



ANIMAS RIVER COMMUNITY FORUM
**THE VALUE OF PARTNERSHIPS – PROTECTING THE ABILITY TO USE AND
ENJOY THE ANIMAS RIVER**

Chara J Ragland, Ph.D., Querencia Environmental

Ann Oliver, Animas Watershed Partnership

Water Resources Challenges and Opportunities Facing Southwestern Colorado

SGM Fall Forum, Fort Lewis College

Durango, Colorado

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Gold King Mine Spill: The Crisis

- August 5, 2015, a US Environmental Protection Agency (EPA) work crew digging into the Gold King Mine near Gladstone, CO, triggered a blowout and ongoing discharge of impounded mine water
- 3 million gallons of acidic mine water containing sediment, heavy metals and other chemicals
- 400,000 Kg of metals entered the Animas River

From the "Animas, San Juan Spring Runoff Preparedness Plan" drafted by 24 state, tribal, county, municipal and federal agencies. March 24, 2016.



Response to Gold King Mine Spill: Needs

We need to communicate.

We need to make a plan.

We recognize that we need to:

- Build trust – don't play the name and blame game
- Local plan – Local responses are in place and nimble
- Use local knowledge – institutional, public, and 'old timers'
- Build community networks BEFORE an incident

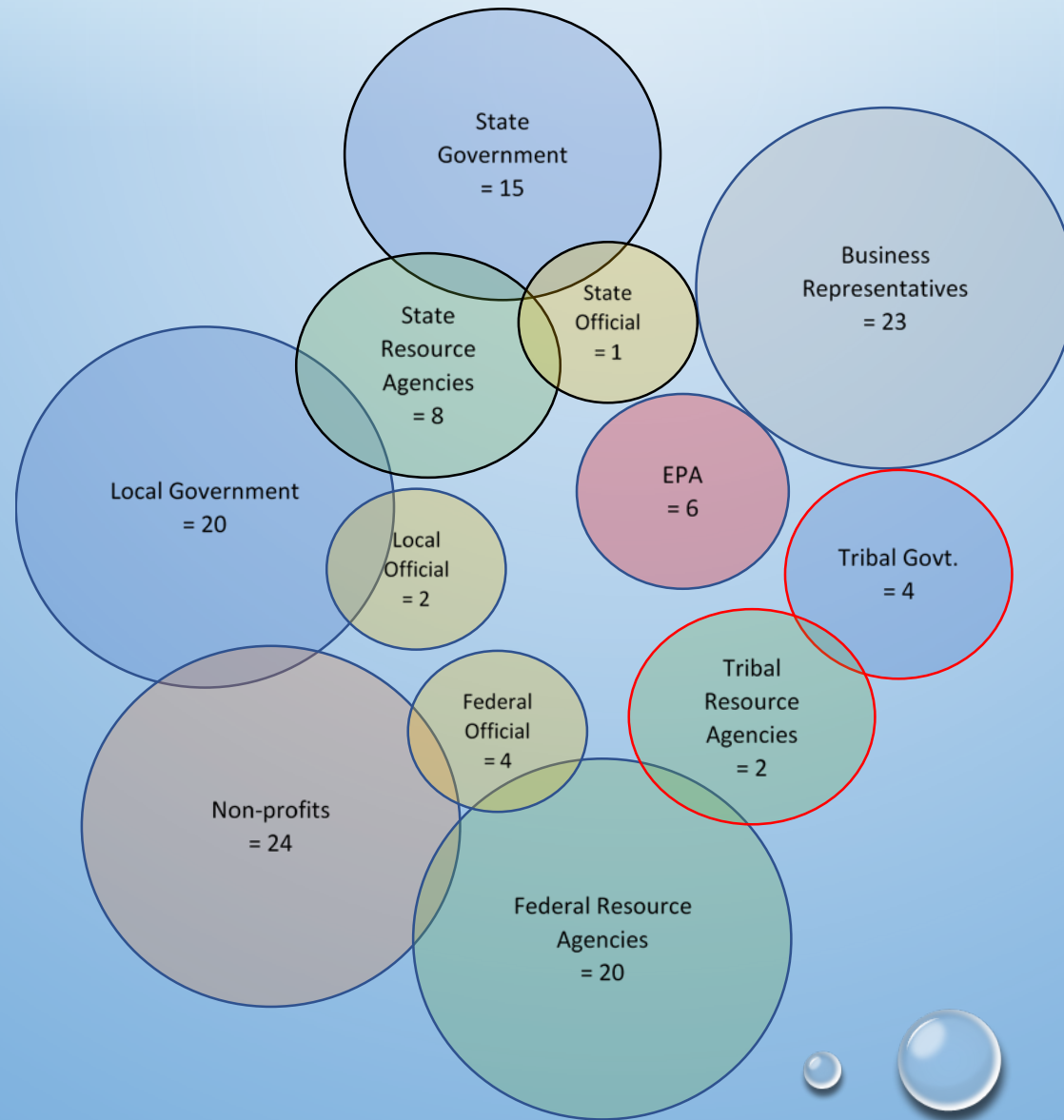
Animas River Community Forum: Mission

- **Promote** communication, coordination and collaborative action;
- **Foster** public confidence;
- **Support** resiliency in our communities; and
- **Enhance** planning, improved public safety and health for the future

All while honoring the institutional authorities and decision making of governmental and community organizations.

Animas River Community Forum: Members

**Total Members
= 129**



Animas River Community Forum: Outcomes

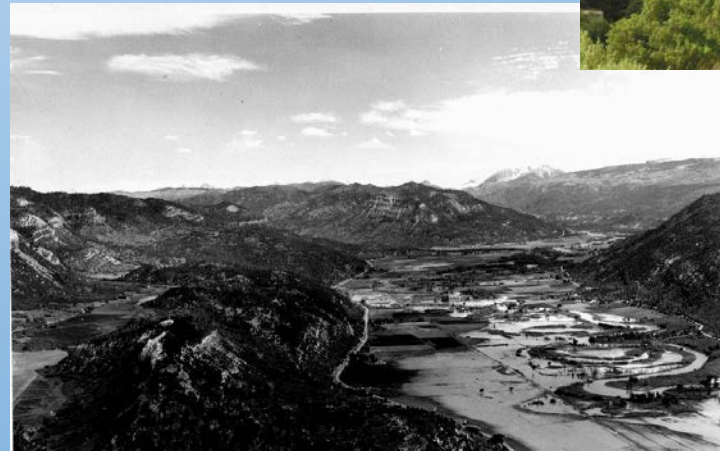
- Emergency response improvement
- Public engagement
