DIGITAL MAPPING TECHNIQUES 2024

The following was presented at DMT '24
May 13 - 16, 2024

The contents of this document are provisional

See Presentations and Proceedings
from the DMT Meetings (1997-2024)
http://ngmdb.usgs.gov/info/dmt/

Enhancing Accessibility and Relevance of Geological Products in the Digital Age

By Alfred C. Guiseppe

Pennsylvania Geological Survey

3240 Schoolhouse Road, Middletown, PA 17057

aguiseppe@pa.gov

In the fast-paced digital era, maintaining the timeliness, relevance, and accessibility of our products is paramount.

State geological surveys bear the vital responsibility of generating and disseminating geologic information to stakeholders, constituents, and the broader geologic community. With this mandate comes the duty to deliver pertinent information promptly and in easily accessible formats. As the needs of our communities evolve, it is imperative for geological surveys to remain abreast of these changes to stay relevant.

To enhance the timeliness of our products, the Pennsylvania Geological Survey (PaGS) is implementing a streamlined publication process to increase the number of maps and reports published annually. This involved adopting a sundered publication model, enabling us to track downloads by specialized topic as well as geographic significance. The statistics gathered will inform future mapping efforts, ensuring they are focused on more relevant subject matter. Additionally, PaGS has enhanced the functionality of our primary delivery website, PaGEODE, to improve the accessibility and ease of use of our products. We have also introduced expanded feedback mechanisms to better understand user experiences and needs, that will enable the timely delivery of relevant geologic products to the public.

In recent years, the publication of PaGS maps and reports became entangled in seemingly endless review cycles. This impasse severely hindered production and dampened enthusiasm among authors. In 2023, PaGS took steps to streamline the publication process, focusing on providing authors and project teams with more control and flexibility, defining objectives within agreed timeframes, and standardizing report and map templates. This resulted in the creation of a new publication series, Data Release, to release processed digital data to the public while analysis and report preparation are ongoing. This change enables outside organizations to utilize collected data without waiting for a formal report. Moreover, we believe this expanded data sharing will foster collaboration opportunities with other research institutions resulting in more robust geologic interpretations.

As the survey prioritizes mapping projects, it is crucial to gauge the needs of our end-users. When allocating resources between bedrock and surficial geology mapping projects, understanding which maps are more useful to our stakeholders is invaluable. In 2023, we implemented an approach that separates maps of the same project into distinct publications. Instead of presenting a single report with multiple maps (e.g., bedrock and surficial geology), we produce three separate publications: a bedrock geologic map, a surficial geologic map, and a geologic report. By tracking the downloads of each, we can

objectively assess the utility of individual products, enabling us to make more informed decisions regarding the relevancy and usefulness of future mapping efforts.

In the private sector, workers often prioritize speed over quality when faced with looming deadlines. Our 1:250,000 scale bedrock geologic map is the most frequently used (and misused) publication due to its accessibility. In the private sector time is money; therefore, utilization of an outdated statewide geologic map is the prudent approach. The return on investment to locate a more recent and applicable map of the project area is lost if it takes too much time to acquire. Acknowledging this reality, PaGS is revamping our interactive map, PaGEODE, our primary delivery site for all mapping products, to facilitate quicker access to current geologic data. Dubbed "The Living Map", this new concept will enable users to effortlessly access and download the latest mapping of their area of interest. While enticing in theory, the required digital infrastructure poses a challenge within governmental resources constrains.

In response to changing user needs, PaGS actively seeks feedback from the geologic community. Recently, we conducted a real-time survey poll at the annual meeting of the Pennsylvania Council of Professional Geologists (PCPG). The poll focused on products and services, providing valuable insights into how we are perceived by our primary constituents. We intend to continue engaging stakeholders and the general public to raise awareness of the products and services we offer and tailor our work to meet the ever-changing needs of our end-users.

