

Ohio Water Policies

ORSANCO TEC
June 2024

Tiffani Kavalec, Policy Director





FORBES > LIFESTYLE > TRAVEL

Columbus Is America's Fastest Growing City And A Wonderful Place To Visit

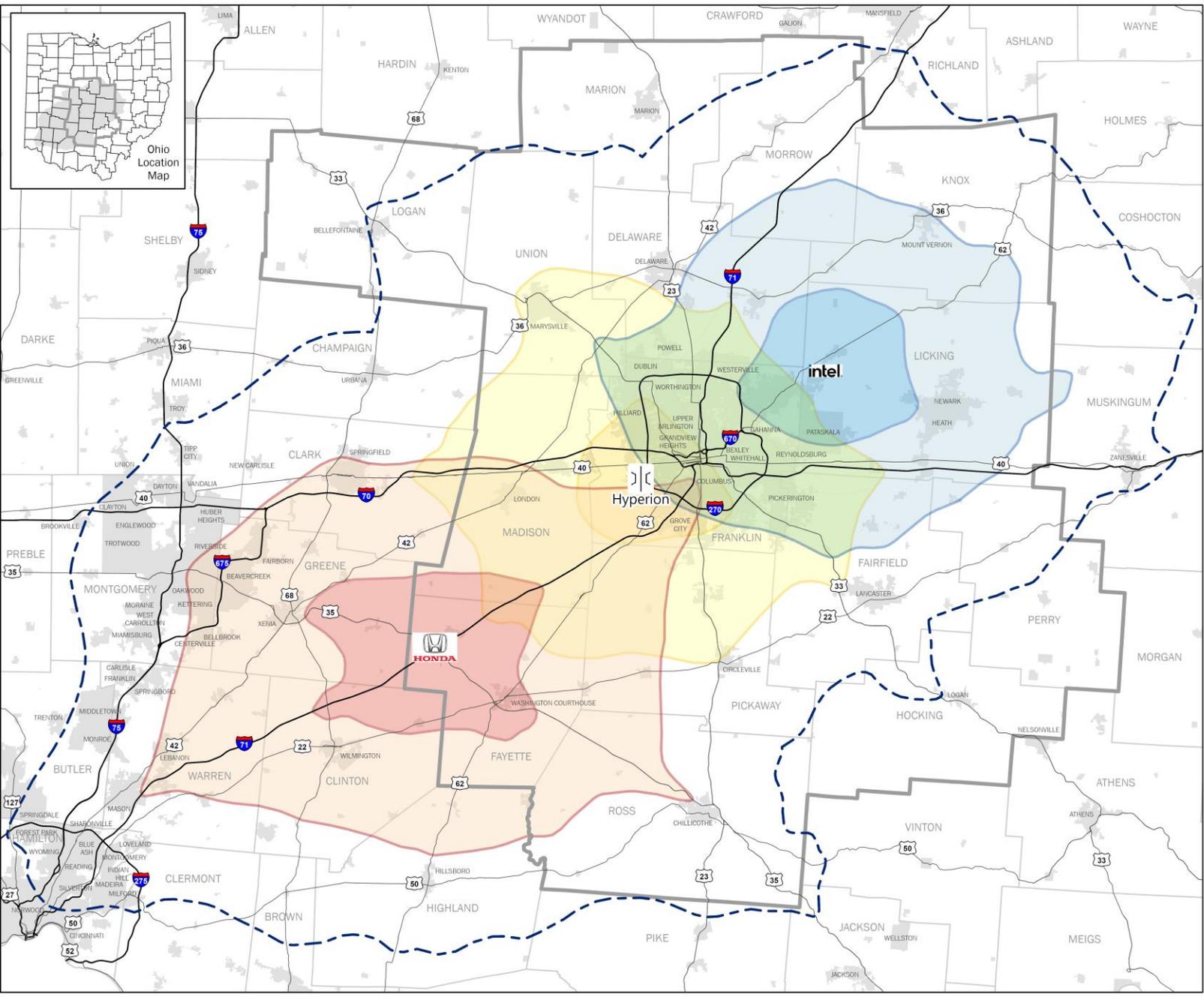
Katie Chang Contributor @

Follow

🔖 0

Apr 14, 2024, 08:00am EDT





Major New Development Driving Times

Intel

- 20 minutes
- 40 minutes

Honda

- 20 minutes
- 40 minutes

Hyperion

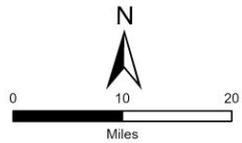
- 20 minutes
- 40 minutes

- Within 60 minutes of a Development

- MORPC Area

- City/Village

Note: Travel assumed by car. Travel times are approximate from Intel, Hyperion, and Honda sites out at 5pm. Buffers generated using ESRI Network current conditions.



The information shown on this map is compiled from various sources made available to us which we believe to be reliable.
 N:\ArcGIS\LOCAL\MajorDev\MajorDevDriveTimes.aprx
 2/14/2023



Environmental Protection Agency

Ohio is the Midwest's Cloud Infrastructure Hub

- From 2015-22, Amazon Web Services (AWS) invested **\$6.3 billion** in its Ohio data centers
- In June 2023, AWS announced it planned to invest an additional **\$7.8 billion** in Ohio by 2030
- In 2017, Meta announced its initial multi-building data center campus in central Ohio that is LEED Certified Gold
 - Meta's total announced Ohio investment had grown to **\$1.5 billion** as of 2022
- In 2019, Google officially broke ground on a **\$600 million** data center in New Albany
 - In 2023, Google announced two new locations that will bring total investment to more than **\$2 billion**
- In 2021, the Tax Foundation's Location Matters report found Ohio **ranked #1** in new data center corporate tax costs

Economic Impact of the AWS US East (Ohio) Region from 2015-2022

\$6.3 billion

Total investment
in Ohio, including both
capital and operating
expenditures

\$2.2 billion

Estimated total gross
domestic product (GDP)
contributed to Ohio

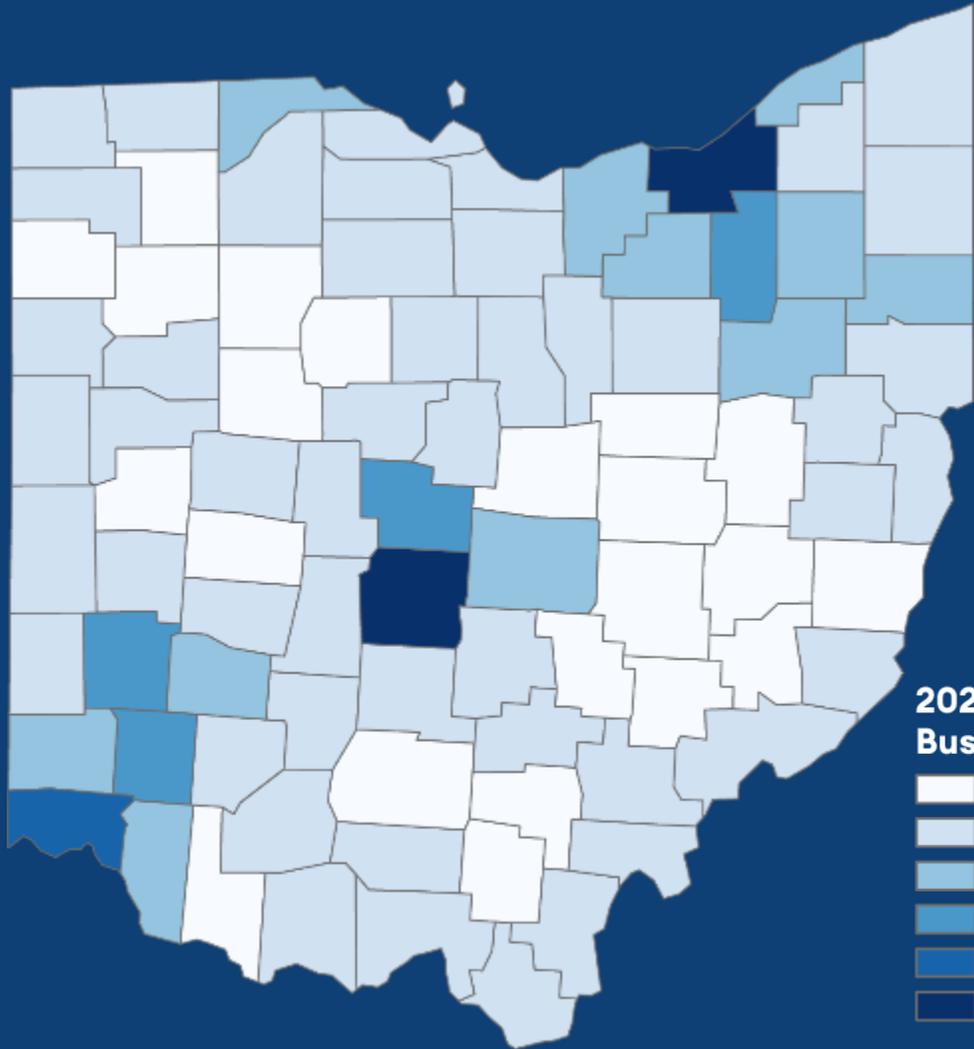
3,550

Estimated average
full-time equivalent (FTE)
jobs supported at local
vendors annually in Ohio

AWS Capital Investment in Ohio



Dramatic Growth in the Data Center Industry over the Past Decade



Source: Lightcast, 2022 Payrolled Business Locations in NAICS 51-8210: Data Processing, Hosting, and Related Services
This document is not a public record and its content should not be reprinted in any other document. Ohio Revised Code 149.43(A)(1)(bb) and 187.04(C)(1) and (2)



WWTP-Treated Effluent as Process Water





Regional Water Studies - Scope

- Comprehensive Water Study
 - Current availability
 - Current demand
 - Projected future demand 2030, 2040, & 2050
 - Gap analysis
 - Regionalization recommendations
 - Water reuse opportunities
 - Siting locations for new mega water users



Request for Proposals - Scope



Identify zones of economic opportunity based on water resource feasibility and availability



Provide a “Pathway to Readiness” for communities with capacity limitations



Maintain water quality in our rivers and streams throughout the state in the long term

