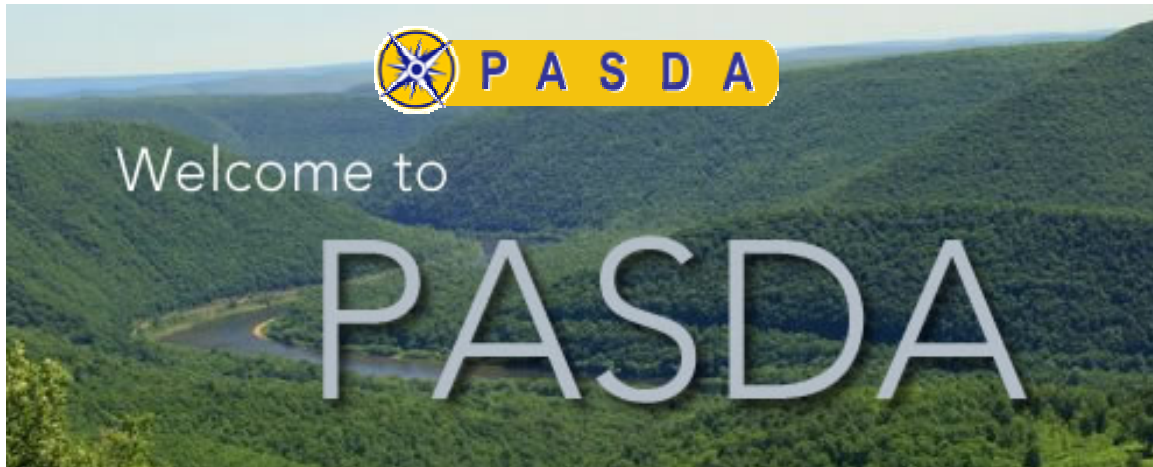


**FY 2007-2008  
Annual Summary Report of Activities**

**Pennsylvania Spatial Data Access**

**The Public Geospatial Data Clearinghouse for the Commonwealth of Pennsylvania**



Submitted by

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**Penn State Institute of Energy and the Environment**

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## Introduction

Pennsylvania Spatial Data Access (PASDA), the public geospatial data clearinghouse for the Commonwealth of Pennsylvania marked its tenth year in 2006. PASDA, which has grown from a small website offering 35 data sets in 1996 to the expansive user centered data clearinghouse that it is today, has become a staple of the GIS community in Pennsylvania. 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.

PASDA was developed by the Pennsylvania State University as a service to the citizens, governments, and businesses of the Commonwealth. PASDA is a cooperative project of the Governor's Office of Administration, Office for Information Technology, Geospatial Technologies Office and Penn State Institutes for Energy and the Environment of the Pennsylvania State University. Funding is provided by the Pennsylvania Office for Information Technology, Geospatial Technologies Office. The Pennsylvania State University provides additional substantial support to PASDA for system administration, database technologies administration, and infrastructure. PASDA has served for the past twelve years as the Commonwealth's node on the National Spatial Data Infrastructure (NSDI), Geospatial One Stop, and the National Biological Information Infrastructure.

### *About PASDA*

Pennsylvania Spatial Data Access (PASDA) is Pennsylvania's official public access geospatial information clearinghouse.

PASDA was developed as a research and outreach program by the Pennsylvania State University as a service to the citizens, governments, and businesses of the Commonwealth. PASDA is a cooperative project of the Governor's Office of Administration, Office for Information Technology, Geospatial Technologies Office 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, Geospatial Technologies Office.

In addition, Penn State University provides substantial support to the PASDA program through contributions such as system administration, database administration support, and infrastructure. Penn State partners include Institutes of Energy and the Environment, the Center for Environmental Informatics, and the College of Earth and Mineral Sciences. PASDA has received additional financial support via successful grants through Penn State Institutes of Energy and the Environment from the Federal Geographic Data Committee CAP and Don't Duck Metadata programs on the following projects: the Pennsylvania Watershed Atlas, Pennsylvania Framework Data: A Local Approach (with PAMAGIC), and Conservation & Watershed Organization Metadata Outreach Project. In addition, PASDA has received financial support from the US Geological Survey National Biological Information Infrastructure, the US Department of Agriculture Geospatial Innovations in America initiative, and the Penn State GIS Council.

In addition to those listed above, contributing partners throughout the twelve years of the program include the College of Agricultural Sciences and the E-Education Institute. PASDA supports cooperation and collaboration across state and local boundaries by serving as the Commonwealth's node on the National Spatial Data Infrastructure (NSDI), Geospatial One Stop, and the National Biological Information Infrastructure.

### *Our Purpose*

PASDA was developed in 1996 by the Pennsylvania State University and has served as the clearinghouse node for Pennsylvania for the past twelve years.

