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Nutrient Credit Trading Program

Proposed Program Enhancements

Summer 2013

Goals to Define Trading Program Enhancements

- 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



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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



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Questions

Stormwater Offsetting

- Developing guidance document now
- Apply to MS4 Communities and Construction Activities
- Provide for stormwater offsetting in a watershed:
 - With a TMDL
 - Without a TMDL



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Questions

Refinements 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.**

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



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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:

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.

Crop	Grazing Livestock	Commercial Fertilizer Applications	Manure Fertilizer Applications	Tillage Operations	Harvest Operations	
Crop 1 Corn	-	2	-	-	1	delete
Crop 2 Soybeans	-	1	-	-	1	delete
+ Add a Crop to Rotation						

Crop 1

Crop Category

Enter information for the entire the life cycle of this crop.

Crop Category

Crop

Plant date

place.

If the nitrogen load reduction calculated for alternative watering facility is greater than that for buffers, it will be used instead.

Show Buffer BMP Descriptions

Forest buffer in place

Area of buffer 3 ac

Linear feet of buffer 500 ft

Planned

Check this box if this BMP is not currently in place but *will be implemented* in the future to meet baseline load requirements.

Grass buffer in place

Area of buffer ac

Linear feet of buffer ft

Planned

Check this box if this BMP is not currently in place but *will be implemented* in the future to meet baseline load requirements.

Planning to convert grass buffer to trees There is no grass buffer to convert.

Refinements to Baseline

	Farmer A	Farmer B	Farmer C
Existing Loading Off Farm = Regulatory Compliance	35 lbs/acre	25 lbs/acre	40 lbs/acre
Allowable Loading Rate (Baseline)	30 lbs/acre	30 lbs/acre	30 lbs/acre
Planned Practices Needed to Trade	Practices to get to Baseline + Addition Reduction	Practices to get an additional reduction	Practices to get to Baseline + Addition Reduction
Loading After Practices Installed	20 lbs /acre	20 lbs /acre	30 lbs/acre
Total Credits	10 lbs /acre	5 lbs /acre	0 lbs/acre





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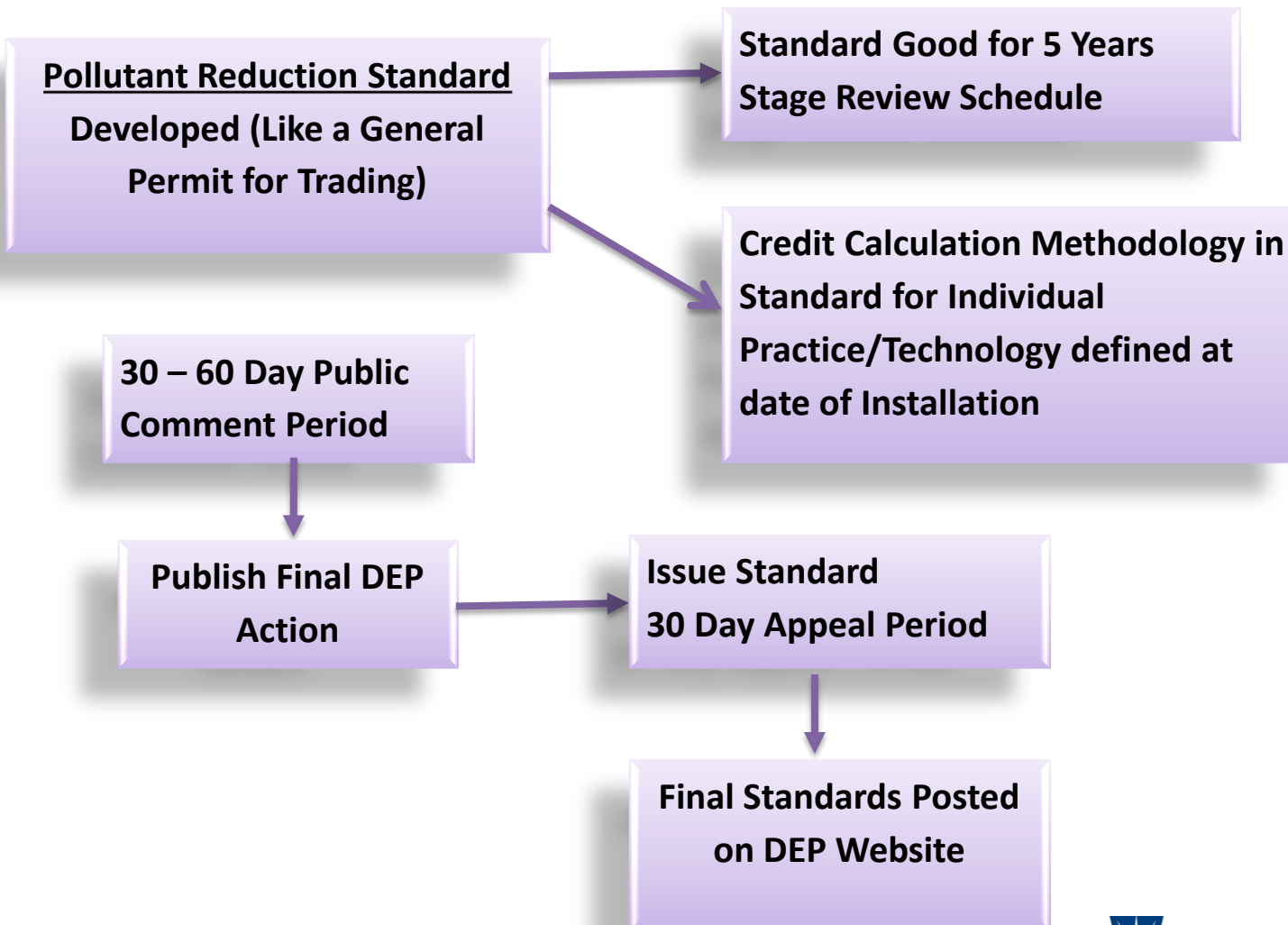
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Questions