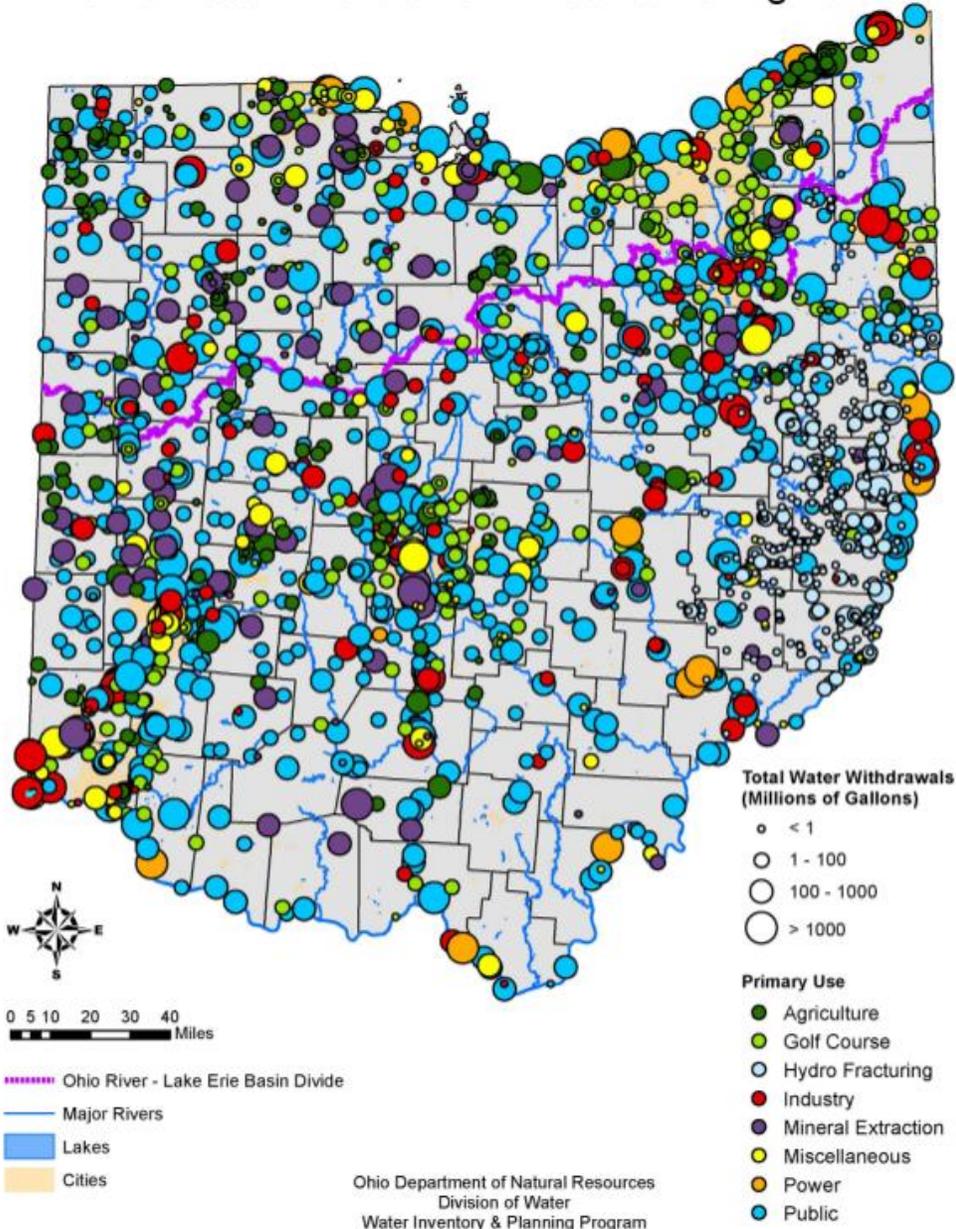


Identify ground water recharge needs and recommendations



Provide information regarding reservoir re-evaluation and management (ODNR, USACE controlled and others)

Ohio Water Withdrawal Amounts During 2021



Ohio Department of Natural Resources

- Water availability (water budget)
- High-capacity withdrawal permitting
- Reservoirs / USACE Contracts

Proposal 4

- \$2,997,700
- RANK 1st
- Contracted for \$2797,700



Overview of Hazen's Subconsultant Roles

Jacobs

Scenario planning and integrated modeling expertise, economic development planning

Eagon and Associates

Ground water availability, local modeling, ground water sensitivities and contamination

Coldwater

Ecosystem and recreational services, environmental demands, water quality limits

Burgess & Niple

Scenario development, infrastructure needs

Geosyntec

Regulatory constraints and permitting, TMDLs

Neighborhood Strategies

Ground water availability, local modeling, ground water sensitivities and contamination

Midwest Biodiversity Institute

Technical advisor - Central Ohio stream health knowledge

Lisa Jeffrey

Technical advisor - Evaluation of safe yield and water quality considerations

Dashboards



Regional Water Study (RWS) – Central Ohio Region



Home



Current and Projected Demands



Integrated Map and Model



Scorecard for Alternatives Analysis

Search



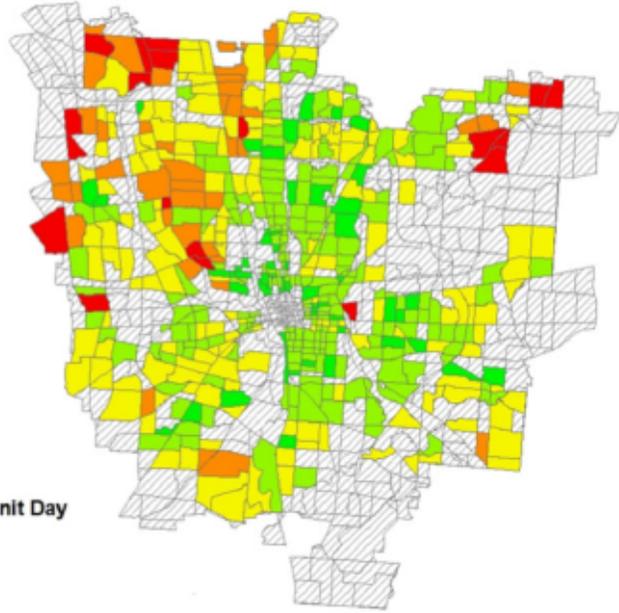
Area of interest:

City of Columbus

Historical parameter:

Residential gallons per unit day by TAZ (2018)

Historical Data



Gallons per Unit Day

- 25 - 88
- 89 - 127
- 128 - 182
- 183 - 305
- 306+

Screened Out or No Observed Use

Household growth rate:

+10%

Residential GPCD:

Base GPCD 2020-2022 Avg

Non-residential GPCD:

Base GPCD 2020-2022 Avg

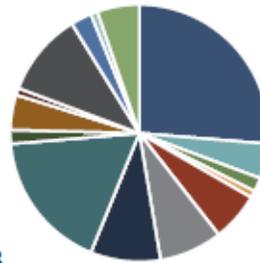
Weather condition:

Historical Normal

Water efficiency factor:

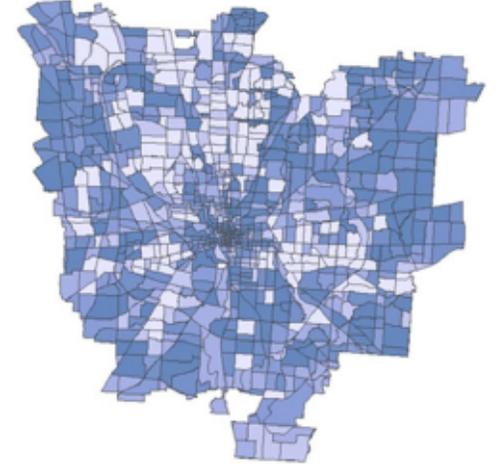
Passive

Total Water Use by County in Central Ohio Region



2023

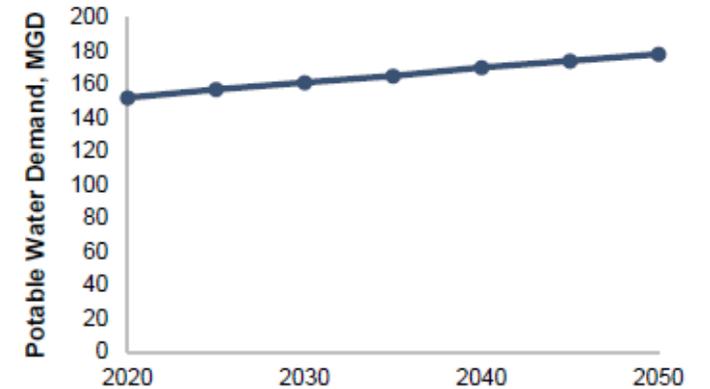
Projected Data



Change in Total Water Use (2020-2050, MGD)

- 0.078 - -0.008
- 0.007 - 0.000
- 0.001 - 0.003
- 0.004 - 0.010
- 0.011 - 0.028
- 0.029 - 0.983

Projected Data

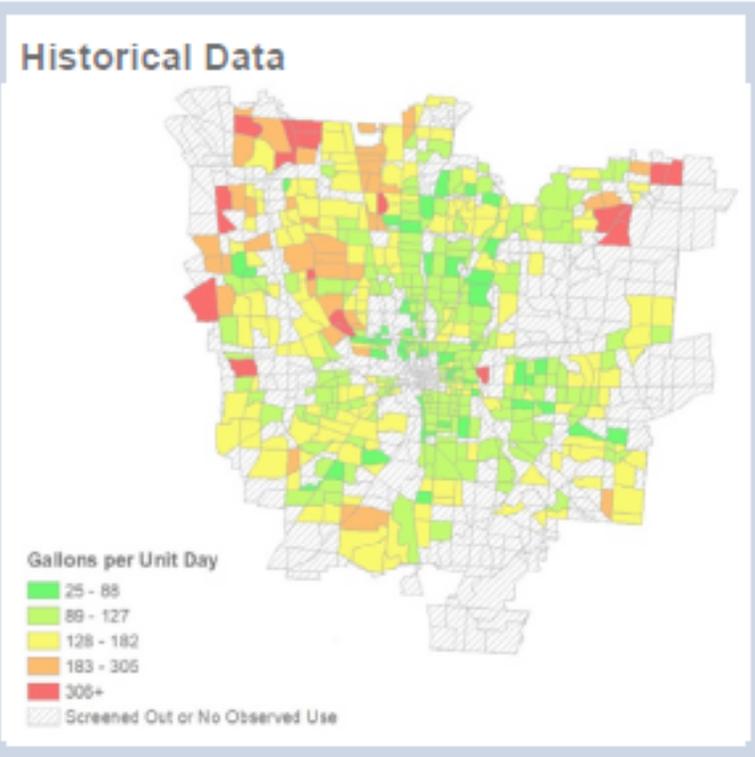


Potable Water Demand, MGD

2020 2030 2040 2050

Area of interest:

Historical parameter:



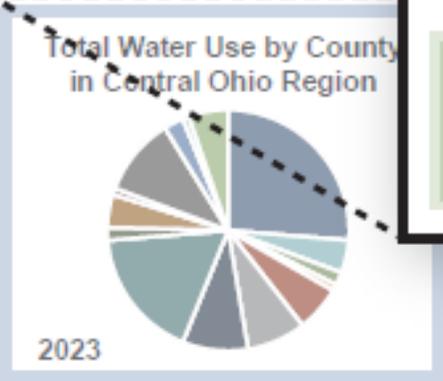
Household growth rate:

Residential GPCD:

Non-residential GPCD:

Weather condition:

Water efficiency factor:



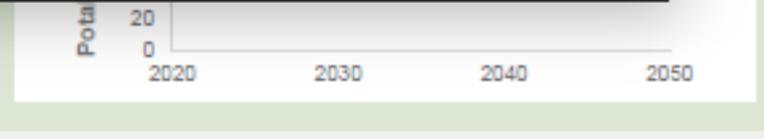
Household growth rate:

Residential GPCD:

