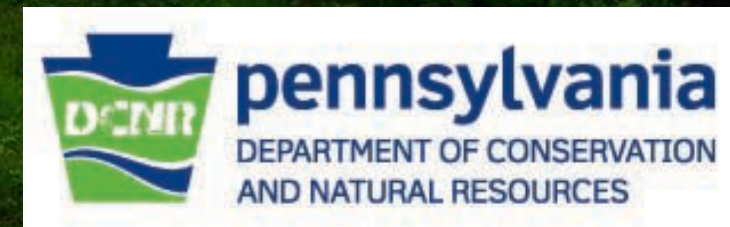


Mapping Biodiversity In Pennsylvania

Dr. Greg Podniesinski
Chief, Natural Heritage Section
DCNR – Bureau of Forestry



Today's Topics

- Overview of PA Natural Heritage Program (PNHP)
- PNHP data products and tools
- Focus
 - Natural Heritage Areas
 - PA Conservation Explorer
 - Environmental Review
 - Conservation planning





Mission

The PNHP provides scientific information, expertise, and assistance to support conservation of biological diversity.



Pennsylvania Natural Heritage Program Overview

- PNHP established in 1982 by DER, TNC & WPC
 - Coincided with Wild Resource Conservation Act
 - Consolidation of TNC staff under WPC in 2006
- Partnership between DCNR, PGC, PFBC and WPC
 - Formal partnership in 2006
 - US FWS (cooperator)
- PNHP fulfills DCNR mandate under Act 18 of 1995 (Section 305 (a)(10))
 - Thorough and extended survey of the ecological resources of PA and the species of which they are comprised
 - Collect, maintain and analyze the resulting data
 - Make it available for reference



Partner roles and responsibilities

- DCNR: Legislative mandate for Natural Heritage Program, primary funding for program, strategic direction, jurisdictional agency for plants (informally some “orphan taxa” – fungi, terrestrial inverts)
- Western Pennsylvania Conservancy: partner in program since inception, provides about 90% of staff capacity, operational lead
- PA Fish and Boat Commission: provides some funding, jurisdictional agency for fish, aquatic inverts, amphibians and reptiles
- PA Game Commission: provides some funding, jurisdictional agency for birds and mammals

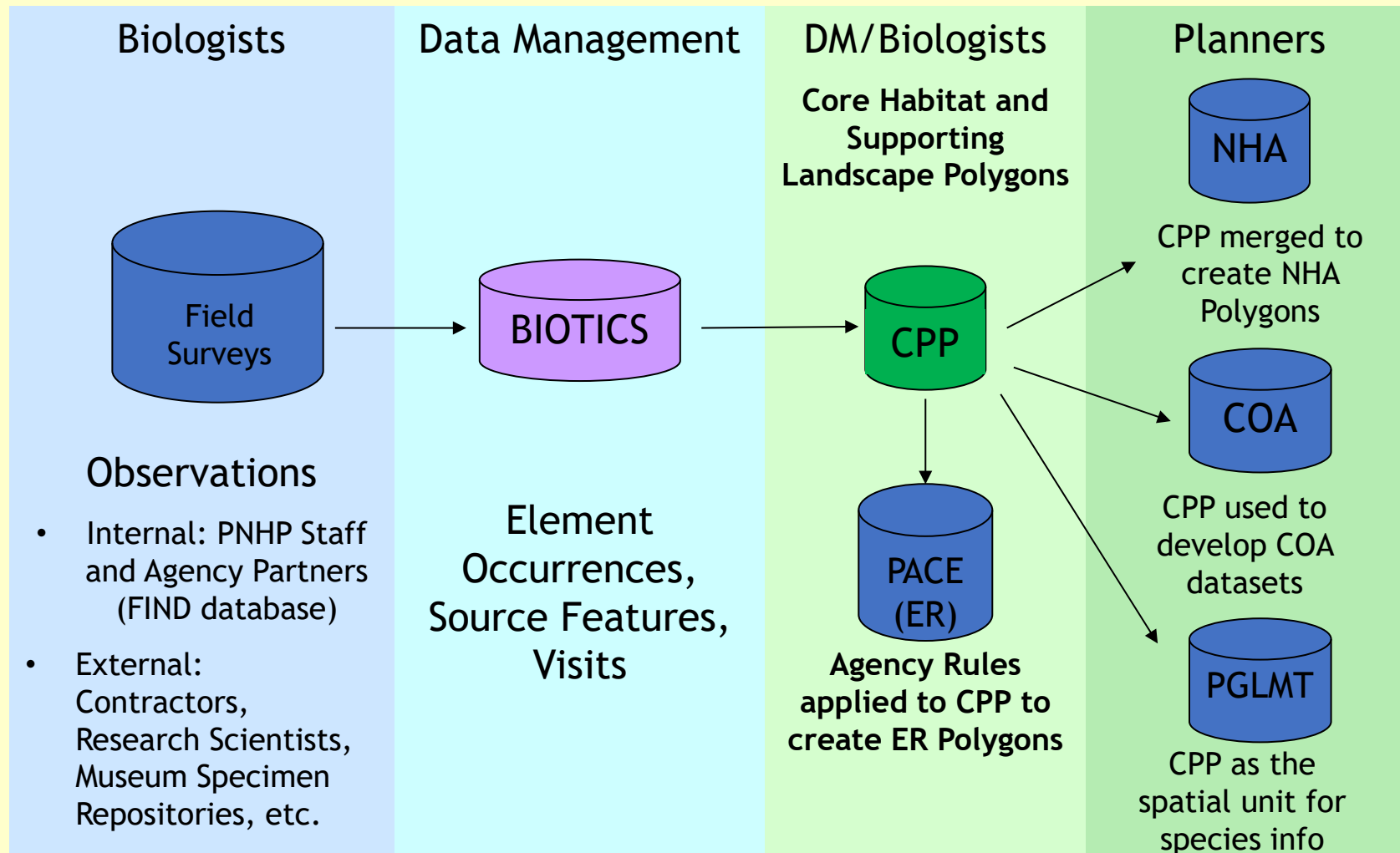


PNHP staff

- Agency staff (DCNR, PGC, PFBC) with significant PNHP involvement ~15-20
- DCNR - Western Pennsylvania Conservancy contract: staff of ~40
 - Staff of ecologists, botanists, zoologists, data managers
 - Offices in Pittsburgh, Harrisburg (RCSOB)



PNHP Data Flow

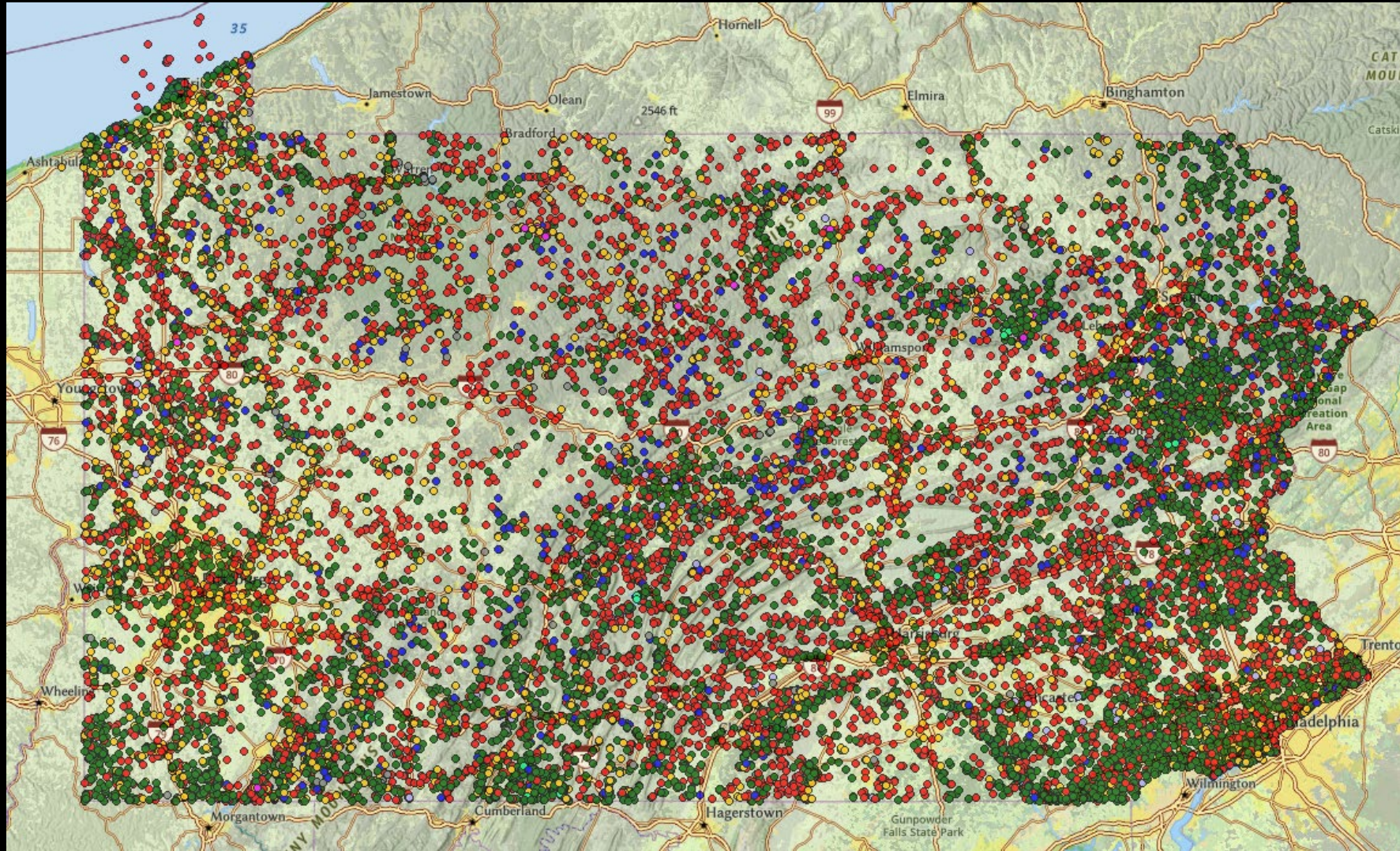


PNHP database

- 32,000 Element Occurrence records (documented locations of Rare, Threatened and Endangered species, natural features, rare plant communities, and other tracked species)
- 15,000 represented in environmental review
- Over 4,000 Natural Heritage Areas mapped



32,000 Element Occurrences



PNHP products and tools

What do we do with all the data?

- Environmental Review
- Natural Heritage Areas (NHAs)
- Species lists
- Plant Community Classification
- PA Community Predictor Tool
- Conservation Opportunity Areas
 - SWAP
- Newsletters/annual report
- Project pages
 - Vernal pools
 - Fungi
- Website: <https://www.naturalheritage.state.pa.us/>



Species Lists

Welcome

The Pennsylvania Natural Heritage Program (PNHP) is a partnership between the Pennsylvania Department of Conservation and Natural Resources (DCNR), the Pennsylvania Fish and Boat Commission (PFBC), the Pennsylvania Game Commission (PGC), and the Western Pennsylvania Conservancy (WPC) in cooperation with the U.S. Fish and Wildlife Service. PNHP is a member of NatureServe, an international network of natural heritage programs that gather and provide information on the location and status of important ecological resources (plants, vertebrates, invertebrates, ecological communities and geologic features). Our purpose is to provide current, reliable, objective ecological data and analysis to help guide conservation work and land-use planning.



About PNHP

Learn about our mission, how we work, and how to contact our staff.



Species and Natural Features

Find species and features subject to environmental review by PNHP jurisdictional partner agencies. View other species of interest, rare natural communities, or geologic features.



Ecological Communities

Find tools to identify terrestrial, palustrine and aquatic ecological communities found in Pennsylvania and learn about their importance.



Conservation Tools

Explore interactive maps and conservation tools including the County Natural Heritage Inventory,



Research and Initiatives

Access PNHP scientific publications and explore projects our staff are working on to address



Conservation Explorer

Visit the Conservation Explorer for conservation planning purposes and Pennsylvania Natural

Species Lists

are threatened or endangered and 6% are considered special concern species. Over 50 rare or unique natural communities, 50 moths and butterflies, and almost 20 types of geologic features are considered species or resources of concern.

PNHP maintains lists of the above ecologically significant species, geologic features, and natural communities which are subject to environmental review by regulatory agencies and displays them in the [Conservation Explorer](#). PNHP also tracks vulnerable plants, extirpated and extinct species, wildlife species of greatest conservation need, and other species of interest.

PNHP biologists and the [Pennsylvania Biological Survey](#) use inventory data to recommend a state rank and status for species that reflects how common or rare it is in Pennsylvania. Agencies rely upon this expertise and the NatureServe [status ranking](#) process to help determine the status for each species in our lists.



Environmental Review List

Find species, geologic features, and natural communities subject to environmental review and present in the Conservation Explorer.



Species and Natural Features List

In addition to species and features subject to environmental review, find vulnerable plants, extirpated and extinct species, and other species of interest.



Using the Species Lists

Instructions for using the PNHP Species Lists.



Rank and Status Definitions

Learn how species rank and status are defined for Pennsylvania species and natural features.



Submit or Request Data

Find instructions and forms for submitting data to or requesting data from PNHP.

Plant Community Classification

Plant Community Classification

Plant communities are groups of plants sharing a common environment that interact with each other, animal populations, and the physical environment. The types of plant communities found in an area can tell us a lot about that landscape. Plant community surveys provide information about plant species presence, the structure and composition of the plant community, soil chemistry, geology, presence of wildlife habitat, and quality of the entire landscape. These data can be used to create comprehensive, wide-scale land management and conservation plans.

PNHP's plant community classification system, [Terrestrial and Palustrine Plant Communities of Pennsylvania 2nd Ed.](#), includes information on over 100 natural plant communities found in Pennsylvania. Community descriptions include plant species and their associated soil types, geology, related plant communities, and range. Information from the PNHP classification system has been incorporated into NatureServe's [National Vegetation Classification](#) and other national projects.



Using the Classification

Learn about plant community classification concepts and view relevant references and a glossary.



Palustrine Communities

Explore wetland and riparian plant communities of Pennsylvania with our fact sheets and Palustrine Community Key.



Terrestrial Communities

Learn about the upland plant communities of Pennsylvania with our fact sheets and Terrestrial Community Key.



History of the Classification

Terrestrial and Palustrine Plant Communities of Pennsylvania 2nd Edition represents the third approximation of plant communities for

Plant Community Classification

Palustrine Community Descriptions

[Physiognomic System](#)

[Ecological Group](#)

[Palustrine Community Key](#)

Palustrine Forests

Coniferous Palustrine Forests

- [Black Spruce - Tamarack Peatland Forest Pdf link](#)
- [Hemlock Palustrine Forest Pdf link](#)
- [Red Spruce Palustrine Forest Pdf link](#)

Coniferous - Broadleaf Palustrine Forests

- [Hemlock - Mixed Hardwood Palustrine Forest Pdf link](#)
- [Red Spruce - Mixed Hardwood Palustrine Forest Pdf link](#)

Broadleaf Palustrine Forests

- [Bitternut Hickory Floodplain Forest Pdf link](#)
- [Elm - Ash - Maple Lakeplain Forest Pdf link](#)
- [Green Ash - Mixed Hardwood Floodplain Forest Pdf link](#)
- [Oak - Mixed Hardwood Palustrine Forest Pdf link](#)
- [Red Maple - Black Ash Palustrine Forest Pdf link](#)
- [Red Maple - Black-gum Palustrine Forest Pdf link](#)
- [Red Maple - Elm - Willow Floodplain Forest Pdf link](#)
- [Red Maple - Magnolia Palustrine Forest Pdf link](#)
- [Silver Maple Floodplain Forest Pdf link](#)
- [Sugar Maple - Mixed Hardwood Floodplain Forest Pdf link](#)
- [Sweetgum - Willow Oak Coastal Plain Palustrine Forest Pdf link](#)
- [Sycamore - Mixed Hardwood Floodplain Forest Pdf link](#)
- [Sycamore Floodplain Forest Pdf link](#)

Palustrine Woodlands

Coniferous Palustrine Woodlands

- [Black Spruce - Tamarack Palustrine Woodland Pdf link](#)
- [Pitch Pine - Leatherleaf Palustrine Woodland Pdf link](#)


Coniferous - Broadleaf Palustrine Woodlands

- [Hemlock - Mixed Hardwood Palustrine Woodland Pdf link](#)
- [Red Spruce - Mixed Hardwood Palustrine Woodland Pdf link](#)

Broadleaf Woodlands

- [Red Maple - Highbush Blueberry Palustrine Woodland Pdf link](#)

