



Conowingo BMP Opportunity Viewer Update

CWIP SC Meeting: Sept 8, 2025

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Conowingo BMP Web Viewer

About

Documentation



All Parcels with BMP Opportunities

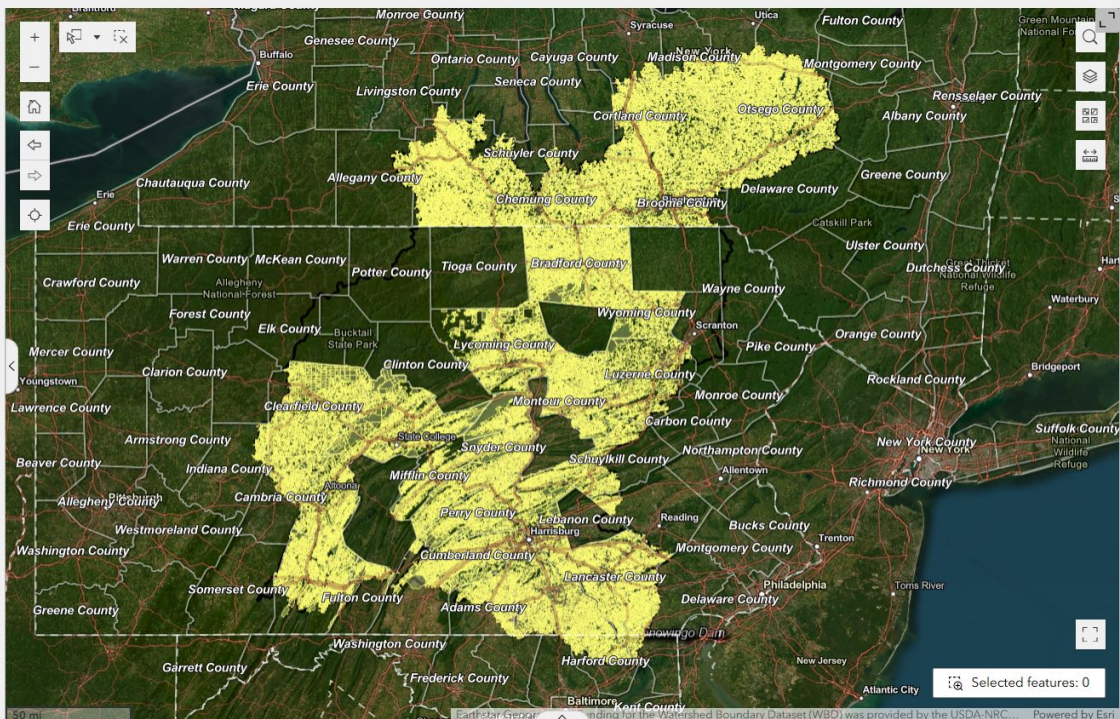
- Annual Cropland Practices
- Prescribed Grazing
- Barneyard Runoff Control
- Urban Forest Planting
- Wetland Restoration
- Vegetated Buffer Opportunity

BMP Definitions provided by the Bay Program:

Annual Cropland Practices:

1) **Manure incorporation:** "Manure Incorporation is defined as the mixing of dry, semi-dry, or liquid organic nutrient sources (including manures, biosolids, and compost) into the soil profile within a specified time period from application by a range of field operations (≤ 24 hr for full ammonia loss reduction credit and 3 days for P reduction credit(s))."

2) **Conservation Tillage:** "A conservation tillage routine that involves the planting, growing and harvesting of crops with minimal disturbance to the soil in an effort to maintain 30 to 59 percent crop residue coverage immediately after planting each crop."



Print templ...

