Nutrient Credit Trading Program

Proposed Program Enhancements

Summer 2013
• Reduce current level of uncertainty and risk

• Maximize use of available resources:
  – Technical/financial resources of buyers and sellers
  – DEP/PENNVEST resources to manage/implement the program and the auction

• Enhance program transparency

• Provide opportunity for public participation where appropriate

• Compliance with EPA Requirements
  – Technical Memoranda Under Development
New Opportunities & Synergies

• Flexible County Planning Targets
• Bay Pollutant Reduction Plans for MS4 Communities
• Stormwater Offsetting
• Refinements to Baseline
  – Chesapeake Bay Watershed Permit
• Program Business Process
Exciting Results

- Opportunities for Working Together
- Achievement of Water Quality Goals
- Environmental Protection
- Effective and Efficient Sharing of Resources
Flexible County Planning Targets

• Generated from TMDL Run of the EPA Chesapeake Bay Watershed Model, using data from the Phase 2 WIP

• These are all numbers that the public has seen before as part of the outreach done in the Fall of 2011

• Propose to use them now within the context of these new initiatives... not for regulatory compliance
Questions
Bay Pollutant Reduction Plans for MS4 Communities

• Required by the PAG 13 or individual permit
• Must show activities that will be undertaken to reduce Nitrogen, Phosphorus and sediment loading to the Bay
• No reduction standard included in this permit
• Use flexible County planning targets as the objective
Questions
• Developing guidance document now
• Apply to MS4 Communities and Construction Activities
• Provide for stormwater offsetting in a watershed:
  – With a TMDL
  – Without a TMDL
Questions
Refrinelements to Baseline -- PS

• **NPS Treatment Technologies with a Permit**
  – Credits generated based on sampling results as defined in verification plan + Individual Farm Worksheet

• **WWTFs**
  – Compliance Year 2013 through 2015 – No change
  – Compliance Year 2016 (Starting October 1, 2015) -- Must achieve a treatment capacity of 6 mg/L TN and 0.8 mg/L TP

• **No Trading Ratio**

• **True Up Period = 120 to 180 days**

*This would only impact the ability to trade. No change to the assigned cap load for a WWTF is proposed.*

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Pennsylvania DEPARTMENT OF ENVIRONMENTAL PROTECTION
Watershed Permit

- Applies to all municipal and non-municipal facilities in the Chesapeake Bay Watershed, but **NOT** Industrial Waste facilities
- Include All Special Conditions & Reporting Requirements Relative to Chesapeake Bay
- Include all Provisions for Nutrient Trading such as:
  - Definition of Baseline
  - Credit Calculation Methodology
  - Submittal Requirements
- Table of Cap Load, Identification of # of Permanent Connections of On-lot Septic Systems for Each System
- Five Year Renewal ??
- Updated/Amended as Needed
Questions
Refinements to Baseline – NPS

• **Baseline = Allowable loading rate = County Flexible Planning Target**

• **Formula for credit generation:**
  – Between now and Sept. 30, 2015 = NO Change
  – After Sept. 30, 2015 = Performance Based Approach

• **Credit certifications:**
  – Existing = Expire September 30, 2015
  – Between now & Sept. 30, 2015
    • Expire September 30, 2015 or
    • Apply adjustments as defined in draft regulations
  – After Sept. 30, 2015 = Follow new business process

• **Eliminate Manure Hauling as Credit Generator – October 1, 2015**
Refinements to Baseline

HYPOTHETICAL EXAMPLE – How would this work?

• Site-Specific Calculation Tool Accounts for each Pollutant Reduction Standard
  – Working on Developing Now
    • USDA, EPA, CIG Grant Recipients, Penn State, Others
    • Will be Available by October 1, 2015

• Assumption: In regulatory compliance

• For this example, using the NutrientNet NTT Tool developed by the state of Maryland
  – Ours may be something like this, may not be
Map Navigation

Use the map navigation controls or county and ZIP code lists below to find your area.

- Zoom to a County:
- Zoom to a ZIP Code:

Farm Field Tools

To add a new parcel or field, click the New button and then click on the map. To stop drawing it, double-click or click on the first (or last) point.

To edit a parcel or field, first activate it using the Editing Options. To edit its boundary, move mouse over it and drag the points. Click on a point to delete it.

Click the Submit button to proceed, once the parcel and/or fields are delineated.

Editing Options:
- Parcel
- Fields: pai
**Crop Rotation Summary**

The crops in this field’s current crop rotation are listed below. You may add a crop to the rotation or click on a specific crop to edit it.

<table>
<thead>
<tr>
<th>Crop</th>
<th>Grazing Livestock</th>
<th>Commercial Fertilizer Applications</th>
<th>Manure Fertilizer Applications</th>
<th>Tillage Operations</th>
<th>Harvest Operations</th>
<th>Delete</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crop 1</td>
<td>Corn</td>
<td>-</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
<tr>
<td>Crop 2</td>
<td>Soybeans</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>1</td>
</tr>
</tbody>
</table>

- [Add a Crop to Rotation](#)

**Crop 1**

**Crop Category**

Enter information for the entire life cycle of this crop.

