GAPS Information Session

Generating Awareness for Project Success (GAPS) is supported through the Foundation for Pennsylvania Watersheds (FPW) with funding from the Colcom Foundation.

Agenda

1. Brief background on 3RQ and free tools available for your use
   - WATERS database
   - 3RQ Mapping Tool
2. GAPS program information
3. Q & A session

Three Rivers QUEST

Melissa O'Neal, Lisa Barreiro, Melissa Shafer, Rachel Spirnak

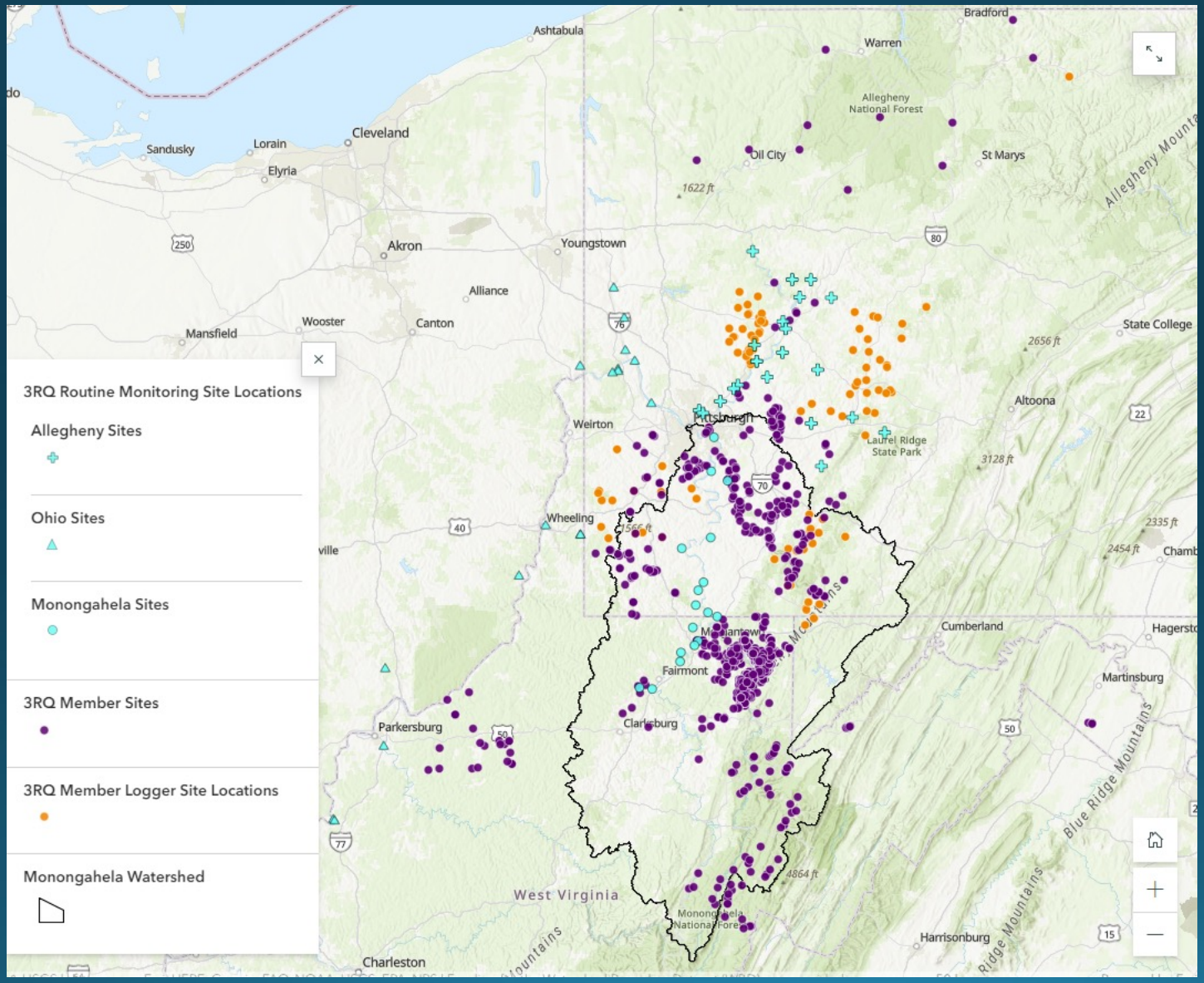
What is 3RQ?

- Collaborative network of universities and grassroots groups collecting water quality data in the Upper Ohio River Basin led by the West Virginia Water Research Institute (WVWRI).
- Routine monitoring since 2009 focusing on total dissolved solids.
- Supports and collaborates with other groups collecting data in tributaries and headwaters.
- Expanded to include other chemicals and biologicals.

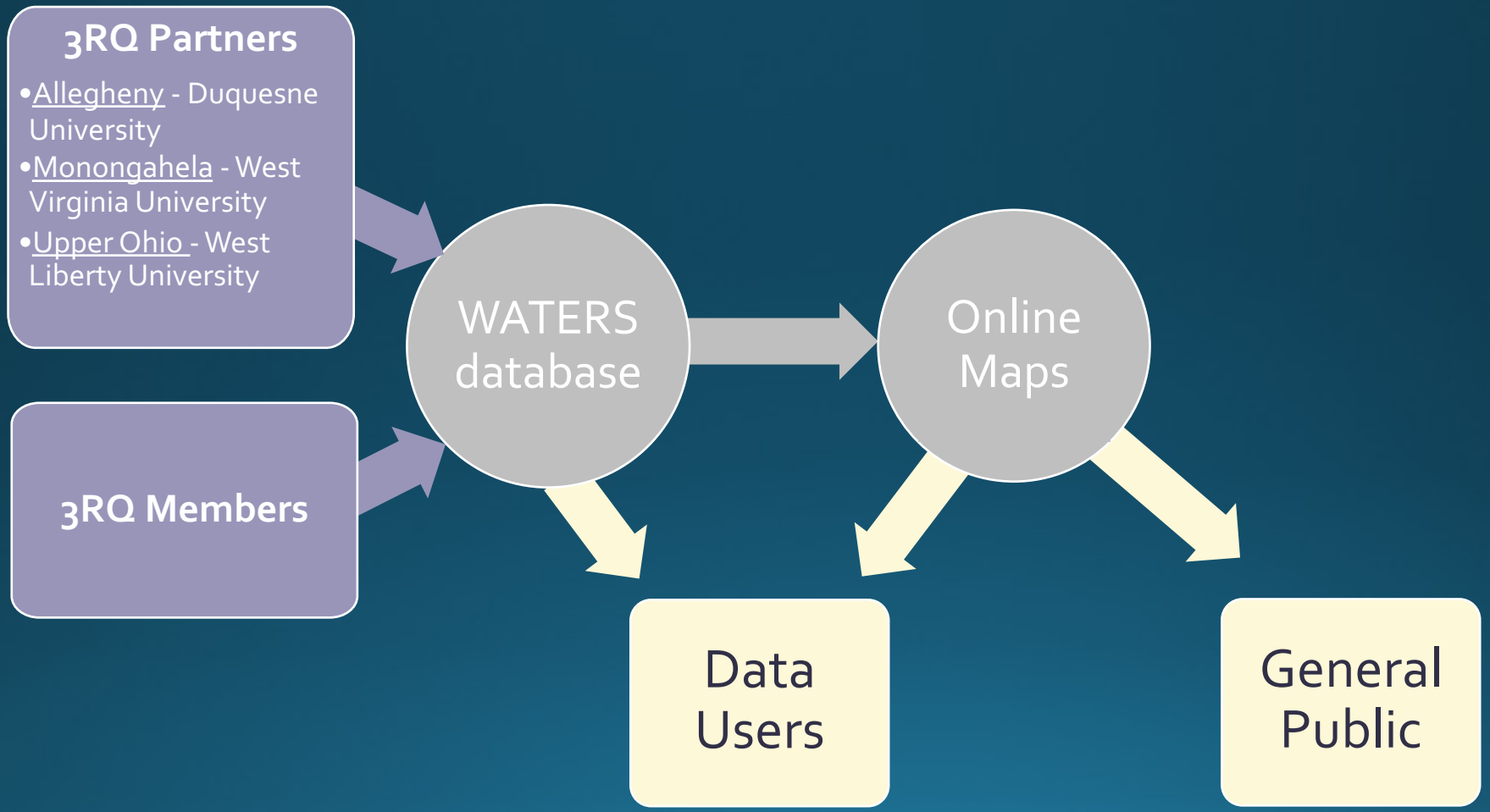
What does 3RQ do?

- Routine Monitoring
- Targeted studies
- Provide data to government agencies
- Discussion groups (SWPAWQN, ORBA, ORSANCO)
- Data warehousing & mapping
- Roundtable hosting
- Student support

Where do we monitor?



