June 4, 2025

Drought and Water Supply Advisory Committee

RE: Annual Review of the Montana Stream Gage Network

The following information is presented at the June 4, 2025, Drought and Water Supply Advisory Committee (DWSAC) meeting as required under 2-15-3308 (3)(h)(ii), MCA, which requires "an annual review of the funding status and potential alterations to the [State stream gage] network."

Montana Stream Gage Network

Montana's real-time stream gage network is composed of stream gages operated and maintained by the following entities:

1. The United States Geological Survey (USGS) currently operates a network of 232 real-time gages across Montana (Montana USGS Stream Gage Network). These gages are located primarily on Montana's mainstem rivers and their large tributaries.
    - 41 sites are known as "Federal Priority" gages that are funded entirely by the federal government and support federal activities like Bureau of Reclamation reservoir operation or USGS studies.
    - The remaining 191 sites are known as "Cooperatively Funded" gages that are funded through a mix of state (DNRC and Montana Fish Wildlife and Parks (FWP)), tribal, local, or private sector funding and support multiple objectives.

2. The Montana Department of Natural Resources and Conservation (DNRC) operates a network of real-time stream gages that are typically located on smaller streams and tributaries not monitored by the USGS (Montana DNRC Stream Gage Network). As of June 4, 2025, DNRC is operating 74 of the 100 real-time gages, and is in the process of installing the remaining 26 stations with a buildout goal of 2027.

3. Tribal nations in Montana operate stream gage networks to support the administration and distribution of water under tribal jurisdiction.

Funding Status

Montana USGS Stream Gage Network

FWP and the DNRC are among the numerous entities that provide annual operations and maintenance funding to support the Cooperatively Funded USGS stream gage network. The DNRC currently funds 49 gages that are vital for water administration throughout the state and federal and

tribal water compact administration. FWP currently funds the operation of 59 gages used primarily for fisheries management. Although FWP and DNRC financially contribute to only a portion of the overall network, both agencies depend on streamflow information generated by all 232 USGS stream gages to meet their natural resource management objectives and statutory responsibilities.

Congressional appropriations to the USGS for operation of the nation's stream gage network have not kept pace with rising costs. As a result, the USGS is forced to pass cost increases on to other funding partners. For state government, the burden falls almost entirely on the DNRC and FWP. For state fiscal year 2026, the increased cost to DNRC is projected to be 5.4%. During the 2025 Session, the Montana Legislature appropriated funding[1] to absorb this anticipated operations and maintenance costs over the next biennium, as well as to invest in installation of new Cooperatively Funded gages to support federal and tribal water compact implementation and fisheries objectives.

Montana DNRC Stream Gage Network

Montana's State Water Plan (2015) and Drought Management Plan (2024) both recommend building out the state-operated DNRC Stream Gage Network to 100 real-time gages. In 2023, the Montana Legislature provided DNRC with one-time-only funding to install 32 new stream gage sites in support of this goal.

In 2025, the DNRC received base budget funding to maintain the existing network of stream gages as well as funding to install an additional 24 stream gages to bring the total of DNRC operated stream gages to 100 stations. This base budget funding represents the first stable funding source for the state-operated DNRC Stream Gage Network since its inception in 2015.

Alterations to the Network

Montana USGS Stream Gage Network

The State of Montana and USGS Stream Gage Notification Plan (Notification Plan) (May 19, 2022) sets forth the process the U.S. Geological Survey Wyoming-Montana Water Science Center and the State of Montana will follow to ensure the timely exchange of information regarding funding or program changes with the potential to impact the ongoing operation of the USGS stream gage network in Montana.

The Notification Plan was not initiated during state FY2023 or FY2024 because there were no notable changes, positive or negative, to the USGS Montana Stream Gage Network. During FY2025, the DNRC received multiple notifications pursuant to the Notification Plan regarding Federal Priority and Cooperatively Funded stream gages that were threatened due to lack of funding. These are documented in Table 1.

