

U.S. Geological Survey

Water Level Program Overviews

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Water Levels in the Southeast
June 13-15, 2023

High Level Overview of Program

Created by an act of Congress in 1879, the USGS provides science for a changing world, which reflects and responds to society's continuously evolving needs. As the science arm of the Department of the Interior, the USGS brings an array of earth, water, biological, and mapping data and expertise to bear in support of decision-making on environmental, resource, and public safety issues.



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High Level Overview of Program

Matrix Management: Aligned Under 5 Mission Areas (23 Programs), 7 Regions, 5 Volcano Observatories, 60 Science Centers, and over 500 laboratories nationwide



Core Science Systems Mission Area

CSS leads USGS's mission as the civilian mapping agency for the Nation. We conduct detailed surveys and develop high quality, highly accurate topographic, geologic, hydrographic, and biogeographic maps and data. Our maps allow precise planning for critical mineral assessments; energy development; infrastructure projects; urban planning; flood prediction; emergency response; and haz.



Ecosystems Mission Area

The USGS Ecosystems Mission Area provides science to help America achieve sustainable management and conservation of biological resources in wild and urban spaces, and places in between.



Energy and Minerals Mission Area

The Energy and Mineral Resources Mission Area conducts research and assessments that focus on the location, quantity, and quality of mineral and energy resources, including the economic and environmental effects of resource extraction and use.



Natural Hazards Mission Area

Every year in the United States, natural hazards threaten lives and livelihoods and result in billions of dollars in damage. We work with many partners to monitor, assess, and conduct targeted research on a wide range of natural hazards so that policymakers and the public have the understanding they need to enhance preparedness, response, and resilience.



Water Resources Mission Area

Water information is fundamental to national and local economic well-being, protection of life and property, and effective management of the Nation's water resources.



Northeast Region

We conduct impartial, multi- and interdisciplinary research and monitoring on a large range of natural resource issues that impact the quality of life of citizens and wildlife throughout Connecticut, Delaware, Rhode Island, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Vermont, Virginia, West Virginia, and Washington D.C.



Southeast Region

We conduct impartial, multi- and interdisciplinary research and monitoring to address a broad range of natural resource issues that affect the quality of life of citizens and landscapes in the Southeastern United States and the Caribbean region.



Midcontinent Region

Welcome to Region 7 Our Region includes the states of Minnesota, Wisconsin, Michigan, Illinois, Indiana, and Ohio. We conduct science to address resource managers on issues such as aquatic invasive species, water quality and quantity, wildlife disease, and conservation of fish, wildlife, and their habitats.



Rocky Mountain Region

U.S. Geological Survey (USGS) Region 7: Upper Colorado Basin includes the States of Colorado, New Mexico, Utah, and Wyoming. USGS Science Centers in the Region conduct interdisciplinary research and monitoring related to natural resources, ecology, climate, and mineral resources. Data, analysis, and such developed by USGS staff help stakeholders to make sustainable management decisions.



Southwest Region

The Southwest Region covers Arizona, California, Nevada, and a portion of southern Oregon. Our scientists do a broad array of research and technical assistance throughout the U.S. and across the globe.



Alaska Region

USGS in Alaska conducts science for decision-making for the major areas: natural hazards, energy & minerals, water quality, riverine/fish & wildlife, fish & habitat, and geospatial mapping. The Alaska Regional Office provides management and strategic coordination among the Alaska Science Center, the Volcano Science Center, & other partners operating in AK.



Northwest-Pacific Islands Region

Welcome to the USGS Northwest-Pacific Islands Region website. Our seven science centers conduct a wide array of impartial, multi- and interdisciplinary research and monitoring on natural resource issues for the states of Hawaii, Washington, Oregon, Idaho, and Nevada; Alaska and the United States Pacific Territories of American Samoa, Guam, and the Northern Mariana.



SECOORA



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High Level Overview of Program

PRODUCTS

Real-time Data Information

Providing real-time or near real-time data and information on current conditions and earth observations.

[Access All](#)

EARTHQUAKES	LANDSAT	NATIONAL WATER DASHBOARD	VOLCANOES
LANDSLIDES	GEOMAGNETISM	HARMFUL ALGAL BLOOMS	WILDLAND FIRE



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What is the objective of your stations?

Water Mission Area

The USGS investigates the occurrence, quantity, quality, distribution, and movement of surface and underground waters and disseminates the data to the public, State and local governments, public and private utilities, and other Federal agencies involved with managing our water resources.