The purpose of Pennsylvania Spatial Data Access (PASDA) is to serve as a comprehensive geospatial data digital library by providing free, universal access to geospatial data and information by, for, and about the Commonwealth of Pennsylvania.

### *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.

**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.

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/webgis applications, and metadata/documentation efforts.

### *PASDA Staff*

PASDA is a cooperative project developed with funding from the Geospatial Technologies Office and substantial support from the Pennsylvania State University to provide the greatest possible benefit to the GIS stakeholders in the Commonwealth. The management of PASDA is the responsibility of the PASDA Director at Penn State Institutes of Energy and the Environment (PSIEE). The PASDA staff includes:

- Maurie Caitlin Kelly, Director
- Ryan E. Baxter, Information Technology Coordinator
- James F. Spayd, Data Systems and Metadata Coordinator
- Scott B. Dane, Data Manager (PASDA/PAMAP) and Outreach
- Wayne Myers, Co-Director of the Office for Remote Sensing and Spatial Information Resources

**Note:** In addition, the PASDA staff would like to gratefully acknowledge the continued assistance and support of Chris Pfeiffer, Computer Systems Network Administrator for PSIEE. Although Chris is no longer officially a PASDA staff member, his continued dedication to the project has proved invaluable.

### *PASDA Services*

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/webgis applications, and metadata/documentation efforts. PASDA services are provided free of charge to all users and data providers. The data on PASDA is provided by federal, state, local and regional government agencies, non-profit organizations, and academic institutions throughout the region.

#### **Data Storage and Access**

PASDA works directly with state and federal agencies, local and regional governments, non-profit organizations, and academic institutions to access to the widest variety of data possible. There is no fee to store or provide access to data via the PASDA clearinghouse.

#### **Inventory and Documentation (Metadata)**

PASDA will create FGDC standard metadata free of charge for any agency, organization, or data stakeholder. The metadata will also be hosted by PASDA for the purposes of developing the state data inventory.

### **Data Liaison Activities**

PASDA staff work directly with state agencies to identify, document, and provide access to agency data. PASDA works directly with state and federal agencies, local and regional governments, non-profit organizations, and academic institutions to access to the widest variety of data possible. There is no fee to store or provide access to data via the PASDA clearinghouse.

### **Metadata Training**

PASDA staff provide free metadata training and training in the use of PASDA for individual organizations and groups. PASDA offers formal training twice a year at different locations throughout the Commonwealth. If you would like to participate in or host a metadata or PASDA training session, please contact [pasda@psu.edu](mailto:pasda@psu.edu).

### **Educational Outreach**

PASDA works with non-profit organizations such as watershed groups and K-12 schools to promote the knowledge and use of GIS. PASDA develops lessons, tutorials, and guidelines for new GIS users.

### **Presentations & Seminars**

PASDA staff offer seminars and presentations at meetings, conferences, and schools.

### **User Assistance**

PASDA is committed to providing timely user assistance with the PASDA website and the data available through PASDA. Since PASDA is not the originator of the data found on the site, specific questions about data sets are often best directed toward the data contact listed in the metadata. However, feel free to contact PASDA with any question

### **Acquiring Data from PASDA Offline**

PASDA does not provide offline data reproduction services, either on digital media or paper. All data available on the PASDA website can be obtained on digital media on a cost recovery basis.

## **Summary of Major Activities & Accomplishments**

A summary of activities for this year includes a dramatic increase in both the available data and services of PASDA. Though the size of the staff at PASDA has diminished, remaining staff have assumed additional responsibilities to ensure we continue to serve our users and the Commonwealth with the same degree of quality and effectiveness demonstrated in previous years. In addition to ongoing activities of the PASDA clearinghouse as listed in the previous section of this report, the primary efforts of PASDA throughout the 2007-2008 fiscal year focused on five major areas: acquisition and integration of new data and development of new data partnerships; support for the PAMAP program and the enterprise approach to accessing imagery; applications,

services, website, and systems enhancement; ongoing support for the GTO, and the first phase of development for a long range strategic plan.

Within these broader activities, several efforts deserve specific mention.

### *New Data and Partnerships*

Throughout the past year, PASDA has had the opportunity to extend its data partnerships throughout the Commonwealth and the region. In addition to continuing partners and new data from sources such as the PA Fish and Boat Commission, PA DEP, PennDOT, PA DCNR, City of Philadelphia, Lancaster County, Chester County, Heritage Conservancy, Natural Lands Trust, and other long-term PASDA partners, we have had the opportunity to work with a number of new partners.

One of the first highlights this year includes the acquisition of the Delaware Valley Regional Planning Commission aerial photography for southeastern Pennsylvania. Although DVRPC has collaborated with PASDA on many initiatives over the years, this past fiscal year was our first opportunity to share data with the general public from this important data partner.