Under the Notification Plan, DNRC reached out to a list of interested stakeholders about any potential alterations to the network. The USGS also adds the gages to its

[1] House Bill 2 is awaiting the Governor's signature as of May 28, 2025.

Endangered, Discontinued, and Rescued Stream gages Mapper. The intention of this outreach is to provide an opportunity for finding alternate funding to cover the USGS shortfall and keep threatened gages operational. While many of the notifications occurred with enough time for stakeholders to make decisions, some of the notifications occurred only a few days before the threatened gages were scheduled for decommissioning.

In total, the USGS network was reduced by a total of seven sites during state FY2025. Four additional sites remain threatened as of June 4, 2025, with a potential discontinuation date of July 1, 2025. The names and locations of all threatened and discontinued sites, as well as the impacts of each site being decommissioned were documented in a letter sent on February 3, 2025, from the DNRC in response to a request for information from Montana Representative Ryan Zinke (attached).

Table 1. Chronology of activation of the early notification system regarding alterations of the Montana stream gage network in state FY2025.

Date	Summary
July 17, 2024	DNRC received a list of 11 Federal Priority gages with a request to prioritize the most important sites. USGS indicated that funding constraints would require discontinuation of eight of the 11 sites by Dec. 31, 2024, and as early as Oct. 1, 2024. DNRC was asked not to share the list until the eight threatened gages were identified.
Aug. 6, 2024	DNRC was notified of two additional threatened USGS gages; however, those were "rescued," i.e. alternate funding was secured, fairly quickly. They were never posted to the USGS Endangered, Discontinued, and Rescued Streamgages Mapper, and DNRC did not alert stakeholders of the threatened status pursuant to the Notification Plan.
Sept. 23, 2024	USGS provided a finalized list of nine threatened gages from the original July list that would be discontinued as early as Dec. 31, 2024.
Sept. 24, 2024	DNRC notified the stakeholder list of potential changes to the network and provided information to contact the USGS if any additional funding could be secured to rescue the site(s).
Nov. 15, 2024	DNRC was notified of two additional threatened USGS gages that were not on the July list. DNRC notified the stakeholder list on Dec. 2.
Early Dec. 2024	DNRC was notified via phone conversation of one gage being rescued and a different gage that was not on the July list being identified as threatened. DNRC notified the stakeholder list of the changes on Dec. 9.

On December 5, 2024, DNRC and FWP sent a joint letter to USGS leadership (attached) expressing concern about the lack of appropriate notification for some of the threatened sites, as well as frustration regarding federal funding not keeping pace with inflation and the resulting shift in funding obligation to state entities. On January 23, 2025, the USGS responded (attached) recognizing that funding constraints have resulted in increased reliance on partner contributions to maintain the

network. USGS also stated that its federal FY2026 budget request included additional funding to maintain the reduced network and avoid additional near-term decommissions.

Montana DNRC Stream Gage Network

As noted previously, 2023 HB 2 provided funding to install 32 new stream gages throughout Montana. As of June 4, 2025, 30 of the 32 new stations have been installed with the remaining two stations being planned for installation prior to July 1, 2025. During the coming biennium, an additional 24 stations will be installed.

The DNRC prioritized new gage locations from a list of sites that were nominated by stakeholders. Criteria used to select the new sites included: DNRC administrative need; federal and tribal compact related administrative need; water distribution projects; partner needs from municipal, watershed groups, and conservation districts; multi-agency overlapping benefit; public awareness and education; and support for academic studies and investigations. The DNRC will continue to accept nominations for new stream gage sites and will rank and prioritize the nominations if additional funding becomes available.

February 3, 2025

Representative Ryan Zinke
512 Cannon House Office Building
Washington, DC 20515

Re: Loss of 10 USGS Federal Priority Stream Gages in Montana

Information from the United States Geological Survey's (USGS) Federal Priority Stream gage network not only serves federal water management agencies but also is invaluable to State and Local water managers. The State of Montana relies heavily on USGS stream gage data to make critical decisions about public safety, respond to extreme weather events, manage the water resources of the state, and support the nation's economy. Funding for the network needs to not only keep pace with inflation but should also restore losses to the network that have been experienced since 2021. In 2021, Montana relied on data from 52 Federal Priority Stream gages; however, as of July 1, 2025, the network will consist of only 37 sites.

