

PENNSYLVANIA SPATIAL DATA ACCESS **PASDA ANNUAL REPORT** 2024–2025



Overview of PASDA

Pennsylvania Spatial Data Access (PASDA—www.pasda.psu.edu), the official public geospatial data clearinghouse for the Commonwealth of Pennsylvania marked its 30th year in 2025. PASDA, which has grown from a small website offering 35 data sets in 1995 to the expansive user-centered open data portal that it is today, has become a staple of the GIS community in Pennsylvania.

PASDA is a cooperative project of the Governor's Office of Administration, Office for Information Technology, and Penn State Institutes of Energy and the Environment of the Pennsylvania State University. Funding and support is provided by the Pennsylvania Office for Information Technology. Penn State provides significant contributions to PASDA including system administration support and infrastructure from the Institute for Computational and Data Sciences (ICDS) and the College of Earth and Mineral Sciences.

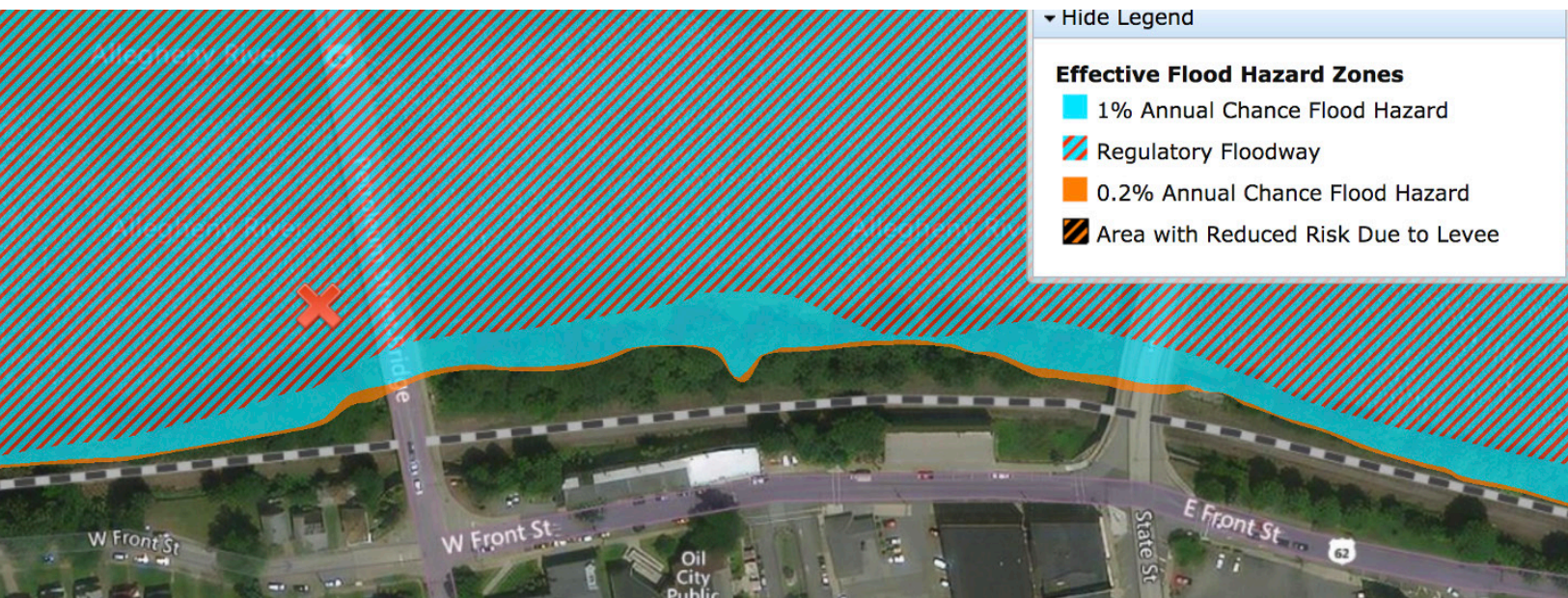
PASDA was developed as a service to the citizens of the Commonwealth of Pennsylvania. The purpose of PASDA is to serve as the Commonwealth's comprehensive and coordinated open geospatial data portal that

provides free public access to geospatial data and information by, for, and about the Commonwealth of Pennsylvania.

