alternative approaches may have a better chance of success

- Explore the use of alternative, performance-based policy approaches for addressing nonpoint source pollution.
- Voluntary incentive programs may generate more reductions with the same budget through the use of auctions.
- Existing tools for estimating nonpoint source abatement credits can be used to estimate field-level performance of management practices.

Establishing trust with agricultural community is critical

- Making use of existing agencies or institutions that have strong ties with farmers, such as soil and water conservation districts appears to be key in successful programs.
- It is important that adequate financial resources be available to support this relationship.

Workshop recommendations

- Trading is an economic tool. Trading rules that can have significant impacts on markets need to make economic sense.
- Recognize that setting a baseline for point/nonpoint trading that is more stringent than what is *legally* required may limit farmer interest.
- Limit the use of trading to situations where adequate information and financial resources are available to minimize uncertainty and to provide support.

Recommendations cont'd

- Incentive on-site verification of BMPs.
- Explore use of alternative performance-based policy approaches such payments for environmental services through auctions.
- Foster trust and a close working relationship with the agricultural community.
- Conduct research on practice performance and the movement of pollutants to reduce uncertainty.