

Coalition Support for USGS Streamgauge Networks and Modernization

Congressman Jeff Merkley, Chair
Congresswoman Lisa Murkowski, Ranking Member
Senate Appropriations Subcommittee on Interior, Environment & Related Agencies
131 Dirksen Senate Office Building
Washington, D.C. 20510

February 28, 2023

RE: WATER DATA & SCIENCE PROGRAM FUNDING
Interior Department Appropriations for FY2024

Summary of Coalition's Requests for FY2024:
Federal Priorities Streamgages = \$32.0 M
Cooperative Matching Funds Program = \$68M
(includes \$33M streamgauge support and studies)
NGWOS/data modernization = \$35M

Dear Chairman Merkley and Ranking Member Murkowski:

Our coalition of 96 water management and use stakeholders urges your support to sufficiently fund the United States Geological Survey's Federal Priorities Streamgauge network and supportive programs for the upcoming Fiscal Year 2024 budget appropriation.

A fully funded streamgauge network – one that keeps pace with inflationary and routine maintenance overhead – is critical to ensuring the nation's socioeconomic and cultural wellbeing. These streamgages are crucial as we embark on new efforts to understand, plan for, and build our collective capacity to improve the nation's resilience to extreme weather events. A summary of our funding request is detailed below. The final section of this letter explains in more detail why we as a nation simply cannot risk an inadequately funded network of streamgages.

Summary of funding request

Our broad coalition of state agencies, interstate commissions, associations, universities, non-governmental organizations, and private industry request a total USGS Fiscal Year 2024 budget appropriation. This request consists of **\$32M** dedicated to Federal Priorities Streamgages, **\$68M** for the Cooperative Matching Funds Program (including \$33M for streamgauge support) and **\$35M** for Next Generation Water Observing System and data delivery modernization.

Supporting details

Federal Priority Streamgages (FPS) -- \$32M

We envision the need for a \$2M increase over our FY2023 \$30M funding request which was designed to cover the costs of existing gages and preclude any loss of sites. This request does not include a cost-share takeover for any FPS gages; it is just to keep the current gages going.

Justification: Funding for FPS has been flat since 2016, yet operational costs have grown by approximately one to three percent per year due to increases in salary, travel, equipment and communication costs. Inflationary costs associated with streamgauge site maintenance, operations and reporting have also generated a \$1M per year shortfall since 2022.

Cooperative Matching Funds (CMF) Program -- \$68M

The CMF program should be funded at \$68M to adequately support cooperative matching funds for streamgaging. Of that appropriation, \$33M for CMF-supported streamgages is needed to protect the approximately 5,275 CMF-supported streamgages that are already in place and functioning nationwide.

Justification: The USGS works with more than 1,400 partners nationwide (federal, state, tribal, local and non-governmental organizations) using CMF to jointly support streamgages. This matching program began as a 50/50 cost share but has seen the federal contribution decrease to less than 30 percent. When an increasing share of the streamgages must be funded by reimbursable and private parties, they become ever more susceptible to having the funding pulled, thus rendering the FPS program less stable overall.

Next Generation Water Observing System (NGWOS) - \$35M

Our coalition appreciates Congress' support of the Next Generation Water Observation System (NGWOS). We stand by last year's FY2023 request for \$35M to allow for further buildout of the NGWOS program. Funding at this level for FY2024 would complete rollout for the fifth Integrated Water Science (IWS) basin and ultimately move NGWOS toward the goal of 10 IWS basins nationwide.

Justification: The FY2023 appropriation of \$29.5M was only a \$500,000 increase over the FY2022 appropriation which allowed planning to begin in the fifth basin but with fewer resources than originally intended.

USGS Streamgauge network data improve our resilience to extreme weather events

A fully funded and implemented streamgage network will augment our nation's resilience in response to extreme weather events. Without water data from this widespread system of sites, we are less equipped to make informed decision making, such as flood and hurricane risk predictions, drought determinations, and water supply forecasts.