PASDA also acquired new data from FEMA this year. This data, DFIRM or the flood rate insurance map database, covers major portions of Pennsylvania and provides information on flood prone areas. PASDA has also partnered with two important new Federal organizations, the National Park Service and the National Renewable Energy Lab. Both of these new partners provided valuable data to the clearinghouse to support environmental protection and discovery and research of renewable energy resources in Pennsylvania.

On the local front, PASDA continued to receive updates from our local government data partners. Our newest partner is Allegheny County. Within the first three months of availability, the Allegheny County data was downloaded approximately 3000 times and the map services accessed almost 20,000 times.

Title	Originator	Date			
<b>Allegheny County - Basins</b>	Allegheny County	2002			
<b>Allegheny County - Blocks</b>	Allegheny County	2002			
<b>Allegheny County - Building Footprints</b>	Allegheny County	2008			
<b>Allegheny County - Cemeteries</b>	Allegheny County	2002			
<b>Allegheny County - Contours</b>	Allegheny County	2006			
<b>Allegheny County - Councils of Government</b>	Allegheny County	2008			
<b>Allegheny County - County Council Districts</b>	Allegheny County	2002			
<b>Allegheny County - Floodplain</b>	Allegheny County	2000			
<b>Allegheny County - Golf</b>	Allegheny County	2000			
<b>Allegheny County - Greenareas</b>	Allegheny County	2000			
<b>Allegheny County - Hydrology Areas</b>	Allegheny County	2006			
<b>Allegheny County - Hydrology Lines</b>	Allegheny County	2006			
<b>Allegheny County - Index</b>	Allegheny County	2000			
<b>Allegheny County - Land Use</b>	Allegheny County	2006			

**Data Wizard Results for Allegheny County.**

The county has provided PASDA with over 30 new data sets from contours to parcels; all of which are available for FTP download and as map services.

*Support for the PAMAP Program and Enterprise Imagery Solutions*

The PAMAP program has dramatically increased the amount of data available as well as increasing the hardware needs for PASDA. As the statistics demonstrate, the data, applications and map services available through PASDA for PAMAP are heavily used. In addition to providing these services to the PAMAP program, PASDA also provides assistance with metadata and works with project management and partners to maintain streamlined data flow from PAMAP to PASDA. PASDA also provides support to users seeking or utilizing PAMAP data in the form of both e-mail and phone assistance.

The DCNR PAMAP Program continues to be a substantial data provider to the PASDA clearinghouse. PASDA currently hosts and provides access to approximately 8 terabytes of PAMAP data on the FTP site and in our relational database. PASDA provides storage for the data for the program as well as access services and utilities that have been developed since 2004/2005. The PAMAP map services developed by PASDA are used by over 100 thousand users each month.

The 2006 PAMAP aerial photography work was completed this fiscal year and all the data was made available via the PASDA clearinghouse. PASDA has developed map services for all PAMAP data, Google Earth KML files so the data is viewable in that environment, and created specialized pages on the site to identify and credit PAMAP. In addition, PASDA was asked to participate in planning processes for increasing the visibility of the PAMAP program and to provide input on the most effective manner in which to provide access to PAMAP data. As part of the overall plan to enhance the PASDA site (see below), PASDA increased the visibility and functionality of the Imagery Viewer application which will help to address the overall approach to accessing imagery. PASDA also provided information to the PAMAP program on statistics, use cases, and feedback on plans and user needs.

### *Upgrading and Enhancement of the PASDA Site and Systems Architecture*

The transition of the PASDA site, while still in progress, has been a long-term effort. The goal of this effort has been to increase the loading speed, usability, and ease of management of the overall PASDA site. During the past fiscal year, the PASDA team finalized the transition of the website to style sheets, updating and enhancing both the organization and the design of the site at the same time. The new site is all text with a few exceptions for top banners and some logos of data providers. In addition to finalizing the website, PASDA staff are working on migrating all the applications and services to the new format. This transition, focusing initially on the Imagery Viewer (now Navigator), will be applied to all applications.

The screenshot shows the PASDA Home Page with the following layout:

