USGS
science for a changing world

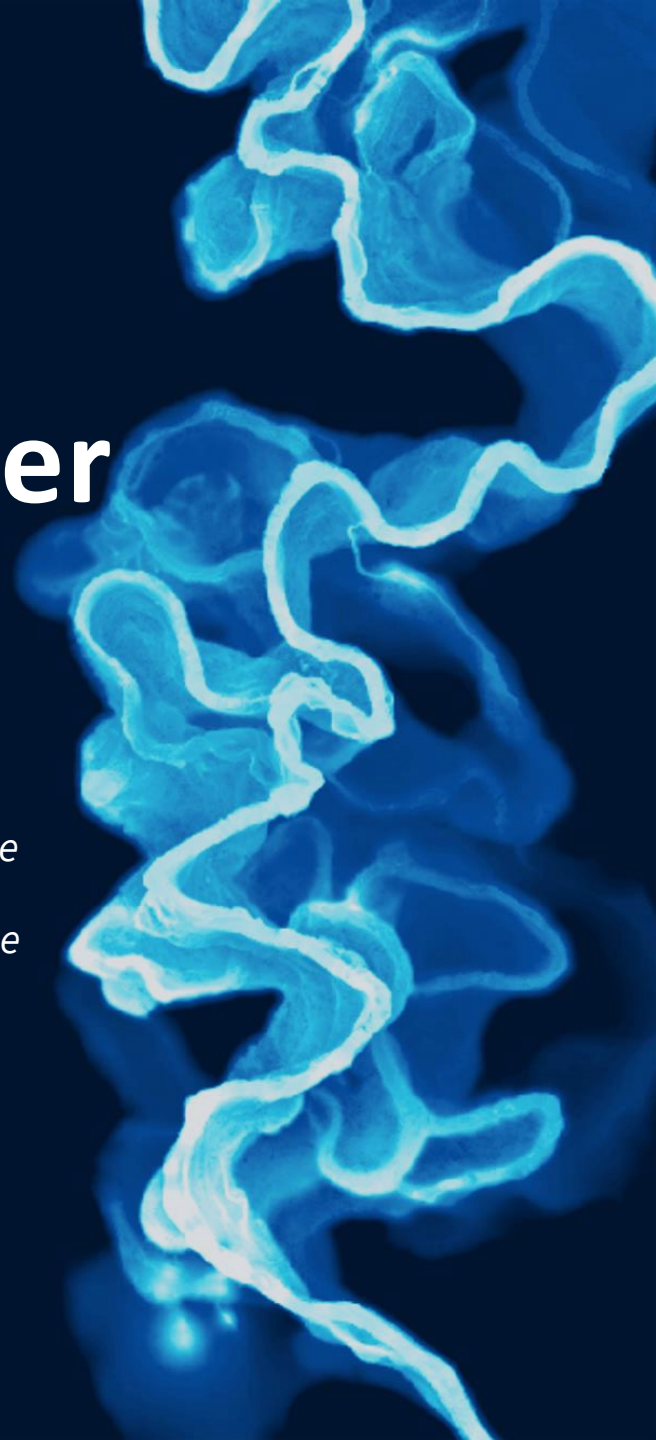
Recent Advances from USGS Water

May 28, 2026

Mike Mahoney – mjmahoney@usgs.gov

USGS Water – Integrated Information Dissemination Division

WDFN@usgs.gov | waterdata.usgs.gov/blog | @USGS_Water

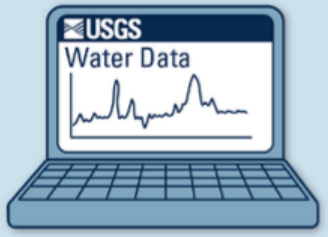


U.S. Geological Survey
Department of the Interior

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 streamgage data

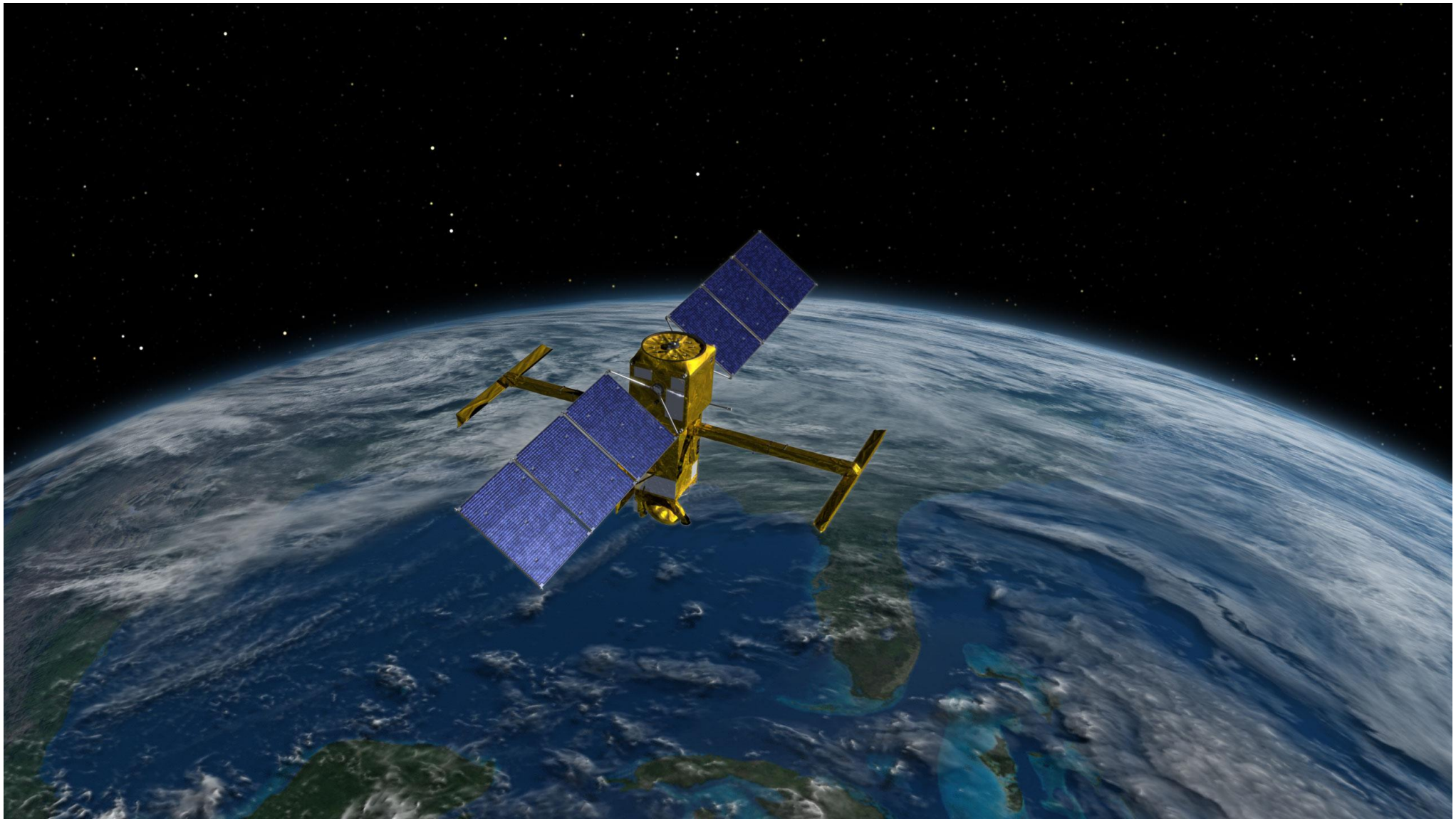
Up to 45:1 benefit/cost
ratio for flood forecasting, floodplain management, and reservoir design and operations using USGS streamgage data[8]