Results

Template

A3 Landscape

Title

ArcGIS Web Map

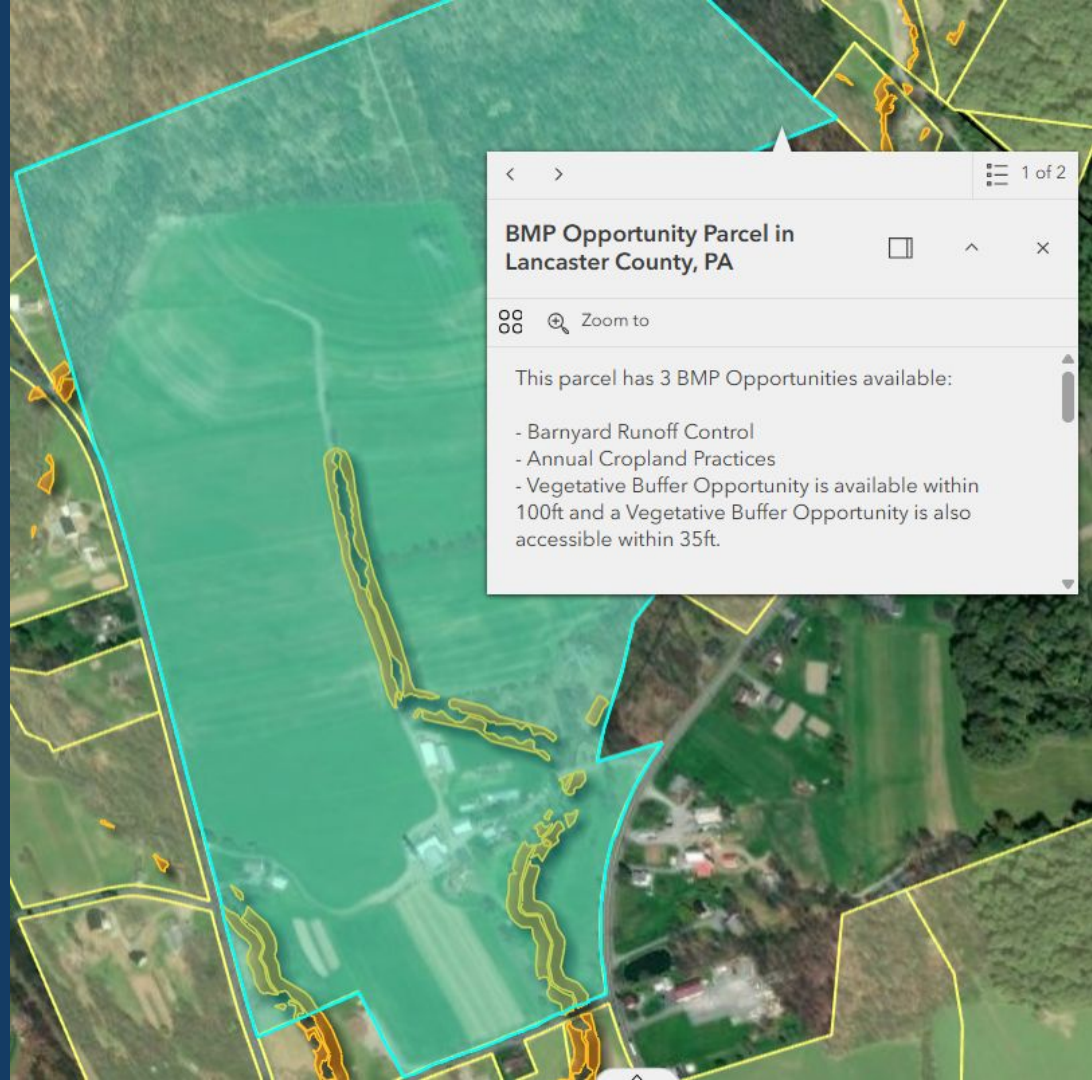
Advanced

Show print area

Print

Intended Use

- To support the CWIP, this tool was created to help local practitioners:
 - Identify opportunities for restoration activities
 - Gather information to include in proposals for CWIP funding available through SRBC
- County and watershed level planning



What is a BMP Opportunity?