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)



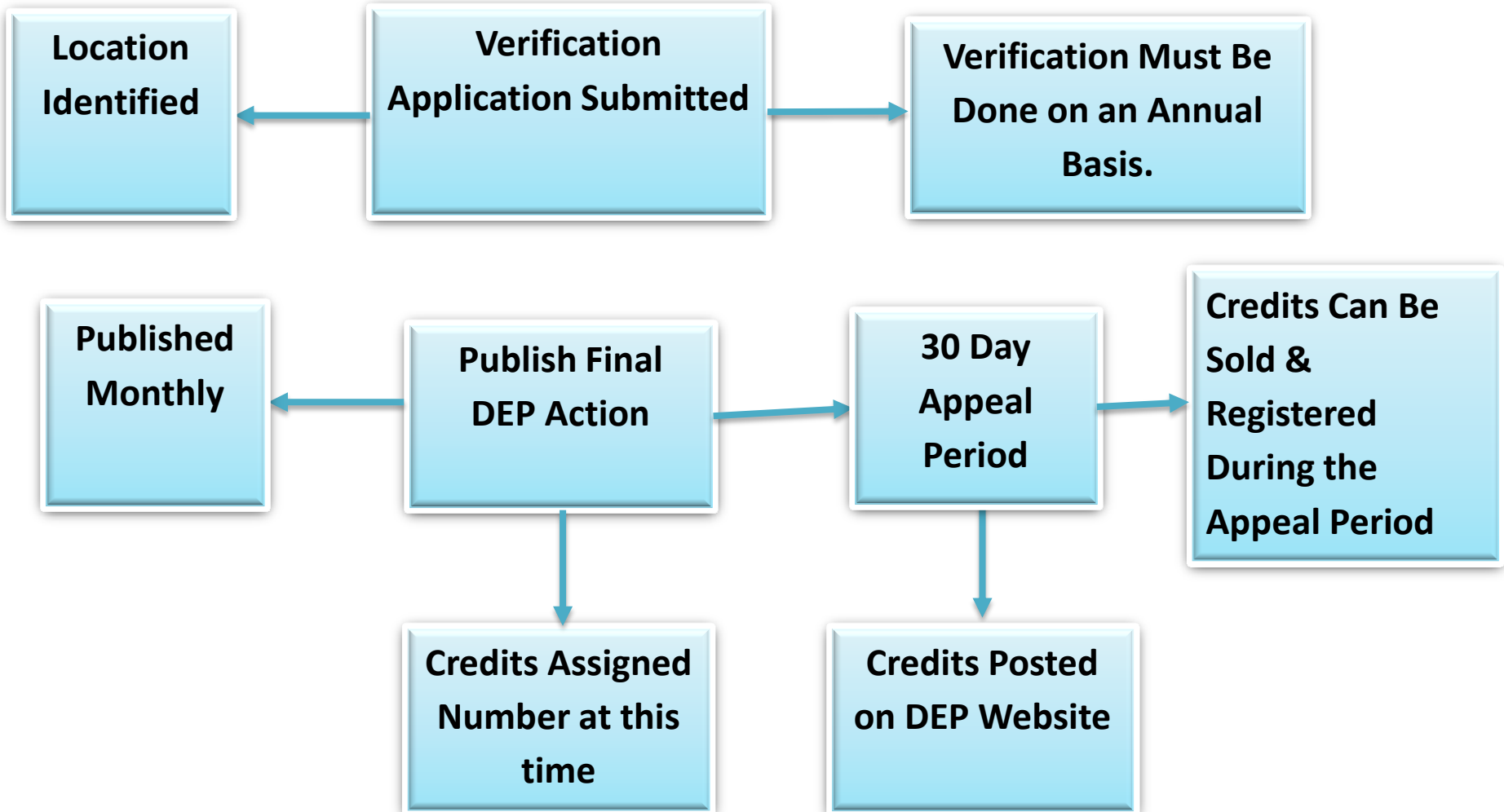
Program Business Process – Standards to be Developed