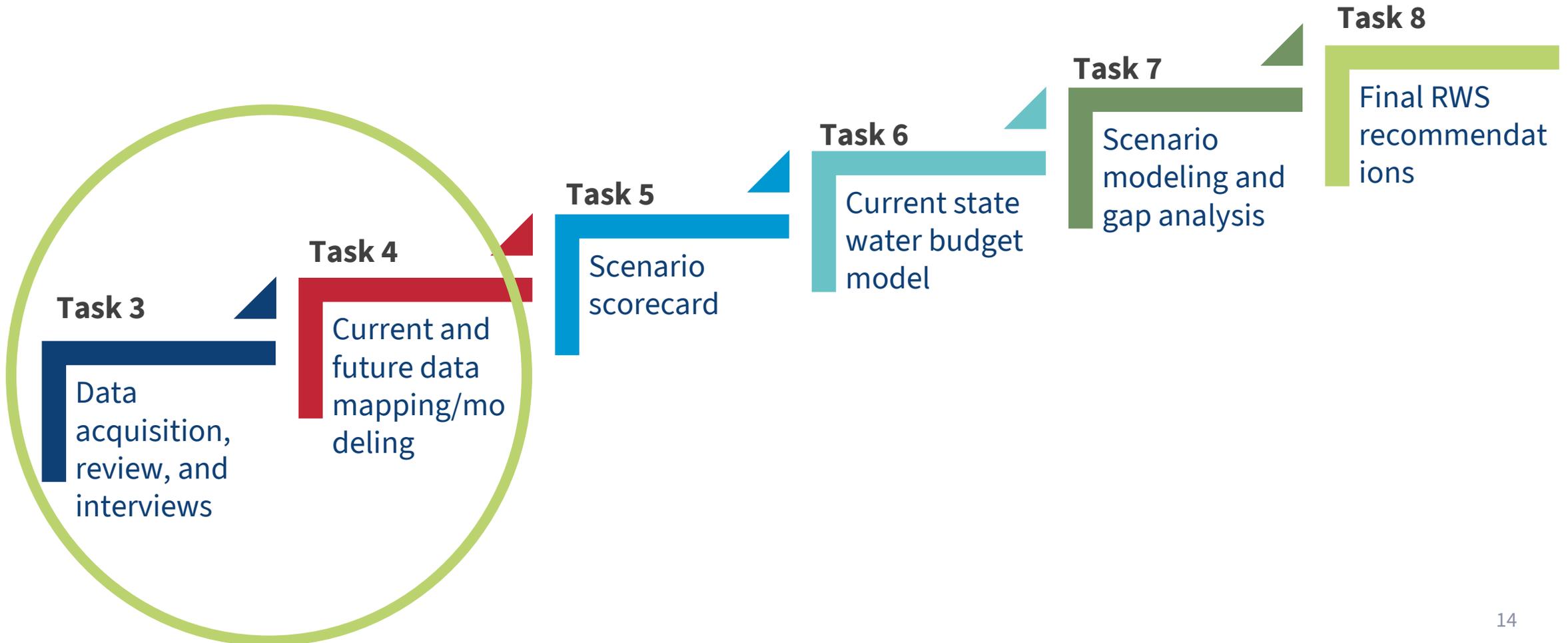
Non-residential GPCD:

Weather condition:

Water efficiency factor:



Project Workflow



USDA NRCS Web Soil Survey

USDA United States Department of Agriculture
Natural Resources Conservation Service

Contact Us | [Subscribe](#) | [Archived Soil Surveys](#) | [Soil Survey Status](#) | [Glossary](#) | [Preferences](#) | [Link](#) | [Logout](#) | [Help](#)

[Area of Interest \(AOI\)](#) | **Soil Map** | [Soil Data Explorer](#) | [Download Soils Data](#) | [Shopping Cart \(Free\)](#)

[Printable Version](#) | [Add to Shopping Cart](#)

Search

Map Unit Legend

Franklin County, Ohio (OH049)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AdB	Alexandria silt loam, 2 to 6 percent slopes	390.8	0.1%
AdC2	Alexandria silt loam, 6 to 12 percent slopes, eroded	532.2	0.2%
AdD2	Alexandria silt loam, 12 to 18 percent slopes, eroded	1,134.3	0.3%
AdE2	Alexandria silt loam, 18 to 25 percent slopes, eroded	1,760.0	0.5%
Ad	Algiers silt	285.6	0.1%

Soil Map

Scale: (not to scale)

Ohio Water Well Database

OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGICAL SURVEY

WATER WELLS DATABASE

HELP LOGIN

Zoom In

Zoom Out

Wells

Sealing Reports

Well Symbology

Base Map

Features & Layers

Select

Measure

Draw

Zoom To Location

Scale: 1 : 144447.6442
Latitude: 39.995276
Longitude: -82.994328

QUICK SEARCH

ADVANCED SEARCH

Well Log Sealing Report

County: FRANKLIN

Township: Select Township

Record Number:

SEARCH BY ID

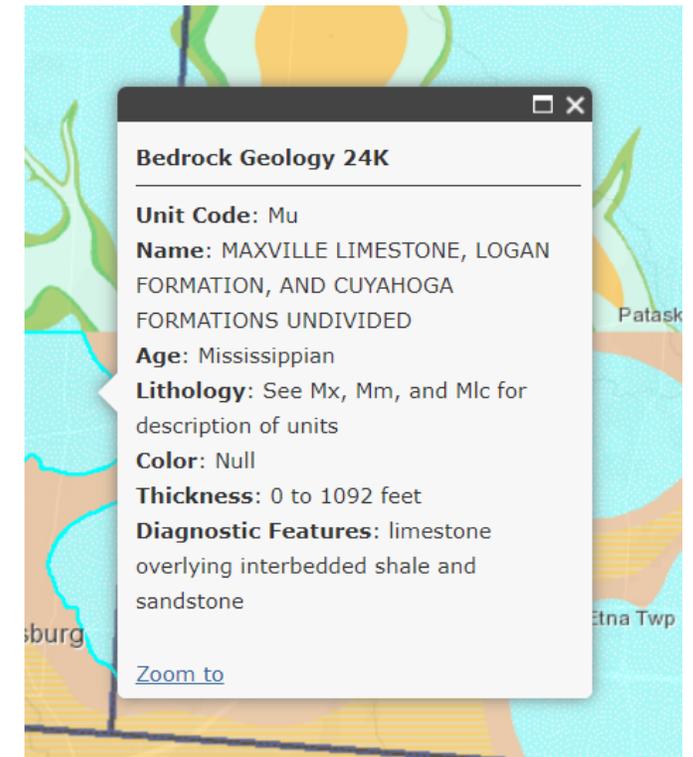
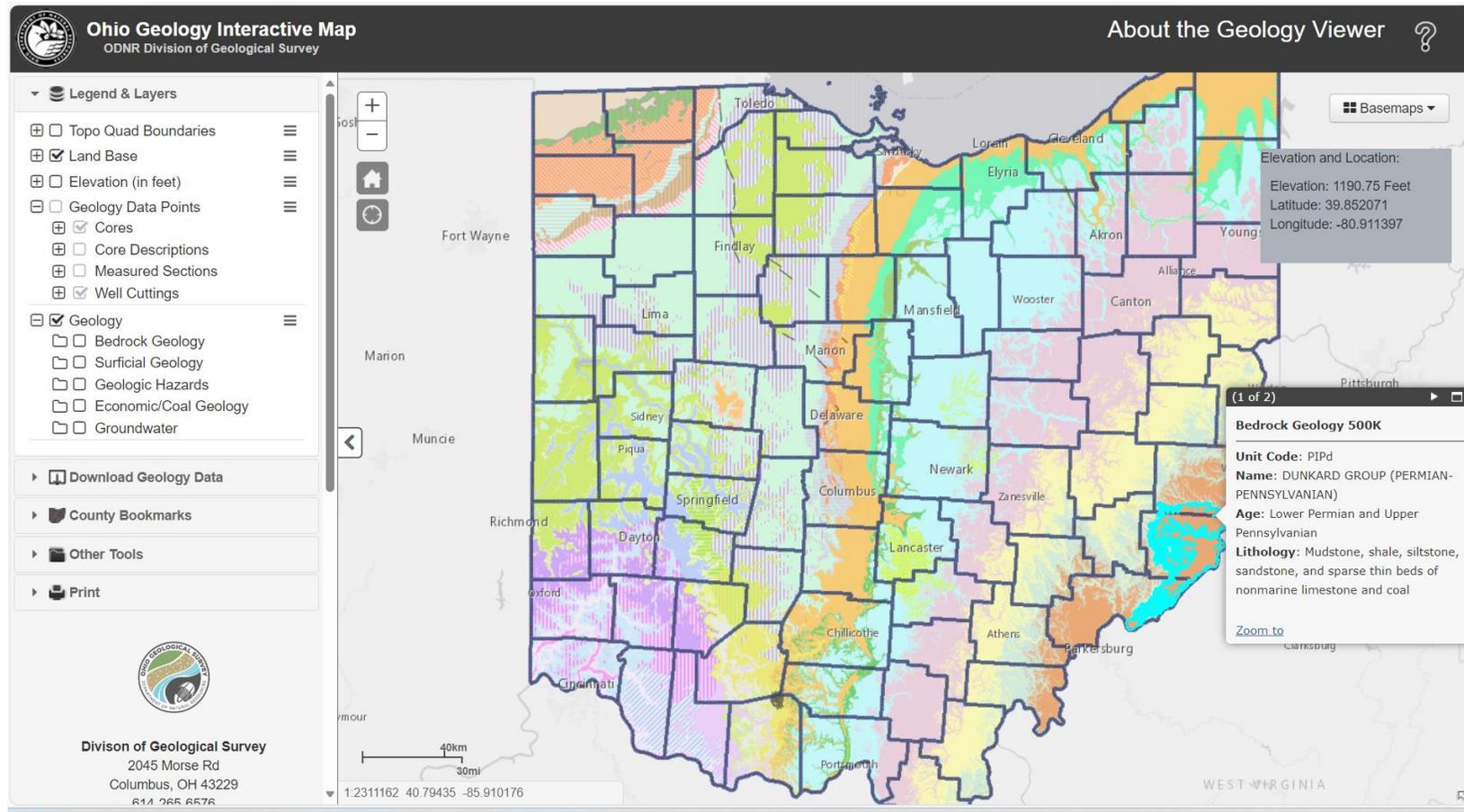
Aquifer Type

- Sandstone & Limestone (SLI)
- Shells Lime Sand (LSS)
- Shells/Lime/Sand (SHL)
- Traverse Group (TRV)
- Dolomite (DOL)
- Limestone & Gravel (LSG)
- Limestone (LST)
- Shell (SHE)
- Niagara Formation (NIA)
- Marl (MRL)
- Shale w/ Sandstone Streaks (SHD)
- Shale & Sandstone (SHS)
- Stringer (STG)
- Streak (STK)
- Sandstone & Shale (STS)
- Injun Sandstone & Shale (ISH)
- Sandstone/Shale/Limestone (SSL)
- Limestone & Shale (LSH)
- Limestone & Rock (LSR)
- Shale & Limestone (SHI)
- Limestone & Clay (LSC)
- Lime & Clay (LMC)
- Sand & Clay (SCL)
- Mud & Sand (MSD)