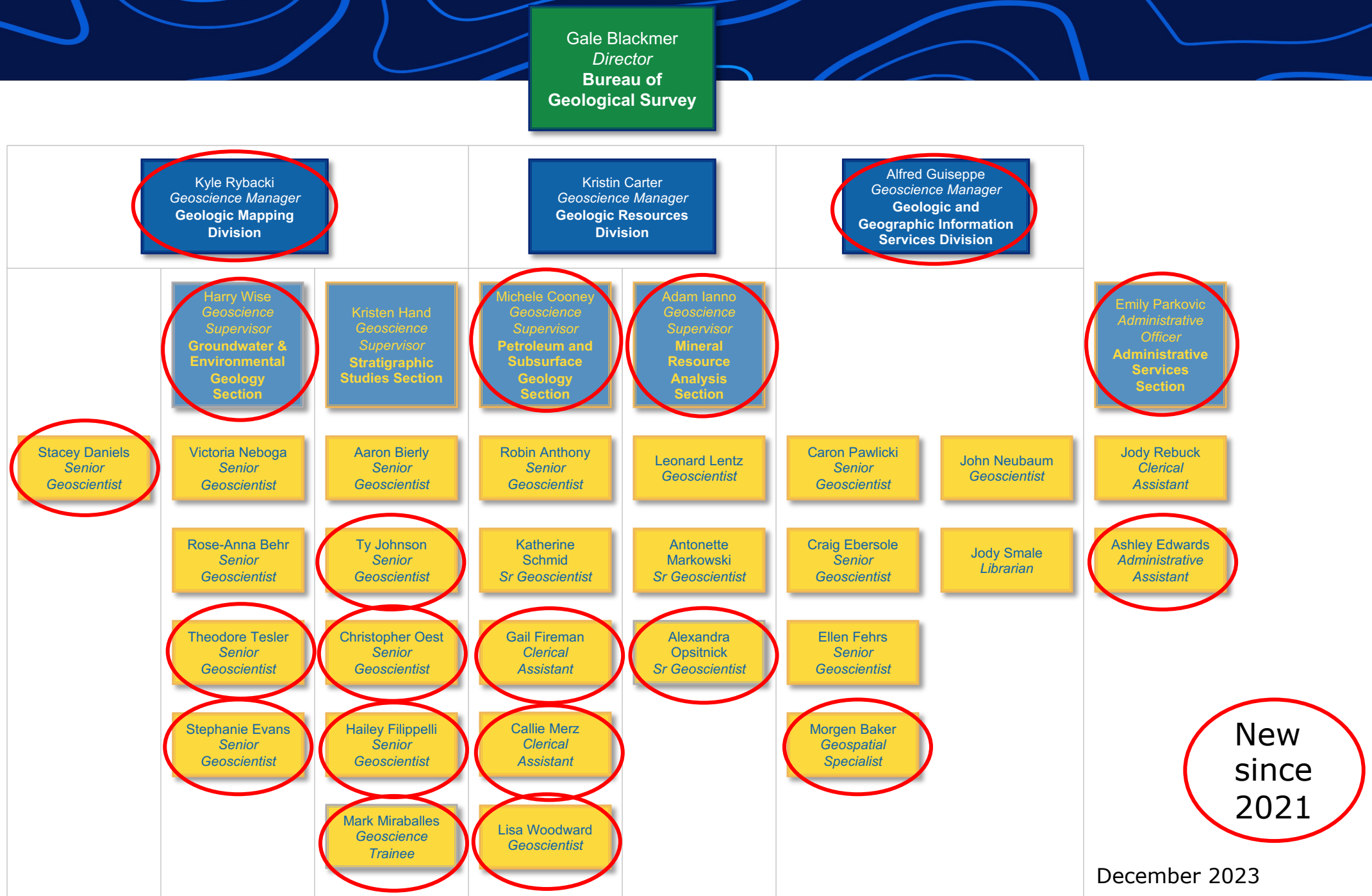
pennsylvania
DEPARTMENT OF CONSERVATION
AND NATURAL RESOURCES

Enhancing Accessibility and Relevance of Geological Products in the Digital Age

Al Guiseppe, P.G., Pennsylvania Geological Survey

We've always done it this way

Photo by Ralph Stone at the 1925 Association of State Geologists Field Trip



December 2023

The Times They Are A-Changin'