See the data

Explore more

USGS

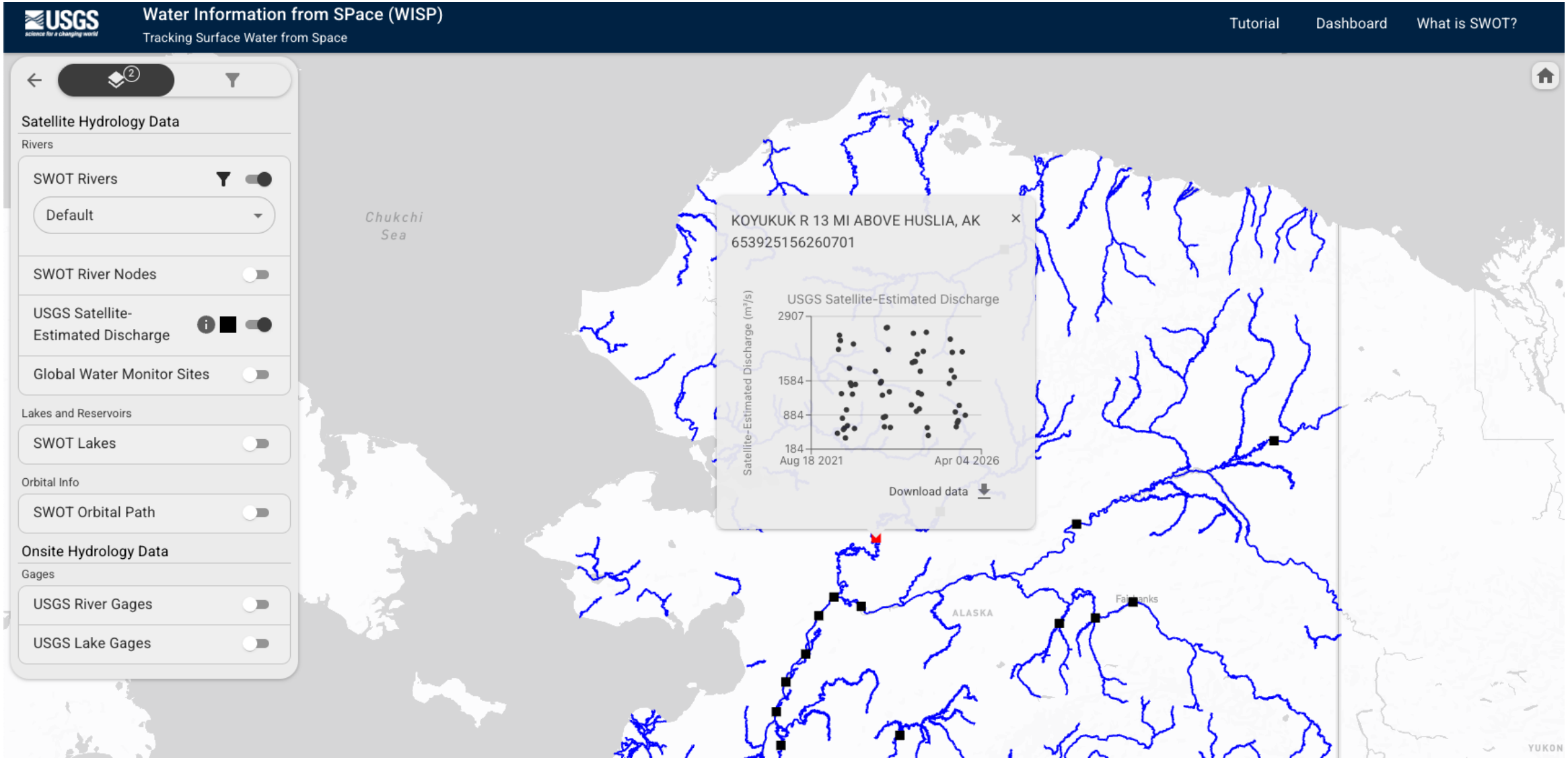
Surface Water Ocean Topography Satellite (SWOT)