- 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

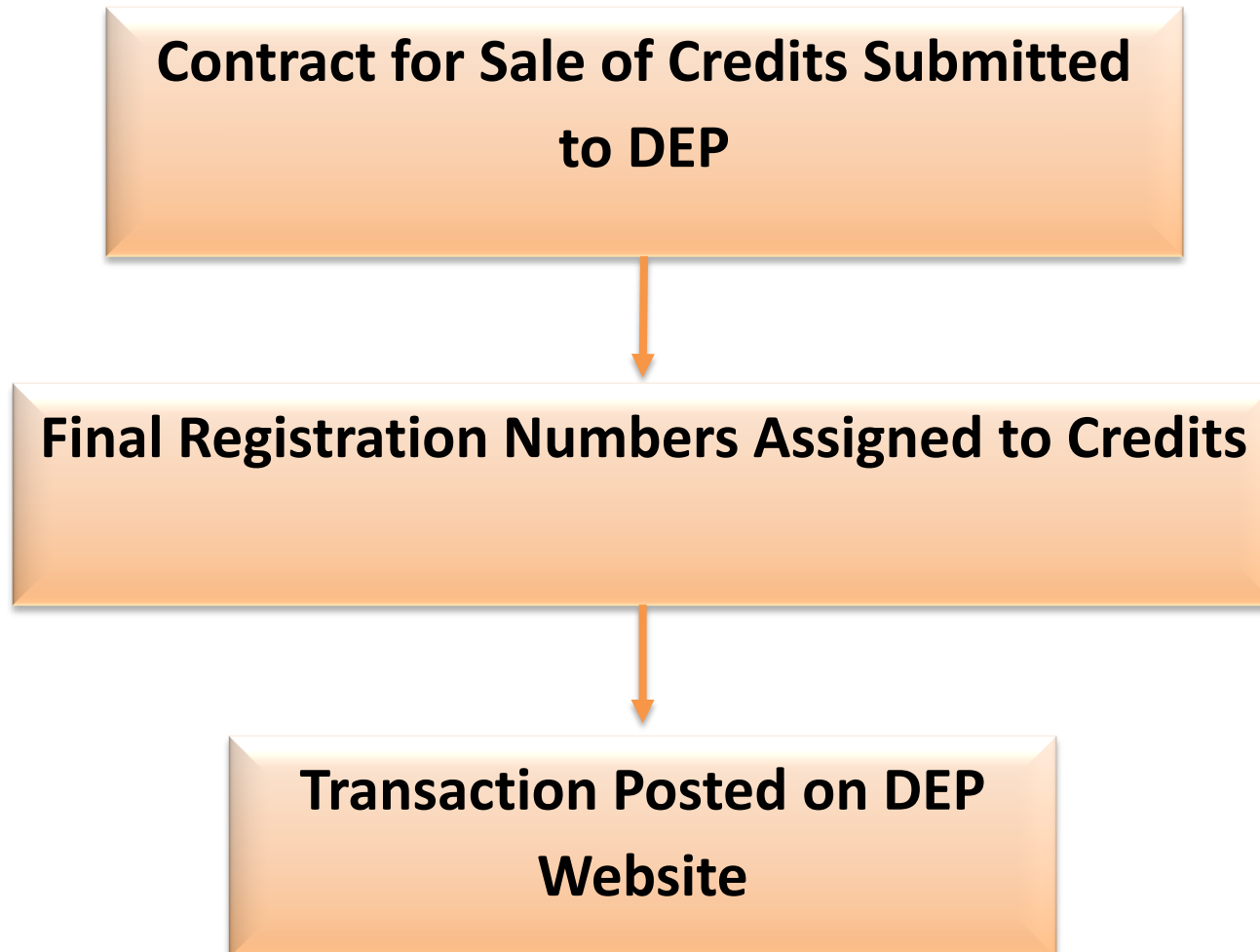
Program Business Process – Standard Process Outline

- 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



Program Business Process – Registration





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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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