Timely

Relevant

Accessible

Images generated by AI through Microsoft Designer Image Creator

Publication Process Improvements

'Data Release' as new publication series

- Digital data only:
  - GIS data (features, tables, TINs, etc.)
  - Lab results (tabular data, analytical reports, etc.)
- No prepared plates or graphics
- No interpretations
- Must contain full metadata

Streamlined publication/review process

- More control/flexibility given to author's supervisor
- Defined objectives within agreed timeframe
- Standardized report templates

Data Release

Precedes interpretive technical report	• Release laboratory analytical data ***before*** incorporating into final report
Periodic updates to comprehensive reports	• Example: • OFMR 11-01.1 Directory of the nonfuel-mineral producers in Pennsylvania
Updates to previously published Open-File reports	• Example: • OFGG 11-01.1 Folds of Pennsylvania—GIS data

Publication Review Sign-Off Form

PUBLICATION REVIEW SIGN-OFF FORM

Suggested Citation

Tracking ID	Project ID	Project	Grant

PROJECT ROLES & RESPONSIBILITIES

NAME	ROLE	RESPONSIBILITIES
	Lead Author	Collect, analyze, and communicate geologic data. Formulate interpretations and conclusions.
	Co-Author(s)	Assist lead author
	GIS Support	Provide data schema for data collection. Create GIS products from dataset(s) provided by author(s). Apply cartographic standards to map products. Generate metadata.
	Section Supervisor	Provide edits focused on the content. Work with author in iterative steps to perfect document. *Reading as relative subject matter expert.*
	Copy Editor	Check readability, grammatical accuracy, conformity to Survey report style, references, appendices, illustrations, and internal consistency.
	Peer Reviewer 1	External review – *Reading as subject matter expert.*
	Peer Reviewer 2	External review – *Reading as subject matter expert.*
	Division Manager	Provide edits focused on the content—focus is "big picture" and more holistic than supervisor edits. *Reading as non-expert professional.*
Al Guiseppe	GIS Manager	Data and metadata standards & review.
Gale Blackmer	Bureau Director	Final review

At every stage of review, turnaround time will be discussed/determined with the author and will be respected.

