



Welcome To Maryland's Nutrient Trading Program . . .

What is Nutrient Trading?

Nutrient trading is a form of exchange (buying & selling) of nutrient reduction credits. These credits have a monetary value that may be paid to the seller for installing Best Management Practices (BMPs) to reduce nitrogen or phosphorous. In general, water quality trading utilizes a market-based approach that allows one source to maintain its regulatory obligations by using pollution reductions created by another source. As a market-based approach, increased efficiency and cost-effectiveness are achieved by letting the market determine costs. To achieve a desired load reduction, trades can take place between point sources (usually wastewater treatment plants), between point and nonpoint sources (a wastewater treatment plant and a farming operation) or between nonpoint sources (such as agriculture and urban stormwater sites or systems).

Why is there a need for a Nutrient Trading Program?

Over the years, pollution levels in the Chesapeake Bay have been increasing.



View Nitrogen and Phosphorous Credits

- Available Credits
- Traded Credits

[Login to Market](#)

Technical References & Guidelines

- [Guidelines for Agricultural Credit Sellers](#)
- [Guidelines for Agricultural Credit Buyers](#)
- [Policy for Point Source Buyers & Sellers](#)



MARYLAND NUTRIENT TRADING



Username:

Password:

Login

[Create Account](#) | [Reset Password](#)

Water Quality Marketplace

[How do I get started?](#)
[View Nitrogen Marketplace](#)
[View Phosphorus Marketplace](#)
[View Certified Credit Registry](#)

Welcome to NutrientNet, Maryland's online trading tool. NutrientNet is developed by [World Resources Institute](#) and [Tarleton State University, TIAER](#) in cooperation with the [Maryland Department of Agriculture](#) and [Maryland Department of the Environment](#).

NutrientNet is comprised of two main components:

Calculation Tools: Calculate credits generated by agricultural management practices.

Trading Marketplace: Trade nutrient credits.

Please feel free to [contact us](#) for more information.

Return to [Maryland's Nutrient Trading Program](#).