- Monitoring gaps analysis
- Facilitate dialogue

Outcomes: Emergency Response Improvement

"Animas, San Juan Spring Runoff Preparedness Plan," March 24, 2016
by 24 state, tribal, county, municipal and federal agencies.

Ongoing Challenges:

- Staff changes and maintaining network
- Crises more than mine spills





Outcomes: Public Engagement

- 2 forums on Gold King Mine spill information (Fall 2015)
- 3 forums aimed at rafting, recreation, and irrigation user groups on water quality (Spring 2016)
- 1 Year Anniversary “Celebrating Community Response to GKM Spill” (August 2016)
- Presentations at 2 conferences and 3 community groups (2017)



Outcomes: Public Engagement

Web page development
animasrivercommunity.org

Challenge:

Requires ongoing funding to
maintain.



Outcomes: Public Engagement

Engagement Committee: formed to develop a communication plan for the ARCF

Accomplishments:

- Identified effective communication methods
- Re-designed website
- Developed effective resource leveraging among partners

Outcomes: Monitoring Gaps Analysis Committee

Committee Goals:

Collaborate to identify and make available timely, useful, and accessible information for decision makers and the public.

Tell accurate stories about our resources and community so as to increase our resilience to impacts to our environment, economy and quality of life.

Monitoring Gaps Analysis Committee: Plan

Resilient Community - Response Adequate to Avoid Disaster

Data to Information to Decision/Story

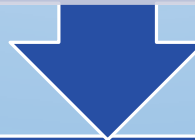


Create Monitoring Collaboration

Geographic Scope: Animas
Watershed

Data Objective: Baseline

Replicable



Survey to identify monitoring questions...

Final report...

Process to Get to Information/Decisions/Stories

Define Scope 1

Existing/Gap 2

Obtain 3

Access 4

Analyze 5

Communicate

6

Data Swap...