Plant Community Predictor Tool

**Pennsylvania Natural Heritage Program**

Plant Restoration Tool

Instructions

Click on the Select Target button

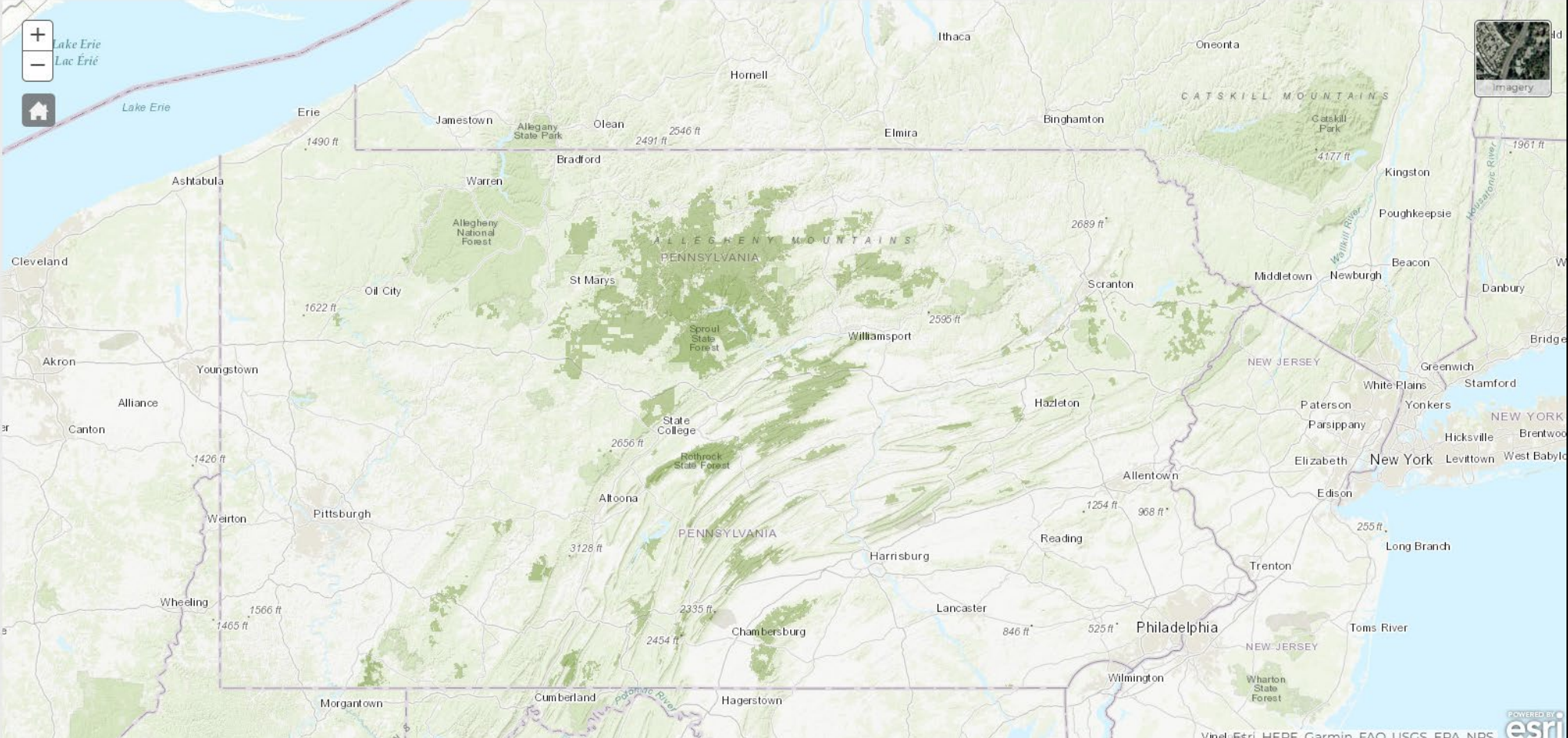
Select Target

Click on your area of interest


Click on the report link below

Report Link:


[Tool Help](#)



Plant Community Predictor Tool



Pennsylvania Natural Heritage Program



Plant Restoration Tool

Instructions

Click on the Select Target button

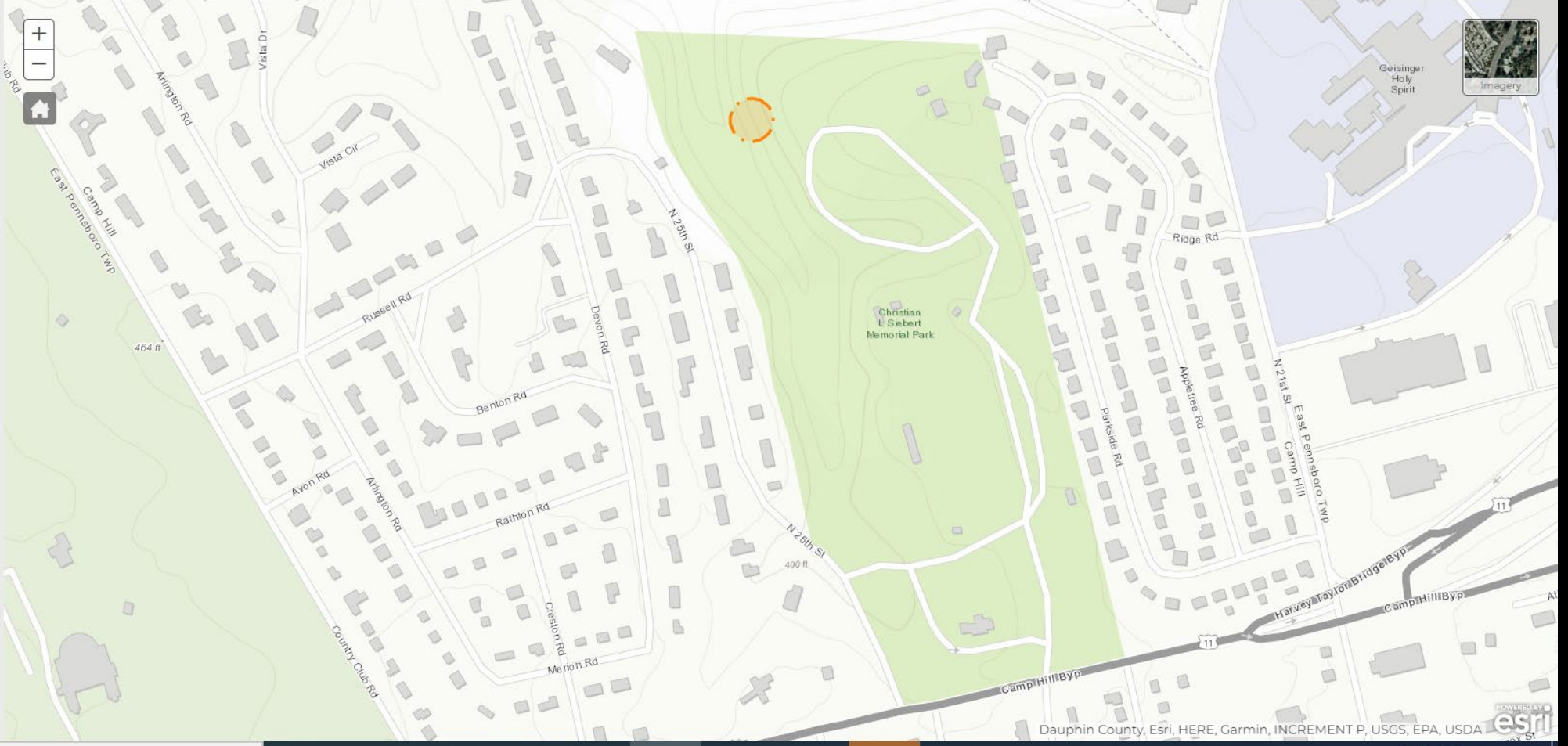
Select Target

Click on your area of interest

Click on the report link below

Report Link: Calculating results...

[Tool Help](#)



Plant Community Predictor Tool

Community Restoration Targeting Tool

version 0.9

8.4 EcoRegion: Appalachian Forests - Predicted Upland Communities

This is some help

8.4: Appalachian Forests

View Wetland List

View Upland List

View Full List

90 GIS-derived fields used to calculate similarity

edit

Similarity	Community	Code	Plots
0.7550	Yellow oak - redbud woodland	CTWBYOR000	14
0.7500	Virginia pine - mixed hardwood forest	CTFMVPO000	4
0.7430	Hemlock - tuliptree - birch forest	CTFMHTB000	11
0.7320	Dry oak-mixed hardwood forest	CTFBOMH000	39
0.7300	Side-oats gramma calcareous grassland	CTHOSOG000	7
0.7150	Red-cedar - mixed hardwood rich shale woodland	CTWMRCM000	3
0.7140	Dry white pine (hemlock) - oak forest	CTFMPHO000	16
0.7120	Red maple (terrestrial) forest	CTFBRMT000	17
0.7080	Dry oak - heath woodland	CTWBOHE000	3
0.7050	Dry oak-heath forest	CTFBOHE000	37
0.7030	Virginia pine - mixed hardwood shale woodland	CTWMVPM000	3
0.7010	Hemlock (white pine) - red oak - mixed hardwood forest	CTFMHPR000	11

Plant Community Predictor Tool

Planting list for [Yellow oak - redbud woodland](#) (CTWBYOR000)



EcoRegion 8.4: Appalachian Forests

For planning purposes only. Use at your own risk.
14 plots have vegetation data and are summarized below.

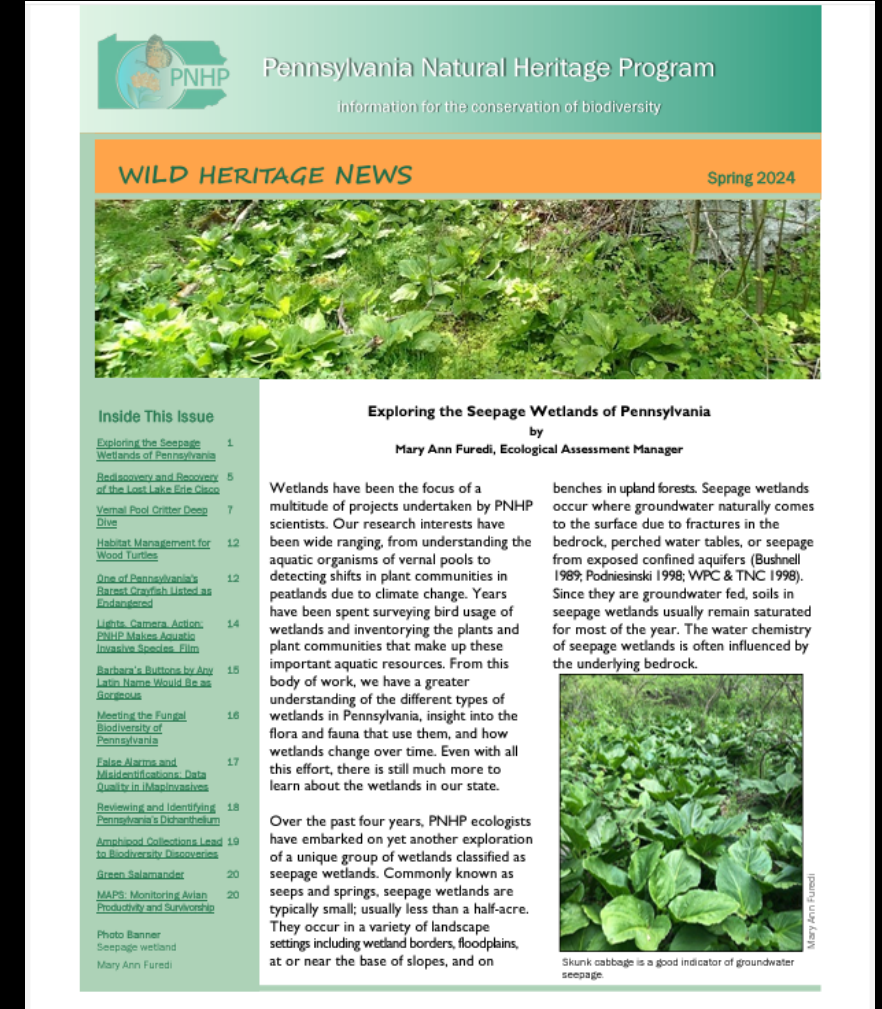
Search:

Export to CSV

Save plant list

Scientific Name 	Common Name 	Cover where present 	Constancy 	S Rank 	Floristic Index 	Wetland Ind. 
<i>Ostrya virginiana</i>	Hophornbeam	15.5	100.0%	S5	7	FACU
<i>Acer saccharum</i>	Sugar Maple	31.8	92.9%	S5	6	FACU
<i>Galium circaeans</i>	Wild Licorice	0.9	92.9%	SNR	6	UPL
<i>Quercus rubra</i>	Northern Red Oak	10.6	92.9%	S5	6	FACU
<i>Solidago caesia</i>	Wreath Goldenrod	1.2	92.9%	SNR	6	FACU
<i>Carya ovata</i>	Shagbark Hickory	3.2	78.6%	S5	6	FACU
<i>Quercus muehlenbergii</i>	Chinquapin Oak	16	78.6%	SNR	8	
<i>Fraxinus americana</i>	White Ash	8.6	71.4%	S5	5	FACU
<i>Packera obovata</i>	Roundleaf Groundsel	2.3	71.4%	SNR	6	FACU
<i>Cercis canadensis</i>	Redbud	23.7	64.3%	S5	5	FACU
<i>Polygonatum biflorum</i>	Solomon'S-Seal	0.7	64.3%	SNR	7	FACU
<i>Toxicodendron radicans</i>	Poison-Ivy	5.4	64.3%	S5	1	FAC
<i>Ageratina altissima</i> var. <i>altissima</i>	Common White Snakeroot	2.2	57.1%	SNR	3	FACU
<i>Hamamelis virginiana</i>	Witch-Hazel	9.9	57.1%	S5	5	FACU
<i>Asplenium platyneuron</i>	Rock-Spleenwort	1.5	57.1%	SNR	5	UPL

Annual Report and Quarterly Newsletters



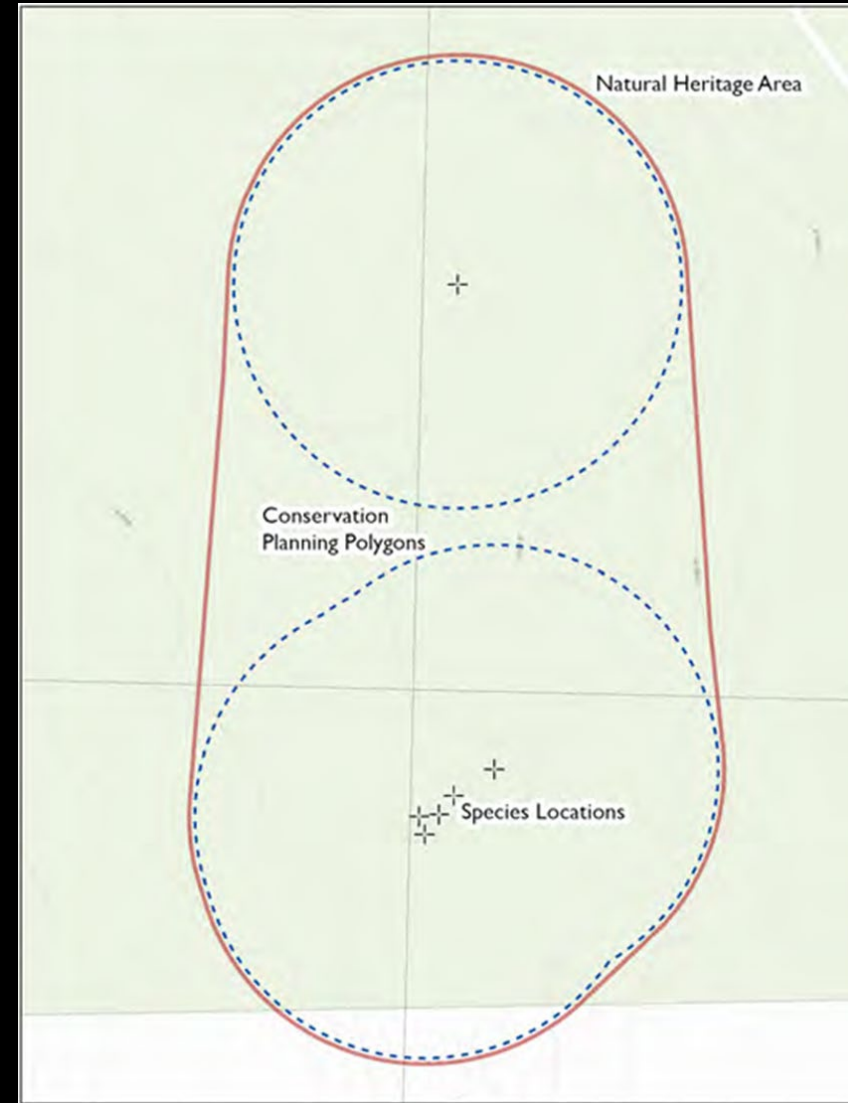
Natural Heritage Areas

- What is a Natural Heritage Area?
 - Natural Heritage Areas (NHAs) are sites that have been identified as areas that support rare plants or animals, exemplary ecological communities, and Pennsylvania's native species biodiversity.
 - Originally developed through County Natural Heritage Inventories
 - Began in 1989, continues today
 - Recently completely update of 10 counties in SW PA
 - Adams, Franklin, York and Cumberland underway
 - New inventory update in Wayne County starting soon
 - All 67 counties inventoried at least once, many twice, a few three times



