



Ohio Streamgauge Program

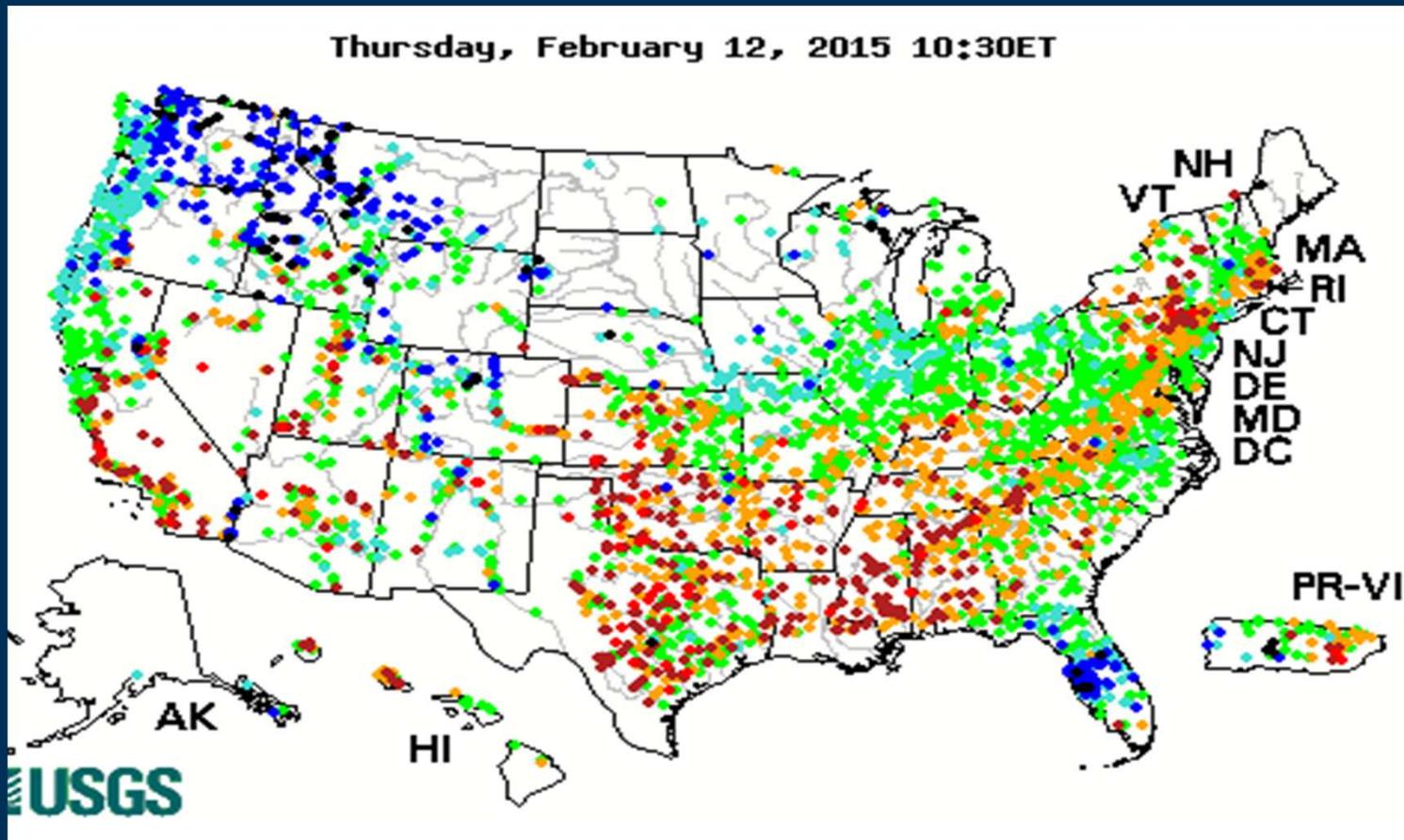
**Ohio Workgroup for Water Resources
Monitoring**