USGS

https://apps.usgs.gov/wisp/what-is-swot

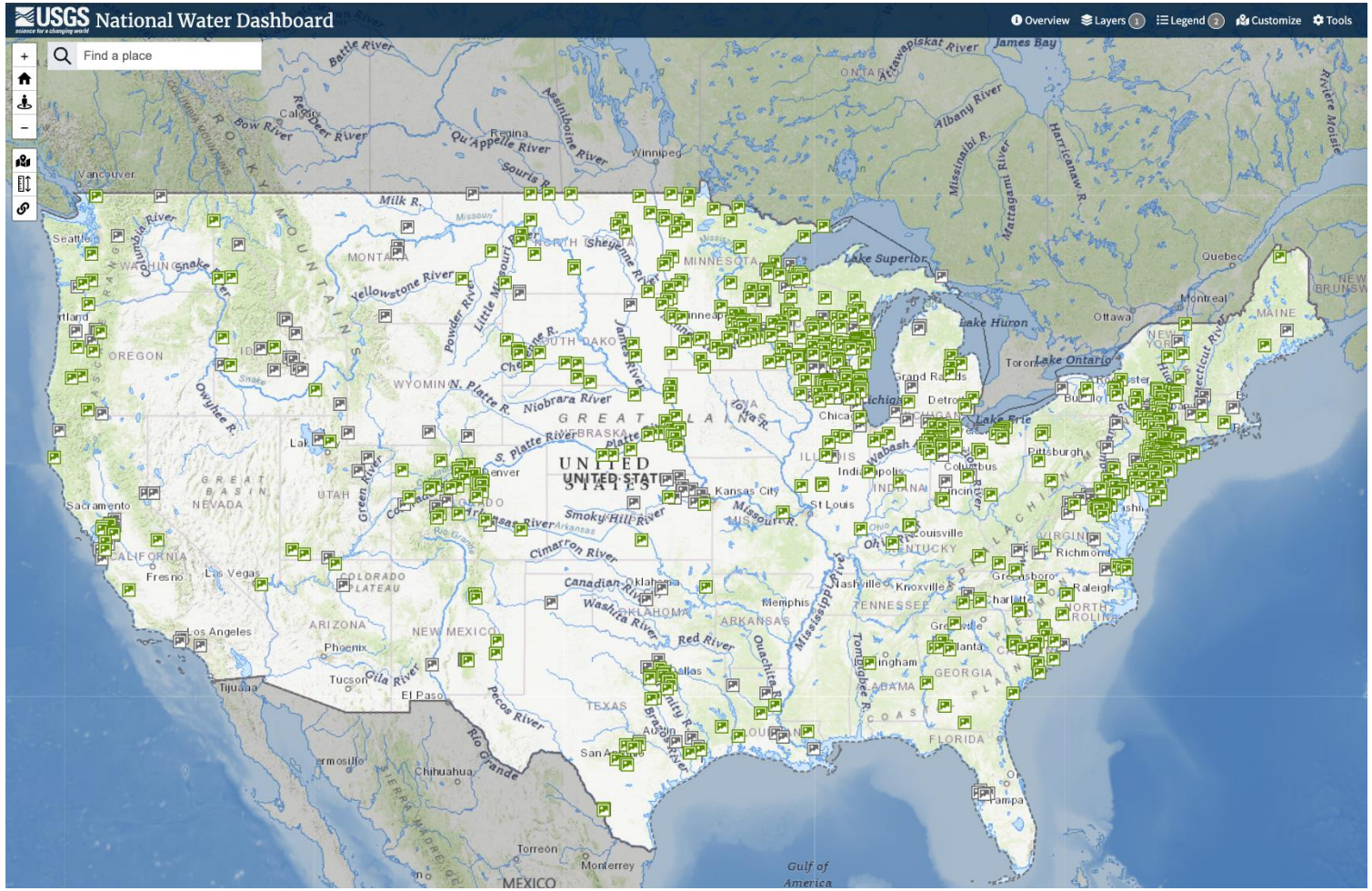
Water Information from Space



USGS

https://apps.usgs.gov/wisp

Expanding stream camera network



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

HIVIS

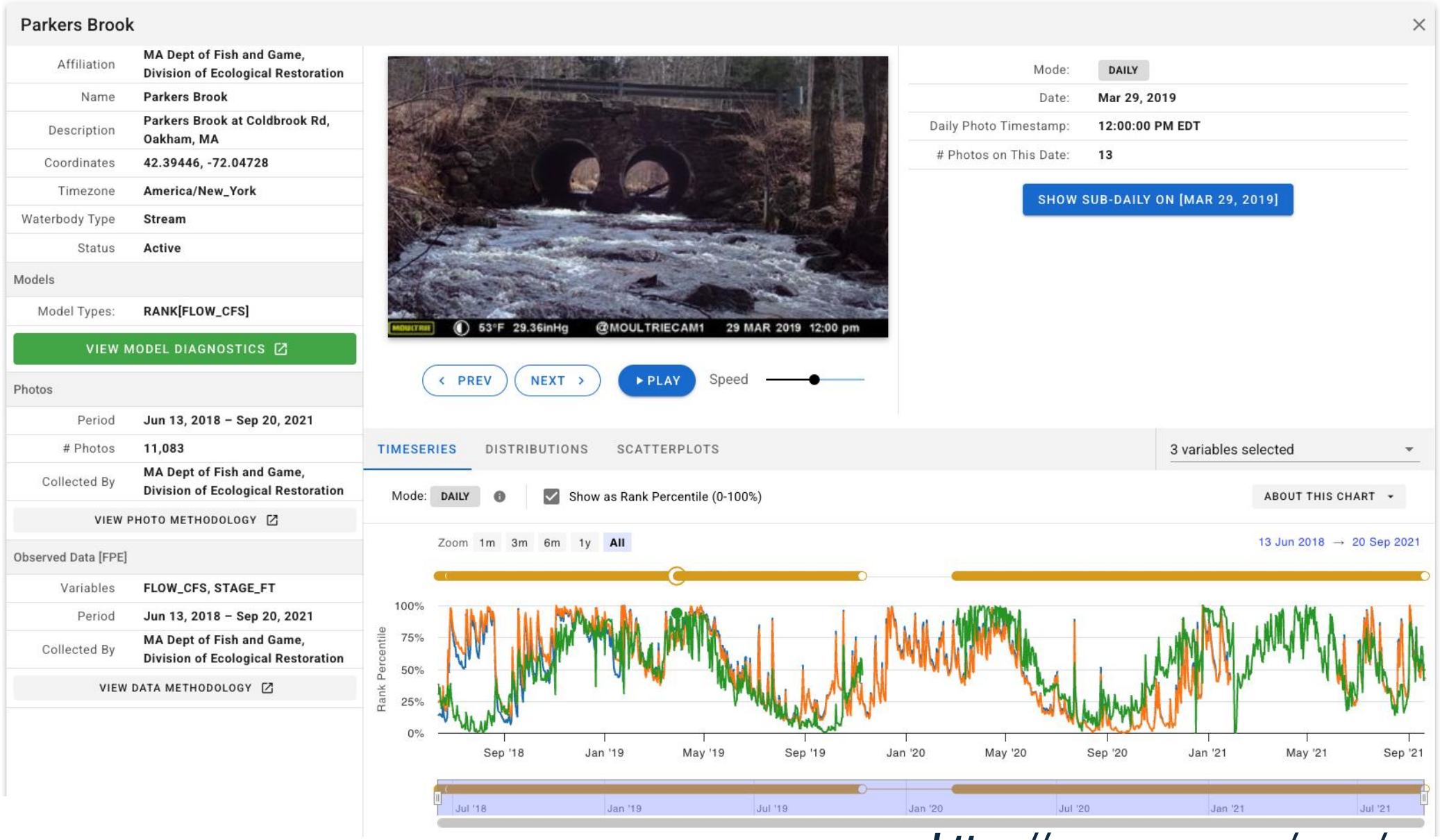
USGS

https://apps.usgs.gov/hivis/camera/CO_Colorado_River_near_Kremmling_Control_View

Contextualizing major events

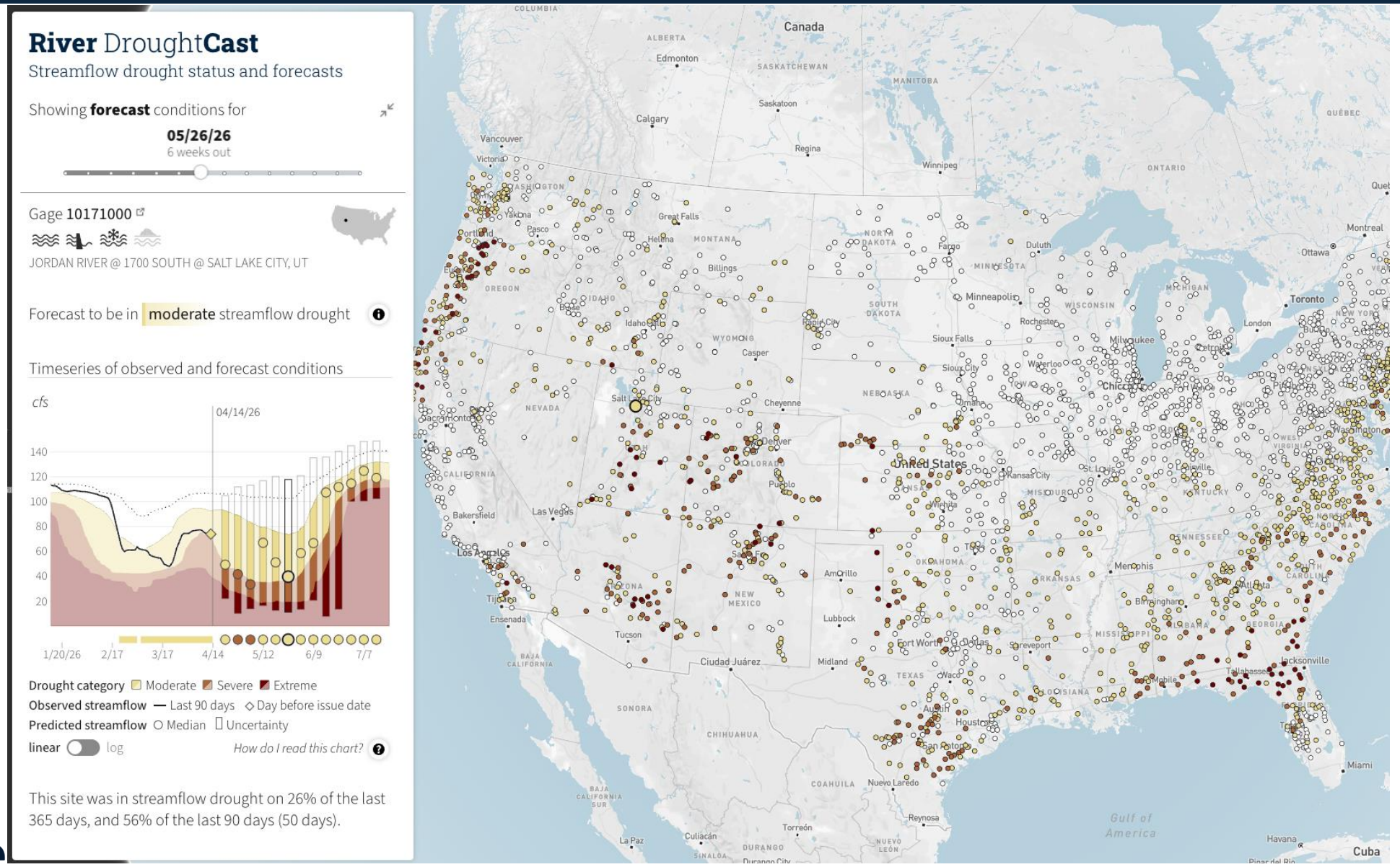
USGS

Flow Photo Explorer



https://www.usgs.gov/apps/ecosheds/fpe

River DroughtCast



USGS

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

Local impacts

USGS

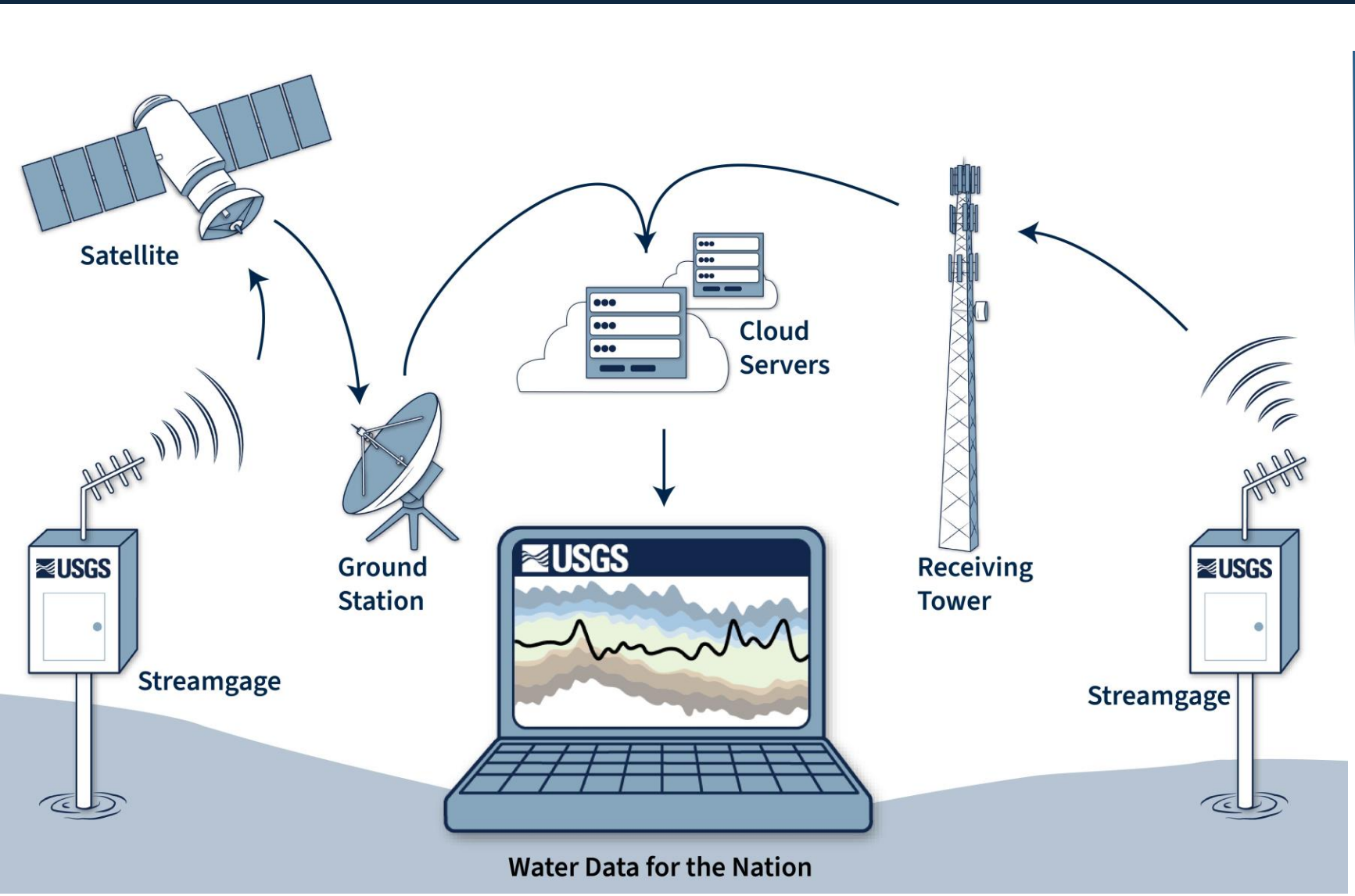