- Header:** PASDA PENNSYLVANIA SPATIAL DATA ACCESS. The Pennsylvania Geospatial Data Clearinghouse.
- Navigation Menu:** Home, About PASDA, Download Data, Online Mapping, News & Events, Related Links, Tutorials, Help.
- Data Shortcuts:** Aerial Photography, Topographic Maps, State-wide Data, Browse FTP.
- Download New Data:**
  - Allegheny County:** data now available in MapServices and for download [Quick Link>>](#)
  - PAMAP Imagery:** Imagery now available in MapServices and for download [Quick Link>>](#)
  - DVRPC Imagery:** Imagery now available in MapServices and for download [Quick Link>>](#)
  - FEMA DFIRM:** flood insurance rate map data by county is now available for download [Quick Link>>](#)
- Main Content Area:**
  - Welcome to PASDA:** A large banner image with the text "Welcome to PASDA".
  - Introduction:** Pennsylvania Spatial Data Access (PASDA) is the official public access geospatial information clearinghouse for the Commonwealth of Pennsylvania and has served for twelve years as Pennsylvania's node on the National Spatial Data Infrastructure, Geospatial One-Stop, and the National Biological Information Infrastructure.
  - Development:** PASDA was developed by the Pennsylvania State University as a service to the citizens, governments, and businesses of the Commonwealth. PASDA is a cooperative project of the Governor's Office of Administration, Office for Information Technology, Geospatial Technologies Office and the 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, Geospatial Technologies Office. In addition, PASDA also receives substantial support from the Pennsylvania State University.
  - Information:** For more information about PASDA, see our [About PASDA](#) pages.
  - Enhanced PASDA Service: The Pennsylvania Imagery Navigator:** The Pennsylvania Imagery Navigator was developed to provide easier access to imagery and raster data such as topographic maps. The Navigator still maintains all
- Upcoming Events:**
  - GIS in the Rockies:** The Ranch - Larimer County Fairgrounds Loveland, Colorado September 10-12, 2008
  - 24th Annual New York State GIS Conference:** 441 Electronics Parkway Liverpool, NY October 6-7, 2008
- Spotlight on GIS:**
  - Crime Map:** The Philadelphia Police Department now provides public access to information about crime occurrence by place, category of crime, and/or range of dates.
  - Moth Map:** Centre County GIS has developed a public access application to help inform citizens about the Cypripis Moth Spraying Program. Moth Map provides information on which blocks will be sprayed, which opted out of the program, and which did not qualify for spraying.
- Footer:** PASDA Clearinghouse

**Enhanced PASDA Home Page**



PASDA also made some major upgrades to systems architecture this year. ArcGIS Server was installed and utilized as part of an overall goal of transitioning from older ArcIMS platforms to the more versatile ArcGIS Server environment.

### *Pennsylvania Imagery Navigator*

One major goal of the past year was to increase the usability, accessibility, and functional of the Imagery Viewer. This tool, which was initially developed during the previous fiscal year, followed the graphic intensive template used by PASDA in the past. As part of the overall effort to transition the site to style sheets, the Imagery Viewer, as the most heavily used application, was selected to be transitioned first. In the Fall of 2007, initial efforts to address the graphic design and determine any changes in functionality. PASDA staff reviewed input on the old Viewer and also benchmarked against other clearinghouses to see if they had similar functions. However, the priority was to remove the navigation and tool graphics and replace those with text. An additional priority was to ensure that PASDA provide easier access to imagery and raster data such as topographic maps and LIDAR data. The Navigator still maintains all the functions of the Imagery Viewer and Download Utility. However, the enhanced Navigator allows users to print the map image, identify and download multiple tiles for an area of interest, and new options for specifying area of interest.



### **Enhanced Imagery Navigator**

The enhanced Imagery Navigator will increase ease of access to all imagery and raster data from a diversity of providers through a single interface.

PASDA works toward providing easy access to a comprehensive collection of data. Imagery and raster data are unique. They come from many providers and are available for different years, different resolutions, different formats, geographic extents, unique tile grids, and are taken for different purposes (leaf on vs. leaf off, for example). Maintaining access to historic data from as many areas as possible allows the clearinghouse to support a broad range of government, business, emergency management, and environmental needs. The data available include imagery and raster data from the PAMAP program, the Delaware Valley Regional Planning Commission, the USDA, and the USGS, and NASA, as well as specialized imagery from PEMA and the NGA. The years of coverage range from 1992 through 2007. It is the expectation that all of these existing partners, as well as new data sharing partners, will continue to develop this data.

The Imagery Navigator continues to be the most used tool in the PASDA suite of services. In FY 2007-2008 the Viewer received over 2 million hits and was used to “create maps” (meaning users reached the final map) almost 1.5 million times.

### *GTO Support*

PASDA has provided ongoing support to the Geospatial Technologies Office in the areas of metadata development, data acquisition, database loading, data standards, and imagery/raster data. PASDA provided extensive support to the Geospatial Technologies Office during the fiscal year. This support included metadata review and development; applications support and development; database support; data acquisition support; outreach and education; and consultations on architecture, infrastructure, and data issues. Some examples of support include James Spayd, metadata and data systems coordinator for PASDA, worked with GTO to develop templates for state agency data to be used in the GTO enterprise architecture and developed metadata for existing data in the GTO database. PASDA staff also provided assistance to GTO in emergency response support, GIS Day, development of map services, and data acquisition.