March 4, 2015

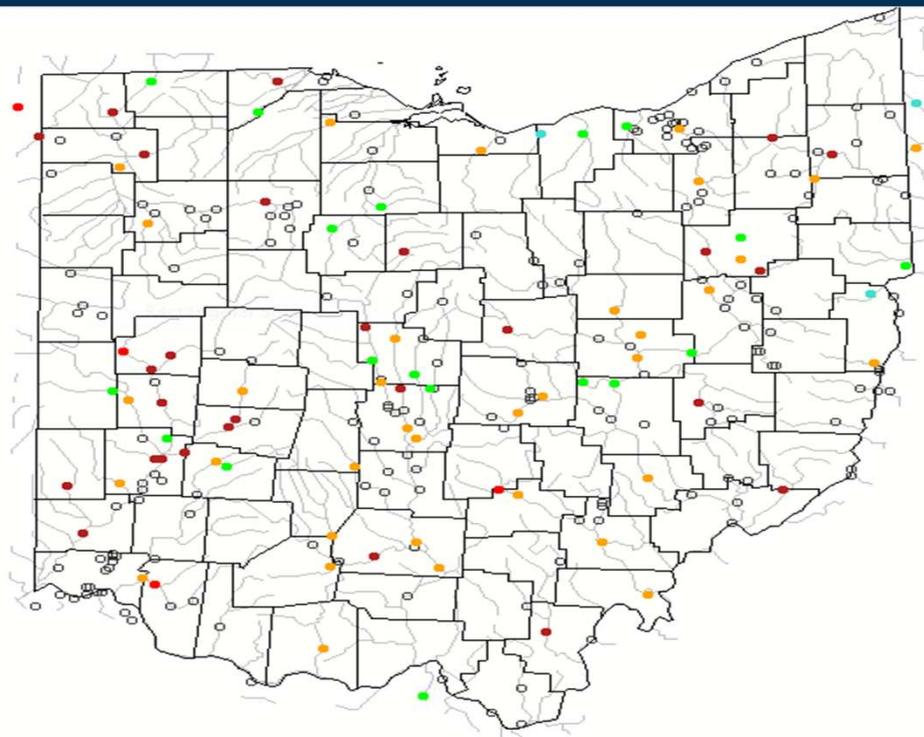
Thomas E. Harris, Supervisory Hydrologist
USGS Ohio Water Science Center

