



# PA State Geospatial Coordinating Board 2018 Annual Report



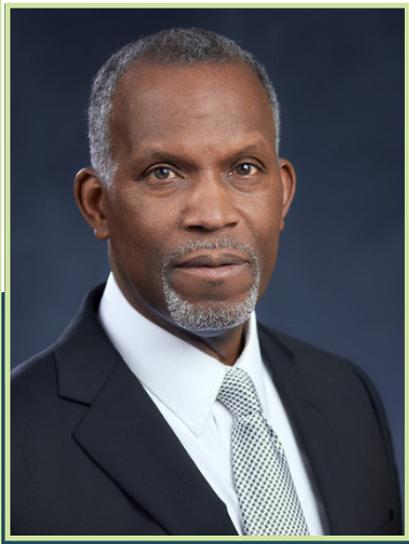
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# Michael Newsome, Secretary



I am pleased to present the Pennsylvania State Geospatial Coordinating Board (GeoBoard) annual report for 2018.

The members of the GeoBoard represent a variety of stakeholders and perspectives related to geospatial technologies. In 2018, the success of the GeoBoard continued to be defined by the pursuit of common goals for the benefit of the wider GIS community.

During the past calendar year, the GeoBoard published a strategic plan, established a GIS data sharing agreement, identified authoritative spatial data layers and their stewards, adopted a phased approach for continuously improving a base map, and continued outreach and education at a variety of stakeholder events. You can read more about these and other accomplishments throughout the report.

In 2019, we remain united in our collective challenge to improve the business outcomes from geospatial capabilities. Through the goals in our strategic plan, we will seek to:

- *Create a sustainable business model*
- *Facilitate the development of statewide authoritative data sets*
- *Ensure and promote public access to geospatial data and services*
- *Enhance collaboration, cooperation, and coordination*

I would like to thank the GeoBoard's members for their volunteer-based leadership, experience and dedication to the mission of the group.

Michael Newsome  
Pennsylvania Office of Administration

# About the GeoBoard

## Mission

The GeoBoard shall provide advice and recommendations to the Governor, the General Assembly, and the public on geospatial issues, uniform data standards, coordination and efficiency in geospatial policy, and technology across different sectors.

## Vision

Through the work of the GeoBoard and its partners, geospatial activities throughout the Commonwealth will be enhanced through open communication, collaborative efforts, unified planning, and coordinated implementation, resulting in effective and efficient use of Pennsylvania's geospatial resources.

The Pennsylvania State Geospatial Coordinating Board (GeoBoard) was established in 2014 under Act 178 to:

**“Provide advice and recommendations to the Governor and the citizens of this Commonwealth on geospatial issues and provide uniform data standards, coordination, and efficiency in geospatial policy and technology issues among Federal, State, and local government agencies, academic institutions, and the private sector.”**

According to Act 178, the GeoBoard has the following powers and duties:

1. Recommend data development priorities and interoperability standards for data sharing across agencies and different units of government across this Commonwealth.
2. Monitor national and state trends, identify issues of potential interest and concern to the Commonwealth, and submit annual reports to the Governor and the General Assembly and other reports as necessary.
3. Define and prioritize strategic opportunities where maps and spatial analysis activities could enhance the business of government and provide more cost-effective services to citizens. This may include recommendations of specific geospatial technology investments in the Commonwealth.
4. Develop task forces as needed to formulate recommended positions or actions. The task force membership may be comprised of board members or designees appointed by the board. The board shall consider any task force recommendations at its next meeting.

# GeoBoard Leadership Team

The leadership team is an unofficial title given to the collective group comprised of the GeoBoard Chair, Vice Chair, and all task force chairs. The Leadership Team strives to ensure GeoBoard operations comply with the intent of Act 178 and with Commonwealth requirements for advisory boards. Additionally, the Leadership Team acts as a focused communication platform where they engage in open dialogue, debate, and frequent interaction to advance the mission of the GeoBoard.

