

Recent Advances from USGS Water

May 28, 2026

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USGS Water – Integrated Information Dissemination Division

WDFN@usgs.gov | waterdata.usgs.gov/blog | [@USGS_Water](https://twitter.com/USGS_Water)   

Water at USGS

USGS collects and delivers the water data our nation needs.



More than 13,500
real-time water
monitoring stations



86.12 TB
of USGS water
data delivered in
2025



4,000 river locations
with National Weather
Service flood forecasts
and warnings because
of USGS streamgauge
data



Up to 45:1 benefit/cost
ratio for flood
forecasting, floodplain
management, and
reservoir design and
operations using USGS
streamgauge data⁸

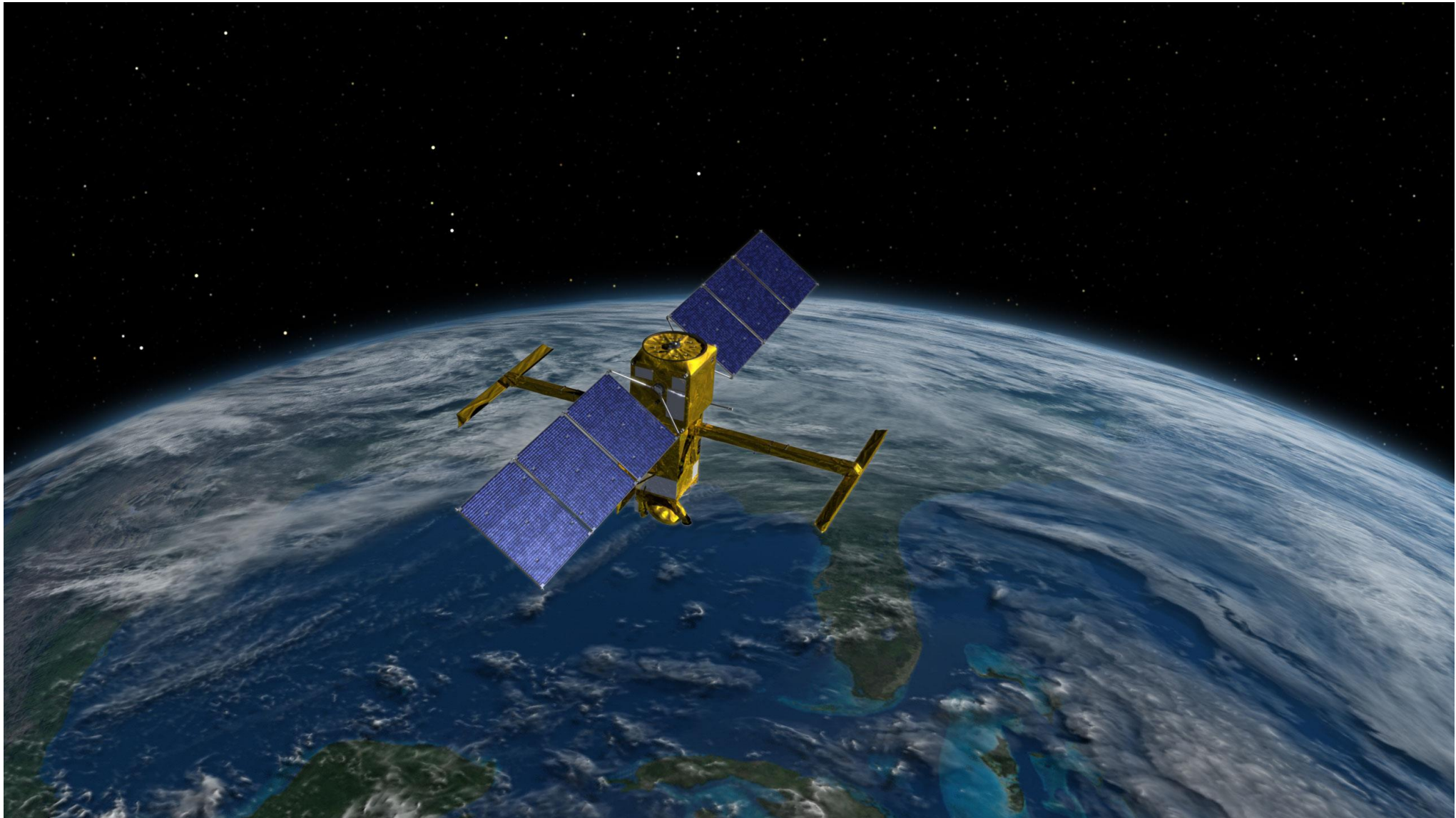
See the data



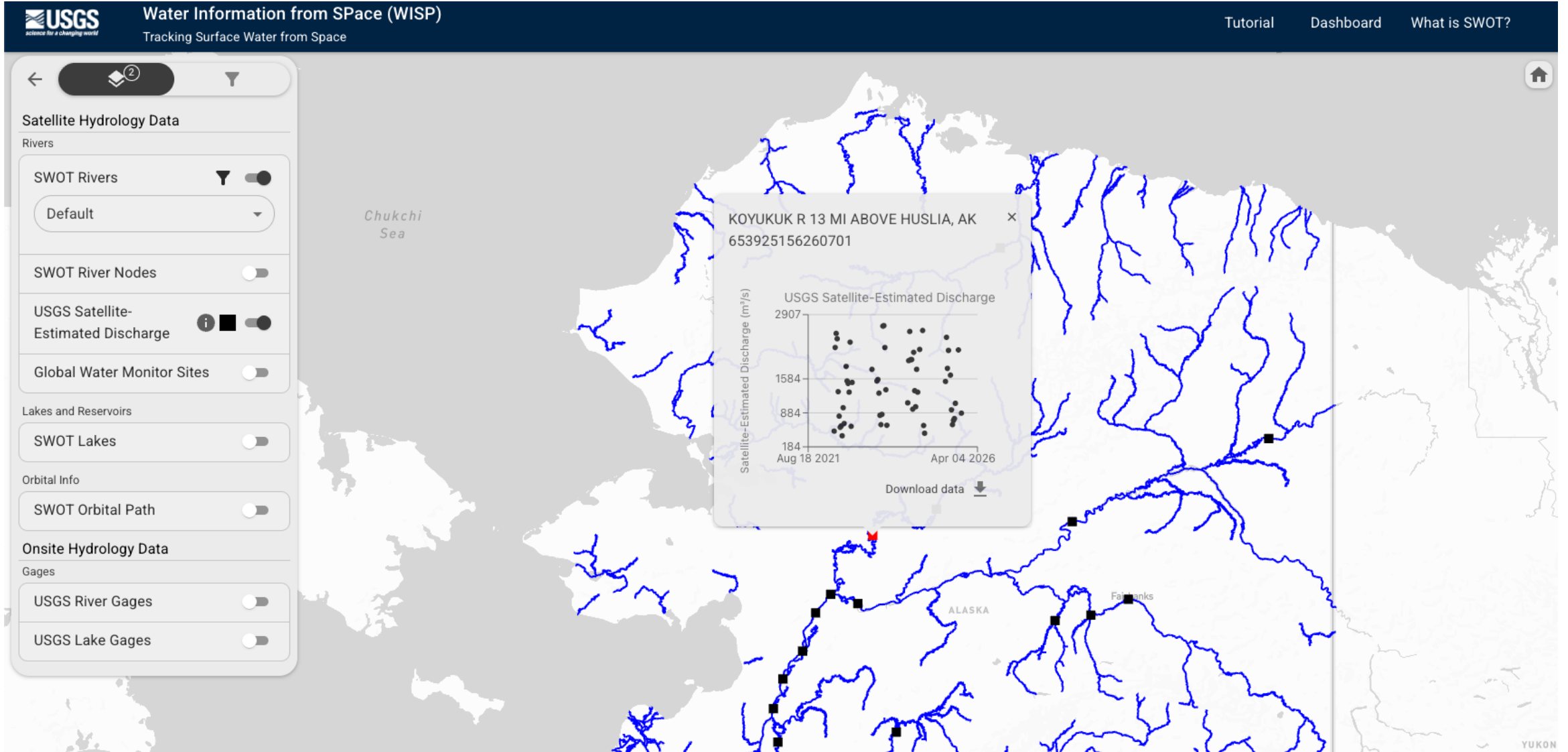
Explore more



Surface Water Ocean Topography Satellite (SWOT)