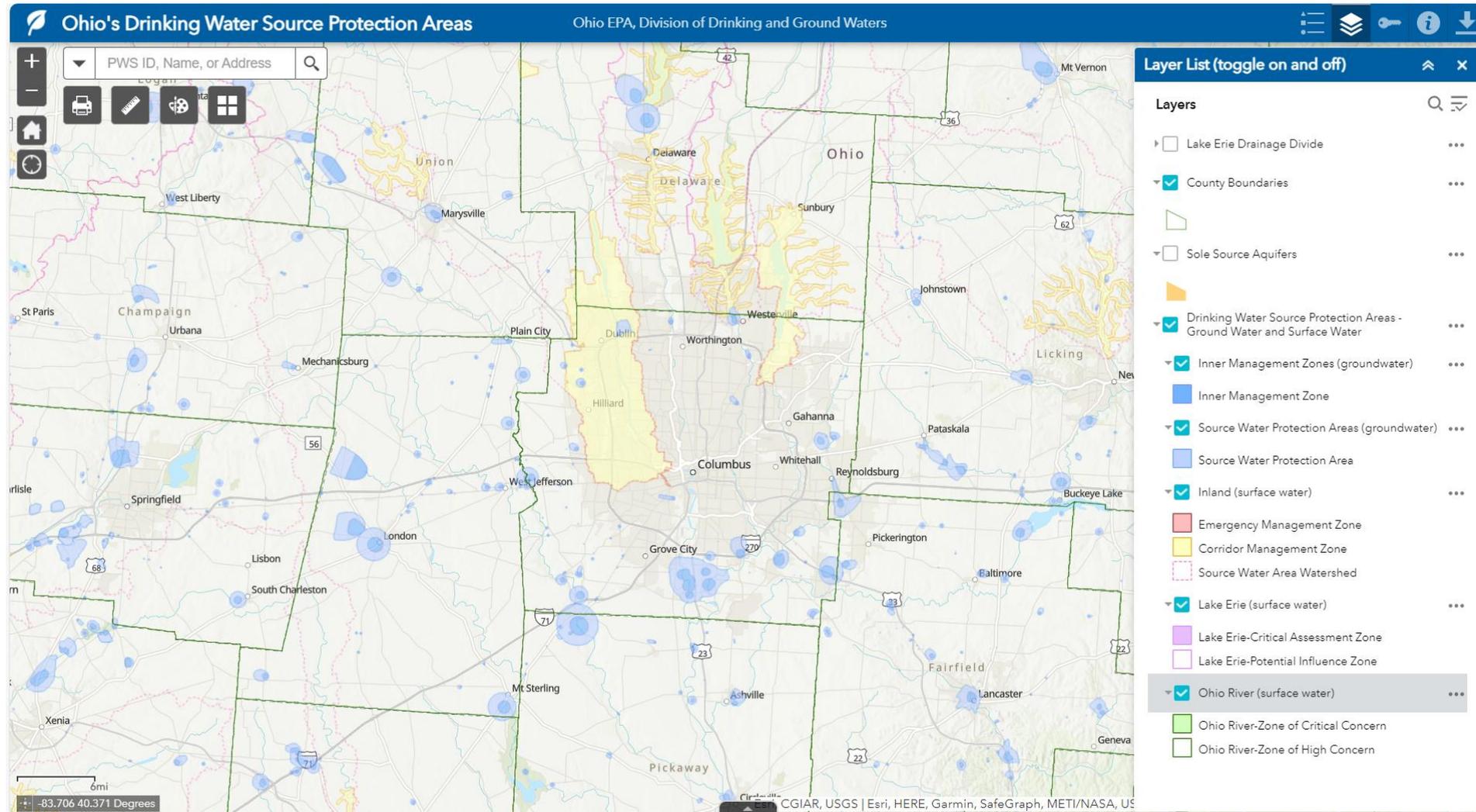
PRINT MAP

Leaflet | Powered by Esri | OSU GIS, City of Gahanna, City of Grandview Heights, Franklin County Auditor, Esri, HERE, Garmin, INCREMENT P, NG

