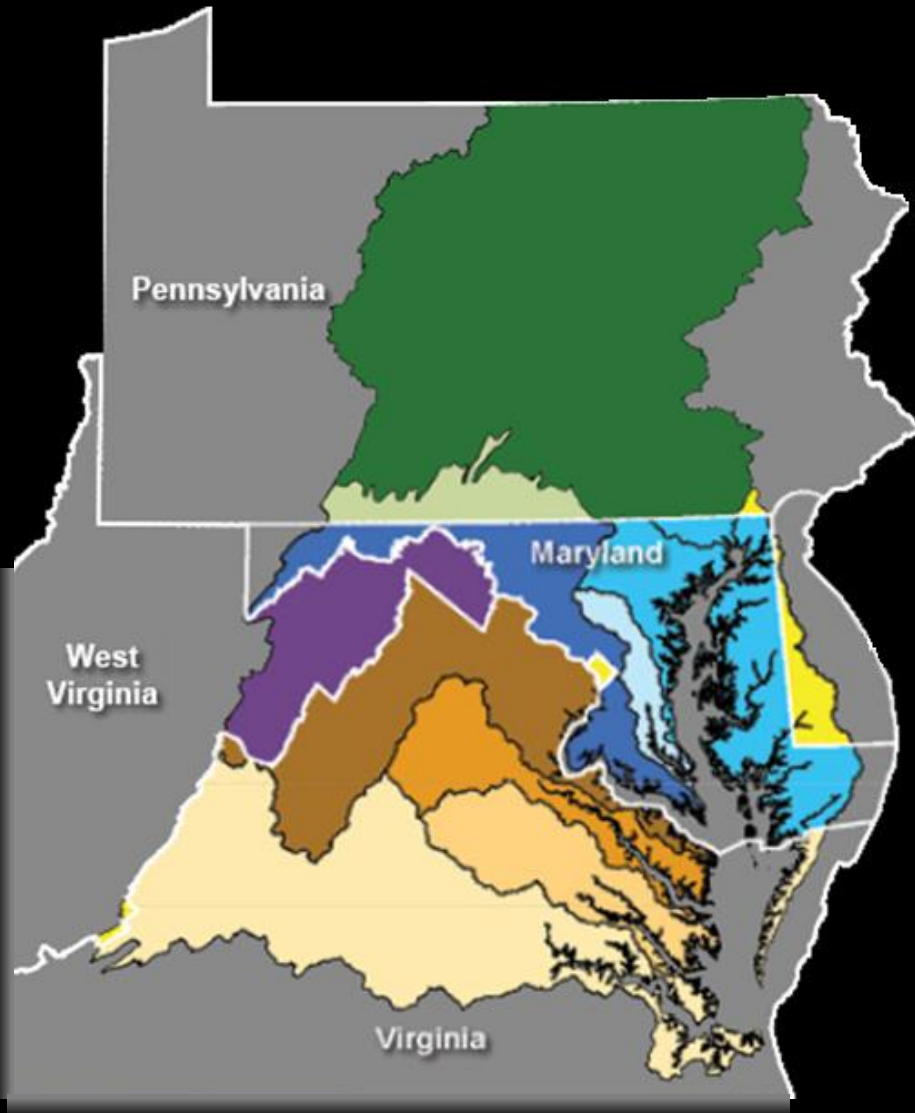


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## Overview of Trading Programs in Maryland, Pennsylvania, and Virginia

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# Overview of Presentation

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- 1) Pollutants and general eligibility requirements
- 2) Market functionality
- 3) Compliance and enforcement provisions
- 4) Trading ratios
- 5) Baseline requirements
- 6) Types of projects credited
- 7) Credit or offset restrictions
- 8) Next steps and opportunities for CBC Members



# Notes on terminology...

Trading and its terms mean different things to different states

Not until  
you've  
upgraded!



Verify.  
No, wait...  
Verify,  
certify, and  
register!



Two separate  
programs!  
(OK, three.)