When Montana is notified about sites being discontinued, there are three possible outcomes:

1. The site could be moved from the Federal Priority Stream gage list to the Cooperatively Funded stream gage network. This requires the State or another partner like a Tribal or local government to contribute funding – currently approximately $20,000 per year.
2. Operation of the site could be transferred from the USGS to the Montana Department of Natural Resources and Conservation (DNRC), the agency that maintains the state-based real time stream gage network. DNRC does not generally have funding available to take on new stream gage sites, so this option would typically require a legislative appropriation. The current cost to fund a DNRC stream gage is approximately $12,000 per year.
3. If neither of the first two options occurs, the station would be decommissioned, and the period of record would cease. A loss of even one of these sites leaves a large void in Montana's ability to manage its water resources.

As you may be aware, the State of Montana's Federal Priority Stream gage network was reduced by an additional 21% in FY25, from 47 to 37 sites. The following stations were discontinued on December 31, 2024, or will be discontinued on July 1, 2025:

Teton River at Dutton (#06108000)- This station had a 68-year period of record and provided critical data to water users within the lower Teton River Distribution Project. Additionally, Montana Fish Wildlife and Parks (FWP) relied on this station for fisheries management on the Teton River. As this is a critical site to Montana water users, the DNRC has taken over operations of the site and will continue the period of record. Taking over operations of a former USGS site is generally not feasible; however, DNRC was in a unique situation and had legislatively appropriated funding to expand the State operated stream gage network. Instead of expanding the network to fill in data gaps across the state, DNRC had to make the hard choice to instead continue operations of one of the more critical stream gages that had, up till now, been funded and operated by a federal agency.

Milk River at Malta (#06155500)-This station has a 31-year period of record and provides critical data to forecast flood dangers for the community of Malta as well as other downstream communities. The station is one of the few operated year-round in this part of Montana, and it provides early flood warning and stream flow information to the downstream Fort Peck Indian Reservation. Data is used by disaster and emergency managers. It is also an important calibration point for Montana's Integrated Hydrologic Modeling System (MIHMS), a tool DNRC is developing to use many different datasets to understand historical, current, and future water availability throughout the state. During times of drought, this station provides valuable stream flow data in this sometimes dewatered and disconnected reach of the Milk River. As this is a critical stream gage for Montana water users, DNRC had to make the hard choice to remove a different stream gage (Nevada Creek, above the reservoir #12335500) from our list of cooperatively funded USGS stream gages and instead move this gage onto that list to continue USGS operation of the site and continue receiving the critical data.

South Fork of Musselshell River at Martinsdale (#06119200)-This station had a four-year period of record with the USGS. Data from this station is used for reservoir operations at the State owned Martinsdale Reservoir and data is also used by water commissioners who distribute irrigation water to water right holders. This station is a Federal Energy Regulatory Commission (FERC) requirement under the license granted to the Gordon Butte Water Storage/Pump project. As this station provided critical data to manage the Martinsdale State Reservoir, the DNRC State Water Projects Bureau is taking over operations of this former USGS site.

Bitterroot River near Missoula (#12352500)-This station has a 39-year period of record and is scheduled to be discontinued on July 1, 2025. This station provides critical flood warning data that informs emergency and disaster management operations for the City

of Missoula, Montana's second largest City. This station is regularly used by the recreation industry, and data is used to daily inform business decisions about safety and fishability of this blue-ribbon trout fishery. The Confederated Salish Kootenai Tribe (CSKT) and the Montana FWP co-own an instream flow water right on the Bitterroot River, and those entities rely on data from this station to monitor and enforce the instream flow water right which is critical to protect the native west slope cutthroat trout and bull trout in the Bitterroot River. Montana FWP uses temperature information from this station to implement hoot owl fishing restrictions on the lower Bitterroot River. As this station is located at the basin outlet or "pour point" of the Bitterroot basin, it is a critical calibration point used for the MIHMS water forecasting model.