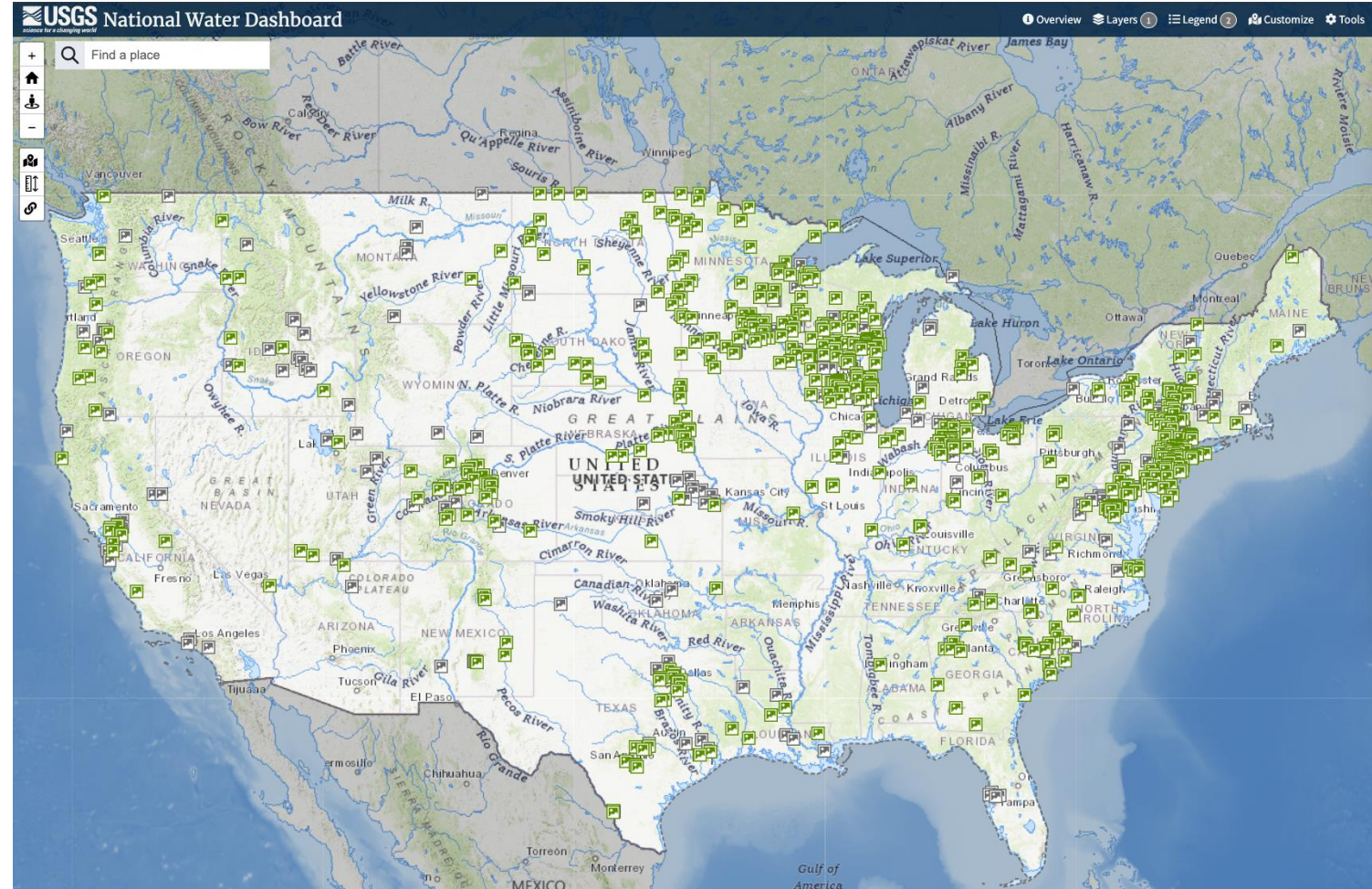


Water Information from Space



Expanding stream camera network

April 8, 2026 at 8am CT



<https://www.usgs.gov/products/multimedia-gallery/webcams>

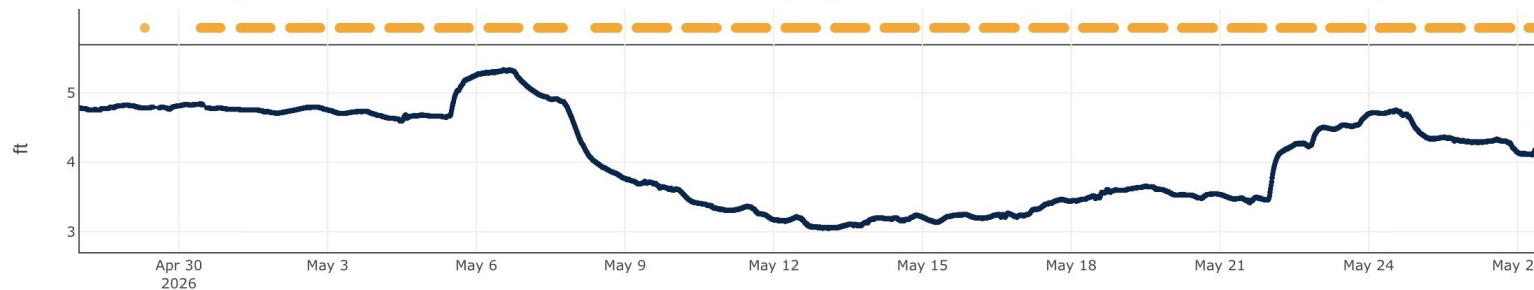
HIVIS

Hydrologic Imagery Visualization and Information System



● Image: 5/27/2026, 16:15:23 MDT

— Data: 4.32 ft, 5/27/2026, 15:15:00 MDT



Contextualizing major events

2025/12/04 01:30:17

USGS Station No: 12211195

Nooksack River Overflow at Highway 544 at Everson, WA

Wednesday, Dec 10, 2025 12:15:02 PST



Flow Photo Explorer

Parkers Brook

Affiliation	MA Dept of Fish and Game, Division of Ecological Restoration
Name	Parkers Brook
Description	Parkers Brook at Coldbrook Rd, Oakham, MA
Coordinates	42.39446, -72.04728
Timezone	America/New_York
Waterbody Type	Stream
Status	Active

Models

Model Types: RANK[FLOW_CFS]