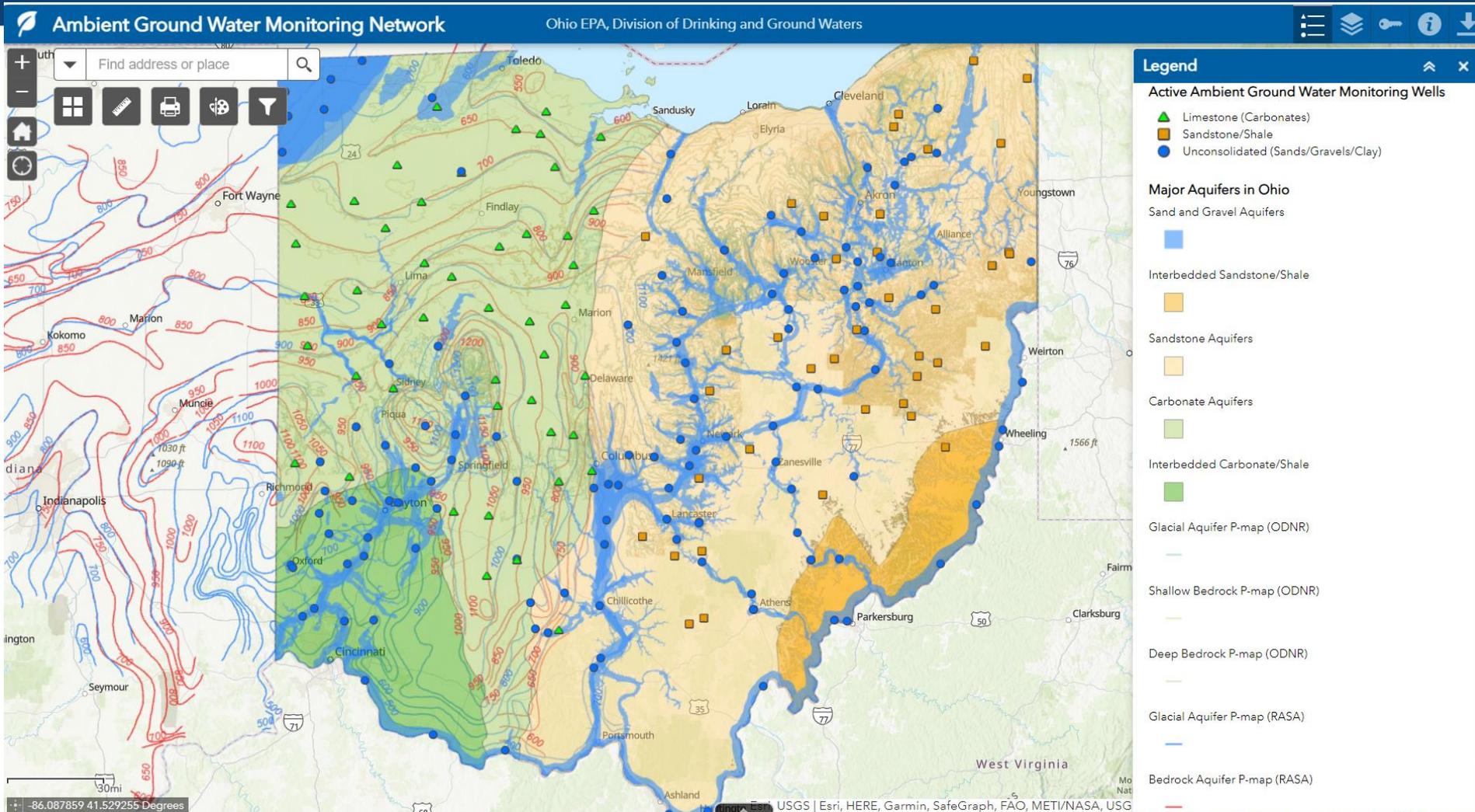
Ground Water Vulnerability Map of Ohio



Drinking Water Source Protection Area



Ambient Ground Water Monitoring Data

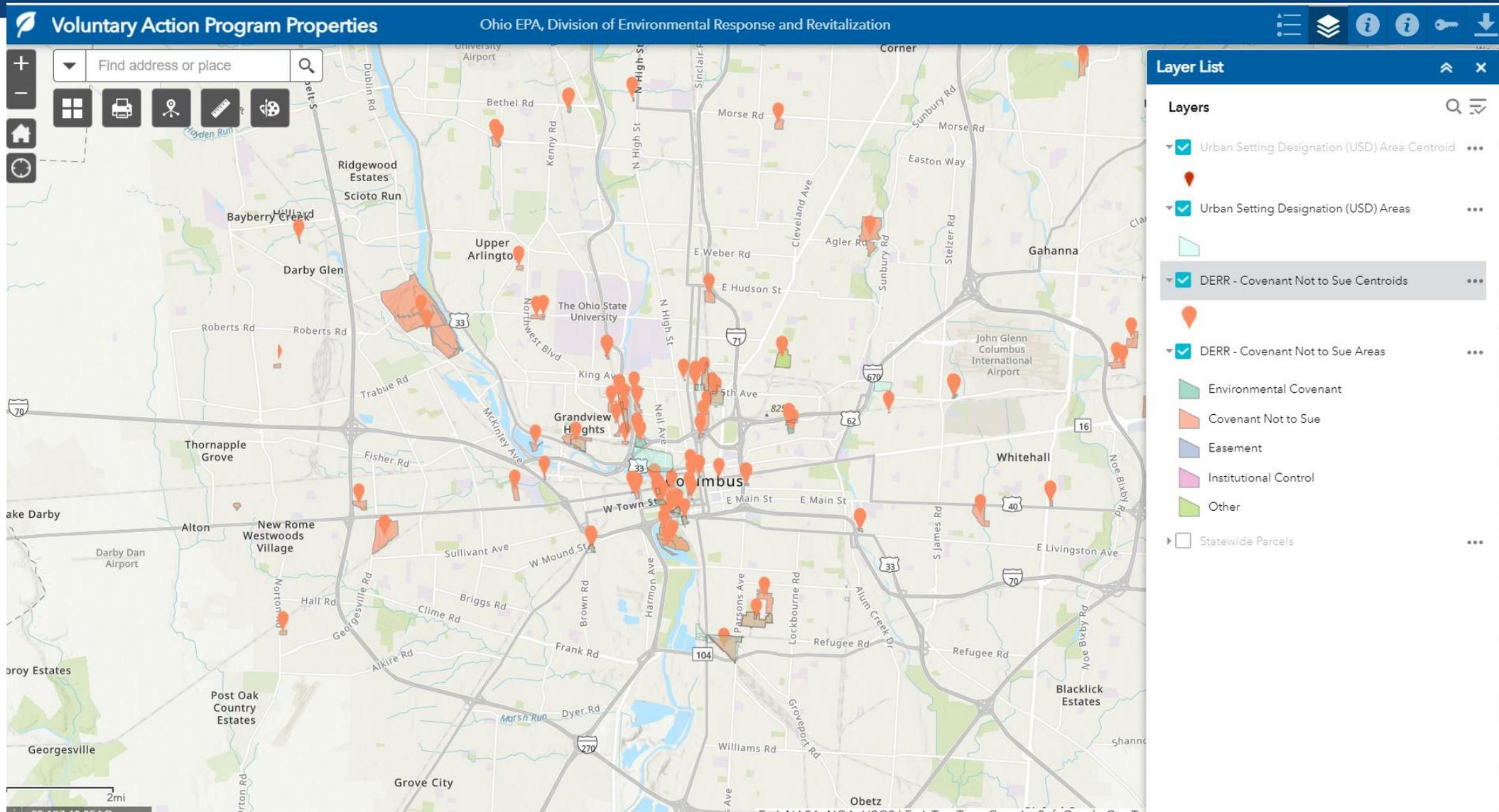


Strawser & Allen Partnership

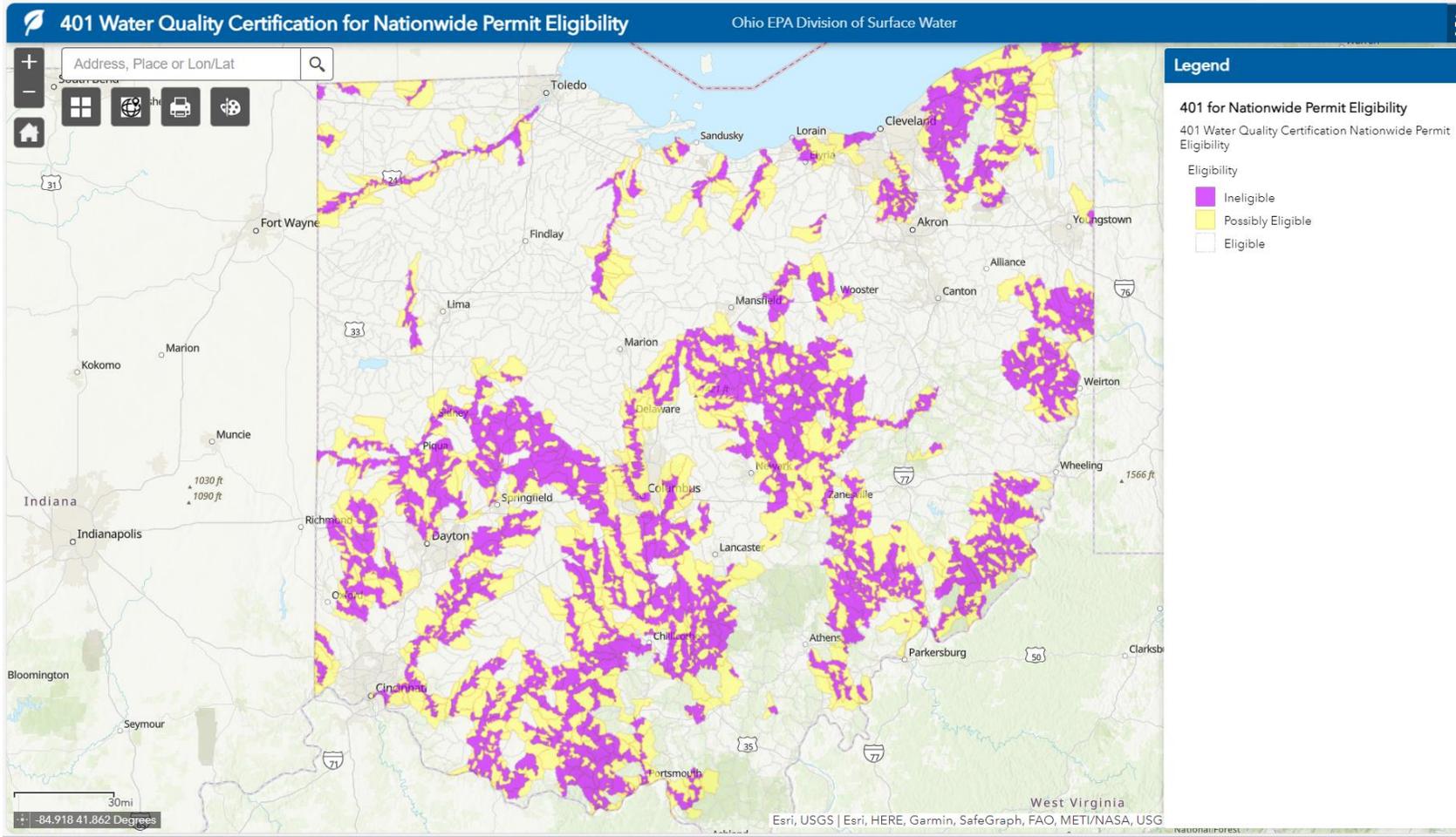
County: Franklin
Ambient Well ID: 39FRA00404
Well No: 1
ODNR Well Log: 468710
Aquifer Lithology: LS
Local Aquifer Name: Hilliard
Geologic Age: DEV_SIL
Well Depth (ft): 85.00
Casing Length (ft): 41.00
Depth to Bedrock (ft): 26.00
Elevation (AMSL, ft): 708.00
Sampling Status: Active18Cycle
Inorganic Report: [LINK](#)
Organic Report: [LINK](#)
Time Series: [LINK](#)

[Zoom to](#)

Urban Settings Designations/ VAP Site Covenants Not to Sue



Ohio EPA Stream Eligibility Map



Category Definitions:

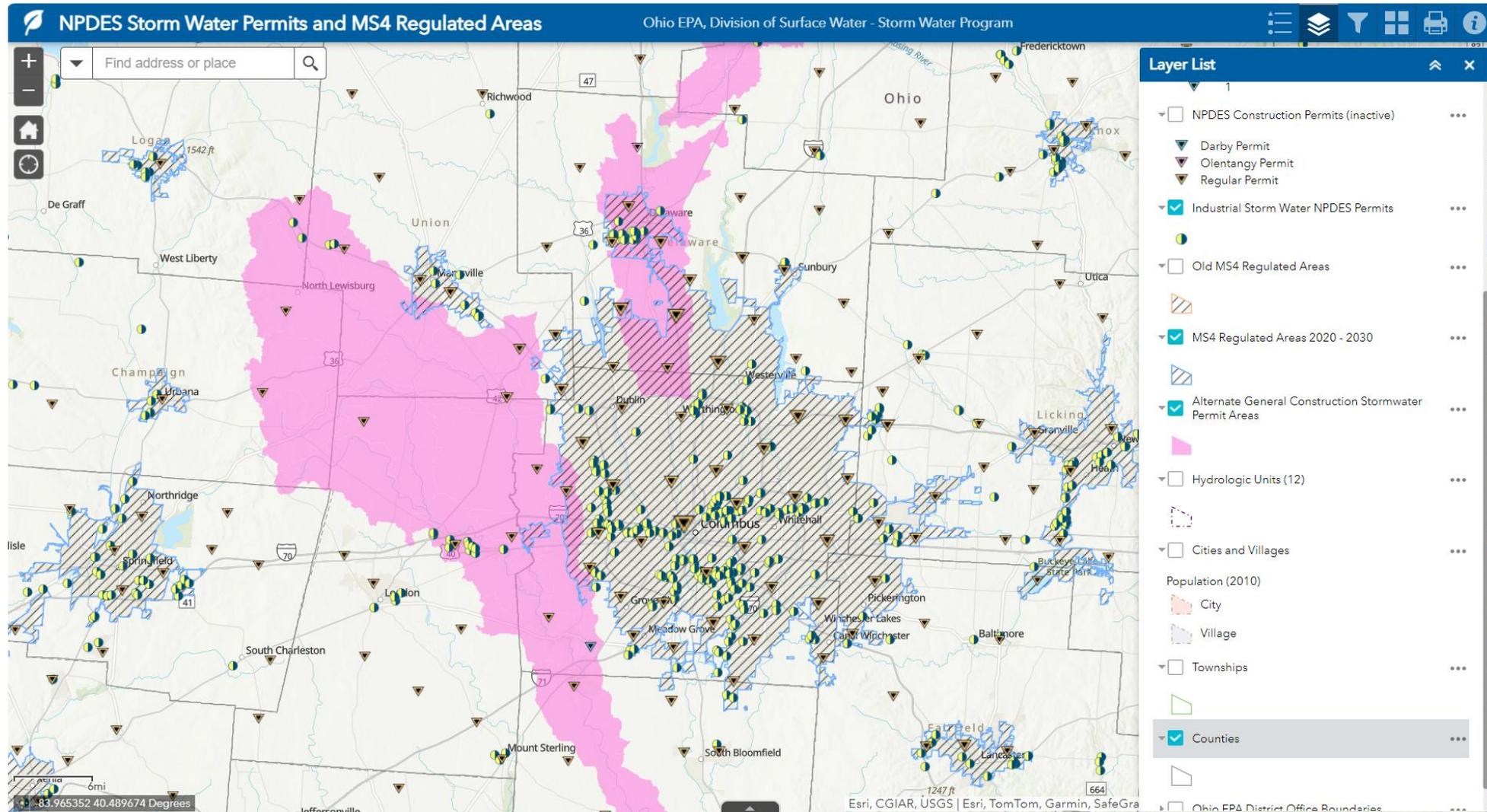
Ineligible Areas (Shaded Purple): an individual 401 water quality certification is required.

Possibly Eligible Areas (Shaded Yellow): may require an individual water quality certification if the streams which are proposed to be impacted exhibit habitat features indicative of high quality waters, or if other Ohio general and special limitations and conditions for the nationwide permits are not met.

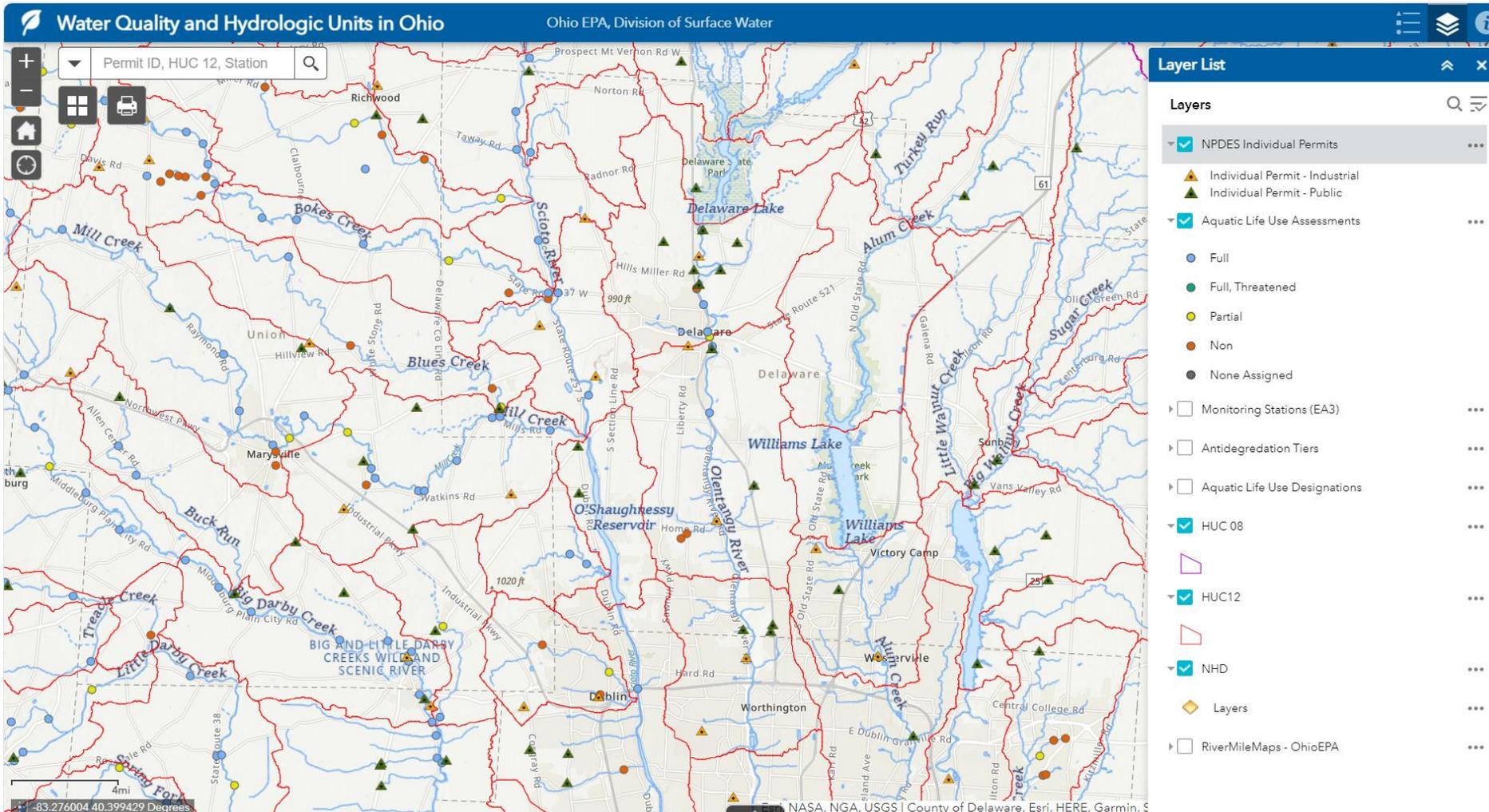
Eligible Areas (No Shading): may require an individual 401 water quality certification if Ohio general and special limitations and conditions for the nationwide permits are not met.