PASDA provides access to credible and authoritative source data. Maintaining PASDA as a coordinated and comprehensive open data portal eliminates the creation of data silos that can frustrate and complicate public access to data.

One of the primary purposes of PASDA is to facilitate data sharing in a streamlined environment, making the process fast and easy for data sharing stakeholders. Any state, local, or federal government, non-governmental agency, or academic institution can freely share its geospatial data through PASDA.

Data on PASDA is indexed by search engines such as Google to ensure wide dissemination and broad impact. In addition, the metadata may be harvested via a web accessible folder (WAF) for integration into other search engines/repositories. PASDA is currently integrated with the US data repository Data.gov, esri's AGOL, and the Big 10 Alliance Geoportal. PASDA staff collaborate with individuals and organizations at the national level to ensure that it meets standards for metadata and data delivery.



PASDA creates an archival copy of all data which is stored in long term archival storage via ICDS that will ensure that access to the data in perpetuity.

Users come from a broad spectrum of organizations and backgrounds, from teachers and citizens to businesses and government agencies.

PASDA provides free access to data, applications, and customization tools to meet the needs of every user.

The PASDA staff include:

- Maurie Kelly, Director
- Ryan Baxter, Information Technology Coordinator
- James Spayd, Data Scientist
- Bernd Haupt, Data Scientist

PASDA Services

PASDA provides a number of key services to the Commonwealth. PASDA services and support includes:

- Data Storage
- Data Management
- Metadata Development
- Metadata Training
- Data Search and Retrieval
- Data Download (in multiple formats)
- Map Services/APIs/KMLs/Rest Services
- Data Preservation and Archiving
- Online Mapping Apps
- Data Previewer
- PA Imagery Navigator
- PA Atlas
- PA Mine Map Atlas

The Keystones of PASDA

- The success of PASDA is based on a long-term vision that incorporates the ideas of free access to data, outreach, and community service. The keystones in the success of the program are:
- Collaboration—PASDA understands that collaboration among the geospatial community benefits everyone in the Commonwealth. Collaboration saves money, time, and makes the most of the limited resources of data providers.
- Cooperation—PASDA cooperates with all levels of government, non-profits, academia, business, and citizens to support the geospatial data infrastructure and access to data.
- Innovation—PASDA continues to be the leader in geospatial data portal operations and services.
- Continuity—PASDA works with data providers to ensure continuity of data access and storage.
- Active Engagement—PASDA engages the geospatial community to foster understanding and data sharing.
- Efficiency—PASDA's streamlined processes make data sharing fast and easy for our partners.
- Free Access—PASDA provides data storage, data access and retrieval, and metadata services free of charge.

Principles

- PASDA will continue to provide free storage of geospatial data, as well as build partnerships that enhance ease of access and benefit the data provider, and to develop data access resources and innovative tools to enhance the use and benefits of geospatial data for all citizens of the Commonwealth and geospatial community.
- The data made available through PASDA is provided by our data partners to encourage the widespread sharing of geospatial data, eliminate the creation of redundant data sets, and to further build an inventory (through the development and hosting of metadata) of available data relevant to the Commonwealth.
- PASDA serves as a resource for locating data throughout the Commonwealth through its data storage, interactive mapping applications, and metadata/documentation efforts.

- PA Lidar Navigator
- PennPilot
- PA Flood Risk Assessment Tool
- User Support
- Offline Data Access
- Integration with Additional Resources

PASDA FY 2024/2025 Activities

Imagery

In FY 2024/2025 PASDA received the following PEMA Imagery counties: Armstrong, Cameron, Venango, Mifflin, Fulton, McKean, Clarion, Jefferson, Elk, Butler, Indiana, Fayette, Clearfield, Huntingdon, Juniata, Snyder, Somerset, Union, Blair, Centre, Bradford, Tioga, Westmoreland, Bedford, Sullivan, Clinton, Potter, and Lycoming counties.