Natural Area Construction

- Start with Element Occurrences (EO)
- Build CPP for each EO based on specifications for likely habitat
- Combine adjacent and overlapping CPPs to create NHA



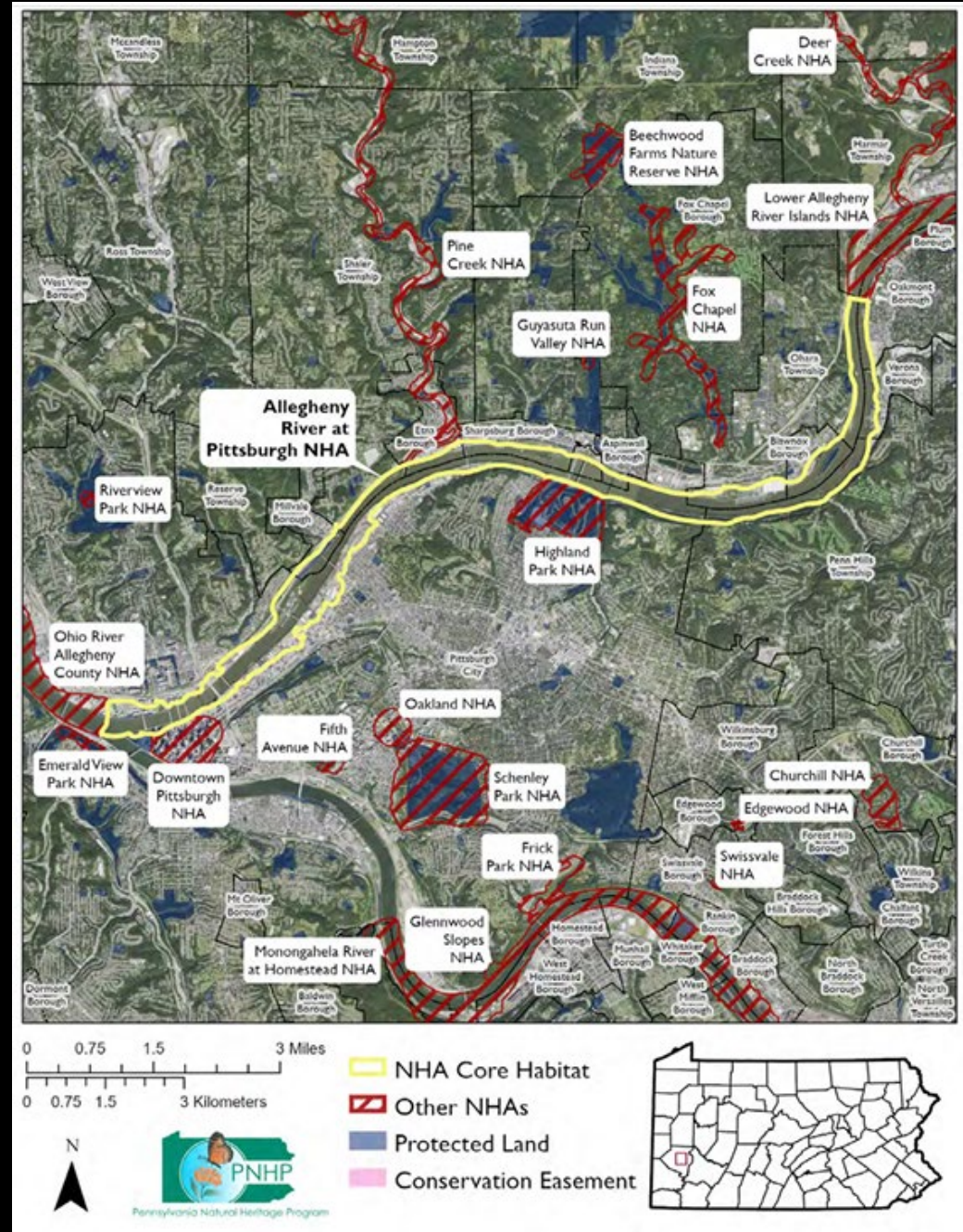
Where to find Natural Heritage Area Info

- The Big Binder
 - Early Inventories hard copy only
 - Later included CD of GIS files and report



Excerpt from 2021 Allegheny CNHI:

Allegheny River at Pittsburg NHA



Allegheny River at Pittsburg NHA

- Site Description

Allegheny River Pool #4 NHA

A site of Regional Significance

This stretch of the Allegheny River reaches from where it meets the Kiskiminetas River, north of Freeport, and southwest to Natrona. It includes the fourth navigational pool, and while the surrounding valley is industrialized and urbanized, there are stretches here that have less disturbed, vegetated river banks. Towards the mouth of the Kiskiminetas River, which is currently impacted by abandoned mine drainage, river scour supports a population of **blue false-indigo** (*Baptisia australis*). Several rare fish species occur in this stretch of the river, including the **Tippecanoe darter** (*Etheostoma tippecanoe*) and **river redhorse** (*Maxostoma carinatum*). The Pennsylvania-endangered mussel, **long-solid** (*Fusconaia subrotunda*), was also recovered here, and the **russet-tipped clubtail** (*Stylurus plagiatus*), a dragonfly often found along larger, sandy or silty-bottomed rivers was observed as well. There is also an active **bald eagle** (*Haliaeetus leucocephalus*) nest in the forest along the eastern side of the river, and an additional sensitive species of concern found at this site.



Blue false-indigo grows along the Allegheny River, in cobble banks that experience natural freezing and flooding cycles. Photo: Lindsey Bocian

This site is of Regional significance. It has been assigned this significance level because of the occurrence of at least two globally vulnerable (G3) species, such as Tippecanoe Darter (*Etheostoma tippecanoe*), within this NHA.

All species tracked by PNHP documented at this NHA include:

Species or Natural Community Name		Global ¹	State ¹	PA Legal Status ¹	PABS Status ¹	Last Observed	Quality ²
Bald Eagle (<i>Haliaeetus leucocephalus</i>)	✖	G5	S4B,S5N,S4M	DL	PT	2014	E
Bluebreast Darter (<i>Etheostoma caeruleum</i>)	🐟	G4	S4S5	DL	PT	1986	E
Tippecanoe Darter (<i>Etheostoma tippecanoe</i>)	🐟	G3G4	S3S4	DL	PT	2014	E
River Redhorse (<i>Maxostoma carinatum</i>)	🐟	G4	S4	DL	DL	1997	E
Channel Darter (<i>Percina copelandi</i>)	🐟	G4	S5	DL	DL	1988	E
Long-solid (<i>Fusconaia subrotunda</i>)	🐌	G3	S2	–	PE	2005	D
Fragile Papershell (<i>Leptodea fragilis</i>)	🐌	G5	S2S3	–	CR	2005	D
Pink Heelsplitter (<i>Potamilus alatus</i>)	🐌	G5	S4	–	CR	2005	CD
Blue False-indigo (<i>Baptisia australis</i>)	🌿	G5	S2	PT	PT	2008	E
Russet-tipped Clubtail (<i>Stylurus plagiatus</i>)	🦋	G5	S2S3	–	–	2015	AC
Sensitive Species of Concern A ³	S	–	–	–	–	2016	E

¹ See the PNHP (<http://www.naturalheritage.state.pa.us/rank.aspx>) for an explanation of PNHP ranks and legal status. PABS status refers to the status recommended by the Pennsylvania Biological Survey.

² See NatureServe (<http://www.natureserve.org/explorer/eorankguide.htm>) for an explanation of quality ranks.

³ This species is not named by request of the jurisdictional agency responsible for its protection.

Threats and Species Recommendations

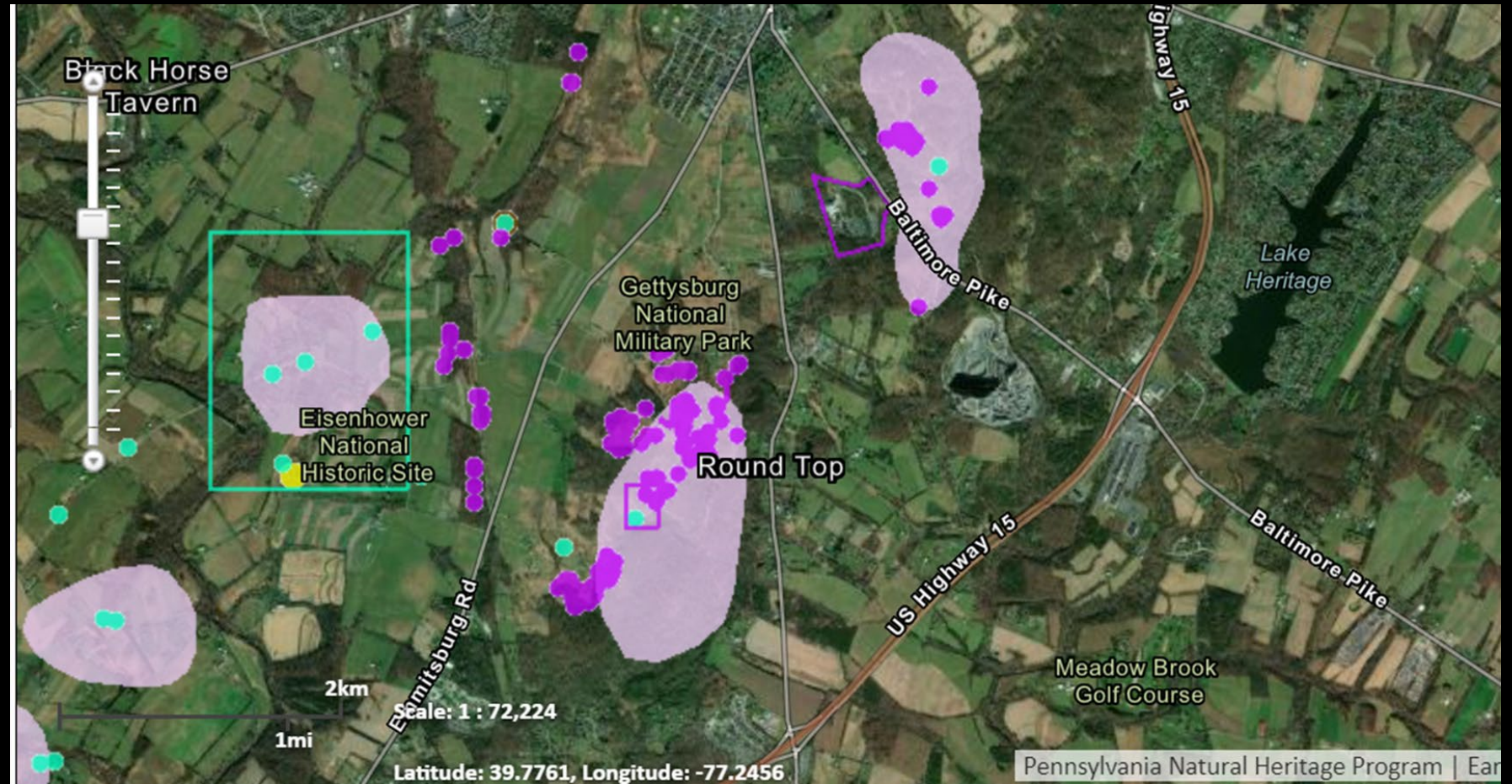
NHAs in the PA Conservation Explorer Tool

- All NHAs from all county inventories available in the PA Conservation Explorer tool




Goal: All EO's in an NHA

- Counties overdue for an update will have some EO's not in an NHA
- Adams County CNHI done in 2001
- NPS inventory project done in 2005



Site Description still available (and easier to access)



The map shows an aerial view of a rural landscape with green fields and brown patches. A red polygon outlines the Round Top Hills area, with a black dot at its center. Other labeled areas include Black Horse Tavern, Eisenhower National Historic Site, and Gettysburg National Military Park. A road labeled 'Emmitsburg Rd' runs diagonally. A scale bar indicates 1mi and 2km. The map's scale is 1:72,224, and the coordinates are Latitude: 39.8232, Longitude: -77.2901.

Details (1 of 1): Natural Heritage Area: Core Habitat - Round Top Hills ? - x

Layer: Natural Heritage Area: Core Habitat
Site Name: Round Top Hills
Map ID: null
Description: Forested diabase hills and successional meadows support numerous plant and animal species of concern. "Devils Den" is a significant geologic feature.
County: ADAMS
Description Link:
<https://www.naturalheritage.state.pa.us/cnhi/cnhi/Round%20Top%20Hills.pdf>

Zoom Flash < > 1 /1 Tasks

Two Taverns

Pennsylvania Natural Heritage Program | Earthstar Geographics | data.pa.go...

NHA Site Description

Round Top Hills

This site consists of several forested diabase bedrock hills and adjacent successional meadows with much surface area being occupied by boulders and outcrops. Numerous species of concern are found here. Several plant species of concern **Buxbaum's sedge** (*Carex buxbaumii*), **rigid sedge** (*Carex tetanica*), **short-fruited rush** (*Juncus brachycarpus*), **grass rush** (*Juncus biflorus*), **smooth beardtongue** (*Penstemon laevigatus*) and **orange coneflower** (*Rudbeckia fulgida*) are found in a wet meadow along with a diversity of other herbs, sedges, and grasses. The meadow is an active cattle pasture, but disturbance from grazing and trampling has not been a problem for these elements.

Puttyroot (*Aplectrum hyemale*), **Heller's witchgrass** (*Dichanthelium oligosanthos*) and **Shumard Oak** (*Quercus shumardii*) are found at a higher elevation on a dry wooded slope in partial light.

Three butterfly species of concern, the **Giant swallowtail** (*Papilio cresphontes*), **Baltimore Checkerspot** (*Euphydryas phaeton*) and **Dion Skipper** (*Euphyes dion*) and an **additional species of concern**, not named at the request of the jurisdictional agency overseeing its protection, occur within this site as well.

"Devil's Den" is a **significant geologic feature** as identified by Geyer and Bolles (1979). The site provides an example of an Erosional Remnant that consists of a large mass of diabase boulders. Diabase is an erosion-resistant igneous rock that has been locally referred to as ironstone or Gettysburg granite (Speir 1967). The "Round Top Hills" site is mostly within Gettysburg National Military Park.

NHA Applications

- Project planning
 - Consultants
- County planning
 - Inform zoning
 - Greenway planning
 - Early project planning
- Conservation planning
 - Natural Resource & Habitat Management planning
 - Land Acquisition planning
- State Agencies
 - Habitat management
 - Land use zoning (BOF context)
 - Land acquisition



NHAs versus Environmental Review

- NHAs typically define sites of conservation importance, often with multiple species across one or more taxa groups (plants and animals), for planning purposes (may include natural features and species other than R,T&E)
- ER polygons limited to a single occurrence of one species. Polygons include Element occurrence plus likely habitat (and an additional buffer for some sensitive species), intended for screening projects for potential impacts.

PA Conservation Explorer and Environmental Review

- Historical context
 - Early ER (1990's)
 - primarily manual, database on mainframe, rudimentary GIS tool for internal use
 - PA Natural Diversity Inventory (PNDI 1.0)
 - Cutting edge circa early 2000's
 - Pros:
 - online,
 - fast project screening,
 - addressed state and federally listed species
 - Con:
 - no visible species data (black box),
 - unable to proactively modify projects or fully anticipate species conflicts,
 - Projects submitted manually, potentially to all four agencies (DCNR, PGC, PFBC and USFWS)





Pennsylvania Conservation Explorer

Pennsylvania Natural Heritage Program

[My account](#) [Shopping cart](#) [Log out](#)

[Home](#)

[Map](#)

[My Projects](#)

[My Projects \(Archived\)](#)

[Terms & Conditions](#)

[Contact Us](#)

[Help](#)

Pennsylvania Conservation Explorer

Conservation Planning and PNDI Environmental Review



Welcome to **Pennsylvania Conservation Explorer**—a one stop shop for conservation planning and PNDI environmental review. The Explorer provides conservation information on biological diversity, protected lands, streams and other natural resources for planning purposes and also allows users to screen a project area for potential impacts to threatened, endangered, and special concern species.