PUBLICATION ELEMENTS

NAME	TYPE	COMMENTS

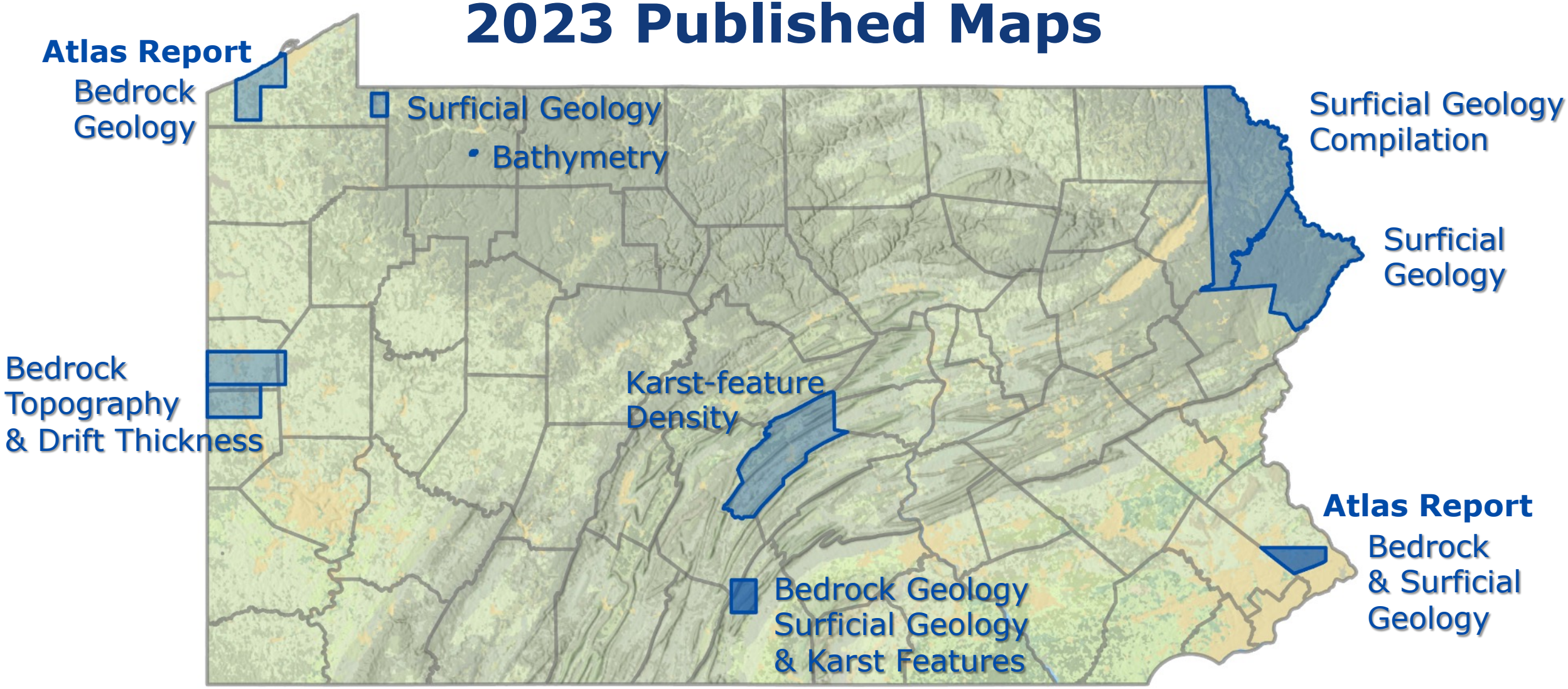
PUBLICATION REVIEW NOTES

REVIEWER NOTES

APPROVAL

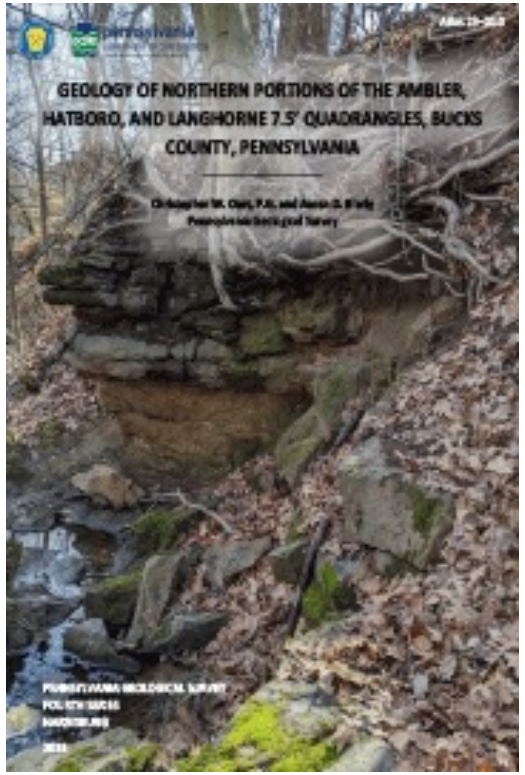
NAME	SIGNATURE	DATE

2023 Published Maps



