



# USGS Ohio-Kentucky-Indiana Water Science Center

*Serving the Nation and providing high-quality science for over 100 years*

## USGS in Kentucky, A century of science with our partners

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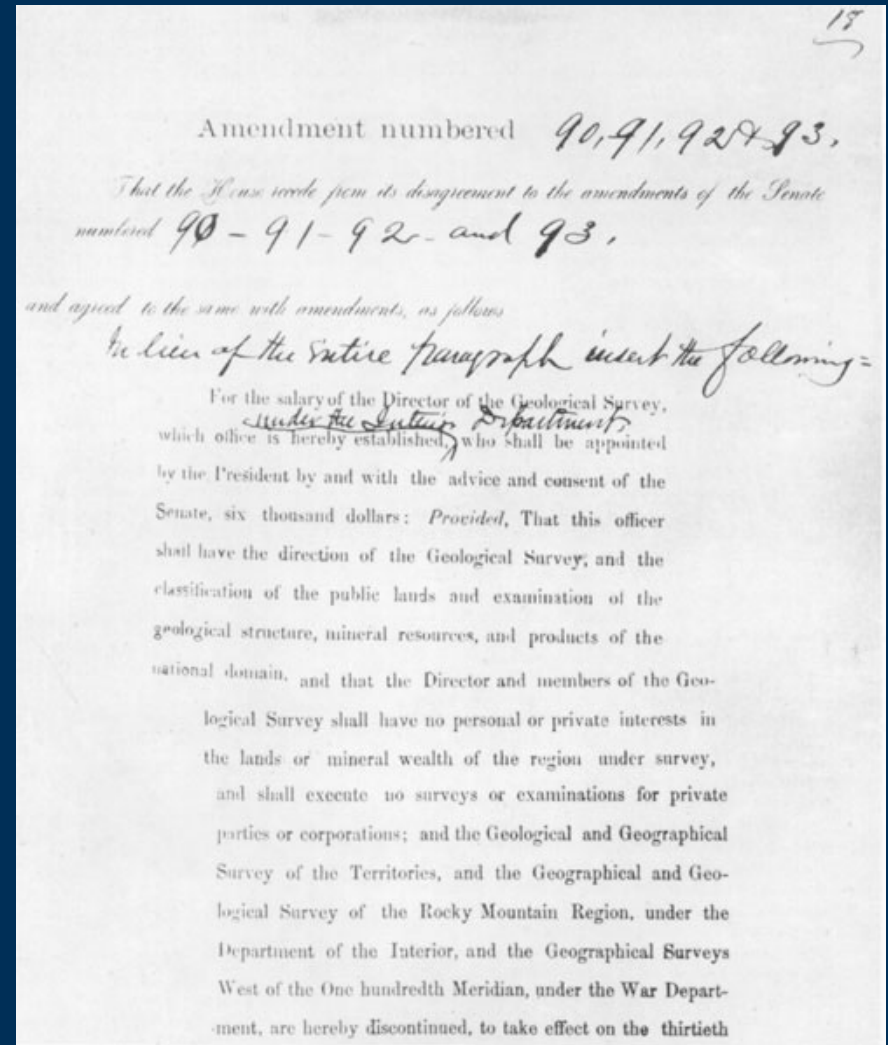
U.S. Department of the Interior  
U.S. Geological Survey

# USGS Established in 1879

USGS established for:

"classification of the public lands, and examination of the geological structure, mineral resources, and products of the national domain"

The Conference Committee copy of the law establishing the U.S. Geological Survey, 1879



# Irrigation Survey – roots of water science at USGS (1888 – 1890)

The mission was authorized by Congress to survey western water resources, map them, and establish sites for reservoirs.

F.H. Newell lead this and became “*The Father of Systematic Stream Gaging*” when he realized the science of the day was inadequate and created new methods.