# 1) Pollutants and general eligibility requirements

## Pollutants that can be traded

Common features	State variations
<ul style="list-style-type: none"><li>• Nitrogen</li><li>• Phosphorus</li></ul>	<ul style="list-style-type: none"><li>• MD and PA include sediment; VA does not</li></ul>

## Eligible market participants

Common features	State variations
<ul style="list-style-type: none"><li>• Agricultural operations (i.e., NPS, other landowners)</li><li>• Nonsignificant PS</li><li>• Significant PS</li><li>• Third parties</li><li>• All states are considering MS4 and construction permits</li></ul>	<ul style="list-style-type: none"><li>• VA includes stormwater through ch. 364, 2009 VA Acts</li></ul>

# 1) Pollutants and general eligibility requirements (cont'd)

## General eligibility requirements for credit purchases

### Common features

- PS accommodate growth by purchasing PS or NPS offsets or WLA

### State variations

- MD requires significant PS to have ENR in operation
- PA allows PS to purchase PS or NPS credits to meet existing, permitted load limits
- VA allows PS to purchase PS credits to meet existing, permitted load limits and NPS/PS offsets or WLAs to accommodate growth



## 2) Market functionality

Trading areas	
Common features	State variations
<ul style="list-style-type: none"><li>• Potomac</li></ul>	<ul style="list-style-type: none"><li>• MD – Patuxent, Potomac, “Everywhere Else”</li><li>• PA – Potomac, Susquehanna</li><li>• VA – Eastern Shore,* James, Potomac, Rappahannock, York</li></ul>

\* 2010 VA Acts allow VA Eastern Shore PS to purchase compliance credits from the Potomac and Rappahannock Basins



# 3) Compliance and enforcement provisions

## Liability for credit and/or offset implementation

### Common features

- Permit holders retain liability for compliance with NPDES permits

### State variations

- MD and PA require contracts or sale/purchase agreements between sellers and buyers
- MD and PA trading policies suggest or require contract terms
- MD suggest aggregators self-insure



# 3) Compliance and enforcement provisions (cont'd)

True-up period for credit purchases	
<b>Common features</b> <ul style="list-style-type: none"><li>• None</li></ul>	<b>State variations</b> <ul style="list-style-type: none"><li>• PA may provide ≤ 60-days</li><li>• VA provides six-months</li></ul>

Minimum offset requirement	
<b>Common features</b> <ul style="list-style-type: none"><li>• None</li></ul>	<b>State variations</b> <ul style="list-style-type: none"><li>• MD requires offsets for 10 years and plan for additional 10 years</li><li>• PA requires credits for at least 5 years</li><li>• VA requires credits for at least 5 years</li></ul>



# 4) Trading ratios

Delivery ratio	
<b>Common features</b> <ul style="list-style-type: none"><li>• The CBWM provides delivery ratios</li></ul>	<b>State variations</b> <ul style="list-style-type: none"><li>• N/A</li></ul>

Edge-of-segment ratio	
<b>Common features</b> <ul style="list-style-type: none"><li>• The CBWM provides edge-of-segment ratios</li></ul>	<b>State variations</b> <ul style="list-style-type: none"><li>• N/A</li></ul>

Reserve ratio	
<b>Common features</b> <ul style="list-style-type: none"><li>• None</li></ul>	<b>State variations</b> <ul style="list-style-type: none"><li>• PA requires 10% for all certified credits</li></ul>

## 4) Trading ratios (cont'd)

### Retirement ratio

#### Common features

- None

#### State variations

- MD requires 5% for PS credits and 10% for NPS credits

### Uncertainty ratio

#### Common features

- None

#### State variations

- MD can require  $\geq 10\%$  NPS credits generated by BMPs that are not approved by the CBP
- VA requires 100% (i.e., 2:1 ratio for NPS offsets)



# 5) Baseline requirements

## Baseline for agricultural operations

### Common features

- Agricultural operations must comply with all applicable laws and regulations

### State variations

- MD farms must meet performance-based, per acre annual loading rates
- VA must implement practice-based BMPs
- PA requires practices or 20% load reduction



## 6) Types of projects credited

### Available BMPs

#### Common features

- BMPs with nutrient and/or sediment reduction efficiencies approved by the CBP are eligible to generate credits and/or offsets
- States may authorize new BMPs or technologies on a case-by-case basis

#### State variations

- MD establishes three categories of practices:
  - 1) BMPs with approved load reductions;
  - 2) BMPs requiring technical review; and
  - 3) Other BMPs



# 7) Credit or offset restrictions

## Credit for BMPs financed through state and/or federal cost share

### Common features

- Cost-shared BMPs may be used to meet baseline requirements

### State variations

- PA allows cost-shared BMPs to generate credits and/or offsets; not allowed in MD and VA

## Farmland preservation measures

### Common features

- None

### State variations

- MD and PA do not allow credit generation through idling whole or substantial portions of farms
- MD does not allow credit generation through farmland conversion
- MD allows credit generation through conversion to other agricultural operations



