

Stream Gage Oversight Work Group Update

Montana Water Policy Interim Committee
Helena, MT
March 15, 2022

Paul Azevedo
Water Management Bureau

Co-Chair: Stream Gage Oversight Work Group



Why “Gage” and not “Gauge”?

“Gage” is the spelling adopted
the by USGS circa 1882.

“Gage” is used in the Montana
Water Use Act – Title 85.



Snapshot of USGS Stream Gage Network

- ❖ 218 Stream gages across Montana
- ❖ \$18,800/gage annual O&M cost*
- ❖ Multiple sources of O&M funding
 - ✓ 9 Federal agencies
 - ✓ 4 State agencies
 - ✓ 5 Tribal governments
 - ✓ 11 local entities
 - ✓ 4 Private entities

* FY21 - 12-month continuous discharge (streamflow).



Stream Gages Provide Decision Support For:

- ❖ Flood forecasting and warnings
- ❖ Local drought response coordination
- ❖ Administration of water rights
- ❖ Reservoir operations
- ❖ Fishing, floating, boating and swimming
- ❖ International and interstate apportionment



SB32 – AN ACT CREATING A STREAM GAGE OVERSIGHT WORK GROUP

- ❖ Driven by stakeholders.
- ❖ Concerned about the loss of funding to support USGS stream gages.
- ❖ Drafted by Water Policy Interim Committee
- ❖ Passed by 2019 Legislature - §2-15-3308 MCA
- ❖ Sunsets June 30, 2023



Responsibilities:

- ❖ Review locations, uses and, funding arrangements for USGS network.
- ❖ Review priorities, needs, and expectations of funders and users.
- ❖ Create an annual work plan, which may include
 - ❖ Review options for funding O&M
 - ❖ Cost-effective and reasonable alternatives
 - ❖ Coordination of information
- ❖ Report to:
 - ❖ Water Policy Interim Committee
 - ❖ Drought and Water Supply Advisory Committee



Members

Representing *	Name
Dept of Natural Resources	Paul Azevedo – Co-chair
Fish Wildlife and Parks	Stephen Begley – Co-chair
Dept of Livestock	Mike Honeycutt
Dept of Agriculture	John Peterson
Dept Military Affairs/DES	Andrew Long
Dept of Commerce	Wayne Johnston
Dept of Environmental Quality	Darrin Kron

*Representatives from the seven agencies on the Governor's Drought and Water Supply Advisory Committee



Stakeholders and Interested Parties

Musselshell Watershed Coalition

Sun River Watershed Group

Blackfoot Challenge

Big Hole Watershed Committee

Montana Watershed Coordination
Council

Soil and Water Conservation
Districts of Montana

Montana Trout Unlimited

Bureau of Mines and Geology

US Geological Survey



Stakeholders Desired Outcomes

- ❖ “Want to be certain that we don’t lose stream gages in the future.”
- ❖ “There is a plan for how the gages will be funded. Not necessarily government funded, but there will be a plan. No more chopping block.”
- ❖ “Eliminating the surprises at the 11th hour on funding issues.”