[Zoom to](#)

NPDES MS4 Regulated Areas



Water Quality and Hydrologic Units



Watershed Attributes

Watersheds - Watershed - HUC12: Bliss Run-Alum Creek

Name	Bliss Run-Alum Creek
AreaAcres	33,866.00
AreaSqKm	137.05
GNIS_ID	
HUC12	050600011602
HUMod	TF
HUType	Standard
LoadDate	January 18 2013
MetaSourceID	
NonContributingAcres	0.00
NonContributingSqKm	0.00
SourceDataDesc	
Zoom to	

How's My Waterway

Let's get started!

Search by address, zip code, or place...

Go OR Use My Location

Choose a place to learn about your waters:

Community

State & Tribal

National

Explore Topics:



Swimming



Eating Fish



Aquatic Life



Drinking Water

Ohio Water Quality

Choose a Topic:

Swimming

Eating Fish

Aquatic Life

Drinking Water

Other

Pick your Water Type and Use:

Water Type:

Rivers and Streams

Use:

Recreation - Bathing Waters

Assessed *Rivers and Streams* that support *Recreation - Bathing Waters*

Targeted monitoring provides information on water quality problems for the subset of those waters that were assessed.

Good

235 miles

210 miles

Impairment for Ohio *Rivers and Streams* assessed for *Recreation - Bathing Waters*

contain [Bacteria and Other Microbes](#).

Let's get started!

columbus ohio

Go OR

Use My Location

Columbus, Ohio
WATERSHED: Kian Run-Scioto River (050600012302)

Overview

Swimming

Eating Fish

Aquatic Life

Drinking Water

Water M

Overview

Show Text

Your Waters: What We Know

Waters in your community are connected within a local [watershed](#). The **dashed outline on the map shows your watershed**.

Water quality is monitored for physical, chemical and biological factors. The monitoring results are assessed against EPA approved water quality standards or thresholds. Water can be impaired, meaning it is not able to be used for certain purposes... [Show more](#)

DISCLAIMER

2

Waterbodies

38

Water Monitoring Locations

6

Permitted Dischargers

Waterbodies

Water Monitoring Locations

Permitted Dischargers

Waterbody Conditions:

Good

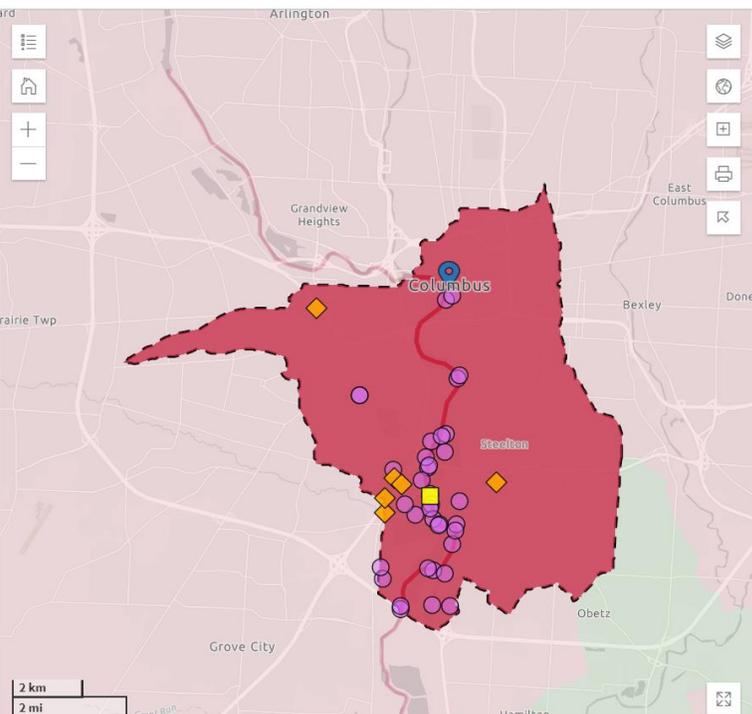
Impaired

Condition Unknown

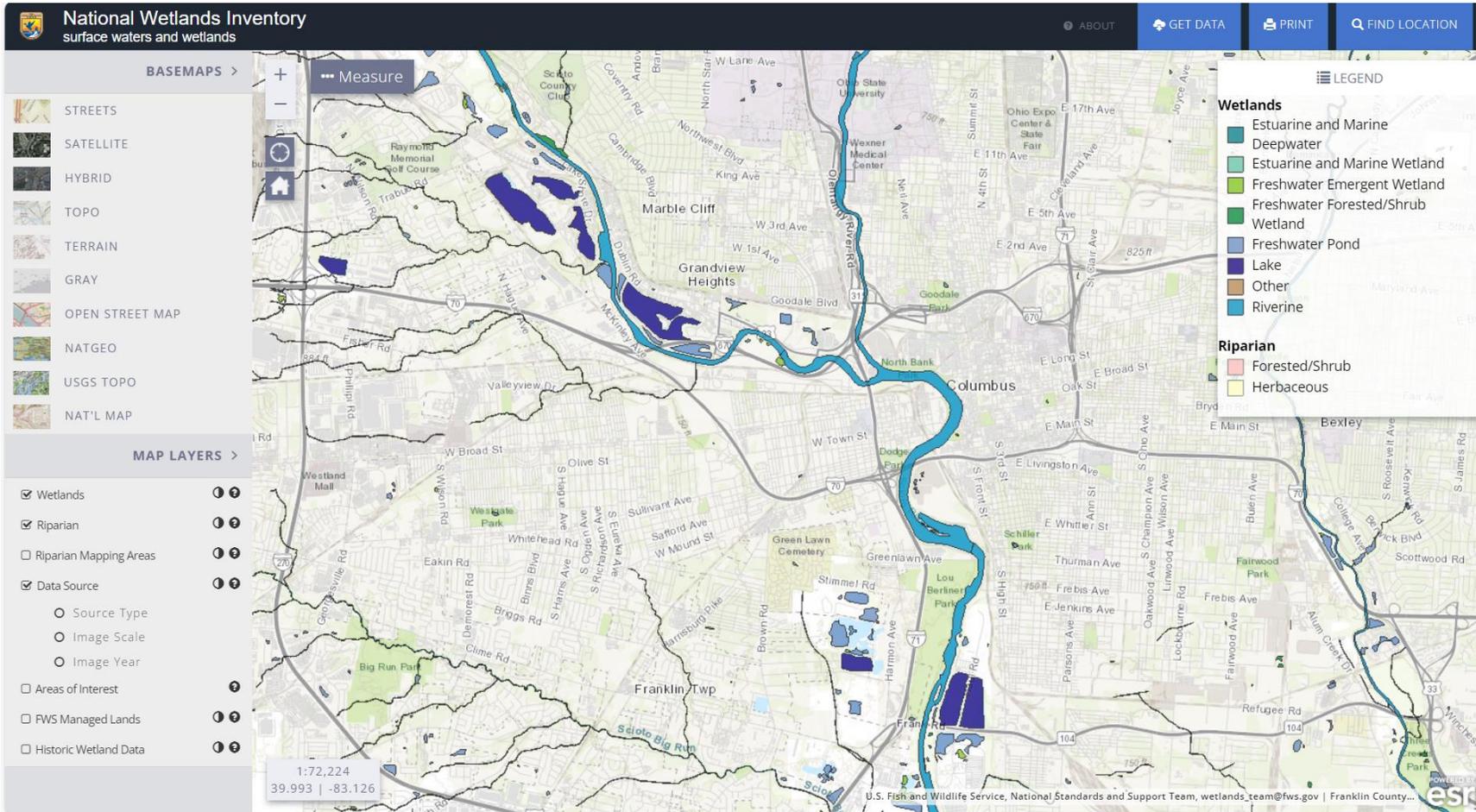
Overall condition of 2 waterbodies in the *Kian Run-Scioto River* watershed.

Expand All

Kian Run-Scioto River
State Waterbody ID: OH050600012302



U.S. Fish and Wildlife Service National Wetland Inventory



General Description Reports About

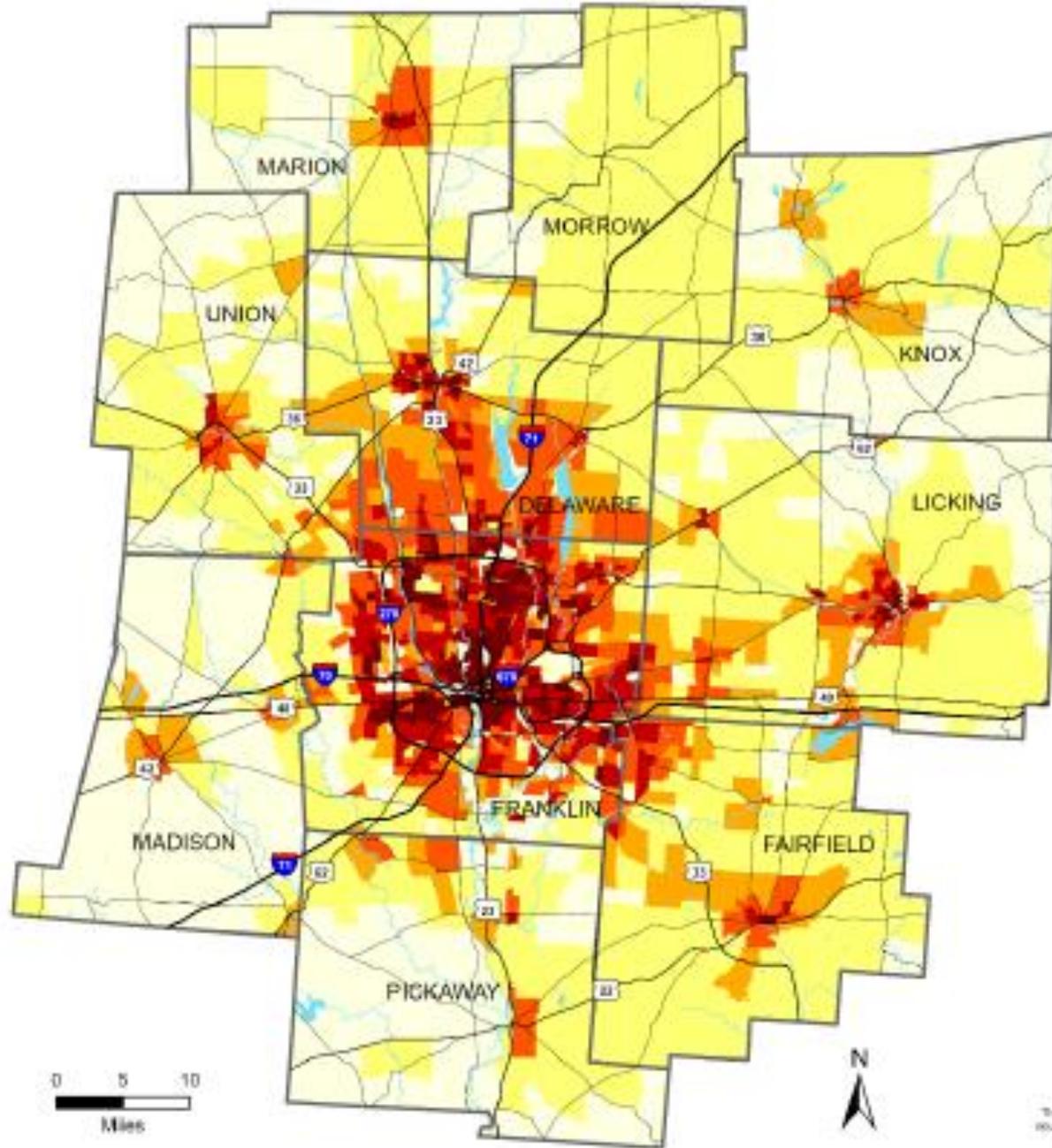
This 513.69 acre Riverine habitat is classified as a R2UBH. For a complete code description, click [here](#).