U.S. Department of the Interior
U.S. Geological Survey

About 7400 Real-Time Streamgages Nationwide Available on the Internet



250 Real-Time Streamgages in Ohio



Choose a data retrieval option and select a location on the map

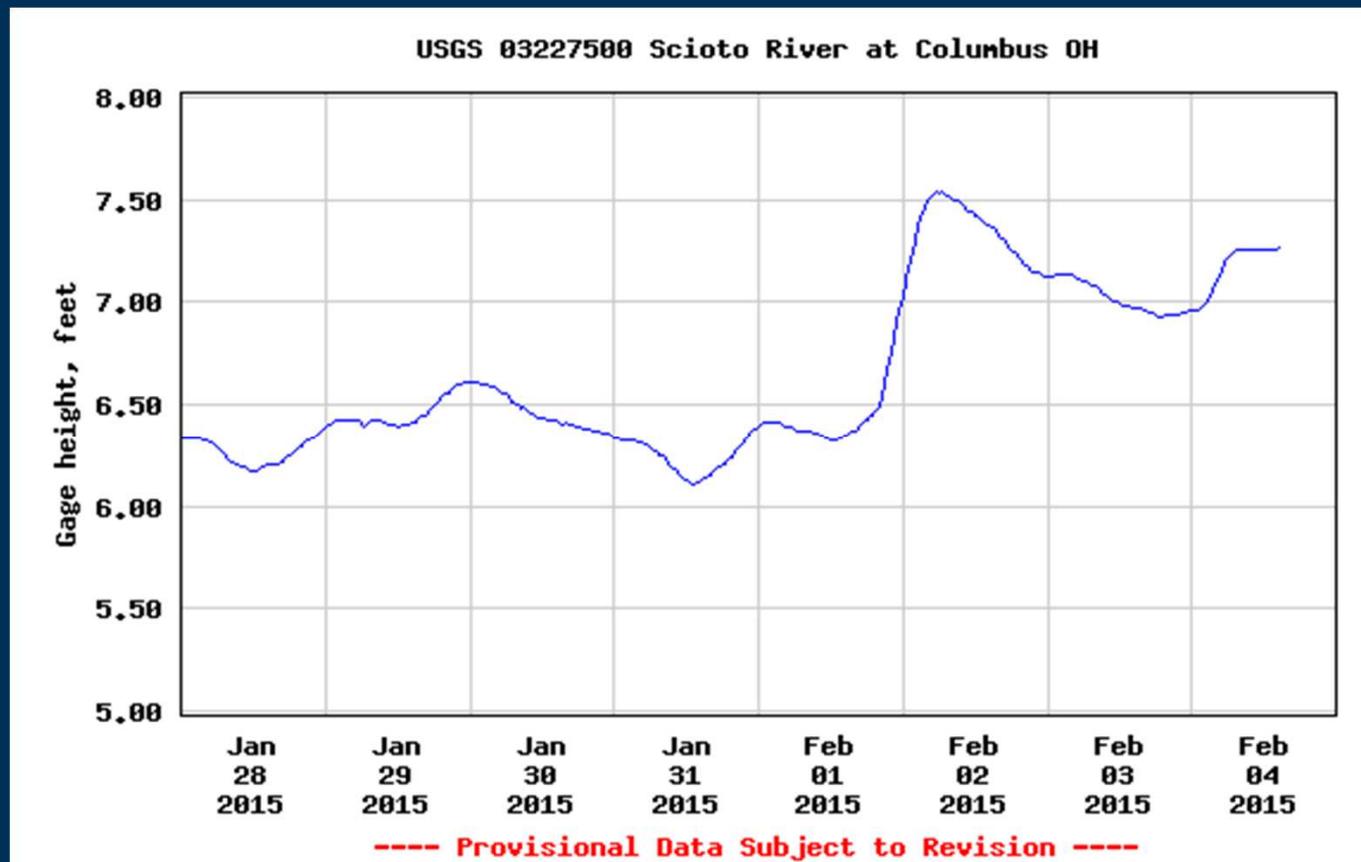
- List of all stations Single station Nearest stations Peak flow

Explanation - Percentile classes

Low	<10 Much below normal	10-24 Below normal	25-75 Normal	76-90 Above normal	>90 Much above normal	High	Not-ranked



Stage Recorded Every 15 Minutes, Reported Every Hour



Scioto River at Columbus, OH



A river gage is erected....what's next?