PA Conservation Explorer (PNDI 2.0)

- PNDI 1.0 software obsolete, system aging out
- Addressed much needed updates
 - Visible environmental review polygons
 - ER polygons more habitat-based versus generic buffers
 - Species names provided for non-sensitive species
 - All project information can be submitted online, to all agencies
 - Data refreshed 3-4 times a year,
 - Ongoing updates and enhancements
 - Speeds up most reviews, ~70% of projects get no hits, cleared in minutes
- Online in 2016



PA Conservation Explorer

- Two main functions:
 - Environmental review screening
 - Conservation planning





Pennsylvania Conservation Explorer

Pennsylvania Natural Heritage Program

[My account](#)[Shopping cart](#)[Log out](#)[Home](#)[Map](#)[My Projects](#)[My Projects \(Archived\)](#)[Terms & Conditions](#)[Contact Us](#)[Help](#)[Switch Basemap](#) [Add Resources](#) [Create Project](#) [Conservation Report](#)[Find address or place](#)[Layers](#) [Make a Map](#) [Feature Search](#)

Environmental Review

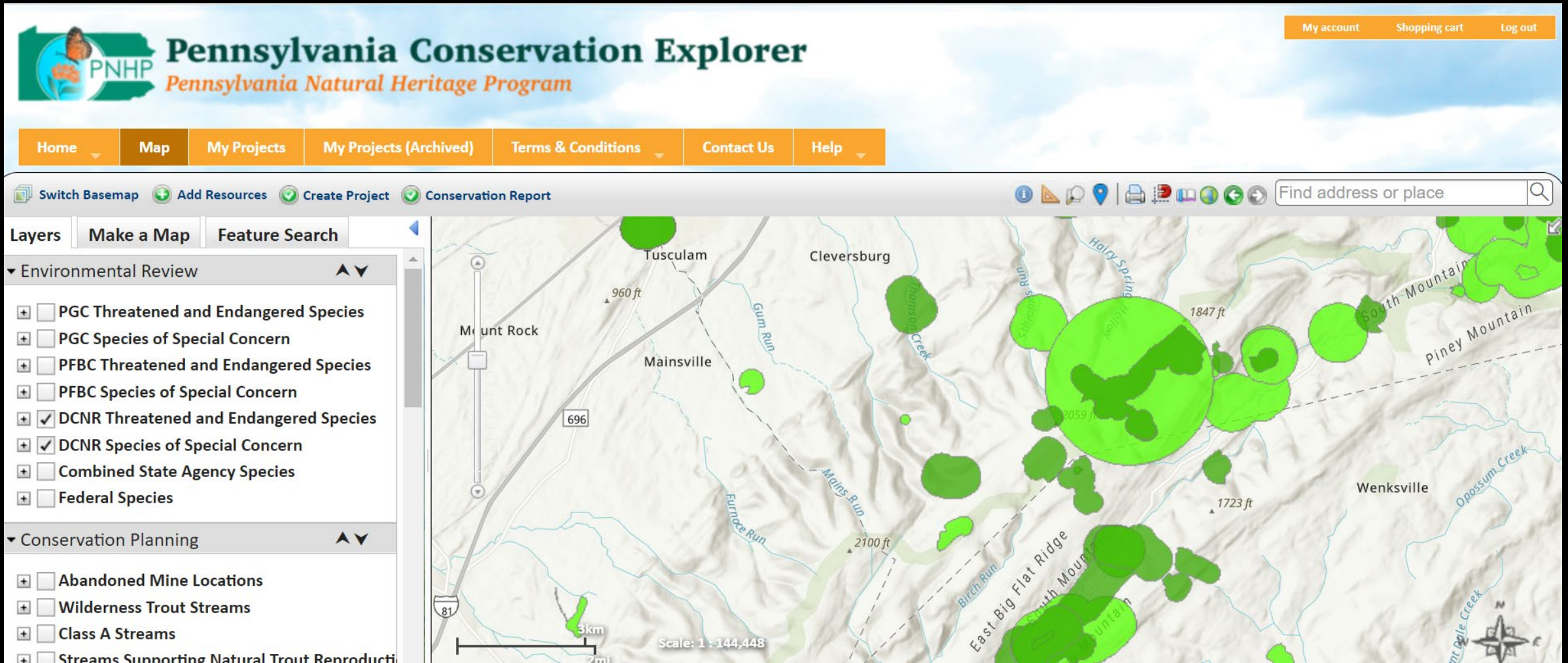
- ☐ PGC Threatened and Endangered Species
- ☐ PGC Species of Special Concern
- ☐ PFBC Threatened and Endangered Species
- ☐ PFBC Species of Special Concern
- ☐ DCNR Threatened and Endangered Species
- ☐ DCNR Species of Special Concern
- ☐ Combined State Agency Species
- ☐ Federal Species

Conservation Planning

- ☐ Abandoned Mine Locations
- ☐ Wilderness Trout Streams
- ☐ Class A Streams
- ☐ Streams Supporting Natural Trout Reproduction
- ☐ Chapter 93 Existing Use Streams



Visible ER Polygons





Pennsylvania Conservation Explorer

Pennsylvania Natural Heritage Program

[My account](#) [Shopping cart](#) [Log out](#)

[Home](#) [Map](#) [My Projects](#) [My Projects \(Archived\)](#) [Terms & Conditions](#) [Contact Us](#) [Help](#)

[Switch Basemap](#) [Add Resources](#) [Create Project](#) [Conservation Report](#)

[Find address or place](#)

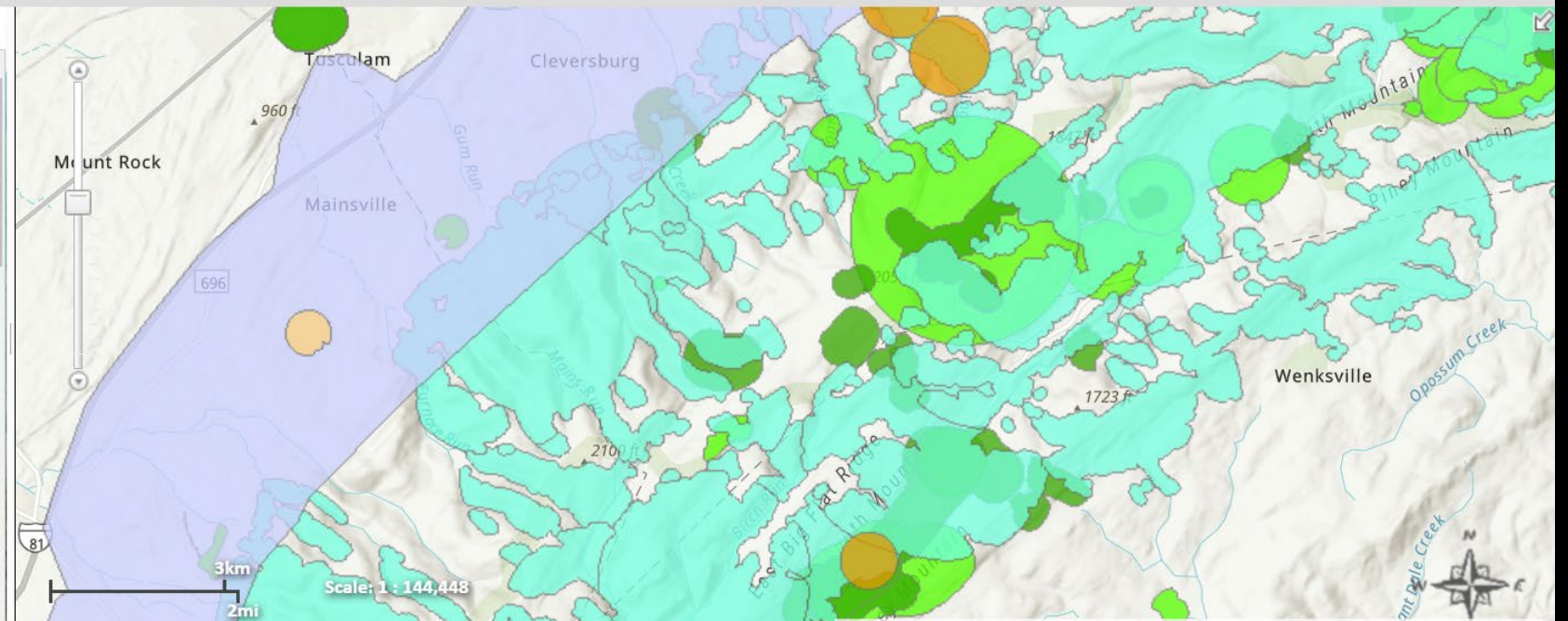
Layers **Make a Map** **Feature Search**

Environmental Review

- ☒ PGC Threatened and Endangered Species
- ☒ PGC Species of Special Concern
- ☒ PFBC Threatened and Endangered Species
- ☒ PFBC Species of Special Concern
- ☒ DCNR Threatened and Endangered Species
- ☒ DCNR Species of Special Concern
- ☐ Combined State Agency Species
- ☐ Federal Species

Conservation Planning

- ☐ Abandoned Mine Locations
- ☐ Wilderness Trout Streams
- ☐ Class A Streams
- ☐ Streams Supporting Natural Trout Reproducti





Pennsylvania Conservation Explorer

Pennsylvania Natural Heritage Program

[My account](#) [Shopping cart](#) [Log out](#)

[Home](#) [Map](#) [My Projects](#) [My Projects \(Archived\)](#) [Terms & Conditions](#) [Contact Us](#) [Help](#)

[Switch Basemap](#) [Add Resources](#) [Create Project](#) [Conservation Report](#)

[Find address or place](#)

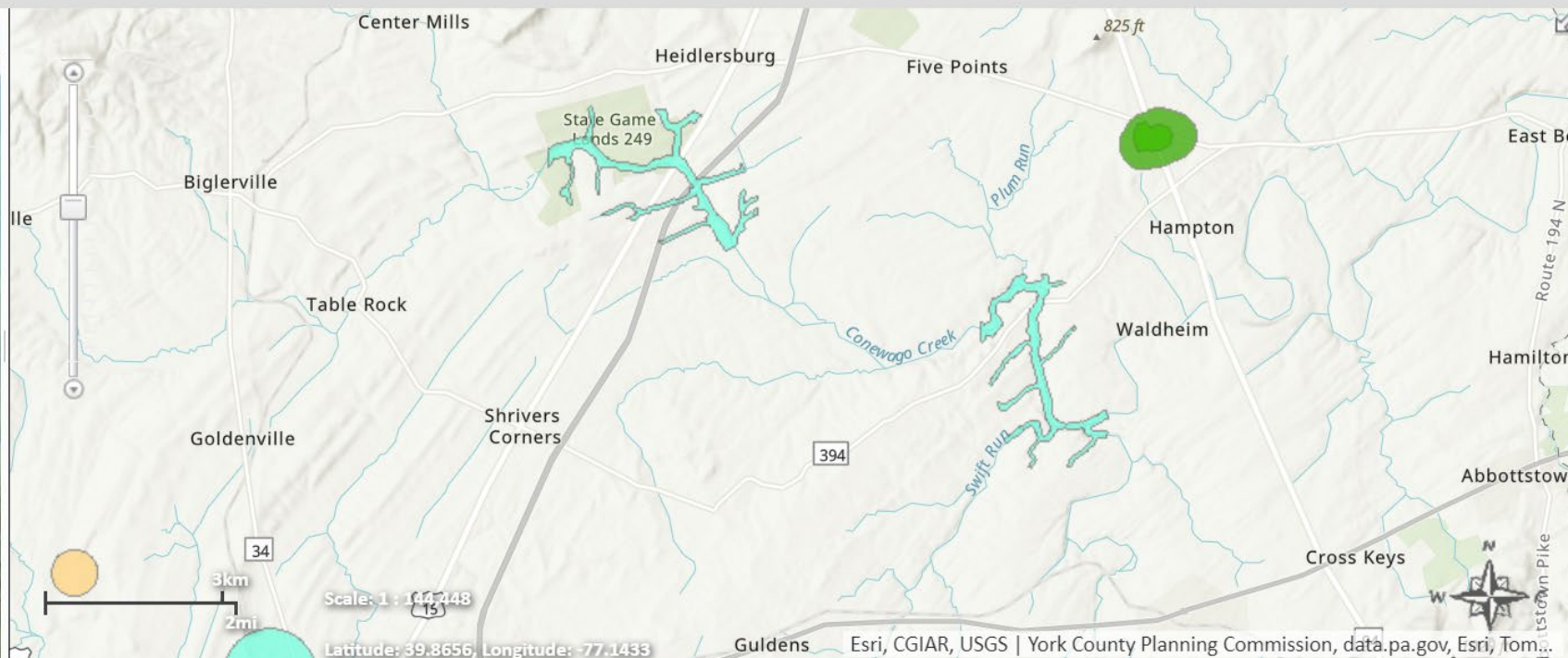
[Layers](#) [Make a Map](#) [Feature Search](#)

Environmental Review

- ☒ PGC Threatened and Endangered Species
- ☒ PGC Species of Special Concern
- ☒ PFBC Threatened and Endangered Species
- ☒ PFBC Species of Special Concern
- ☒ DCNR Threatened and Endangered Species
- ☒ DCNR Species of Special Concern
- ☐ Combined State Agency Species
- ☐ Federal Species

Conservation Planning

- ☐ Abandoned Mine Locations
- ☐ Wilderness Trout Streams
- ☐ Class A Streams
- ☐ Streams Supporting Natural Trout Reproduction
- ☐ Chapter 93 Existing Use Streams



Scale: 1 : 144,248
Latitude: 39.8656 Longitude: -77.1433

Guldens Esri, CGIAR, USGS | York County Planning Commission, data.pa.gov, Esri, Tom...



Pennsylvania Conservation Explorer

Pennsylvania Natural Heritage Program

[My account](#)[Shopping cart](#)[Log out](#)[Home](#)[Map](#)[My Projects](#)[My Projects \(Archived\)](#)[Terms & Conditions](#)[Contact Us](#)[Help](#)[Switch Basemap](#) [Add Resources](#) [Create Project](#) [Conservation Report](#)[Layers](#)[Make a Map](#)[Feature Search](#)

▼ Environmental Review ▲▲

- ☒ PGC Threatened and Endangered Species
- ☒ PGC Species of Special Concern
- ☒ PFBC Threatened and Endangered Species
- ☒ PFBC Species of Special Concern
- ☒ DCNR Threatened and Endangered Species
- ☒ DCNR Species of Special Concern
- ☐ Combined State Agency Species
- ☐ Federal Species

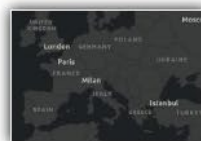
▼ Conservation Planning ▲▲

- ☐ Abandoned Mine Locations
- ☐ Wilderness Trout Streams
- ☐ Class A Streams
- ☐ Streams Supporting Natural Trout Reproducti

Switch Basemap



Blank White Map



Dark Gray Canvas



Imagery



Imagery Hybrid



Light Gray Canvas



National Geographic Style Map



Ocean Basemap



Streets



Terrain with Labels



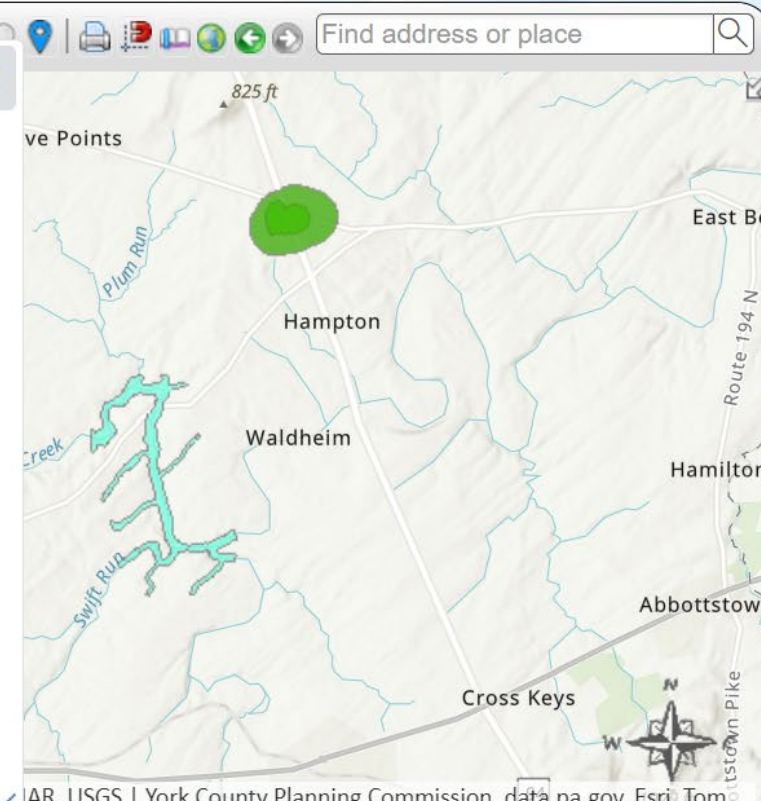
Topographic



USA Topo Maps



USGS National Map



AR, USGS | York County Planning Commission, data.pa.gov, Esri, Tom...