My Account Calculate Credits Trade Credits Help Log Out

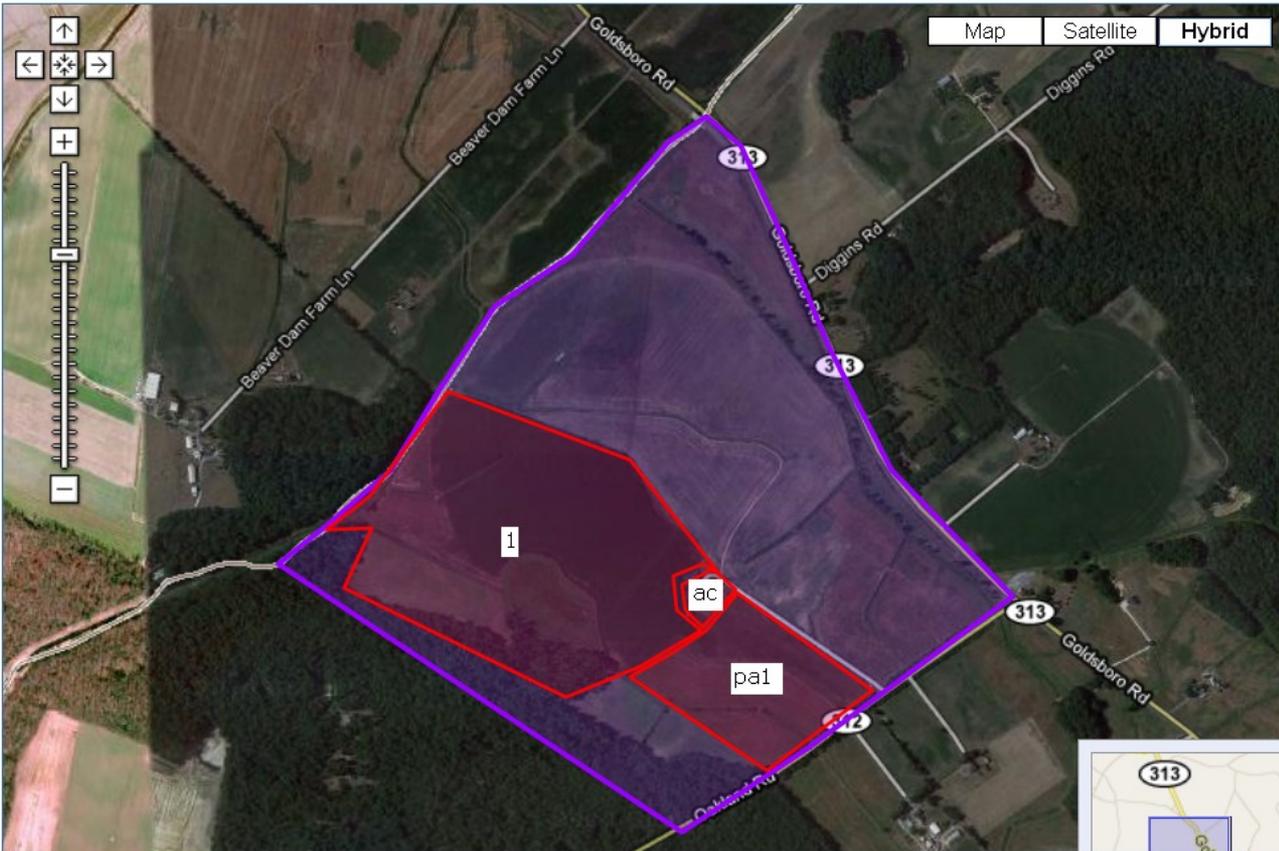
Getting Started Worksheets

New Worksheet

To begin, enter a worksheet name. The name will not be displayed publicly.

Worksheet Name

Create Worksheet



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:

Kepler Farm 2 > Field 1 > Land

Worksheet PCL-000318

- General
- Soil**
- Baseline Crop Management
- Baseline BMPs
- Baseline Nutrient Load
- Future Crop Management
- Future BMPs
- Future Nutrient Load

Soil Characteristics

Enter soil information. If the soil information below, derived from the farm's location, is incorrect, complete one or more of the soil characteristic survey questions below.

Field area ac

From map: 80.08 ac

Map unit Ingleside loamy sand, 2 to 5 percent slopes (1600079)

Soil component Ingleside (1229499)

Map symbol IeB

Hydrologic group B

Mehlich-3 P test value ppm

Average across field. Typically, in the range of 20-200 ppm. If you have a unitless Mehlich-3 FIV (Fertility Index Value), no conversion is required to express in ppm.

Slope %
optional

If you do not know the slope of this field, leave this blank and a default slope for this soil type will be used.

Tile drainage depth ft

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 Year 1

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.

Edge of Segment Baseline Load Summary

Summary of edge-of-segment load before planned BMPs are implemented. If current load is higher than the baseline load, you must implement BMPs sufficient to reduce your load below baseline in order to generate credits. For any field to generate credits, every field in the farm must meet baseline.

This field meets the baseline load requirements. Additional planned BMPs will allow you to generate credits.

Nitrogen

Baseline Load (EOS):	889.6 lb	11.1 lb/ac
Current Load (EOS):	718.5 lb	9.0 lb/ac

This field meets the nitrogen load requirements.

Phosphorus

Baseline Load (EOS):	89.6 lb	1.1 lb/ac
Current Load (EOS):	61.5 lb	0.8 lb/ac

Keppler Farm 2 > Field 1 > Reduction Crop Rotation Worksheet PCL-000318

- General
- Soil
- Baseline Crop Management
- Baseline BMPs
- Baseline Nutrient Load
- Future Crop Management
- Future BMPs
- Future Nutrient Load

Crop Rotation Summary

The crops in this field's planned 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
Crop 3	Rye	-	-	-	-	-	delete

[+ Add a Crop to Rotation](#)

[Copy Baseline Crop Rotation to Reduction Crop Rotation](#)

Continue

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

Baseline

Reduction

Forest buffer planned Yes

Area of buffer 3

 ac

Linear feet of buffer 500

 ft

Baseline

Reduction

Grass buffer planned No

Area of buffer

 ac

Linear feet of buffer

 ft

Baseline

Reduction

Planning to convert grass buffer to trees

There is no grass buffer to convert.

Keppler Farm 2 > Field 1 > Reduced Load Worksheet PCL-000318

- General
- Soil
- Baseline Crop Management
- Baseline BMPs
- Baseline Nutrient Load
- Future Crop Management
- Future BMPs
- Future Nutrient Load

Reduced Load for Field

Review the nutrient reductions and credits generated by this project.