Imagery from Sentinel 2; map information from [OpenStreetMap]

Local impacts

USGS

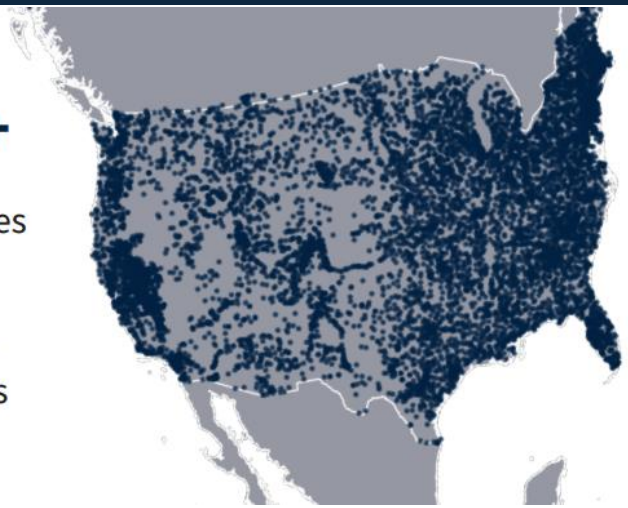
https://ffsl.utah.gov/uncategorized/dnr-modifies-great-salt-lake-causeway-breach-in-response-to-salinity-issues/

The National Water Information System



12,000+
active streamgages

1,000+
hydrologic technicians



112 billion
water observations annually

10.6 million
users annually

USGS

New home for USGS water data

Water Data for the Nation

High-quality and discoverable water data for everyone

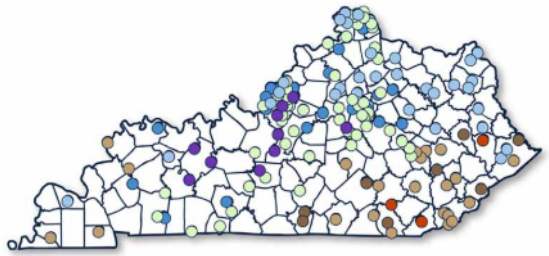
Over 135 years of water data from more than one million monitoring locations