In 2018, the GeoBoard adopted a procedures framework to help guide governance and operations.

# Task Forces

As identified in Act 178, under official duties and responsibilities, the GeoBoard may develop task forces as needed to formulate recommendations and perform actions. At the Board's initial meeting in March 2016, the GeoBoard created three task forces in accordance with the authority set out in the enabling legislation. The current task forces are: Service Delivery, Data Program, and Governance. The GeoBoard formally adopted charters that guide the task force activities. Task force meetings occur as needed, with certain task forces meeting as frequently as twice a month in 2018. Task force members are volunteers from within and outside of the GeoBoard, including members from local, county, and state government agencies, academia, and the private sector. Task forces can choose to form one or more working groups to focus on key goals and objectives.



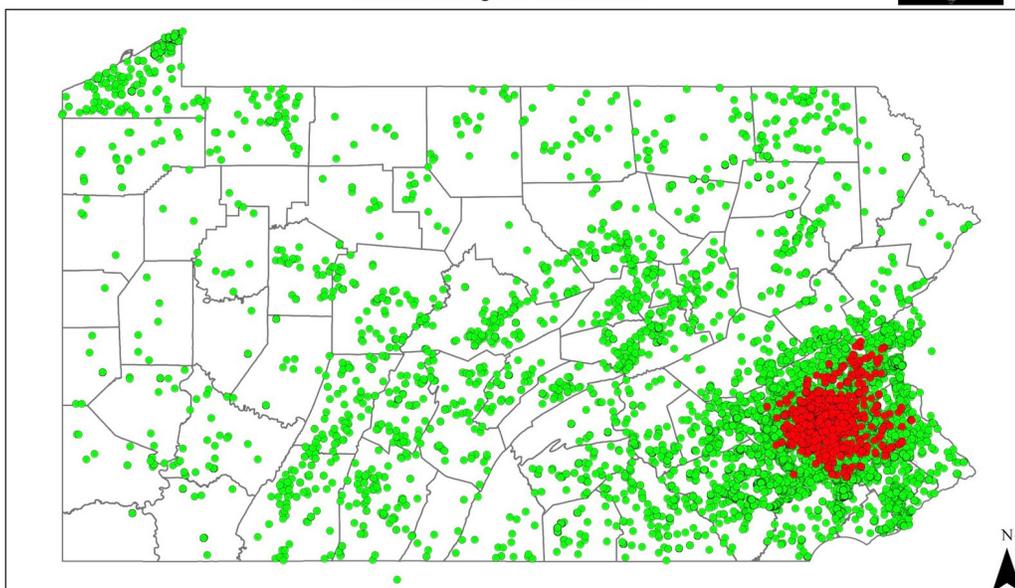
Grand Canyon of Pennsylvania, Wellsboro, PA

# 2018 GeoBoard Highlights

The following list represents important GeoBoard highlights from calendar year 2018.

1. Approved and published the Strategic Plan
2. Established a Legislative Review Subcommittee of the Governance Task Force
3. Approved and published the 2017 Annual Report
4. Created an interactive website to showcase the 2017 Annual Report
5. Concluded Legislative Review Subcommittee report on PA House Bill 1106 (Printer's No. 1931). Opened discussions with HB 1106 backers for amending HB 1106
6. Established a Procedures Subcommittee of the Governance Task Force
7. Established a position regarding PA HB 1106 and posted to website
8. Approved an official procedures document to guide GeoBoard members
9. Approved a data sharing agreement
10. Approved a Phase 1 approach for the PA Base Map
11. Created a collaboration platform for Board members to share ideas and documents

