

Proposed Nutrient Trading Principles

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Resources Policy Committee
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COG's Proposed Nutrient Trading Principles

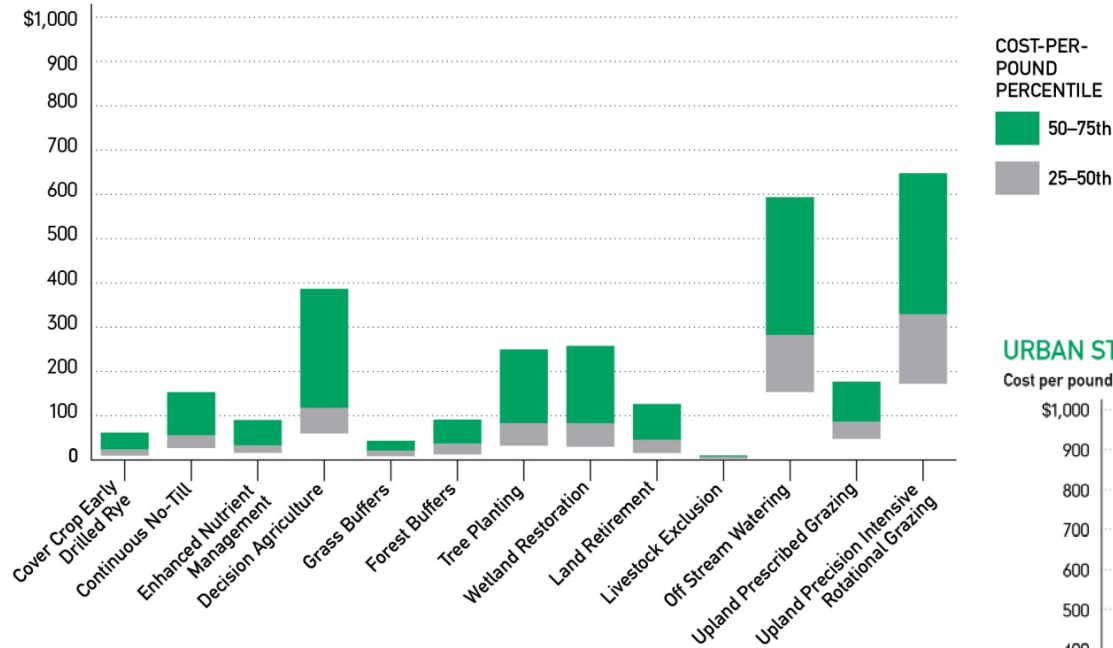
- **COST EFFECTIVE** —Support for the concept of nutrient trading as a way to more cost effectively meet Bay TMDL target reductions
- **CROSS-SECTOR** — Support for trading programs that operate across all sources of pollution: wastewater, septic systems, agriculture, regulated and unregulated urban, new development
- **STATE BASED**—Support for having individual state trading programs at the river basin level (rather than trying to rely on one overall EPA-sponsored interstate trading program)
- **MEET BAY-WIDE TRADING CRITERIA**—Support for the concept that trading platforms should be based on some minimum Bay-wide criteria adopted by the Bay Program, such as for trading ratios
- **PRESERVE LOCAL WATER QUALITY**—Support for the principle that trading cannot result in further degradation of local water quality

Basis for Trading

Cost-effectiveness of ag and stormwater BMPs varies widely

AGRICULTURAL BMPs

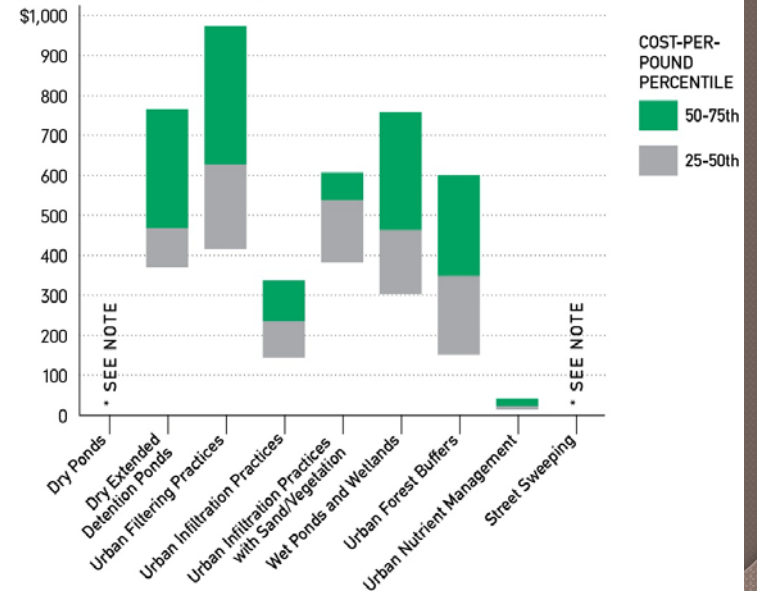
Cost per pound of NITROGEN reduced per year