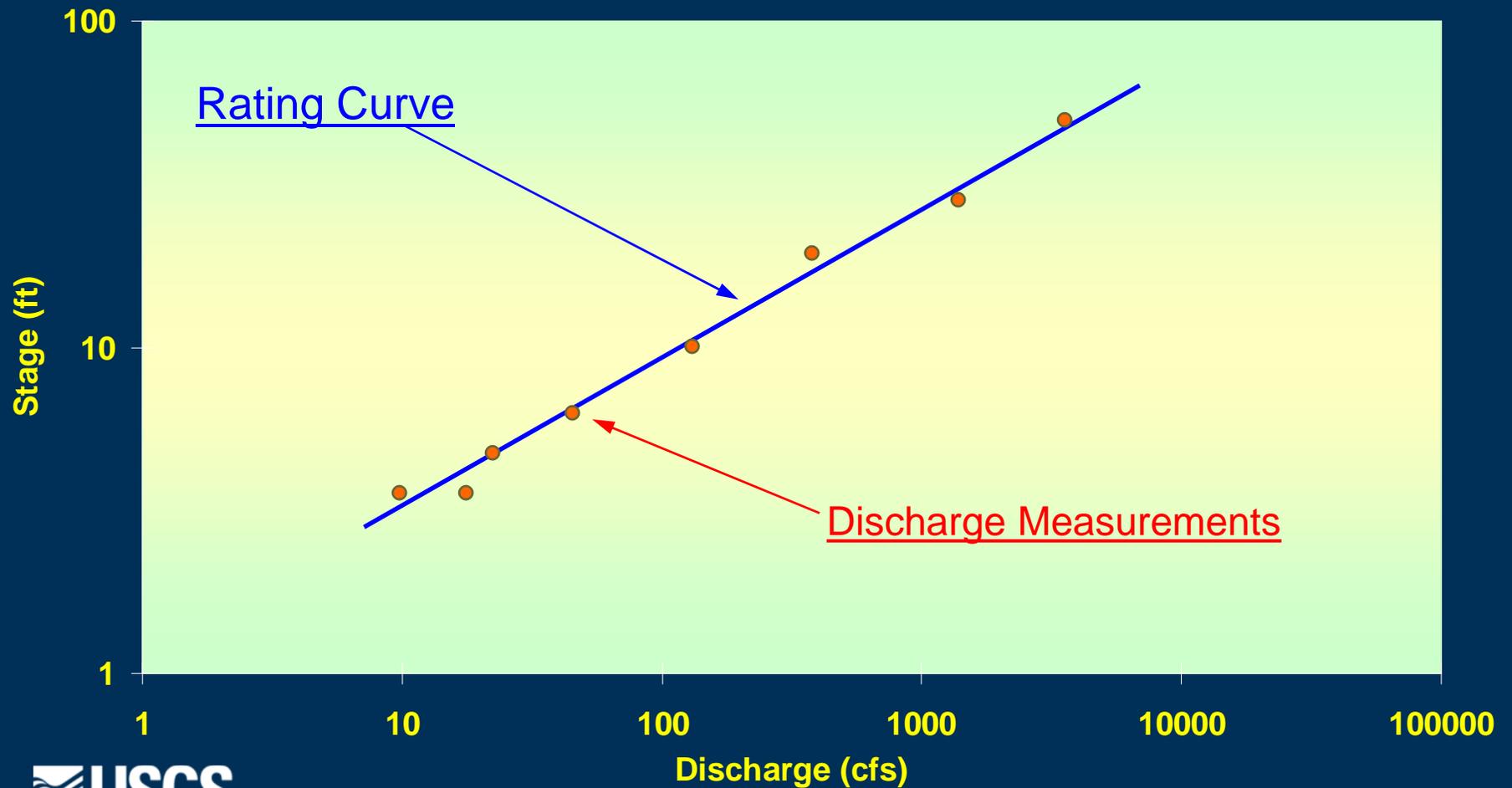
Start Measuring Flow