In addition, some data had to be corrected/resent due to issues. These include:

Clarion, Mercer, Butler, Geotiffs for Bradford counties.

Resent metric data for: Bedford, Bradford, Clarion, Fayette, Huntingdon, Juniata, Snyder, Tioga, Union

PASDA also received 2024 imagery from Philadelphia

Lidar Data

PASDA received Philadelphia 2024 lidar

PASDA received Lidar derived data from a project of Penn State and PA DEP:

- Pennsylvania 3m lidar digital elevation models
- Pennsylvania 3m lidar slope maps
- Pennsylvania 3m lidar flow accumulation
- Pennsylvania 3m lidar geomorphon landforms
- Pennsylvania Stream Polygons
- Pennsylvania Stream Valley Intersections
- Pennsylvania Valley Segment Statistics
- Pennsylvania Valley Bottom Polygons

Other Data Highlights:

Return on Environment data package for Berks County from Kittatinny Ridge Conservation Association (includes riparian areas, natural systems, etc.). Lebanon and Monroe County data posted as well.

PA Northeast Susquehanna 3DHP

Archiving Federal Data:

- HD Hydrography - Major Watersheds (HUC 8)
- NHD Hydrography - Watersheds (HUC 10)
- NHD Hydrography - Sub Watersheds (HUC 12)
- National Forests
- National Parks
- National Wild and Scenic Rivers
- Imagery data for the Vegetation Mapping Inventory Project of Appalachian National Scenic Trail
- MRLC

PA Geospatial Coordinating Board

PASDA continued to be an active member of the PA GeoBoard in 2024/2025. PASDA



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PASDA Stats

In the past year, almost **3.5 million** files were downloaded from the PASDA site; while usage on the entire site was almost **556 million** hits from almost **10 million** visitors. The PASDA Internet Map Services and applications were accessed almost **265 million** times. The Pennsylvania Imagery Navigator, an application used for viewing and downloading aerial photography, topographic data, DEMs, and LIDAR was accessed **11.6 million** times in FY 2024/2025. The Pennsylvania Mine Map Atlas service which is an application that provides users with both viewing and downloading capabilities for over 100,000 underground mine maps was accessed almost **6 million** times. PennPilot saw almost **16 million views**.

The statistics this year show an increasing use of data and map services and a dramatic increase in the use of long-time data providers. **The state-wide imagery cached serviced was hit over 62 million times.** The DEP map services **almost 10 million** views, PennDOT map services over **73 million views**, the PA Game Commission received **almost 5.7 million** hits and the PA Fish and Boat Commission with **over 7.5 million views**.

staff served as members of all of the task forces and several of the working groups and subcommittees including: Governance Task Force, Data Task Force, Services Delivery Task Force, and Elevation Working Group.

PASDA staff continued to support and update the PA Parcel Mapping service. PASDA staff also and worked with the Services Task Force to encourage sharing among state and county entities.

PASDA director, Maurie Kelly worked with Steve Kocsis (Cambria County), and Eric Jerspersen (PA GeoBoard Executive Director) to develop the 3D PA Special Report which explore how Basemap 2030 and 3D PA can expand our data development and access. This report was published on the PA GeoBoard site.

PASDA, as part of the Services Delivery Task Force, two seminars including the December 6th 2024 seminar "Return on Environment" that featured a presentation on the Kittatinny Ridge/PA DCNR/PA Audubon/Greener Planning program to develop return on environment analyses for counties within the ridge region. Tom West of Greener planning was the presenter. The second seminar was held on January 10th 2025 and featured two presenters: . "A Future Powered by AI" presentation from Kristen Kurland of Carnegie Mellon and Kat Kraft from Teren4D Inc.

PASDA also co-organized the recent webinar "Innovation in GNSS Receiver Technology for Field Data Collection" on May 5th 2025. Recordings of these events are available on PASDA.