3RQ Data Generation & Usage

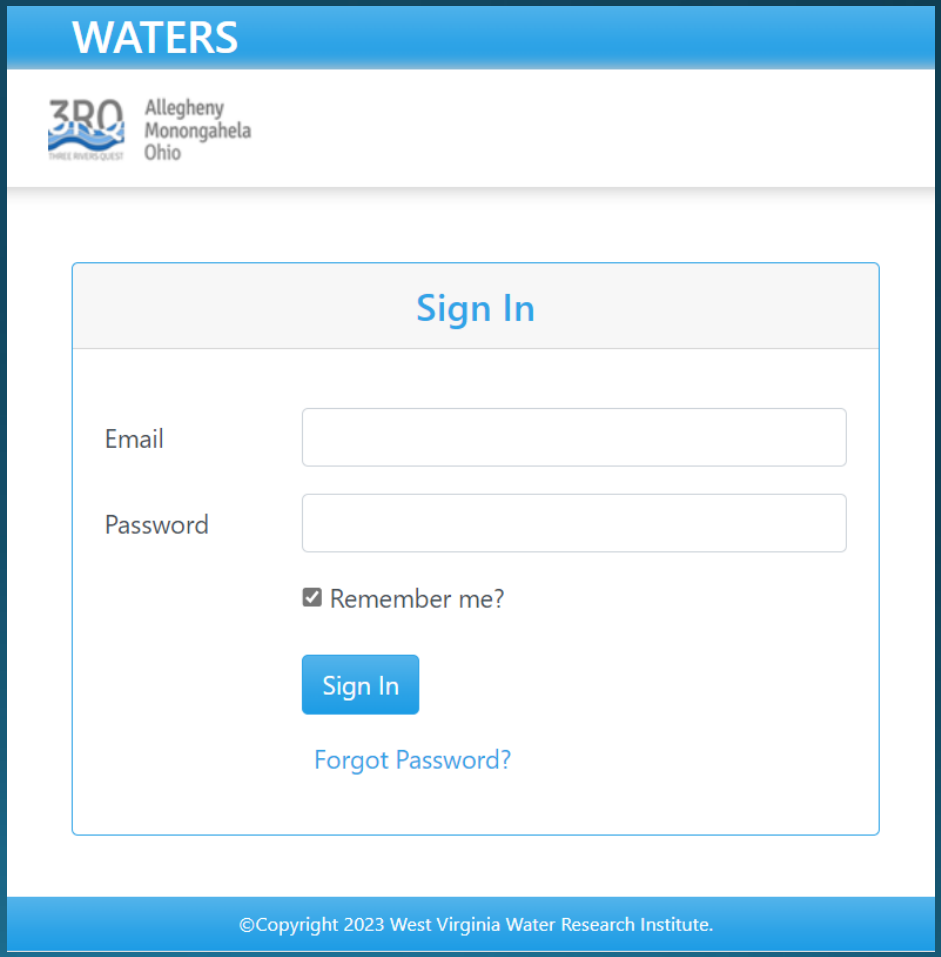


WATERS Database

Watershed Assessment Tool for Education and Research Studies

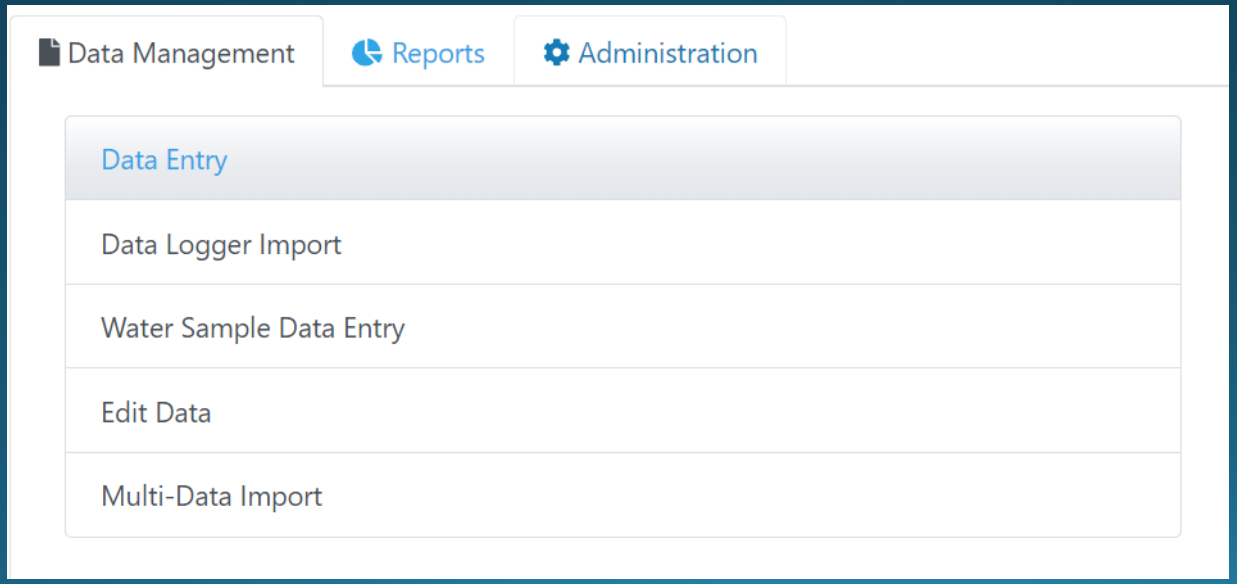
What is WATERS?

- WATERS is a cloud-based database for water quality parameters.
- Any organization can use WATERS for **free**.



WATERS Highlights

- Can be viewed on Android, iPhone, and iPad; allowing data upload in the field.
- Warehouses (easy Import/Export)
  - Visualizations (Graphs/Reports)
  - Filters data
- Routinely upgraded; specific modifications can be requested by users (funding-dependent).



Current Parameters

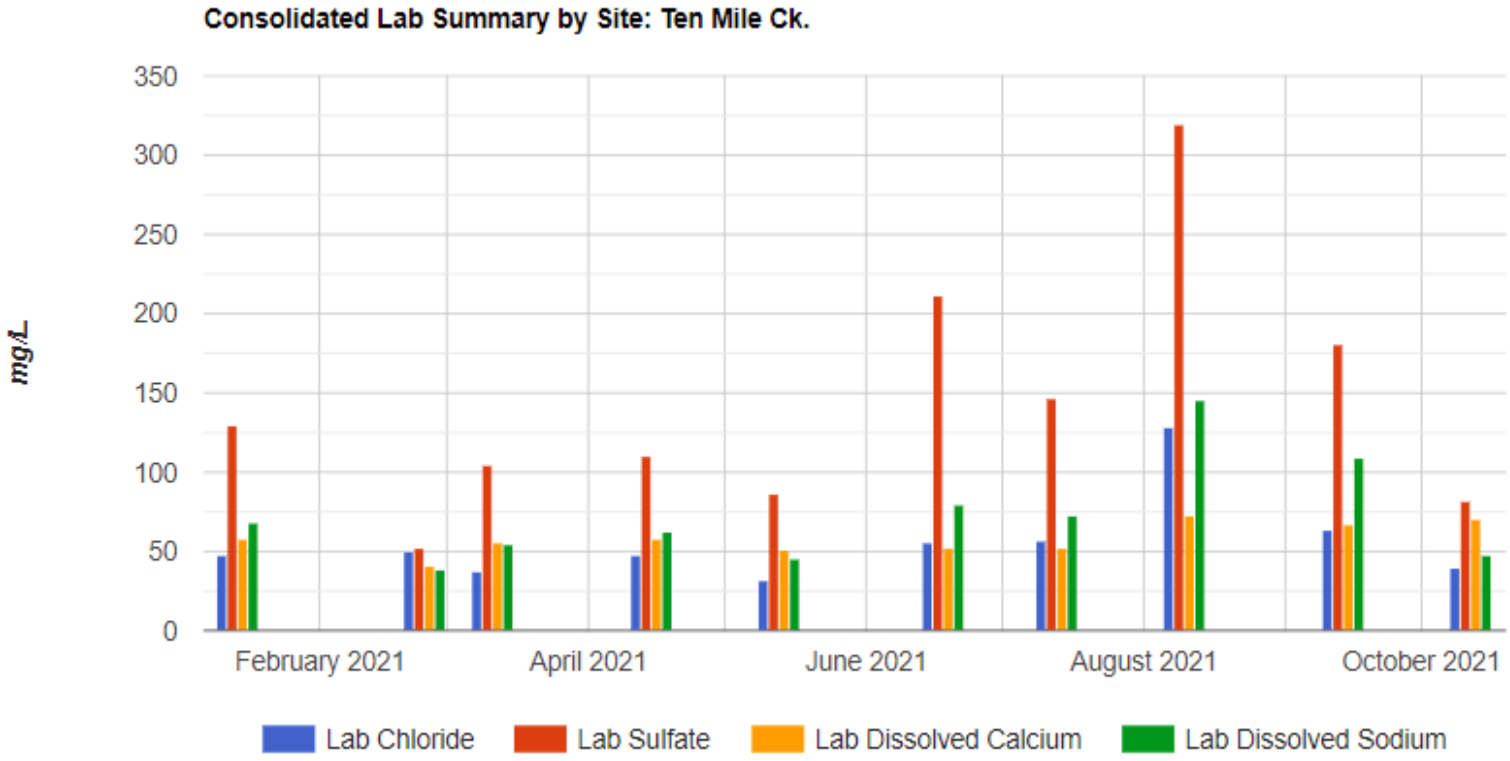
- Accepts lab and field values, including sonde data.
  - General WQ indicators
  - Metals
  - Halogens
  - Nutrients
  - Algae, diatoms, & bacteria

Data Organization

- Query data falling within specified values (e.g., pH between 2 and 6) and date ranges of your choosing.
- Data outputs can be viewed online or exported to Excel.
- Generates statistical summary of requested data.

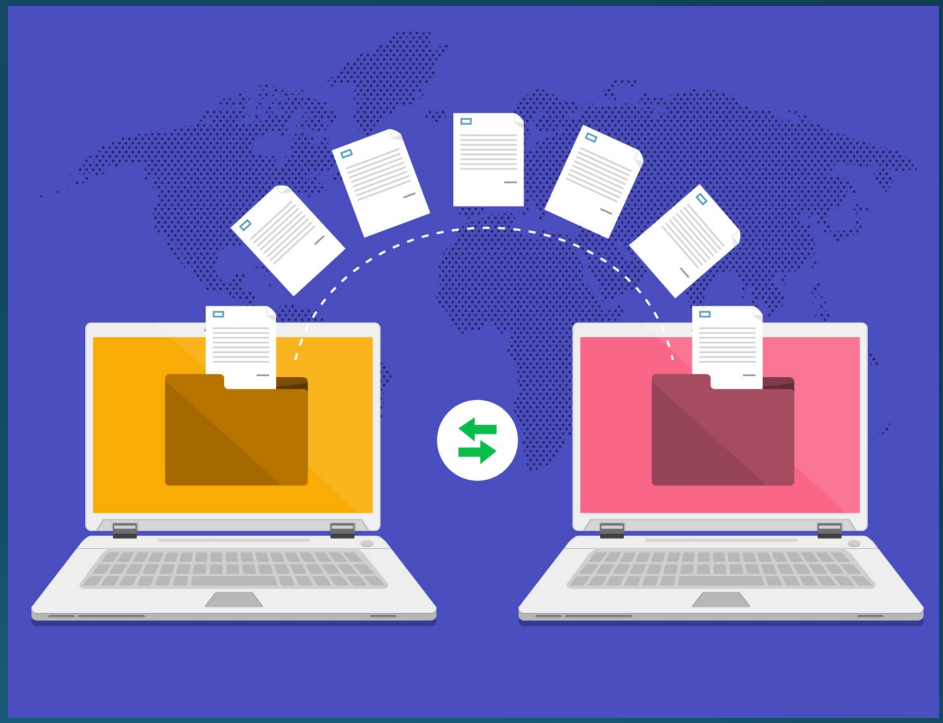
	Minimum	Average	Maximum
Lab Chloride	31.6	55.95	128
Lab Sulfate	52	142.24	319
Lab Dissolved Calcium	40.6	57.94	72.2
Lab Dissolved Sodium	38.1	72.42	146

Data Visualization



Data Sharing

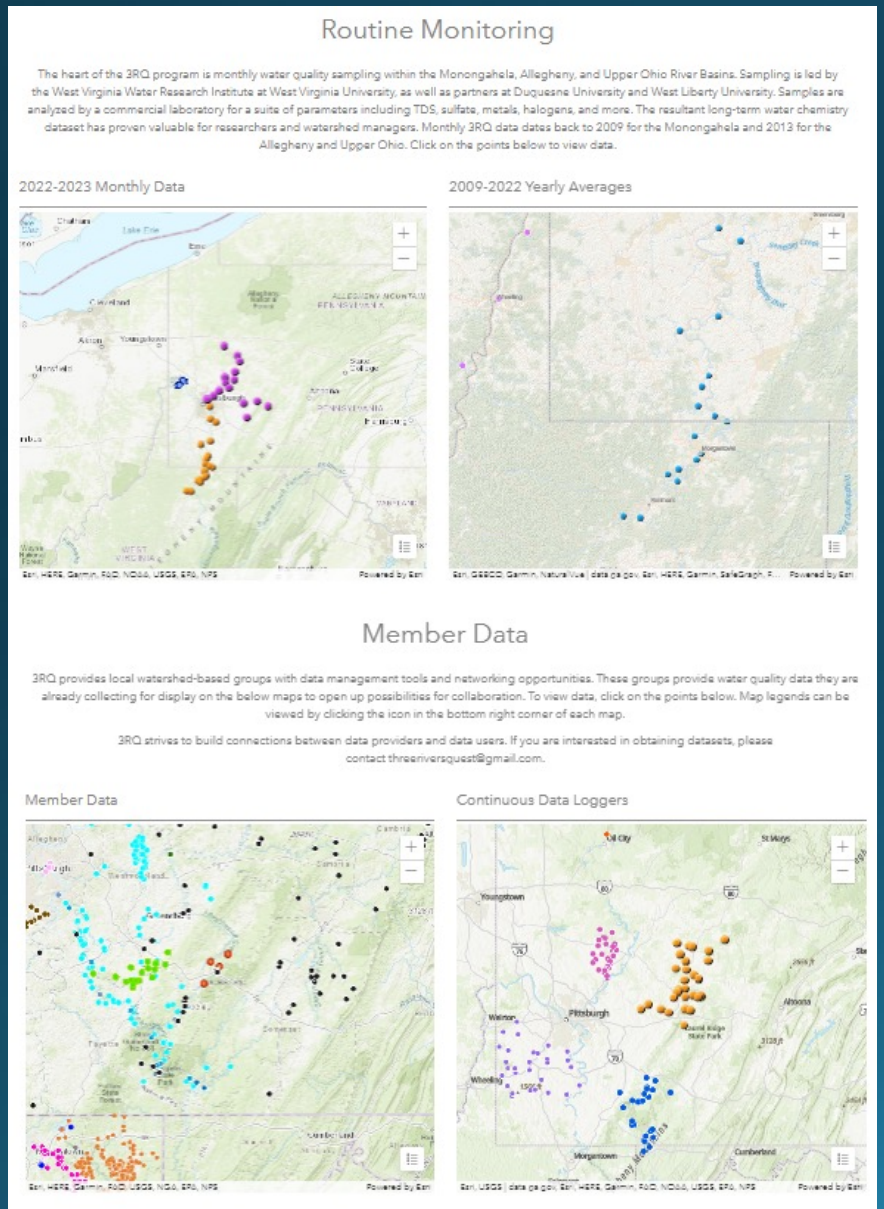
- 3RQ believes in connecting data generators to data users.
  - With the data generator's permission, access can be granted to allow other users to view and download their data in WATERS.
- All data uploaded to WATERS is shared publicly through online maps.