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

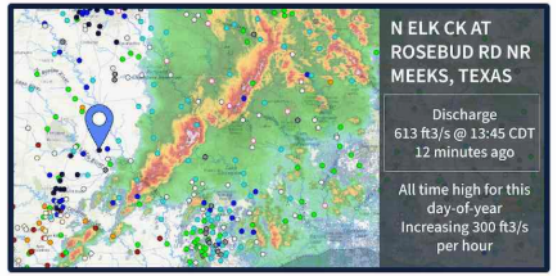
Select a state

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



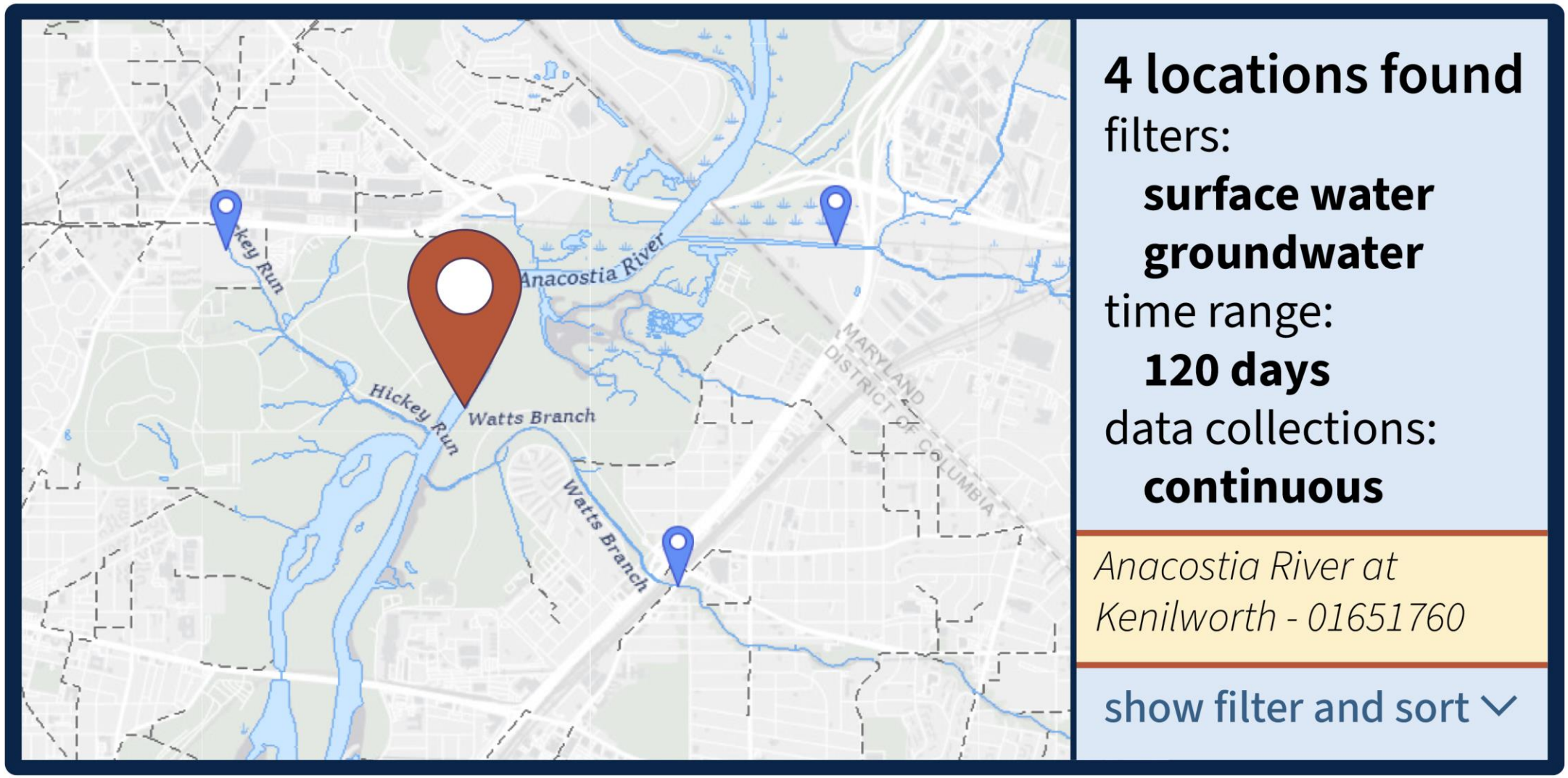
USGS has over 13,500 real-time stream, lake, reservoir, precipitation, water quality, and groundwater monitoring locations. View the latest continuous data in your area together with weather-related data to understand rapidly changing water conditions.

