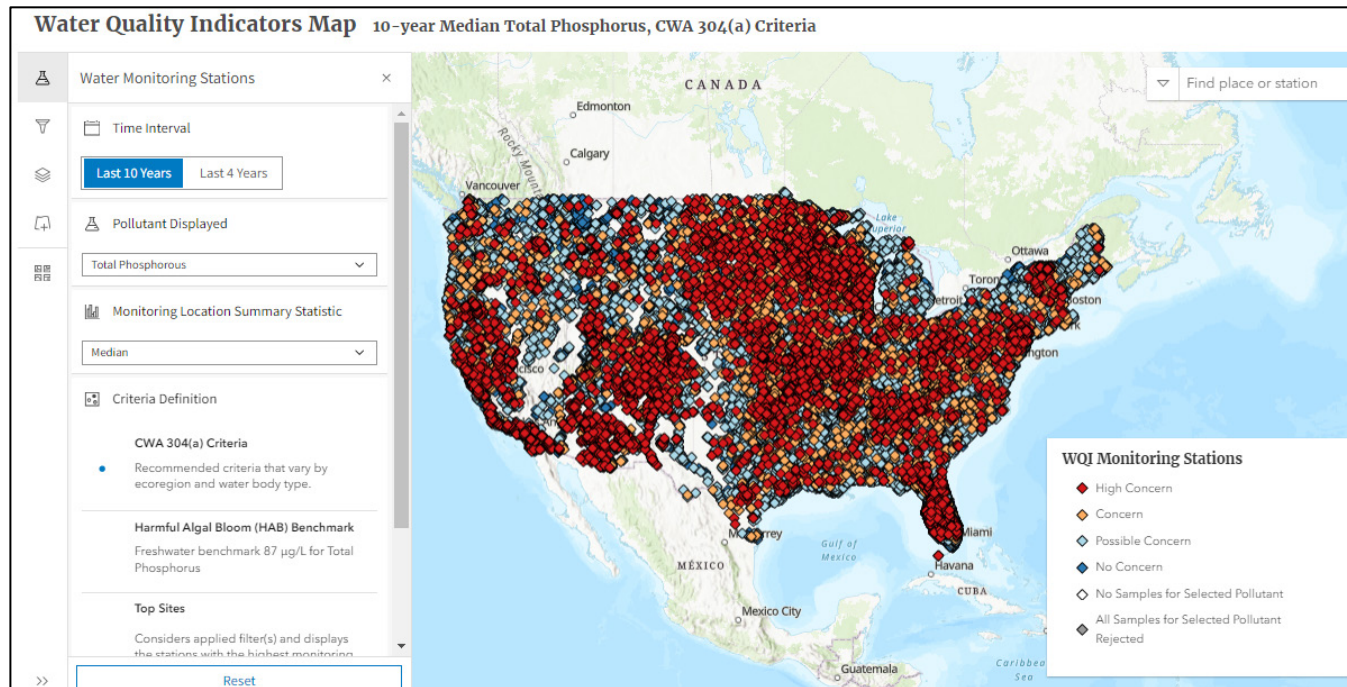




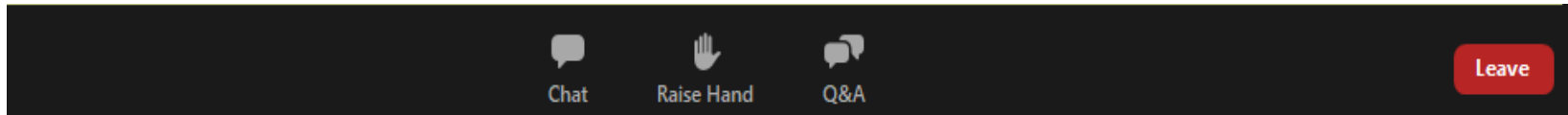
How to Use the Water Quality Indicators Tool (WQI)



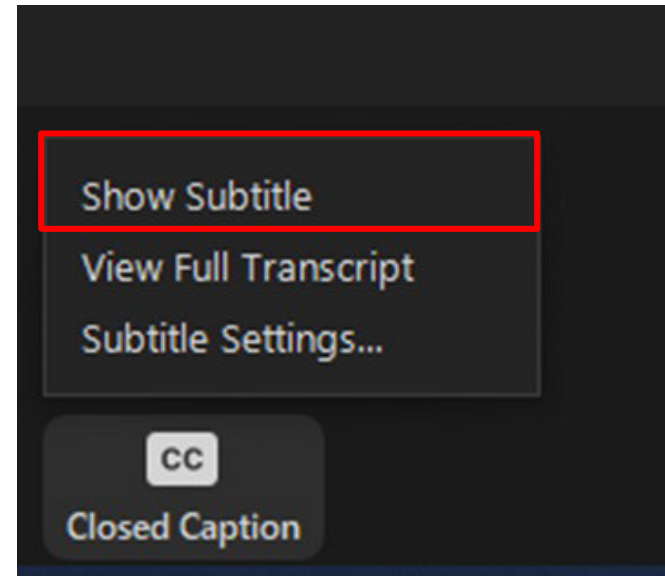
<https://echo.epa.gov/maps/water-quality-indicators>

Audio Instructions

You are in listen-only mode (muted).

