PENNSYLVANIA SPATIAL DATA ACCESS

http://www.pasda.psu.edu

PA Geospatial Coordinating Board   September 2016

OVERVIEW

- About PASDA
- Purpose
- Stats
- PASDA Users
- PASDA Services
- Online Mapping
- Open data
- Preservation
- Outreach & User Support

QUESTION

- How many of you have used PASDA before?

- What do you use it for?

- What data do you use most often?

ABOUT PASDA

- Pennsylvania Spatial Data Access (PASDA) is Pennsylvania's official public access geospatial information clearinghouse. PASDA was developed in 1996 by the Pennsylvania State University and has served as the clearinghouse for Pennsylvania for over twenty years.

- 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 CyberScience**, and the **College of Earth and Mineral Sciences**.

PURPOSE

- 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 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.

- PASDA serves as Pennsylvania's node on the NSDI and works at the national level to ensure that we meet national and international standards for metadata and data delivery.

STATS

- PASDA stores more than 85 Terabytes of data and provides access to more than 450,000 data sets.
  - (Note: This does not include the **Statewide Imagery Cache** (this data is only available for use via a map service or for viewing via the PA Imagery Navigator) which consists of more than 1.2 million images.
- Overview FY 2015/2016 Statistics:
  - PASDA Hits: 91,169,041
  - Page Views: 49,684,434
  - PASDA Unique Visitors: 1,035,588
  - Datasets Downloaded: 2,455,977
  - Map Services Requested (APIs, KMLs, WMS, REST): 70,899,511
  - Pennsylvania Imagery Navigator: 5,456,183

PASDA USERS

- State Agencies

- Local Governments—Municipal, County, Regional

- Federal Agencies—EPA, FEMA, US Military, Homeland Security, National Weather Service, Army Corps, Transportation,…

- Emergency Responders, Police Departments

- Non Profit Organizations

- Conservation Districts

- Academic Institutions

- Business and Industry: Engineering, Surveying, Utilities, Engineers, Architects, Developers, Environmental Management, Real Estate, Transportation, Geospatial…

- K-12 Schools

- Pennsylvania Citizens!

PASDA STAFF

- Maurie Kelly

- James Spayd

- Ryan Baxter

- Scott Dane

- Approximately 2.75 staff manage PASDA

PASDA TODAY: SERVICES

- Data Storage

- Data Management and Curation

- Metadata Development

- Metadata Training

- Data Search and Retrieval

- Data Download (in multiple formats)

- Map Services/APIs/KMLs

- Data Preservation and Archiving

- Online Mapping Apps
  - Data Previewer
  - PA Imagery Navigator
  - PA Atlas
  - PA Mine Map Atlas

- User Support

- Offline Data Access

- Integration with Additional Resources

PASDA ONLINE MAPPING

PENNSYLVANIA IMAGERY NAVIGATOR

This interactive application serves as the **One Stop Portal to all** imagery and raster data by, for, or about Pennsylvania. Capabilities of the Navigator include viewing data, search and retrieval of data, and creating a list of imagery or raster data to download. Functionality includes navigating the map, zooming automatically to a street address, and downloading the available images in MrSID, JPEG 2000, or TIFF formats. Dynamic links are included for images that are available from multiple time periods, data providers, and formats.