Monitoring Gaps Analysis Committee: Community Survey

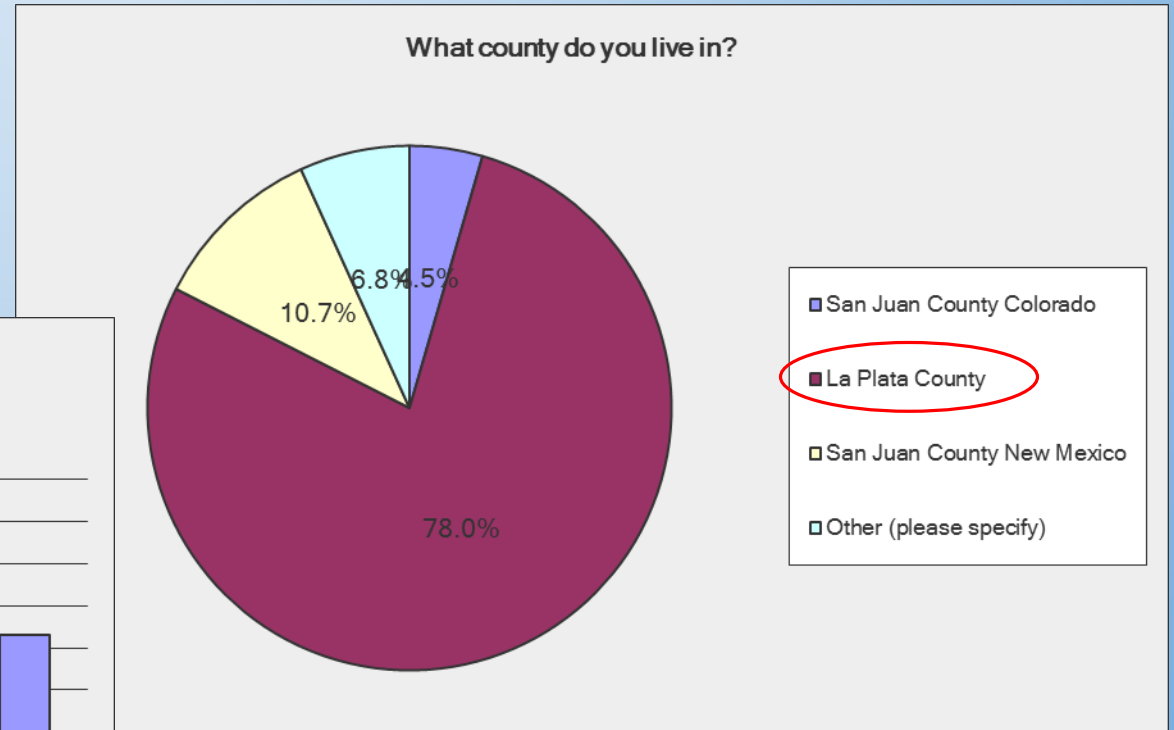
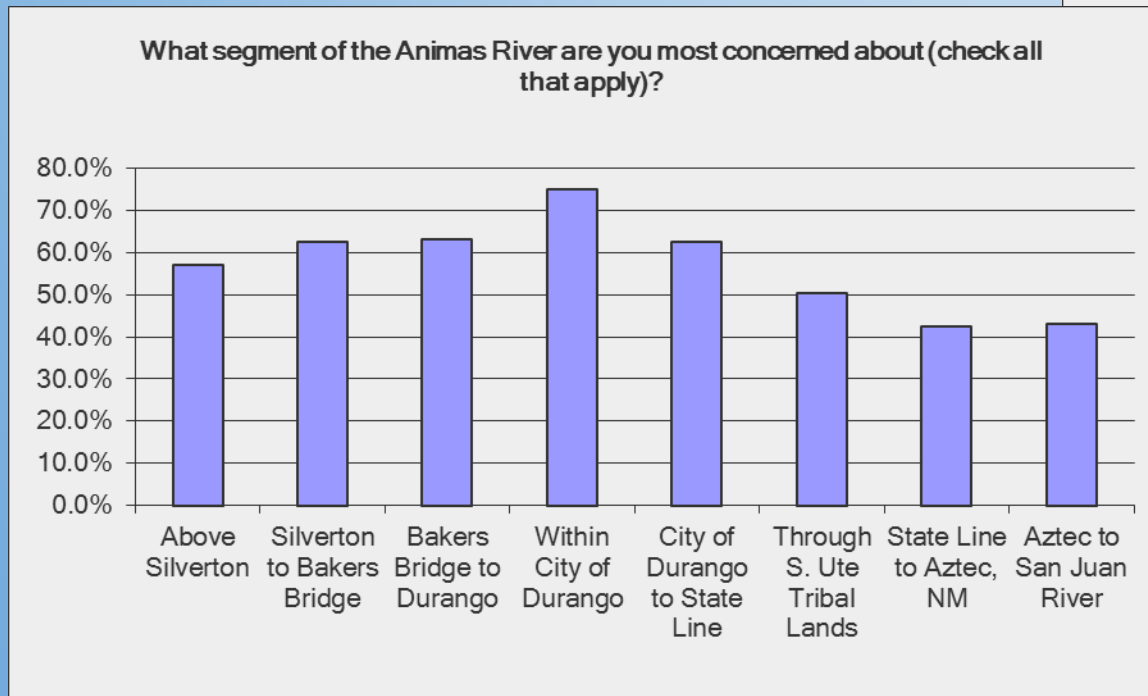
1. How **do you use** the Animas River?
2. What **segment of the Animas River** are you most concerned about?
3. How would you **rate the health or resilience** of the Animas River?
Why?
4. What **concerns** do you have about the Animas River regarding: **public health; health or resilience of the river; and other concerns?**
What **information would help you evaluate** those concerns?
5. How would you prefer to **access information** about your concerns?
6. **Who should be included** in this conversation?