3D PA

In relation to the PA Basemap/3D PA effort described above, PASDA has been exploring serving out 3D data and various scenarios related to hosting the data. PASDA received 3D data from Cambria County and has been working with Skyline to install and deploy the data publicly.

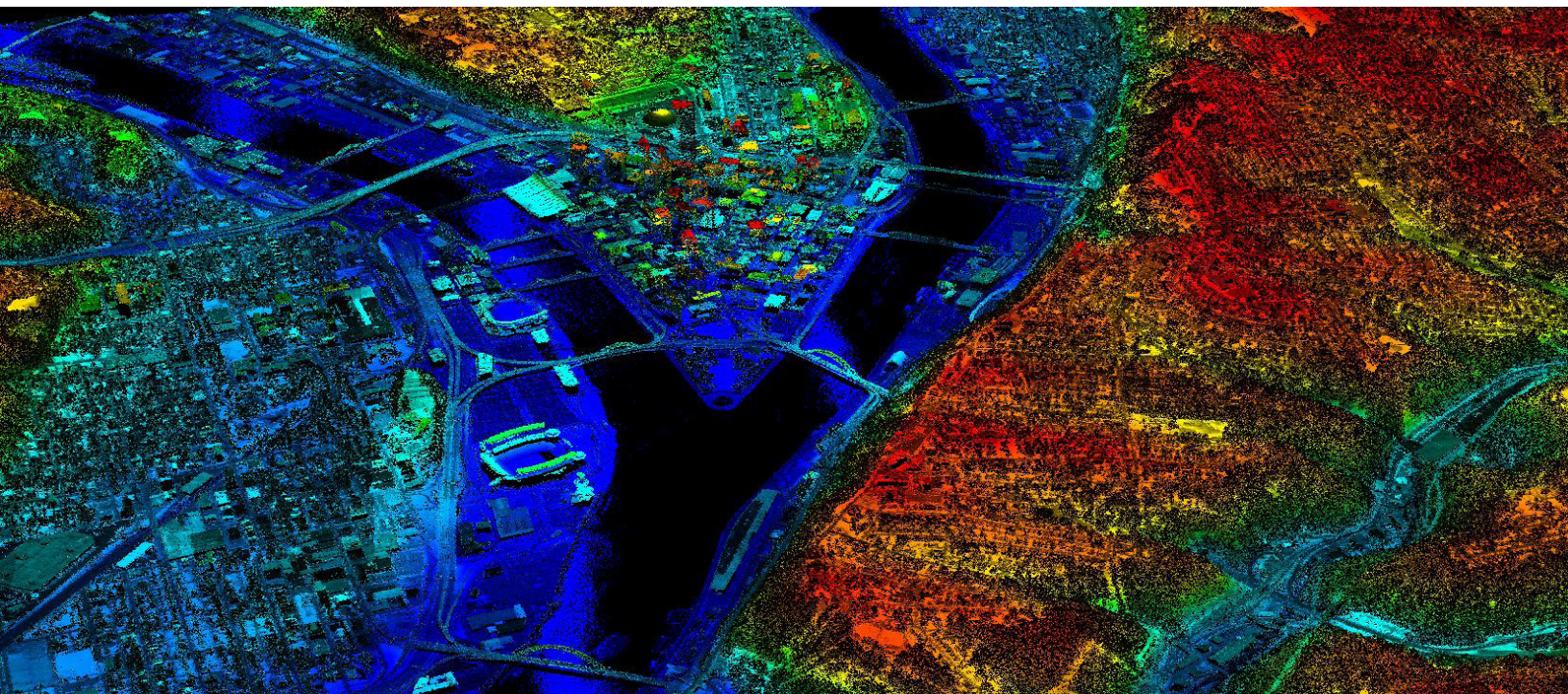
In relation to this effort, Cambria County and Center for Immersive Experiences (CIE) to created a 3D visualization for GIS Day and the PA GIS Conference.