3RQ Maps

https://three-rivers-quest-wvu.hub.arcgis.com

Map Hub



Data uploaded to WATERS is displayed visually through 3RQ Maps.

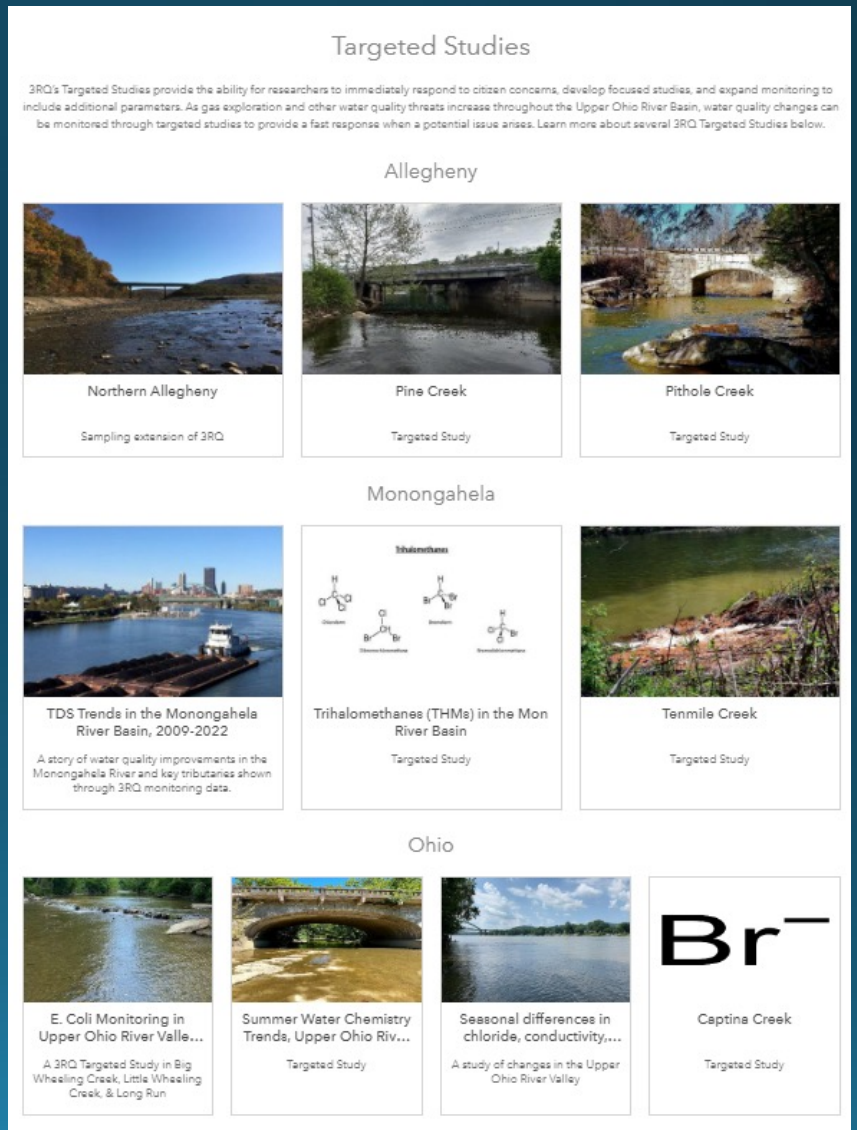
3RQ Maps are:

- Available to the public
- User-friendly
- Interactive
- Easy to share

StoryMaps

StoryMaps dive deeper into 3RQ's targeted studies.

- Combines text with photos, interactive maps, and more.

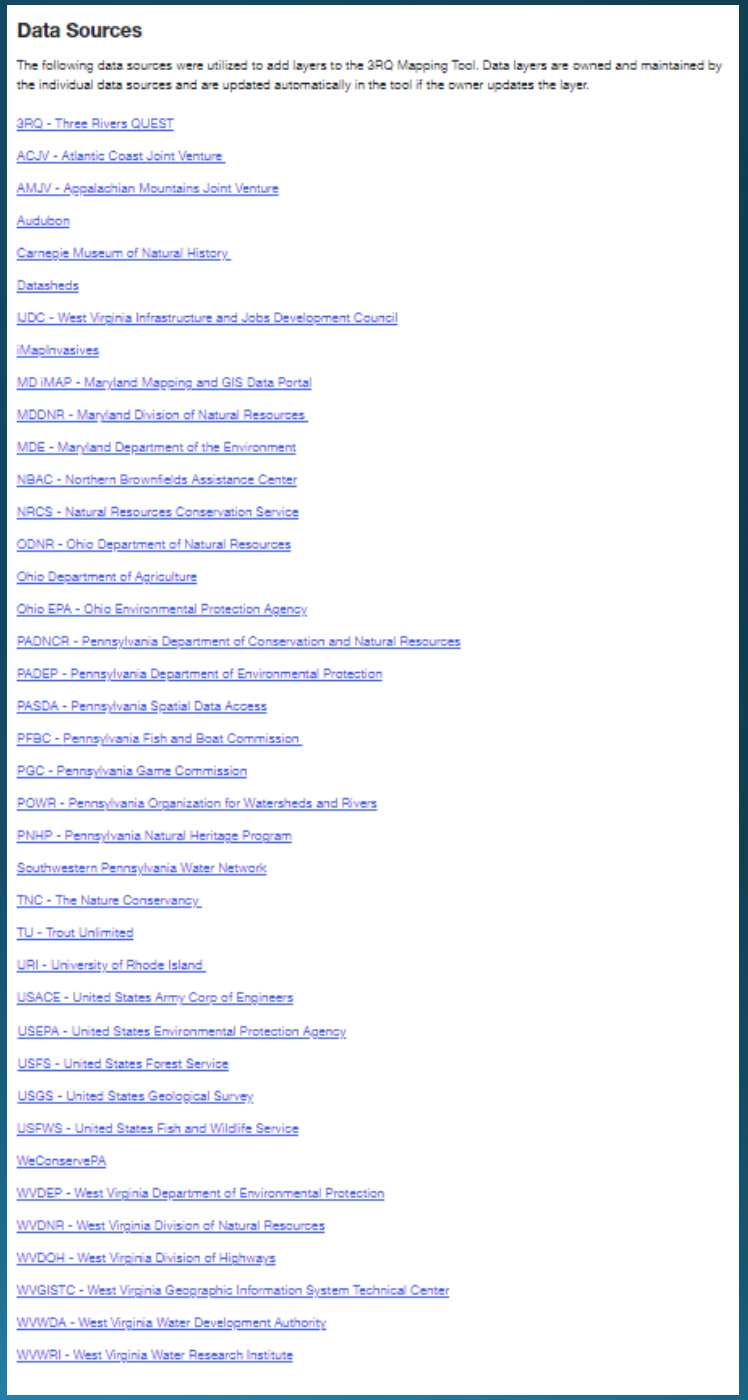


Beta Mapping Tool

- Includes layers from various sources all in one convenient place.
- Crosses state lines within the Upper Ohio River Basin.
- Provides a useful tool to the public and other organizations.

How does it work?

- Created with ArcGIS Online.
  - No downloads or logins needed.
- Nearly 40 different data sources:
  - State agencies
  - Federal agencies
  - NGOs
  - 3RQ
- Data is owned and maintained by its creator.
  - Updated automatically in the tool.
  - Credit is given to data sources.



Data Sources

The following data sources were utilized to add layers to the 3RQ Mapping Tool. Data layers are owned and maintained by the individual data sources and are updated automatically in the tool if the owner updates the layer.

3RQ - Three Rivers QUEST

ACJV - Atlantic Coast Joint Venture

AMJV - Appalachian Mountains Joint Venture

Audubon

Carnegie Museum of Natural History

Datasheds

IJDC - West Virginia Infrastructure and Jobs Development Council

iMapInvasives

MD iMAP - Maryland Mapping and GIS Data Portal

MDDNR - Maryland Division of Natural Resources

MDE - Maryland Department of the Environment

NBAC - Northern Brownfields Assistance Center

NRCS - Natural Resources Conservation Service

ODNR - Ohio Department of Natural Resources

Ohio Department of Agriculture

Ohio EPA - Ohio Environmental Protection Agency

PADNCR - Pennsylvania Department of Conservation and Natural Resources

PADEP - Pennsylvania Department of Environmental Protection

PASDA - Pennsylvania Spatial Data Access

PFBC - Pennsylvania Fish and Boat Commission

PGC - Pennsylvania Game Commission

POWR - Pennsylvania Organization for Watersheds and Rivers

PNHP - Pennsylvania Natural Heritage Program

Southwestern Pennsylvania Water Network

TNC - The Nature Conservancy

TU - Trout Unlimited

URI - University of Rhode Island

USACE - United States Army Corp of Engineers

USEPA - United States Environmental Protection Agency

USFS - United States Forest Service

USGS - United States Geological Survey

USFWS - United States Fish and Wildlife Service

WeConservePA

WVDEP - West Virginia Department of Environmental Protection

WVDNR - West Virginia Division of Natural Resources

WVDOH - West Virginia Division of Highways

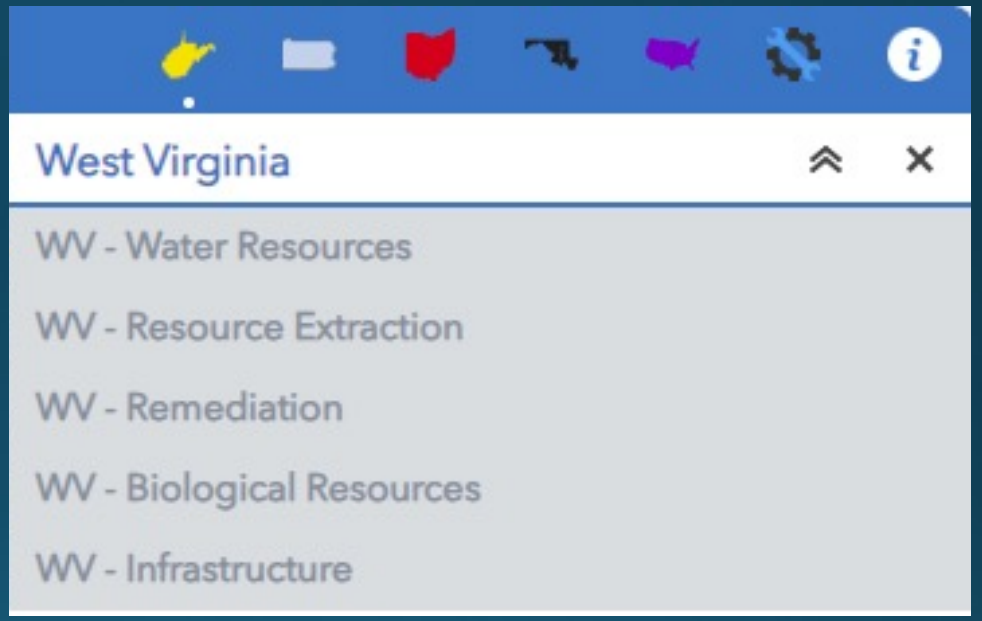
WVGISTC - West Virginia Geographic Information System Technical Center