[VIEW MODEL DIAGNOSTICS](#)

Photos

Period: Jun 13, 2018 – Sep 20, 2021

Photos: 11,083

Collected By: MA Dept of Fish and Game, Division of Ecological Restoration

[VIEW PHOTO METHODOLOGY](#)


Observed Data [FPE]

Variables: FLOW_CFS, STAGE_FT

Period: Jun 13, 2018 – Sep 20, 2021

Collected By: MA Dept of Fish and Game, Division of Ecological Restoration

[VIEW DATA METHODOLOGY](#)



Mode: DAILY

Date: Mar 29, 2019

Daily Photo Timestamp: 12:00:00 PM EDT

Photos on This Date: 13

[SHOW SUB-DAILY ON \[MAR 29, 2019\]](#)

53°F 29.36inHg @MOULTRIECAM1 29 MAR 2019 12:00 pm

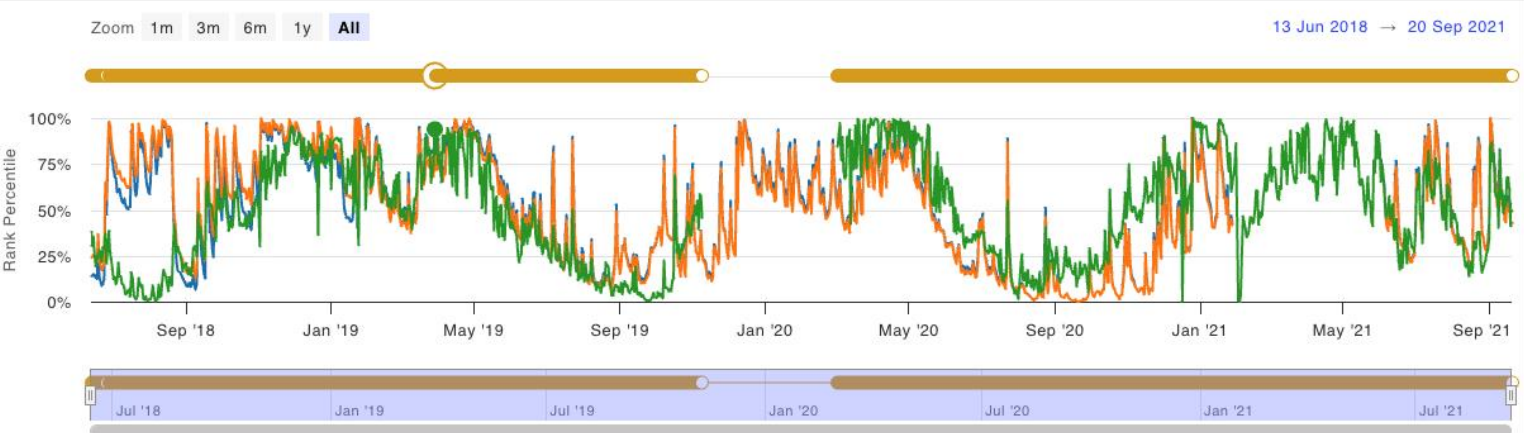
[PREV](#) [NEXT](#) [PLAY](#) Speed

TIMESERIES DISTRIBUTIONS SCATTERPLOTS

3 variables selected

Mode: DAILY Show as Rank Percentile (0-100%) [ABOUT THIS CHART](#)

Zoom 1m 3m 6m 1y All 13 Jun 2018 → 20 Sep 2021



Rank Percentile

Sep '18 Jan '19 May '19 Sep '19 Jan '20 May '20 Sep '20 Jan '21 May '21 Sep '21

Jul '18 Jan '19 Jul '19 Jan '20 Jul '20 Jan '21 Jul '21

River DroughtCast

River DroughtCast

Streamflow drought status and forecasts

Showing **forecast** conditions for

05/26/26
6 weeks out

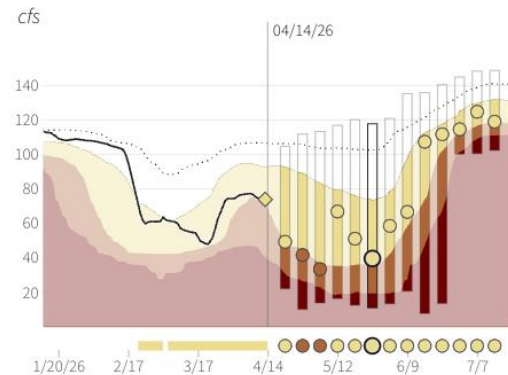
Gage 10171000



JORDAN RIVER @ 1700 SOUTH @ SALT LAKE CITY, UT

Forecast to be in **moderate** streamflow drought

Timeseries of observed and forecast conditions



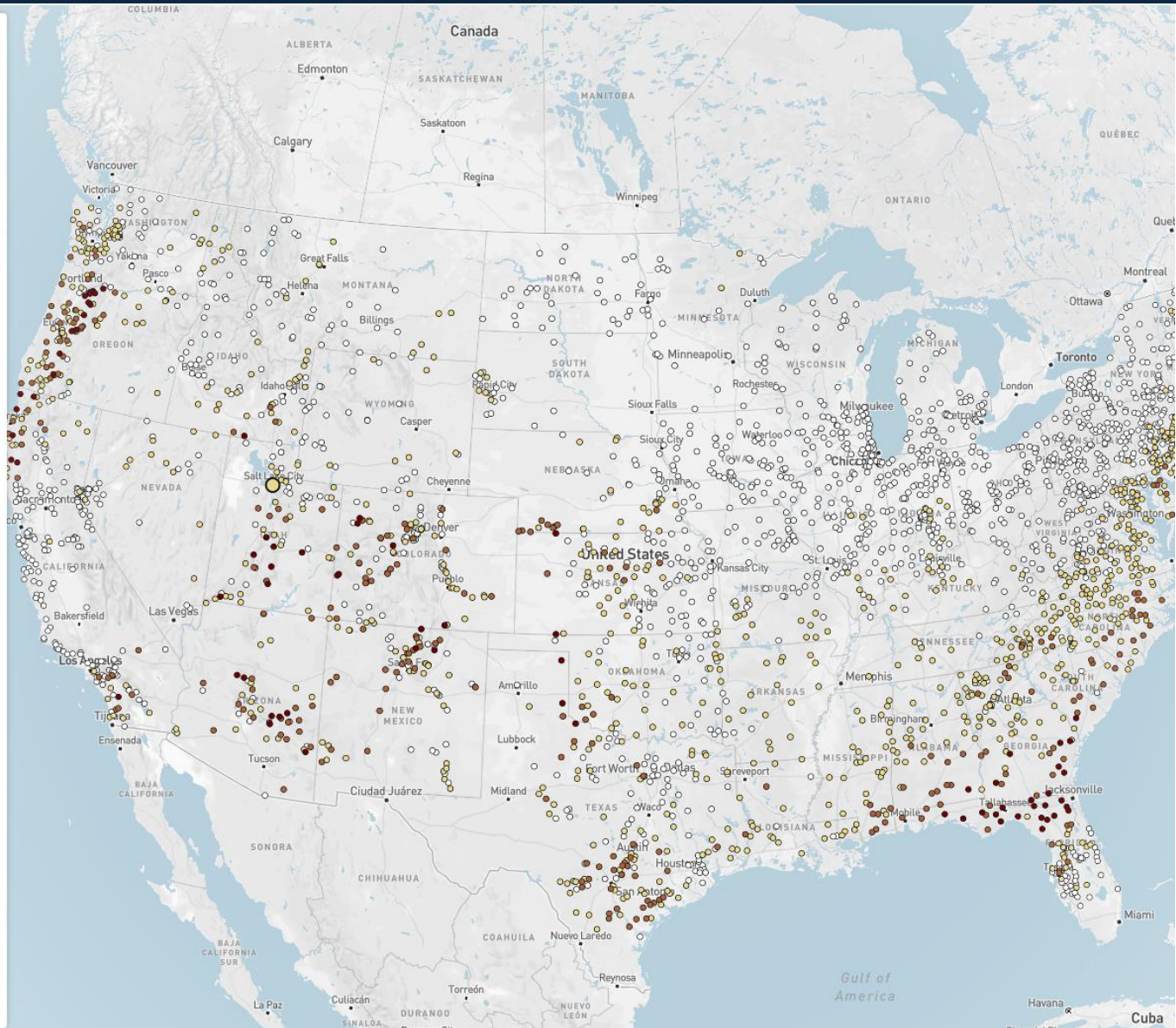
Drought category ■ Moderate ■ Severe ■ Extreme