The USGS recently completed an analysis of the USGS Streamflow Monitoring Network to determine priority areas to maintain or improve coverage, resolution, and representation throughout the United States.¹ This analysis identified network gaps in three important areas in context to building resilience to extreme weather events:

- 1) Most coastal watersheds (83 percent) do not have streamgages. More gages are needed in coastal areas; a robust streamgage network implemented in coastal areas would provide important data to reduce flood risk in context to sea level rise through improved flood forecasting and warning.
- 2) Thirty-nine states lack streamflow information in areas to assess how local climate is affecting floods and droughts. More streamgages are needed to understand how climate variability affects different parts of the Nation. The findings indicate that more gages are needed in 30 percent of NOAA Climate Divisions.
- 3) The USGS network has streamgages in many areas where water supply is vulnerable to reduced snowpack because of climate warming. Some of these areas may require additional gages because they are particularly vulnerable to changes in snowpack.

With your help and continued support, Congress can enable the USGS to fulfill its Water Resources Mission Area goals by adequately funding the Federal Priority Streamgages network, Cooperative Matching Funds program, and NGWOS to move water science into the 21st century.

We are happy to answer your questions or provide any additional information. Please contact any of us or Beth Callaway at the Interstate Council on Water Policy at: beth@icwp.org or (307) 772-1999.

CC:
Appropriations Subcommittee Members
Secretary of the Interior
Director, Office of Management and Budget
Director, US Geological Survey

¹ Konrad, C.P., Anderson, S.W., Restivo, D.E., and David, J.E., 2022, Network Analysis of USGS Streamflow Gages: U.S. Geological Survey data release, <https://doi.org/10.5066/P9C8NYTO>.

Organizations Signing on to FY 2024 Streamgauge Support Letter (February 28, 2023)

<u>Organization</u>	<u>Signor</u>	<u>Title</u>
Alabama Office of Water Resources	Tom Littlepage	Division Chief
American Fisheries Society	Dr. Douglas J. Austen	Executive Director
American Rivers	Ted Illston	Senior Director-Policy
American Society of Civil Engineers	Thomas W. Smith	Secretary & Exec. Dir.
American Water Resources Association	Dresden Farrand	Executive VP/CEO
American Water Works Association	Tracy Mehan	Exec. Dir./Gov't Affairs
American Whitewater	Mark Singleton	Executive Director
America's Watershed Initiative	Kimberly A. Lutz	Executive Director
Appalachian Mountain Club	Susan Arnold	Interim President & CEO
Association of American State Geologists	James Faulds	President
Association of California Water Agencies	David Reynolds	Director/Fed. Relations
Association of Clean Water Administrators	Mary Ann Nelson	ACWA President
Association of Fish & Wildlife Agencies	Kurt Thiede	Gov't Affairs Director
Association of Metropolitan Water Agencies	Tom Dobbins	CEO
Association of State Dam Safety Officials, Inc.	Lori C. Spragens	Executive Director
Association of State Floodplain Managers	Chad Berginnis	Executive Director
Bear River Commission	Don A. Barnett	Engineer-Manager
Big Hole Watershed Committee	Pedro Marques	Executive Director
Big Horn River Alliance	Anne Marie Emery	Executive Director
California Sportfishing Protection Alliance	Bill Jennings	Executive Director
Cascade Water Alliance	Ray Hoffman	CEO
CDM-Smith	Timothy D. Feather	Vice President
Cobb County-Marietta Water Authority	Cole Blackwell	General Manager
Colorado Lake & Reservoir Management Assn.	Caleb Owen	President
Colorado River Basin Salinity Control Forum	Don A. Barnett	Executive Director
Delaware River Basin Commission	Steven J. Tambini	Executive Director
Environmental Defense Fund	Steve Cochran	Assoc. VP State Affairs
Fly Fishers International	Patrick Berry	President & CEO
Freshwater Mollusk Conservation Society	Steve McMurray	President
Great Lakes Commission	Erika Jensen	Executive Director
Great Lakes Observing System	Kelli Paige	CEO
Henry's Fork Foundation	Brandon Hoffner	Executive Director
Hawaii Commission on Water Resource Management	Kaleo Manuel	Deputy Director
Hoopa Tribal Land Management/EPA	Ken Norton	Director
Hydrological Services America	Peter Ward	General Manager
Idaho Rivers United	Nic Nelson	Executive Director
Idaho Water Users Association	Paul L. Arrington	Executive Director
Interstate Commission on the Potomac River Basin	Michael Nardolilli	Executive Director
Interstate Council on Water Policy	Matt Unruh	ICWP Chair
Kansas-Oklahoma Arkansas River Compact Comm.	Earnie Gilder	Federal Chair
Kansas Water Office	Connie Owen	Director
KISTERS North America, Inc.	Becca Emery	Business Dev. Mgr.
Madison River Foundation	Jonathan Malovich	Executive Director
Metropolitan North Georgia Water Planning District	Katherine Zitsch	Director