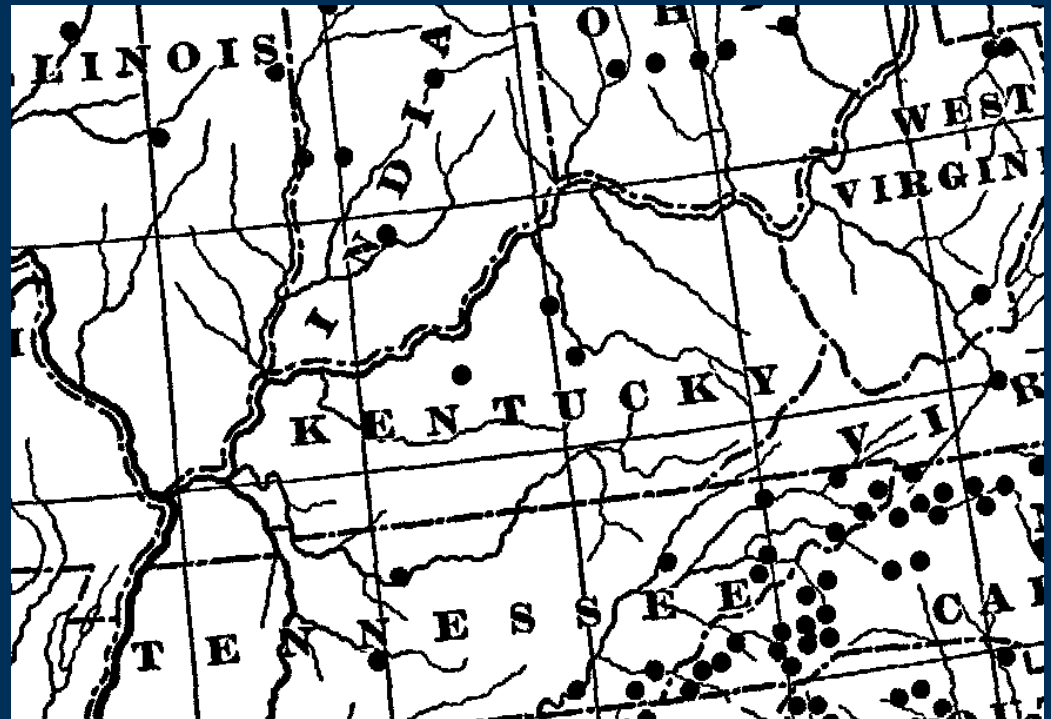
# Growth and development of KY cooperative relationships

- With support from Congress, the first **specific appropriation for stream gaging** became available in 1894 and, with increasing appropriations in 1902, USGS created “Districts” to operate more efficiently.
- Kentucky joined the Chicago District in 1905 and installed 3 new gages in KY (**the first USGS gages in KY!**).
- Accordingly, this period also marked the beginning of increased cooperation with local partners as USGS moved into more States.

# First “USGS” gages in Kentucky

- 1) Kentucky River at Frankfort, KY - March 18, 1905 (First gage!)
- 2) Dix River at Danville, KY – May 1, 1905
- 3) Rolling Fork of the Salt River at New Haven, KY – June 16, 1905