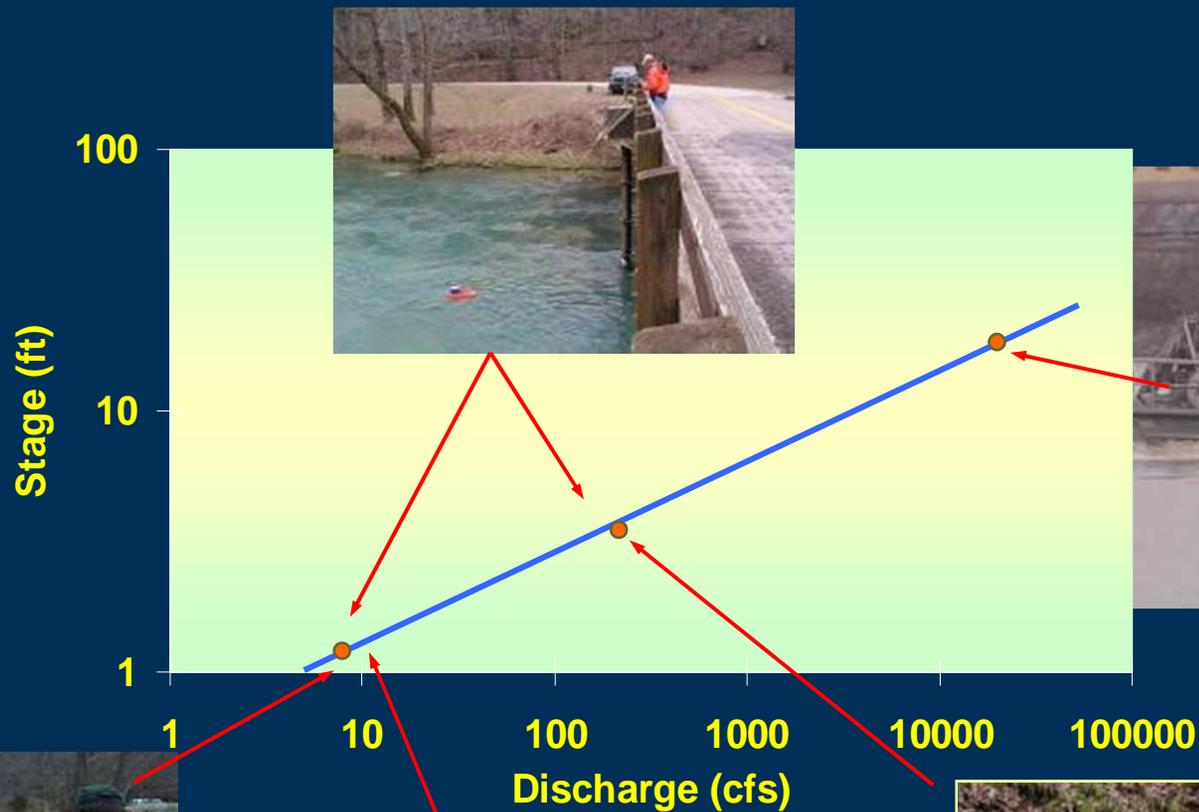
How are USGS Measurements Used?