PENNSYLVANIA ATLAS

The Pennsylvania Atlas was designed to provide enhanced visualization and data download capabilities through an online mapping interface. With the PA Atlas you will be able to view, download, and create your own maps using data available through PASDA. The data in the PA Atlas includes statewide boundary files, transportation, wildlife, conservation, recreation, and health data layers to name a few. Users can search for data by county or address or simply zoom in to their area of interest. By using our identify function, users can see data attributes such as road names, traffic counts, state park names and link directly to websites related to data for more information. If you would like to create your own map, simply select your data layers and use our map making function to create a PDF, JPG or PNG file to download. Please feel free to provide comments, suggestions and ideas about our new Pennsylvania Atlas.
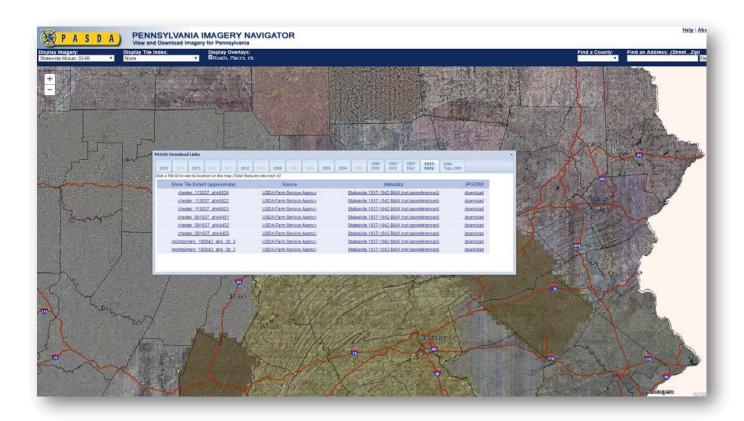
PENNSYLVANIA MINE MAP ATLAS

Coal mining has occurred in Pennsylvania for over a century. The maps to these coal mines are stored at various public and private locations (if they still exist at all) throughout the commonwealth. The Pennsylvania Department of Environmental Protection, Office of Active and Abandoned Mine Operations (DEP) is involved in many projects dealing with historic and active mine map restoration and digitization. The DEP has tried to preserve the historic information contained on these maps by scanning the maps into a digital image.
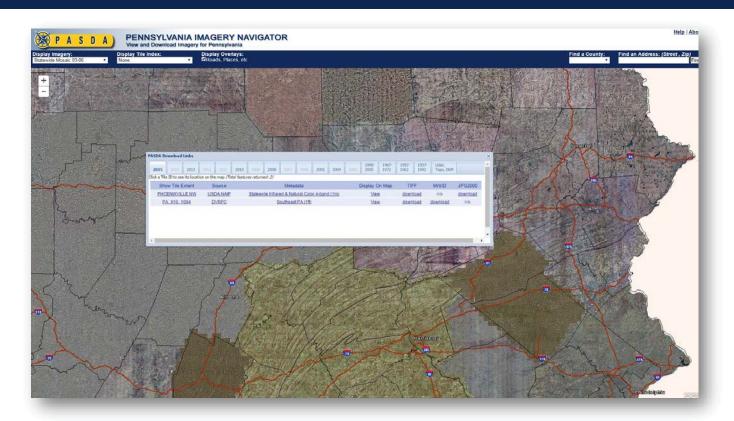
PENNSYLVANIA IMAGERY NAVIGATOR

- The PA Imagery Navigator was created to provide easy access to the thousands of imagery, elevation, and LIDAR data sets available through PASDA.
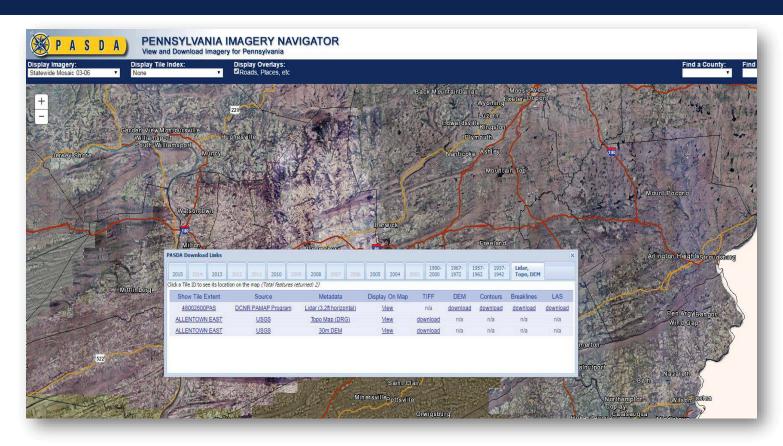
PA IMAGERY NAVIGATOR: HISTORIC IMAGERY
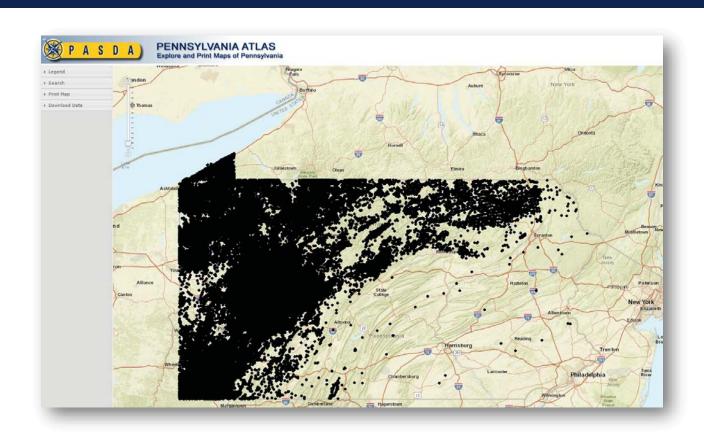
PA IMAGERY NAVIGATOR: MOST RECENT IMAGERY