**Crop Category**

- Corn, Grains, Cereal Grains

**Crop**

- Corn

**Plant date**

- Year 1
- 4: Apr
- 30
If the nitrogen load reduction calculated for alternative watering facility is greater than that for buffers, it will be used instead.

<table>
<thead>
<tr>
<th>Forest buffer in place</th>
<th>Check this box if this BMP is not currently in place but <strong>will be implemented</strong> in the future to meet baseline load requirements.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Area of buffer</strong></td>
<td>3 ac</td>
</tr>
<tr>
<td><strong>Linear feet of buffer</strong></td>
<td>500 ft</td>
</tr>
<tr>
<td><strong>Planned</strong></td>
<td>□</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Grass buffer in place</th>
<th>Check this box if this BMP is not currently in place but <strong>will be implemented</strong> in the future to meet baseline load requirements.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Area of buffer</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Linear feet of buffer</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Planned</strong></td>
<td>□</td>
</tr>
</tbody>
</table>

**Planning to convert grass-buffer-to-trees** There is no grass buffer to convert.
<table>
<thead>
<tr>
<th></th>
<th>Farmer A</th>
<th>Farmer B</th>
<th>Farmer C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing Loading Off Farm = Regulatory Compliance</td>
<td>35 lbs/acre</td>
<td>25 lbs/acre</td>
<td>40 lbs/acre</td>
</tr>
<tr>
<td>Allowable Loading Rate (Baseline)</td>
<td>30 lbs/acre</td>
<td>30 lbs/acre</td>
<td>30 lbs/acre</td>
</tr>
<tr>
<td>Planned Practices Needed to Trade</td>
<td>Practices to get to Baseline + Addition Reduction</td>
<td>Practices to get an additional reduction</td>
<td>Practices to get to Baseline + Addition Reduction</td>
</tr>
<tr>
<td>Loading After Practices Installed</td>
<td>20 lbs /acre</td>
<td>20 lbs /acre</td>
<td>30 lbs/acre</td>
</tr>
<tr>
<td>Total Credits</td>
<td>10 lbs /acre</td>
<td>5 lbs /acre</td>
<td>0 lbs/acre</td>
</tr>
</tbody>
</table>
Questions
Program Business Process –
Notice of Participation

- List of potential sellers of credits
- Information posted on the web for use by buyers to include:
  - Name, contact information and qualifications
  - Counties where potential credits might be generated
- Submittal is not a requirement to participate in the program
- Focused effort to update between October and March
Program Business Process –
Pollutant Reduction Standard (Credit Certification)

Pollutant Reduction Standard Developed (Like a General Permit for Trading)

Standard Good for 5 Years Stage Review Schedule

Credit Calculation Methodology in Standard for Individual Practice/Technology defined at date of Installation

30 – 60 Day Public Comment Period

Publish Final DEP Action

Issue Standard 30 Day Appeal Period

Final Standards Posted on DEP Website
Program Business Process – Standards to be Developed

- Wastewater Treatment Facilities
- Agriculture:
  - Land Management Practices
    - NRCS Standard
    - Practices Approved by the Chesapeake Bay Program
  - Animal Waste
- NPS Treatment Technologies
  - Sampling Protocols for wet vs dry process
  - Stationary vs Mobile Process (Gasification)
- Forestry Practices
- Impervious Surface Reduction Through Retrofits or New Infrastructure
  - Existing Stormwater
- Process to Add Others
Program Business Process – Standard Process Outline

• Definition

• Purpose – as related to nutrient reduction

• Conditions where practice applies

• Baseline Compliance

• Verification
  – Calculations
  – Supporting Documentation and references
  – Funding source
  – Risk management
  – Identification of confidential business information
  – Operation and Maintenance

• Registration
  -- Contract Needed
Program Business Process – Verification

1. Location Identified
2. Verification Application Submitted
3. Verification Must Be Done on an Annual Basis.
4. Published Monthly
5. Publish Final DEP Action
6. 30 Day Appeal Period
7. Credits Assigned Number at this time
8. Credits Posted on DEP Website
9. Credits Can Be Sold & Registered During the Appeal Period

Credits Can Be Sold & Registered During the Appeal Period
Contract for Sale of Credits Submitted to DEP

Final Registration Numbers Assigned to Credits

Transaction Posted on DEP Website
Questions
PROPOSED Key Dates

• Regulation Development
  – Early 2014 -- EQB Approves Draft Regulations
  – Mid 2014 -- Public Comment Period
  – Early 2015-- EQB Approves Final Regulations
  – Summer 2015 -- Regulations Published in Pennsylvania Bulletin

• Implementation
  – October 1, 2015 – Revisions to Baseline Take Affect
  – October 1, 2015 – Watershed Permit Effective Date
  – 2017 to 2018 -- Midpoint Assessment of Progress Made in the Chesapeake Bay TMDL
  – 2018 -- Renewal of the MS4 General Permit
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