Tenmile Creek near Helena (#06063000)-This station has a 61-year period of record and is scheduled to be discontinued on July 1, 2025. The densely populated Helena Valley lies in the floodplain of Tenmile Creek, and this station provides critical flood warning data that informs emergency and disaster management operations for Lewis and Clark County. This station also provides important data to Montana FWP where it is used to manage and enforce an instream flow water right used to protect and manage the fishery. As this station is downstream of a major municipal water diversion and treatment plant, it is an important calibration point used for the MIHMS water forecasting model.

Smith River near Ft Logan (#06076690)-This station has a 32-year period of record and is scheduled to be discontinued on July 1, 2025. This station is located near the headwaters of one of Montana's most coveted floating and fishing destinations. In addition to providing valuable data to the recreational industry, the data is also used for water distribution and irrigation management. This station provides important data that Montana FWP uses to manage floating/fishing permits on the Smith River. As this station is near the headwaters of a major river, it is used as an important calibration point for the MIHMS water forecasting model.

Shields River near Livingston (#06195600)-This station has a 45-year period of record and is scheduled to be discontinued on July 1, 2025. This station is located on an important tributary of the Yellowstone River. As a tributary station, the station acts as an important flood indicator, providing essential stream flow data and early flood warning to downstream communities and critical infrastructure such as interstate highways, railroads, several petroleum refineries, and Montana's largest City, Billings, all located on or near the Yellowstone River floodplain. This station is regularly used by irrigation water managers and by the DNRC for water rights administration. This station also provides important data to Montana FWP where it is used to manage and enforce an instream

flow water right during times low water and drought. As this station is located at the basin outlet or “pour point” of the Shields River Basin, it is a critical calibration point used for the MIHMS water forecasting model.