Go to the National Water Dashboard

USGS

https://waterdata.usgs.gov/

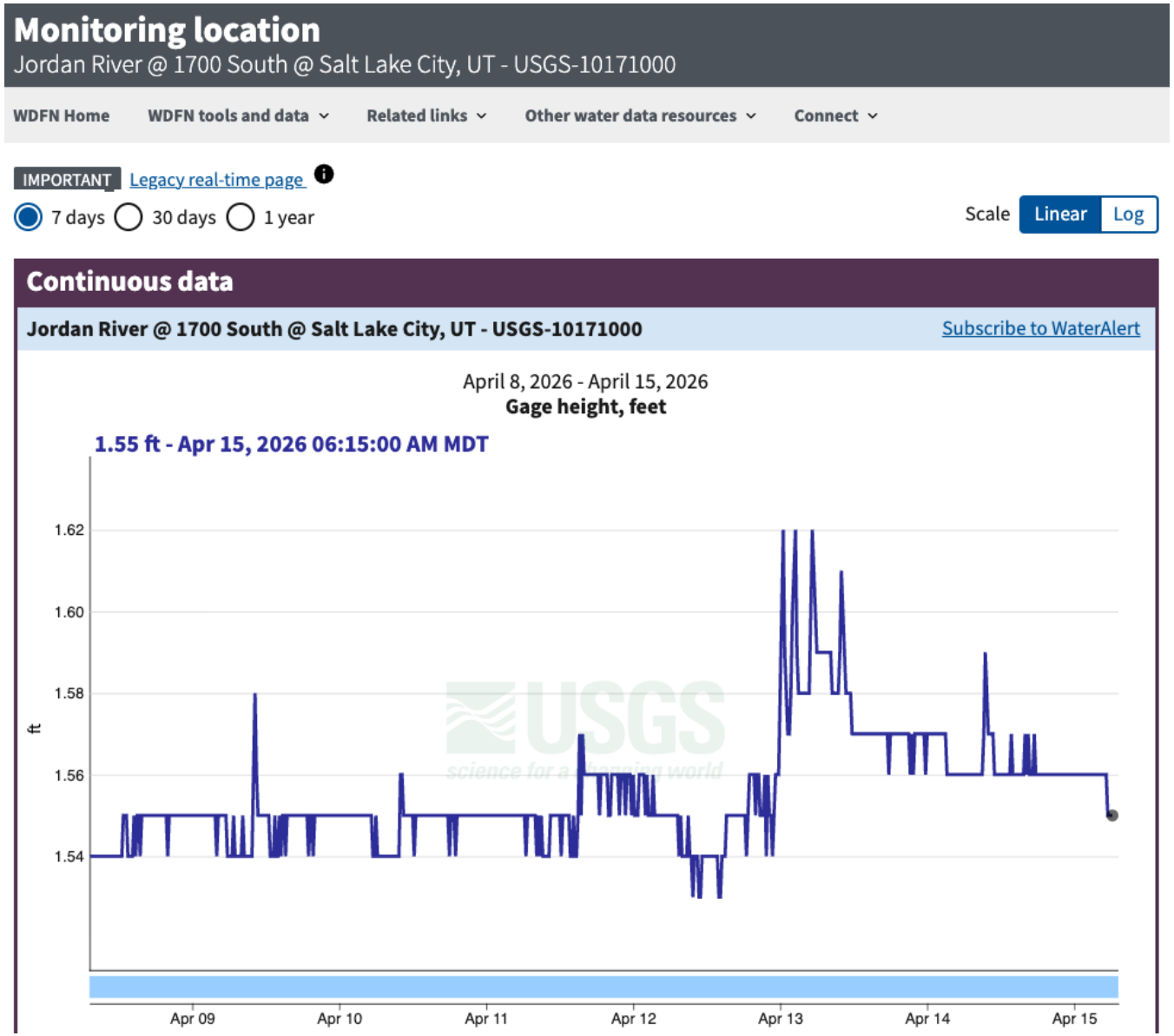
New ways to explore USGS water data



USGS

https://waterdata.usgs.gov/explore/

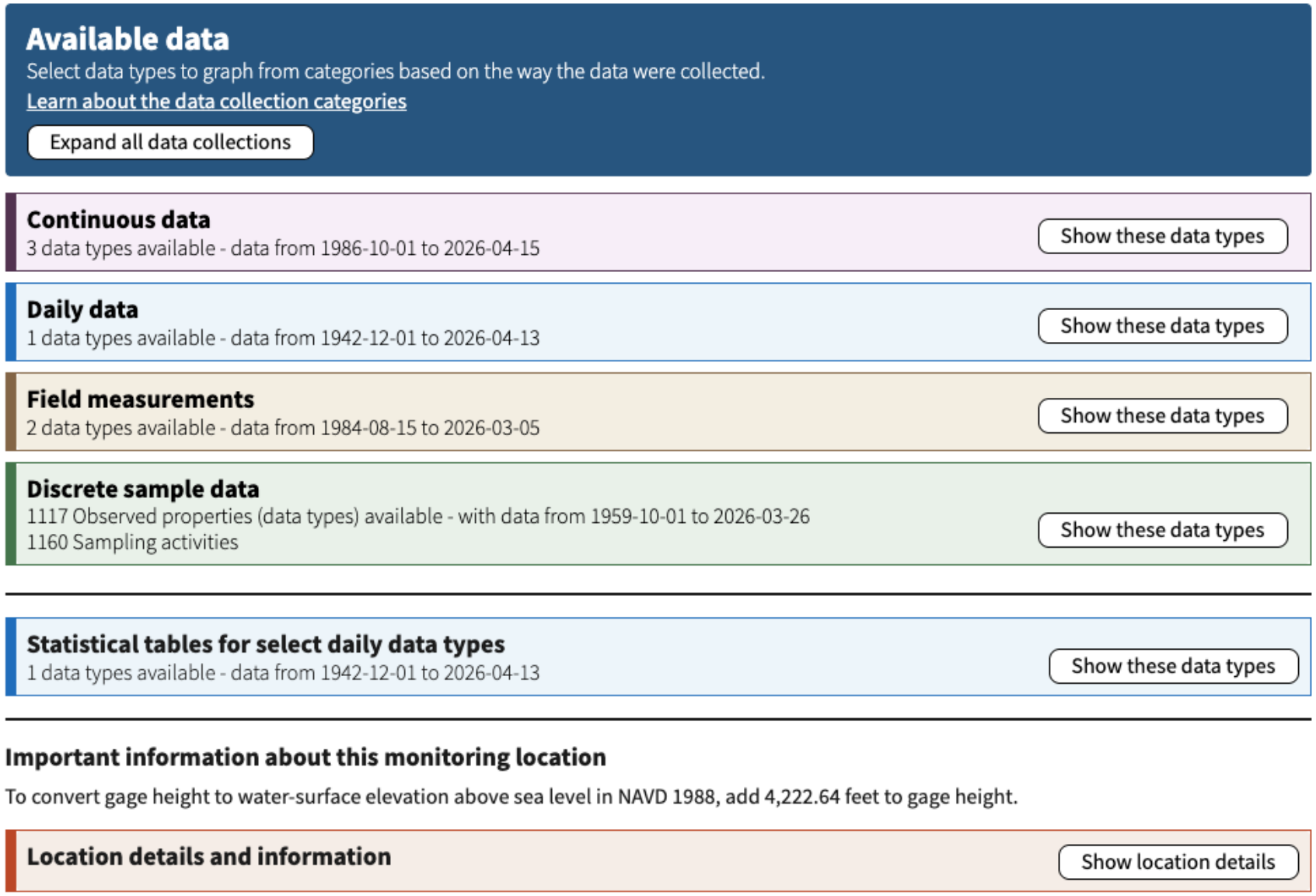
New centralized view for USGS water data



USGS

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

New centralized view for USGS water data



USGS

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

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

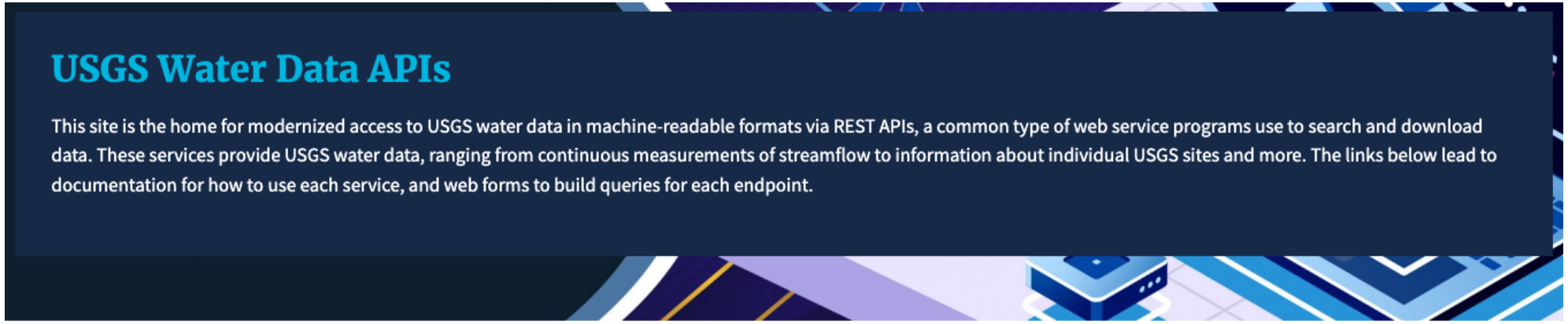
If selected, monitoring location metadata will be downloaded for each provided ID, whether or not a location has data matching the parameter codes and time ranges requested.

- ☐ Continuous values
  Learn more ▼ | Field names and descriptions
- ☐ Daily values
  Learn more ▼ | Field names and descriptions
- ☐ Field measurements