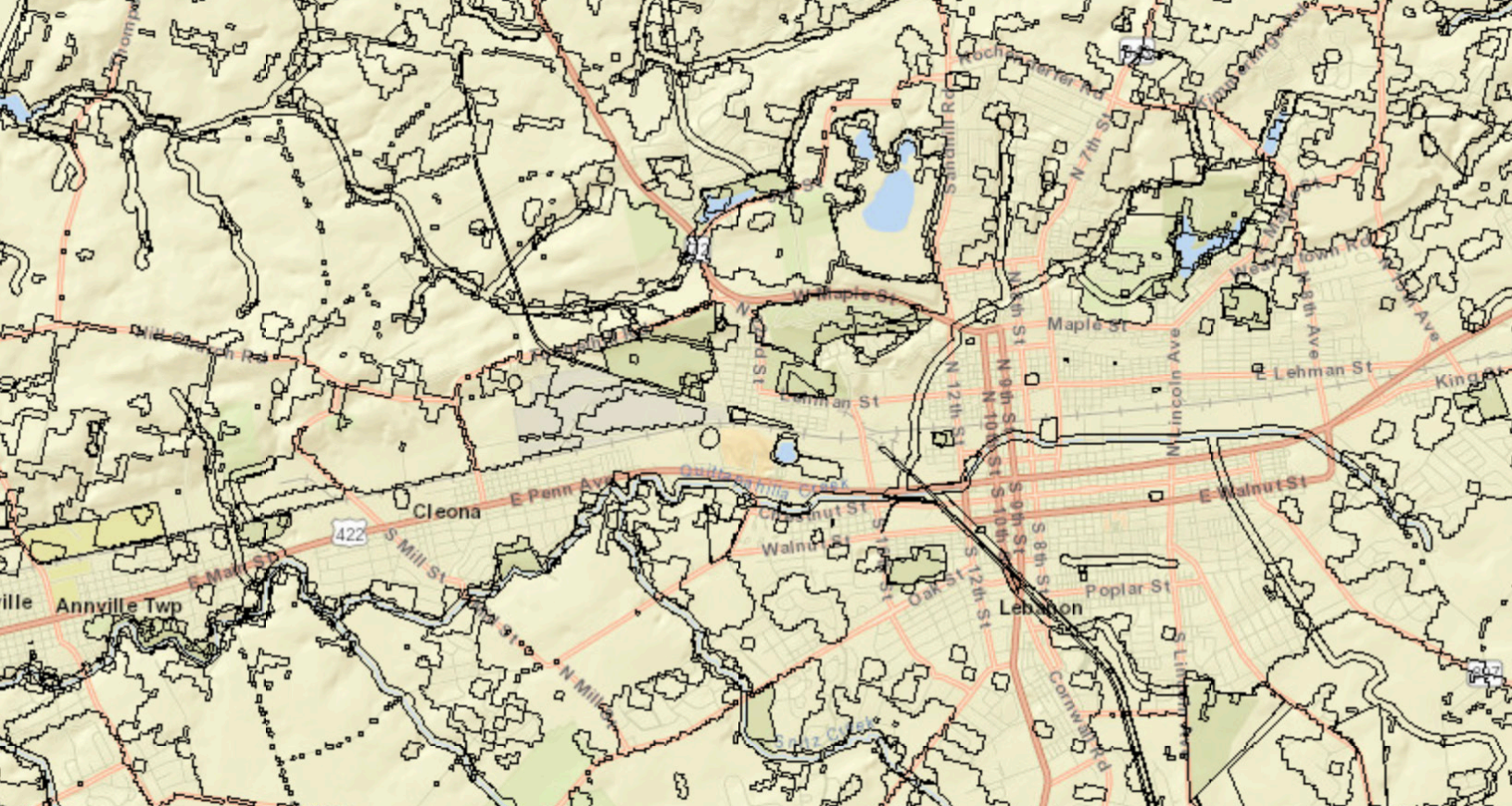
Dec. 2024 – “Return on Environment” with Kittatinny Ridge B. Jan. 2025 – “A Future Powered by AI” presentation from Kristen Kurland of Carnegie Mellon and Kat Kraft from Teren4D Inc.