2014 -- 2017 *Lycorma* Detection Survey  
Results through 10 October 2017



**Spotted Lanternfly Presence**

- Positive
- Negative



# Agriculture

The agriculture industry is a major employer and contributor to the Commonwealth's economy. Agriculture generates employment and economic activity on 59,000 farms and in every county in the Commonwealth. On-farm agriculture production underpins a large food processing industry and agriculture support services located throughout the state, including bakeries, confectioners, dairy and meat processors, and snack food manufacturers, among others. Pennsylvania's equine industry includes some of the top breeding farms nationwide and supports a strong racehorse industry. The state's forest products sector is grounded in hardwoods production, where Pennsylvania ranks first in export grade hardwood. [1]

## How GIS Data can help:

GIS offers farmers various data management opportunities to analyze ways to increase production, reduce input costs, and manage farmland efficiently, from handheld computer mapping in the field to the scientific analysis of production data at the farm manager's office.

## Example: Spotted Lanternfly

The Spotted Lanternfly, *Lycorma delicatula* (White), an invasive planthopper, has been discovered in Berks County, Pennsylvania. It is native to China, India, Vietnam, and introduced to Korea where it has become a major pest. This insect has the potential to greatly impact the grape, hops, and logging industries. Early detection is vital for the protection of Pennsylvania businesses and agriculture. In order to facilitate early detection and address this threat the PA Spotted Lantern Fly reporting app was created. [2]

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1. Source: PA Department of Agriculture, Economic Outlook, 2018
  2. Source: PA Department of Agriculture, 2018 (<https://extension.psu.edu/have-you-seen-a-spotted-lanternfly>)

# Benefits of Data Sharing

# 2018 Accomplishments

The following represents the GeoBoard's important accomplishments in calendar year 2018. The dates that frame the list align with 2018 Board meetings.

## February 26, 2018

- Approved and published the Strategic Plan
  - *A Geospatial Strategic Plan for the Commonwealth of Pennsylvania was developed by the GeoBoard to lay the foundation for the future of Pennsylvania's geospatial environment. Four strategic goals were established.*
    1. Create a Sustainable Business Model
    2. Facilitate the Development of Statewide Authoritative Datasets
    3. Ensure and Promote Public Access to Geospatial Data and Services
    4. Enhance Collaboration, Cooperation, and Coordination
- Established a Legislative Review Subcommittee of the Governance Task Force
  - *The Legislative Review Subcommittee was formed to ensure the GeoBoard is kept aware of legislative affairs which may impact the geospatial community. The subcommittee is tasked with review of the legislative action and creation of a report submitted to the GeoBoard for action.*
- Approved and published the 2017 Annual Report
  - *As per the Act that governs the activities of the GeoBoard, an Annual Report was developed and delivered to various stakeholders outlining the accomplishment of the Board for 2017.*
- Created an interactive website to showcase the 2017 Annual Report
  - *Utilizing the content of the Annual Report, the GeoBoard developed an interactive geospatially-enabled Story Map that highlighted the 2017 activities of the Board with maps, graphics, charts, case studies, and video testimonials.*
- *The Legislative Review Subcommittee completed an official review of PA House Bill 1106 (Printers No. 1931) which concluded several adverse effects to the geospatial community could occur if enacted. Four key alterations were suggested to mitigate these effects:*
  1. Expand definitions section
  2. Incorporate NCEES Model Rules
  3. Incorporate "mapping grades"
  4. Develop standardized, legally sound, and universally agreed upon disclaimer:

The Legislative Review Subcommittee established dialogue with HB 1106 sponsors to work through the issues and establish a common ground.
- Established a procedures subcommittee of the Governance Task Force
  - *The Procedures Subcommittee was created to streamline, formalize, and document the operations and procedures of the GeoBoard and create a platform of operational review to enable improvement over time.*

## August 20, 2018

- Established a position regarding PA HB 1106 and posted to website
  - *Following the report of the Legislative Review Subcommittee on PA House Bill 1106 (Printers No. 1931), an official position of the Board was established. This official position was voted for dissemination on the GeoBoard website and to stakeholders in the legislative process. Official position summary: The PA State GeoBoard officially does not endorse HB 1106 (Printers No. 1931) and recommends alterations be made to mitigate possible negative impacts to the geospatial community.*

## May 21, 2018

- Legislative Review Subcommittee concluded report on PA House Bill 1106 (Printer's No. 1931). Opened discussions with HB 1106 backers for amending HB 1106

## November 5, 2018

- Approved an official procedures document to guide GeoBoard members
  - The Procedures Subcommittee official procedures and operational practices were approved and enacted by the GeoBoard.