Discharge measurements are used to develop rating curves by defining a relationship of discharge to stage in log space



Discharge must be measured at all stages

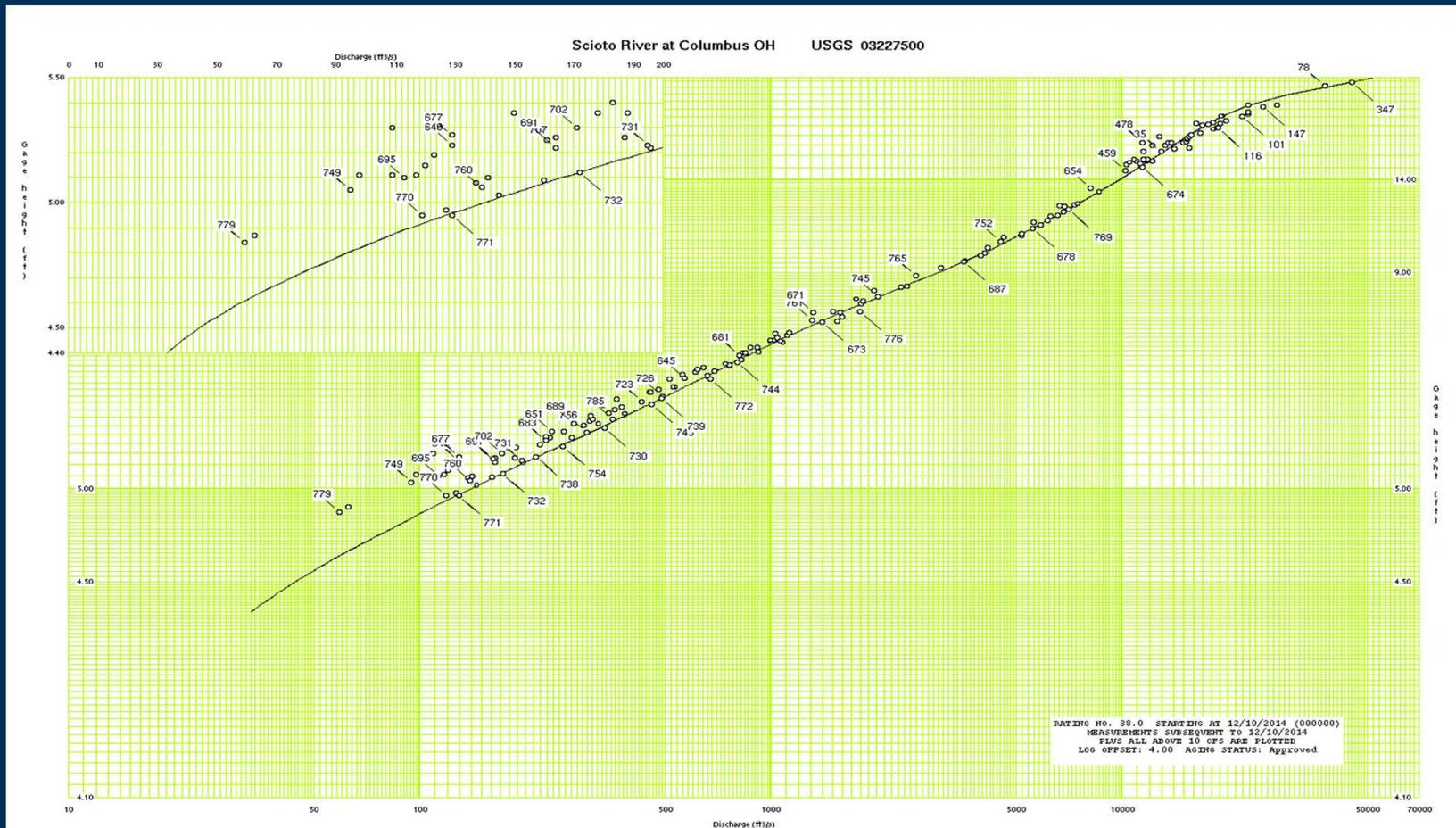


Discharge measurements during high stages are particularly important



Indirect measurement

Rating curve for Scioto River at Columbus, OH



Why Continue to Measure Flow?

- Because channel configurations are always changing



Who Uses Our Data?



USGS Ohio Water Science Center—List of Cooperators, 2015

The following State, regional, local, and other Federal agencies currently are supporting water-resources investigations in cooperation with the U.S. Geological Survey in Ohio.

Federal

National Park Service—Cuyahoga Valley National Park

National Weather Service—Cleveland and Wilmington Forecast Offices and Ohio River Forecast Center

U.S. Army Corps of Engineers—Buffalo, Huntington, Louisville, and Pittsburgh Districts and Great Lakes and Ohio River Division

U.S. Environmental Protection Agency—Great Lakes National Program Office, National Homeland Security Research Center, and Office of Research and Development

U.S. Geological Survey—Atmospheric Deposition Program, National Water-Quality Assessment Program, Office of Groundwater, Office of Surface Water (National Streamflow Information Program), and Office of Water Quality

State

Ohio Department of Natural Resources—Division of Mineral Resources Management and Division of Soil and Water Resources

Ohio Department of Transportation—Research and Development

Ohio Emergency Management Agency—Mitigation and Grants Division

Ohio Environmental Protection Agency—Division of Surface Water

Ohio Water Development Authority

Regional

Metropolitan Sewer District of Greater Cincinnati

Miami Conservancy District

Mid-Ohio Regional Planning Commission

Muskingum Watershed Conservancy District

Northeast Ohio Regional Sewer District

County

Allen County—Soil and Water Conservation District

Cuyahoga County—Cuyahoga County Board of Health

Defiance County—Soil and Water Conservation District

Erie County—Health Department

Franklin Soil and Water Conservation District

Geauga County—Geauga County Commissioners

Lake County—Emergency Management Agency and General Health District

Licking County—Licking County Planning Commission

Marion County—Marion County Commissioners

Noble County

Ottawa County—Soil and Water Conservation District

Ross County—Ross County Commissioners

Summit County—Summit County Engineer

Washington County—Washington County Commissioners

Local

City of Akron

City of Canton

City of Columbus—Division of Power and Water and Division of Sewerage and Drainage