Co-organized the recent webinar “Innovation in GNSS Receiver Technology for Field Data Collection” on 5/2/2025 - recording available via PASDA.

Outreach & Meetings

- Weekly Geospatial Services status meetings
- Weekly PASDA staff meetings
- Monthly meetings with system administration staff including ICDS and EMS computing
- Member, PA GIS Day Committee
- Member, PA GIS Conference Committee
- Member, PA View Executive Committee
- Exhibited at PA GIS Day
- Presented and exhibited at NW PA GIS Conference
- Moderated a session for PA GIS Conference
- Exhibited at PA GIS Conference
- Presented at PA Flood Plain Managers Annual Conference
- Presented at PA KEMA Conference
- Participated in PA Geospatial Coordinating Board meetings
- Participated in GeoBoard Governance Task Force
- Participated in GeoBoard Services Delivery Task Force
- Participated in GeoBoard Elevation Working Group Meetings
- Participated in GeoBoard Parcel Working Group Meeting





- Participated in GeoBoard joint task force meetings
- Participated in PEMA State Hazard Mitigation Plan Update Meetings
- Meetings with Susquehanna River Basin Commission
- Quarterly Silver Jackets Meetings
- Interviewed for The Spark podcast - discussed Penn Pilot and the history of aerial photography through the years.
- Brought in exhibitors, speakers, attendees to PA GIS Day 2024 including: US Fish and Wildlife Service, Central PA Food Bank, UPenn Hospital, SRBC, Danville Areas School District
- Reached out to City of Philadelphia Police Dept about being speaker at GIS Day 2025
- Reached out to Jennifer Haney of Bloomsburg University about being speaker at GIS Day 2025
- Meeting with PA WSC working on an approach for a county/municipality-level flood warning system that may have a geospatial flood inundation component to it
- The Spark—Penn Pilot and historic Imagery

- Meeting Kristin Warner and Greg Dunmire PennDOT
- Provided Civil Air Patrol images to PA Elevation working group from contacts at PAWG
- PEMA Blackout meeting

Architecture/System Updates

- Penn State Institute for Energy and the Environment purchased a PowerEdge R660xs to support map services.
- Skyline software installed in test environment
- Updated Data.gov instance

Data Providers

State Agencies

- PA DEP
- PA State Police
- PA Fish and Boat Commission
- PA Game Commission
- PA DEP Bureau of Mining/Mine Maps

- PennDOT
- PA Geologic Survey
- PA DCNR
- PA Department of Health
- PA DMVA
- PEMA

- Union County
- Snyder County
- Mercer County
- Huntingdon County
- Montgomery County
- Cambria County

Counties & Regional Governments

- Allegheny county
- Erie County
- Butler County
- Adams County
- Franklin County
- Dauphin County
- Lancaster County
- Chester County
- Cumberland County
- Fulton County
- Crawford County
- Wyoming County
- Luzerne County
- Perry County
- Somerset County
- Carbon County
- Lycoming County
- Bucks County
- Bradford County
- Delaware Valley Regional Planning Commission
- SEPTA
- York County
- Washington County
- Mifflin County
- Centre County
- Blair County
- Philadelphia
- Bedford County

NGOs, Academic

- Eastern PA Coalition for Abandoned Mine Reclamation
- WeConserve PA
- PA Sea Grant
- Penn State University OPP
- Natural Lands Trust
- Kittatinny Ridge Association
- PA Audubon