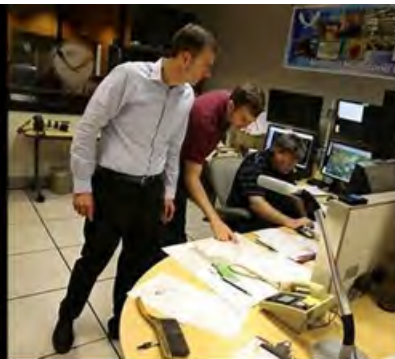
Who are your stakeholders / users?

USGS Coastal Storm Team

USGS Coastal Storm Team is a large multi-disciplinary group comprised of USGS and Partner Agencies that is activated as necessary in response to tropical and extratropical storms.

Partner Agencies

- NOAA
 - National Hurricane Center
 - National Weather Service
 - National Ocean Service
 - COASTAL Act
- FEMA
- USACE
- DOTs, EMs
- USFWS, NPS
- ICAMS/DIAP
- NIST
- Academia (NEER, SECOORA)
- Other



The U.S. Geological Survey works with many partners to provide objective and impartial science to resource managers, emergency response, and the public.

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What types of data do you collect?



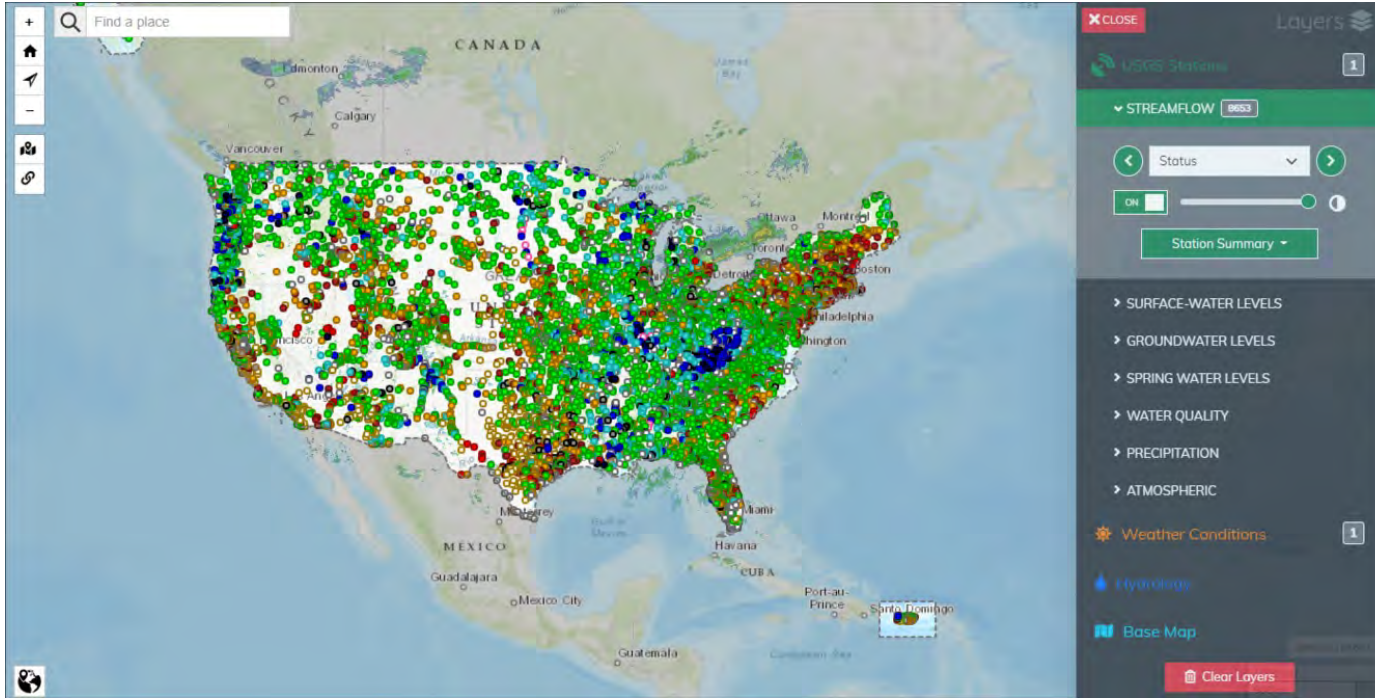
USGS Response Activities
Tropical & Extratropical Storms

- Realtime data
 - Permanent streamgages
 - Temporary streamgages (Rapid Deployment Gages)
- Observed data
 - Barometric
 - Storm Tide & Wave
 - High Water Marks

****FEMA MA****



Where are your water level stations?