Pennsylvania Conservation Explorer

Pennsylvania Natural Heritage Program

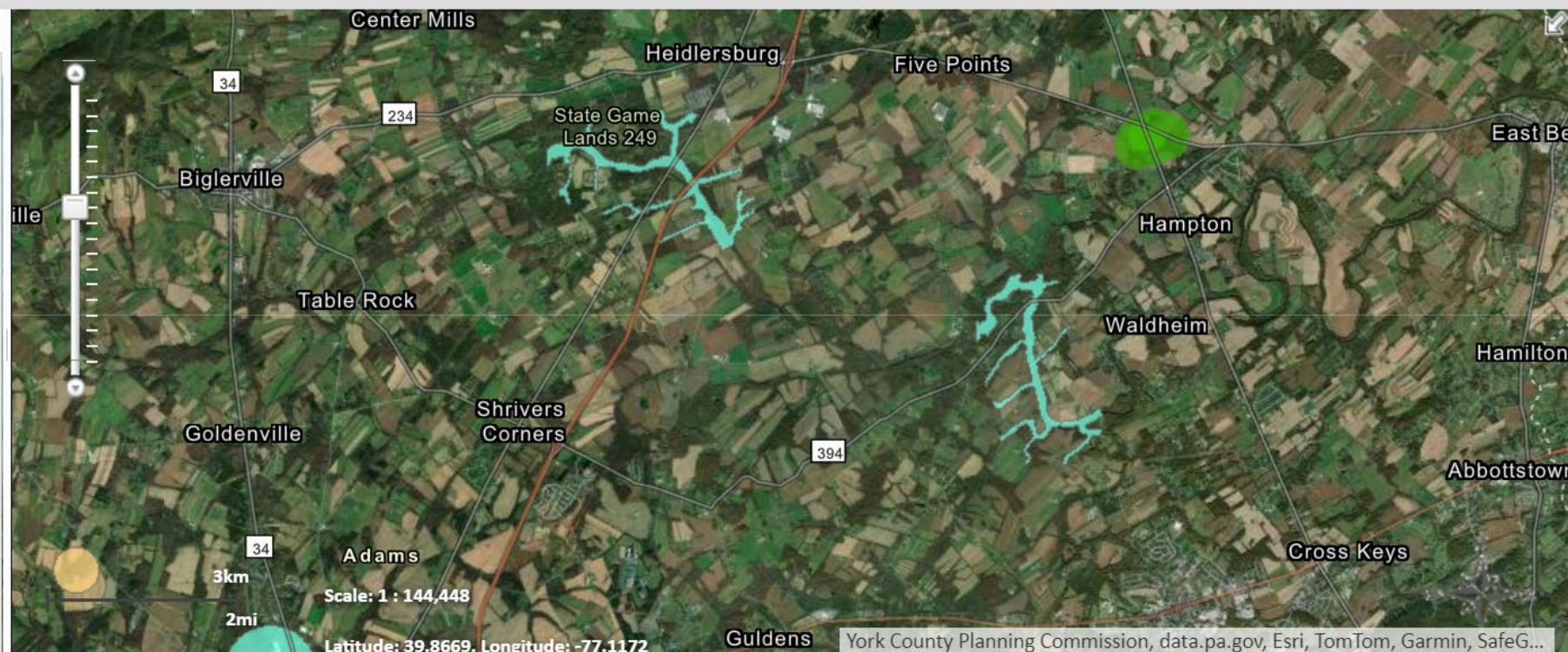
[My account](#)[Shopping cart](#)[Log out](#)[Home](#)[Map](#)[My Projects](#)[My Projects \(Archived\)](#)[Terms & Conditions](#)[Contact Us](#)[Help](#)[Switch Basemap](#) [Add Resources](#) [Create Project](#) [Conservation Report](#)[Layers](#)[Make a Map](#)[Feature Search](#)

Environmental Review

- ☒ PGC Threatened and Endangered Species
- ☒ PGC Species of Special Concern
- ☒ PFBC Threatened and Endangered Species
- ☒ PFBC Species of Special Concern
- ☒ DCNR Threatened and Endangered Species
- ☒ DCNR Species of Special Concern
- ☐ Combined State Agency Species
- ☐ Federal Species

Conservation Planning

- ☐ Abandoned Mine Locations
- ☐ Wilderness Trout Streams
- ☐ Class A Streams
- ☐ Streams Supporting Natural Trout Reproduction
- ☐ Chapter 93 Existing Use Streams





Pennsylvania Conservation Explorer

Pennsylvania Natural Heritage Program

[My account](#) [Shopping cart](#) [Log out](#)

[Home](#) [Map](#) [My Projects](#) [My Projects \(Archived\)](#) [Terms & Conditions](#) [Contact Us](#) [Help](#)

[Switch Basemap](#) [Add Resources](#) [Create Project](#) [Conservation Report](#)

[Find address or place](#)

Layers **Make a Map** **Feature Search**

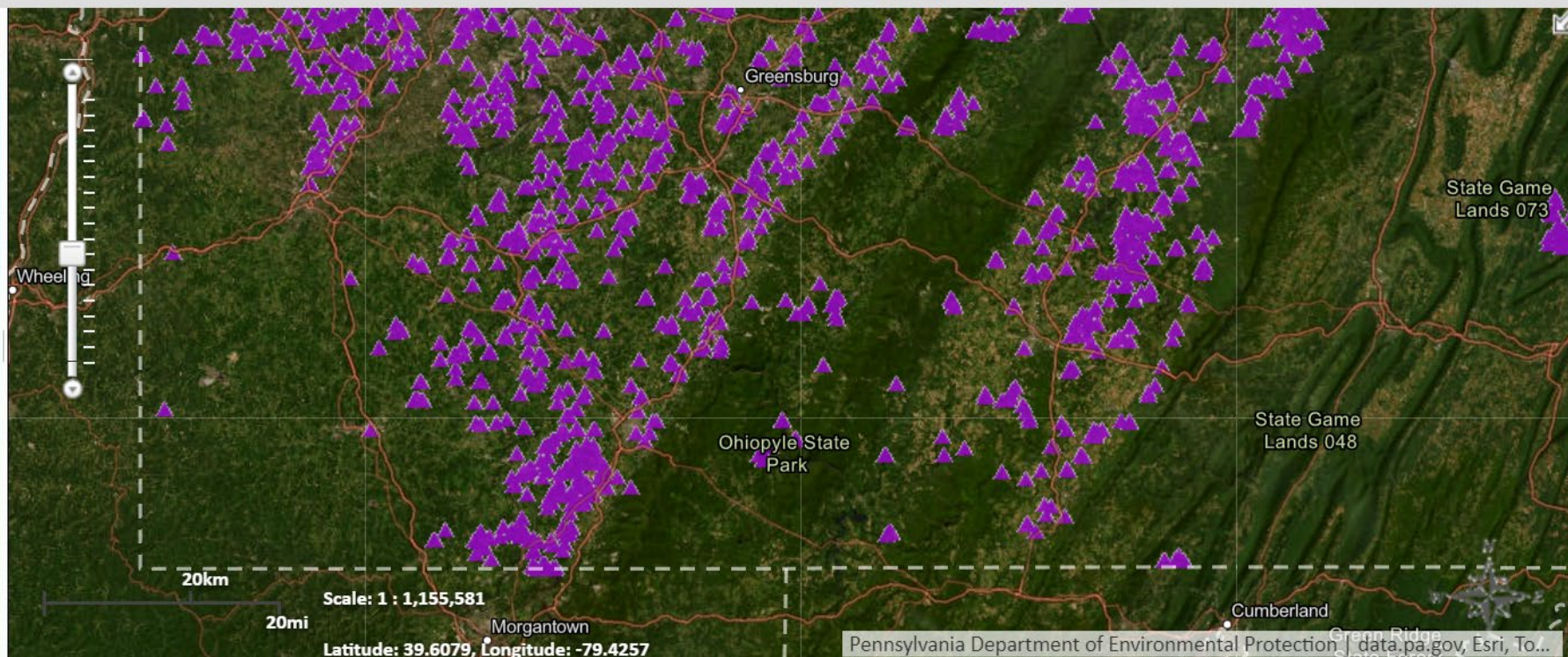
☐ Federal Species

Conservation Planning

- ☒ Abandoned Mine Locations
- ☐ Wilderness Trout Streams
- ☐ Class A Streams
- ☐ Streams Supporting Natural Trout Reproduction
- ☐ Chapter 93 Existing Use Streams
- ☐ Chapter 93 Designated Streams
- ☐ Important Bird Areas
- ☐ Natural Heritage Area: Core Habitat
- ☐ National Wetlands Inventory
- ☐ National Hydrography Dataset
- ☐ Climate Change Connectivity

Protected Lands

- ☐ State Wild and Natural Areas (DCNR)





Pennsylvania Conservation Explorer

Pennsylvania Natural Heritage Program

[My account](#) [Shopping cart](#) [Log out](#)

[Home](#) [Map](#) [My Projects](#) [My Projects \(Archived\)](#) [Terms & Conditions](#) [Contact Us](#) [Help](#)

[Switch Basemap](#) [Add Resources](#) [Create Project](#) [Conservation Report](#)

[Find address or place](#)

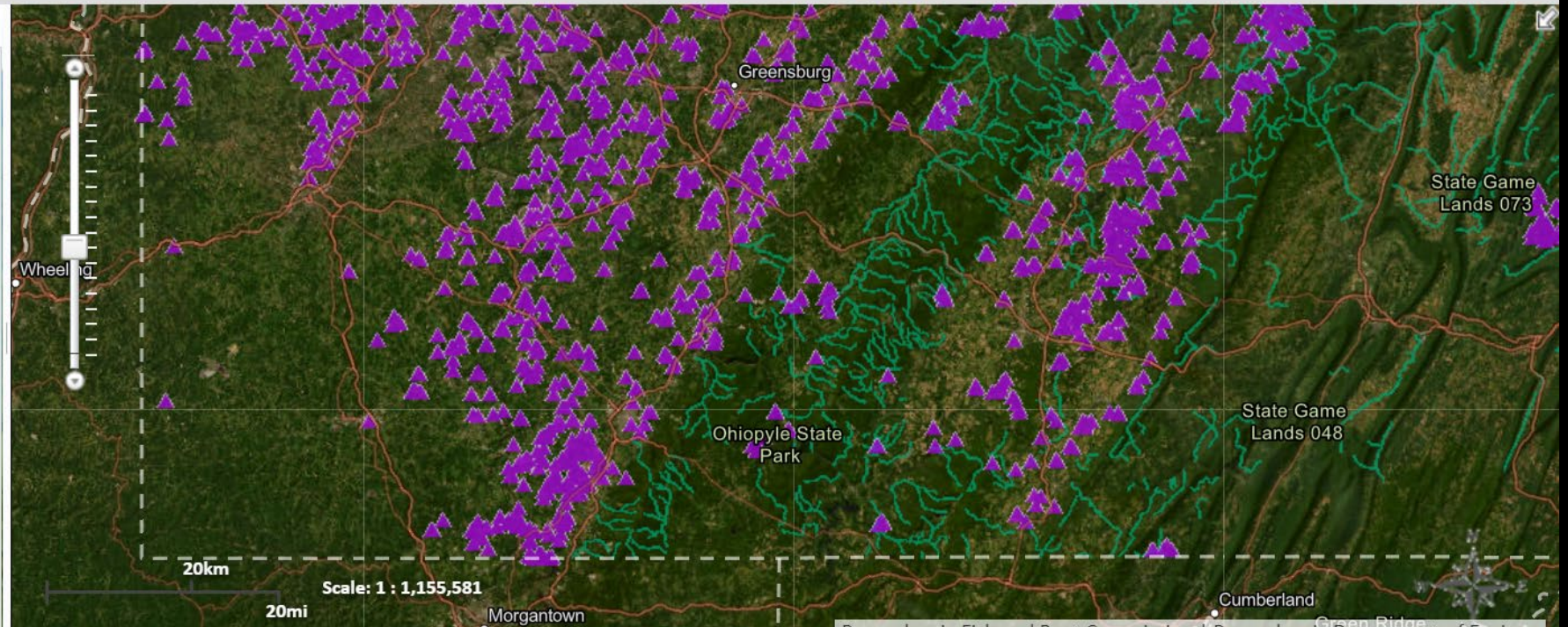
Layers **Make a Map** **Feature Search**

☒ Federal Species

▼ Conservation Planning ▲▼

- ☒ Abandoned Mine Locations
- ☐ Wilderness Trout Streams
- ☐ Class A Streams
- ☒ Streams Supporting Natural Trout Reproduction
 - Trout Natural Reproduction
- ☐ Chapter 93 Existing Use Streams
- ☐ Chapter 93 Designated Streams
- ☐ Important Bird Areas
- ☐ Natural Heritage Area: Core Habitat
- ☐ National Wetlands Inventory
- ☐ National Hydrography Dataset
- ☐ Climate Change Connectivity

▼ Protected Lands ▲▼





Pennsylvania Conservation Explorer

Pennsylvania Natural Heritage Program

[My account](#)[Shopping cart](#)[Log out](#)[Home](#)[Map](#)[My Projects](#)[My Projects \(Archived\)](#)[Terms & Conditions](#)[Contact Us](#)[Help](#)[Switch Basemap](#) [Add Resources](#) [Create Project](#) [Conservation Report](#)[Layers](#) [Make a Map](#) [Feature Search](#)☐ Federal Species

▼ Conservation Planning

- ☐ Abandoned Mine Locations
- ☐ Wilderness Trout Streams
- ☐ Class A Streams
- ☐ Streams Supporting Natural Trout Reproduction
 - Trout Natural Reproduction
- ☐ Chapter 93 Existing Use Streams
- ☐ Chapter 93 Designated Streams
- ☐ Important Bird Areas
- ☒ Natural Heritage Area: Core Habitat
- ☐ National Wetlands Inventory
- ☐ National Hydrography Dataset
- ☐ Climate Change Connectivity

▼ Protected Lands



Pennsylvania Natural Heritage Program | data.pa.gov, Esri, TomTom, Garmin,...



Pennsylvania Conservation Explorer

Pennsylvania Natural Heritage Program

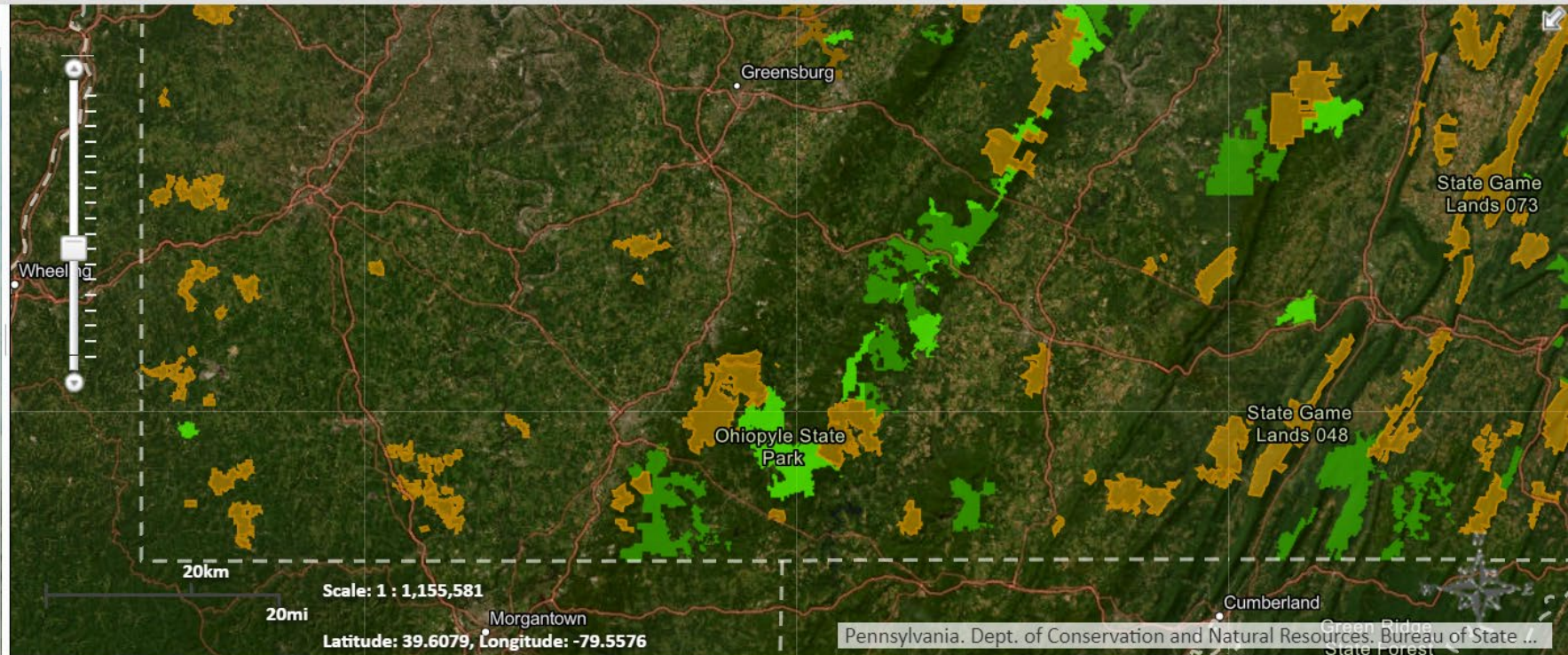
[My account](#)[Shopping cart](#)[Log out](#)[Home](#)[Map](#)[My Projects](#)[My Projects \(Archived\)](#)[Terms & Conditions](#)[Contact Us](#)[Help](#)[Switch Basemap](#) [Add Resources](#) [Create Project](#) [Conservation Report](#)[Find address or place](#)[Layers](#) [Make a Map](#) [Feature Search](#)☐ Climate Change Connectivity