<u>Organization</u>	<u>Signor</u>	<u>Title</u>
Missouri Department of Natural Resources	Erin Fanning	DNR Deputy Director
Minnesota Department of Natural Resources	Katie Smith	Director/Ecol & Water
Montana Department of Environmental Quality	Lindsey Krywaruchka	Water Division Admin.
Montana DNRC	Anna Pakenham -Stevenson	Admin-Water Res. Div.
Montana Trout Unlimited	David Brooks	Executive Director
Montana Watershed Coordination Council	Ethan Kunard	Executive Director
Nat'l. Assoc. Flood & Stormwater Mgt. Agencies	Susan Gilson	Executive Director
National Assoc. State Boating Law Administrators	John Fetterman	Depty Exec. Director
National Association of Wetland Managers	Marla J. Stelk	Executive Director
National Audubon Society	Julie Hill-Gabriel	VP/Water Conserv.
National Drought Mitigation Center	Dr. Mark Svoboda	Director
National Ground Water Association	Terry S. Morse	CAE, CIC, CEO
National Hydrologic Warning Council	Bruce Rindahl	President
National Hydropower Association	Malcolm Woolf	President and CEO
National Society of Professional Surveyors	Tim Burch	Executive Director
National Water Resources Association	Dale Nellor	Exec. Vice President
National Water Supply Alliance	Dave Mitamura	Executive Director
National Wildlife Federation	Abby Tinsley	Assoc. VP Policy/Gov't
Nebraska Department of Natural Resources	Thomas E. Riley	Director
New Engl. Interstate Water Pollution Control Comm.	Susan J. Sullivan	Executive Director
North American Lake Management Society	Lisa Borre	President
Ohio R. Valley Water Sanitation Commission	Richard Harrison	Executive Director
Oklahoma Water Resources Board	Julie Cunningham	Executive Director
Oregon Water Resources Congress	April Snell	Executive Director
Phycological Society of America	Eric W. Linton	President
Red River Compact Commission	Sue Lowry	Chairman
Republican River Compact Commission	Thomas E. Riley	Nebraska Commissioner
Rivers Alliance of Connecticut	Alicea Charamut	Executive Director
Society of Wetland Scientists	Loretta L. Battaglia	President
Southwest Kansas Groundwater Mgt District	Mark Rude	Executive Director
Susquehanna River Basin Commission	Drew Dehoff	Executive Director
Tacoma Water	Scott Dewhirst	Water Superintendent
The Nature Conservancy	Jimmy Hague	Sr. Water Policy Adv
Three Rivers QUEST	Melissa O'Neal	Associate Director
Tri-State Water Resource Coalition	Gail Melgren	Executive Director
Trout Unlimited	Kate Miller	Gov't Affairs Director
University of Georgia River Basin Center	Sechindra Vallury/ Seth Wegner	Directors
Upper Colorado River Commission	Chuck Cullom	Exec. Director
Upper Mississippi River Basin Association	Kirsten Wallace	Executive Director
Upper Missouri Watershed Alliance	Sherry Meador	Board Chair
Washington State Water Resources Association	Tom Myrum	Executive Director
Water Environment Federation	Walter Marlowe	Executive Director
West Virginia Rivers Coalition	Angie Rosser	Executive Director

<u>Organization</u>	<u>Signor</u>	<u>Title</u>
West Virginia Water Research Institute	Paul Ziemkiewicz	Director
Western Landowners Alliance	Lesli Allison	Executive Director
Western States Water Council	Tony Willardson	Executive Director
Wild Salmon Center	Jessica Helsley	Gov't Affairs Director
Wyoming State Engineer's Office	Brandon Gebhart	State Engineer
Wyoming Water Association	Jodee Pring	President
Wyoming Water Development Office	Jason Mead	Interim Director
Xylem Analytics	Randy Hadland	Senior Manager
Yellowstone River Compact Commission	Brandon Gebhart	Commissioner

Additional information:

The SECURE Water Act of 2009 authorized implementation of not less than 4,700 streamgage sites funded by the national streamflow information program. The total cost of a fully implemented network would have required \$130M initially and \$80M for ongoing operations and maintenance.