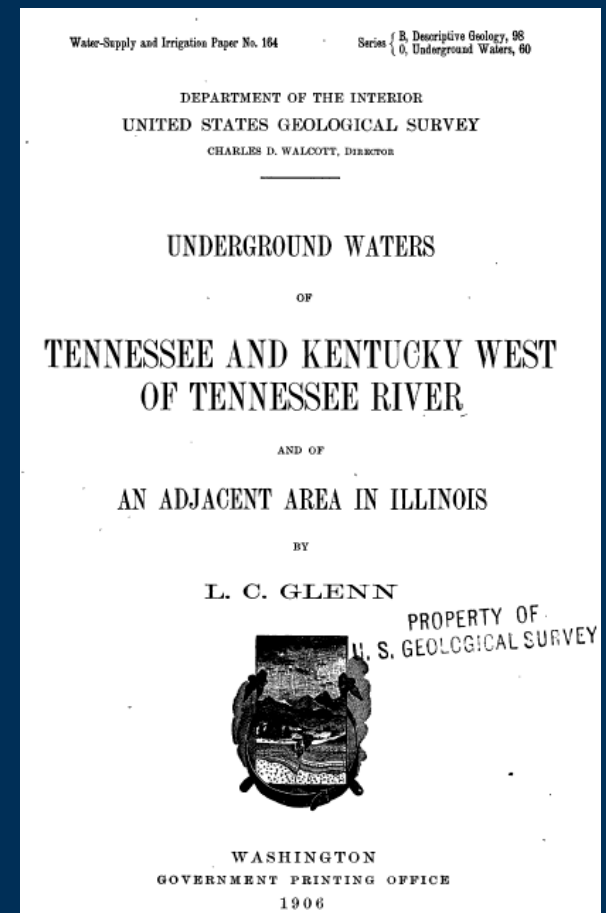
USGS streamgage  
map from 1905



# Groundwater -

USGS also focused on **groundwater** from the start! The first report on Kentucky groundwater was published in 1906:

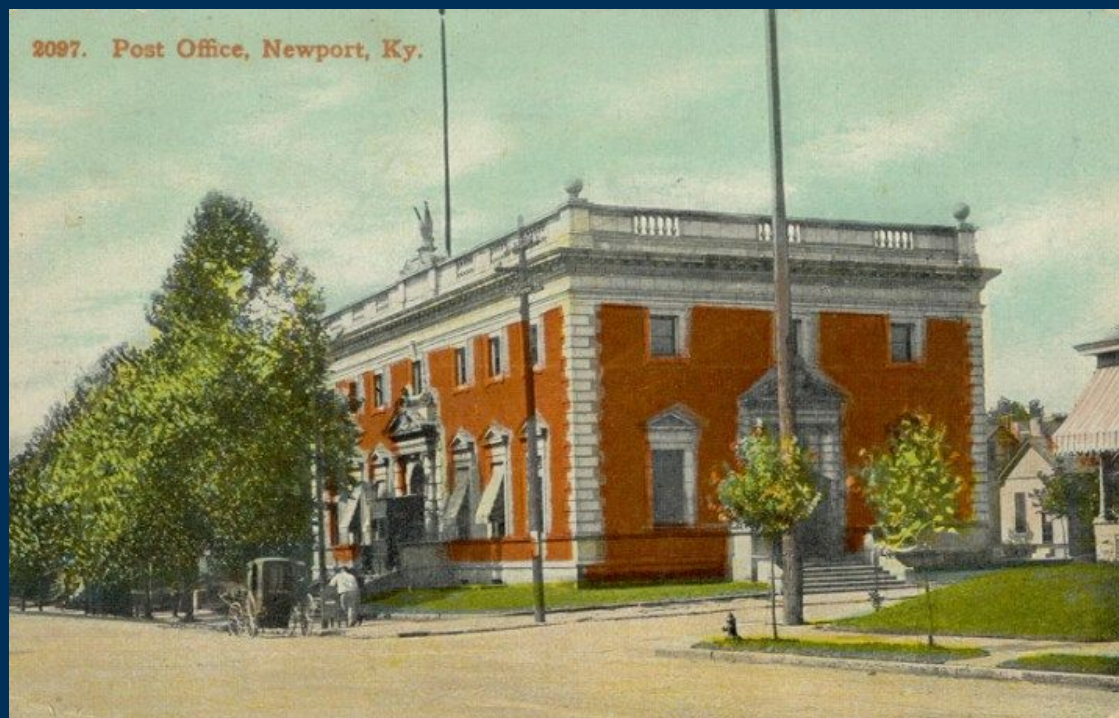
**“Underground Waters of Tennessee and Kentucky West of the Tennessee River and of an Adjacent Area in Illinois”; L.C. Glenn; USGS Water Supply and Irrigation Paper No. 164**



# First formal presence in Kentucky

In May of 1908, Kentucky was moved into the new Ohio River District and a new District office was opened in the Newport, Kentucky Post Office. **The first USGS office in Kentucky!**

This office was active until 1913 when operations were moved back to Washington D.C. in response to increased reporting requirements.