- BMP opportunity:
 - An area identified on the map as potentially suitable for implementing the respective BMP.
- BMP opportunity footprint vs. BMP opportunity parcel
- Annual Cropland Practices
- Prescribed Grazing
- Barnyard Runoff Control
- Urban Forest Planting
- Wetland Restoration
- Vegetated Buffer Opportunity



Annual Cropland Practices

- Applicable for Conservation Tillage, Manure Incorporation, and Cover Crop
- Extract all cropland land use and filter cropland to contiguous areas of at least 1 acre
- Summarize cropland area within each parcel



Prescribed Grazing

- Pasture land use filtered to contiguous pasture of at least 1 acre
- Identify filtered pasture areas that fall within 300 ft of a waterway, to identify pasture that is likely used for grazing
- Identify all parcels with pasture meeting this criteria



Barnyard Runoff Control

- Extract structures from land use and estimate the number of structures per parcel
- Extract all agricultural land use (cropland and pasture/hay) for area of interest. Filter agricultural lands to contiguous areas of at least 1 acre
- Extract barren land cover and filter to contiguous areas of at least 4,000 square feet, within 300 ft of a waterway
- Identify parcels that satisfy the following requirements:
 - Contain at least two structures
 - Contain any agricultural land use from filtered layer
 - Contain any barren land use from filtered layer



Wetland Restoration

- Follows slightly modified USDA Agricultural Conservation Planning Framework (ACPF) methodology:
 - Identify depression areas through a subtraction of a filled DEM from an unfilled DEM (preprocessed for noise)
 - Filter depressions by agricultural land use (cropland and pasture/hay)
 - Remaining polygons must have a minimum surface area of 0.25 acres
 - The mean percent hydric soils within each polygon must be greater than 50%
 - Depressions must have a minimum depth of 30 cm
 - Identify parcels that intersect with opportunities that meet the above criteria



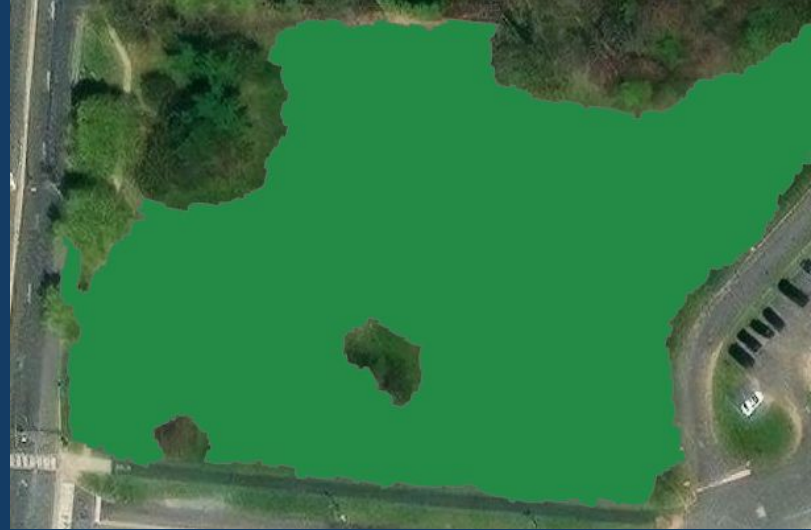
Vegetated Buffer Opportunity

- Areas within 35ft and 100ft of waterways
- Forest buffers or grassed waterways
- Identify all areas of low vegetation or barren land cover within 35 ft and 100 ft of an enhanced flowpath waterway
- Remove opportunities that are less than 25 square meters in size
- Identify parcels that intersect with remaining opportunities