Nitrogen Summary

Baseline Load (EOS): 889.6 lb	11.1 lb/ac
Current Load (EOS): 718.5 lb	9.0 lb/ac
Planned Load (EOS): 497.2 lb	6.2 lb/ac
Reduction (EOS): 221.4 lb	2.8 lb/ac
Reductions Eligible to Generate Credits (EOS): 221.4 lb	2.8 lb/ac
Delivery Ratio: 1.00	
Reductions to Chesapeake Bay: 221.4 lb	2.8 lb/ac
Credits Generated: 221 credits/yr	

Phosphorus Summary

My Account Calculate Credits Trade Credits Help Log Out

Getting Started Worksheets

Keppler Farm 2 > Field ac > General

Worksheet PCL-000318

General Requirements Livestock Current BMPs Current Nutrient Load Planned BMPs Planned Nutrient Load

Field Information

Enter field information.

Chesapeake Bay segment 400: Choptank

TMDL watershed No

(FSA) Field number

Field type Animal Confinement

Notes
optional

Examples: 1, 7, 18b

If you want to change this field's type, delete the field from the [farm summary page](#) and then re-add it in the Edit Location tab.

General Requirements Livestock Current BMPs Current Nutrient Load Planned BMPs Planned Nutrient Load

Requirements

Landowners must have an implemented nutrient management plan and a soil and water conservation plan before being eligible to generate credits.

For confined livestock, operators must have a properly sized and maintained manure storage and runoff system to be eligible to generate credits.

- I have an implemented nutrient management plan.
- I have an implemented soil and water conservation plan.
- I have a properly sized and maintained manure storage and runoff system.

Save & Continue →



Show Storage Systems

Livestock Storage System

Livestock #1

Animal

Quantity

Number of confined animals

Days/year confined days

Hours/day confined hr/day

Average weight lb Typically \approx 1351.35 lb

N excreted lb/1000 gal Typically \approx 10.69 lb/1000 gal

P₂O₅ excreted lb/1000 gal Typically \approx 1.92 lb/1000 gal

Poultry

Livestock BMPs

Select all livestock BMPs that are in place.

Livestock Ammonia Reduction BMPs

- Plastic permeable lagoon cover

Livestock Runoff Reduction BMPs

Barnyard Runoff Control/Loafing Lot Management:

- Heavy use area protection
- Clean water diversions (curbing and gutters)
- Runoff collection and infiltration (settling basins)
- Vegetated swales
- Water control structure
- Treatment wetland

Poultry BMPs

Kepler Farm 2 > Field ac > Current Load

Worksheet PCL-000318

- General
- Requirements
- Livestock
- Current BMPs
- Current Nutrient Load**
- Planned BMPs
- Planned Nutrient Load

Edge of Segment Baseline Load Summary

Summary of edge-of-segment load before planned BMPs are implemented. If current load is higher than the baseline load, you must implement BMPs sufficient to reduce your load below baseline in order to generate credits. For any field to generate credits, every field in the farm must meet baseline.

This field meets the baseline load requirements. Additional planned BMPs will allow you to generate credits.

Nitrogen

Current Manure Load (no ammonia) (EOS): 734.5 lb/T
Current Ammonia Load (EOS): 2,792.8 lb/T

This field meets the nitrogen load requirements.

Livestock BMPs

Select all livestock BMPs that are planned.

Livestock Ammonia Reduction BMPs

- Plastic permeable lagoon cover

Livestock Runoff Reduction BMPs

Barnyard Runoff Control/Loafing Lot Management:

- Heavy use area protection This BMP is currently in place.
- Clean water diversions (curbing and gutters) This BMP is currently in place.
- Runoff collection and infiltration (settling basins)
- Vegetated swales
- Water control structure
- Treatment wetland

Poultry BMPs

Kepler Farm 2 > Field ac > Planned Load

Worksheet PCL-000318

- General
- Requirements
- Livestock
- Current BMPs
- Current Nutrient Load
- Planned BMPs
- Planned Nutrient Load

Reduced Load for Field

Review the nutrient reductions and credits generated by this project.

Nitrogen Summary

Current Manure Load (no ammonia) (EOS): 734.5 lb/T
Current Ammonia Load (EOS): 2,792.8 lb/T
Reduction from Ammonia Controls (EOS): 0.0 lb/T
Reduction from Runoff Controls (EOS): 365.4 lb/T
Total Reduction (Ammonia + Runoff) (EOS): 365.4 lb/T
Delivery Ratio: 1.00
Reductions Delivered to Chesapeake Bay: 365.4 lb/T
Credits Generated: 365 credits/yr

Phosphorus Summary

Crop 1

Crop Category

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

Crop Category Pasture, Pasture Grasses

Crop Pasture

Plant date Year 1 3: Mar 30

Grazing Livestock

Enter grazing livestock for the given year.