Using N as an example

URBAN STORMWATER BMPs

Cost per pound of NITROGEN reduced per year



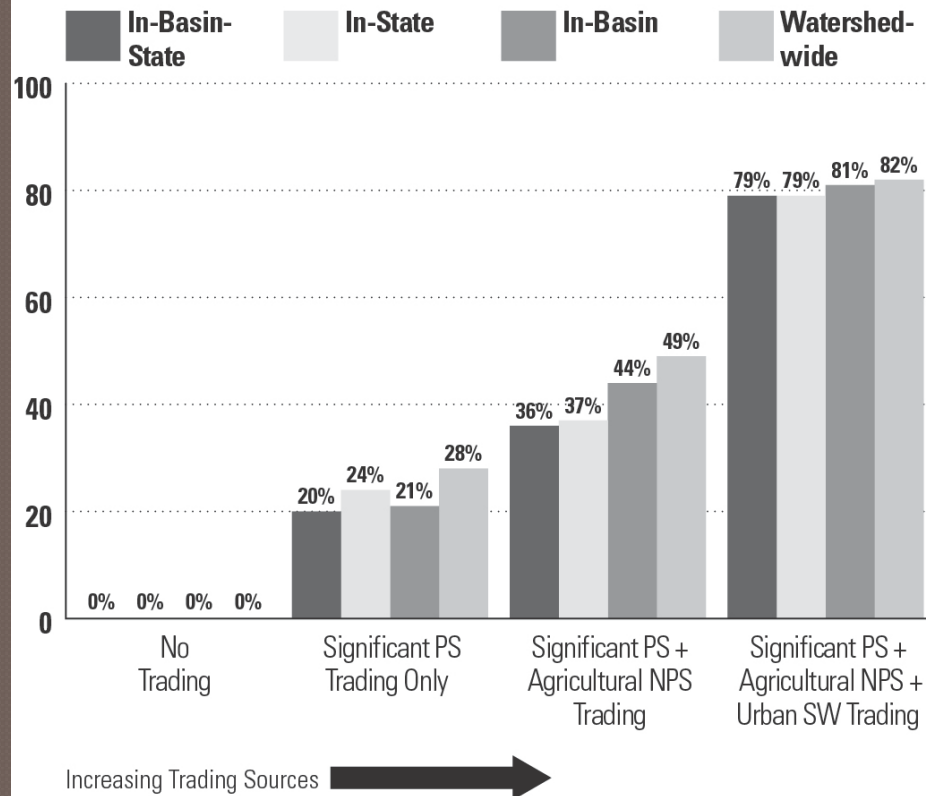
***Value ranges for dry ponds and street sweeping are above \$1,000/lb**

Jack Frye, Virginia Director, Chesapeake Bay Commission (September 2012)