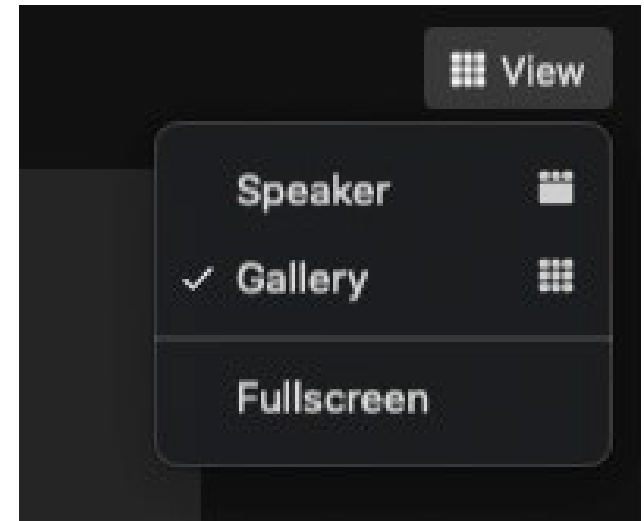


Closed Captioning for today's Webinar is available by clicking the "Closed Caption" button on your toolbar.



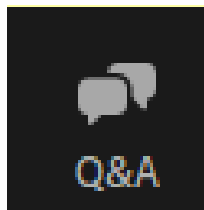
Video Instructions

If you don't see a presentation on the screen, try switching the view layout using the options in the top right corner.



Questions During the Webinar

- Use the Questions box to type in your questions throughout the webinar.
- Please make the context of your question clear, as we will be answering questions covering a range of topics (feel free to reference live examples or slide numbers).
- To make this webinar useful for all attendees, we will not address site specific or individual problems during this session - please use ECHO's [Contact Us](#) page for help with those questions.



Ask a Question

Webinar Materials

A recording of the webinar and transcript, as well as the presentation slides will be posted on the [ECHO Training Page](https://echo.epa.gov/help/training) (<https://echo.epa.gov/help/training>).

Introduction

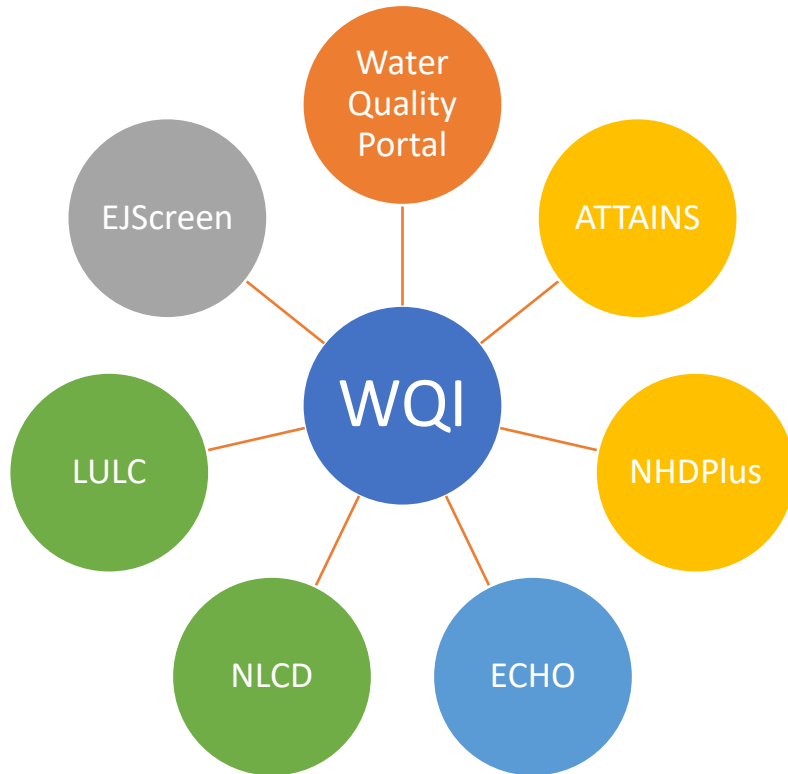
- The U.S. Environmental Protection Agency provides public access to its regulatory compliance and enforcement data via the Internet.
 - The Enforcement and Compliance History Online (ECHO) website at <https://echo.epa.gov> integrates data from major EPA information systems for public use.
 - The Water Quality Indicators Tool (WQI) is one of many applications available on the ECHO website.
-

What is the WQI?

- On September 18, 2024, EPA release the WQI to the public. The WQI makes it easy to explore nutrient and pathogen data and identify the potential sources that are contributing to water quality problems using a mapping tool.
- The WQI allows you to see pollutant level trends from nearby monitoring stations and compare them to numerous other stations across the country. In addition, the tool provides data on facilities including compliance records as well as environmental justice indicators gathered through EJScreen, EPA's environmental justice screening and mapping tool.
- The WQI is a screening tool!