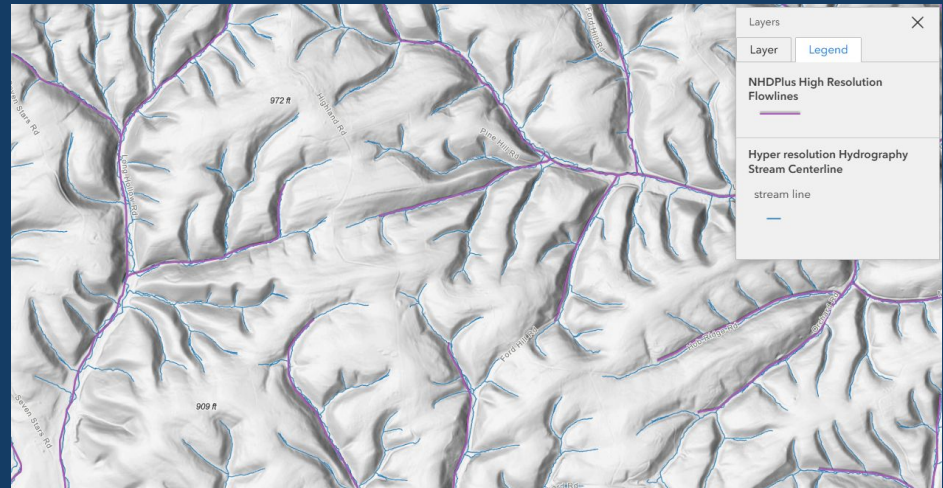
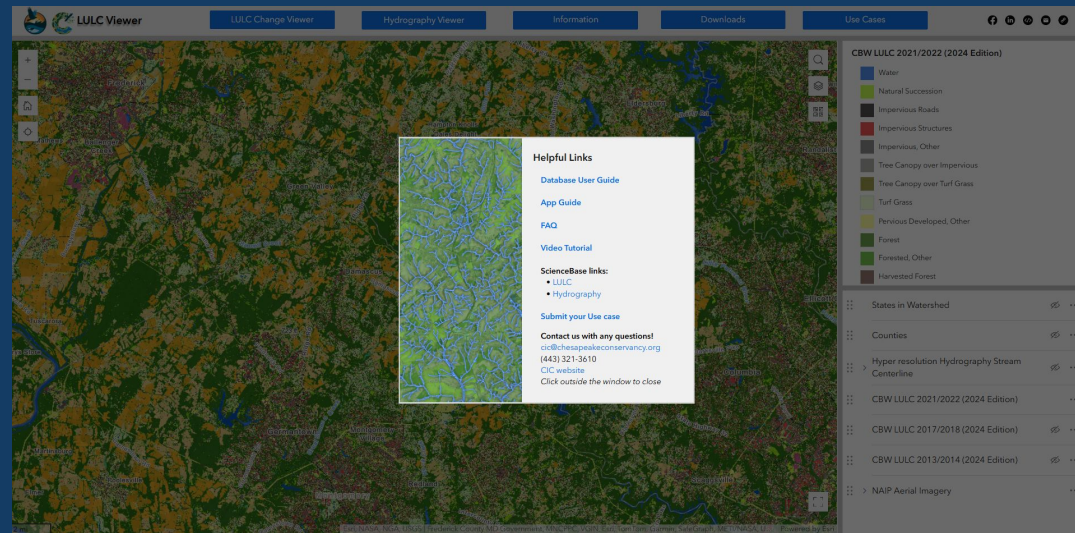
Urban Forest Planting

- Extract all turf grass from land use data and filter to contiguous areas of at least 1 acre that are farther than 30 ft from non-road impervious surfaces
- Identify parcels that contain turf grass meeting the above criteria
- Limited to Census Urban Areas



