

## 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, 241 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, 16 super gages (which are a subset of the 241 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 led by USGS and managed in cooperation with local agencies.
- SCALE: Nationwide network, 18 lake /reservoir 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, 212 wells (52 real-time and 160 periodic) in Indiana.
- USE: Includes but not limited to providing long-term groundwater level for planning purposes, monitoring conditions during drought, and hydrologic research including aquifer tests and individual, short-term project sites.

### Indiana Volunteer Groundwater Monitoring Network

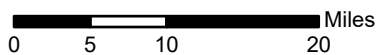
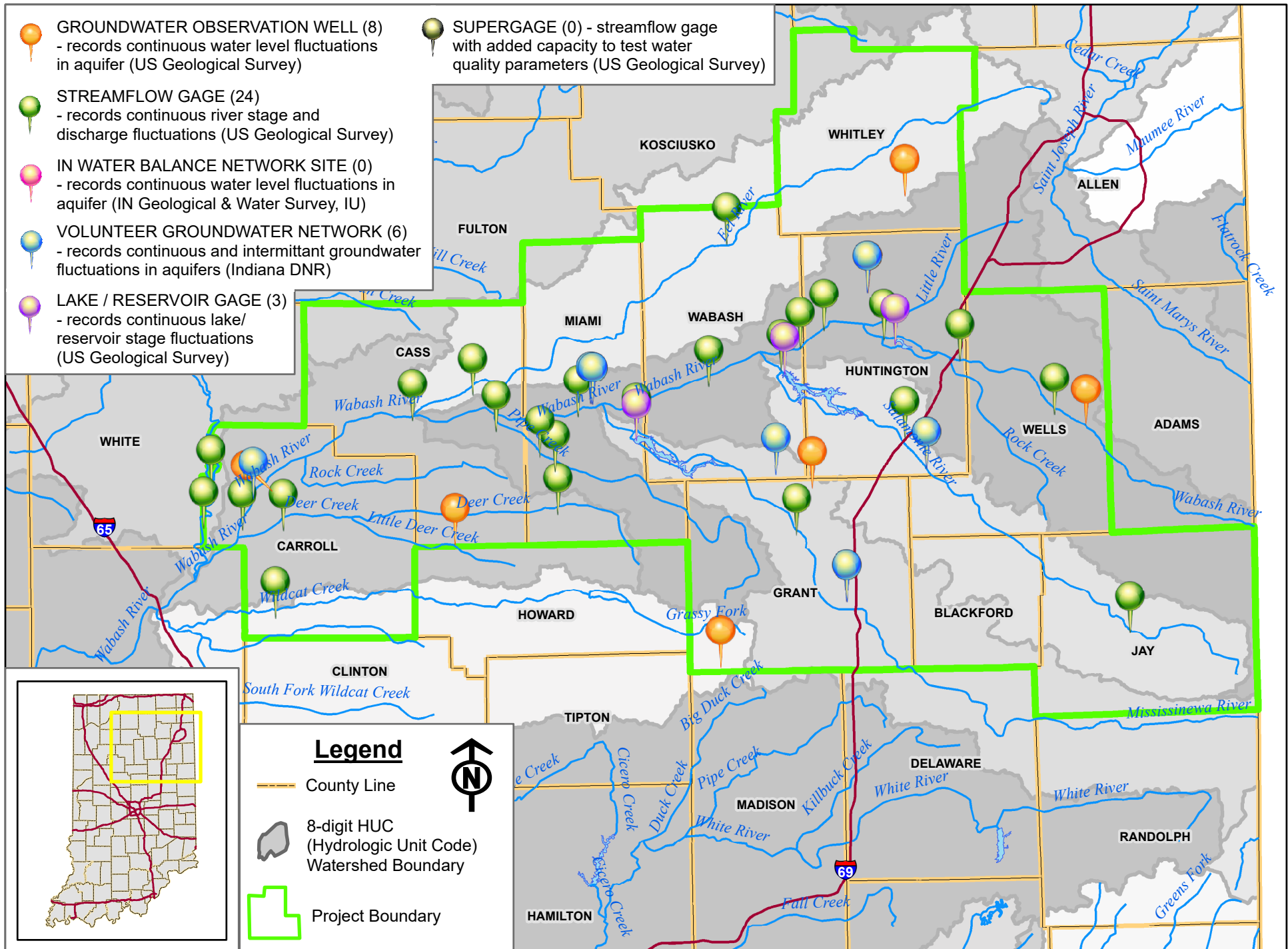
- SCOPE: Continuous and discrete groundwater level data collected through a cooperative agreement between the IDNR, USGS, and volunteer well owners.
- SCALE: Statewide network includes 60 wells (57 continuous, 3 intermittent); 53 wells operated and maintained by IDNR, 7 by cooperative partners, and data quality-assured and hosted by USGS.
- USE: Track groundwater levels to identify and assess impacts of water use and climate variability on aquifer resources.



### Indiana Water Balance Network

- SCOPE: Continuous data collection to estimate evapotranspiration of water, soil moisture, and/or water level fluctuations in aquifers.
- SCALE: Statewide network, 22 sites capturing varied data
- USE: Monitor trends in water loss and gain to improve understanding of water budgets in Indiana.





**Wabash Headwaters Water Study Area**