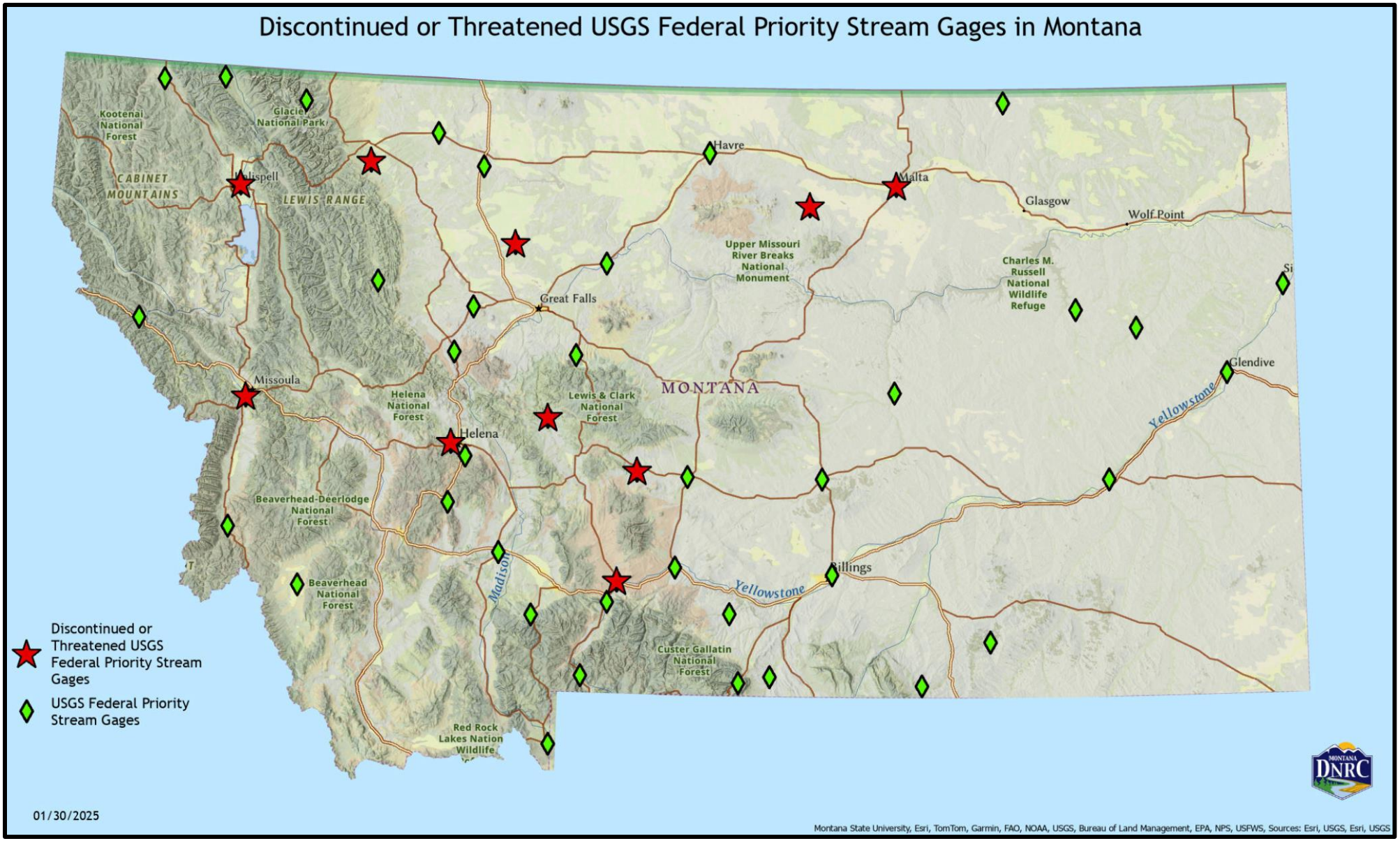
Peoples Creek near Hays (#06154400)-This station had a 57-year period of record and was discontinued on December 31, 2024. Under the Fort Belknap Tribal Compact, a large storage reservoir is proposed above this station. The historic record of this gage provides a critical baseline dataset for designing and constructing the reservoir. After the reservoir is constructed, this station would have been important for water delivery and administrative purposes for downstream water users.

Two Medicine River near Browning (#06091700)-This station has a 48-year period of record and is scheduled to be discontinued on July 1, 2025. This stream gage supports instream flow monitoring and enforcement under the Blackfeet Tribal Compact. Data from this station is used in the operation and management of the Bureau of Indian Affairs’ canal for the Blackfeet Indian Irrigation Project. The station also supports the Blackfeet Tribe's Water Resource, Environmental Protection, and Fisheries programs. This station provides data to understand inflow to Tiber Reservoir. Operations of Tiber Reservoir and the Marias River below the reservoir are of great importance to Montana FWP to help understand and improve spawning conditions for pallid sturgeon. This station is an important regional calibration point used for the MIHMS water forecasting model.

Flathead River at Kalispell (#12363500)-This station had a 4-year period of record and was discontinued on December 31, 2024. This stations location on the Flathead River is the lowest in the system, above Flathead Lake, that can measure an accurate flow rate in the river without influence from Flathead Lake backwater effects. While this station did not have a long period of record, its location on the Flathead River was valuable to Montana FWP to manage the Flathead River fishery.

Table 1. Summary of critical/important data loss by water management category.

Station	Period of Record (years)	Fisheries Management	Water Distribution	Tribal/ Federal Compact	Flood and Emergency Management	Hydrologic Model Calibration Point	Other
Teton River at Dutton	68	X	X			X	Provides data for water leases
Milk River at Malta	31	X		X	X		Drought management
South Fork of Musselshell River at Martinsdale	4	X	X			X	FERC requirement
Bitterroot River near Missoula	39	X		X	X	X	Extensive public use
Tenmile Creek near Helena	61	X	X		X	X	Drought management
Smith River near Ft Logan	32	X	X				Extensive public use
Shields River nr Livingston	45	X	X		X	X	Water Rights Administration
Two Medicine River near Browning	57	X		X		X	Informs BIA irrigation project
Peoples Creek near Hays	48	X	X	X			Data used for reservoir engineering design
Flathead River at Kalispell	4	X					High value for fisheries management