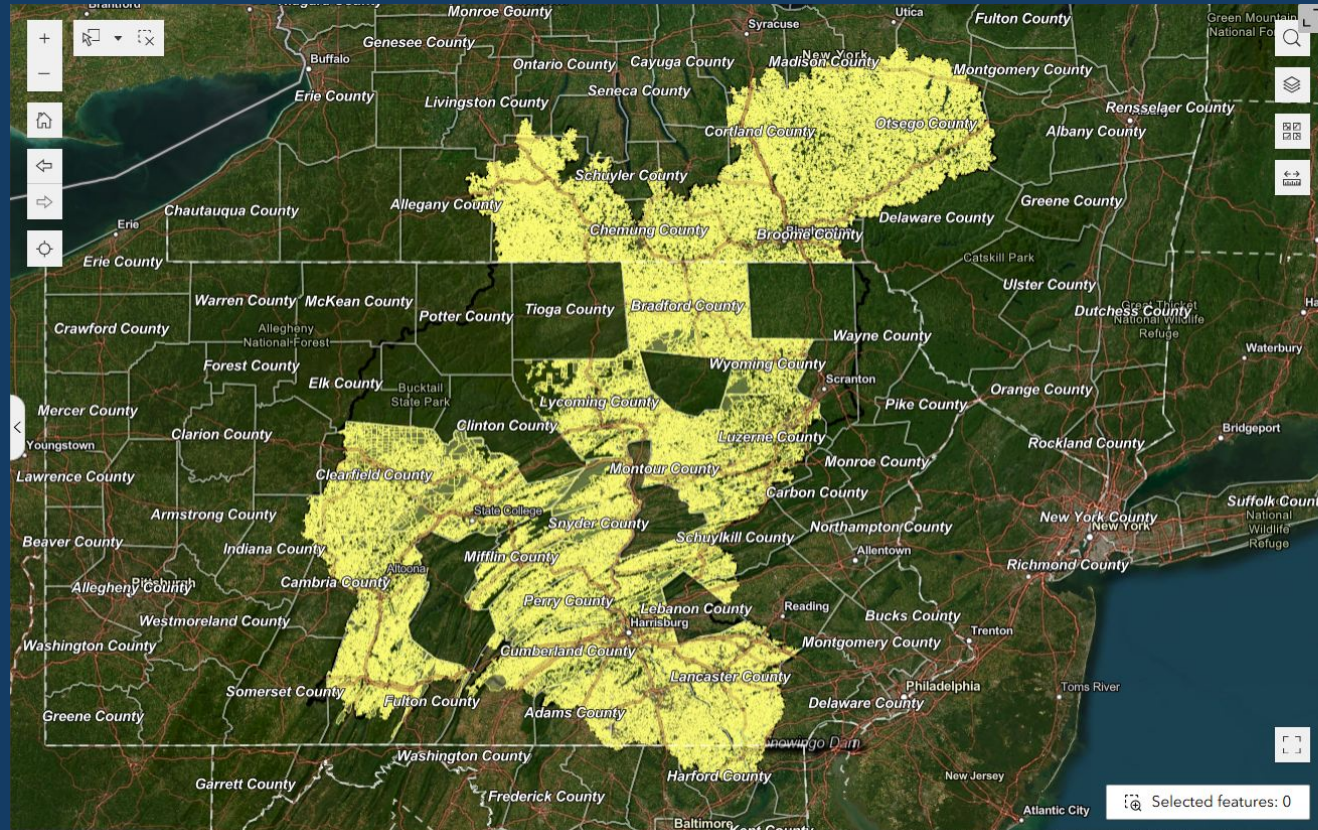
Data Updates

- New LULC and hydrography
 - [CBP Data Link](#)
- 11 new county parcel files (39 to 50 counties with parcels)
- Original 39 counties saw a net increase in opportunity area
 - Net decrease in prescribed grazing opportunity



Limitations to Note

- High resolution land use vintage (2021/2022) and error
- Does not account for existing BMP locations
- Parcel data vintage and availability
- Not intended to be prescriptive layers



Key Features

- BMP opportunity layers
- Additional context layers
- PDF map
- Summary tables and BMP opportunity acreages
- Filter functionality
- Downloadable data layers (pending)



OBJECTID																										
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y		
1	OBJECTID	Tax ID	County	File	Owner	Parcel	Adi	Country	State	POA	Acres	ACPA	Acres	BPC	YN	UFGA	Acres	PGA	YN	ACPA	YN	UFGA	YN	VR	YN	
2	1	00ADM-AC	adam_420		Adams Cc PA										NO											
3	2	00ADM-RC	adam_420		Adams Cc PA										NO											
4	3	00ADM-RC	adam_420		Adams Cc PA										1	NO			NO	YES		NO				
5	4	00ADM-AC	adam_420		Adams Cc PA										53	NO										
6	5	00ADM-YC	adam_420		Adams Cc PA										0	NO										
7	6	00ADM-YC	adam_420		Adams Cc PA										14	YES		YES								
8	7	00ADM-YC	adam_420		Adams Cc PA										5	NO			NO	YES						
9	8	00ADM-YC	adam_420		Adams Cc PA										23	NO				NO						
10	9	00ADM-YC	adam_420		Adams Cc PA										24	NO				NO						
11	10	00ADM-YC	adam_420		Adams Cc PA										8	YES		YES								
12	11	00ADM-YC	adam_420		Adams Cc PA											NO			NO	NO						
13	12	00ADM-YC	adam_420		Adams Cc PA											NO			NO	NO						
14	13	00ADM-YC	adam_420		Adams Cc PA										15	YES		YES								