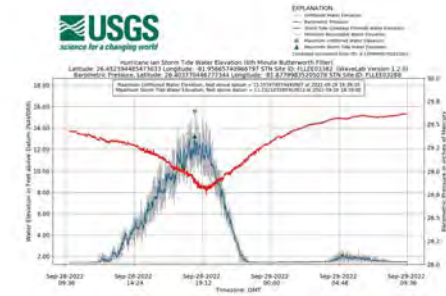
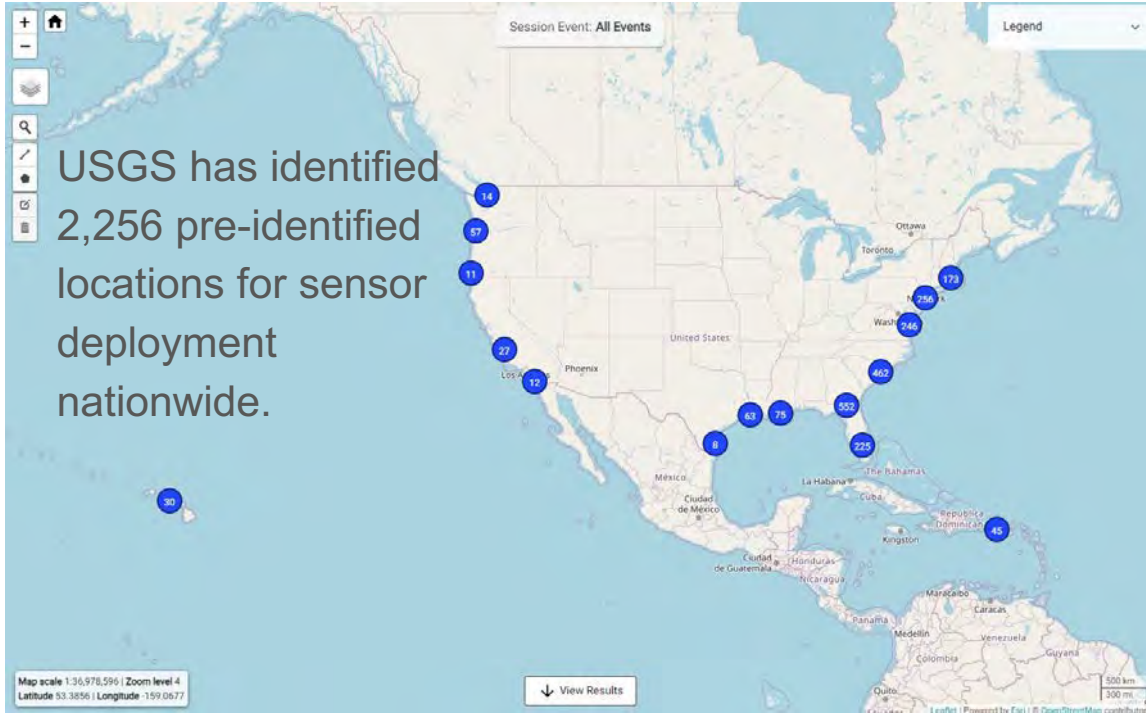
National Water Dashboard presents real-time stream, lake and reservoir, precipitation, and groundwater data from more than 13,500 USGS observation stations across the country.



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Where are your water level stations?

USGS has identified 2,256 pre-identified locations for sensor deployment nationwide.