Work Plan Objectives

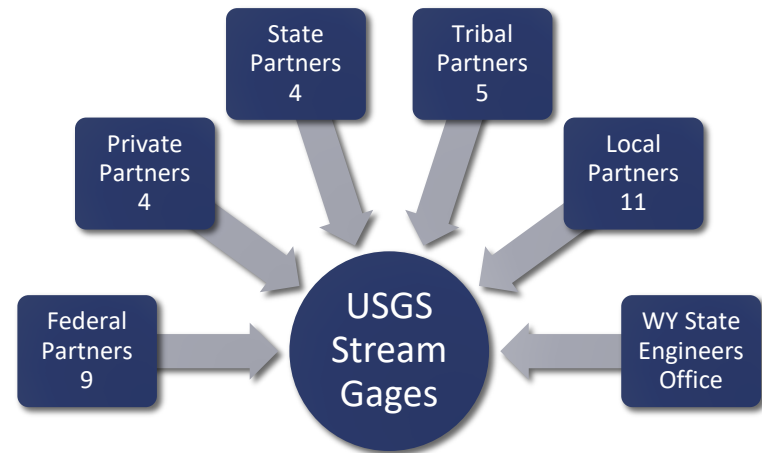
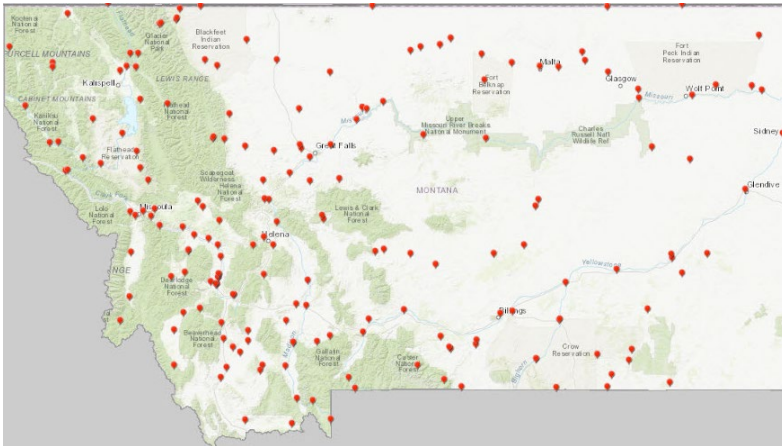
1. Develop a rapid-response plan.

Date of Notice	# of Gages	Status
Feb 17, 2021	1	Rescued
March 22, 2021	1	Rescued
Aug 19, 2021	5	2 – Rescued 3 – Discontinued
Feb 7, 2022	4	3 – ??? 1 - Discontinued



Work Plan Objectives

2. Identify the locations, uses and existing funding arrangements.



Work Plan Objectives

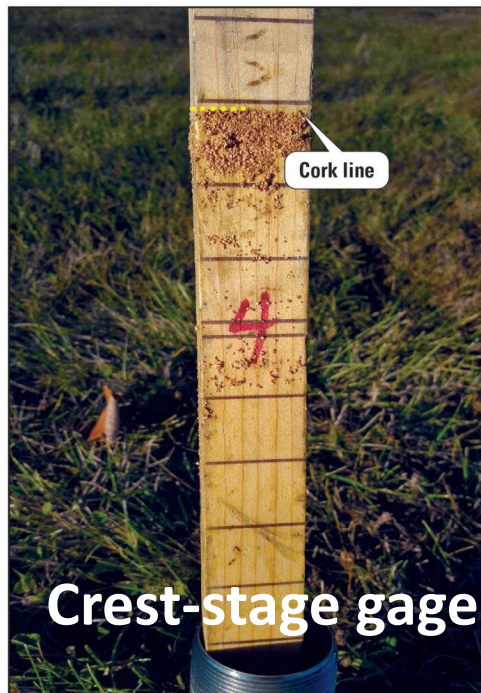
3. Identify the users of the USGS Stream Gage network in Montana.

- ❖ User survey
- ❖ Federal funders survey
- ❖ Google Analytics



Work Plan Objectives

4. Identify cost effective and reasonable alternatives to stream gages.



Large-Scale Particle-Image Velocimetry

Work Plan Objectives

5. Develop specific policy recommendations that would minimize the vulnerability of the network to disruptions in O&M funding.

In Development



Next Steps

1. Develop recommendations
2. Draft report
3. Review and comment
4. Draft report to WPIC – July 2022
5. Final Report to WPIC – September 2022
6. Sunset June 2023

