

RELEVANCE OF THE NETWORKS

State leaders and the IFA are working to better understand the future availability of Indiana's water resources for critical uses. These studies are dependent upon several important networks and agency resources whose scope, scale, and relevance are outlined below.

WATER MONITORING NETWORKS

U.S. Geological Survey (USGS) Streamgaging Network

- SCOPE: Continuous, near real-time streamflow and water-level data from which daily mean stream flows are computed and made publicly available online.
- SCALE: Nationwide network, 216 streamgages in Indiana.
- USE: Planning, forecasting, and warning for floods and drought, water allocations, regulating pollutant discharges, designing reservoirs, roads, bridges, drinking water and wastewater facilities, operating waterways for power production and navigation, monitoring environmental conditions to protect aquatic habitats, and determining safety of recreational activities.



USGS Super Gage Network

- SCOPE: Some gages in the Streamgage Network have added capacity to test water quality parameters, including water temperature, specific conductance, pH, dissolved oxygen, total nitrogen (or nitrate concentration), total phosphorous (or orthophosphate), turbidity, and/or suspended sediment.
- SCALE: Nationwide network, 12 super gages (which are a subset of the 216 streamgages) in Indiana.
- USE: Calculate concentration and loads to understand and address watershed processes and issues such as climate and land-use effects, water-related human health issues, or hazardous substance spills.

USGS Lake and Reservoirs Gage Network

- SCOPE: Instantaneous water surface elevation and reservoir storage (in select locations) data collection system lead by USGS and managed in cooperation with local agencies.
- SCALE: Nationwide network, 9 lake /reservoirs gaging stations in Indiana.
- USE: Planning and management of lake/reservoirs for water supply, flood mitigation, industry, and recreation.

USGS Active Groundwater Level Network

- SCOPE: The network measures water levels in wells irrespective of measurement frequency, location, or the monitoring objective.
- SCALE: Nationwide network, 257 wells (48 real time, 66 continuous, 143 periodic) in Indiana.
- USE: Includes but not limited to monitoring well drawdown, hydrologic research, aquifer tests.

Indiana Volunteer Groundwater Monitoring Network

- SCOPE: Continuous and intermittent groundwater data collection system through USGS, IDNR, and volunteer private well owners.
- SCALE: Statewide network, complements USGS Groundwater Network, 54 wells (51 continuous, 3 intermittent), 16 volunteer private well owners.
- USE: Measure water level fluctuations in aquifers to gather quality-assured and quality-reviewed archival and current data.






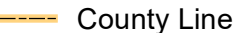


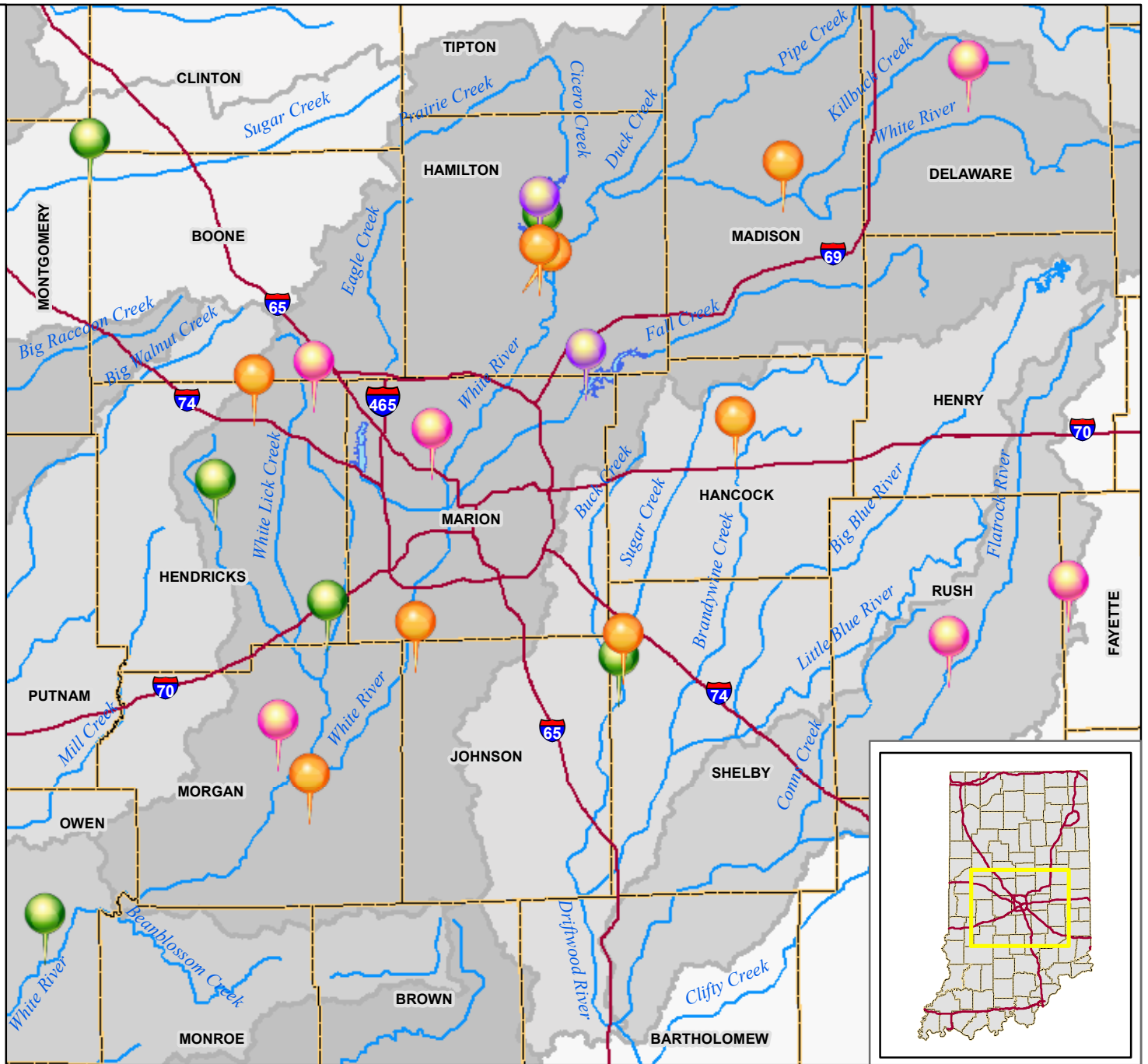
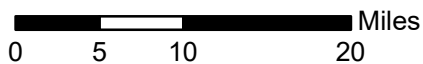
Indiana Water Balance Network

- SCOPE: Continuous data collection to estimate evapotranspiration of water, soil moisture, and water level fluctuations in aquifers.
- SCALE: Statewide network, 13 sites.
- USE: Monitor trends in water loss and gain to improve understanding of water budgets in Indiana.



Legend

- 
GROUNDWATER OBSERVATION WELL
 - records continuous water level fluctuations in aquifer (US Geological Survey)
- 
STREAMFLOW GAGE
 - records continuous river stage and discharge fluctuations (US Geological Survey)
- 
RESERVOIR GAGE
 - records continuous reservoir stage fluctuations (US Geological Survey)
- 
IN WATER BALANCE NETWORK SITE
 - estimates potential evapotranspiration of water, monitors soil moisture, and records continuous water level fluctuations in aquifer (IN Geological & Water Survey, Indiana University)
- 
8-digit HUC (Hydrologic Unit Code) Watershed Boundary
- 
County Line



Central Indiana Water Study Data Collection Sites