WVWDA - West Virginia Water Development Authority

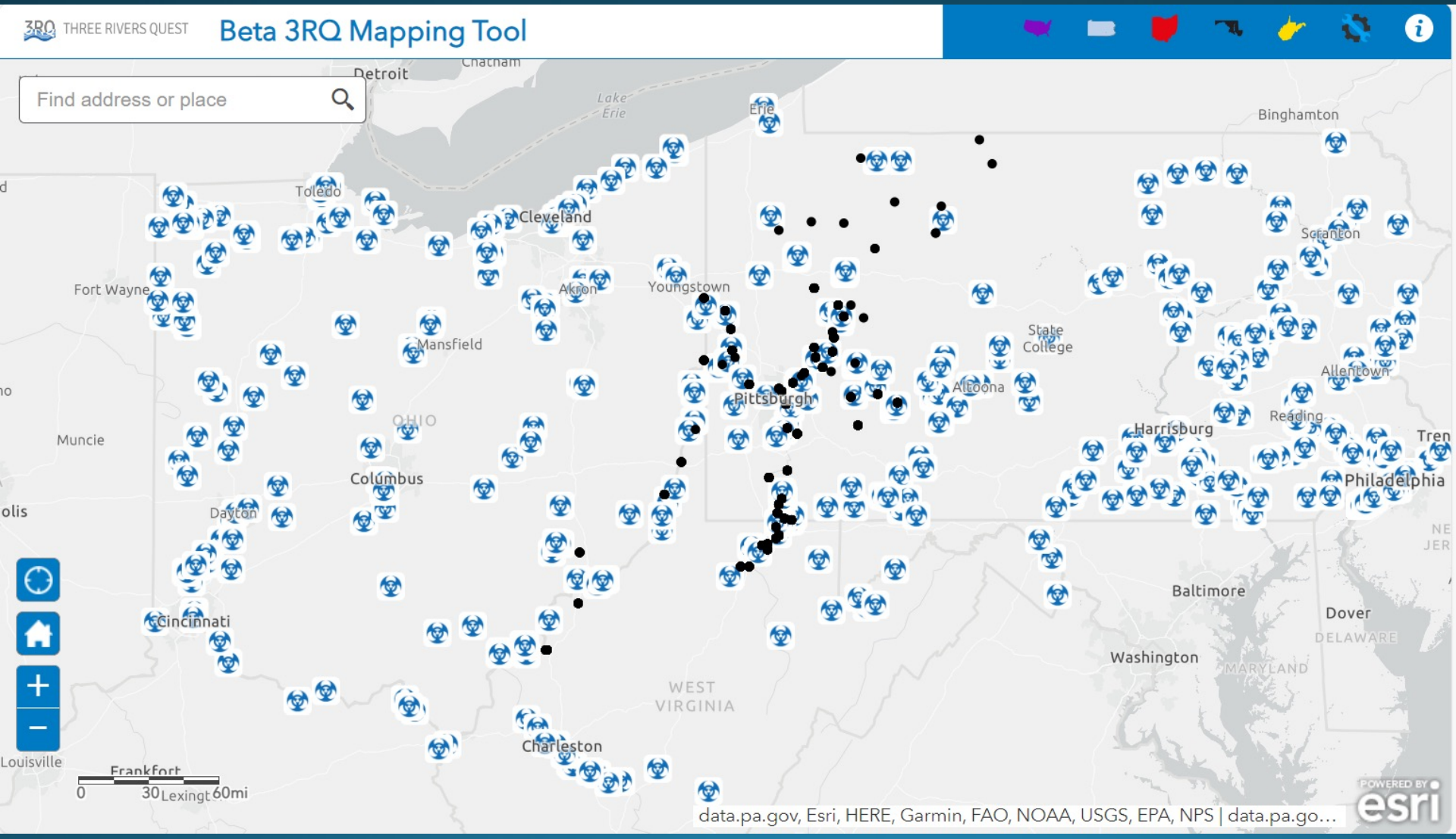
WVWRI - West Virginia Water Research Institute

Data Layers

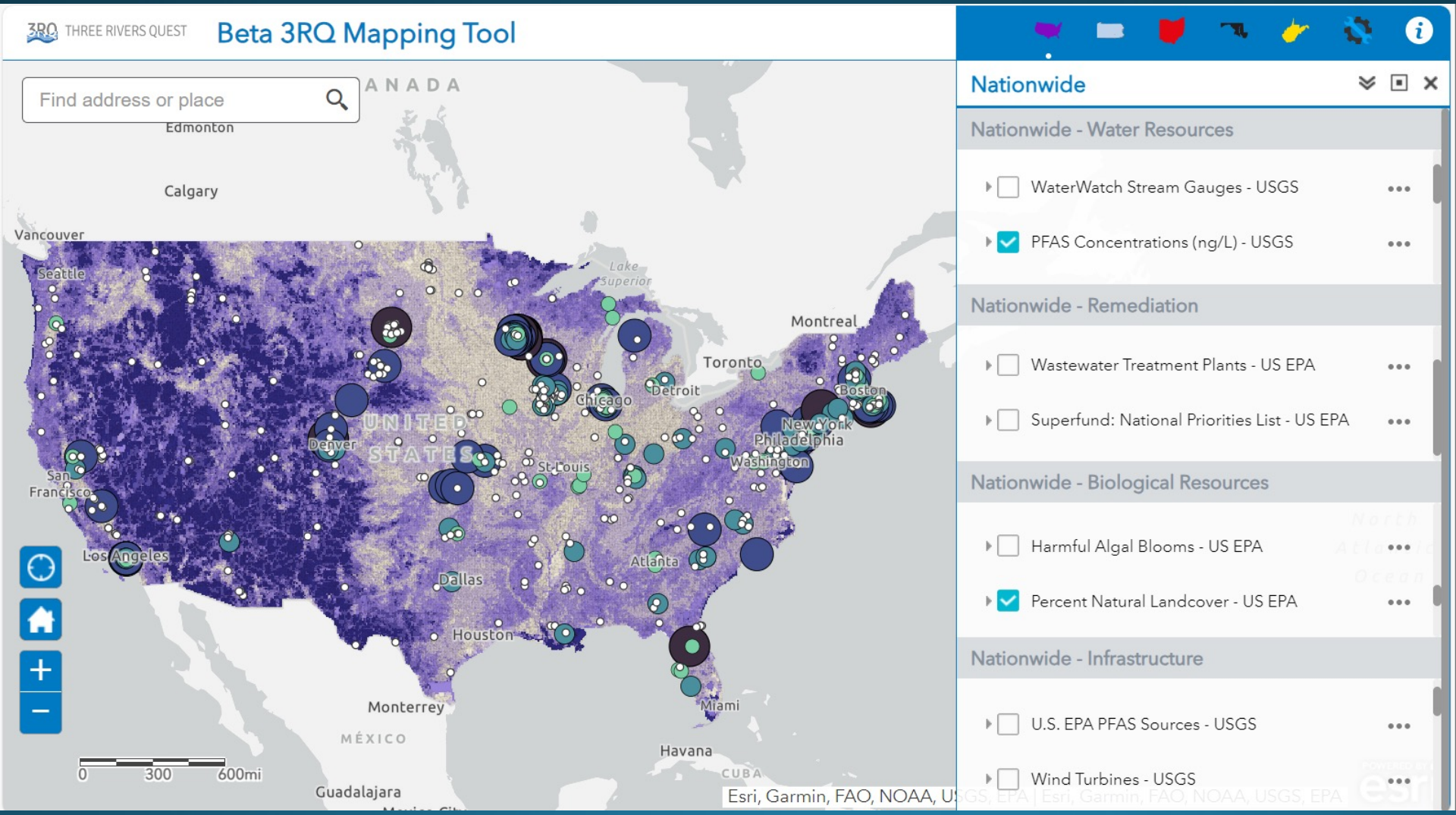
- Includes layers in WV, PA, OH, MD, and national datasets organized into the following categories:
  - Water Resources
  - Resource Extraction
  - Remediation
  - Biological Resources
  - Infrastructure