- Approved a data sharing agreement
  - *A finalized data sharing agreement was voted and adopted by the GeoBoard as the official data sharing agreement to be utilized in the facilitation of data sharing activities between data stewards.*
- Approved a Phase 1 approach for the PA Base Map
  - *Adopted and defined the approach of the Phase 1 Base Map. This allows for the publishing of “best available” data layers by PASDA (Pennsylvania State Data Access) via a website that includes links to download datasets and more advanced connectivity access capabilities such as web services.*
- Created a collaboration platform for GeoBoard members to share ideas and documents
  - *A SharePoint repository was established that allows GeoBoard and Task Force members to collaborate on the development of products such as the Strategic Plan, Annual Report, Task Force reports and recommendations, etc., as well as submit topics for discussion and GeoBoard consideration.*

## Service Delivery Task Force

### Completed a year-long user feedback study and report

- The Service Delivery Task Force conducted focus group sessions that included representatives from counties, state and federal agencies, educational institutions, nonprofit organizations, and business and industry throughout the Commonwealth. The results will be used to more effectively guide the deployment of geospatial services and development of data in the future. In addition, these outreach sessions resulted in several new data partnerships which will grow in the future.

### Presentations and engagement with data users at PA GIS and PA NENA Conferences

- Members of the Service Delivery Task Force presented at the 2018 PA GIS and PA National Emergency Number Association Conferences. These conferences provided a forum for open communication with emergency service personnel

and geospatial professionals regarding data sharing and services. Attendees conveyed the importance of working together with the Pennsylvania Emergency Management Agency as Next Generation 911 moves forward.

### Creation of Stage 1 Base Map landing page and data services

- A Base Map landing page now exists for users to easily access the 12 state-wide themes identified by the Data Task Force. As data and services develop, this page will expand with the goal of providing current and accurate Pennsylvania geospatial data to all users. More Pennsylvania county parcel data is being served than ever before, and much of that effort is the result of collaboration between counties and the many members of the Geospatial Coordinating Board.

### Meetings with PEMA regarding NG911 and data services

- Discussions were held with Pennsylvania Emergency Management Agency regarding the Pennsylvania Emergency Management Agency Imagery Acquisition Project as well as Next Generation 911 data and services. These discussions will continue to take place in order to coordinate access to the latest state-wide imagery products. The user feedback sessions determined that coordination with Pennsylvania Emergency Management Agency on Next Generation 911 data and services will be a critical function as we strive to enhance geospatial data, applications, and infrastructure that will support Next Generation 11 systems.



# Health and Wellness

## Focus on Cancer

Cancer is the second leading cause of death in Pennsylvania, exceeded only by heart disease. More than 75,000 Pennsylvanians are diagnosed every year. [1] In addition, Pennsylvania ranks 6th in the United States for pediatric cancer. [2]

## How GIS Data Can Help

- GIS data can help identify barriers to individuals who need to access resources and services such as transportation to hospitals and care centers, cancer screening and tests, to support populations at greatest risk and need.
- GIS data can help identify common risk factors as well as analyze how those factors can be mitigated.
- GIS data can help analyze data on types of cancer, cancer rates, and impacts in local communities.

## Example: The Story of Cancer in Central Pennsylvania

Doctors and researchers from the Penn State Cancer Institute created the Story of Cancer in Central Pennsylvania which is a GIS based map and related story of cancer from the perspective of specific local populations. It allows users to drill down to local data and presents a strategy to address cancer and how patients can navigate through this terrible disease. County data was key in creating this resource and understanding the extent of and services for cancer patients.