### *Map Services*

In FY 2007-2008 PASDA continued serving and developing map services for most incoming data. These services have been extremely successful and well received. As part of its data processing procedures, PASDA creates map services for all of the state wide data from providers as well as data that covers regional areas. In addition, PASDA will create map services for our data providers in local government agencies as well. Users continue to access the map services via desktop GIS software or they can view them in Google Earth. All services are OGC compliant, WMS services. The success of the map services continues to be demonstrated by the use statistics. The most heavily used services continue to be those for imagery products such as PAMAP data, DVRPC aerial photography, the PA DOQQs, and the NAIP. There were more than 2 million users of imagery based map services in FY 2007-2008. The weather map services continue to be heavily used as are the PA DRG/Topo, PA roads, counties, and municipality data from PennDot.

### *Energy Research, Exploration, & Development*

Those familiar with PASDA and its data partner program recognize the wealth of GIS data available--from roads, streams, and parcels to aerial photography and elevation data. This data comes from partners across the Commonwealth including state, federal, and local governments, non-profit institutions and conservancies, as well as academic research institutions. Though the majority of PASDA users come from Pennsylvania and the Mid-Atlantic region, in recent years a significant increase in the number and diversity of national and international users has occurred. An analysis of the drivers behind this trend has demonstrated that two major forces are at work: energy research and exploration and an increased interest in weather and climate information.

Those interested in energy research, exploration and development have wide ranging needs for data. In the renewable energy field, users are interested in any data related to identify locations for wind farms such as elevation, available land, current land uses, and wind speed/wind gusts. In addition, those interested in research and development of biomass as a renewable energy source have been seeking data on municipal/industrial wastes, landfills, wood/timbered areas. Solar energy is also a common theme among users of PASDA, but less so than other renewable types of energy. PASDA has acquired data from the National Renewable Energy Lab (NREL) that will help support these efforts. These include biomass, solar, and wind data. PASDA also works in collaboration with the National Weather Service/NOAA to develop Internet Map Services (data that can be pulled into a desktop GIS via the Internet) of NWS/NOAA data. In addition, PASDA works with Pennsylvania based data providers such as the Pennsylvania Department of Conservation and Natural Resources PAMAP program, the Pennsylvania Department of Environmental Protection Bureau of Mining, and others to provide access to data such as contours and elevation, abandoned mine areas, and oil and gas well locations.

The more traditional energy exploration organizations such as XTO Energy are frequent users of PASDA. As might be expected, the energy industry has developed an increased interest in accessing information about Marcellus Shale in Pennsylvania. These information can be gathered from the geology data provided by PA DCNR and is found in reports and documents housed in libraries and state geologic surveys. In addition, these industry based users have accessed and utilized data such as oil and gas well locations, streams, roads, and even Census data. A recent discussion with one industry user also demonstrated that these companies are in need of information about Pennsylvanians themselves, the government, and local information such as tax parcels and land ownership/land use.

Although it is difficult to pinpoint exactly how much data downloading and accessing activity is directly related to energy exploration and research, user assistance statistics taken during a four month period in 2008 show that a significant number of the almost 500 inquiries per month are energy related.

## *PAView*

PASDA is a member of the Executive Committee for the PaView project. This project is a national effort to develop educational information and promote access to data resources such as satellite imagery and aerial photography. PASDA works with PaView members at California University of PA, Penn State, DCNR, and GTO to manage and populate the website and provide direct access to data via the PASDA clearinghouse.

## *Emergency Support*

PASDA continues to respond as needed to support emergency services for the Commonwealth. In response to the Commonwealth's need for support and to enhance response time, PASDA developed an Emergency Application Support Template. The template will be used to allow for immediate response to application development needs related to emergency events.

## *Meetings, Conferences, Training, Presentations, & Papers*

PASDA staff participated in numerous meetings, conferences, and delivered presentations at many of these events. Of particular interest are:

- ESRI 2008 International Users Conference—two collaborative presentations with PSU EMS
- LIDAR Seminar—participated in workshop
- GIS Day at the Capitol Rotunda—member of organization committee
- PA GIS Conference—participated as exhibitor
- Regional Hazards Teleconferences and presentations—participant for GTO
- American Meteorological Society—invited to present on weather services in collaboration with PSU EMS
- Northwest PA GIS Conference—exhibitor and presenter
- PAMAP Advisory Board—participant
- PAVIEW Executive Committee meetings
- References to PASDA will appear in two encyclopedias in 2008: Encyclopedia of Database Technologies and Applications, published by IGI Global and Encyclopedia of Data Warehousing and Mining published by IGI Global
- PASDA was also discussed in the January issue of the PSATS journal.
- PASDA weather based map services were also featured in the journal Disaster Safety Review.
- PASDA was referenced in a Science Daily article in June.
- PASDA weather map services and data wizard were featured in an Ivanhoe Broadcast News program “Breakthroughs in Science”