Who responded ?

Female: 41%

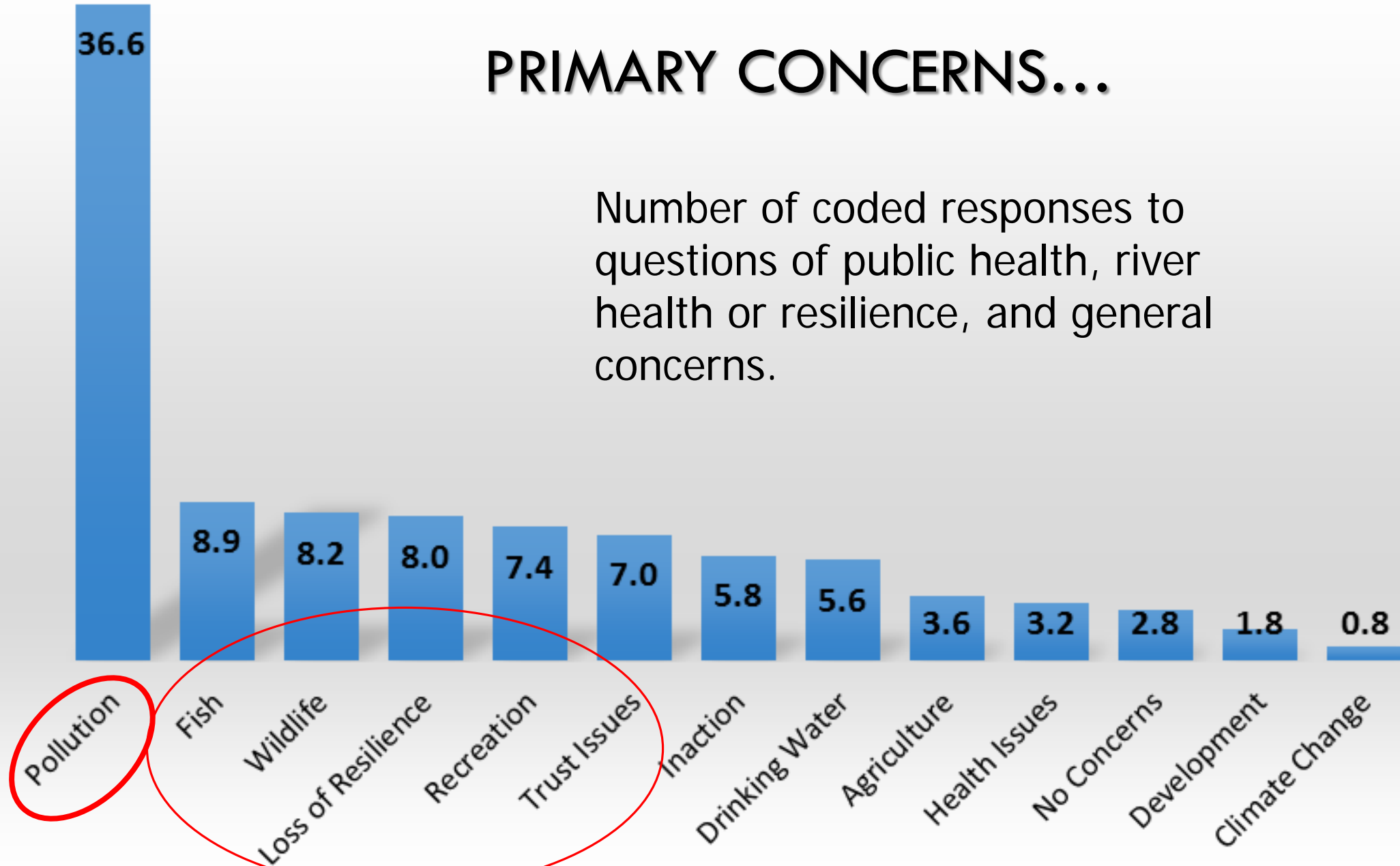
Male: 59%

188 total responses



PRIMARY CONCERNS...

Number of coded responses to questions of public health, river health or resilience, and general concerns.