Identify water pollution problems in your community, then look upstream.

WQI Data Sources



Many stove-piped data sources with useful information are integrated in this tool.

Ambient Water Monitoring Data

[Water Quality Portal](#)

Compliance Data

[U.S. EPA Enforcement and Compliance History Online \(ECHO\) - Facility Data](#)

Water Data

[U.S. EPA's National Hydrography Dataset Plus \(NHDPlus\)](#)

[U.S. EPA's Assessment, TMDL Tracking and Implementation System \(ATTAINS\)](#)

Land Use Data

[U.S. Geological Survey National Land Cover Database \(NLCD\)](#)

[Chesapeake Conservancy Land Use Land Cover Database \(LULC\)](#)

Other Sources

[U.S. EPA's EJScreen – Environmental Justice Data](#)

WQI Data Details

- First, an algorithm that normalizes water quality data.
- Then, the GIS interface visualizes the water quality monitoring dataset.
 - The map interface visualizes the water monitoring data with facility & land cover data.

1.

Gathers Publicly Available Monitoring Data

- Water Quality Portal - 10 years of nutrient and pathogen data
- 198k monitoring stations
- 12.5m water samples

2.

WQI Algorithm Normalizes Monitoring Data to Create WQI Dataset

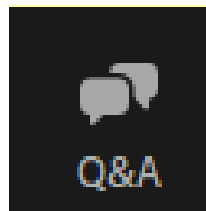
- QA/QC data
- Combine subspecies of nitrogen into a total nitrogen value.
- Calculate representative statistics for each monitoring station.
- Identify river and stream segments where water quality is dramatically changing.

3.

Visualize WQI Dataset in a GIS Interface

- Compare to water quality criteria
- Add data layers for additional context (e.g. ECHO Facility Data, Impaired Waters Data, EJScreen, and USGS Land Use Data).
- Find the 50 highest monitoring locations in a Region/State.

Please enter questions you have as the presentation goes on and we will answer them soon.



Ask a Question



Example 1:

Evaluate water data in my community

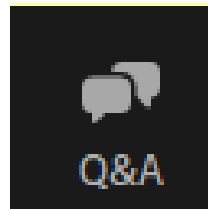
-Search upstream to find permitted facilities

Example 2:

Find the monitoring locations with the highest readings in my state

-Using filters to evaluate the data

Question and Answer Break



Ask a Question

Example 3:

Using optional layers

- Land use layers
- Adding a layer
- Pollutant change layer

Pollutant Change Layer (Beta)
identifies river/stream segments
where pollution changed $\pm 25\%$.

Support/Documentation

- WQI Project Homepage: <https://echo.epa.gov/maps/water-quality-indicators>
- WQI Help Page: <https://echo.epa.gov/help/wqi-help>
- WQI FAQs: <https://echo.epa.gov/help/wqi-faq>
- Water Quality Indicators (WQI) Project Background and Technical Specifications: https://echo.epa.gov/system/files/WQI_overview11.pdf

Data

- WQI Datasets: <https://echo.epa.gov/files/echodownloads/Data-Analytics/WQI/>
- WQI GIS Feature Service:
<https://epa.maps.arcgis.com/home/item.html?id=a8c7231fccb54412b4c4039e31ff7ae0>
- WQI Data Usability Dashboard: <https://echo.epa.gov/maps/water-quality-indicators/dataquality>

Additional EPA Resources for Water Data

[Water Quality eXchange](https://www.epa.gov/waterdata/water-quality-data-upload-wqx) – Share your data!

<https://www.epa.gov/waterdata/water-quality-data-upload-wqx>

[Water Quality Portal](https://www.waterqualitydata.us/) – Find and use data!

<https://www.waterqualitydata.us/>

[How's My Waterway](https://mywaterway.epa.gov) – Explore more data!

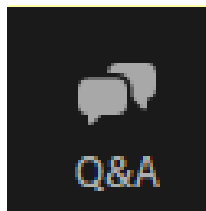
<https://mywaterway.epa.gov>



General ECHO Resources

- ECHO Tool Guide: <https://echo.epa.gov/resources/general-info/tool-guide>
 - ECHO Quick Start Guide: <https://echo.epa.gov/resources/general-info/learn-more-about-echo>
 - Video tutorials: <https://echo.epa.gov/help/tutorials>
 - Webinars: <https://echo.epa.gov/help/training>
 - FAQ: <https://echo.epa.gov/resources/general-info/echo-faq>
 - ECHO Mailing list: <https://echo.epa.gov/resources/general-info/listserv>
 - **ECHO Notify:** <https://echo.epa.gov/tools/echo-notify>
 - How to Report an Error: <https://echo.epa.gov/help/how-to-report-error>
 - State Agency Websites: <https://echo.epa.gov/resources/echo-data/state-websites>
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Question and Answer Session



Ask a Question



Thank you for attending today's training!

A short survey will appear on your screen momentarily, we would really appreciate your feedback.

OMB Control Number: 2030-0051 Expiration Date: 9/30/27

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