Observed streamflow — Last 90 days ◇ Day before issue date

Predicted streamflow ○ Median □ Uncertainty

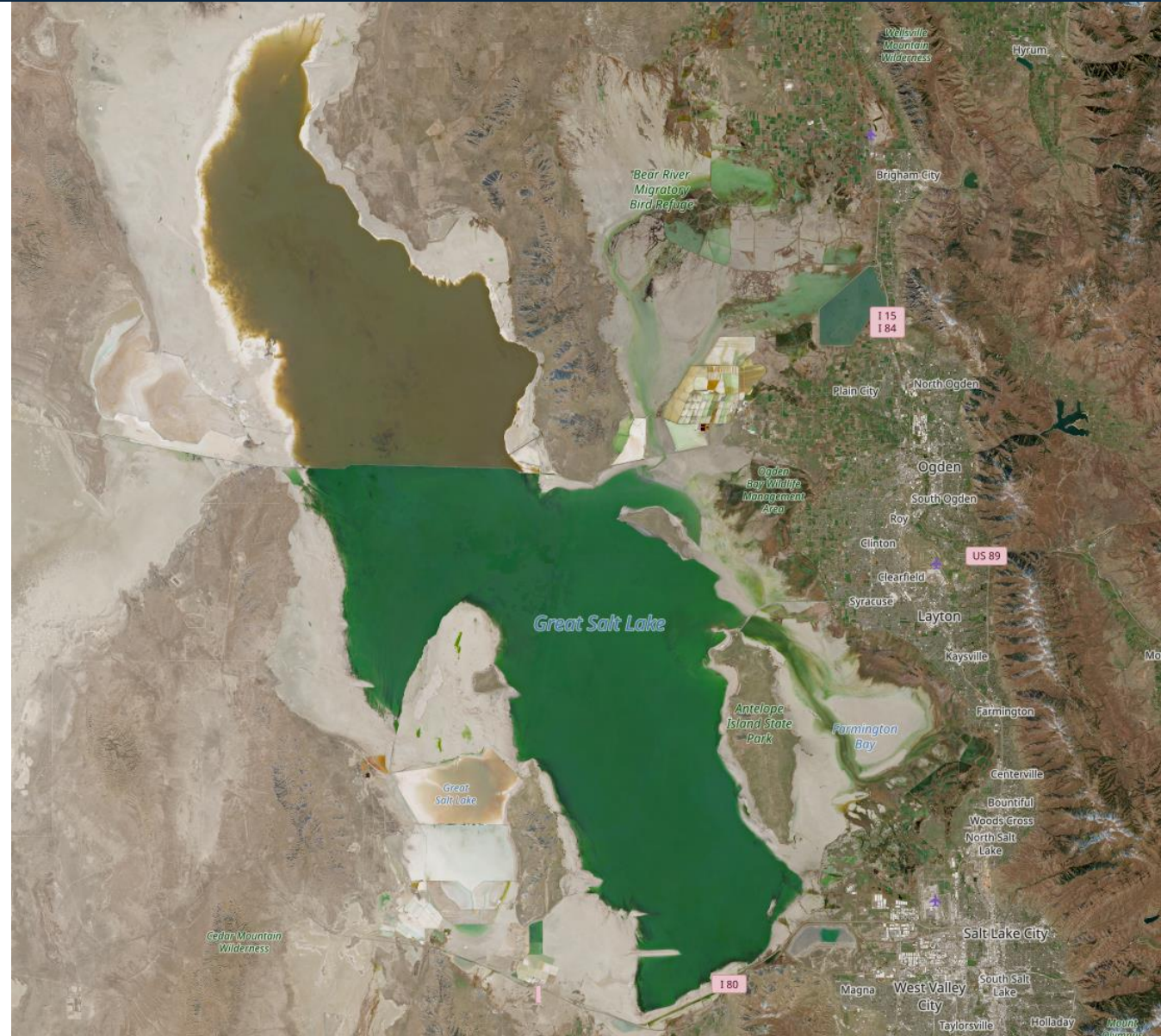
linear log ? How do I read this chart?

This site was in streamflow drought on 26% of the last 365 days, and 56% of the last 90 days (50 days).