Breaking apart publications

Atlas 23–01.0



111 downloads

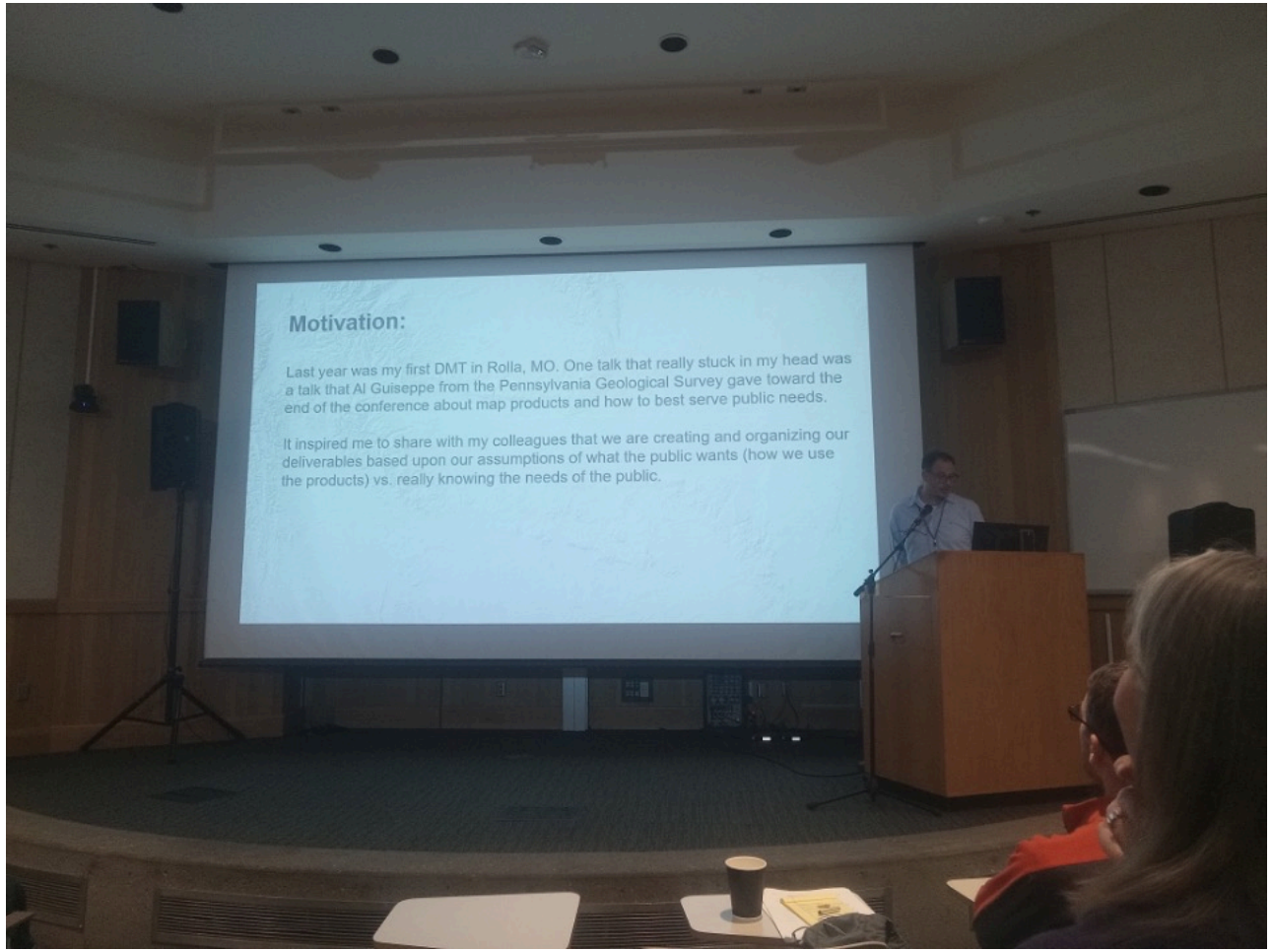
Map 23–01.0

186 downloads

Map 23–02.0

160 downloads

James Amato - Wyoming State Geological Survey