To-date, Congressional streamgage funding priorities have not lined up to meet this goal. The USGS is unable to complete its development for a fully implemented network as directed by Congress in 2009 without additional funding.

Why are Federal Priority Streamgage (FPS) gage data important?

Authorized by Congress in the SECURE Water Act as the National Streamflow Information Program, the FPS is meant to comprise a stable “federal backbone” network of streamgages. Data provided by FPS inform critical life and property saving information. They augment research management decisions, maintain water dependent infrastructure and provide essential public health and environmental condition information. Insufficient funding seriously compromises our national ability to address federal, state, tribal, local socioeconomic issues, including international treaty obligations.

Who uses the data and for what purpose?

State/local/tribal stakeholders: The members of our undersigned organizations rely on these streamgaging networks to ensure our national ability to address critical environmental and socio-economic issues such as:

- Forecasting extreme stream flow and water level events such as floods, droughts, and hurricanes;
- Conducting longer-term climate resilience planning such as coastal flood risk and snowpack drought;
- Performing infrastructure design, operations and capacity for facilities such as roads, bridges, high-rises, dams and coastal development;
- Meeting municipal, public and private water supply needs;
- Completing temperature and other water-quality related assessments of major rivers, lakes, reservoirs and estuaries, and other wetlands;
- Conducting energy generation and exploration;
- Oversight and implementation of many federal laws such as the SECURE Water Act, Clean Water Act, Safe Drinking Water Act, and Endangered Species Act;
- Compliance and implementation of interstate and international compacts, court decrees, and treaties;
- Determining environmental impacts to disadvantaged communities;

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- Balancing competing consumptive water uses with instream flows and water level needs that are essential for sustaining aquatic, riparian and terrestrial ecosystems.

Federal stakeholders: The vital data provided by the streamgages support critical water management activities across the nation by carrying out the mission and operations of federal agencies such as the U.S. Army Corps of Engineers, NOAA, FEMA, EPA, USDA, Department of Interior, NASA, Department of Defense, Homeland Security, and others.

The utility of the network is not singular to USGS -- a recent survey conducted by the agency of 28 sister federal agencies solicited input on the importance and prioritization needs of streamgage information. The results from this survey will be shared this spring; USGS will adapt the FPS program to federal priorities to meet the responses of the survey.

Why is there a current FPS funding shortfall?

Federal Priority Streamgages: Historically, FPS cost increases have previously been covered by USGS partners, including state and other federal agencies (where gages are jointly funded) or by delaying planned network enhancements. Enhancements include, but are not limited to, cyclical upgrades to equipment and activities to flood-harden existing FPS sites.

Unfortunately, after multiple years of flat funding, the USGS reached a breaking where network enhancements could no longer be delayed and operational costs continue to increase. Operations at some streamgages have already been discontinued and more shutdowns will continue into the future unless funding shortages are addressed resulting in losses to long-term data that cannot be re-created.

Additional references:

USGS List of Threatened Gages:

<https://water.usgs.gov/networks/fundingstability/>

National Water Dashboard/Map of USGS Streamgages:

<https://dashboard.waterdata.usgs.gov/app/nwd/?aoi=default>

"U.S. Geological Survey Streamgaging Network: Overview and Issues for Congress":

<https://crsreports.congress.gov/product/pdf/R/R45695>

Coverage, Resolution, and Representation of Public Interests by the USGS Streamflow Monitoring Network:

https://wa.water.usgs.gov/projects/NetworkAnalysis/NetworkAnalysis_index.html

Statement by Michael Connor, Bureau of Reclamation Commissioner before the Energy and Natural Resources Subcommittee on Water and Power on the implementation of the SECURE Water Act – March 16, 2010:

https://www.doi.gov/ocl/hearings/111/SECUREWaterAct_031610