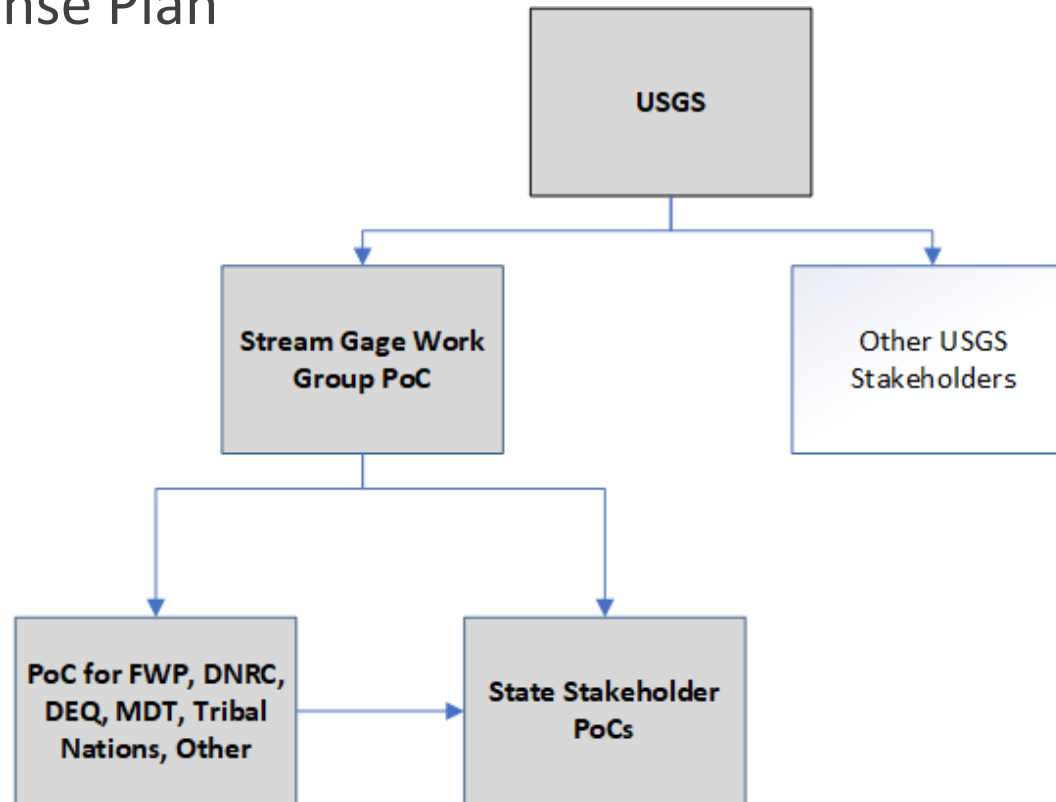


Questions from the Committee?