# First formal cooperative partnerships in KY

In 1912, the Kentucky Legislature authorized the 4<sup>th</sup> KY Geological Survey to cooperate with Federal organizations, particularly the USGS, to report on the water powers of the State.

Referring to this, the new “State Geologist” stated in 1913: “Reliable estimates of capacity can only be based on long-continued gaging readings of the flow of streams and but few of these have been made in Kentucky.”

After the flood of March 1913, USGS arranged formal cooperation with KGS starting in 1915; State funds were allotted from 1915 to 1931 for stream gaging (ranging from ~\$100 to ~\$700 per year) and were matched by USGS funding.





# **“308” Investigations – Aligning missions to improve efficiency**

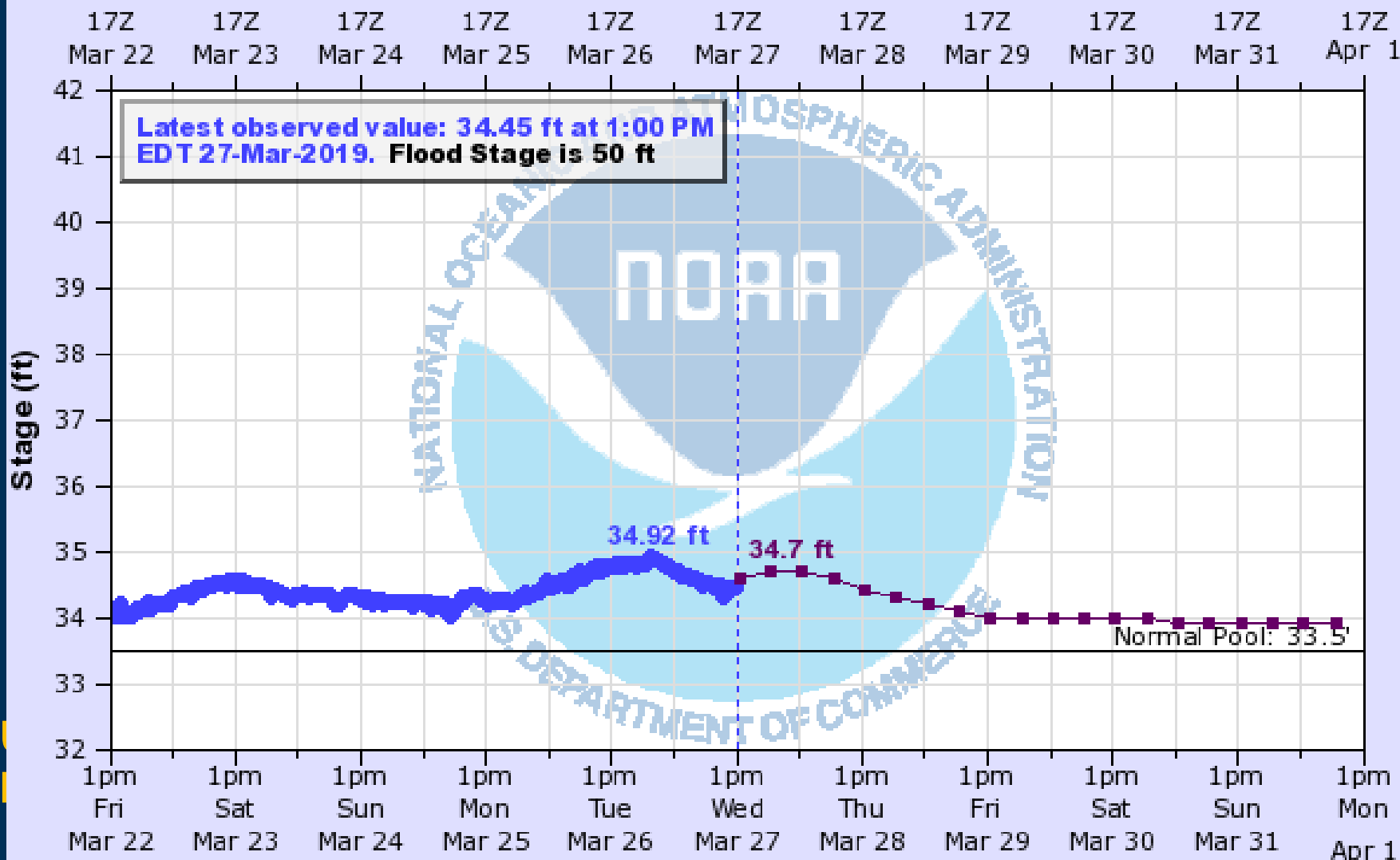
**In 1926, the USACE and Federal Power Commission made a joint report to Congress, which was published as House Document 308, that identified streamflow data as a critical need. An appropriation was made on 1/21/1927 to the USACE.**