Grazing Livestock #1

Start date Year 2 1: Jan 1

End date Year 2 12: Dec 31

Animal Milk cows

Quantity 85

Number of animals grazing on this field.

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

Streambank fenced with forest buffer in place

Fence 35+ ft from streambank

Area of buffer between fence and stream ac

Linear feet fenced with buffer ft

Planned

Check this box if this pasture field contains a fence at least 35 feet, on average, from the streambank.

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

Streambank fenced with grass buffer in place

Fence 35+ ft from streambank

Check this box if this pasture field contains a fence at least 35 feet, on average, from the streambank.

- General
- Soil
- Baseline Crop Management
- Baseline BMPs
- Baseline Nutrient Load**
- Future Crop Management
- Future BMPs
- Future Nutrient Load

Edge of Segment Baseline Load Summary

Summary of edge-of-segment load before planned BMPs are implemented. If current load is higher than the baseline load, you must implement BMPs sufficient to reduce your load below baseline in order to generate credits. For any field to generate credits, every field in the farm must meet baseline.

This field meets the baseline load requirements. Additional planned BMPs will allow you to generate credits.

Nitrogen

Baseline Load (EOS):	266.9 lb	11.1 lb/ac
Current Load (EOS):	92.9 lb	3.9 lb/ac

This field meets the nitrogen load requirements.

Enter information if you have a planned streambank restoration BMP.

Show Streambank BMP Descriptions

Baseline

Reduction

Streambank restoration planned No

Type of restoration

Length of streambank to be restored

 ft

Land Use Conversion Only BMP

Enter information if you have a planned landuse conversion BMP, converting to hay, grass, forest, or alternative crop (perennial). If the BMP is in a riparian area, enter it as a buffer, wetland, or streambank restoration—all of which receive a land use change reduction—BMP above rather than here.

Baseline

Reduction

Land use conversion planned No

Kepler Farm 2 > Field pa1 > Reduced Load

Worksheet PCL-000318

- General
- Soil
- Baseline Crop Management
- Baseline BMPs
- Baseline Nutrient Load
- Future Crop Management
- Future BMPs
- Future Nutrient Load**

Reduced Load for Field

Review the nutrient reductions and credits generated by this project.

Nitrogen Summary

Baseline Load (EOS):	266.9 lb	11.1 lb/ac
Current Load (EOS):	92.9 lb	3.9 lb/ac
Planned Load (EOS):	53.9 lb	2.2 lb/ac
Reduction (EOS):	39.0 lb	1.6 lb/ac
Reductions Eligible to Generate Credits (EOS):	39.0 lb	1.6 lb/ac
Delivery Ratio:	1.00	
Reductions to Chesapeake Bay:	39.0 lb	1.6 lb/ac
Credits Generated:	39 credits/yr	

Phosphorus Summary

Keppler Farm 2

Worksheet PCL-000318

- Summary
- Edit Details
- Edit Location
- Review
- Submit

Farm Overview

DETAILS

Farm name: Keppler Farm 2
Number: PCL-000318
(FSA) Tract number: 3456
Farm notes: *n/a*
Generator type: Landowner/Producer
Name: Jason Keppler
Address: 50 Harry S. Truman Parkway
Address 2: *n/a*
Location description: *n/a*
City: Annapolis
Zip code: 21401
County: Caroline

TOTALS

Number of fields: 3
Percent complete: 89%
Farm meets baseline: Yes
N reduction (EOS): 625.8 lb/yr
N reduction to bay: 625.8 lb/yr
N credits generated: 625 credits/yr
P reduction (EOS): 355.1 lb/yr
P reduction to bay: 355.1 lb/yr
P credits generated: 355 credits/yr

Field Listing

My Account Calculate Credits Trade Credits Help Log Out

Getting Started Worksheets

Kepler Farm 2

Worksheet PCL-000318

Summary Edit Details Edit Location Review Submit

Review & Print

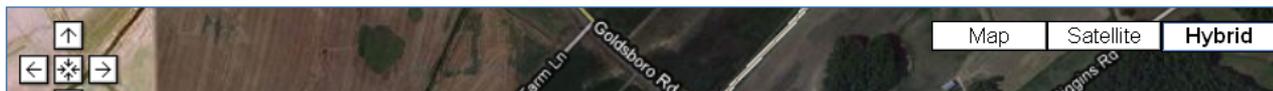
Upon completion of the calculation of credits, you may print this document out and include it in a proposal submission for MDA to review and certify.