Live Demo

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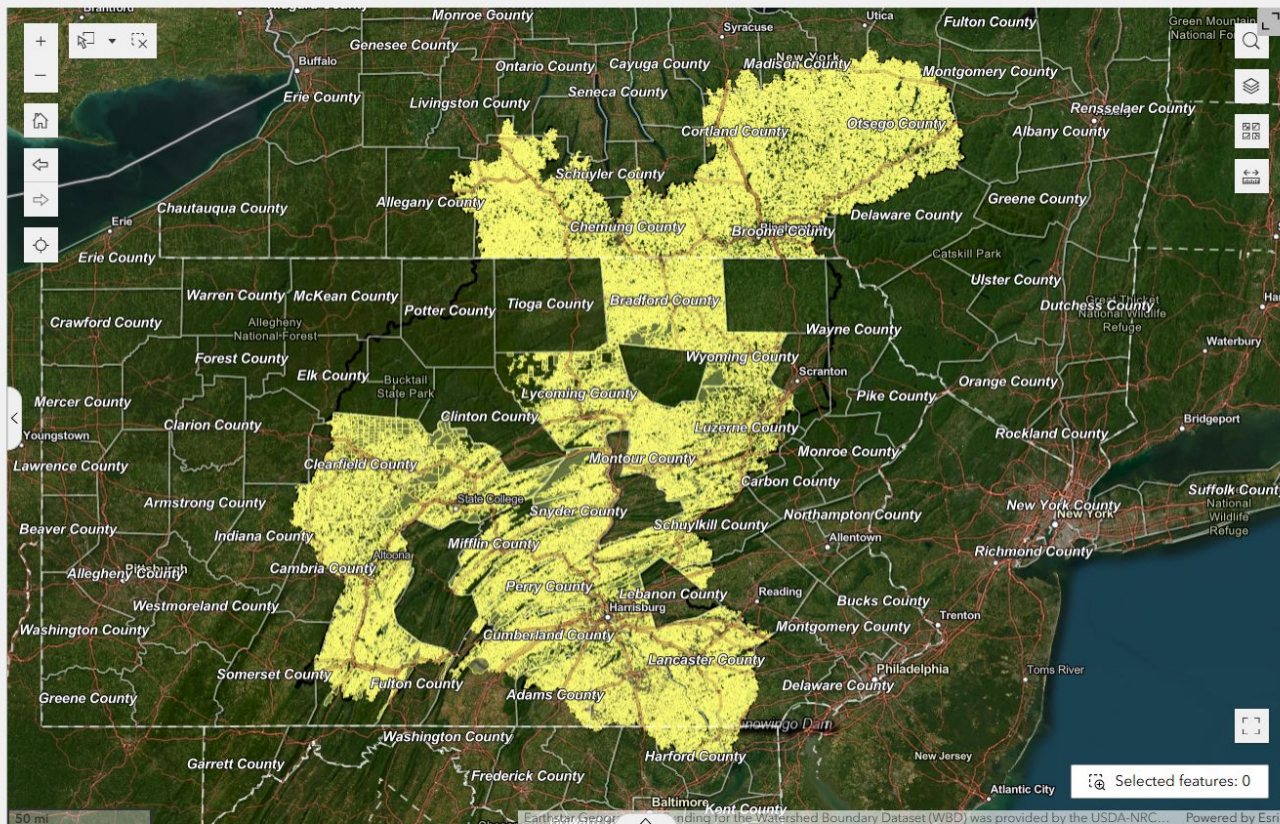
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