Cost Effectiveness of Nutrient Trading

Potential Cost Savings (%) from Nutrient Credit Trading

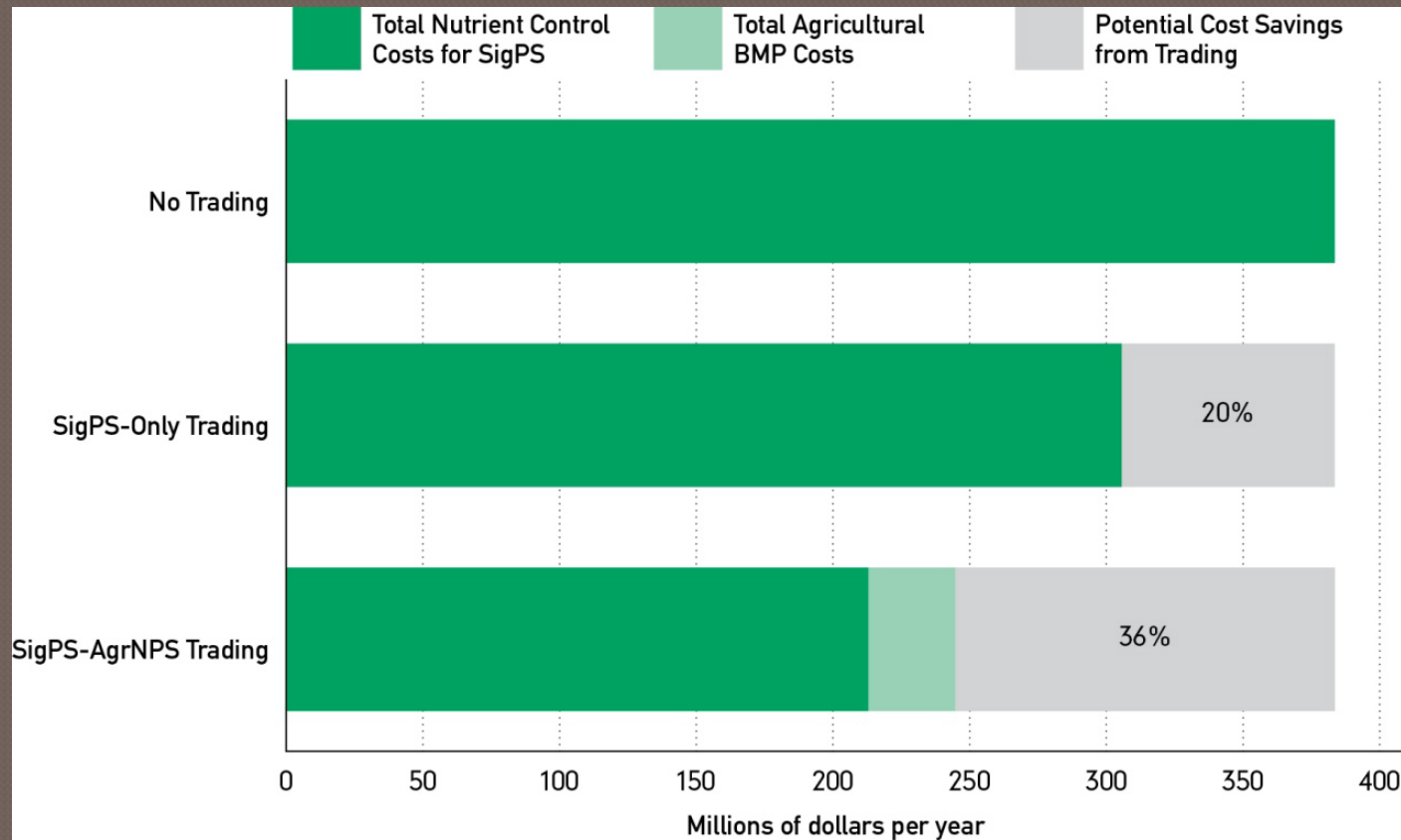
Savings expressed as a percent of TMDL compliance costs for significant point sources with no trading, except for the last column, where the savings are expressed as the percent of TMDL compliance costs for significant point sources and urban stormwater sources *combined*.



The greatest savings are realized when trading is allowed to occur across all major sources of pollution.