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1. Source: Pennsylvania Department of Health, 2018
  2. Source: Center for Disease Control, 2018
  3. Source: The Story of Cancer in Central Pennsylvania, 2018 (<http://redlands.pop.psu.edu/storymap/index.html>)

# Benefits of Data Sharing

## Data Program Task Force

The Data Program Task Force (DPTF) has spent the majority of the last year developing a more cohesive approach to the development, sharing, and management of various data sources that make up the PA Base Map. In conjunction with the Service Delivery Task Force, the DPTF studied mechanisms that are designed to ease and facilitate the sharing of data amongst authoritative data authors and data consumers. The PA Base Map and effective data sharing strategies support the GeoBoard's goals of coordinating data management activities and providing public access to these datasets.

### Data Sharing Agreement

- Developed, approved, and released a standard data sharing agreement that can be utilized between various authors of geospatial data across the Commonwealth. The data sharing agreement can be utilized by local, county, state, and federal partners to govern the transfer and availability of data sets not only for the PA Base Map, but for any publicly available data they may author.
- Presented at the County Commissioners Association of Pennsylvania Annual Fall Conference to a group of commissioners on the value of open data and presented the data sharing agreement for their review.
- Presented at the County GIS Pros regular meeting to discuss the value of open data and to facilitate support for the GeoBoard's mission of making more geospatial data publicly available.

### PA Base Map

- While working closely with the Service Delivery Task Force, the DPTF gathered information regarding the 12 data themes of the PA Base Map and utilized this metadata to develop the "best available" data for the initial release of the PA Base Map.
- Ongoing information collection for the next phase of the PA Base Map development. Efforts have begun to develop optimized standards for the PA Base Map data themes and to identify opportunities to consolidate redundant data sets. Architecture planning for the support of data portals is also ongoing.
- Fostered the efforts of data work groups that focus on the refinement and improvement of specific

data sets. These work groups met on a regular basis and are comprised of the Hydrography work group, the Civic Boundary work group, the LiDAR work Group, and the NextGen911 working Group.