▼ Protected Lands ▲▼

- ☐ State Wild and Natural Areas (DCNR)
- ☒ State Forests
- ☒ State Parks
- ☒ PGC Managed Lands
- ☐ Private Lands
- ☐ PFBC Lands
- ☐ Conservation Easements
- ☐ Farm Easements
- ☐ Federal Lands
- ☐ Local Parks

▼ Reference Layers ▲▼

- ☐ Counties
- ☐ Watershed Boundaries





Pennsylvania Conservation Explorer

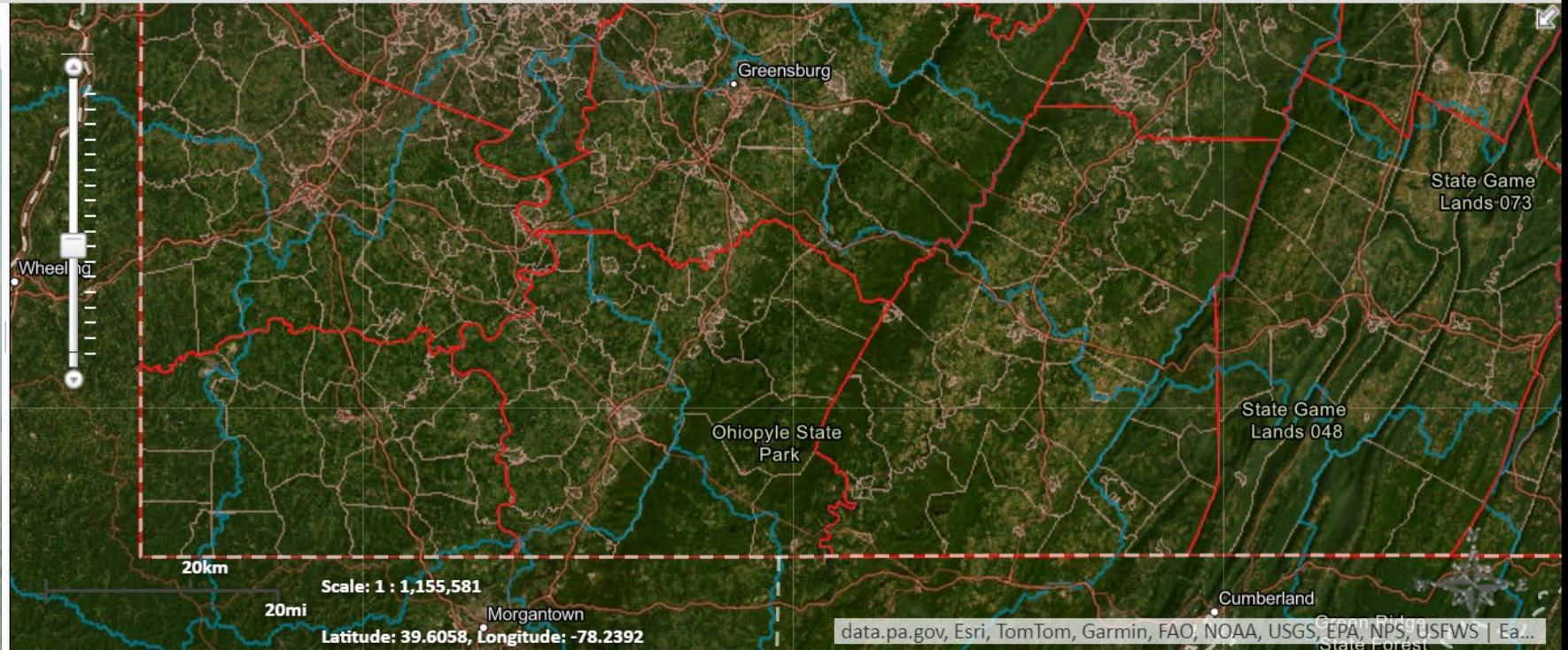
Pennsylvania Natural Heritage Program

[My account](#)[Shopping cart](#)[Log out](#)[Home](#)[Map](#)[My Projects](#)[My Projects \(Archived\)](#)[Terms & Conditions](#)[Contact Us](#)[Help](#)[Switch Basemap](#) [Add Resources](#) [Create Project](#) [Conservation Report](#)[Layers](#) [Make a Map](#) [Feature Search](#)

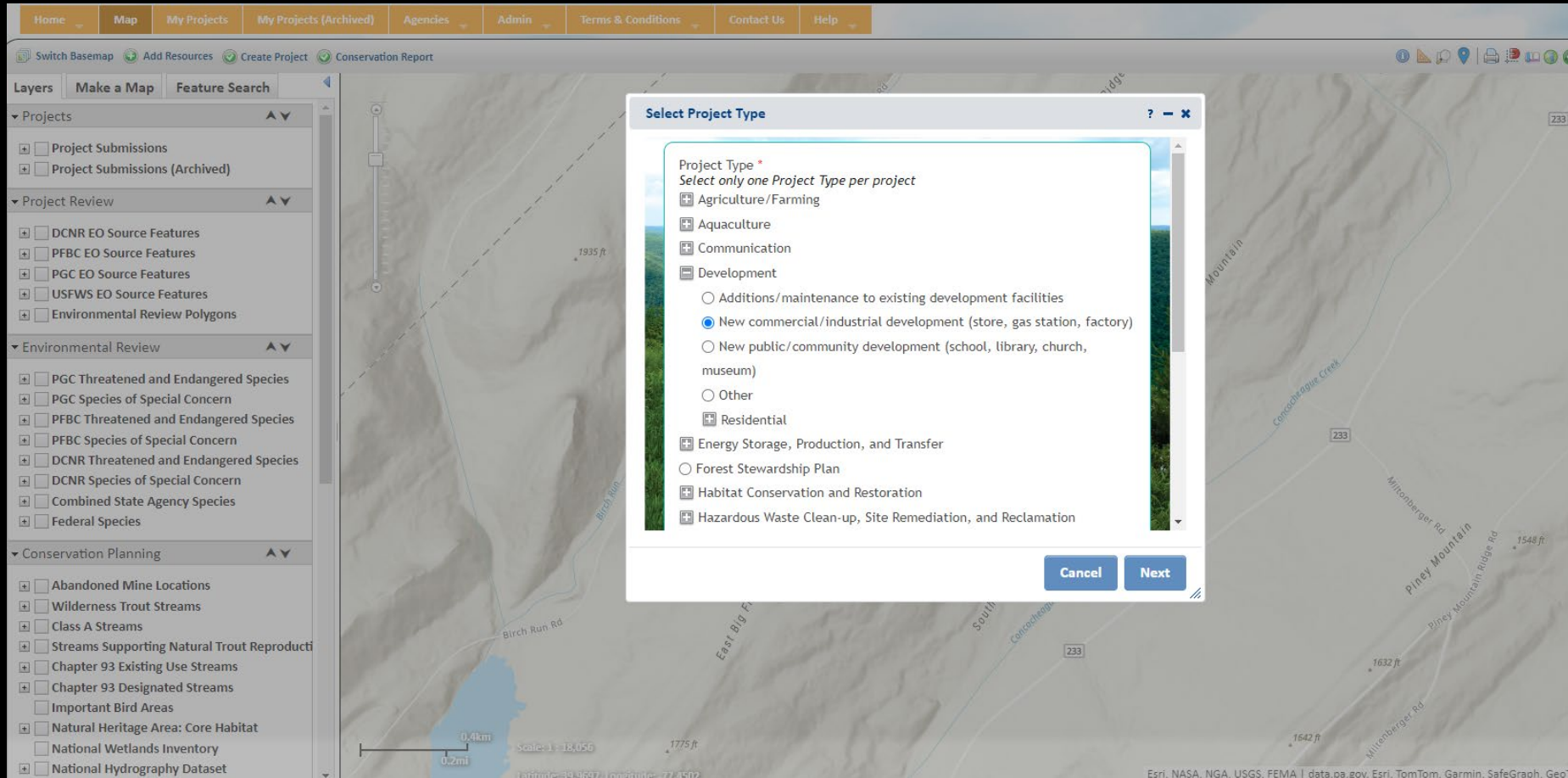
- ☐ Conservation Easements
- ☐ Farm Easements
- ☐ Federal Lands
- ☐ Local Parks

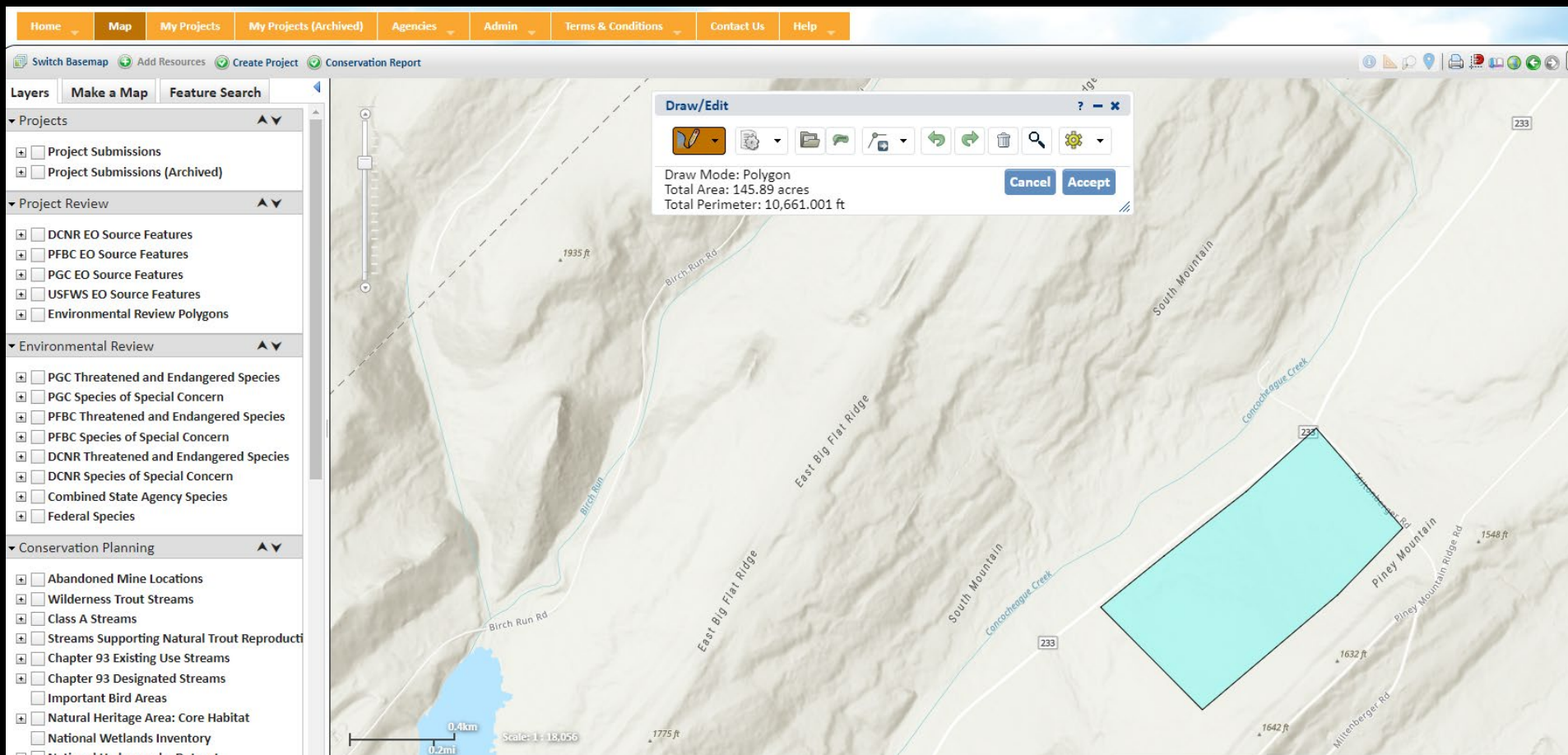
[Reference Layers](#)

- ☒ Counties
- ☒ Watershed Boundaries
- ☐ Parcels
- ☒ Municipalities
- ☐ Quads
- ☐ PEMA Imagery 2022
- ☐ PEMA Imagery 2021
- ☐ PEMA Imagery 2018 - 2020
- ☐ PAMAP Aerial Photography

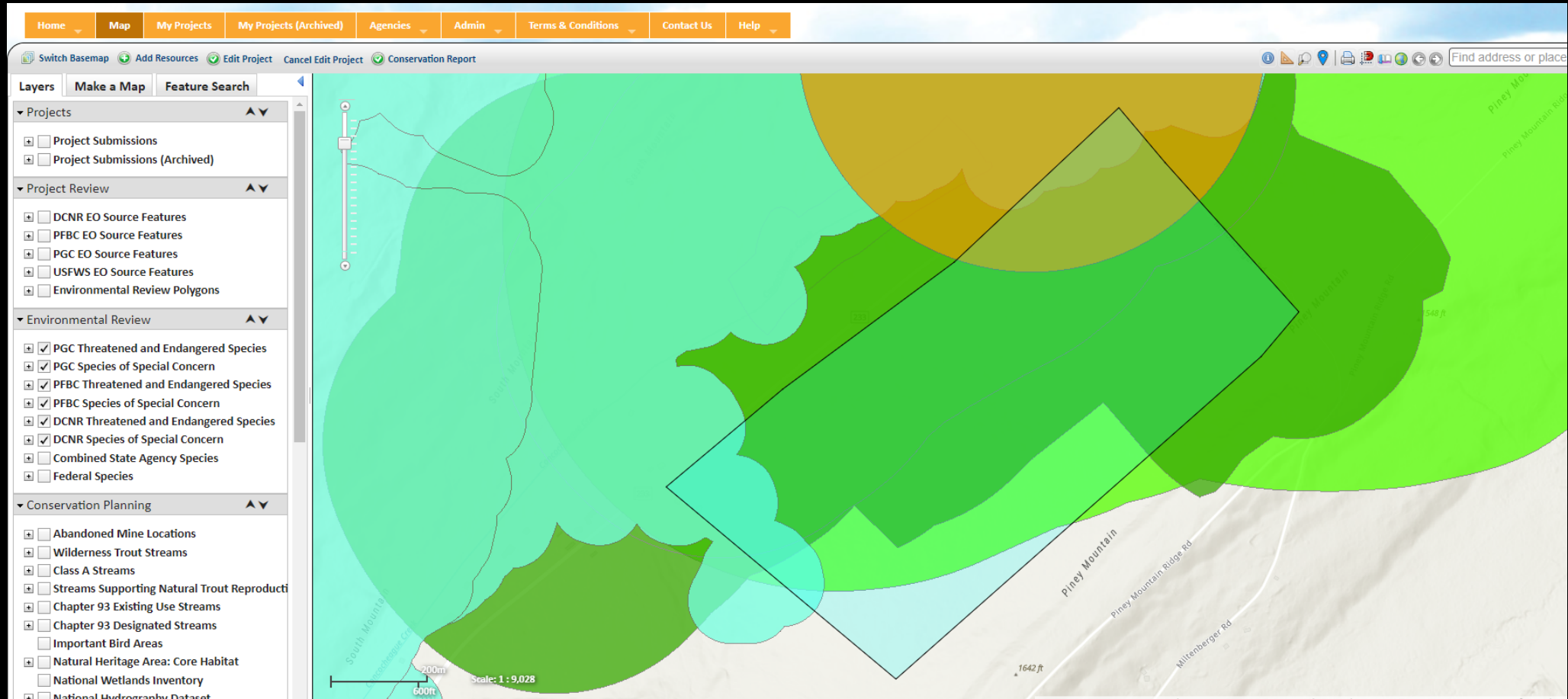
[Basemap](#)

Environmental Review: Screening for T&E Species Impacts





Turn on all agency layers.....Wow!



Create Project



Fields marked with asterisks are required fields.

Project Title *

Enter a descriptive and brief title for this project.

big warehouse

User Project Number(s)

Organization-specific project number(s) for user tracking purposes (optional)

XXXX

Project Description *

Enter a project description (required)

Large warehouse for a lot of stuff

Contact Name *

Greg Podniesinski

Organization *

DCNR, PA Natural Heritage Program

Email *

gpodniesin@pa.gov

Phone number *

717-214-7513

Address *

400 Market Street

Address line 2

City *

Harrisburg

State/Province *

Pennsylvania

ZIP Code *

17105

Fax number

Project Edit Status *

Select Final when your project is ready for Formal Departmental Review.

Draft

Submit for Pre-Analysis >>

Cancel

Preliminary analysis of your project indicates more information is required. Please respond and then Submit to generate your receipt.

Question 1: *

Accurately describe what is known about wetland presence in the project area or on the land parcel by selecting ONE of the following. "Project" includes all features of the project (including buildings, roads, utility lines, outfall and intake structures, wells, stormwater retention/detention basins, parking lots, driveways, lawns, etc.), as well as all associated impacts (e.g., temporary staging areas, work areas, temporary road crossings, areas subject to grading or clearing, etc.). Include all areas that will be permanently or temporarily affected -- either directly or indirectly -- by any type of disturbance (e.g., land clearing, grading, tree removal, flooding, etc.). Land parcel = the lot(s) on which some type of project(s) or activity(s) are proposed to occur.