**The 308 investigations established the groundwork for the current roles of the USGS and USACE as we see them today - from the USACE Chief of Engineers on 4/19/1928:**

**“It is contemplated by this office that in general, stream gaging, river profiling, and the necessary topographic mapping will be executed by the USGS...”. “...District engineers should not, however, form new parties for the purpose of executing work which can be done by the USGS.”**

# OHIO RIVER AT MAYSVILLE

Universal Time (UTC)



--- Graph Created (1:36PM Mar 27, 2019) —●— Observed —■— Forecast (issued 10:14AM Mar 27)

# USGS moves to Louisville!

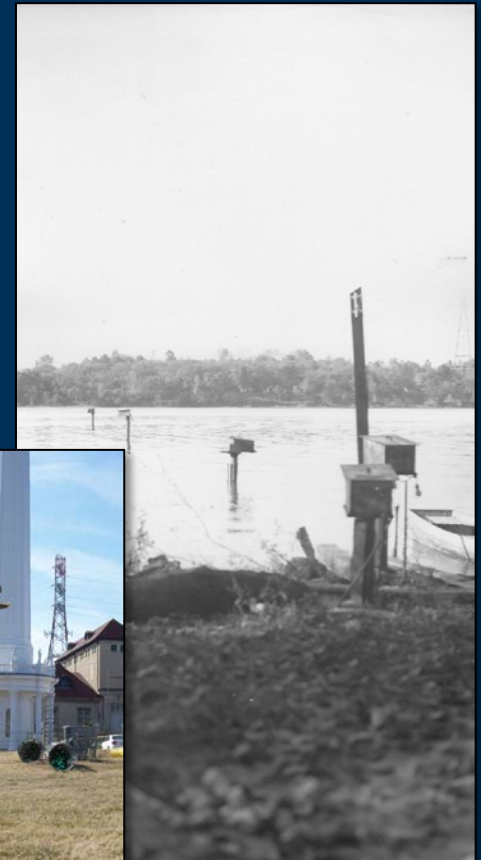
To accommodate this new work and local cooperative agreements (including a large program assisting the state with bridge and highway design), a new District office was established in Louisville at what is now the Gene Snyder US Courthouse; the office opened on **April 18, 1938.**



# The war years -

Cooperative ground-water investigations increased in 1943 when shortages in Louisville were caused by war-time chemical and rubber plants. During this time, there were 130 observation wells in Louisville alone.

Louisville Water Company cooperation began in 1945 as, during the war, contamination in Ohio River became problematic and they began looking into induced river infiltration as a solution.



# Roots were established – now USGS continues to lead in water data

Historically, many Federal agencies collected water-quality data, resulting in duplication of effort and significant differences in data standards.

In 1964, the Bureau of the Budget (now OMB) issued Circular A-67 (superseded in 1992 by OMB Memorandum No. M-92.01) designating DOI (USGS) as the lead agency in coordinating Federal activities in water-data acquisition.

1997, the Advisory Committee on Water Information (ACWI) was created from the original fed and non-fed committees established by USGS.