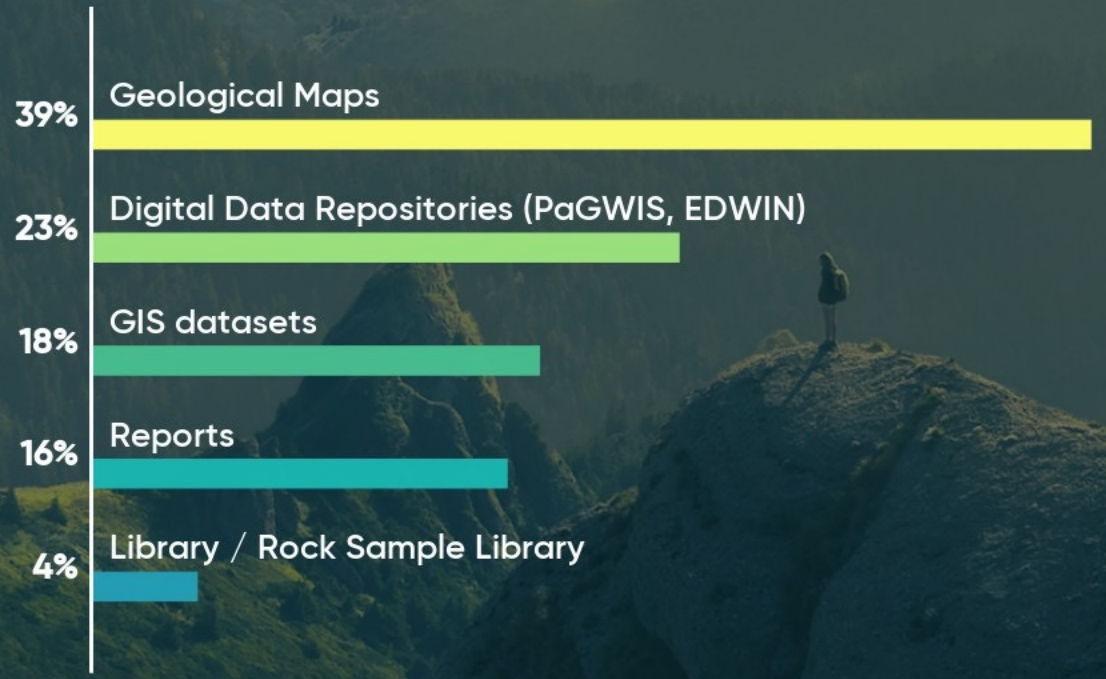
Survey on the Survey

Join at menti.com

How do you obtain our products?

Mentimeter

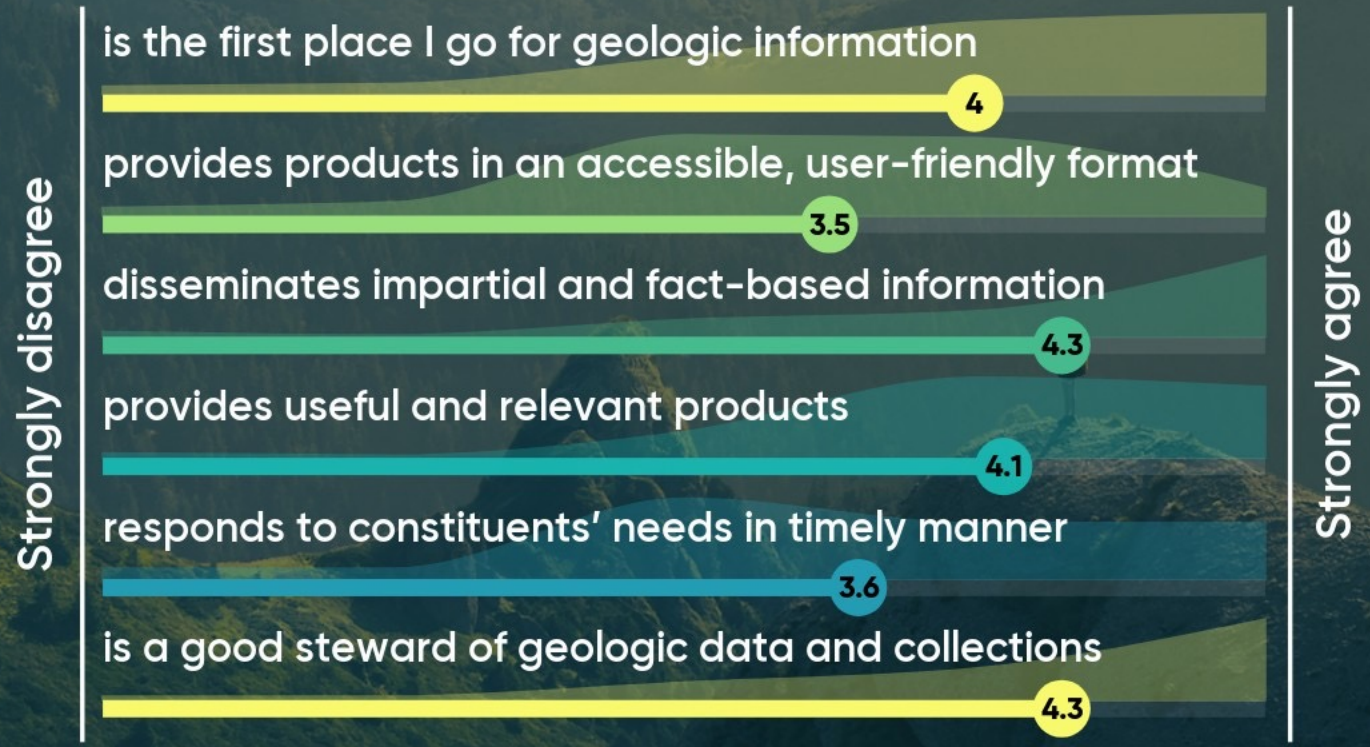
How useful are these products in your work?