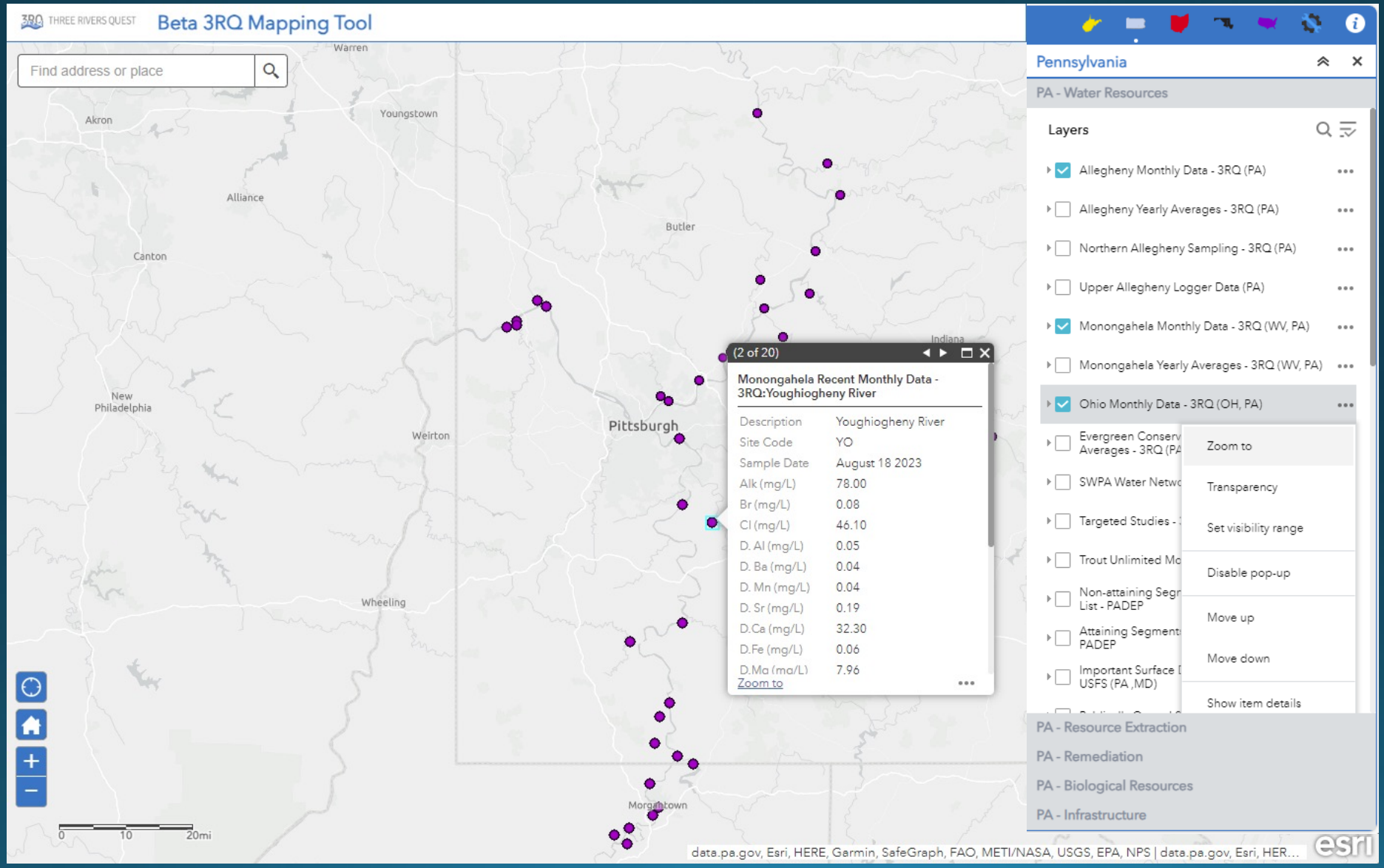
Focuses on Upper Ohio R. Basin



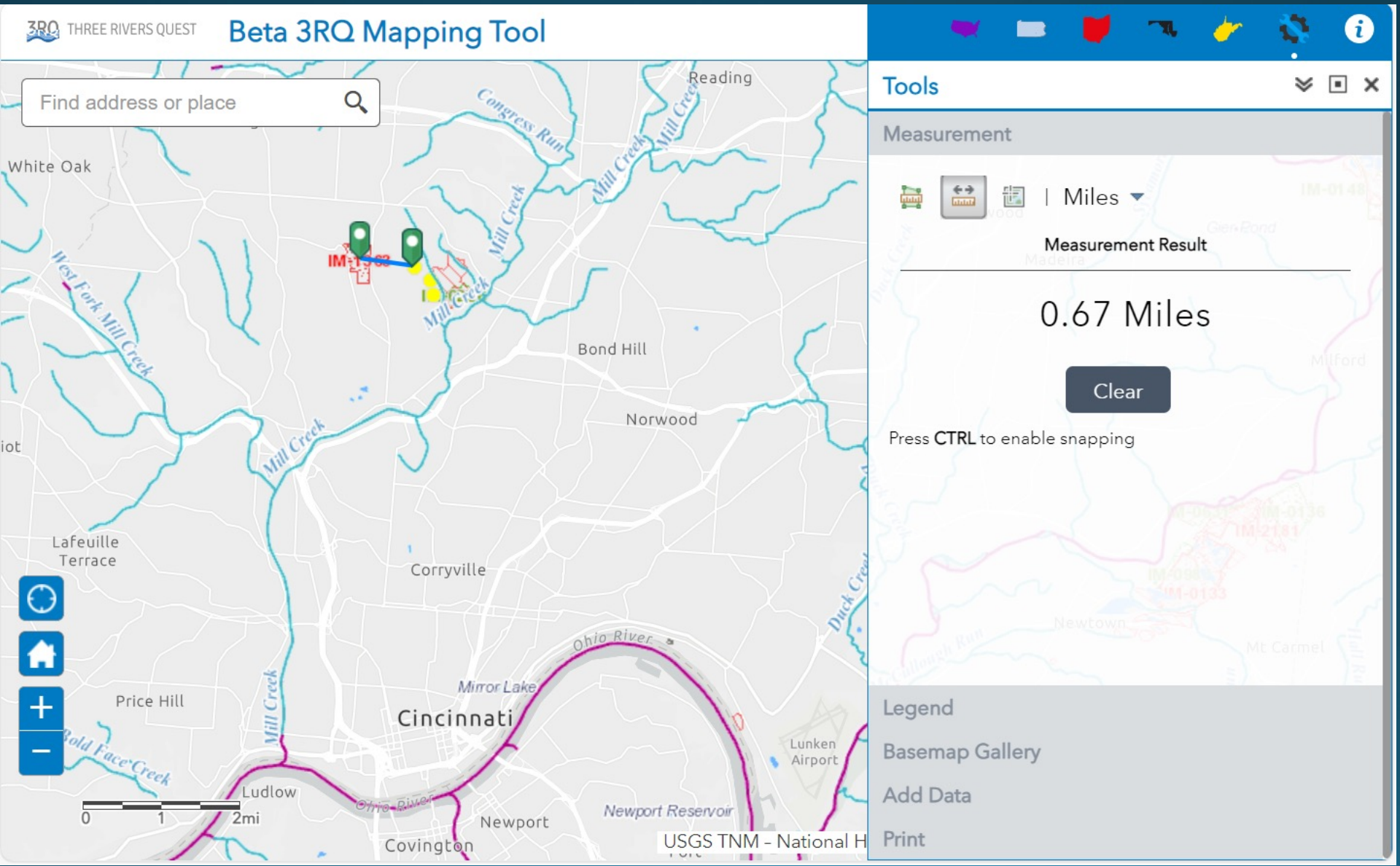
Includes National Datasets



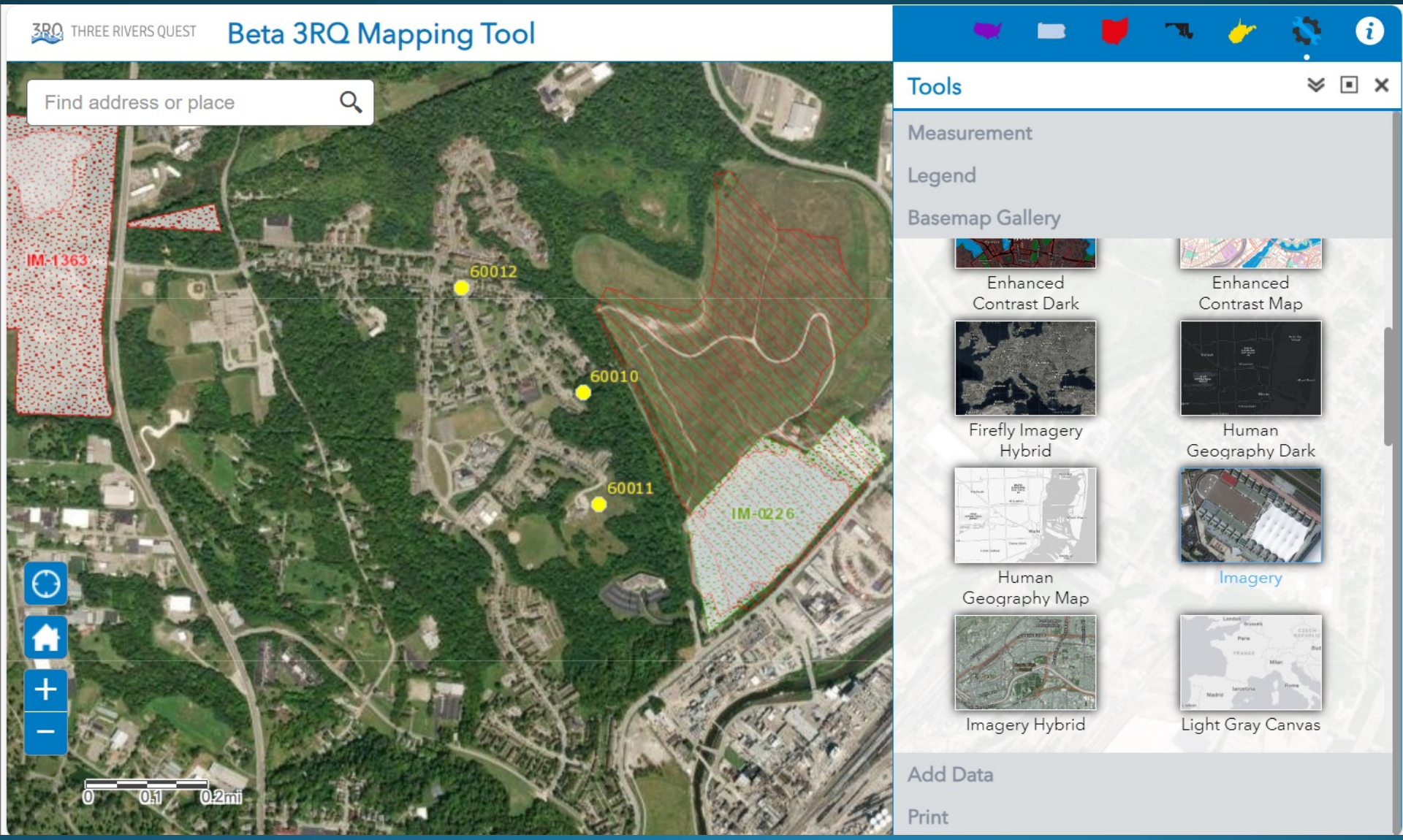
Interactive



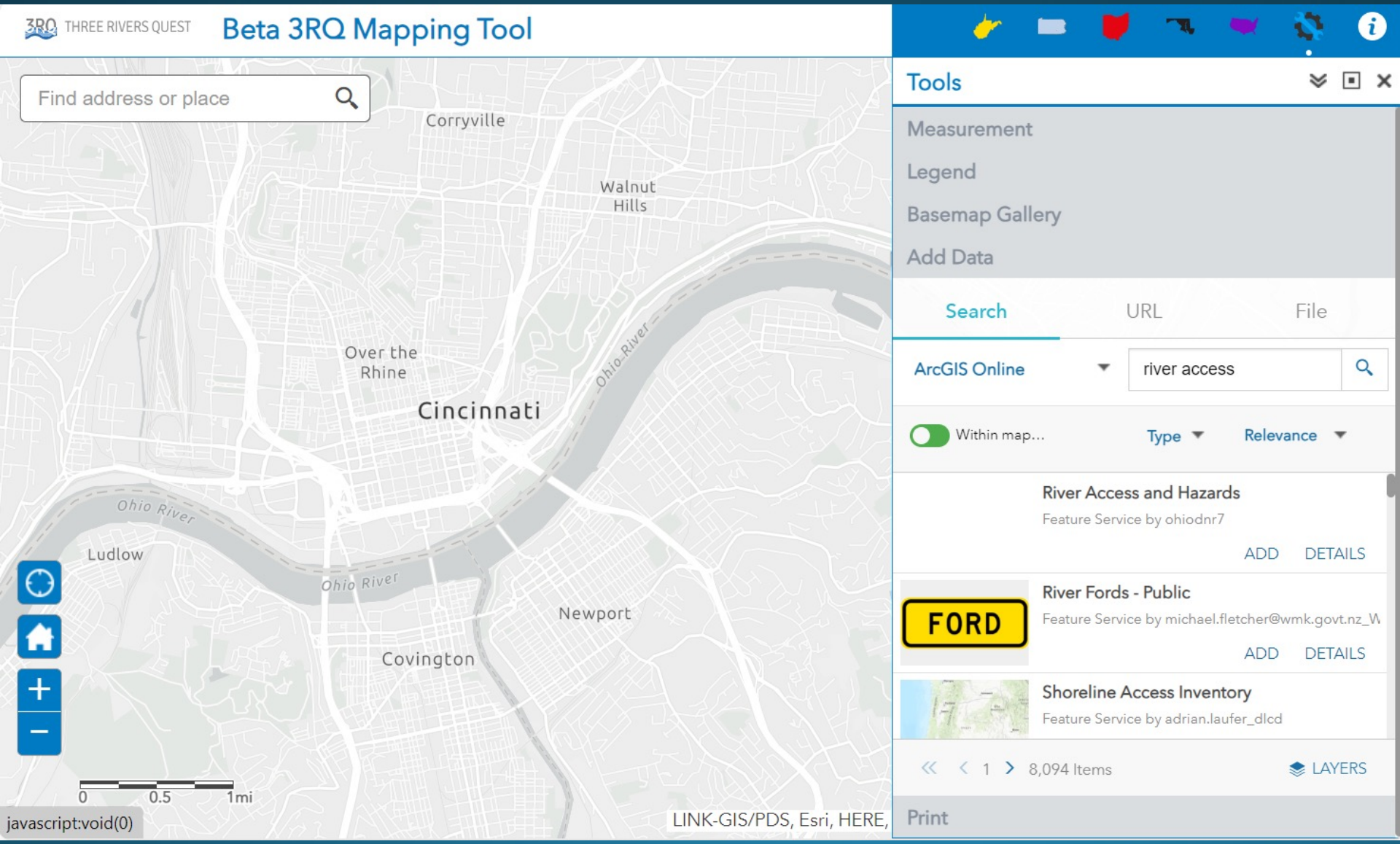
Tools - Measure



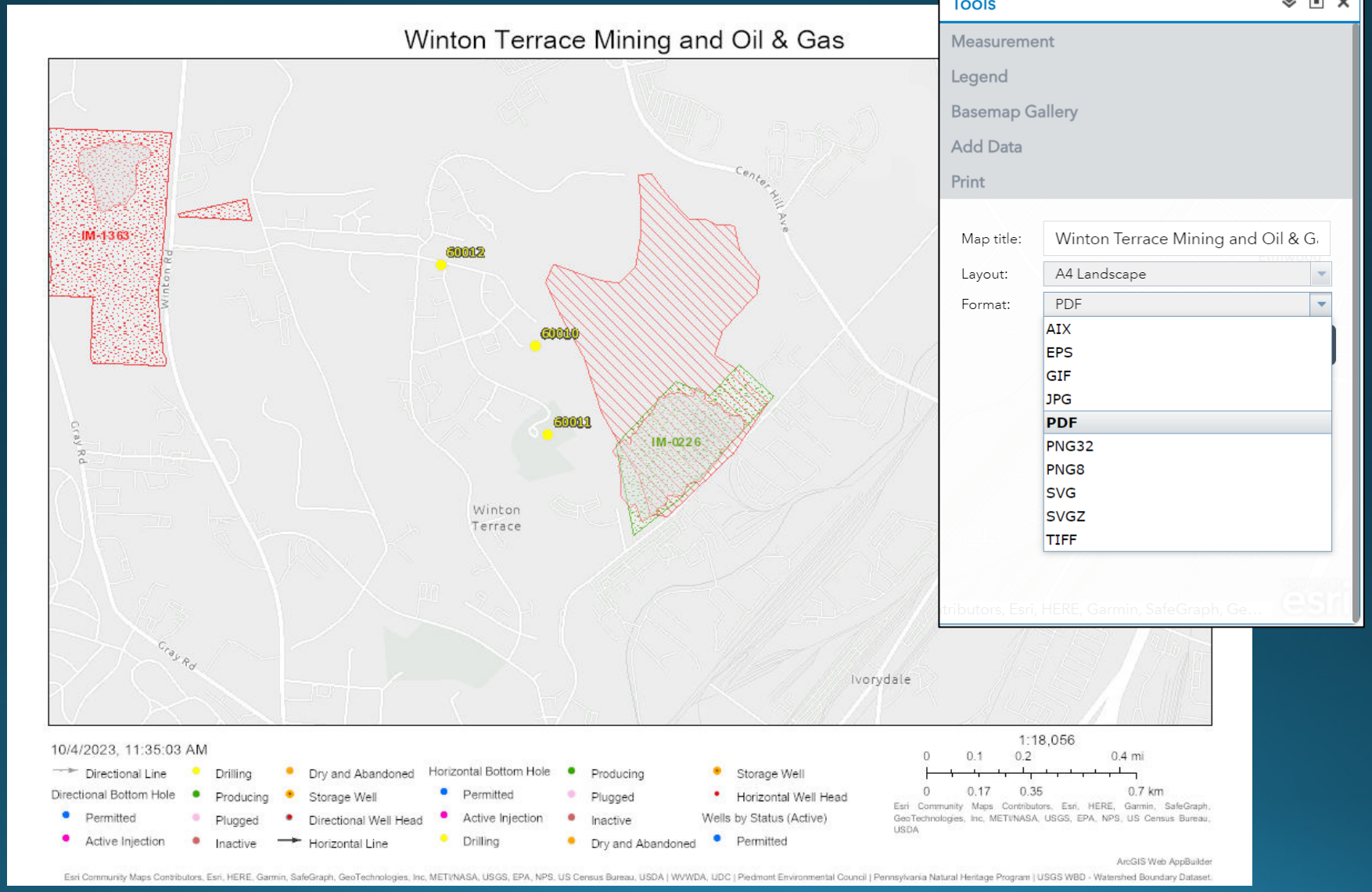
Tools – Basemap Gallery



Tools – Add Data



Tools - Print


Winton Terrace Mining and Oil & Gas
IM-1363
60012
60010
60011
IM-0226
Winton Rd
Gray Rd
Center Hill Ave
Winton Terrace
Ivorydale
Tools
Measurement
Legend
Basemap Gallery
Add Data
Print
Map title:
Winton Terrace Mining and Oil & G.
Layout:
A4 Landscape
Format:
PDF