<https://water.usgs.gov/vizlab/streamflow-drought-forecasts/>

Local impacts

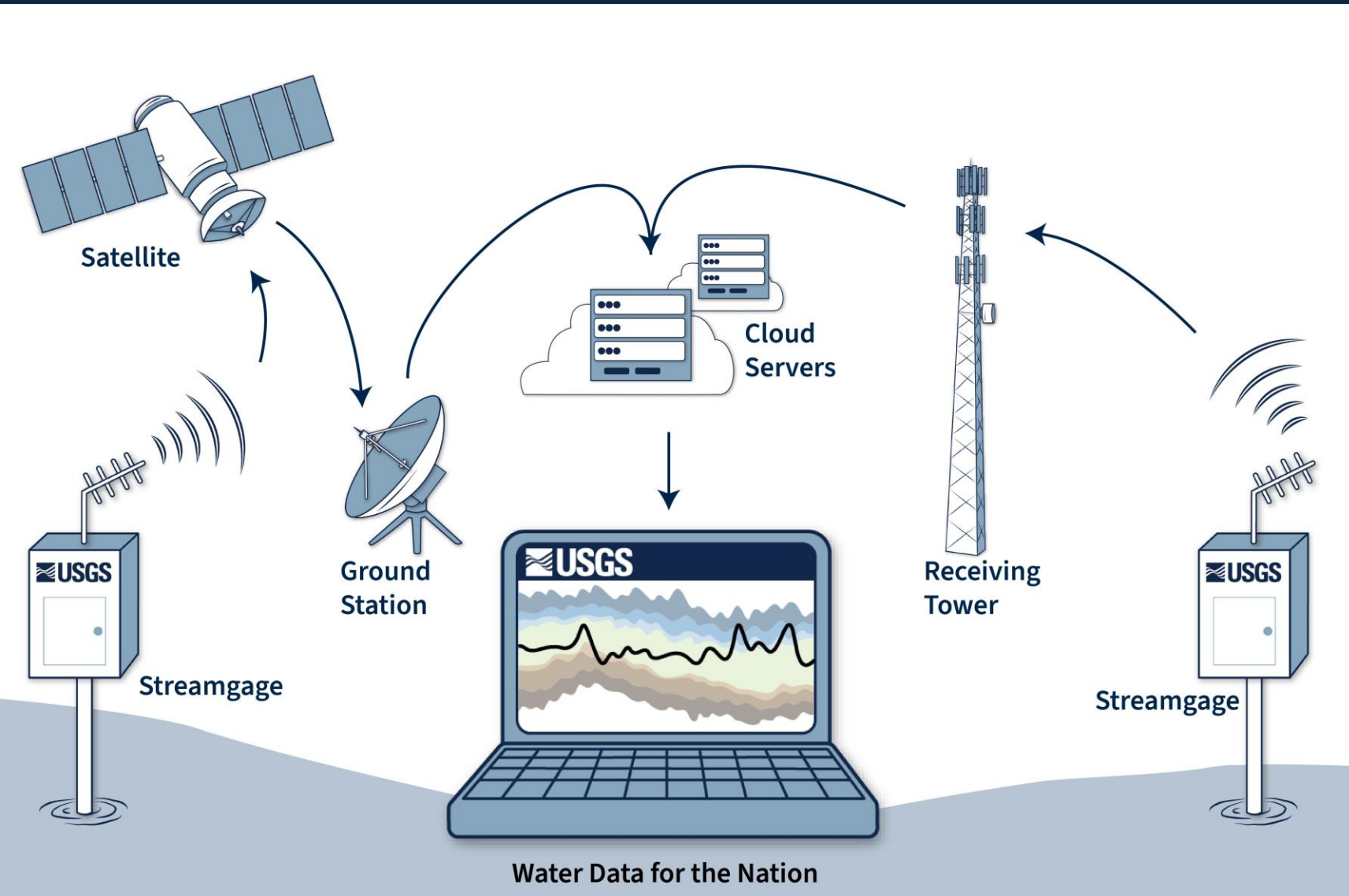


Imagery from Sentinel 2; map information from [OpenStreetMap](https://www.openstreetmap.org/)

Local impacts

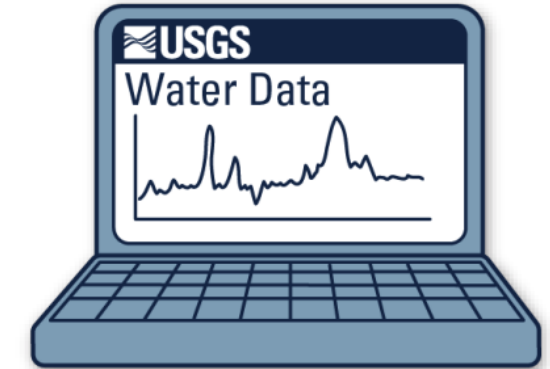
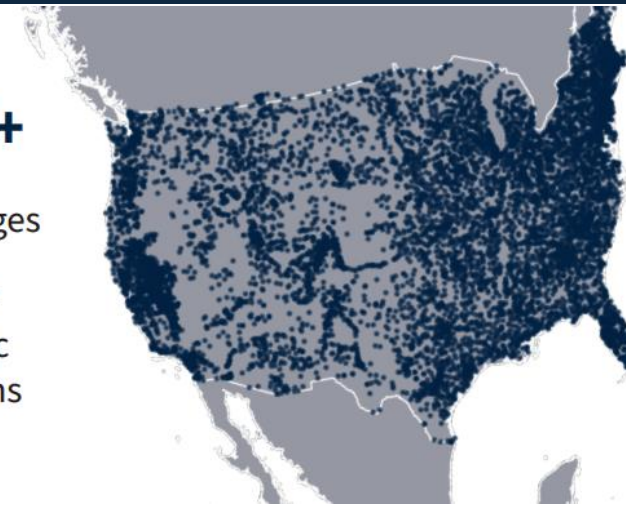


The National Water Information System



12,000+
active
streamgages

1,000+
hydrologic
technicians



112 billion
water observations annually

10.6 million
users annually

New home for USGS water data

Water Data for the Nation

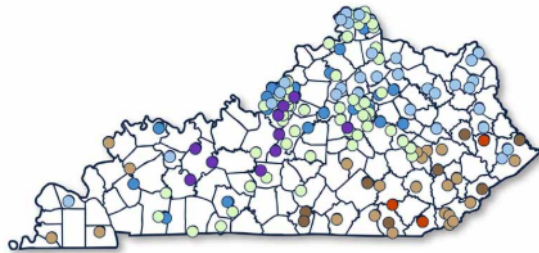
High-quality and discoverable water data for everyone
Over 135 years of water data from more than one million monitoring locations

The United States Geological Survey (USGS) collects water data at monitoring locations across the United States using *automated sensors* and *manual* data collection. Each monitoring location has location information that details the location name and identifier, the agency responsible for data collection, and geographic information about the location. Most monitoring locations have data available in one or more of the following categories of water data: continuous data, daily data, field measurements, and discrete sample data.

Learn more about the [categories of water data](#) available in Water Data for the Nation.

Find the water information you need

Discover real-time data in your state



State pages provide a summary of the latest continuous data being collected in your state. Quickly filter the map and list to show a data type of interest to you, or customize the filters to further refine the map and list to your needs.

Select a State or Territory Page

Select a state

Create a list of your favorite monitoring locations



Make and share a list of USGS monitoring locations that you are interested in. Access the latest continuous water data at those locations all in one place. Create combined location graphs or a custom list of data graphs from your favorites list.

[Go to My Favorites](#)