- ☐ The entire project and associated discharge, plus a 300-foot buffer around the project area, all occur in or on an existing building, parking lot, driveway, road, road shoulder, street, runway, paved area, railroad bed, maintained lawn, or crop agriculture field.
- ☐ The project area (or land parcel) has not been investigated by someone qualified to identify and delineate wetlands (holding a natural resource degree or equivalent work experience) or it is currently unknown if the project or project activities will affect wetlands.
- ☒ Someone qualified to identify and delineate wetlands (holding a natural resource degree or equivalent work experience) has investigated the site, and determined that NO wetlands are located in or within 300 feet of the project area. (A written report from the wetland specialist, and detailed project maps should document this.)
- ☐ Someone qualified to identify and delineate wetlands (holding a natural resource degree or equivalent work experience) has investigated the site, and determined that wetlands ARE located in or within 300 feet of the project area. (A written report from the wetland specialist, and detailed project maps should document this.)
- ☐ The specific project area (that is, project layout or "footprint") has not yet been identified, but the land parcel on which the project will occur has been investigated by someone qualified to identify and delineate wetlands (holding a natural resource degree or equivalent work experience), and wetlands were located.
- ☐ The specific project area (that is, project layout or "footprint") has not yet been identified, but the land parcel on which the project will occur has been investigated by someone qualified to identify and delineate wetlands (holding a natural resource degree or equivalent work experience), and no wetlands were located. (A written report from the wetland specialist should substantiate this.)

PNDI Receipt

1. PROJECT INFORMATION

Project Name: **Big Warehouse**
Date of Review: **9/10/2024 05:19:50 PM**
Project Category: **Development, New commercial/industrial development (store, gas station, factory)**
Project Area: **180.40 acres**
County(s): **Adams**
Township/Municipality(s): **FRANKLIN TOWNSHIP**
ZIP Code:
Quadrangle Name(s): **CALEDONIA PARK**
Watersheds HUC 8: **Conococheague-Opequon**
Watersheds HUC 12: **Headwaters Conococheague Creek**
Decimal Degrees: **39.952015, -77.409268**
Degrees Minutes Seconds: **39° 57' 7.2554" N, 77° 24' 33.3651" W**

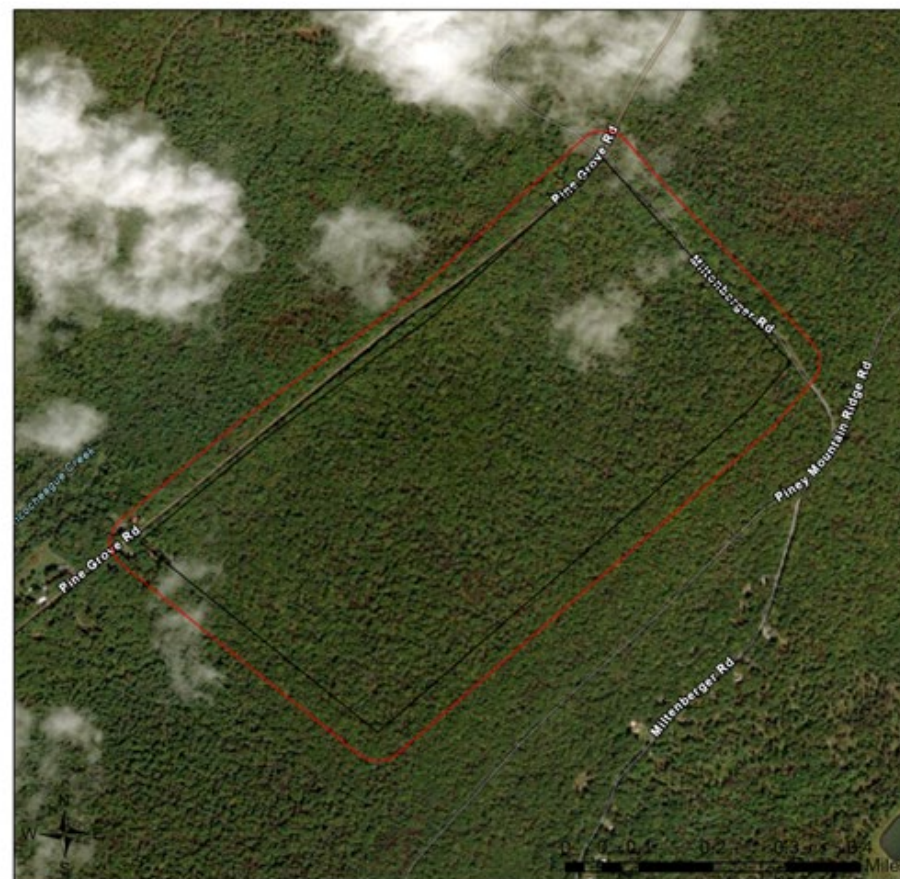
This is a draft receipt for information only. It has not been submitted to jurisdictional agencies for review.

2. SEARCH RESULTS

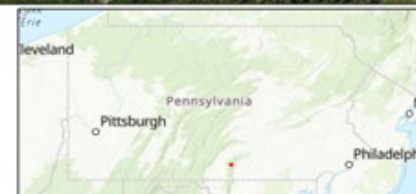
Agency	Results	Response
PA Game Commission	Potential Impact	FURTHER REVIEW IS REQUIRED, See Agency Response
PA Department of Conservation and Natural Resources	Potential Impact	FURTHER REVIEW IS REQUIRED, See Agency Response
PA Fish and Boat Commission	Conservation Measure	No Further Review Required, See Agency Comments
U.S. Fish and Wildlife Service	No Known Impact	No Further Review Required

As summarized above, Pennsylvania Natural Diversity Inventory (PNDI) records indicate there may be potential impacts to threatened and endangered and/or special concern species and resources within the project area. If the response above indicates "No Further Review Required" no additional communication with the respective agency is required. If the response is "Further Review Required" or "See Agency Response," refer to the appropriate agency comments below. Please see the DEP Information Section of this receipt if a PA Department of Environmental Protection Permit is required.

Big Warehouse



- Buffered Project Boundary
- Project Boundary



Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community

RESPONSE TO QUESTION(S) ASKED

Q1: Accurately describe what is known about wetland presence in the project area or on the land parcel by selecting ONE of the following. "Project" includes all features of the project (including buildings, roads, utility lines, outfall and intake structures, wells, stormwater retention/detention basins, parking lots, driveways, lawns, etc.), as well as all associated impacts (e.g., temporary staging areas, work areas, temporary road crossings, areas subject to grading or clearing, etc.). Include all areas that will be permanently or temporarily affected -- either directly or indirectly -- by any type of disturbance (e.g., land clearing, grading, tree removal, flooding, etc.). Land parcel = the lot(s) on which some type of project(s) or activity(s) are proposed to occur.

Your answer is: Someone qualified to identify and delineate wetlands (holding a natural resource degree or equivalent work experience) has investigated the site, and determined that NO wetlands are located in or within 300 feet of the project area. (A written report from the wetland specialist, and detailed project maps should document this.)

Q2: The proposed project is in the range of the Indiana bat. Describe how the project will affect bat habitat (forests, woodlots and trees) and indicate what measures will be taken in consideration of this. Round acreages up to the nearest acre (e.g., 0.2 acres = 1 acre).

Your answer is: The project will affect 1 to 39 acres of forests, woodlots and trees.

Q3: Is tree removal, tree cutting or forest clearing of 40 acres or more necessary to implement all aspects of this project?

Your answer is: No

3. AGENCY COMMENTS

Regardless of whether a DEP permit is necessary for this proposed project, any potential impacts to threatened and endangered species and/or special concern species and resources must be resolved with the appropriate jurisdictional agency. In some cases, a permit or authorization from the jurisdictional agency may be needed if adverse impacts to these species and habitats cannot be avoided.

These agency determinations and responses are **valid for two years** (from the date of the review), and are based on the project information that was provided, including the exact project location; the project type, description, and features; and any responses to questions that were generated during this search. If any of the following change: 1) project location, 2) project size or configuration, 3) project type, or 4) responses to the questions that were asked during the online review, the results of this review are not valid, and the review must be searched again via the PNDI Environmental Review Tool and resubmitted to the jurisdictional agencies. The PNDI tool is a primary screening tool, and a desktop review may reveal more or fewer impacts than what is listed on this PNDI receipt. The jurisdictional agencies **strongly advise against** conducting surveys for the species listed on the receipt prior to consultation with the agencies.

PA Game Commission

RESPONSE:

Further review of this project is necessary to resolve the potential impact(s). Please send project information to this agency for review (see WHAT TO SEND).

PGC Species: (Note: The Pennsylvania Conservation Explorer tool is a primary screening tool, and a desktop review may reveal more or fewer species than what is listed below.)

Scientific Name	Common Name	Current Status
Sensitive Species**		Threatened

PA Department of Conservation and Natural Resources

RESPONSE:

Further review of this project is necessary to resolve the potential impact(s). Please send project information to this agency for review (see WHAT TO SEND).

DCNR Species: (Note: The Pennsylvania Conservation Explorer tool is a primary screening tool, and a desktop review may reveal more or fewer species than what is listed below. After desktop review, if a botanical survey is required by DCNR, we recommend the DCNR Botanical Survey Protocols, available here:
<https://conservationexplorer.dcnr.pa.gov/content/survey-protocols>)

Scientific Name	Common Name	Current Status	Proposed Status	Survey Window
Sensitive Species**		Endangered	Endangered	Flowers late May - June
Eurybia radula	Rough-leaved Aster	Special Concern Species*	Threatened	Flowers July - September
Iris verna var. smalliana	Dwarf Iris	Endangered	Endangered	Flowers May
Neottia smallii	Kidney-leaved Twayblade	Endangered	Endangered	Flowers June - July
Sensitive Species**		Threatened	Threatened	Flowers July - August

PA Fish and Boat Commission RESPONSE:

Conservation Measure: Projects conducted in the occupied range of the timber rattlesnake (*Crotalus horridus*) have a high risk of encountering this species during construction.

- 1) Workers responsible for implementing this project should be advised that timber rattlesnakes may be encountered and that avoidance is the best means of minimizing risks to personal safety. It is suggested that safety protocols be implemented for timber rattlesnake encounters and workers should be advised that the timber rattlesnake is a state protected species and is not to be harmed. Killing of timber rattlesnakes is prohibited by the Commission pursuant to 58 Pa. Code Section 79.6.
- 2) We recommend that a timber rattlesnake habitat assessment be conducted in the project area by a qualified timber rattlesnake surveyor in order to assist project planners in avoiding disturbance of critical habitat. A list of qualified surveyors and habitat assessment protocol can be found here.
 - See <https://www.fishandboat.com/Conservation/Reptiles-Amphibians/Pages/Timber...> for a list of Qualified Timber Rattlesnake Surveyors
 - See <https://www.fishandboat.com/Conservation/Reptiles-Amphibians/Pages/Timber...> for the Timber Rattlesnake Habitat Protocol
- 3) If potential den (over-wintering) habitat is located during the habitat assessment, we recommend that the project be modified to avoid direct impacts to this irreplaceable habitat, or a Timber Rattlesnake Presence-Absence Survey of potential den (over-wintering) habitat be conducted in the habitats that are currently slated for direct disturbance to determine the presence or absence of rattlesnake hibernacula in the project area. Survey reports should be sent to PFBC for review and consultation. This information is necessary to allow PFBC to formulate recommendations to avoid adverse impacts to this species of special concern.
 - See <https://www.fishandboat.com/Conservation/Reptiles-Amphibians/Pages/Timber...> for the Timber Rattlesnake Presence-Absence Survey Protocol
- 4) If potential or occupied gestation habitat is located during the habitat assessment and cannot be avoided by the proposed development, we recommend that this habitat be replaced using our habitat creation guidelines.
 - See <https://www.fishandboat.com/Conservation/Reptiles-Amphibians/Pages/Timber...> for the PFBC Gestation Habitat Creation Guidelines
- 5) Tree clearing and timbering within potential timber rattlesnake critical habitats (135°-275° aspect, >10% slope) should be conducted from October 16 to April 14 in order to avoid encounters with timber rattlesnakes.
- 6) For the safety of workers and snakes, the Commission recommends that a PFBC permitted timber rattlesnake biologist who has the proper skills to handle this venomous species be on-site prior to and during construction, between April 15 and October 15, to inspect and clear the area (including staging areas and access roads) of timber rattlesnakes and to capture and remove any rattlesnakes that may interfere with work activities.
See <https://www.fishandboat.com/Conservation/Reptiles-Amphibians/Pages/Timber...> for the Monitoring Guidelines
- 7) If concerns arise during construction over high numbers of snake encounters or habitat alteration, please contact the PFBC at 814-359-5237 for consultation with our biologists.

PFBC Species: (Note: The Pennsylvania Conservation Explorer tool is a primary screening tool, and a desktop review may reveal more or fewer species than what is listed below.)

Scientific Name	Common Name	Current Status
Sensitive Species**		Special Concern Species*

U.S. Fish and Wildlife Service

RESPONSE:

No impacts to **federally** listed or proposed species are anticipated. Therefore, no further consultation/coordination under the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq. is required. Because no take of federally listed species is anticipated, none is authorized. This response does not reflect potential Fish and Wildlife Service concerns under the Fish and Wildlife Coordination Act or other authorities.

* Special Concern Species or Resource - Plant or animal species classified as rare, tentatively undetermined or candidate as well as other taxa of conservation concern, significant natural communities, special concern populations (plants or animals) and unique geologic features.

** Sensitive Species - Species identified by the jurisdictional agency as collectible, having economic value, or being susceptible to decline as a result of visitation.

WHAT TO SEND TO JURISDICTIONAL AGENCIES

If project information was requested by one or more of the agencies above, upload* or email the following information to the agency(s) (see AGENCY CONTACT INFORMATION). Instructions for uploading project materials can be found [here](#). This option provides the applicant with the convenience of sending project materials to a single location accessible to all three state agencies (but not USFWS).

*If information was requested by USFWS, applicants must email, or mail, project information to IR1_ESPenn@fws.gov to initiate a review. USFWS will not accept uploaded project materials.

Check-list of Minimum Materials to be submitted:

___Project narrative with a description of the overall project, the work to be performed, current physical characteristics of the site and acreage to be impacted.

___A map with the project boundary and/or a basic site plan(particularly showing the relationship of the project to the physical features such as wetlands, streams, ponds, rock outcrops, etc.)

In addition to the materials listed above, USFWS REQUIRES the following

___**SIGNED** copy of a Final Project Environmental Review Receipt

The inclusion of the following information may expedite the review process.

___Color photos keyed to the basic site plan (i.e. showing on the site plan where and in what direction each photo was taken and the date of the photos)

___Information about the presence and location of wetlands in the project area, and how this was determined (e.g., by a qualified wetlands biologist), if wetlands are present in the project area, provide project plans showing the location of all project features, as well as wetlands and streams.

Conservation Planning Reports

- No registration required, no charge
- Provides summary of NHAs and other natural resource layers



Green Salamander



Pennsylvania Conservation Explorer

Pennsylvania Natural Heritage Program

[My account](#)[Shopping cart](#)[Log out](#)[Home](#)[Map](#)[My Projects](#)[My Projects \(Archived\)](#)[Terms & Conditions](#)[Contact Us](#)[Help](#)[Switch Basemap](#) [Add Resources](#) [Create Project](#) [Conservation Report](#)[Layers](#) [Make a Map](#) [Feature Search](#)

Protected Lands

- ☐ State Wild and Natural Areas (DCNR)
- ☒ State Forests
- ☐ State Parks
- ☐ PGC Managed Lands
- ☐ Private Lands
- ☐ PFBC Lands
- ☐ Conservation Easements
- ☐ Farm Easements
- ☐ Federal Lands
- ☐ Local Parks

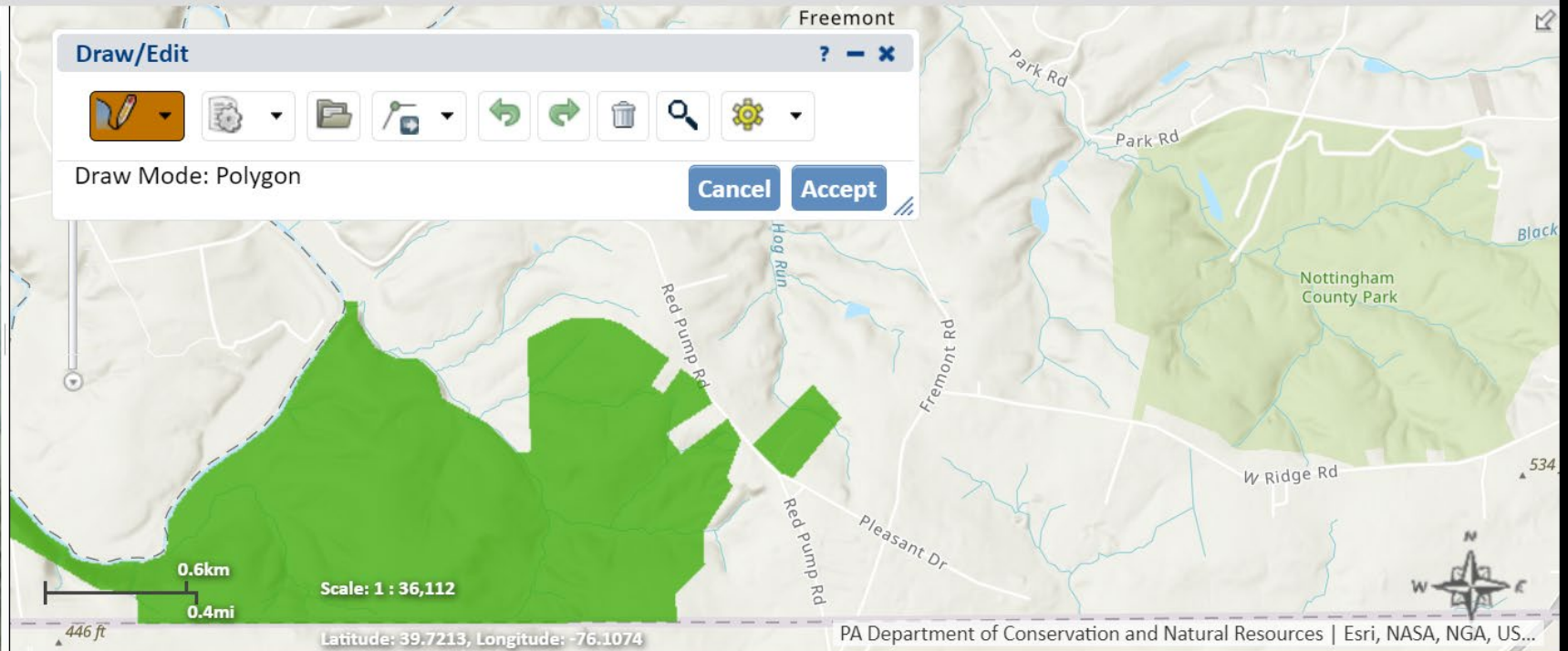
Reference Layers

- ☐ Counties
- ☐ Watershed Boundaries

Draw/Edit



Draw Mode: Polygon

[Cancel](#)[Accept](#)

PA Department of Conservation and Natural Resources | Esri, NASA, NGA, US...