Cross Sector

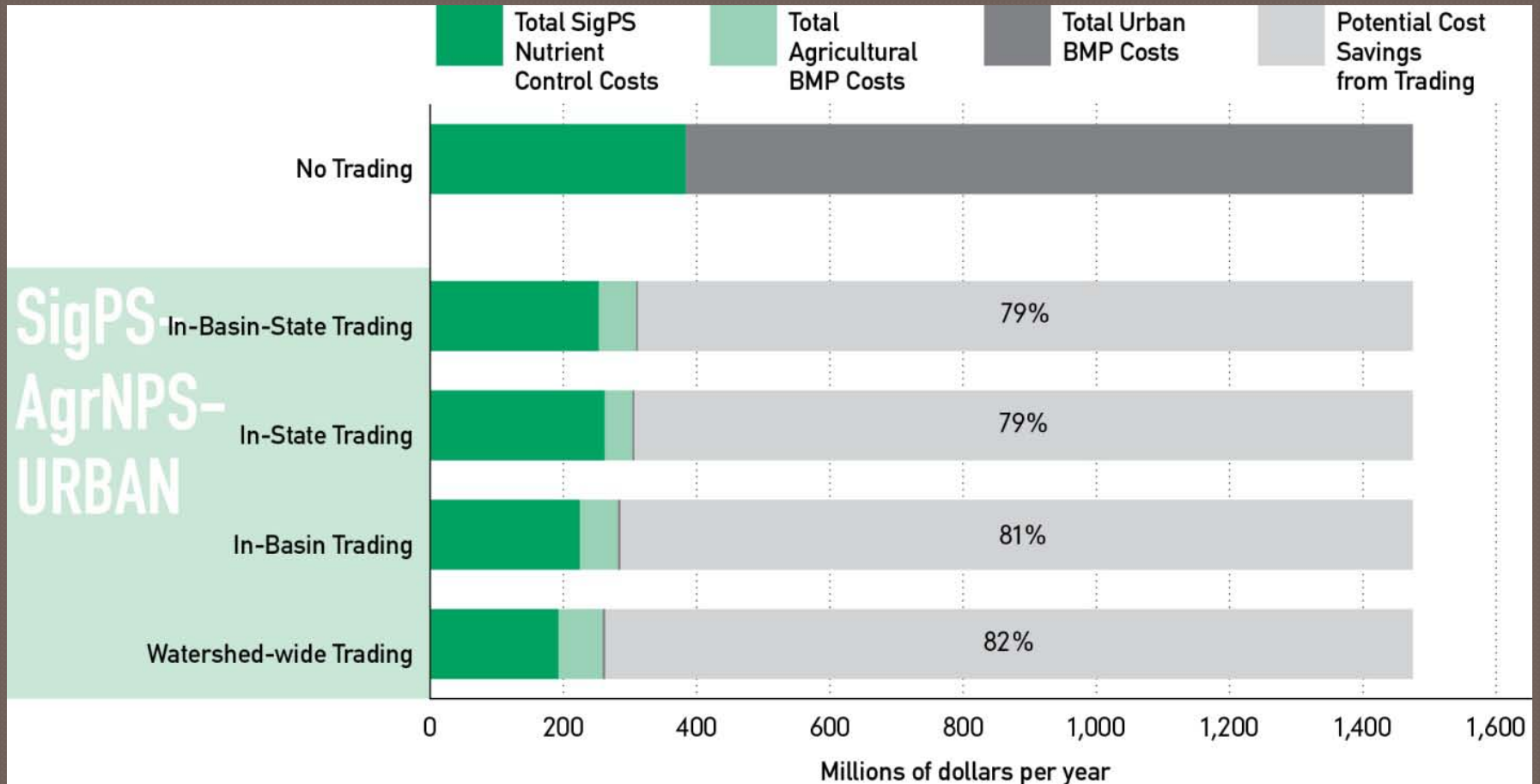
Trading between all source sectors
can lead to the greatest cost/pound benefits



Jack Frye, Virginia Director, Chesapeake Bay Commission
(September 2012)

State-Based

In-basin, in-state programs almost as cost effective as watershed-wide program



Nutrient Trading Principles Fit Within Existing CBPC Policy Principles

PROPOSED NUTRIENT TRADING PRINCIPLES

- **COST EFFECTIVE** —Support for the concept of nutrient trading as a way to more cost effectively meet Bay TMDL target reductions.
- **STATE CONTROLLED**—Support for having individual state trading programs at the river basin level (rather than trying to rely on one overall EPA-sponsored interstate trading program).
- **CROSS-SECTOR** — Support for trading programs that operate across all sources of pollution: wastewater, septic systems, agriculture, regulated and unregulated urban, new development.
- **MEET BAY-WIDE TRADING CRITERIA**—Support for the concept that trading platforms should be based on some minimum Bay-wide criteria adopted by the Bay Program, such as for trading ratios.
- **PRESERVE LOCAL WATER QUALITY**—Support for the principle that trading cannot result in further degradation of local water quality.

COG'S POLICY PRINCIPLES FOR THE CHESAPEAKE BAY

- **Holistic Requirements** – Programs and policies to restore and protect the Chesapeake Bay and its tributaries, whether regulatory or not, shall reflect a holistic, multi-sector analysis of environmental benefits, technical feasibility and costs before being established.
- **Equitable Responsibility** – Programs and policies to restore and protect the Chesapeake Bay and its tributaries shall strive for equity and **cost-effectiveness in allocating responsibilities among regions, counties and municipalities and among the different sources of pollution.**
- **Sound Science** – Programs and policies to restore and protect the Chesapeake Bay and its tributaries shall rely on a sound scientific foundation and shall be revised as needed, reflecting advances in that foundation.
- **Communication and Voice** - Programs and policies to restore and protect the Chesapeake Bay and its tributaries, whether regulatory or not, should be developed through a cooperative process among stakeholders including local governments and wastewater utilities. Given their implementation responsibilities, local governments and wastewater utilities shall be engaged at the earliest stages of these development processes.