Survey Results: Monitoring Concerns

Short term concerns: Is the river safe for users in real time?

Long term concerns: Is the river maintaining overall sustainability of physical and biological parameters impacting resilience?

1. Monitoring **quantifies and documents** river use (daily and weekly), river health (quarterly and yearly), and agricultural use (quarterly)
2. **Trends** in river measures followed over long periods of time (decades) and changes in river and environmental health identified and addressed
3. **Quality of life** questions identified and addressed

Survey Results: Communication Concerns

1. Data sharing: **cooperative and collaborative.**
2. Transparent monitoring methods: **multiple sources and reliable**
3. **Accessible** data: understandable and available online and in news media
4. **Usefulness:** What does it mean for people's use and enjoyment of river, and what are the 'implementation' factors?

Monitoring Exchange

1. Opportunity to learn about current monitoring efforts
2. Inventory also includes:
 - Monitoring Question
 - Intended Use
 - Decision Maker
 - Segments sampled
 - Sampling Period
 - Frequency
 - Start and End dates
 - Link to data

Monitoring Entity	Component Monitored									
	SW-Quality	SW-Quantity	GW-Quality	GW-Level	Sediment	Aquatic Life	Riparian/ Floodplain	Geomorphology	Sondes	Fish Tissue
CO River Watch	X					X				
San Juan Basin Health/CDPHE	X		X		X	X				
USGS	X	X								
EPA Remedial	X	X								
CPW Aquatics						X				
Mountain Studies Institute	X					X				
FLC Geosciences & Biology				X			X	X		
Bureau of Reclamation	X									
Southern Ute Tribe	X		X		X	X			X	X

Report: Questions and Indicators

Concerns	Indicators
Is my water safe to drink?	Clean Water Act (CWA) Drinking Water Standards
Is my water safe to play in?	CWA Recreational Use Standards (E. coli) EPA Region 8 Recreational Screening Levels (water and sediment)
Is food produced with my water safe to eat?	CWA Agricultural Use Standards (crops and livestock) Fish ingestion standards
Is the river safe for fish and wildlife?	CWA Aquatic Life Standards Colorado CWA Sediment Advisory Standards
How is the overall function (ecological) of the Animas River system?	Colorado Multi Metric Index (MMI) Fishery Community Structure and Function Metrics

Report: Questions and Indicators

Concerns:	Potential indicators:
What is impacting the natural system?	
What is the trend in river system condition?	
Can the river sustain impacts?	
How is the river supporting community quality of life or not? Economics, aesthetics?	
What is my impact and what can I do?	

What have you observed?

Invite dialogue!

Animas River Community Forum: Facilitate Dialogue

We need to talk, and we ...


- Coordinate exchange of information
- Ongoing collaboration between Forum partners
- Citizen Superfund Workgroup



Animas River Community Forum: Facilitate Dialogue

Coordinated exchange of information

Outcomes:

- Emergency management updates
 - Helpful for cost reimbursement
- 

Animas River Community Forum: Facilitate Dialogue

- Regular meetings
- Email updates and website
- Promote and support watershed events and partner initiatives
- Support committee initiatives and collaborative efforts

Animas River Community Forum: Facilitate Dialogue

Citizen Superfund Workgroup

Why?

- Potentially over \$100 million taxpayer funds utilized in cleanup efforts of the Bonita Peak Mining District Superfund site over the next 15-20 years.

Goals:

- Help the community better understand the issues involved in the cleanup
- Develop recommendations or community goals

Animas River Community Forum: What Next?

Mission

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All while honoring the institutional authorities and decision making of governmental and community organizations.

Animas River Community Forum: What Next?

Partner goals:

- Dialogue and Communication
- Collaboration to leverage resources

Requirement = ARCF sustainability:

- Evolution of organization structure to maintain networks
- Financial security to support endeavors

Knowledge
Responsibility
Influence

ARCF Partner Support

Financial Support:

Southwestern Water Conservation District

Colorado Water Conservation Board through the Water Supply Reserve Account

Division of Reclamation, Mining & Safety, a division of the Colorado Department of Natural Resources

Fiscal Sponsor: Mountain Studies Institute

In Kind Contributors: San Juan Public Lands Center (NFS and BLM), La Plata County, Town of Silverton, City of Durango



ARCF Steering Committee

Marcie Bidwell, Mountain Studies Institute

Brian Devine, San Juan Basin Public Health

Laura Marchino, Region 9 Economic Development District

Ann Oliver, Animas Watershed Partnership

Ellen Roberts, Attorney

Matt Thorpe, Colorado Parks & Wildlife