City of Findlay

City of Fort Wayne, Indiana

City of Fremont

City of Marietta

City of Newark

City of Sharonville

City of Westerville

Village of Granville

Village of La Rue

Village of Ottawa

Village of South Russell

Academia

Bowling Green State University

Denison University

Heidelberg University

University of Toledo

The Public

- Probably the biggest user of USGS river data

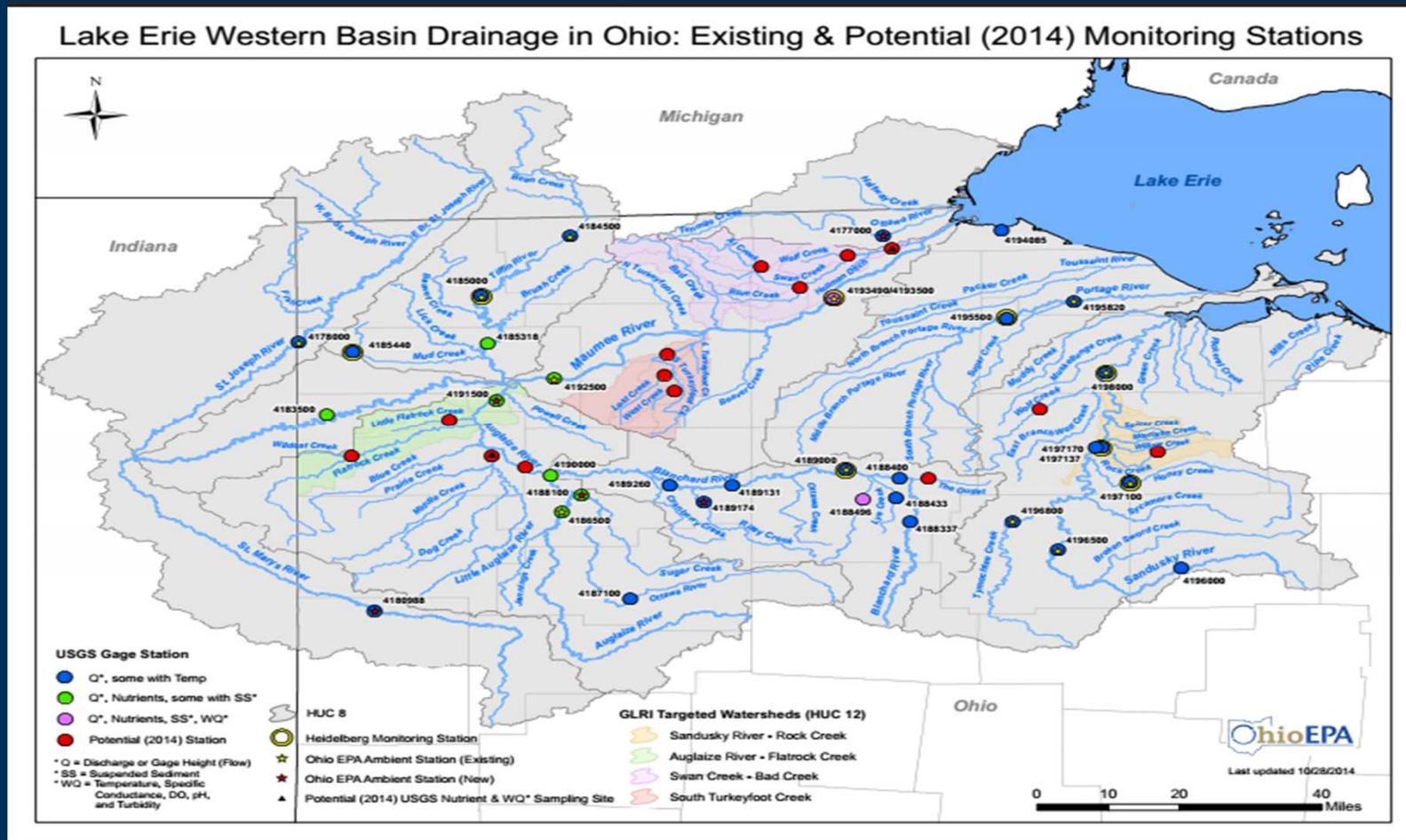


Changes to Our Data Network

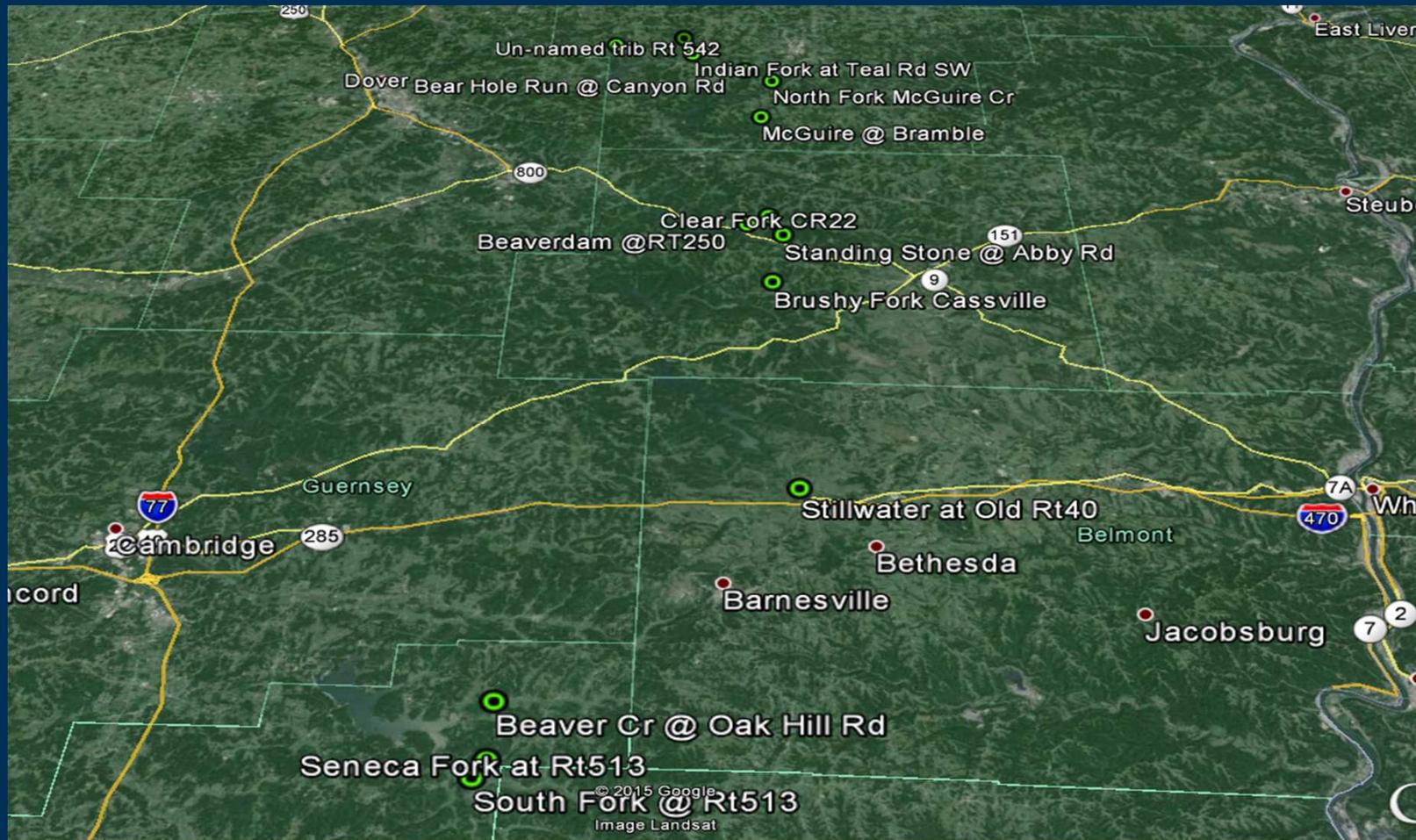
- 2013 – 13 new streamgages
- 2014 – 19 new streamgages
 - 14 WLEB sites with OEPA
 - Brushy Fork and Boggs Creek with MWCD
 - Mill Creek near Sharonville – City of Sharonville
 - Olentangy River on OSU campus
 - Scioto River on 5th Avenue



Western Lake Erie Basin sites added December 2014



14 new sites added spring 2015 in the Muskingum Watershed basin



Looking further out

- Seven potential new sites in the Cleveland area
- Little Killbuck Creek near Lodi – Asian carp
- Clear Fork at Bellville - Flood



Questions??