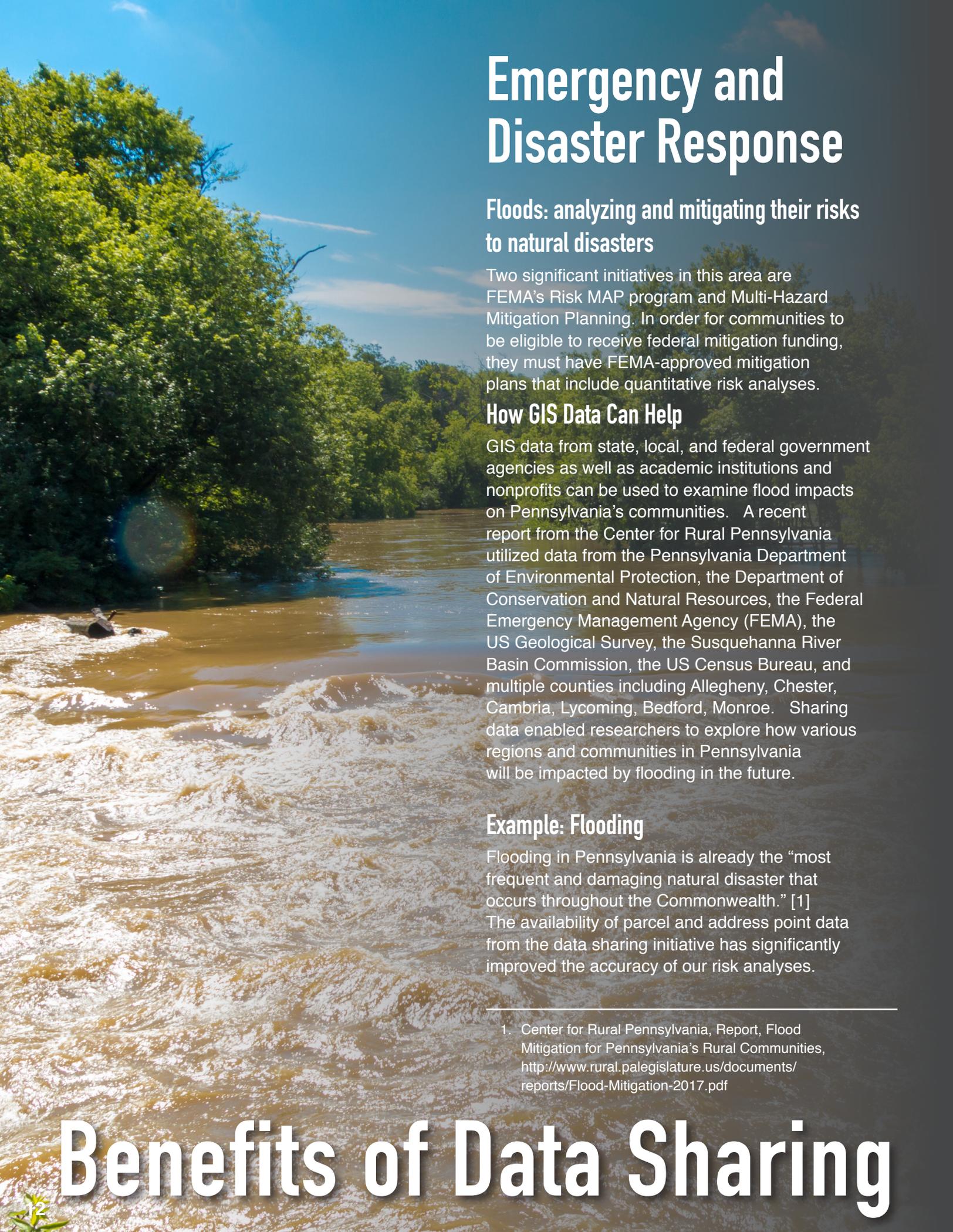
- *The Hydrography work group is currently developing a modernization plan to create an improved water network model for Pennsylvania and to ensure that the proper authoritative owner is identified to develop and maintain this data set.*
- *The Civic Boundary work group has focused on data sets that delineate the boundaries between various political subdivisions. The work group has looked closely at the processes that are utilized today to maintain this data and has been in discussions with the neighboring states of New York and New Jersey to unify their versions of official state boundaries. Lastly, the work group has worked closely with the U.S. Census in clarifying political boundaries for the census activities and streamlining annual update processes.*
- *The LiDAR work group, through the leadership of the Pennsylvania Department of Conservation and Natural Resources, secured \$2.15 million in guaranteed funding for the inclusion of 22 counties (15,000 square miles) including 8 FEMA priority counties through the USGS 3DEP (3D Elevation Program). The USGS will include \$1.22 million towards the project for a total investment of \$3.37 million.*

## Governance Task Force

The Governance Task Force focused its efforts last year to three key topics: Board acceptance of the Strategic Plan, establish Legislative Review Subcommittee and review pending legislation for impacts on PA's geospatial community (PA House Bill 1106 and US Senate Bill 2023), and development of GeoBoard operating procedures.

### Strategic Plan Acceptance

- Strategic Plan was prepared by the Governance Task Force in cooperation with all other Task Forces throughout 2017.
- Early 2018 the Governance Task Force disseminated the Strategic Plan amongst the GeoBoard members for final review.
- Strategic Plan was accepted by the GeoBoard at its February 26, 2018 meeting of the PA State Geospatial Coordinating Board.



# Emergency and Disaster Response

## Floods: analyzing and mitigating their risks to natural disasters

Two significant initiatives in this area are FEMA's Risk MAP program and Multi-Hazard Mitigation Planning. In order for communities to be eligible to receive federal mitigation funding, they must have FEMA-approved mitigation plans that include quantitative risk analyses.