Pennsylvania Conservation Explorer

Pennsylvania Natural Heritage Program

[My account](#) [Shopping cart](#) [Log out](#)

[Home](#) [Map](#) [My Projects](#) [My Projects \(Archived\)](#) [Terms & Conditions](#) [Contact Us](#) [Help](#)

Draw/Edit



Draw Mode: Polygon
Total Area: 434.791 acres
Total Perimeter: 21,111.866 ft

Cancel

Accept

Layers Make a Map

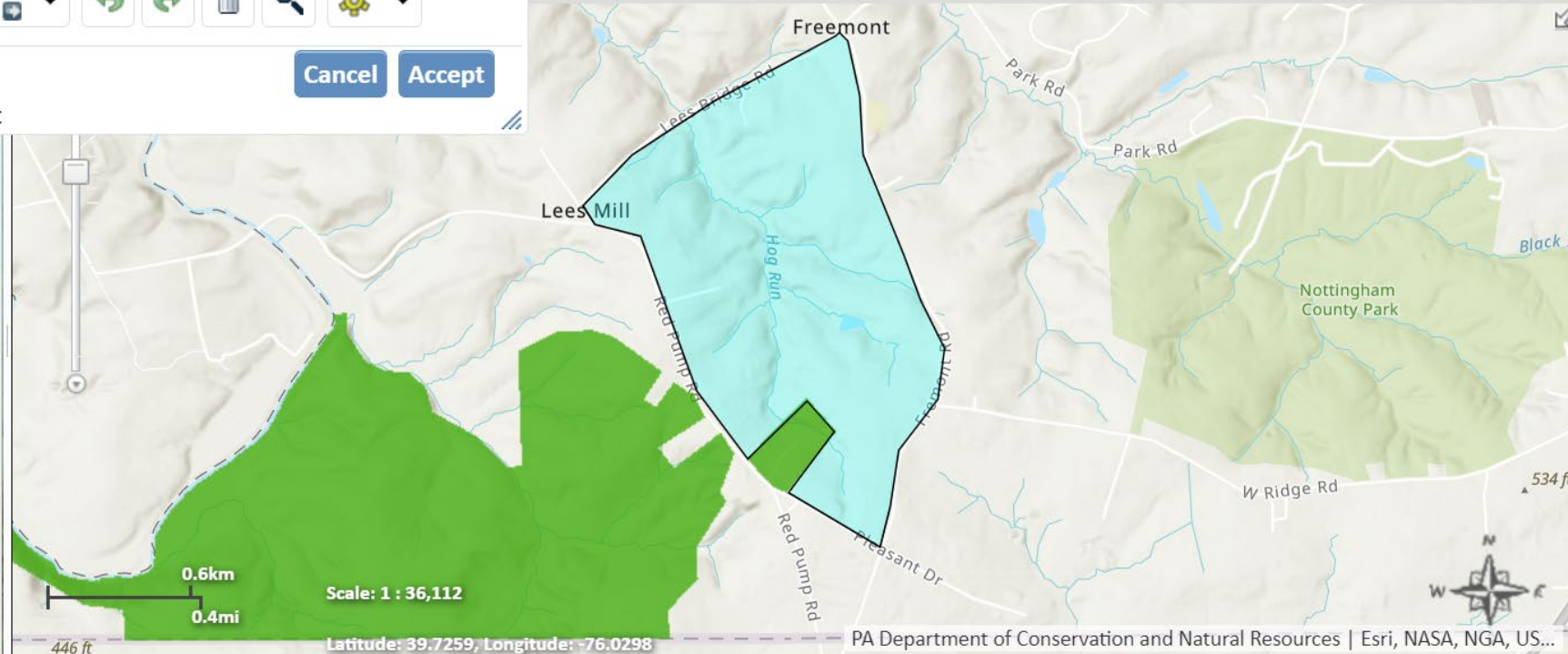
Protected Lands

- ☐ State Wild and Natural Areas (DCNR)
- ☒ State Forests
- ☐ State Parks
- ☐ PGC Managed Lands
- ☐ Private Lands
- ☐ PFBC Lands
- ☐ Conservation Easements
- ☐ Farm Easements
- ☐ Federal Lands
- ☐ Local Parks

Reference Layers

- ☐ Counties
- ☐ Watershed Boundaries

Find address or place



PA Department of Conservation and Natural Resources | Esri, NASA, NGA, US...



Pennsylvania Conservation Explorer

Pennsylvania Natural Heritage Program

[My account](#) [Shopping cart](#) [Log out](#)

[Home](#) [Map](#) [My Projects](#) [My Projects \(Archived\)](#) [Terms & Conditions](#) [Contact Us](#) [Help](#)

[Switch Basemap](#) [Add Resources](#) [Create Project](#) [Conservation Report](#)

[Layers](#) [Make a Map](#) [Feature Search](#)

Protected Lands

- ☐ State Wild and Natural Areas (DCNR)
- ☒ State Forests
- ☐ State Parks
 - ☐ PGC Managed Lands
 - ☐ Private Lands
 - ☐ PFBC Lands
 - ☐ Conservation Easements
 - ☐ Farm Easements
 - ☐ Federal Lands
- ☐ Local Parks

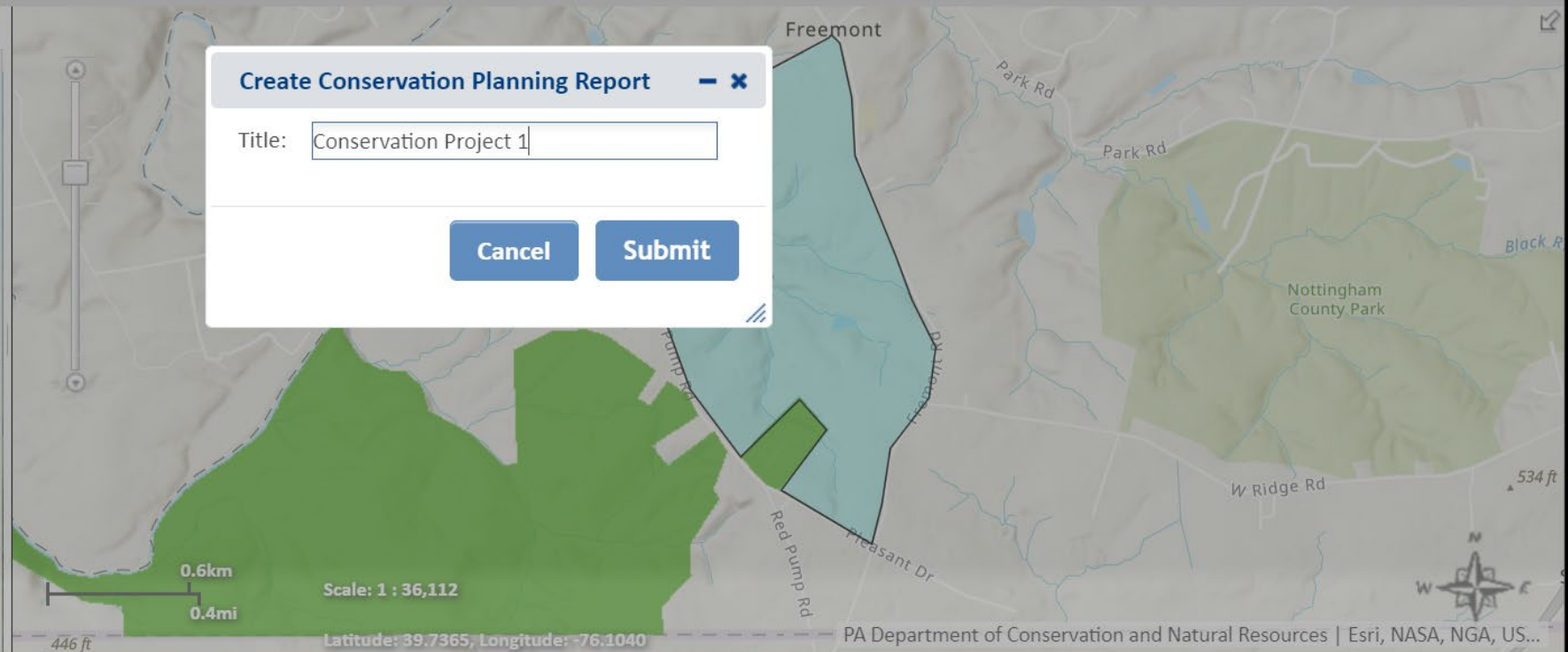
Reference Layers

- ☐ Counties
- ☐ Watershed Boundaries

Create Conservation Planning Report

Title:

[Cancel](#) [Submit](#)



Introduction

This Conservation Planning Report compiles names, descriptions, maps, locations, measurements, links and references for Natural Heritage Areas (core and supporting habitats), Important Bird Areas, State Lands, and agency designated water resources that are coincident with an area of interest defined by the user of the Pennsylvania Conservation Explorer tool. For an overview and additional details, please be sure to visit the website at www.naturalheritage.state.pa.us and download the applicable County Natural Heritage Inventory report(s).

Site Area: 434.79 acres

County(s): Chester

Township/Municipality(s): WEST NOTTINGHAM

Quadrangle Name(s): RISING SUN

Watersheds HUC 8: Lower Susquehanna

Watersheds HUC 12: Basin Run-Octoraro Creek; Tweed Creek-Octoraro Creek

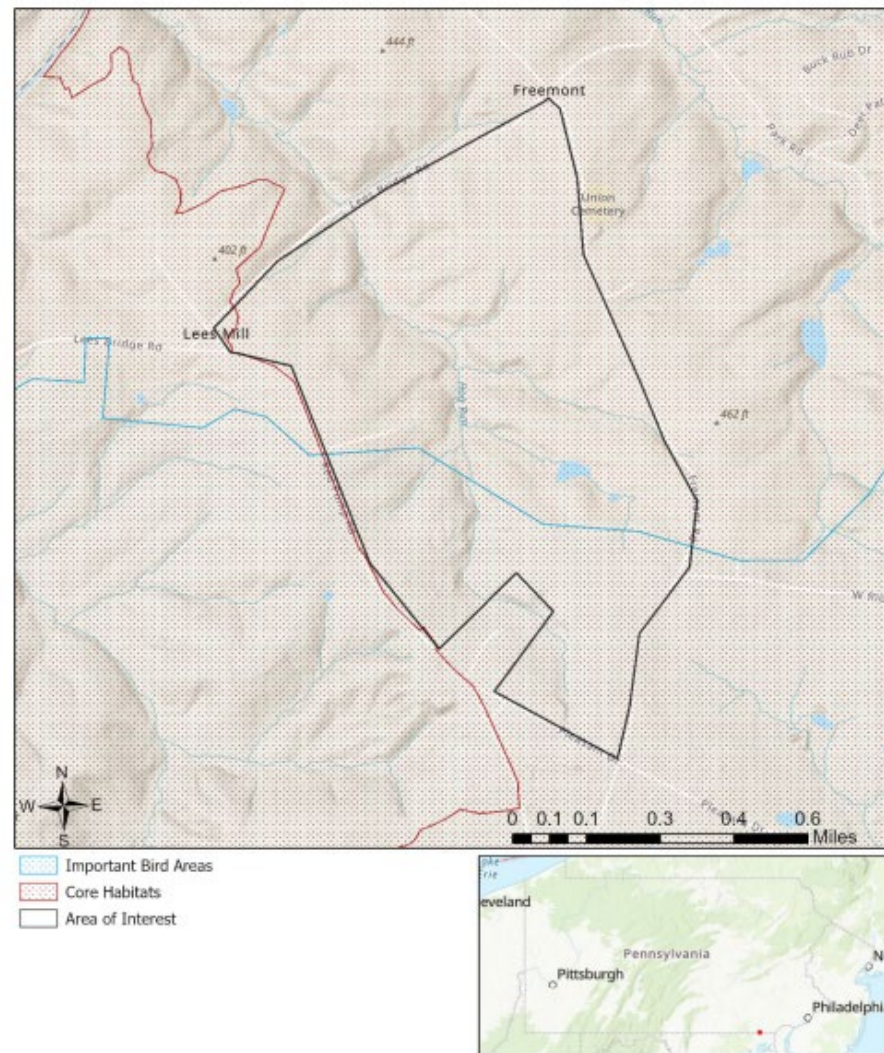
Decimal Degrees: 39.735589 N, -76.069412 W

Degrees Minutes Seconds: 39° 44' 8.1195" N, 76° 4' 9.8835" W

SEARCH RESULT SUMMARY

Conservation Planning Category	Detected Area Summary
Natural Heritage Areas	2 sites
Protected Lands	3 tracts; 45.30 acres
Important Bird Areas	1 area

Conservation Project 1



Natural Heritage Areas

Natural Heritage Areas (NHAs) are sites that have been identified as critical habitat for species or natural communities of concern. This dataset is designed to identify, map and discuss areas that support species of concern, exemplary natural communities, and broad expanses of intact natural ecosystems that support components of Pennsylvania's native species biodiversity. These areas are prioritized based upon their ecological qualities and provided with recommendations regarding their management and protection. Most of the existing NHAs have been developed through PNHIPs County Natural Heritage Inventories -- systematic studies of the critical biological resources of a county.

Natural Heritage Site Name	Description	Reference
Goat Hill Serpentine Barrens	This diverse site contains a globally rare Serpentine Pitch Pine-Oak Forest community and supports populations of more than 65 species of concern - including many moths and butterflies, numerous plants, and some vertebrates.	Link
Nottingham Serpentine Barrens	This diverse site contains globally rare Serpentine Grassland and Serpentine Pitch Pine-Oak Forest communities and supports populations of more than 70 species of concern - including many moths and butterflies, numerous plants, and some vertebrates.	Link

State Lands

These include lands managed by the Department of Natural Resources (DCNR) Bureau of Forestry (BOF) for long-term forest health and native plant conservation; Pennsylvania Game Commission (PGC) for hunting, trapping and fishing; and DCNR Bureau of State Parks (BSP) for healthful outdoor recreation and environmental education.

Name	Wild Area Type	Wild Area Name	Manager	Total Acres
William Penn State Forest	None	NA	BOF	18.97

Protected Lands

Protected lands or conservation areas are locations which receive protection, through legal or other means, because of their recognized natural, ecological and/or cultural values.

Name	Description	Owner	Website	Total Acres
Chester County Agricultural Easement #410	Open Space - Farm	Chester County	Link	0.00
Chester County Agricultural Easement #552	Open Space - Farm	Chester County	Link	0.00

Important Bird Areas (IBAs)

These are areas recognized as being globally important habitat for the conservation of bird populations. Currently there are about 10,000 IBAs worldwide. The program was developed and sites are identified by BirdLife International.

IBA Site Number	Name	Reference
59	State Line Barrens	Link

For additional information about the Pennsylvania Natural Heritage Program, visit the website at www.naturalheritage.state.pa.us or you can email your questions and comments to RA-HeritageReview@pa.gov.

Questions?