15 81

Mentimeter

The Pennsylvania Geological Survey...

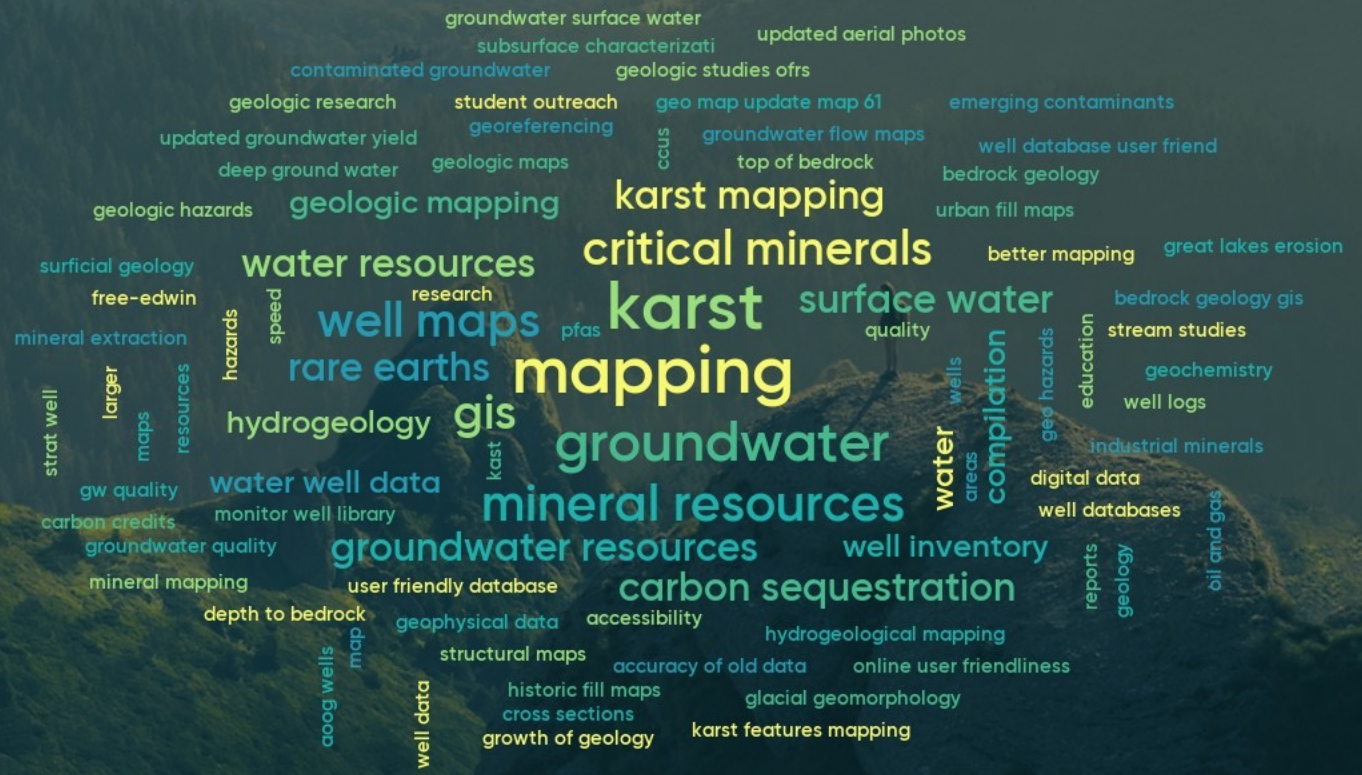


10 78

Mentimeter

What should the Pennsylvania Geological Survey be working on?