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Expansion Opportunities

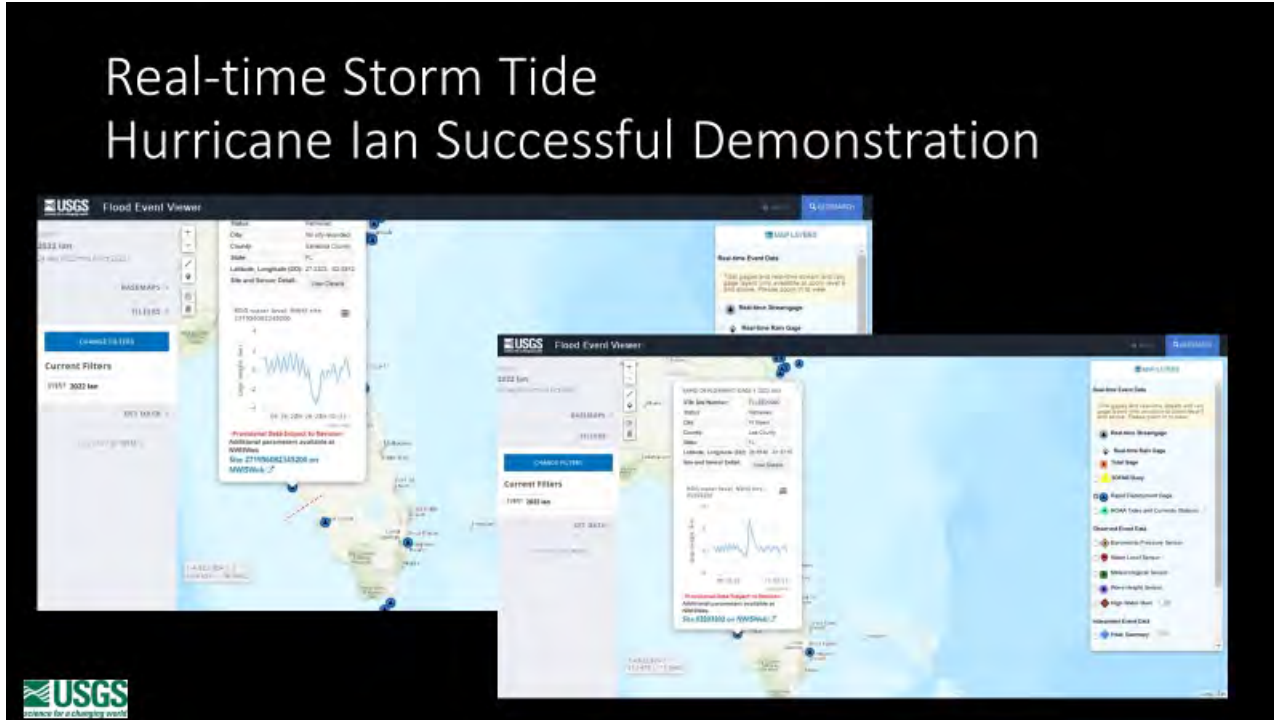
National Network of Real-time Coastal Gages



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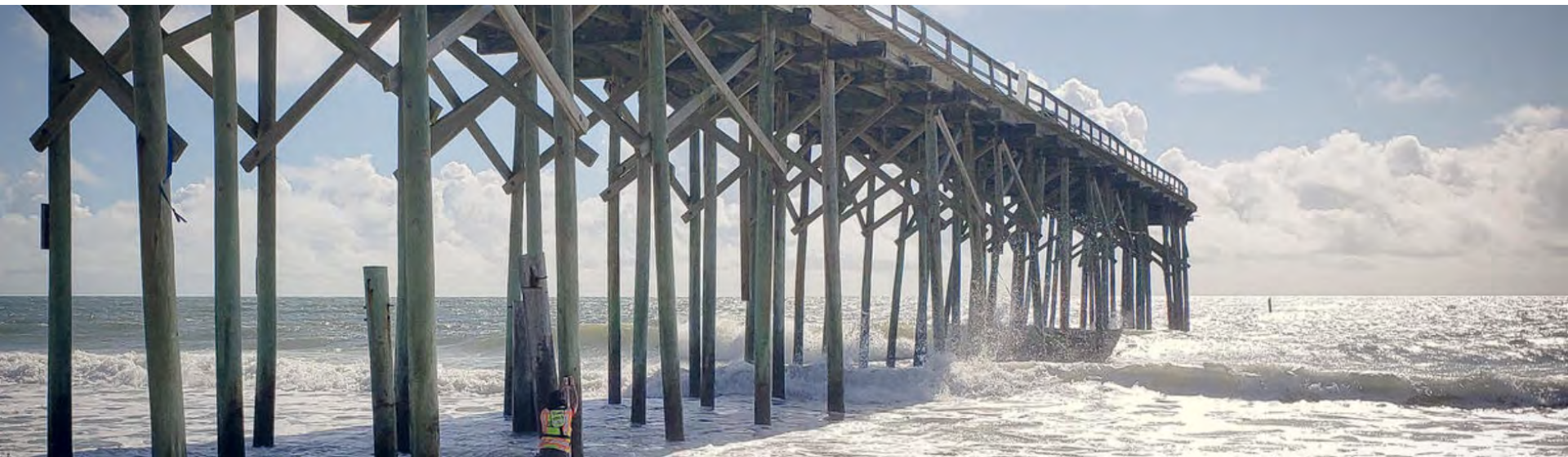
Expansion Opportunities

Real-time Storm Tide Hurricane Ian Successful Demonstration



Thank you!

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