### How GIS Data Can Help

GIS data from state, local, and federal government agencies as well as academic institutions and nonprofits can be used to examine flood impacts on Pennsylvania's communities. A recent report from the Center for Rural Pennsylvania utilized data from the Pennsylvania Department of Environmental Protection, the Department of Conservation and Natural Resources, the Federal Emergency Management Agency (FEMA), the US Geological Survey, the Susquehanna River Basin Commission, the US Census Bureau, and multiple counties including Allegheny, Chester, Cambria, Lycoming, Bedford, Monroe. Sharing data enabled researchers to explore how various regions and communities in Pennsylvania will be impacted by flooding in the future.

### Example: Flooding

Flooding in Pennsylvania is already the "most frequent and damaging natural disaster that occurs throughout the Commonwealth." [1] The availability of parcel and address point data from the data sharing initiative has significantly improved the accuracy of our risk analyses.

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1. Center for Rural Pennsylvania, Report, Flood Mitigation for Pennsylvania's Rural Communities, <http://www.rural.palegislature.us/documents/reports/Flood-Mitigation-2017.pdf>

# Benefits of Data Sharing

## Legislative Review Subcommittee

- PA House Bill 1106 (Printers No. 1931) was brought to the GeoBoard's attention by a GeoBoard member at the February 26, 2018 meeting of the PA State Geospatial Coordinating Board. During this meeting, the Governance Task Force formed a Legislative Review Subcommittee to review, discuss, and report on legislative affairs that impact the PA geospatial community.
- Legislative Review Subcommittee completed an official review of PA House Bill 1106 (Printers No. 1931). Report presented at the May 21, 2018 meeting of the PA State Geospatial Coordinating Board concluded several adverse effects to the geospatial community could occur; suggested alterations to mitigate negative effects.
- Legislative Review Subcommittee engaged stakeholders and House Bill 1106 sponsor organizations to discuss legislation and possible alterations to mitigate negative impacts to the community.

•At the August 20, 2018 meeting of the PA State Geospatial Coordinating Board, an official position of the GeoBoard was voted into acceptance on PA House Bill 1106 (Printers No. 1931) as being non-endorsed by the Board. Official position voted to be disseminated immediately.

U.S. Senate Bill 2128 / House Bill 3522 - Reviewed and determined to have little impact to PA geospatial community and official report not required.

Continued to monitor the Bill until its passage on October 3, 2018.

## GeoBoard Operating Procedures

- At the May 21, 2018 meeting of the PA State Geospatial Coordinating Board, the Procedures Subcommittee was formed under the Governance Task Force to streamline, formalize, and document the operations and procedures of the GeoBoard and create a platform of operational review to enable improvement over time.
- Procedures subcommittee developed draft operating procedures and brought to membership to review at August 20, 2018 meeting.
- At the November 5, 2018 meeting of the PA State Geospatial Coordinating Board the Procedures Subcommittee's draft procedures and operational practices were approved and enacted by the GeoBoard.

# Outreach

GeoBoard Chairs presented at the annual Fall County Commissioners Association of Pennsylvania (CCAP) conference in November. Besides background on the GeoBoard, the presentation highlighted the benefits of adopting an open data approach and use of the data sharing agreement created for such a purpose.

Meetings that included topics on the GeoBoard's background, approach, coordination framework, task forces, strategic plan, and base map layers were held with executives from the following Commonwealth business lines:

1. Pennsylvania Emergency Management Agency in October
2. Department of Agriculture in November
3. Department of Transportation in December

Members of the GeoBoard, including the Task Force chairs, presented at the annual PA GIS Conference in June.

In November, the annual GIS Day was held in conjunction with Harrisburg Area Community College.





# Health and Wellness

## Walkability and Healthy Lifestyle

Access to healthy food and community services is important for living a healthy lifestyle but there can sometimes be challenges.