Discontinued or Threatened USGS Federal Priority Stream Gages in Montana
Kootenai National Forest
Glacier National Park
CABINET MOUNTAINS
Kalispell
LEWIS RANGE
Havre
Malta
Glasgow
Wolf Point
Upper Missouri River Breaks National Monument
Charles M. Russell National Wildlife Refuge
Great Falls
Missoula
Helena National Forest
Lewis & Clark National Forest
MONTANA
Helena
Glendive
Yellowstone
Beaverhead-Deerlodge National Forest
Beaverhead National Forest
Madison
Billings
Yellowstone
Custer Gallatin National Forest
Red Rock Lakes Nation Wildlife
Discontinued or Threatened USGS Federal Priority Stream Gages
USGS Federal Priority Stream Gages
01/30/2025
Montana State University, Esri, TomTom, Garmin, FAO, NOAA, USGS, Bureau of Land Management, EPA, NPS, USFWS, Sources: Esri, USGS, Esri, USGS

GREG GIANFORTE
GOVERNOR

STATE OF MONTANA

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P.O. BOX 200701
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DEPARTMENT OF NATURAL
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December 5, 2024

Chad Wagner, Program Coordinator
Groundwater and Streamflow Information Program
United States Geological Survey
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Raleigh, NC 27607
cwagner@usgs.gov

Dear Mr. Wagner:

On behalf of the Montana Department of Fish, Wildlife & Parks (FWP) and the Montana Department of Natural Resources (DNRC), we write to express our concern over recent funding reductions to the U.S. Geological Survey (USGS) Federal Priority Streamgage (FPS) program. This reduction in funding directly impacts FWP and DNRC's ability to manage water and adequately address the needs of providing real-time streamflow data to local communities in Montana.

FWP and DNRC collectively fund 74 seasonal and annual gages across Montana. Much of this is achieved through partnership with the USGS's Cooperative Matching Fund Agreements. These agreements have been crucial in providing important cost share funding that offers local governments and state agencies an affordable way to support multiple real-time gages.

However, increasing costs coupled with the recent need to fund gages historically covered under the FPS program is pressuring our agencies to make tough decisions as to which gages we can and cannot fund. These decisions will likely result in several local communities losing access to real-time gage data they rely on.

Due to your recent cuts, eleven gages in Montana will lose funding in the next few months and may be entirely discontinued. Seven of the eleven gages that USGS has proposed to cut fall within FWP's priority ranking as critical gages. These gages are needed to administer instream flow water rights that protect, enhance, and maintain fish habitat in Montana's rivers and streams. All eleven gages are important to water managers and water users in the state. The eleven gages are:

6063000	Tenmile Creek near Helena, MT
6076690	Smith River near Ft Logan, MT
6108000	Teton River near Dutton, MT
6195600	Shields River nr Livingston, MT

12352500	Bitterroot River near Missoula, MT
6119200	South Fork Musselshell River at Martinsdale, MT
6154400	Peoples Creek near Hays, MT
06155500	Milk River at Malta, MT
06091700	Two Medicine River near Browning, MT
12363500	Flathead River near Kalispell, MT

It is unfortunate that FWP and DNRC were unaware of these proposed funding cuts while negotiating annual funding contracts with USGS prior to the start of the State of Montana's Fiscal Year. Had FWP or DNRC been informed, our agencies may have had the ability to adjust contracts to address some, if not all, of these gages. Under the current circumstances, FWP and DNRC are unable to fund additional stream gages with their current budgets, and future funding will depend on potential support from the Montana Legislature.