Procedural Documents Submitted to GTO include:

- SERP Committee documents for Allegheny County

- PASDA baseline layers spreadsheet
- Draft newsletter template for GTO
- Draft strategic plan
- Draft user session questions
- Geospatial redundancy matrix
- PASDA PAMAP services
- PASDA statistics on PAMAP
- Comments on PAMAP survey

### *User Assistance & Feedback*

PASDA continued to serve a wide variety of users with diverse needs in FY 2007-2008. Questions ranged from e-mails inquiring about data availability to more in depth questions related to data use and applicability. Approximately 500 inquiries per month are answered.

### **Examples of PASDA Users:**

The following represents a partial list of PASDA users.

**State Government:** Almost all state government agencies and their regional offices access data and services through PASDA. These include PADEP, PADCNR, DMVA, PEMA, L&I, PHMC, Game Commission, Fish and Boat Commission, PennDOT, Health, and Agriculture, CareerLink, Public Welfare, DCED, State Police, Civil Air Patrol.

**Federal Government:** A wide range of Federal agencies access data and services through PASDA. These include FEMA, EPA, NOAA, NWS, Homeland Security, Dept. of Labor, Census Bureau, Dept. of Energy, National Renewable Energy Lab, Chesapeake Bay Program, National Park Service, USGS, Fish and Wildlife Service, US Army Corps of Engineers, US District Attorney's Office, Army National Guard, US National Hurricane Center.

**Regional Government:** Regional governments within Pennsylvania as well as those which include Pennsylvania in a multi-state, cross jurisdictional, or watershed governing structure represent a significant number of those who access data through PASDA. These include: Delaware Valley Regional Planning Commission, SEDA-COG, Southwest Pennsylvania Commission, Northern Pennsylvania Commission, Northwest Pennsylvania Commission, Tri County Planning Commission, Susquehanna River Basin Commission, Ohio River Commission, and Delaware River Basin Commission, SEPTA.

**Local Government:** Almost all counties, urban areas, and many smaller municipalities are using GIS in Pennsylvania. The following are examples of the large component of users who access data and services through PASDA: City of Philadelphia, Allegheny County, Chester County, Centre County, Bucks County, York County, Adams County, Delaware County, Montgomery County, Clarion County, Erie County, Westmoreland County, Schuylkill County, Clinton County, Clearfield County, Blair County, Somerset County,

Bradford County, Tioga County, Lackawanna County, Luzerne County, Potter County, Carbon County, City of Pittsburgh, Antrim Township, Reading PA, Berks County, Greene County, Morgan Township, Elk County Tax Assessor.

**Business/Industry:** Business and industry represents a major component of GIS users in the state. Those who access data and services via PASDA include: XTO Energy, GeoDecisions, GeographIT, HRG, Gannett Fleming, BAE, ESRI, EADS Group, Hershey Medical Center, Reading Hospital, Dewberry, Cabot Oil, Dupont, Synergist Technology Group, Duquesne Light, Global Mapping Solutions, Dominion Transmission, Range Resources LLC, Hunter Insurance, Keystone Consultants, Gibson Thomas Engineering, GAI Consultants, Red Oak Consulting, Urban Research, Magellan Data and Mapping, KMJ Consulting, The Palmerton Group, Larson Design Group, Potomac Hudson Engineering, Blazosky Inc, Meridian Land Group, UGI Utilities, Sewall Assoc, Alion Science and Technology, Motorola, Skelly and Loy, Pioneer Hi Bred International, AllTell Networks, NSIA Inc, Timberframe Services, Arcada Engineers, Penn General Energy, GeoJet Information Solutions.

**Media:** Wall Street Journal, Citizens Voice, Philadelphia Inquirer, Newsweek, Centre Daily Times, Voters Voice, Patriot News, Post Gazette, WITF, Wilkes-Barre Times Leader.

**Non-Profit:** The use of GIS in non-profit organizations including community groups, conservation organizations, water quality monitoring associations, and the like has grown at a fast pace over the past few years. These organizations represent a significant proportion of users who access data and services through PASDA. Some of these include the Heritage Conservancy, Clearwater Conservancy, Nature Conservancy, Western Pennsylvania Conservancy, Stream Restoration Inc, Hollow Oak Land Trust, Breeding Bird Atlas Program, Chesapeake Bay Foundation, Canaan Valley Institute, Center for Coalfield Justice, PA Training and Technical Assistance Center, Partnership for the Delaware Estuary, CCAP, Rettew Assoc, PA Democratic Party, Eastern PA Coalition for Abandoned Mines, PennFuture, Western PA Watersheds, Brownfield Action Network, PA Environmental Council, Natural Lands Trust, PA Center for Environmental Education, Ben Franklin Technology Center, PA Association of Conservation Districts, PA Association of Township Supervisors, Sierra Club, Appalachian Mountain Club.