The wetlands and deepwater habitats in this area were photo interpreted using 1 meter (or less) digital, color infrared imagery from 2007. Click [here](#) for project specific mapping conventions and information.

[Zoom to wetland](#)

[Zoom to project area](#)

Population Density Forecast 2050

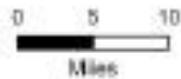


Population 2050 per acre

- 0 - 0.1
- 0.1 - 0.5
- 0.5 - 1.5
- 1.5 - 5
- 5 - 10
- > 10

Traffic Analysis Zone outputs from MORPC regional land use model, based on local input.

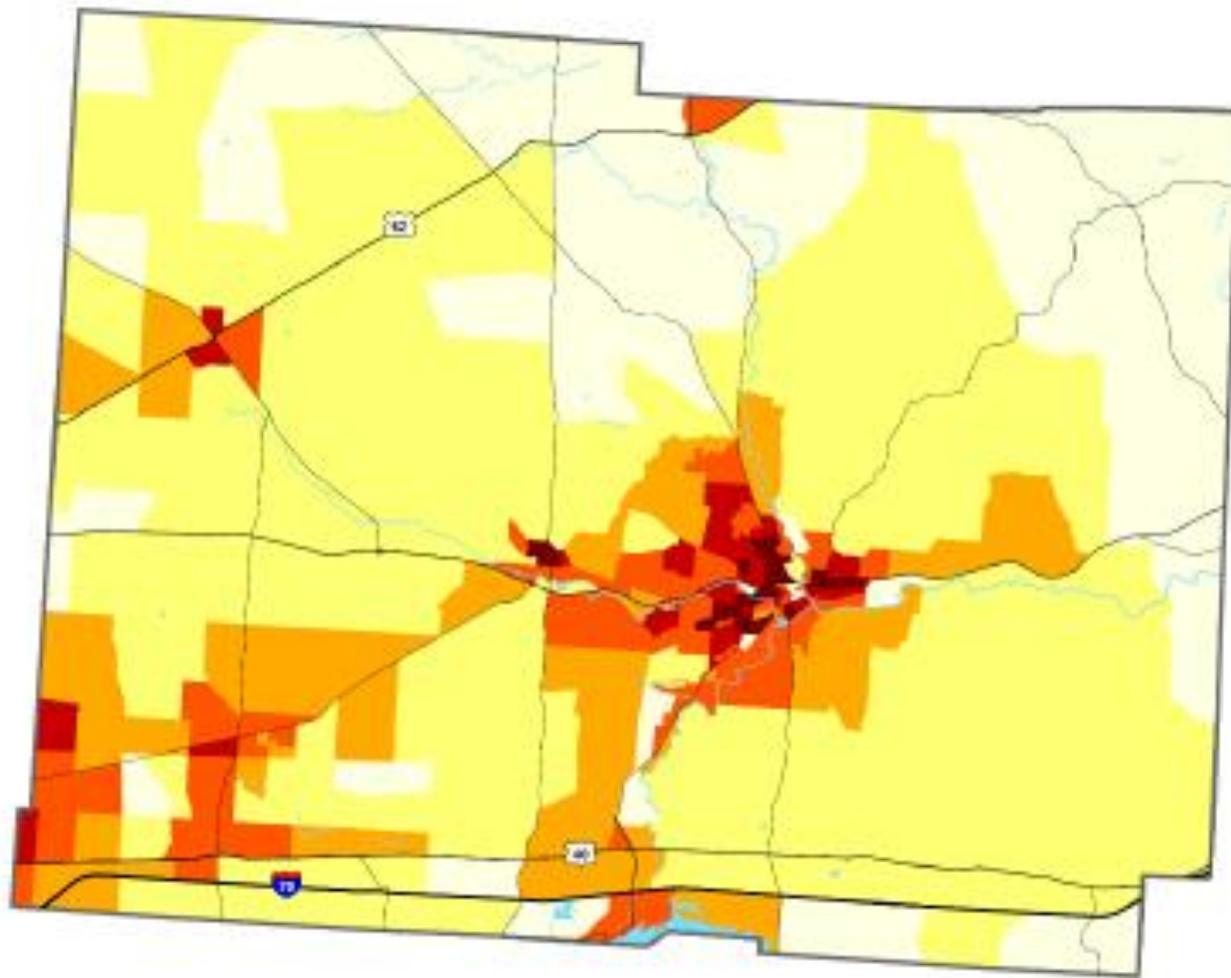
10 County Population: 2,925,943



The information shown on this map is compiled from various sources made available to us and is not intended to be reliable. No warranty is made by MORPC for any use of this information.



Population Density Forecast 2050 Licking County



Population 2050 per acre



Traffic Analysis Zone outputs from
NORPC regional land use model,
based on local input.

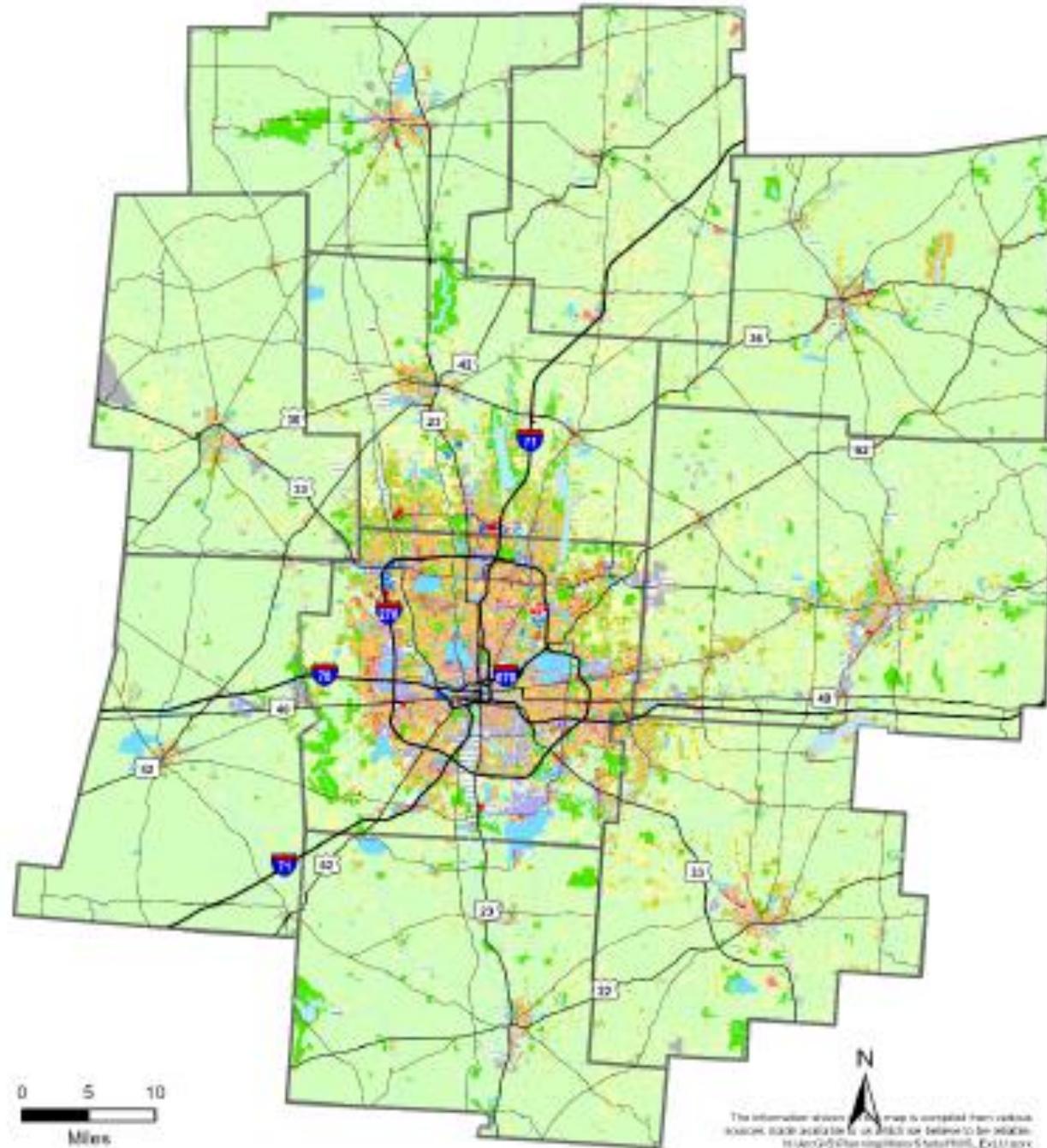
Licking County
2050 Population: 236,202



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sources made available for all and not intended to be reliable.
© 2005 Planning Policy Study 2000, February Update
12/14/05

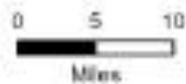


Central Ohio Existing Land Use



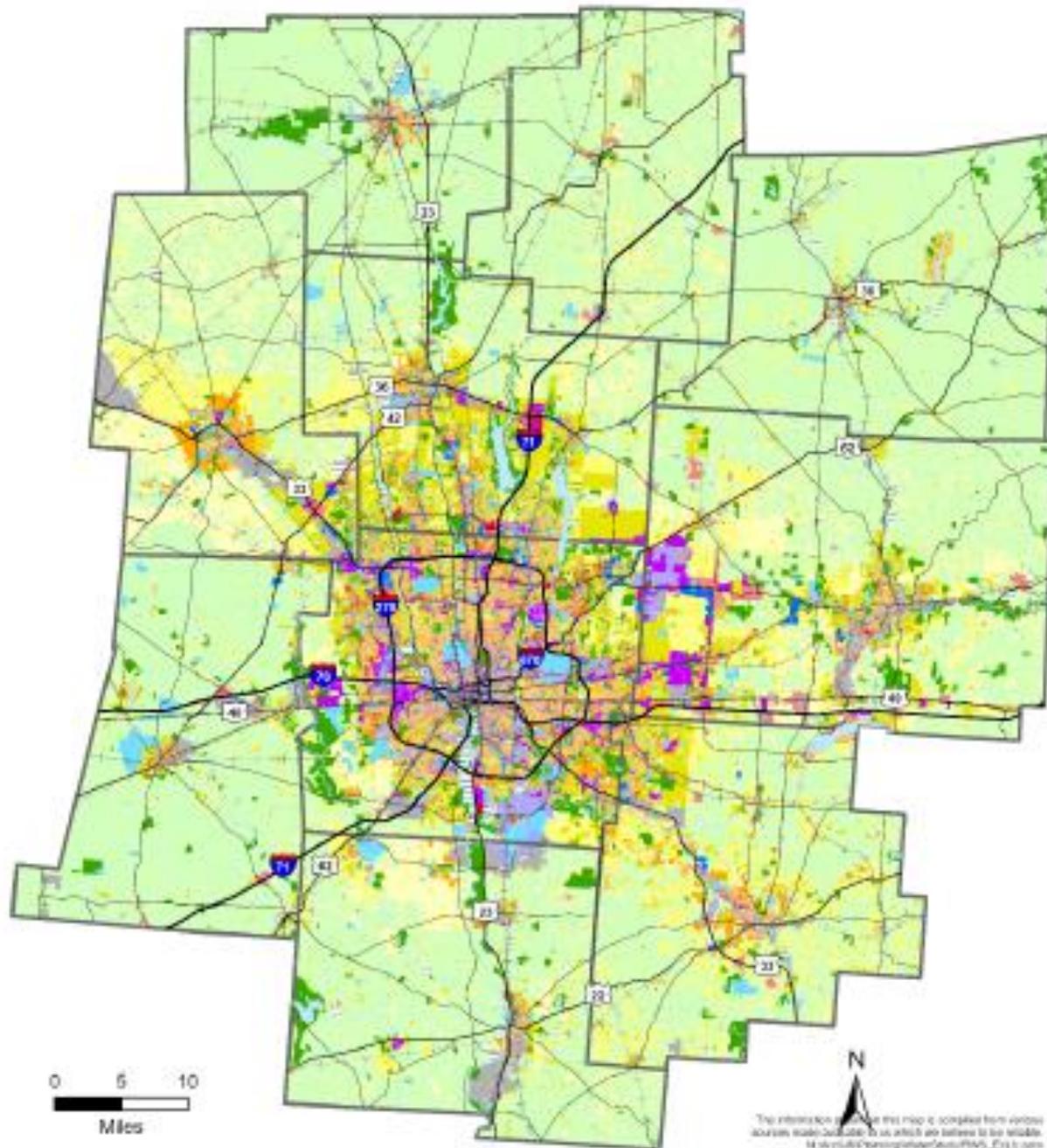
MORPC Standardized Existing Land Use 2021