Federal Agencies

- USGS
- USFWS PA
- USDA
- FEMA

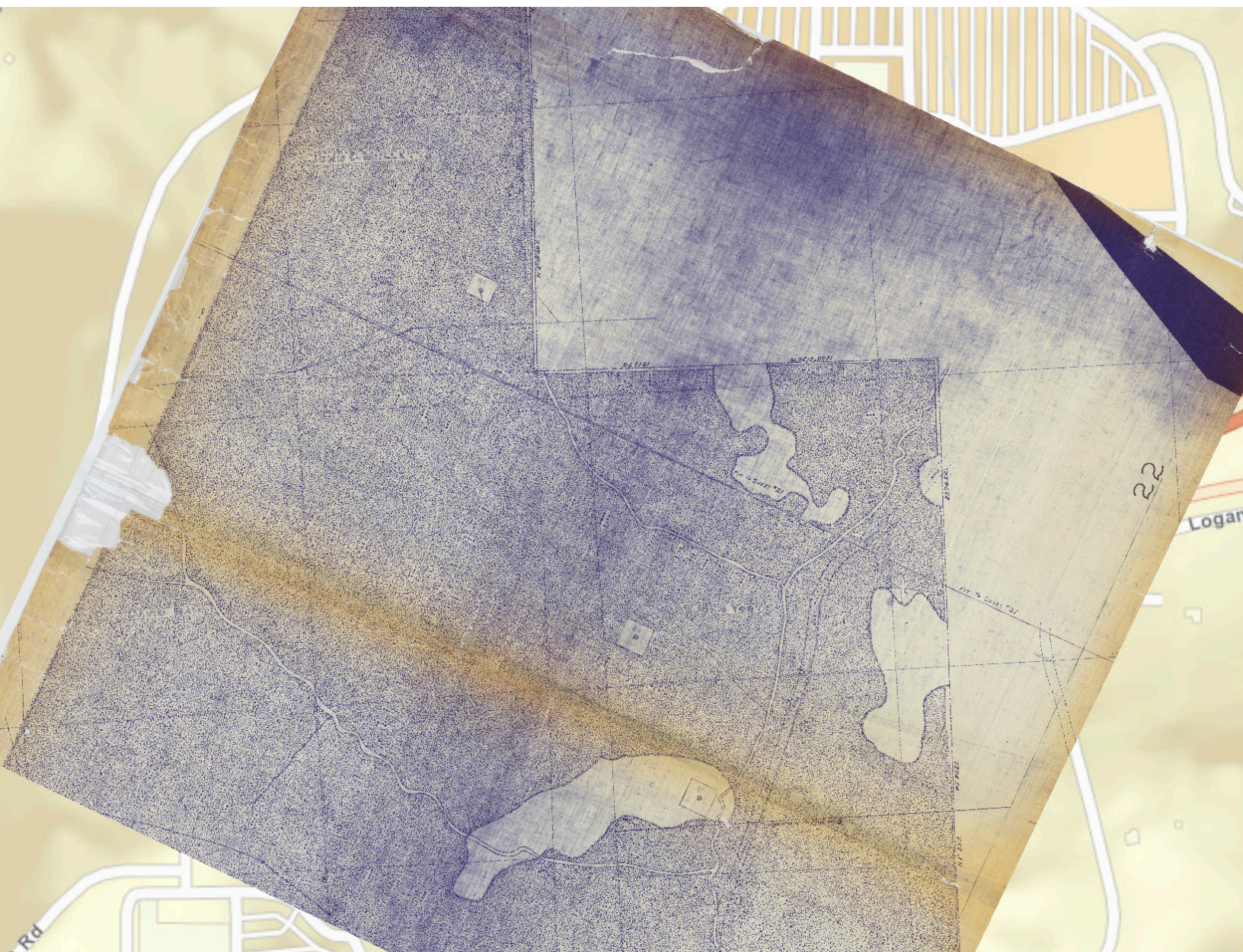
User Support & Assistance

NOTE: PASDA provides user support via email, phone, and in person. It is often not possible to identify the organization from which assistance is requested (for example, if a user emails us with a @gmail.com account). The following list is examples of those organizations we were able to identify. For most organizations listed, there were multiple contacts throughout the year.