AIX
EPS
GIF
JPG
PDF
PNG32
PNG8
SVG
SVGZ
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10/4/2023, 11:35:03 AM
Directional Line
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Horizontal Bottom Hole
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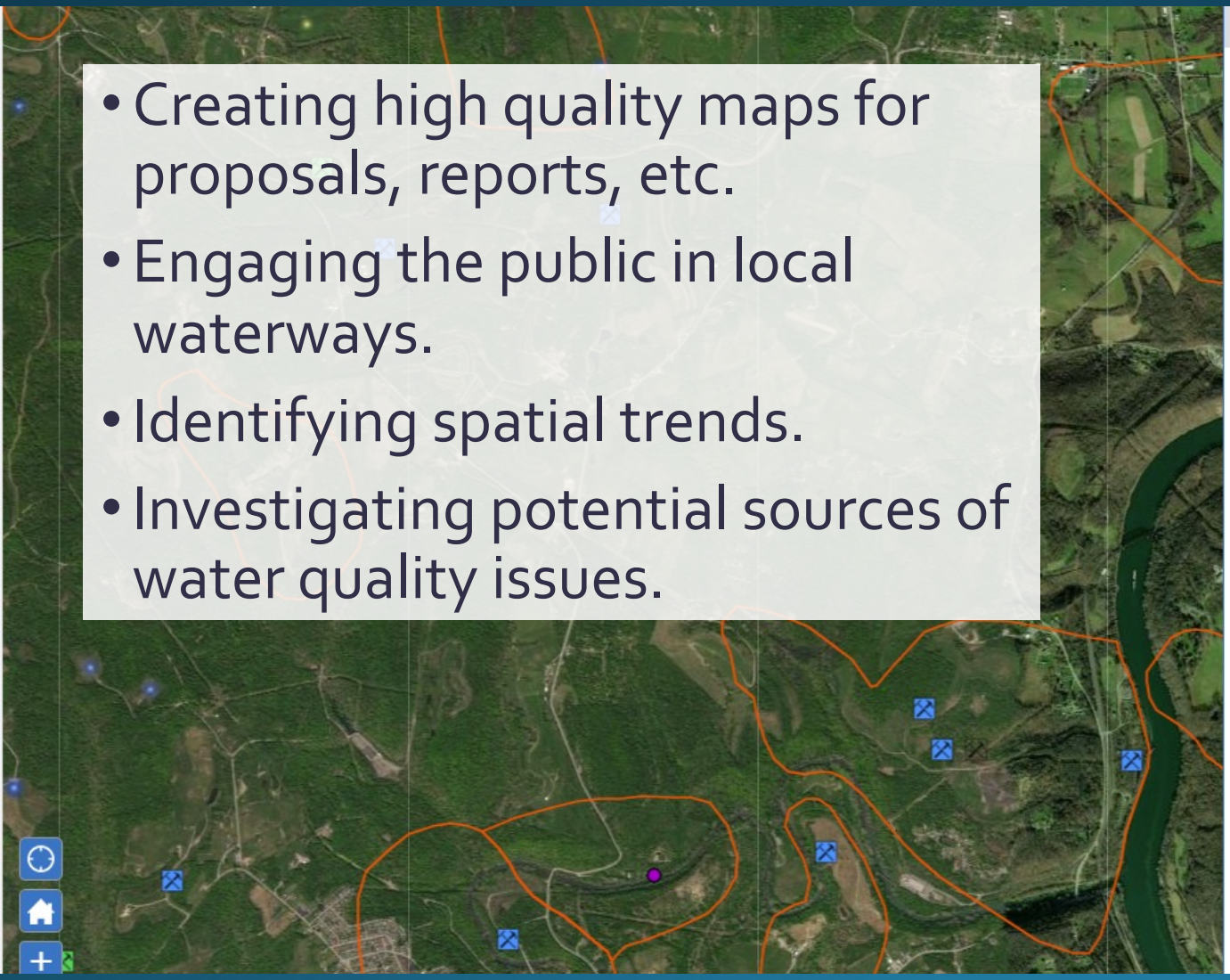
Esri Community Maps Contributors, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA
ArcGIS Web AppBuilder
Esri Community Maps Contributors, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA | WVWDA, UDC | Piedmont Environmental Council | Pennsylvania Natural Heritage Program | USGS WBD - Watershed Boundary Dataset