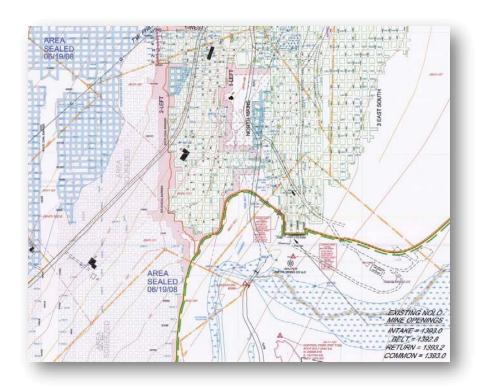# PA IMAGERY NAVIGATOR: LIDAR, TOPOS, DEMS

PENNSYLVANIA ATLAS

- The PA Atlas was created so users could easily visualize dozens of data sets available through PASDA without having to download each data set.

PA ATLAS

PENNSYLVANIA MINE MAP ATLAS

PENNSYLVANIA MINE MAP ATLAS

- The Pennsylvania Mine Map Atlas is an initiative of the Pennsylvania Department of Environmental Protection (DEP) and PASDA.

- This application allows residents and stakeholders to see and download detailed underground mine maps that were once only available in hard copies.

- It not only allows homeowners to view previously unavailable mine maps, but also allows them to see their home's proximity to the nearest underground mine.

PENNSYLVANIA MINE MAP ATLAS

- The impetus for the project began almost 10 years ago when the DEP approached PASDA about the possibility of providing public access to their underground mine maps. This was, in part, a result of the Quecreek Mine Rescue that occurred in Somerset County.

- On July 24, 2002, 18 miners accidentally tunneled into an adjacent abandoned mine and nine of them became trapped by the millions of gallons of water that proceeded to rush in. After 78 hours of desperate escape attempts and hopeless notes scrawled for loved ones, the miners were finally found and pulled to safety.

- The accident led to a strong push at the DEP to provide access to the underground mine maps, which were primarily in paper.

- By September 2012, the DEP had scanned thousands of these maps into digital form and were ready to provide them to PASDA.
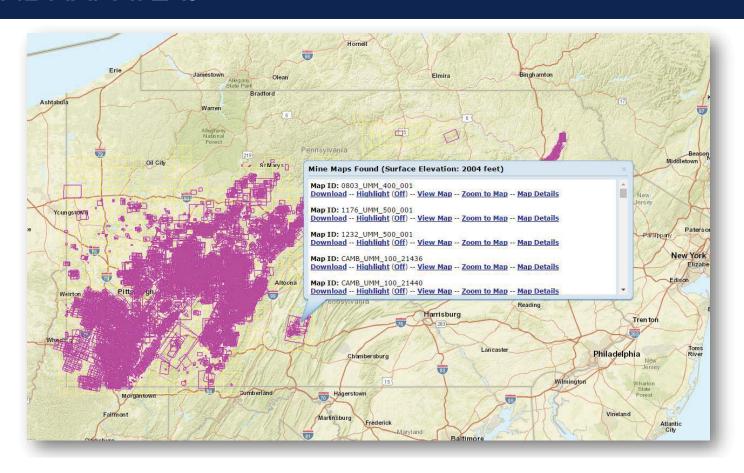
MINE MAP DATA

- By May 2013 the California, Pa., office of the DEP provided PASDA with the first 15,000 digital maps, and PASDA began providing public access to downloadable versions of the maps.