FWP and DNRC value USGS as a partner; however, our agencies are frustrated with the lack of upfront communication as well as the expectation that state agencies and local governments fund critical stream gages (once covered by federal funding) with minimum notice and coordination. Each year, the cost to maintain existing contracts for cooperatively funded gages with the USGS increases by 10-15 percent, all of which falls upon the state's budget, while the USGS budget is stagnate. The added cost of funding additional gages over and above those that are currently covered is a real challenge. It continues to stress the budgets of state and local governments.

FWP and DNRC are therefore asking for your support in directing additional and existing federal monies within USGS to support both the FPS network and the Cooperative Matching Fund programs: two legacy programs within USGS that continue to provide state-of-the-art surface water data to local communities throughout the nation. We believe it is imperative that this program gets the support it deserves.

Sincerely,

Bill Schenk
Land and Water Program Manager
Montana Department of Fish, Wildlife & Parks

Anna Pakenham Stevenson
Water Resources Administrator
Montana Department of Natural Resources and Conservation

Cc: David Applegate, Director, USGS
John Kilpatrick, Wyoming-Montana Water Center Director, USGS

United States Department of the Interior
U.S. Geological Survey
Reston, Virginia 20192

January 23, 2025

Bill Schenk
Land and Water Program Manager
Montana Department of Fish, Wildlife and Parks
PO Box 200701
Helena, MT 59620

Anna Pakenham Stevenson
Water Resources Administrator
Montana Department of Natural Resources and Conservation
PO Box 201601
Helena, MT 59620

Dear Mr. Schenk and Ms. Pakenham Stevenson:

Thank you for your recent letter dated December 5, 2024, concerning funding for priority streamgages, which provide critical information to the residents of Montana.

The Federal Priority Streamgage (FPS) network (formerly the National Streamflow Information Program (NSIP)) has been in place as part of the U.S. Geological Survey's (USGS) budget since 2000. While funding for the FPS has remained flat for many years, increased operational cost for items such as equipment, transportation, and travel are causing USGS centers to make tough decisions on the level of support they can provide. Federal appropriations are impacting state governments, water-resource agencies, tribal organizations, and municipal offices across the country, where the data are used for daily water-resource and regulatory decisions.

In response to increasing expenditures and flat budgets, USGS leadership continues to coordinate potential funding options with cooperating agencies and stakeholders. At this time, many of the nine (9) sites in Montana identified to be discontinued have potential solutions for continued support. Partnership discussions have included the Montana Department of Natural Resources and Conservation (DNRC), the Montana Department of Fish, Wildlife and Parks (FWP), as well as a number of local and regional stakeholders, and Tribes. Additionally, the Wyoming-Montana Water Science Center (WY-MT WSC) continues to discuss these issues and concerns directly with the USGS Water Resources Mission Area (USGS WMA).

In the FY2025 President's budget, the USGS requested a funding increase of more than $4 million for the FPS network. This investment would provide stability for the current size of the network and support the installation of approximately 25 new or reactivated FPS sites nationwide. The USGS WY-MT WSC leadership is exploring ways to improve communication

so that information flows as quickly as possible, and as broadly as necessary to all stakeholders with ample time to address current challenges and take advantage of future opportunities.

Fiscal uncertainty is never an easy course to navigate, and we understand the state of Montana has unique challenges that require unique solutions. Relationships like the one between the USGS and Montana DNRC and FWP are critical to advancing important science for decades to come, while addressing immediate, local needs and providing cutting-edge science for the benefit of all.

We welcome your continued engagement on this critical topic, and the USGS stands ready to assist your agencies in exploring funding options for these endangered gages. Your partnership and support as we promote science in Montana and nationwide will be instrumental to our collective success.

If you would like additional information concerning this topic or to discuss streamgages under the purview of the WY-MT WSC, please contact:

> Melissa Schaar, Supervisory Hydrologist, WY-MT Water Science Center, phone: 406-457-5900, or email at mschaar@usgs.gov.
>
> and Chad Wagner, Program Coordinator, Groundwater and Streamflow Information Program, phone: 919-571-4021, or email at cwagner@usgs.gov.

Sincerely,

William H. Werkheiser

William H. Werkheiser
Associate Director for Water Resources