Erie County, ARM Group, Copper Beach Advisors, Franklin County, Cambria County, Herbert, Rowland, and Grubic Inc, PPL Inc, PA Sea Grant, PA Conservation and Environment Delivery Center, Greener Planning, Spdkidron, Jones Consultants, Butler County, New York

University, EDR Lightbox, Behrend College Penn State, Kittatinny Ridge Conservation Association, PA Audubon, Conservation & Environmental Information Technology Delivery Center, Infrastructure and Economic Development PennDOT, DCED, PEMA, APEX Companies LLC, Montgomery County, Pennsylvania Game Commission Bureau of Automated Technology Services, York County Planning Commission, Jacobs Inc, PA Department of Conservation and Natural Resources Natural Heritage Section, Economic Resource Development Penn State Extension, PA OneStop, GreenForests Work, Bucks County Planning Commission, Office of Transportation & Infrastructure Systems City of Philadelphia, Wade Trim Associates, CoreLogic,

Danville School District, Echelon Agriculture, Allegheny County, Center for Geospatial Analytics, North Carolina State University, Green Leaf Consulting Services, PA Department of Conservation and Natural Resources Bureau of Geological Survey, Roussey Companies, TGS Companies, Dieffenbach and Hritz Inc, Delaware County Technology Division, Juniata County, US Fish and Wildlife Service, National Wild Turkey Federation, PA Civil Air Patrol, THG Geophysics LTD, Dallas-Morris Drilling Inc, City of Philadelphia CityGeo, Harmonia, AECOM, Brand Environmental Consulting Services, ARM Group, Kittleson and Associates Inc, US National Energy Technology Lab, Markosky Associates, PA Fish and Boat Commission,



Moshannon Creek Watershed Association, Harmonia, Pennoni Inc, Human Powered Future Inc, PA State Police Bureau of Communications and information Services, Keyrock Energy LLC, YCPC, TransSystems, GreenForests Work, PA Game Commission Bureau of Automated Technology Services, Pennsylvania General Energy Company, PA DEP Pottsville District Mining Office, Danville School District, Erie county, Franklin County, Adams County, AECOM, CADMUS Group, CoreLogic, Lopresti Surveying, Allegheny County, Montgomery County Board of Assessment, PA PUC, Colliers Engineering and Design, BDC Surveying, ARM Group, Somerset County Assessment Office, Gorski Engineering, NRCS Harrisburg, University of Akron, Western Water Research and Mapping, NTM Engineering, Shippensburg University, PA Geological Survey Stratigraphic Studies Section, Greener Planning LLC, PA Audubon, MD-RWA, PA DEP Cambria District Office, Tier 1 Utility Design, Sarcinello Planning and GIS Services, GeoServices Limited, DVRPC, Fulton County Planning Commission, Blair County, Studio Sustena, Sonic, CAI Tech Inc, AutoSoft Inc, Allegheny College, NEXT Pittsburgh, PA DCNR Forest Information and Spatial Analysis Section, Geppert Lumber, HDR Inc, Cameron County, Columbia County, Glen Hawbaker Inc, City of Philadelphia Office of Innovation and Technology, Gateway Engineers Inc, Borough of Carlisle Sustainable and Community Planning, Carnegie Mellon University, Rosebud Mining, David Miller Associates Inc, Allegheny=Fayette County Labor Council, US ACE Baltimore District, Penn State Greater Allegheny, CloudPermit, RBA, Fayette County, Arizona State University, London Global University, Washington County, DCNR Bureau of Conservation and Recreation, DEP Bureau Abandoned Mine Reclamation, Venango County, ERIS Inc, National Museum of Natural History, Spatial Thinking, USACE Baltimore, PA Sea

Grant, CloudPermit, New Pennsylvania Realty, Inc, US Army CENWK, T3 Global Strategies Inc, Keystone Trails Association, WITF Radio, Project ECHO, PA PUC, RBA Inc, GeoServices LTD, USGS, York Campus PSU, Lancaster County, Danville Area School District, US Forest Service Remote Sensing Program, Holland Township NJ, City of Philadelphia, New York University, Nanticoke Borough, Rocco Consulting, Philadelphia Medica, Union County, Berks County Planning Commission, HMMH, Butler County, Navarro and Wright, Wyoming County, Puza Surveying, Indiana County, MAWC, Moody and Associates, STV Inc, Lehman Engineers



July 1, 2024–June 30, 2025
Completed by Maurie Caitlin Kelly
Penn State Institutes of Energy and the Environment
The Pennsylvania State University
September 1st 2025