USGS

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

New APIs for data access



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

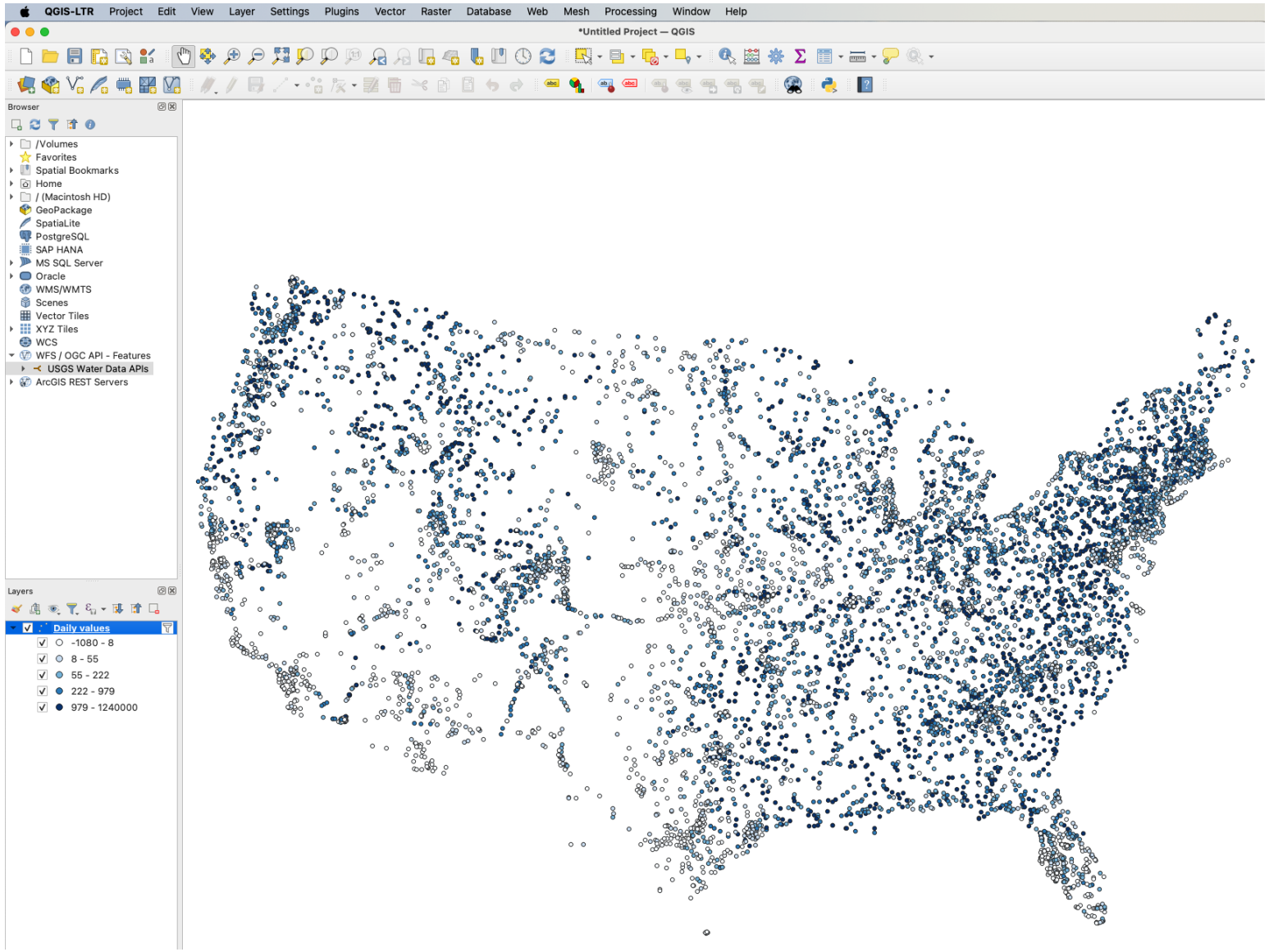
Daily data and continuous measurements are grouped into time series, which represent a collection of observations of a single parameter, potentially aggregated using a standard statistic, at a single monitoring location. This endpoint provides metadata about those time series, including their operational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

Time Series API

USGS

https://api.waterdata.usgs.gov/

New ways to access USGS water data



USGS

https://api.waterdata.usgs.gov/docs/ogcapi/gis/

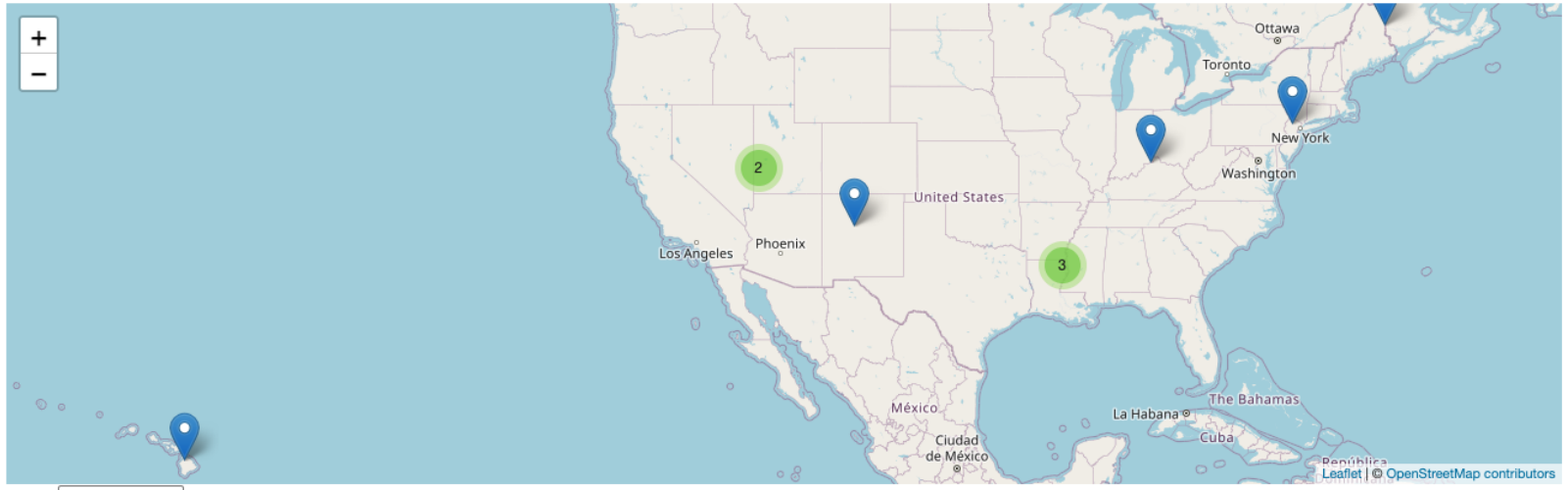
New functionality

An official website of the United States government Here's how you know

USGS science for a changing world

Home / Collections / Time series metadata / Items json

Time series metadata



Limit: 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- 00:0
00009b3da...	ft^3/s	Discharge	00060	00011	160202040403	Utah	2026-04-22 08:09:13.249829	2006-05-18 06:00:00.000001	2026 08:0
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