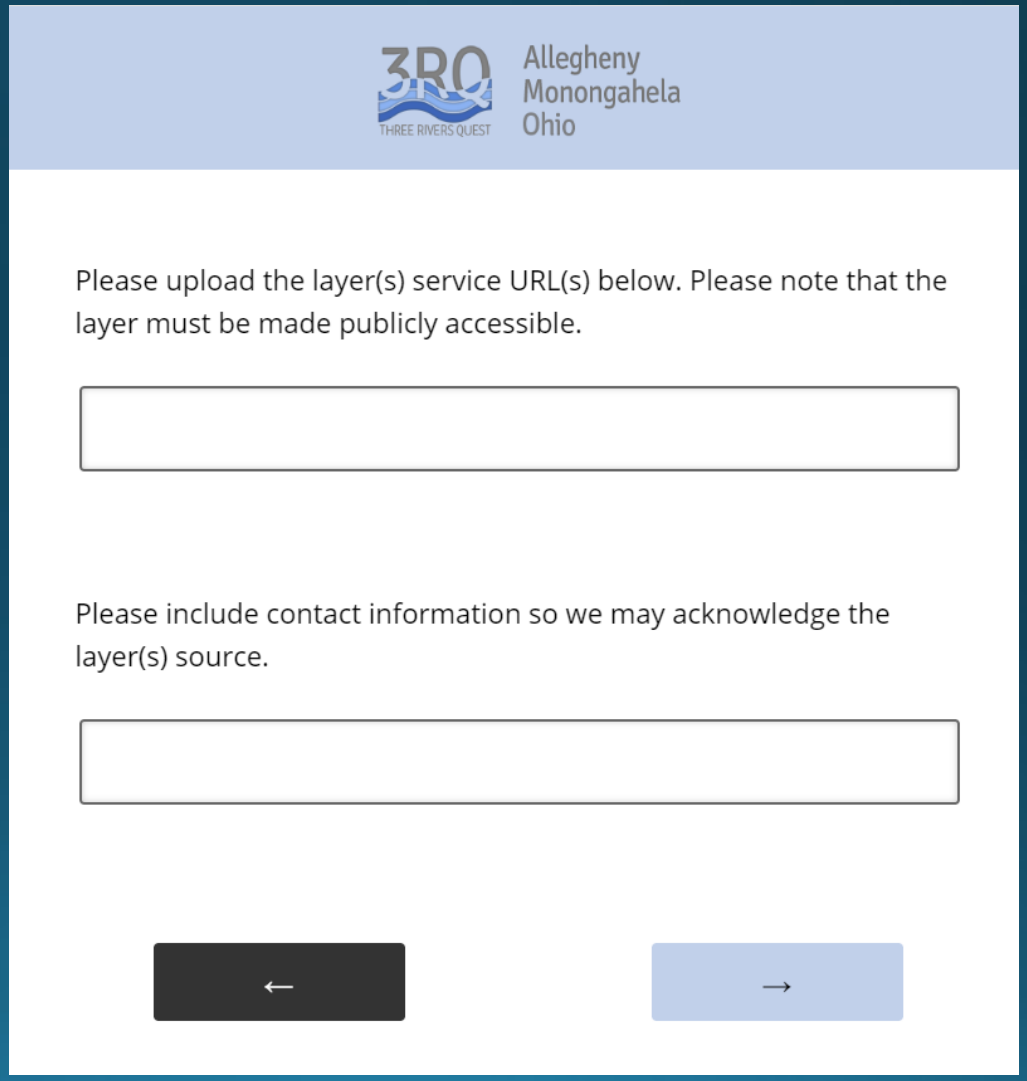
Applications

- Creating high quality maps for proposals, reports, etc.
- Engaging the public in local waterways.
- Identifying spatial trends.
- Investigating potential sources of water quality issues.



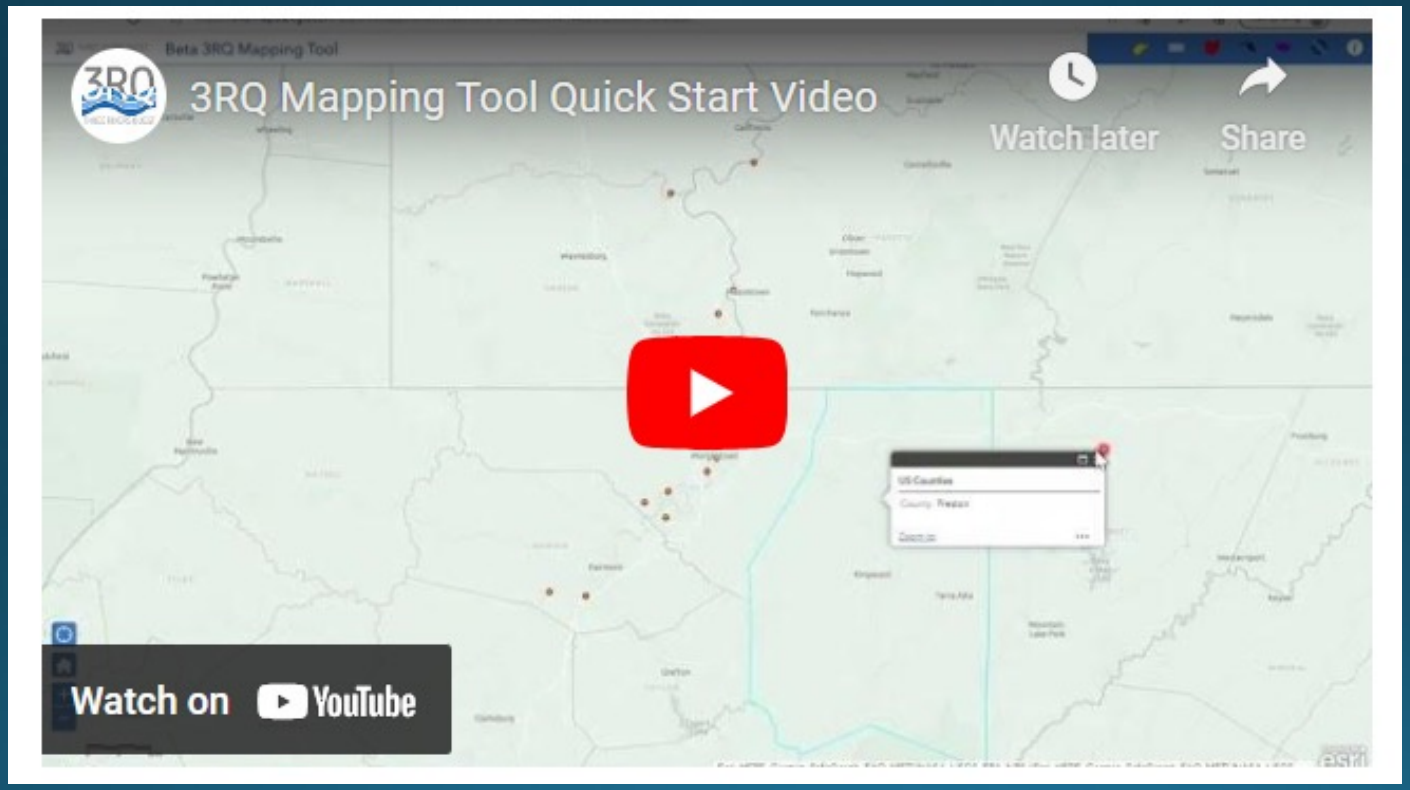
Beta Version

- Ready to be used and shared.
- Seeking feedback and additional layers to add.



More Information

https://3riversquest.wvu.edu/resources/3rq-mapping-tool



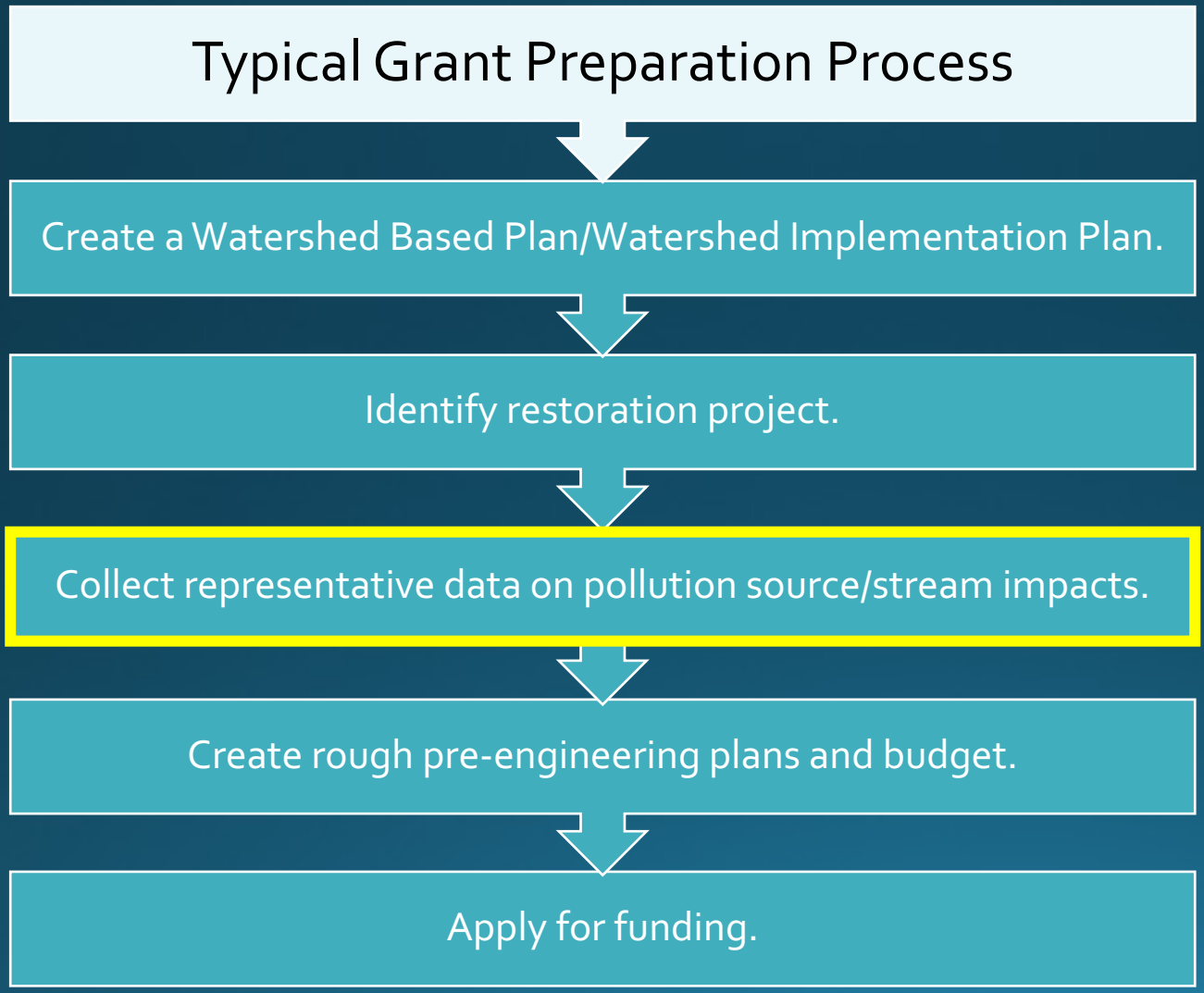
Generating Awareness for Project Success

GAPS

What is GAPS?

- Assistance program for grassroots organizations and small colleges.
  - 2023: Focused on grassroots organizations.
  - 2024: Focus on small colleges/universities.
- Fills gap in funding to prepare for federal, state, and/or private grants.
- Geared toward nonpoint source issues: acid mine drainage, sedimentation, etc.

Where does GAPS come in?



Good data is critical for successful projects!

