Fixing Data and Information Gaps for Water Planning and Management





Indiana Water Summit August 10, 2023

Garth Lindner – Division of Water



DNR Role – Division of Water

The Division of Water is a regulatory and public information agency, having diverse responsibilities associated with the evaluation of Indiana's water resources, and development near Indiana's waterways and lakes.



Resource Assessments

- Monthly Water Resource Summary
- Water Shortage Plan
- Ground Water Basics
- Basin Studies
- Aquifer Systems Mapping
- Potentiometric Surface Mapping
- Water Availability

https://www.in.gov/dnr/water/

Regulatory responsibilities:

- Floodway construction
- Floodplain hazard analysis
- Lakebed and shoreline alteration
- Dam safety
- Conservancy districts
- Water use
- Water well construction

Useful public information:

- Water availability
- Water use
- NFIP participation

Water resource information:

- Individual citizens
- Industry
- Environmental groups
- Government agencies

Programmatic responsibilities:

- Floodway construction
- Dam safety
- Flood hazard planning
- Flood plain regulations
- Conservancy districts
- Water well construction



Floodplain mapping and permitting

• Stream gages



Best Available showing floodway and reducing floodplain fringe

Indiana Floodplain Information Portal (INFIP) 2.0







https://www.weather.gov/iwx/Flooding_February2018



Lake permitting – Lake gages Hudson Lake, Laporte County **USGS** Data 770.00 769.00 29 768.00 6 767.00 766.00 High Elevation NGVD 765.00 λ. • ا 764. .00 763. 00 762 00 OW761.00 760.00 759.00 758.00 757.00 756.00 755.00 10/1/1945 + 10/1/1965 -10/1/1980 10/1/2010 -10/1/1950 10/1/1955 10/1/1960 10/1/1970 10/1/1975 10/1/1985 10/1/1990 10/1/2000 10/1/2005 10/1/2020 10/1/1995 10/1/2015 10/1/2025 Date

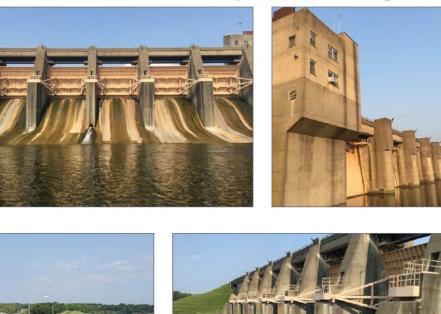


- Dam permitting and operations
- Lake and stream gages



EAGLE CREEK RESERVOIR DAM (49-12)

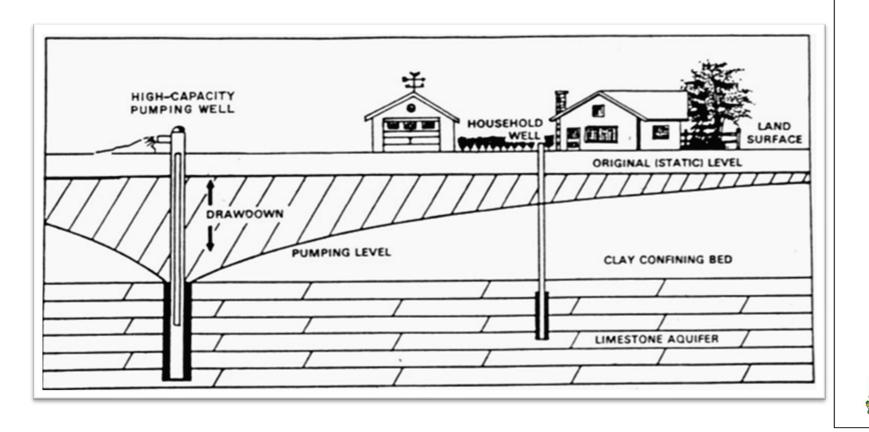
2020 Dam Safety Inspection Report Marion County, IN | October 2021 Inspection Date: August 2020

