

Fundamentals of Nutrient Trading

- ◆ The implementation of BMPs reduces nutrient impacts and increases water quality.
- ◆ Once a farmer reaches the baseline and threshold requirements, and continues to reduce the amount of nutrient runoff, he may be able to earn credits.
- ◆ These credits can be traded to new or existing wastewater treatment plants, municipalities, developers, or industrial facilities.
- ◆ Trading nutrient credits earns the farmer money and decreases the cost of upgrades for the buyer.



No-Till



Tree Plantings in Poultry Litter



Farm Lane Stabilization

Pennsylvania's Conservation Districts

Working with the agricultural community to reduce nutrient levels locally and in the Chesapeake Bay



Animal Composter



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PACD

PENNSYLVANIA ASSOCIATION OF
CONSERVATION DISTRICTS, INC.

Conserving Natural Resources for our Future



Pennsylvania's Nutrient Trading Program

*Opportunities for Farmers
to Gain Revenue While Improving
Water Quality*

For more information on nutrient reduction strategies, please contact your local conservation district (visit <http://pacd.org/your-district/find-your-district/>).

Funding for the Nutrient Trading Program is provided through a Growing Greener Grant from the Pennsylvania Department of Environmental Protection.

Baseline Compliance

- ◆ Baseline Compliance is the **first step** toward a Nutrient Trade. It includes:
 - ⇒ A conservation plan or agriculture erosion and sedimentation (E & S) plan that meets the requirements for Chapter 102 E & S Control
 - ⇒ A manure management plan as required by Chapter 91.36
- ◆ Compliance may also include:
 - ⇒ A nutrient management plan as required by Act 38
 - ⇒ CAFO requirements in Chapter 92

Achieving Baseline Compliance

- ◆ Site visits and/or verification of the implementation of a nutrient management plan, erosion and sedimentation control plan, conservation plan, or manure management plan determines eligibility.
- ◆ All plans are achievable through implementation of **Best Management Practices**, (BMPs) such as:
 - ⇒ Continuous No-Till
 - ⇒ Cover Crops
 - ⇒ Contour Farming
 - ⇒ Streambank Fencing
 - ⇒ Grassed Waterways
 - ⇒ Terraces and Diversions
 - ⇒ Manure Storage Facilities

Steps To A Nutrient Trade

1. Achieve Baseline Compliance
2. Reach minimum “threshold requirements.” For example:
 - ⇒ 100 foot manure setback
 - ⇒ 35 foot streamside buffer, or
 - ⇒ 20% reduction of nutrient balance
3. Installation of BMPs over the threshold requirement can generate credits



4. Conservation district staff can help you design the necessary BMPs on your property
5. Conservation district staff can also assist in calculating the reductions that can generate nutrient credits
6. A proposal can be made to the PA Department of Environmental Protection (DEP) through the conservation district
7. DEP certifies credits according to the nutrient reduction on your farm outlined in the proposal
8. One Credit = One Pound of Nitrogen or Phosphorus reduction per year
9. Nutrient credits expire at the end of the water year (October-September), but can be renewed each year the activity is completed

Nutrient Trading FAQs

How do I know if I am meeting baseline compliance?
You are in compliance if you have completed all the BMPs required in your plans, or if you are on schedule to implement all the BMPs within the time frame allowed.

How long can my credits be used?

You can generate credits annually depending on the BMPs implemented and maintained on your farm. Certification of credits will be valid for five years. Credits are only good for one water year (October-September).

For example: A cover crop can only generate credits for one year, but a manure storage facility can generate credits for the life of the facility.

How will I pay for the necessary BMPs?

Funding is available through many different sources, which will decrease the cost of BMP implementation. These BMPs could earn you credits, which, in turn, will earn you money. In the end, the BMPs could pay for themselves.

Successful Trades

1. **Lancaster County Mount Joy Project**
A farmer in Mount Joy Township applied continuous no-till on 930 acres of his farm over a three year period, which resulted in **11,718 credits**. These credits were sold to a neighboring Wastewater Treatment Plant at \$3.81 per pound of nitrogen reduction. This is equal to **\$133,935.00** earned over a three year period.
2. **Dauphin County Project**
Three farmers installed BMPs including stream crossings, streambank fencing, riparian buffers, and a manure storage facility, generating **3,463 credits** that will recur for **ten years**. If these credits were sold at the same rate as the Mount Joy Project (\$3.81/credit), these farmers could earn **\$13,194** per year. Over ten years, they would earn a total of **\$131,940**.