Services Available

- Services will vary for each awardee based on the needs of the specific project.
- Direct services may include:
  - Field Assistance or Training
    - Grab sample and flow measurement collection
    - Installation and management of in-stream data loggers
  - Coordination with analytical laboratory
  - Data management
  - Grant searching and preparation
- Funding may include:
  - Analytical costs, travel, students
  - **Maximum** ask: $10,000

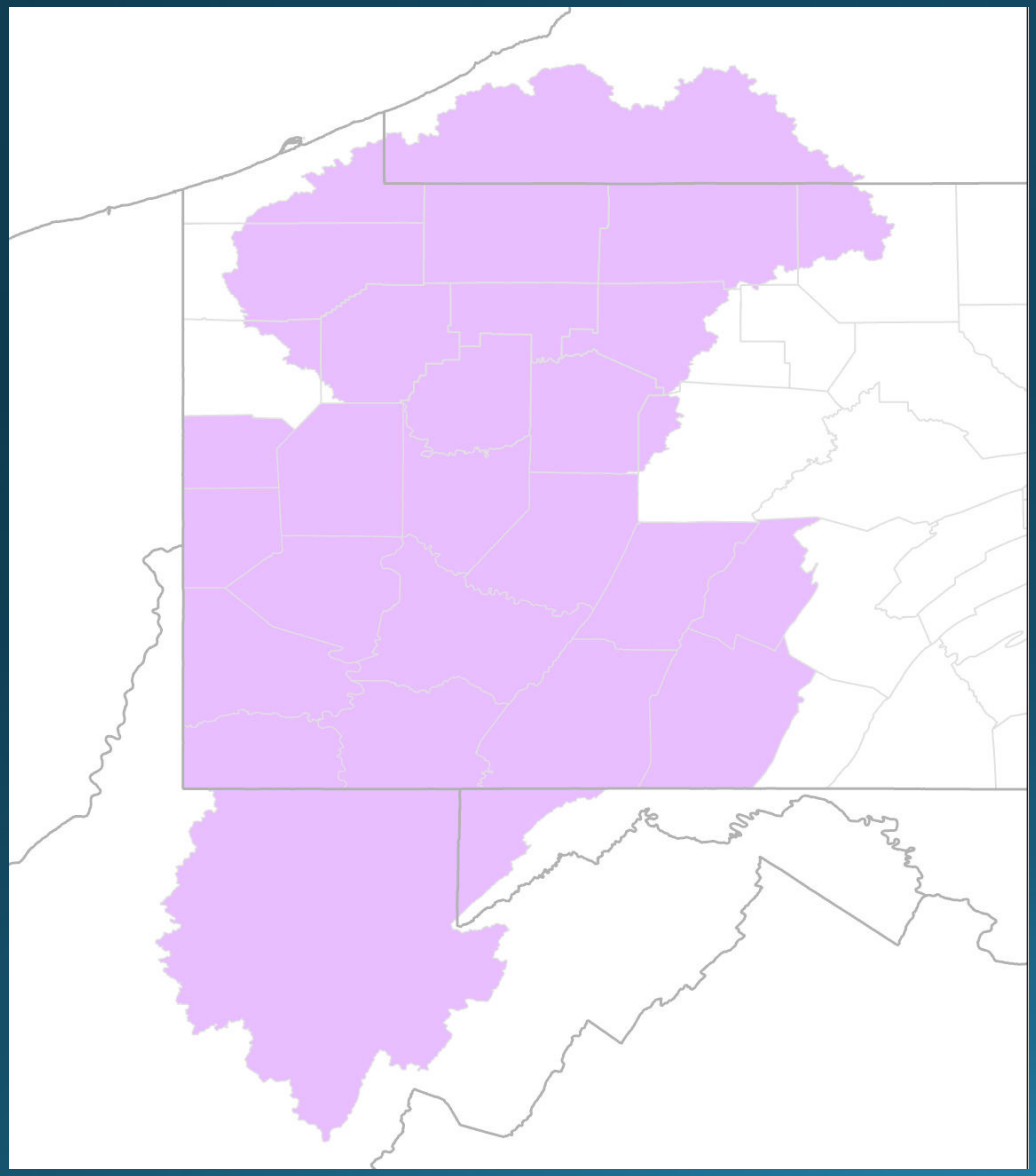
Additional Benefits

- Data
  - Uploaded to WATERS for long-term storage.
  - Published to online maps.
- 3RQ & FPW will facilitate connections with state/federal agencies, researchers, and students.

2023 GAPS Projects Include:

- Bank erosion monitoring
- Flood monitoring
- AMD source characterization and prioritization
- Pollutant monitoring in river systems

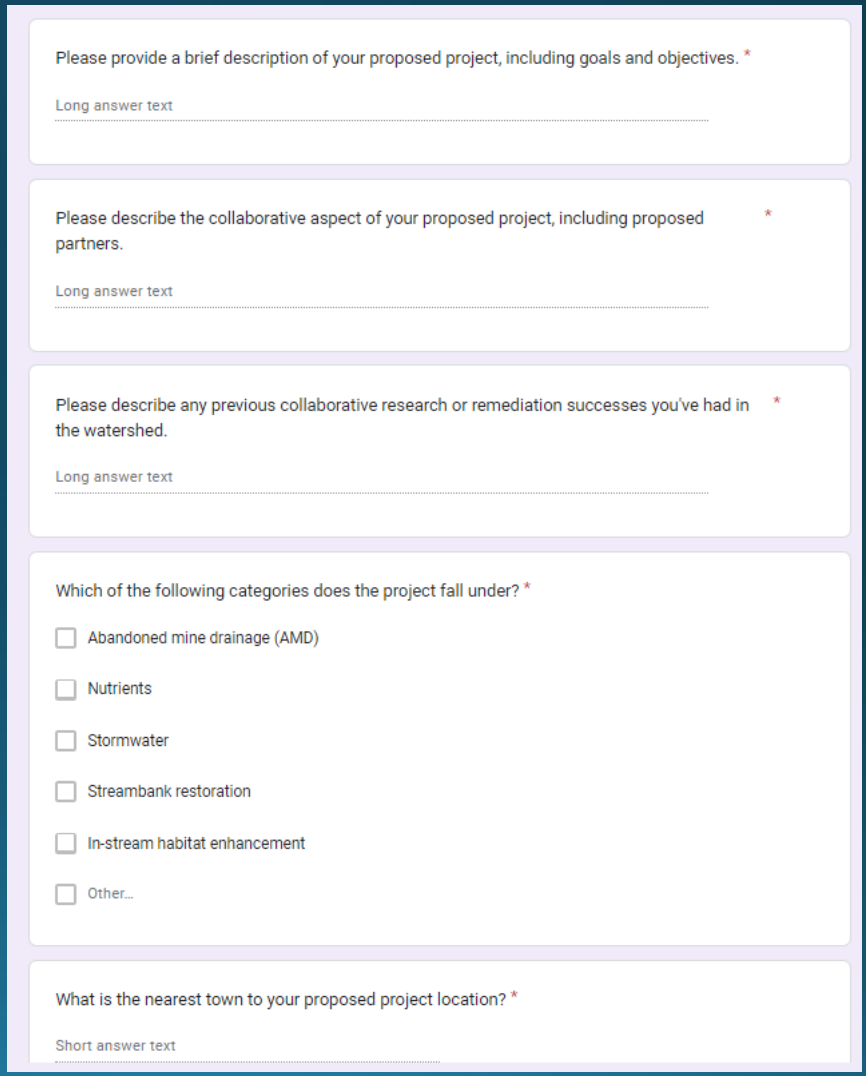
Eligibility



- Project must be within:
  - Monongahela River Basin;
  - Allegheny River Basin; or
  - Southwestern PA counties highlighted

Simple Application

- https://forms.gle/vwQvT726DGTKSntZA



Please provide a brief description of your proposed project, including goals and objectives. *

Long answer text

Please describe the collaborative aspect of your proposed project, including proposed partners. *

Long answer text

Please describe any previous collaborative research or remediation successes you've had in the watershed. *

Long answer text

Which of the following categories does the project fall under? *

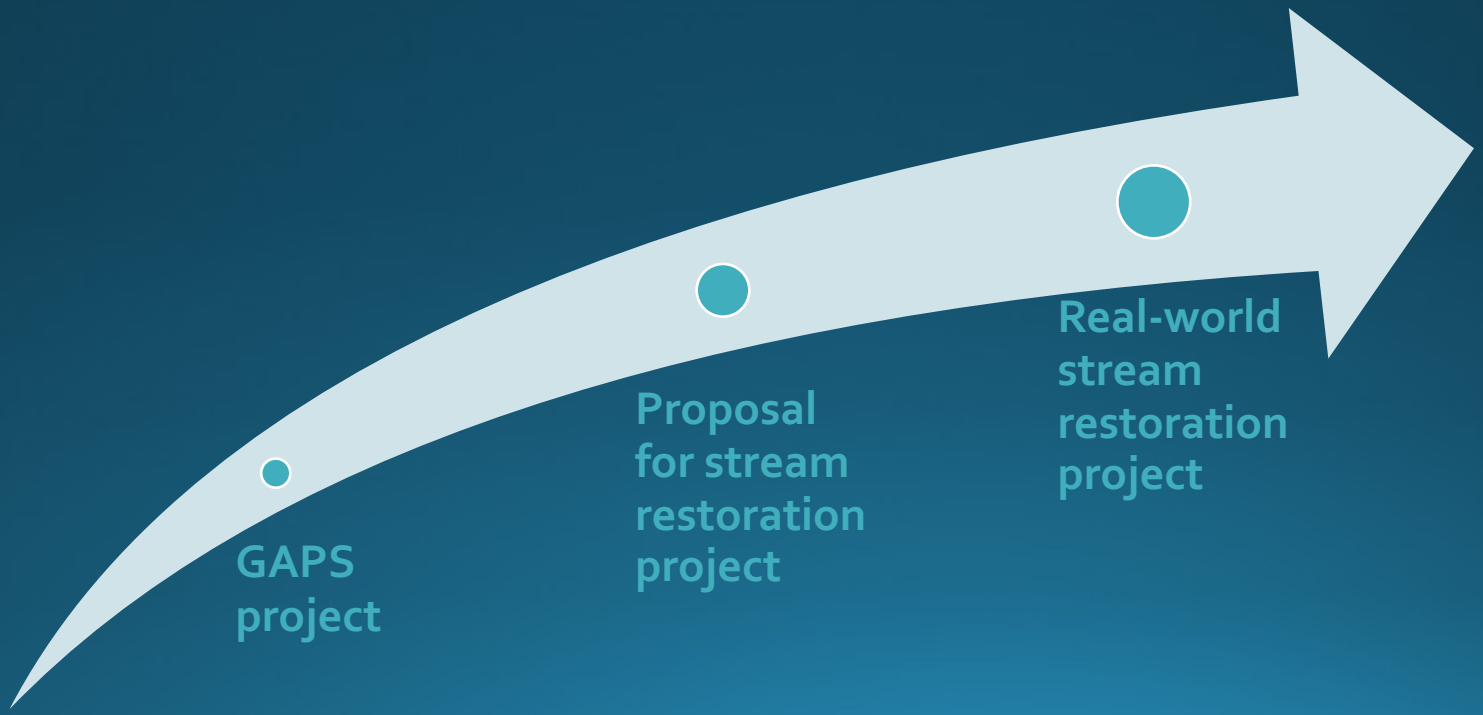
- [ ] Abandoned mine drainage (AMD)
- [ ] Nutrients
- [ ] Stormwater
- [ ] Streambank restoration
- [ ] In-stream habitat enhancement
- [ ] Other...

What is the nearest town to your proposed project location? *

Short answer text

Application Evaluation

- Based on project readiness and potential to leverage future funds.
- Applications accepted on rolling basis; first come first serve.
- We anticipate funding 2-4 projects.



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https://3riversquest.wvu.edu/

Facebook @3RiversQUEST

Biweekly E-newsletter
https://3riversquest.wvu.edu/news/rivers-run-through-this

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3RQ THREE RIVERS QUEST

Q &A Session

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