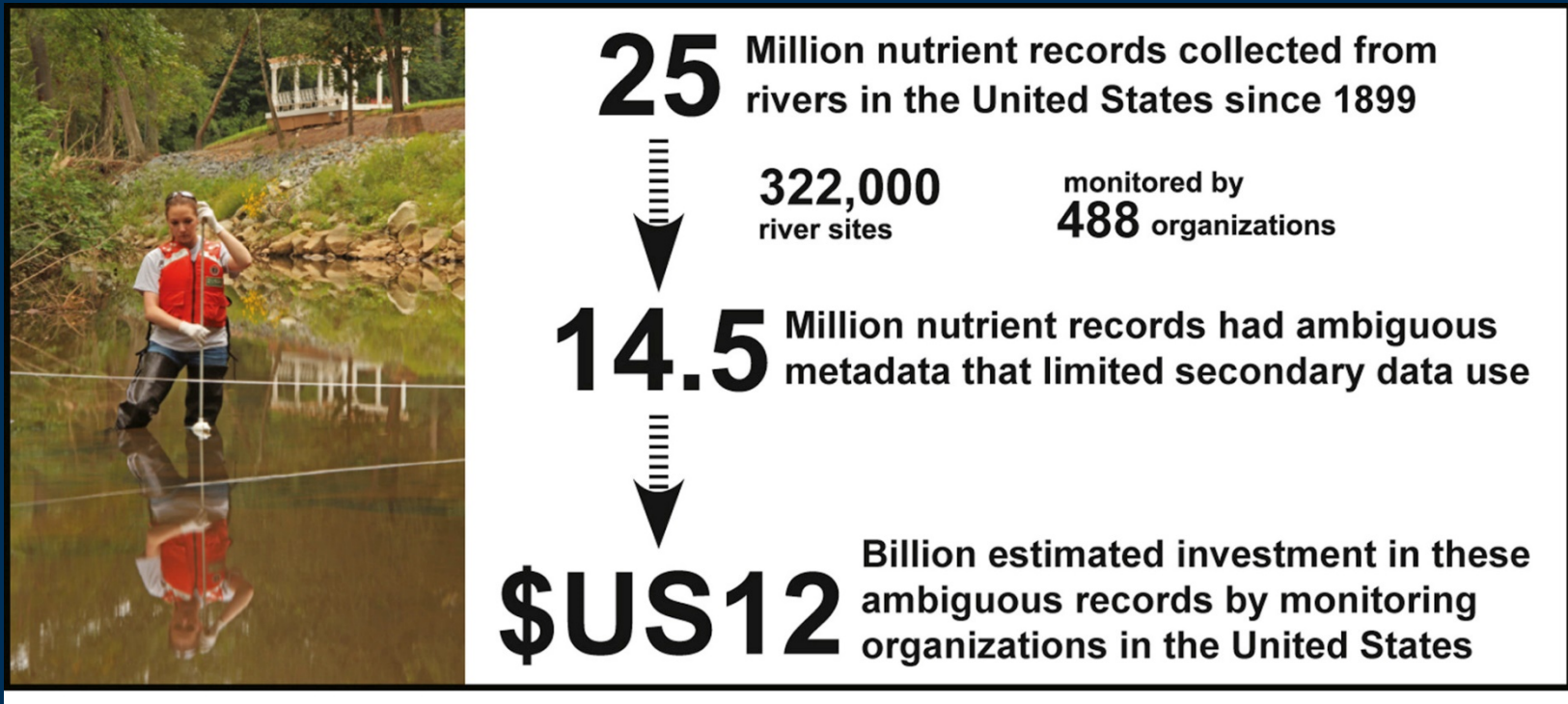


[https://acwi.gov/a\\_charter.html](https://acwi.gov/a_charter.html)

# Is this mandate still relevant? Yes!

## “Challenges with secondary use of multi-source water-quality data in the United States”

(Lori A. Sprague, Gretchen P. Oelsner, Denise M. Argue, 2016)



# The USGS strategic plan for the present and the future

We can't do what we do without your help – we greatly appreciate you and your support!

As for USGS - innovations, cutting-edge science, and partnerships will continue; it's all part of our plan!