**Academic/K-12:** Most universities, colleges, and technical schools have some programs that include a GIS component. Many K-12 schools in Pennsylvania have GIS as well. Some of these include University of Pennsylvania, Temple, Drexel, University of Pittsburgh, Carnegie Mellon, Indiana University of Pennsylvania, Clarion University, California University, Kutztown, Bryn Mawr, Haverford, Bucknell, Shippensburg, Juniata, Lock Haven University, Penn State, Harrisburg Area Community College, York Advanced Skills Center, Dickinson University, Wilkes University, East Stroudsburg, Allegheny College, Slippery Rock, PA Academy of Science, Millersville, Broughal Middle School, Tuplehocken Middle School, Gettysburg College, State College Area Schools, Wissahickon Middle School, Mansfield University, Lafayette College, West Chester University, Dover Area High School.

**Examples of User Feedback:**

Dear Maurie:

It is my pleasure to offer this letter of support for PASDA. I have been teaching GIS at Carnegie Mellon University for over ten years and am the co-author of ESRI Press, Inc.'s best selling GIS Tutorial and GIS Tutorial for Health workbooks. The resources that are offered through PADSAs are extremely valuable in both our classroom setting and in student/faculty research. I often cite examples or download data from PASDA in my course lectures. We use PASDA data in our ESRI workbooks and refer customers of these books to the PASDA site as an extraordinary example of a GIS portal. I offer my full support to you and your team at The Pennsylvania State University for the continued success of PASDA.

Sincerely,

Kristen S. Kurland, Teaching Professor of Architecture and Public Policy, Carnegie Mellon University, School of Architecture/ H. John Heinz III School of Public Policy and Management

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To our partners at PASDA,

As a daily user of GIS, to support County and local planning programs, we have come to rely on the services your organization provides as the state geospatial data clearinghouse. We've also come to value the related services you provide to the GIS community in Pennsylvania. In Chester County the data, knowledge and support you provide significantly enhances our ability to use GIS in support of vital planning programs to help manage growth in the fastest growing county in the state. We also appreciate your service as a resource that is available to the local planning commissions, environmental advisory boards and other committees within our 73 municipalities. We often refer our municipal partners to PASDA and encourage them to take advantage of the resources you provide to augment their mapping and information needs. We know that this service is especially important at the local municipal level, since they are responsible for all development approvals in spite of the fact that resources are often quite limited. We look forward to continuing to work together with PASDA to continue building a partnership that benefits the entire GIS community in Pennsylvania and supports the needs of decision makers at each level of government.

Thank you,

Thomas West, Technical Services Director, Chester County Planning Commission

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Hi PASDA,

The most useful PASDA service I use is the PASDA Imagery Viewer and Download tool. When I need to see all publically available imagery for a certain site I check your service. Yours is the only place I can easily find False Color Infrared Imagery and easily see how it compares with other imagery products. I also appreciate being able to see small areas of USGS topo maps without having to display the entire quarter quadrangle or devote hardware space to it. Thank you for having a service which is rarely down, and which often has more current data than other providers.

Nancy S. H. Richwine, PA Department of Agriculture

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Maurie,

PASDA continues to be a great resource for GIS information across the state. It is the first place my staff goes when looking for geospatial data and when I get requests for geospatial data that we don't have, it is where I direct the public. My staff has even begun to use the Image service for our aerals because it is quicker than pulling our aerals from a server.

I also find the PASDA website intuitive and easy to use and am using it as an example during our own website redesign.

Thanks to you and your staff,  
Will

Will Stevens, GIS Manager, Delaware Valley Regional Planning Commission

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Hello Maurie,

My overall experience has been great. The site is well designed, and the data are easy to access and download. I have been using your elevation products on nearly all of my mining permit application reviews and pollution investigations. I am hoping to see the finalized LiDAR products in the near future. It is quite helpful in my geologic and hydrologic reviews and investigations to use the topographic surface represented by the LiDAR contours.

Scott Barnes, PA DEP

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Ms. Kelly,



We have found pasdas services to be very helpful over the past several years. Recently we found the Topo WMS and Aerial Photo WMS to be very helpful in creating maps in our county and for surrounding areas.

Thank you and keep up the good work.

Wade Gobrecht, Chief Analyst, York County Planning Commission

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Maurie,

Overall, I am very pleased with the the partnership with PASDA. It has proven to be a very effective tool for Allegheny County to distribute GIS data to the masses. Plus the PASDA staff is real nice too!