 [Print](#)

Farm Worksheet

KEPLER FARM 2
Worksheet Number PCL-000318
(FSA) Farm Number 3456

FARM MAP



Keppler Farm 2

Summary Edit Details Edit Location Review Submit

Print & Submit Registration Form

Print out the submission form, initial it, sign it, and send it to MDA. Use the blank form if any data, such as contact information, differs from the data stored in NutrientNet.

Blank form

Standard form.

Pre-filled form

This form is partially filled using data from this farm worksheet. It is important to check all of the information and correct any incorrect or ambiguous information and fill in any missing information.



1. Applicant Information: Jason Keppler
 First Name MI Last Name
Landowner/Producer
 Company Name (if applicable) Title

2. Applicant Address:
 Number Street
 Town State Zip

3. Property Information:
 If the applicant is not the property owner or renter with control, enter the name of the owner or party in control of the property:
 First MI Last

4. Property Address: 50 Harry S. Truman Parkway
 Number Street
Annapolis MD 21401
 Town State Zip

5. Property Description (optional):

6. Property County: Caroline Watershed: Everywhere Else
 Tract Number: 3456 Watershed Segment ID: 400
 MD Property View Acct. ID(s): Latitude: 39.061032
 Longitude: -75.854158

7. Total Annual Credits Generated: 625 (N); 355 (P)
 Total Years:

8. Indicate BMPs that will be used to generate credits:

#	Land Conversion/Streambank BMPs	Acres	#	Field Management BMPs	Acres
1	Wetland	2.00	<input type="checkbox"/>	Conservation tillage*	
-	Land use conversion: hay	0.00	<input type="checkbox"/>	Continuous no-till*	
-	Land use conversion: grass	0.00	<input type="checkbox"/>	Enhanced nutrient management*	
-	Land use conversion: forest	0.00	<input type="checkbox"/>	Decision agriculture	0.00
-	Land use conversion: perennial crop*	0.00	<input type="checkbox"/>	Water control structure	0.00
-	Forested buffer/fencing	0.00	<input type="checkbox"/>	Cover crop*	
-	Grass buffer/fencing	0.00	<input type="checkbox"/>	Commodity cover crop*	Type
1	Streambank restoration	1,500.00	<input type="checkbox"/>		Type





My Account | Calculate Credits | **Trade Credits** | Help | Log Out

Nitrogen Market | Phosphorus Market | Post Credits | Credits Needed Board | Certified Credits by Project | Completed Trades

Nitrogen Marketplace

Filter by Watershed and Year

Watershed: All Watersheds Patuxent Potomac Everywhere Else
Year: All Years

Apply Filter

Year ▲ / Watershed	Posting #	Credits Available*	Price per Credit
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No postings available.

Indicates a posting that you placed on the marketplace.
Indicates a posting on which you have submitted a bid.

Note: the buyer must purchase 10% more than the amount of credits desired. These additional credits will be permanently retired by MDA.



Search

Email Friend

My Account | Calculate Credits | **Trade Credits** | Help | Log Out

Nitrogen Market | Phosphorus Market | **Post Credits** | Credits Needed Board | Certified Credits by Project | Completed Trades

Post Credits to the Marketplace

Complete the form below to post credits to the marketplace.

Select a Marketplace and Watershed

- Marketplace:** Nitrogen Phosphorus
Watershed: Patuxent Potomac Everywhere Else
Price Format: Specified Price Request for Inquiry

Post Credits

No credit available to post. Select a different watershed and/or nutrient.

Your Available Credits

Nitrogen

- Patuxent: 0 credits
- Potomac: 0 credits
- Everywhere Else: 0 credits

Phosphorus

- Patuxent: 0 credits
- Potomac: 0 credits
- Everywhere Else: 0 credits



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[Nitrogen Market](#) | [Phosphorus Market](#) | [Post Credits](#) | [Credits Needed Board](#) | [Certified Credits by Project](#) | **Completed Trades**

Completed Trades

The following is a listing of all trades completed and contains a table of average prices and a listing of individual trades.

Retired Credits

Nutrient	Credits Retired
Nitrogen	0
Phosphorus	0

Average Prices

Compliance Year	Nutrient	Watershed	Minimum Price	Maximum Price	Average Price
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