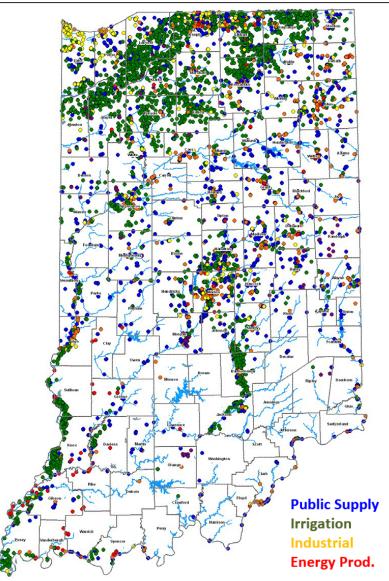




Water Conflicts

• Groundwater gages (wells)



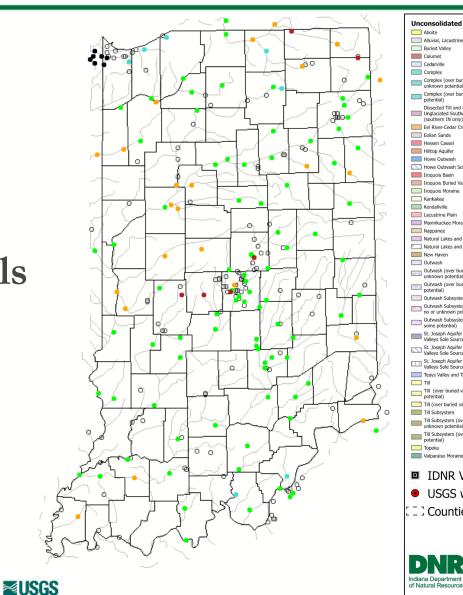


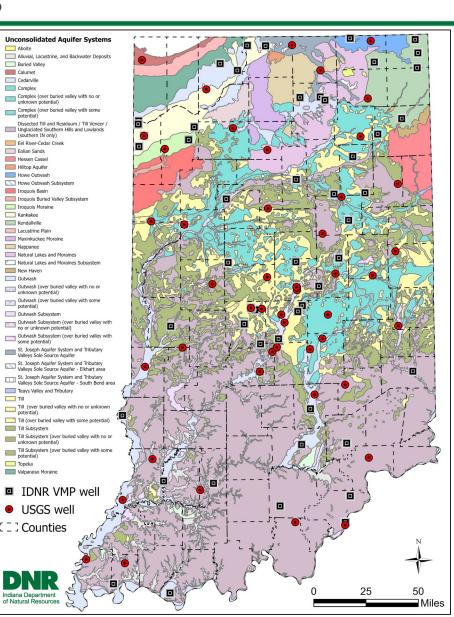


46 streamgages

~100 groundwater wells

4 lake level gages





Indiana Department of Natural Resources Division of Water - Assessments

INDIANA'S WATER SHORTAGE PLAN

INDIANA DEPARTMENT OF NATURAL RESOURCES, DIVISION OF WATER





March 20, 2015

Interagency drought team



The state received 0.5" to 2.0" of rainfall during the week of July 6-13. Heavier amounts were received in the central portion of the state.

Mean temperatures for the week of July 6-13 were below normal ranging from 69.4°F in northern Indiana to 77.5°F in southern Indiana. Departure from normal temperature ranges from -4.9°F to +2.1°F.

4" soil water content from the Purdue Mesonet Data Hub on July 13, 2023, indicates a range of 14.5% available water in northern Indiana to 34.2% in southern Indiana with a statewide average of 26.9%.

Soil moisture data from the NASA SPORT Realtime 3km Land Information System is currently unavailable due to a technical outage.