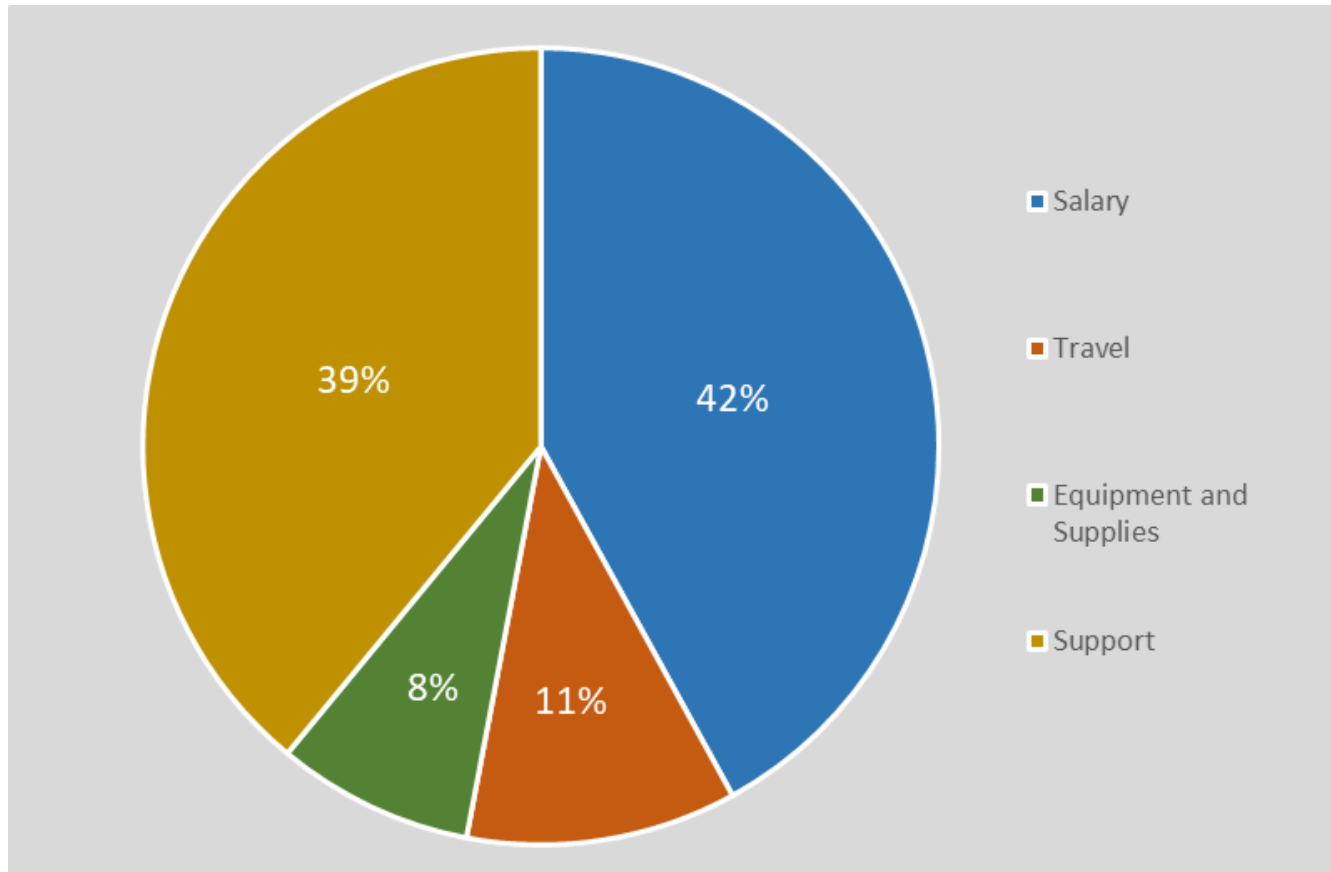


Work Plan Objectives

Rapid Response Plan



USGS Stream Gage O&M Costs \$18,800/year FY21



Federal & Private Funding Sources

FEDERAL PARTNERS – 100% OF COST

- USGS – Priorities Program
- Bureau of Reclamation
- Army Corps of Engineers
- Environmental Protection Agency
- National Park Service
- International Joint Commission
- Bureau of Land Management
- Bonneville Power Authority
- Fish & Wildlife Service

PRIVATE PARTNERS – 100% OF COST

- NE Energy
- Energy Keepers
- Avista
- Talen Energy



State & Tribal Funding Sources

Cost Share with USGS

State Cost Share Partners

- Natural Resources & Conservation
- Fish Wildlife & Parks
- Bureau of Mines & Geology
- Environmental Quality
- Transportation
- Justice

Tribal Cost Share Partners

- Confederated Salish & Kootenai
- Ft. Peck
- North Cheyenne
- Blackfeet

WY State Engineers Office



Local Funding Sources

Cost Share with USGS

Local Cost Share Partners

- Cascade CD
- Granite CD
- Flathead CD
- Petroleum CD
- Madison CD
- Teton CD
- Big Hole Watershed Committee
- Clark Fork Coalition
- Big Sky Water & Sewer District
- City of Bozeman



Work Plan Objectives

1. Develop a rapid-response process to notify stakeholders of vulnerable stream gages and provide support for stakeholders to explore both short and long-term funding options.
2. Identify the locations, uses and existing funding arrangements associated with the USGS Stream Gage Network in Montana and work with stakeholders to identify needs and opportunities for expanding the network.
3. Identify the users of the USGS Stream Gage Network in Montana and develop methods to further engage these users through collaborative planning, outreach and education.



Work Plan Objectives

4. Identify cost effective and reasonable alternatives to stream gages, including gages that are not part of the USGS network, if applicable
5. Develop specific policy recommendations that would minimize the vulnerability of the network to disruptions in O&M funding.