## 8) Next steps and opportunities for CBC Members (cont'd)

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### *Next steps*

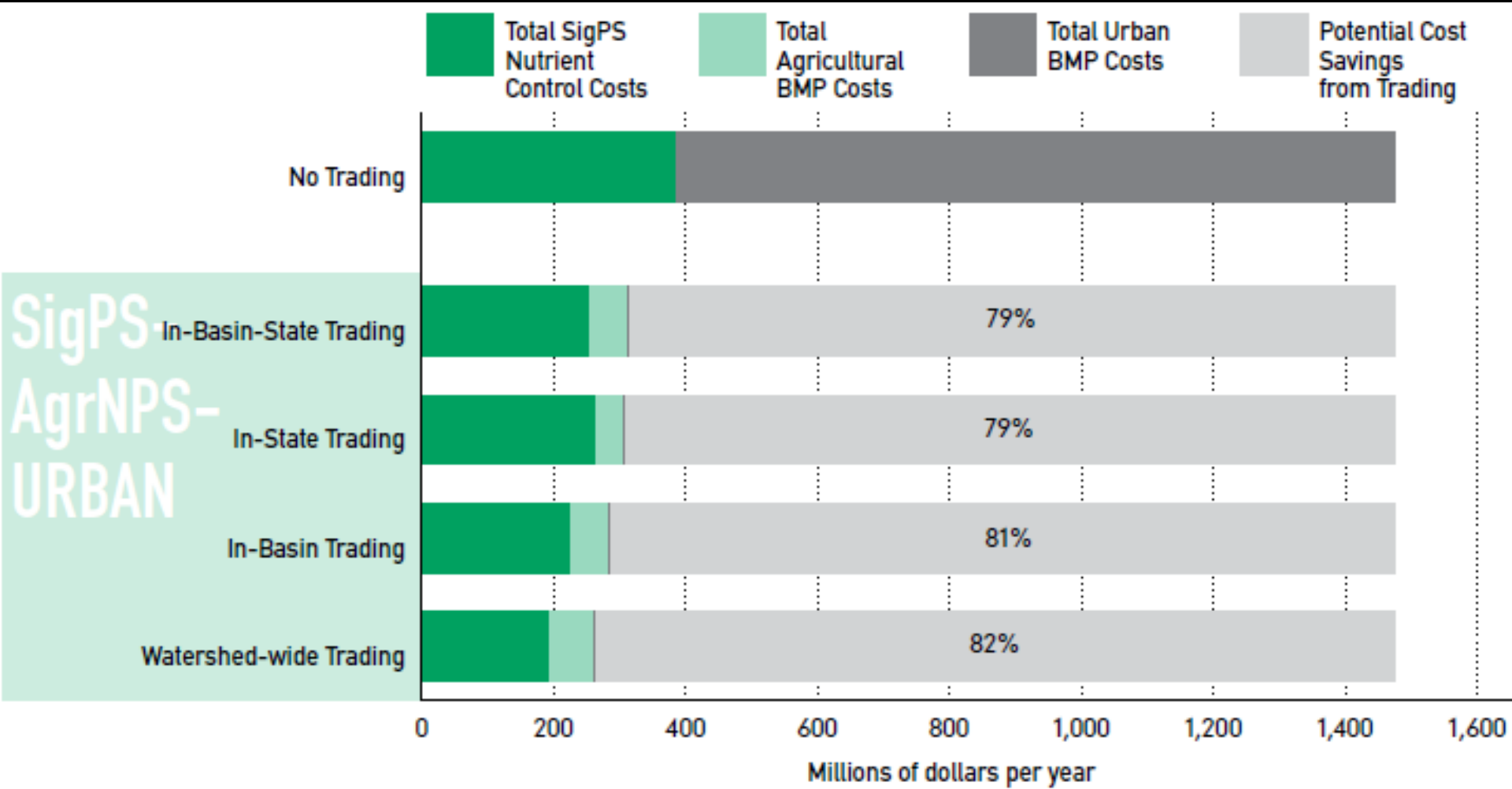
- EPA and the Chesapeake Bay Program develop Technical Memoranda with guidance on jurisdictions' evolving trading and offset programs
- Jurisdictions develop offset programs for TMDL Appendix S
- Jurisdictions refine their existing trading programs (e.g., VA SB77 / HB176, MD Phase III policy)

### *Opportunities for CBC Members*

- Introduce legislation, when and where necessary, to align trading and offset programs with Technical Memoranda
- Include the stormwater sector in trading programs so it may use credits to reduce the TMDL cost (see next slide)
- Use the CBC, WRI, other NGOs, and state environment agency staff as resources for learning more about trading and offset programs



# 8) Next steps and opportunities for CBC Members



Source: Van Houtven, et al. 2012. *Nutrient Credit Trading for the Chesapeake Bay: An Economic Study*.

# Thank you

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