View latest conditions and weather events

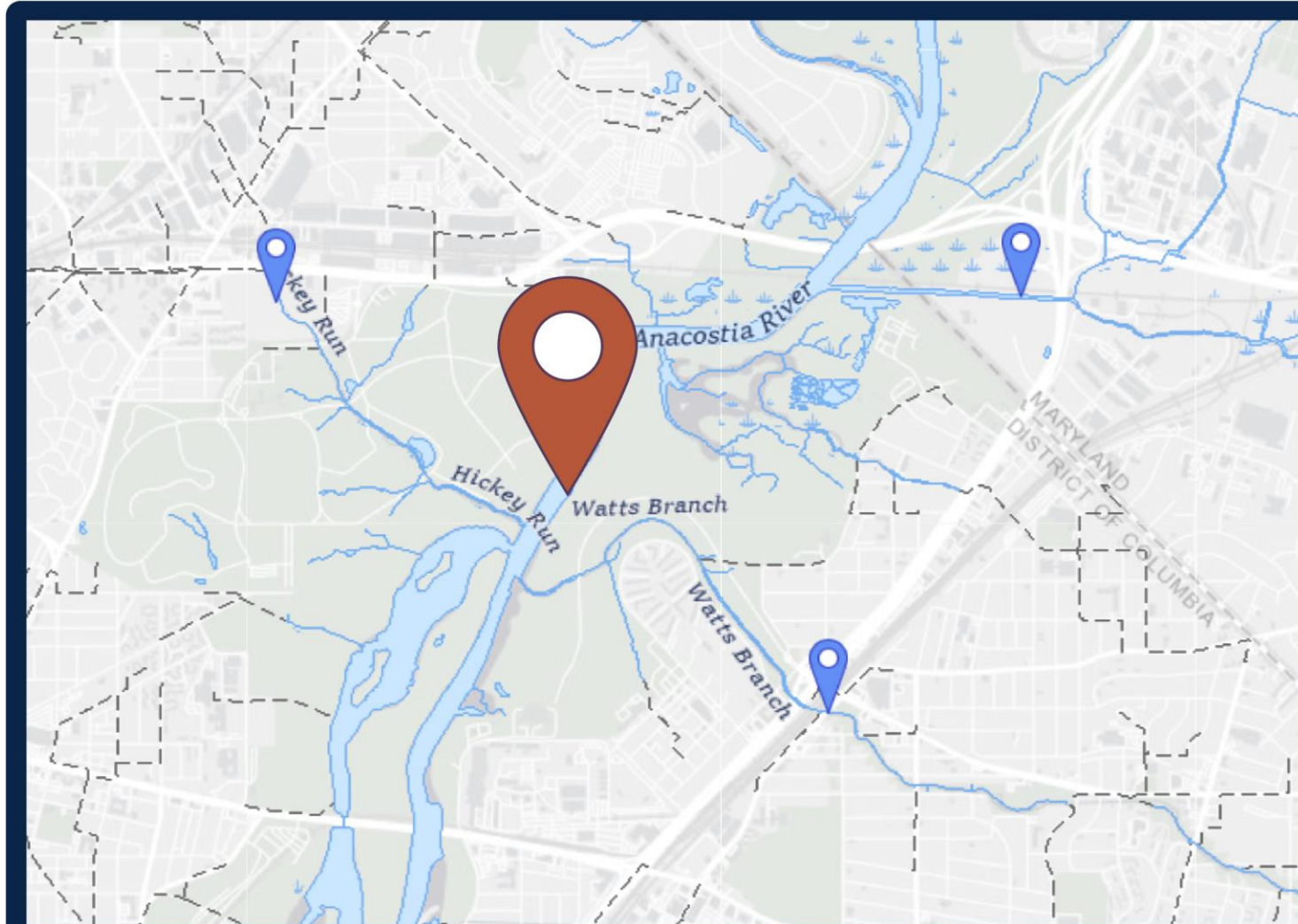


USGS has over 13,500 real-time stream, lake, reservoir, precipitation, water quality, and groundwater monitoring locations. View the latest continuous data in your area together with weather-related data to understand rapidly changing water conditions.

[Go to the National Water Dashboard](#)



New ways to explore USGS water data



4 locations found
filters:

surface water
groundwater

time range:

120 days

data collections:

continuous

*Anacostia River at
Kenilworth - 01651760*

show filter and sort ▾

New centralized view for USGS water data

Monitoring location

Jordan River @ 1700 South @ Salt Lake City, UT - USGS-10171000

[WDFN Home](#) [WDFN tools and data](#) [Related links](#) [Other water data resources](#) [Connect](#)

IMPORTANT [Legacy real-time page](#)

7 days 30 days 1 year

Scale

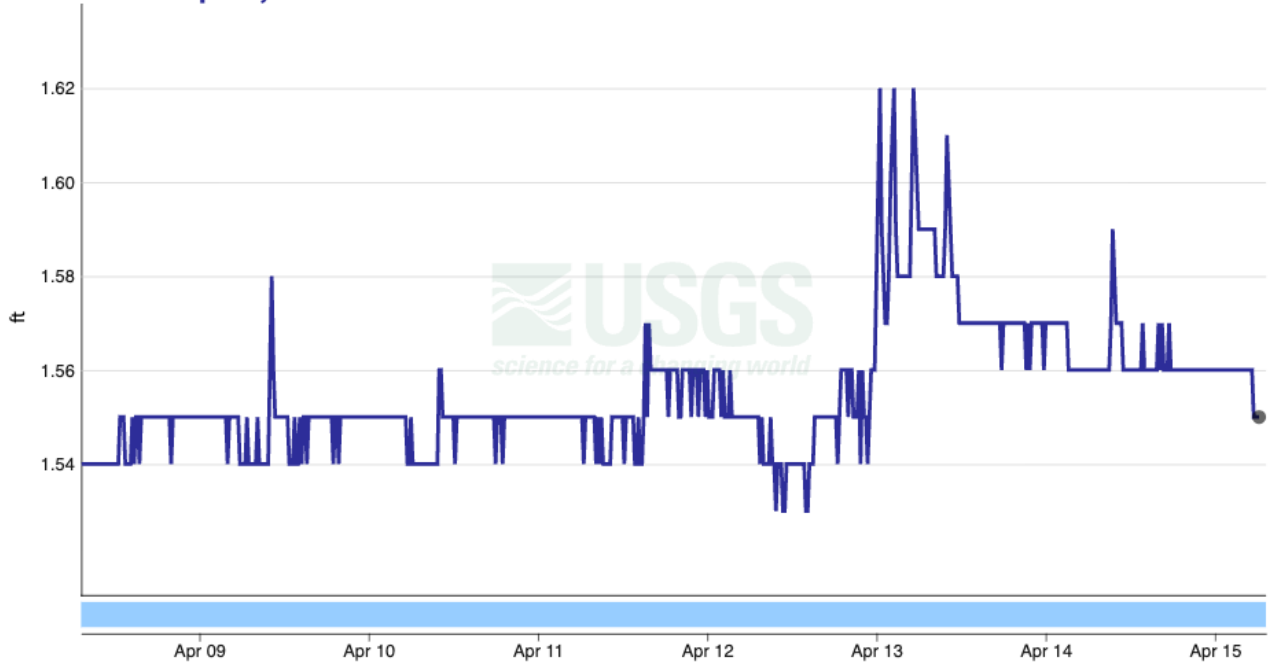
Continuous data

Jordan River @ 1700 South @ Salt Lake City, UT - USGS-10171000

[Subscribe to WaterAlert](#)

April 8, 2026 - April 15, 2026
Gage height, feet

1.55 ft - Apr 15, 2026 06:15:00 AM MDT



<https://waterdata.usgs.gov/monitoring-location/USGS-10171000>

New centralized view for USGS water data

Available data

Select data types to graph from categories based on the way the data were collected.

[Learn about the data collection categories](#)

Expand all data collections

Continuous data

3 data types available - data from 1986-10-01 to 2026-04-15

Show these data types

Daily data

1 data types available - data from 1942-12-01 to 2026-04-13

Show these data types

Field measurements

2 data types available - data from 1984-08-15 to 2026-03-05

Show these data types

Discrete sample data

1117 Observed properties (data types) available - with data from 1959-10-01 to 2026-03-26

1160 Sampling activities

Show these data types

Statistical tables for select daily data types

1 data types available - data from 1942-12-01 to 2026-04-13

Show these data types

Important information about this monitoring location

To convert gage height to water-surface elevation above sea level in NAVD 1988, add 4,222.64 feet to gage height.

Location details and information

Show location details



New tools for bulk data downloads

Download data

This form will help you download data from the [USGS Water Data APIs](#).

For more data filtering options or to make more complex requests, you may wish to query the APIs directly. [Documentation for each endpoint is available at this link](#).

Discrete samples data can be downloaded from the [Download Discrete Sample Data form](#).

Select data to download

If selected, monitoring location metadata will be downloaded for each provided ID, whether or not a location has data matching the parameter codes and time ranges requested.