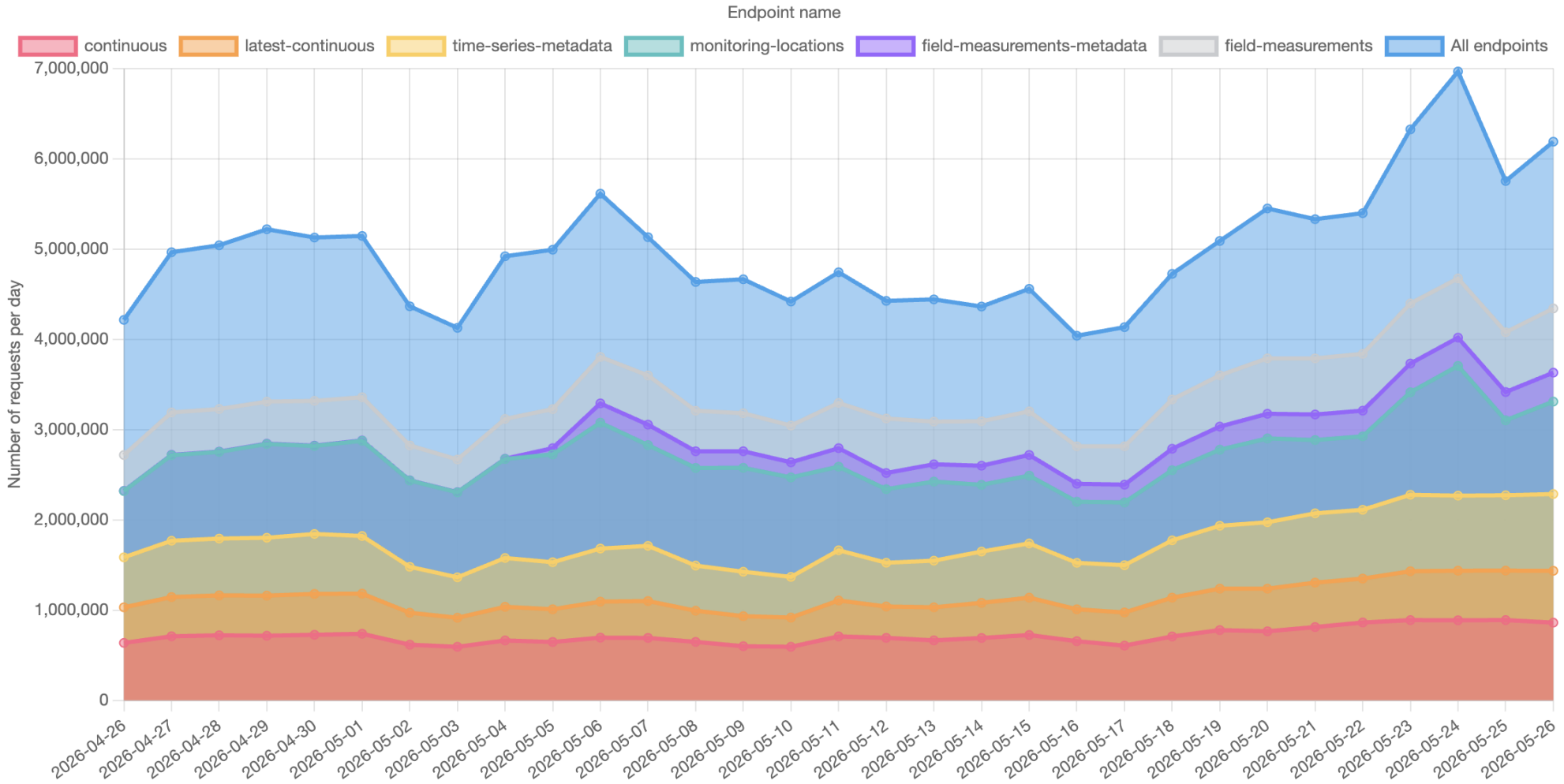
USGS

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. Request numbers are updated once per day.



USGS

https://api.waterdata.usgs.gov/docs/ogcapi/metrics

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 Lenoch
Emily Read

READING TIME
6 minutes

SHARE

What's on this page

USGS

https://waterdata.usgs.gov/blog/nwisweb-decommission-summary/

Up Next: Fit-for-purpose data

Method categories

Items in this collection: 4

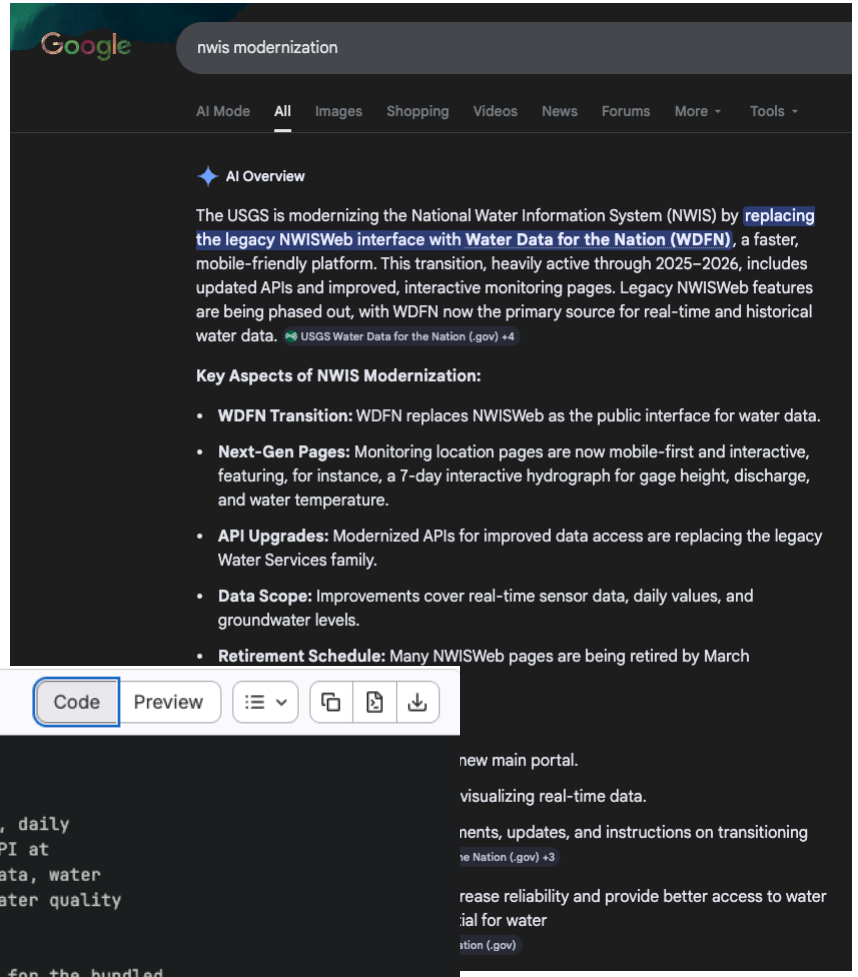
Limit: 10 (default)

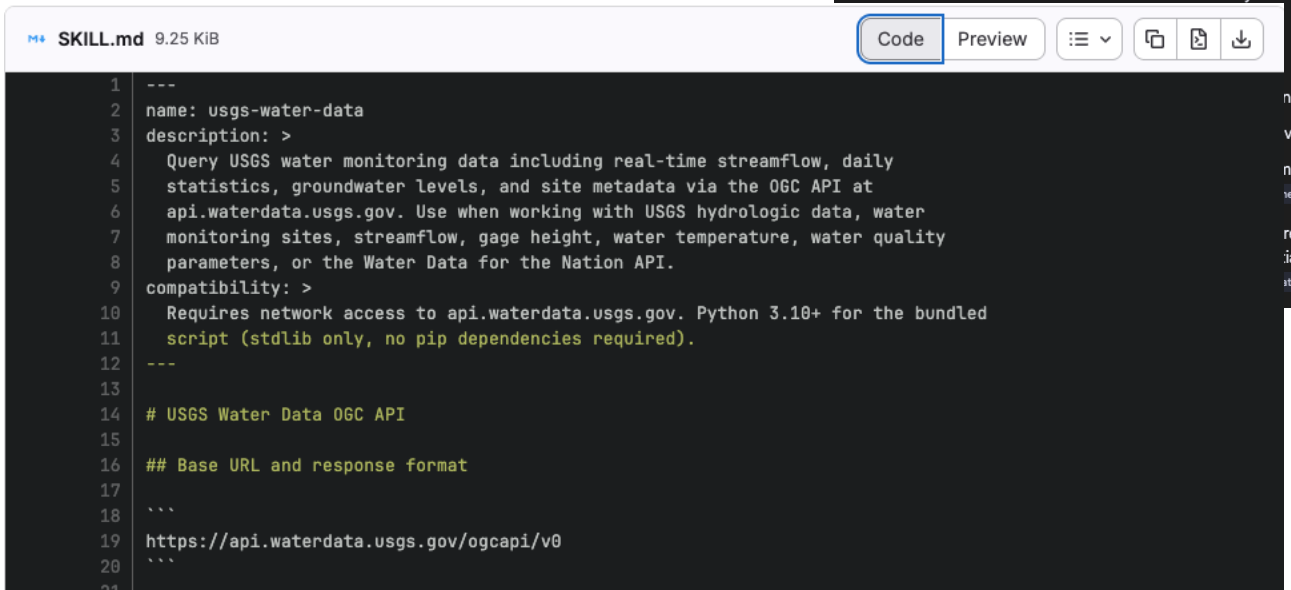
id	method_category_name	method_category_description
EXPER	Experimental	Data obtained by Experimental methods are typically collected as part of research and development into new techniques and instrumentation where standard methods are being developed or evaluated for use. These data may have limited 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.

USGS

Up Next: AI Enablement

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





Thank you!

Mike Mahoney - mjmahoney@usgs.gov

Water Data for the Nation – wdfn@usgs.gov