146 responses

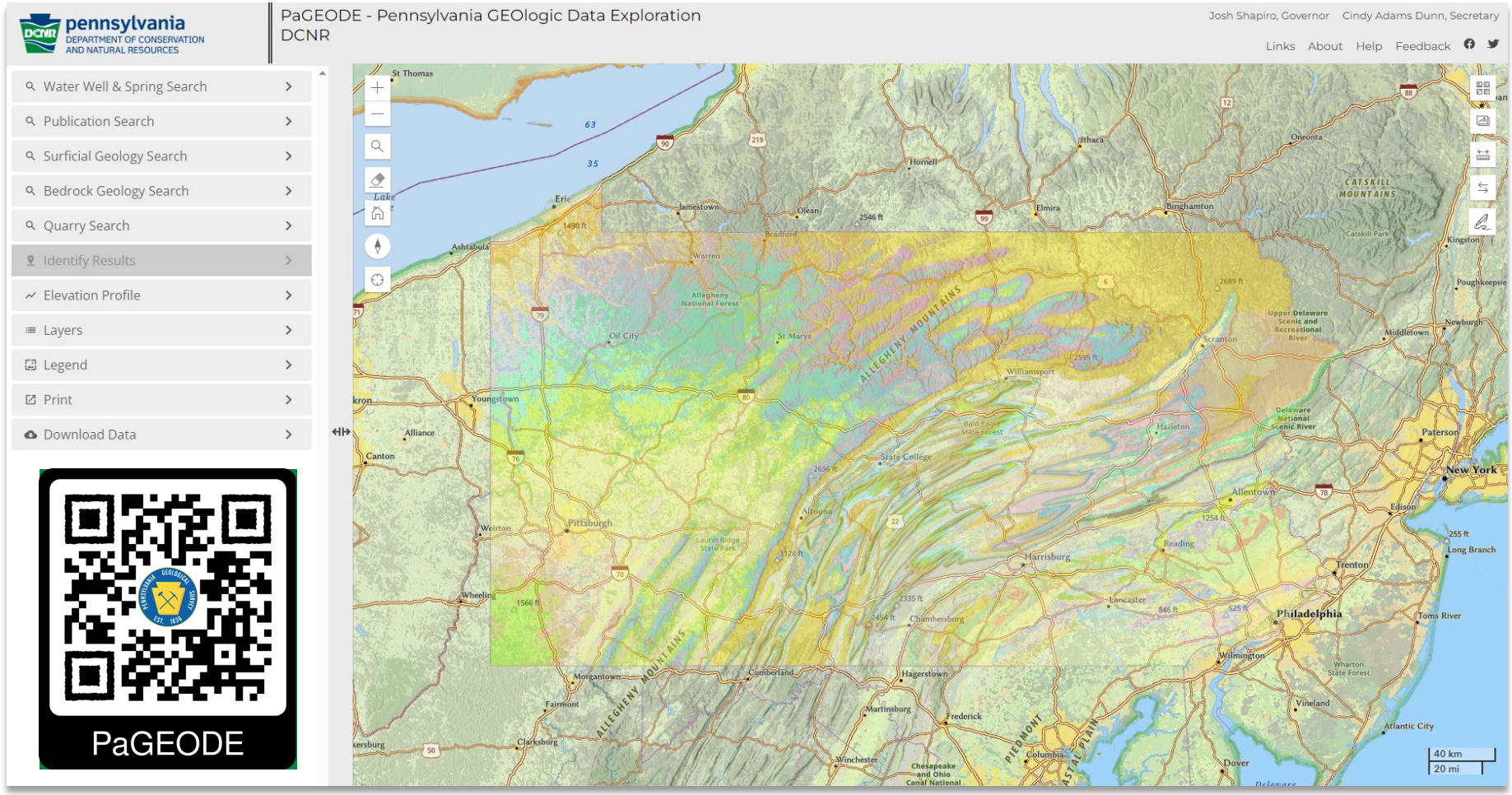


14

62

PA Geologic Data Exploration

https://www.gis.dcnr.state.pa.us/pageode/



Now is the time

Image generated by AI through Microsoft Designer Image Creator