- Continuous values
Learn more ▼ | [Field names and descriptions](#)
- Daily values
Learn more ▼ | [Field names and descriptions](#)
- Field measurements



<https://api.waterdata.usgs.gov/download>

New APIs for data access

USGS Water Data APIs

This site is the home for modernized access to USGS water data in machine-readable formats via REST APIs, a common type of web service programs use to search and download data. These services provide USGS water data, ranging from continuous measurements of streamflow to information about individual USGS sites and more. The links below lead to documentation for how to use each service, and web forms to build queries for each endpoint.

Continuous Values

This API provides the most recent real-time measurements of streamflow, gage height, and hundreds of other parameters for USGS monitoring locations.

[Continuous Values API](#)

Daily Values

Interested in historical summarized daily data about our nation's streams, lakes and wells? This API provides a wealth of historical water data. Daily data is available for USGS water monitoring locations include mean, median, maximum, minimum, and/or other derived values.

[Daily Values API](#)

Monitoring Locations

Location information is basic information about the monitoring location including the name, identifier, agency responsible for data collection, and the date the location was established. It also includes information about the type of location, such as stream, lake, or groundwater, and geographic information about the location, such as state, county, latitude and longitude, and hydrologic unit code (HUC).

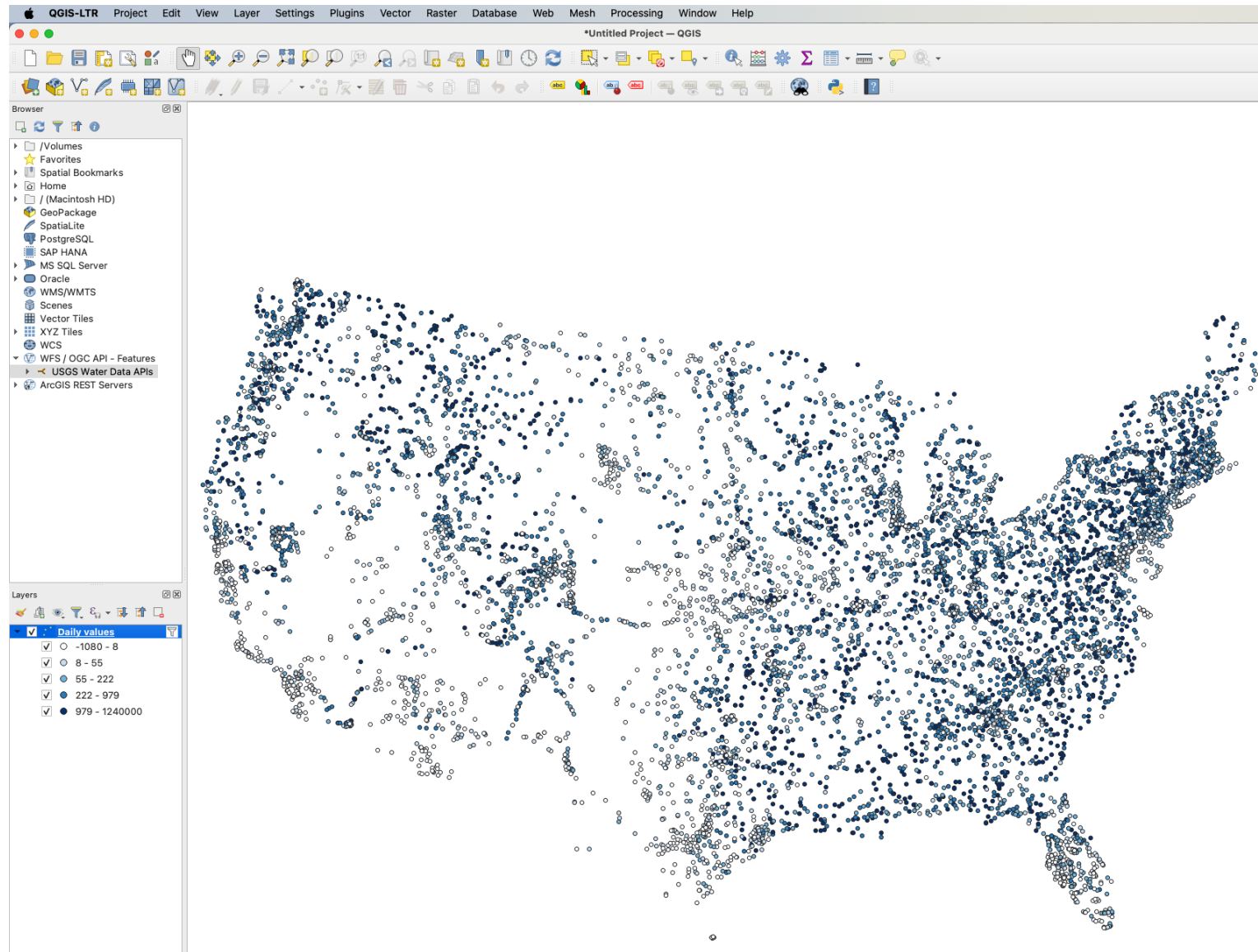
[Monitoring Locations API](#)

Time Series Metadata

Daily data and continuous measurements are grouped into time series, which represent a collection of observations of a single parameter, potentially aggregated using a standard statistic, at a single monitoring location. This endpoint provides metadata about those time series, including their operational thresholds, units of measurement, and when the earliest and most recent observations in a time series occurred.

[Time Series API](#)

New ways to access USGS water data



New functionality

Time series metadata

Map showing the United States with location pins and green circles. The map includes labels for major cities like Los Angeles, Phoenix, Washington, New York, Toronto, and Ottawa. A limit dropdown is set to 10 (default). [Next page](#)

id	unit_of_measure	parameter_name	parameter_code	statistic_id	hydrologic_unit_code	state_name	last_modified	begin	end
000068b2a...	degC	Temperature, water	00010	00002	020301030401	New Jersey	2017-05-07 20:53:29.551297	1983-11-03 00:00:00.000001	1985-08-08 00:00:00.000001
00009b3da...	ft^3/s	Discharge	00060	00011	160202040403	Utah	2026-04-22 08:09:13.249829	2006-05-18 06:00:00.000001	2026-08-08 08:00:00.000001
0000cad39...	ft^3/s	Discharge	00060	00011	010100050303	Maine	2026-04-22 05:51:12.551564	2003-10-01 05:00:00.000001	2026-05-45 05:45:00.000001