- Regional Commercial
- Commercial
- Mixed-Use
- Office
- Industrial
- Warehouse
- Park/Open Space
- Agriculture
- Res. Rural Estate (5-20 acre lots)
- Res. Rural (2-5 acre lots)
- Res. Low/Suburban (0.5-3 units per acre)
- Res. Mod/High Suburban (3-8 units per acre)
- Res. Low Urban (8-20 units per acre)
- Res. High Urban (20+ units per acre)
- Public Service
- Quarry
- Vacant
- Parking
- Water



The information shown on this map is compiled from various sources. Such information is not MRC or MORPC and is not to be used for any purpose other than the original source. MORPC 12/13/2021

Central Ohio Future Land Use



MORPC Standardized Future Land Use

- Regional Commercial
- Commercial
- Mixed-Use
- Office
- Industrial
- Warehouse
- Park/Open Space
- Agriculture
- Res Rural Estate (5-20 acre lots)
- Res Rural (2-5 acre lots)
- Res Low/Suburban (0.5-3 units per acre)
- Res Mod/High Suburban (3-8 units per acre)
- Res Low Urban (5-20 units per acre)
- Res High Urban (20+ units per acre)
- Public Service
- Quarry
- Parking
- Water

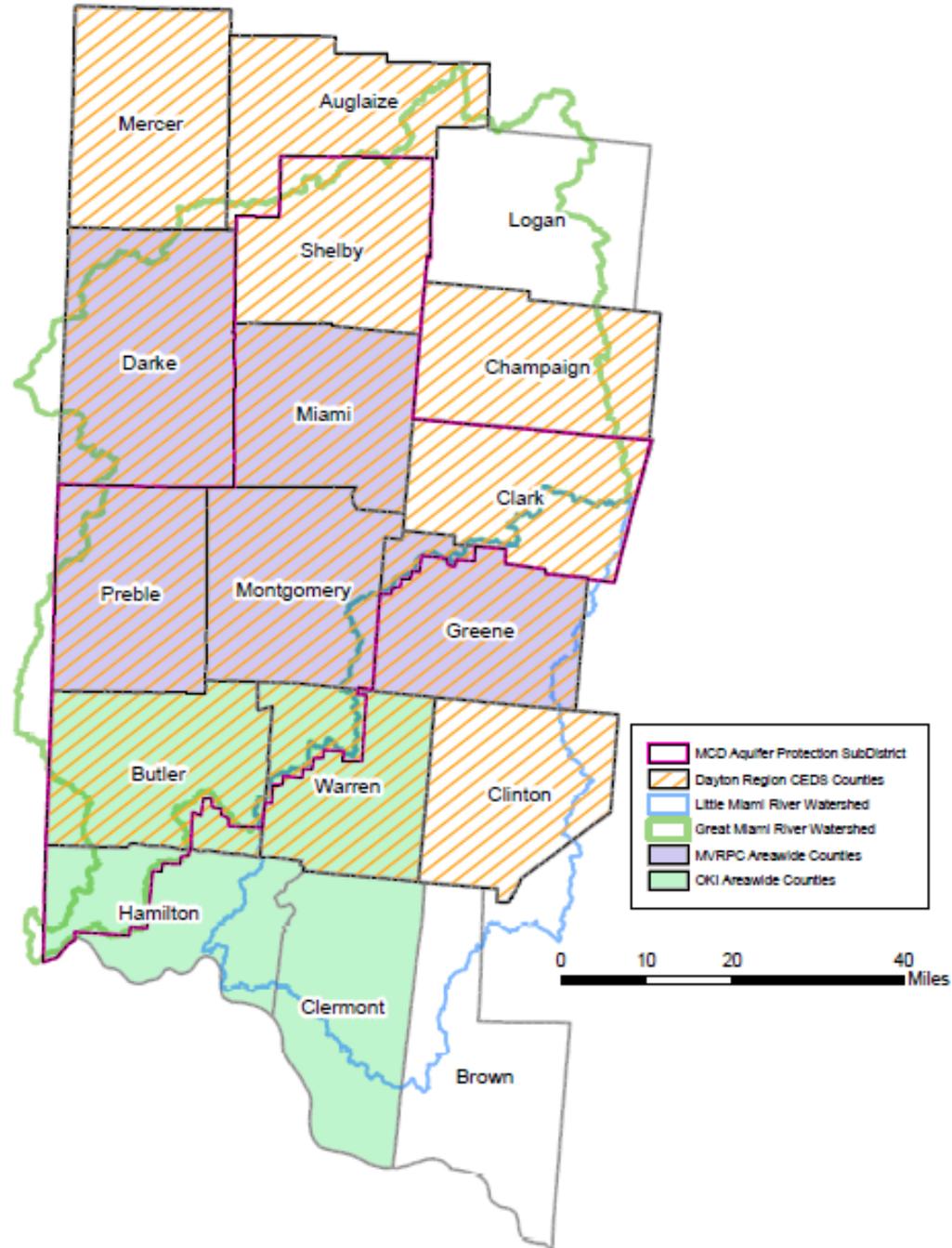
Future is based on local comprehensive plans, zoning and known development.



The information on this map is compiled from various sources made available to us which we believe to be reliable.
M:\GIS\MapServer\maps\PAWS_Eng_1009
12/15/2009



Southwest Ohio Comprehensive Water Study





**Environmental
Protection
Agency**

Next Steps

Central Ohio - completion date = December 2024

Southwest Ohio – Request for Proposals - 2024

Project Manager - Tiffani Kavalec, Policy Director
– Ohio EPA

Tiffani.Kavalec@epa.ohio.gov



WWTP-Treated Effluent as Process Water



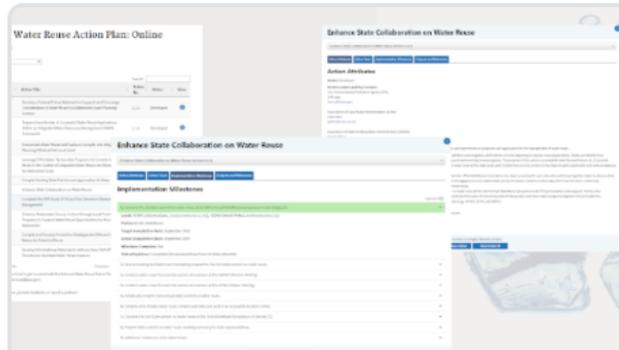
About Water Reuse

Water reuse is the practice of reclaiming water from a variety of sources, treating it, and reusing it for beneficial purposes. It can provide alternative supplies for potable and non-potable uses to enhance water security, sustainability, and resilience. EPA's Water Reuse Program helps foster collaboration among water reuse stakeholders and helps advance water reuse applications across the United States. [Sign up for EPA's water reuse email updates](#) to learn about the latest activities and find opportunities to get engaged.



REUSExplorer Tool

This tool contains summaries of state regulations and guidelines for a variety of water reuse applications.



WRAP Online Platform

The WRAP Online Platform is an interactive tool that tracks and presents the progress of all constituent actions of the National Water Reuse Action Plan (WRAP).



Resource Hub Organized by End-Use

This tool organizes useful information and resources for water reuse professionals by end-use.



watereuse.org



H2O Rivers



DEFA H2Ohio



Google



History



Gov Policy



myOhio



TAS 1



SISO



EPA Collab



DSW Shared



Imported



SPDi



All

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WaterReuse Connect

Recycled Water User Network



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Advocate

News

Become a Member

State Sections

MEMBER RESOURCE

Environmental Benefits of Water Reuse

Learn how water reuse projects can restore habitats, employ natural wetland treatment, prevent subsidence and saltwater intrusion, and more!

LEARN MORE

Watereuse.org

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ARIZONA **WATERREUSE**
CALIFORNIA **WATERREUSE**
COLORADO **WATERREUSE**
FLORIDA **WATERREUSE**
MID-ATLANTIC **WATERREUSE**
NEVADA **WATERREUSE**
NEW MEXICO **WATERREUSE**
OHIO

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- Vice President
 - Brian Coghlan, **Del-Co**
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- Johnstown
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- Marysville
- Mason
- Mid-Ohio W&SD
- NEORS
- Piqua
- Southwest Licking
- St. Henry
- Sunbury
- Jobs Ohio
- Ohio Business Roundtable
- Cleveland Water Alliance
- OSU - Ohio Water Resources Center
- Eurofins
- Intuitech, Inc
- Arcadis
- CDM Smith
- Hazen & Sawyer
- Burgess & Niple
- MS Consultants
- Jacobs
- ODH
- Ohio EPA
- Ohio DNR
- Amazon Web Services
- Honda



- **First Board Meeting took place May 29th**
- **Sub-committee interest, broken into 6 sub-categories:**
 - **Potable**
 - **Purple Pipe**
 - **Onsite**
 - **Outreach**
 - **Financial**
 - **Regulatory**

Proposed WaterReuse Sub-Committees

Potable

Indirect Reuse (reservoir recharge, aquifer recharge)

Direct Reuse

Specifications

Infrastructure required (pipes, pumps, towers, etc.)

Treatment technology required

Purple Pipe

Irrigation Use

Agricultural Use

Industrial Use

Specifications

Infrastructure required (pipes, pumps, towers, etc.)

Treatment technology required

Onsite technology required

Gray Water/stormwater

Closed loop sewer mining

Industrial Use

Infrastructure Required

Treatment

Outreach

PFAS Action Plan 2.0



- **MCL Rule Development**
- **Dupont / Washington Works Settlement**
- **H2Ohio Rivers**
- **Dayton Sewershed Source Investigation**
- **Statewide Source Investigation**
- **AFFF - Fire Fighting Foam - Take Back**
- **Fish Consumption Advisory Methodology**
- **Risk Communications**
- **Funding, etc**

AFFF Takeback



Environmental
Protection
Agency



Questions