This is particularly true in our inner cities and rural areas. Finding ways to ensure that citizens can live a healthy lifestyle is key to ensuring their long-term health.

## How GIS Data Can Help:

- GIS data can help identify locations of grocery stores, farmers markets, and other resources.
- GIS data can analyze accessibility of these resources for our local populations.
- GIS data can help site new stores and farmers markets, bike and walking routes, and public transportation.

## Example: Walkshed Philadelphia

Walkshed is a web application that uses an advanced methodology to calculate and map walkability and access to services such as grocery stores, farmers markets, pharmacies, libraries, bookstores, and even fitness centers in the Philadelphia area. Data from the City of Philadelphia was vital to the development of this resource.

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1. Source: Walkshed Philadelphia, 2018  
(<http://walkshed.org/philly>)

# Benefits of Data Sharing

# APPENDIX: Membership

The designees, alternates, and volunteers make the GeoBoard possible and successful.

State Geospatial Coordinating Board Contact Sheet		
VOTING MEMBERS		
Organization Member	Member Name	Formal Designee
Secretary of Administration	Michael Newsome	John MacMillan
Secretary of Environmental Protection	Patrick McDonnell	Sean Crager
Secretary Conservation and Natural Resources	Cindy Dunn	Gail Blackmer
Director of Pennsylvania Emergency Management Agency	Randy Padfield, Acting Director	Jeff Thomas
Secretary of Transportation	Leslie Richards	Frank DeSendi <i>(On Behalf of Jim Ritzman)</i> Laine Heltebride
Secretary of General Services	Curtis Topper	Matt Bembenick
SENATE: Municipal Authority	—	—
SENATE: Elected Local Government Official - Rural Community	—	—
SENATE: Elected Local Government Official - Suburban Community	—	—
HOUSE: Elected Local Government Official - Urban Community	—	—
HOUSE: Employee of County Emergency Management Agency	Phil Colvin	—
HOUSE: Individual with Expertise in Geospatial Technology	—	—
County Commissioner	Kathi Cozzone	Rita Reynolds
Pennsylvania Society of Land Surveyors	Matthew Warner Professional Land Surveyor Herbert, Rowland, & Grubic, Inc.	—
Individual with Expertise in Data Development and Sharing	Kenneth Juengling GIS Manager PA Turnpike Commission	—
County GIS Professionals Association of Pennsylvania	Barry Hutchins, Senior Public Safety GIS Program Manager, County of Lycoming	Laura Simonetti <i>(ONLY WHEN BARRY HUTCHINS IS NOT AVAILABLE)</i>
Pennsylvania Mapping and Geographic Information Consortium	Dave Gilbert	—
County Commissioners Association of Pennsylvania	Erick Coolidge Tioga County Commissioner	Scott Zubek <i>(ONLY WHEN ERICK COOLIDGE IS NOT AVAILABLE)</i>
Pennsylvania Chapter of the Management Association for Private Photogrammetric Surveyors	Howard Hodder	—

## State Geospatial Coordinating Board Contact Sheet

### NON-VOTING MEMBERS

Organization Member	Member Name	Formal Designee
United States Geologic Survey Mapping Liaison	Eliza Gross Scott Hoffman <i>(Retired 1/3/2019)</i>	—
Pennsylvania One-Call System	Bill Kiger	—
Public Utility Commission - Chairman	Gladys Brown	Paul Metro
Pennsylvania State System of Higher Education - GIS Consortium	Scott Drzyzga	—
Pennsylvania Municipal Authorities Association	Craig Thomas	—
American Planning Association, Pennsylvania Chapter	Brian Traylor	—
Pennsylvania Spatial Data Access - Director	Maurie Kelly	—
Pennsylvania State Police Commissioner	Tyree Blocker	Adam Repsher



**PA State Geospatial Coordinating Board**  
**2018 Annual Report**