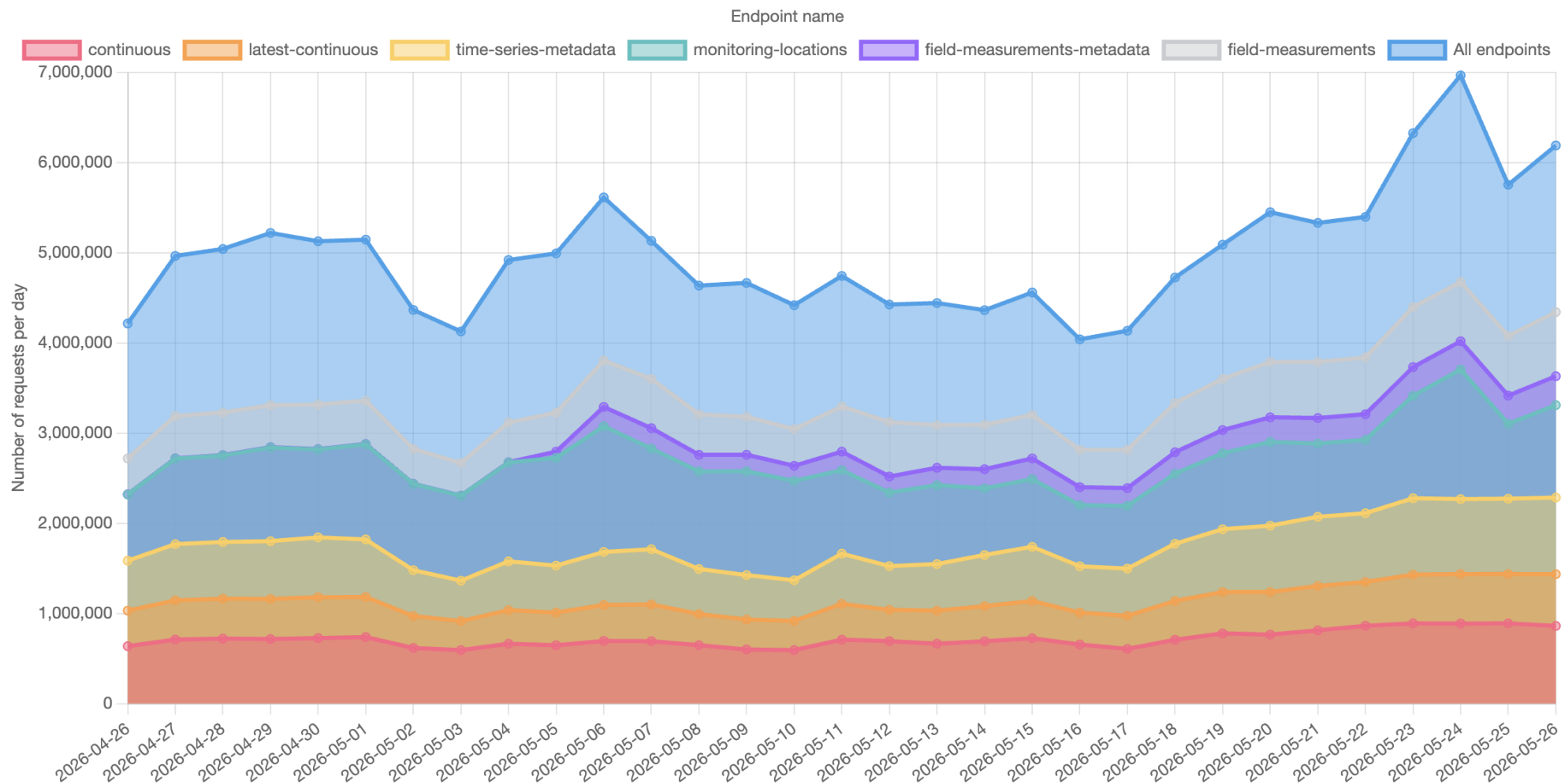


<https://api.waterdata.usgs.gov/ogcapi/v0/collections/time-series-metadata/items>

Migrating to the new APIs

OGC API Metrics

This page tracks metrics about the usage of [the OGC API endpoints](https://api.waterdata.usgs.gov/docs/ogcapi/metrics). Request numbers are updated once per day.



Up next: Retiring legacy pages

NWISWeb Decommission Campaign Summary

Summary of the NWISWeb webpage decommissions ongoing from October 2024 through February 2027

DATE POSTED

December 6, 2024

LAST UPDATED

March 19, 2026

AUTHOR

Shawna Gregory

Rachel Bryan

Leah Leno

Emily Read



READING TIME

6 minutes

SHARE



What's on this page

[Campaign Activities](#)

[Legacy NWISWeb Decommissions](#)

[What is happening?](#)

[What does this mean for you?](#)

Up Next: Fit-for-purpose data

Method categories

Items in this collection: 4

Limit: ▾

id	method_category_name	method_category_description
EXPER	Experimental	Data obtained by Experimental methods are typically collected as part of research and development into new techniques and instrumentation where standard methods are being developed or evaluated for use. These data may have limited QA/QC but will still require metadata describing the methodology and instrumentation being evaluated along with any relevant references.
LMTUS	Limited Use	Data obtained by Limited Use methods are collected and/or reviewed using non-standard methods, which may include modifications to a standard method, differences in quality assurance procedures, and(or) following external methods with limited validation information pertaining to a particular use or context. Limited use may or may not require a new publication; in many cases, describing the deviation from a published method in the metadata may suffice. For major modifications, a publication may be warranted.
STNRD	Standardized	Data obtained by Standardized methods follow approved standard field methods or validated laboratory analytical methods, have known uncertainty or defined bias and variability, and follow rigorous quality assurance and quality control (QA/QC) workflows. Method category of Standardized should not be confused with approved USEPA 'Standard Methods' for water and wastewater analysis.
UNKWN	Unknown	Data obtained by a method with an unknown categorical standard because of an unknown level of data quality, certainty or lack of documentation. Unknown category is not available for new methods.

Up Next: AI Enablement



Are Your Data Ready? Take Stock with ESIP's New AI-Ready Checklist

A screenshot of a Google search result for "nwis modernization". The search bar at the top shows the query. Below the search bar are navigation tabs for "AI Mode", "All", "Images", "Shopping", "Videos", "News", "Forums", "More", and "Tools". The main content area features an "AI Overview" section with a blue star icon. The text states: "The USGS is modernizing the National Water Information System (NWIS) by replacing the legacy NWISWeb interface with Water Data for the Nation (WDFN), a faster, mobile-friendly platform. This transition, heavily active through 2025–2026, includes updated APIs and improved, interactive monitoring pages. Legacy NWISWeb features are being phased out, with WDFN now the primary source for real-time and historical water data." Below this is a link to "USGS Water Data for the Nation (.gov) +4". A section titled "Key Aspects of NWIS Modernization:" lists several bullet points: "WDFN Transition: WDFN replaces NWISWeb as the public interface for water data.", "Next-Gen Pages: Monitoring location pages are now mobile-first and interactive, featuring, for instance, a 7-day interactive hydrograph for gage height, discharge, and water temperature.", "API Upgrades: Modernized APIs for improved data access are replacing the legacy Water Services family.", "Data Scope: Improvements cover real-time sensor data, daily values, and groundwater levels.", and "Retirement Schedule: Many NWISWeb pages are being retired by March". At the bottom of the screenshot, there are buttons for "Code", "Preview", and icons for list, copy, print, and download.

```
SKILL.md 9.25 KiB
1 ---
2 name: usgs-water-data
3 description: >
4   Query USGS water monitoring data including real-time streamflow, daily
5   statistics, groundwater levels, and site metadata via the OGC API at
6   api.waterdata.usgs.gov. Use when working with USGS hydrologic data, water
7   monitoring sites, streamflow, gage height, water temperature, water quality
8   parameters, or the Water Data for the Nation API.
9 compatibility: >
10  Requires network access to api.waterdata.usgs.gov. Python 3.10+ for the bundled
11  script (stdlib only, no pip dependencies required).
12 ---
13
14 # USGS Water Data OGC API
15
16 ## Base URL and response format
17
18 ...
19 https://api.waterdata.usgs.gov/ogcapi/v0
20 ...
21
```

new main portal.
visualizing real-time data.
nents, updates, and instructions on transitioning
re Nation (.gov) +3
rease reliability and provide better access to water
ial for water
tion (.gov)



Thank you!

Mike Mahoney - mjmahoney@usgs.gov

Water Data for the Nation – wdfn@usgs.gov