Matthew Mercurio, GIS Manager, Allegheny County

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Maurie,

I am Glenn Stuck, Snyder County GIS Director. We use numerous files that we have gotten from PASDA. I really would not know where to go to get much of this information if it weren't for PASDA. We thank you for providing the information at one easy to find location.

Glenn Stuck, Snyder County GIS Department

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Maurie,

I was forwarded your request for information regarding how we, being users of PASDA, have taken advantage of your site for our GIS needs. I would like to respond by saying that this site has been very instrumental in our work here at the Brandywine Conservancy. We purchase the majority of our base datasets from the surrounding counties, but turn to your site fist if we need any miscellaneous data. We have gotten the most benefit from the availability of up-to-date aerial photographs that you have made available for the region. Overall the PASDA site has proved to be an invaluable resource for me and my staff. I see it as a supermodel data clearinghouse.

Sincerely,

Erick Marklund, GIS Manager, Brandywine Conservancy

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To Whom It May Concern:

Your online mapping tools are incredible. I work for Reading Hospital in Berks County. I am trying to determine which zip codes fall into which townships. Is there any way to do that with your online mapping tools? I have MapPoint, but it's not possible to do this with this software.

Jan DiCintio, The Reading Area Hospital and Medical Center

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First I would like to thank PASDA for its services - they've been very helpful over the years. Your service and partners help make GIS data accessible to everyone.

Best regards,

Michael A. Leventry, GIS Analyst, Berks County Planning Commission

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Dear Ms. Kelly,

Thank You. Like every single other GIS user in the state I am always very grateful to have PASDA as a resource. I am pleased we are able to contribute our data.

Sincerely,

William Brokaw, Director of Geospatial Services, Heritage Conservancy

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Dear PASDA,

I just wanted to write and express my gratitude for the wonderful service your website provides, and also inquire about when the DCNR Lidar data that you will be hosting soon, might be available.

Thanks again for the service, and your time!

Kind Regards,

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GeoTech Engineering

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## PASDA Statistics July 2007-June 2008

### Internet Map Services and Applications

#### *Mapping Applications*

<i>Application</i>	<i>Users</i>
ImageryViewer	1475562
PA_Atlas	486311
Census	23193
PA_Quads	9954
Place Finder	4261
Ivan	3901
County Finder	3824
DelawareFlood	1325
Flood 2006	984
BeaverTrainWreck	122
Breeding Bird Atlas	142

#### *Internet Map Services*

<i>Service Name</i>	<i>Users</i>
PAMAP_AerialPhotography	1272551
DVRPC	485761
PA_AerialPhoto	189007
PA_Topo	88909
PA_Counties	76221
PA_Roads	38564
NAIP	32479
PA_Streams	27879
LatestRadar	27654
Latest Satellite	16007
PA Municipalities	16033
PA_Quadrangles	10110
LatestInfraredSatellite	8369
PA_Floodplains	8921
Pa_Watersheds	4349
PA_SchoolDistricts	4311
PA_NHD	1543
PA_Terrabyte	1506
PA_Senate_House	1409
PA_NHDWaterbody	14100
PA_Stewardship_Areas	568
NGA	146

### *Data Wizard*

Use statistics on the data wizard reflect users who have reached the point of actually selecting and downloading data using the data cart. These numbers do not reflect “hits” on the Data Wizard page.

<b><i>Month</i></b>	<b><i>Users</i></b>
2007-07	27861
2007-08	26858
2007-09	26901
2007-10	26872
2007-11	26807
2007-12	23350
2008-01	23785
2008-02	23556
2008-03	24117
2008-04	26953
2008-05	26049
2008-06	25721

### *PASDA Website*

Use statistics on the PASDA website reflect “hits” on the website beyond the home page—two levels into the site. For example, a hit is only registered if a user hits the homepage then advances to a second level page—Data Download, Online Mapping, etc. Applications, downloads, map services, and data downloads are captured in the statistics above.

<b><i>Month</i></b>	<b><i>Hits</i></b>
2007-07	1,031,023
2007-08	1,010,276
2007-09	1,295,056
2007-10	1,361,471
2007-11	1,352,880
2007-12	1,046,334
2008-01	1,289,062
2008-02	1,397,908
2008-03	1,578,229
2008-04	1,627,539
2008-05	1,714,006
2008-06	1,717,110

### *User Assistance*

Statistics on user assistance are gathered from e-mails and phone calls that are directed to [pasda@psu.edu](mailto:pasda@psu.edu), staff e-mail addresses, and phone calls to all staff.

<i>Month</i>	<i>E-mail</i>	<i>Phone</i>
2007-07	405	78
2007-08	444	82
2007-09	506	71
2007-10	539	93
2007-11	500	89
2007-12	451	72
2008-01	467	78
2008-02	499	85
2008-03	516	94
2008-04	518	96
2008-05	595	115
2008-06	562	106