Figure 2. US Drought Monitor for the State of Indiana on July 11, 2023

USDM for the State of Indiana



July 13, 2023

Hydrologic summaries

0.01 0.5 Figure 1. Accumulated Precipitation (in.) for July 7-13 from NOAA

8.77 81.23 42.95 18.75 0.00

75 84.25 51.46 26.53 0.00 84 99.16 58.37 1.34 0.00 80.92 19.08 0.00 0.00 0.00

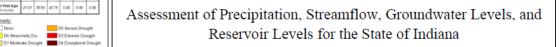
D2 Severe Drough

By Dry D3 Extreme Drough

nitor.unl.edu

Last Week

June 2023 Water Resource Summary

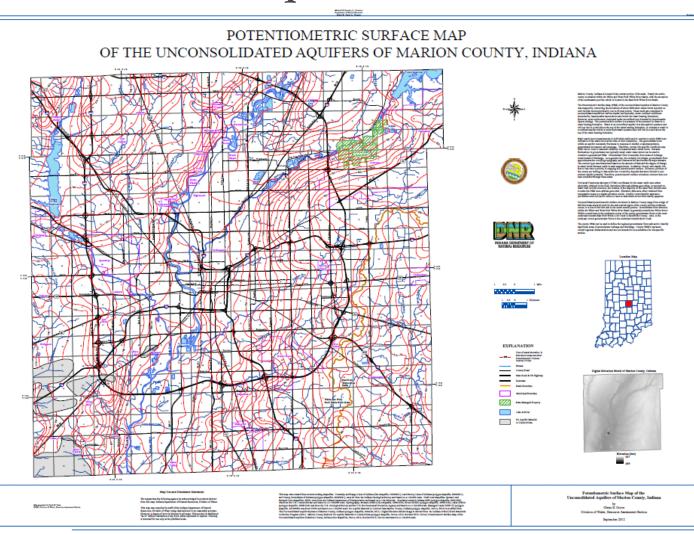


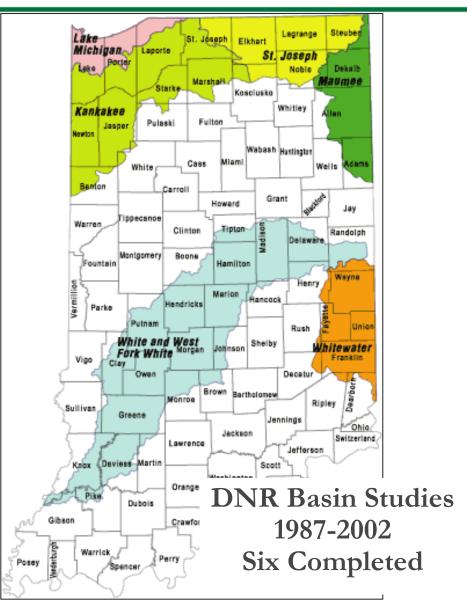
Completed by the Resource Assessment Section Staff

July 7, 2023

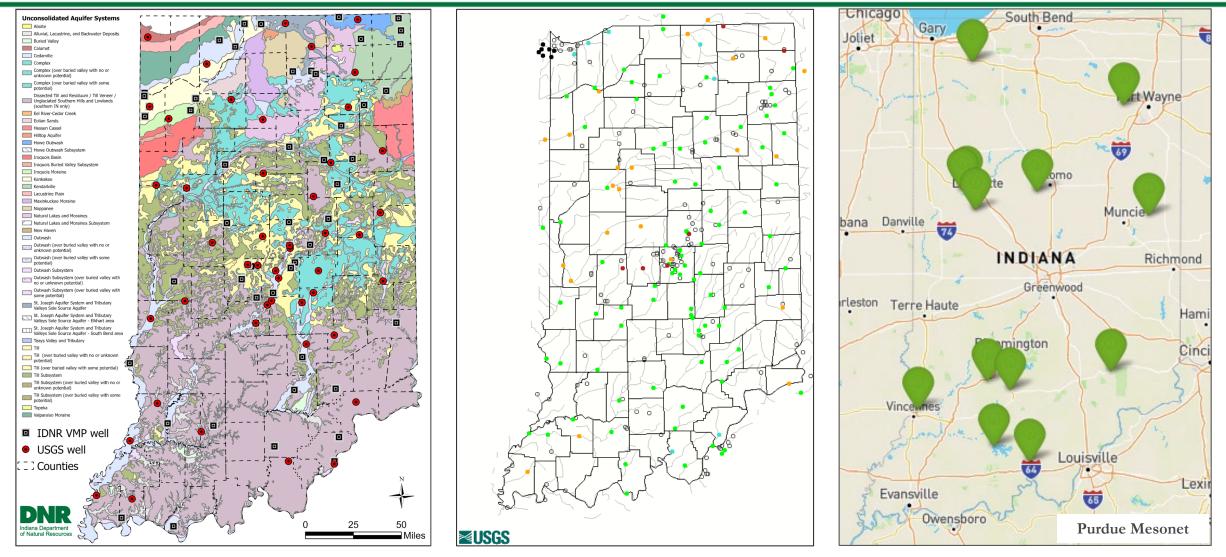


Products and inquiries





Indiana Department of Natural Resources Network complementarity and underserved areas



Groundwater

Stream gages

Multi-sensor mesonet stations

Thank you



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