- This project, which is ongoing, will eventually provide access to more than 100,000 underground mine maps.

PHUMMIS INTEGRATION

- In addition, the PA Mine Map Atlas has been integrated into the Pennsylvania Historic Underground Mine Map Information System—PHUMMIS at the PA Department of Environmental Protection.

- This database contains information relevant to past and present underground mining within the Commonwealth of Pennsylvania, including, but not limited to, maps, indices, locations of mines, and other pertinent data contained in various collections held or obtained by the Pennsylvania Department of Environmental Protection's Office of Active and Abandoned Mine Operations.

PA MINE MAP ATLAS

PASDA & OPEN DATA

- PASDA has provided free access to data for more than 20 years.

- PASDA has provided access to open source data formats (WMS services, APIs, GeoJSON)

- Data on PASDA is discoverable through multiple venues: Google, Data.gov, ESRIs ArcGIS Online, and more!

- Data available via PASDA will be linked from the PA Open Data Portal.

BARRIERS TO DATA SHARING

- It is easy to share data via PASDA.

- However, there are barriers to sharing data in general.

- Barriers include concerns about:
  - liability concerns
  - funding and support—GIS data can generate income
  - control

PRESERVATION & PERSISTENCE

- Data is an asset that belongs to the citizens of Pennsylvania.

- It is important that we not only provide access to data today but also that we manage it and preserve it so that it is available to future generations of Pennsylvanians.

- Two issues that are highly significant are preservation of data and persistence of location. The Library of Congress and Federal Geographic Data Committee have been working on this issue for several years through a committee dedicated to identifying and reporting out on data preservation.

- PASDA is a member of this committee and contributed to the recommendations and report.

- PASDA is committed to long term preservation and access to historic data sets for Pennsylvania.

- PASDA currently has a two level approach.

PRESERVATION & PERSISTENCE

- First, PASDA maintains an "Historic" folder on the FTP site for each agency and dataset that is updated.

- As new data comes in, the previous data is moved to the historic folder so it can be accessed by users. In addition, in the new PASDA site, the option to access historic data will be a link in the Data Summary page.

- The second level is long term archiving of data.

- PASDA is working on long term (10, 20, 30+) year archival program.

- This approach combined with access to new data ensures that citizens of the Commonwealth have access to data today and in the future.

OUTREACH

- PASDA serves the geospatial community through its outreach and user support.
- PASDA:
    - Serves on the PA GIS Conference Committee and presents and exhibits each year.
    - Serves on the PA GIS Day committee and presents and exhibits each year at multiple GIS Day events.
    - Presents and exhibits at the Northwest PA GIS Conference each year.
    - Presents at the PA Society of Land Surveyors Conference.
    - Presented at the EnerGIS conference, the Western PA GIS Conference.
    - Meets with state agencies, local, and regional governments, schools, and other institutions to provide guidance and information on managing geospatial data and metadata.
    - Serve is a member of the Pennsylvania Geospatial Coordinating Board.
    - PASDA serves on the PA Open Data Advisory Committee.
    - PASDA has developed tutorials to assist users who are interested in learning more about GIS and using PASDA.

USER SUPPORT

- PASDA serves Pennsylvanians through its user support.

- PASDA staff are on-hand to provide a direct point-of-contact and timely response to communications from users.

- User support includes responding to inquiries from users via email, phone and in person. PASDA responds to more than 5,000 user requests per year.

- All PASDA staff are engaged in user support as support needs can vary widely.

FUTURE OUTLOOK

- Free public access to GIS data for the past 20 years has helped build a robust and flourishing geospatial community.

- PASDA is the largest, most comprehensive, coordinated state GIS data portal in the US.

- As GIS continues to evolve, PASDA will continue to serve as a major component of the foundation for that evolution.

- PASDA maintains vast stores of current and historic data for the Commonwealth. These assets are preserved and maintained for today and for future generations.

- PASDA will also continue to meet the growing needs of the geospatial data community by providing access to multiple formats and services that address diverse user groups and capabilities.

THANK YOU!

- For more information about Pennsylvania Spatial Data Access (PASDA) see http://www.pasda.psu.edu
- Email us at: pasda@psu.edu