

Gold King Mine Spill Citizen Action Committee

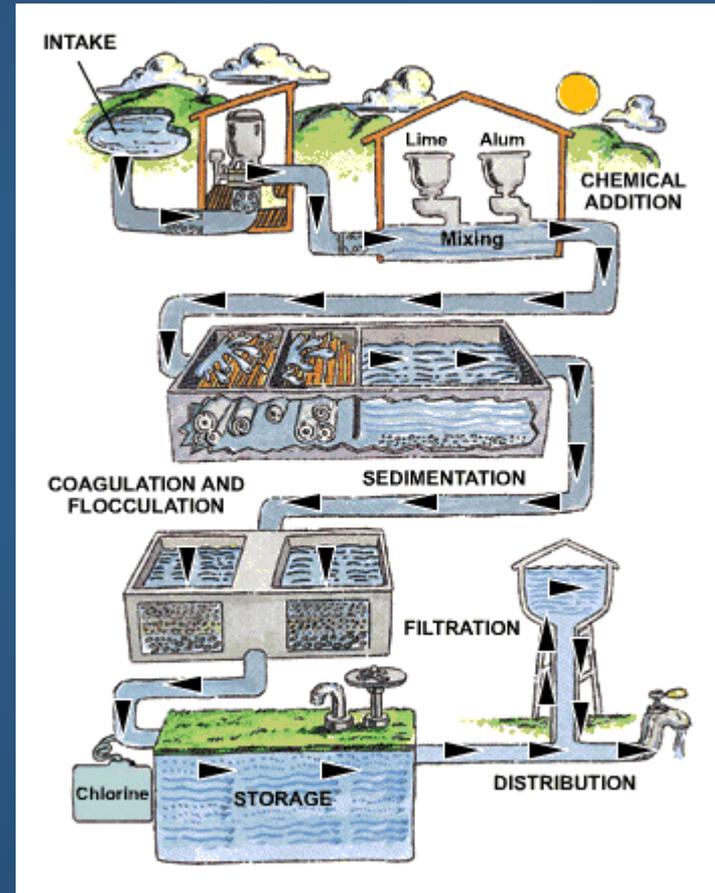


Drinking Water Update



Stephanie Stringer, Chief
Drinking Water Bureau
New Mexico Environment Department

Drinking Water



Drinking Water Bureau

Mission: To preserve, protect, and improve New Mexico's drinking water quality for present and future generations.



Drinking Water Bureau Responsibilities

- Regulatory Oversight of all Public Water Systems (PWS)
- Water quality monitoring (entry point samples)
- Assistance (technical, managerial, financial)
- Enforcement





Regulatory Oversight Program

(aka *Public Water System Supervision Group*)

- Develop and maintain standards and primacy
- Maintain information on all PWS in Safe Drinking Water Information System (SDWIS)
 - contact info, facilities, samples schedules, etc.
- Determine compliance/ Identify problems
- Conduct Sanitary Survey Inspections (every 3-5 years)
- Notify PWS of violations
- Ensure PWS properly inform customers about the drinking water supply
- Enforce on systems when necessary to meet goals



Assistance Programs

(aka *Sustainable Water Infrastructure Group*)

- Community Services
 - Capacity Assessments
 - Managerial assistance (board trainings, PWS complaints, etc.)
 - Financial Assistance (asset management, rate analysis, etc.)
- Technical Services
 - Operational assistance, optimization
 - Emergency response
 - Operator training
 - Project reviews, including engineering reviews
- Source Water Protection
 - Public outreach relating to protecting drinking water sources
 - Assists with development of Source Water Protection Plans



Enforcement Program

(part of PWSS Group)



- Compliance Assistance Strategy
 - Partner with entities and provide assistance to achieve compliance goals
- Formal Actions when necessary and appropriate
 - Risk to public health
 - No demonstrative progress or lack of response from system
 - Administrative Orders with or without penalties



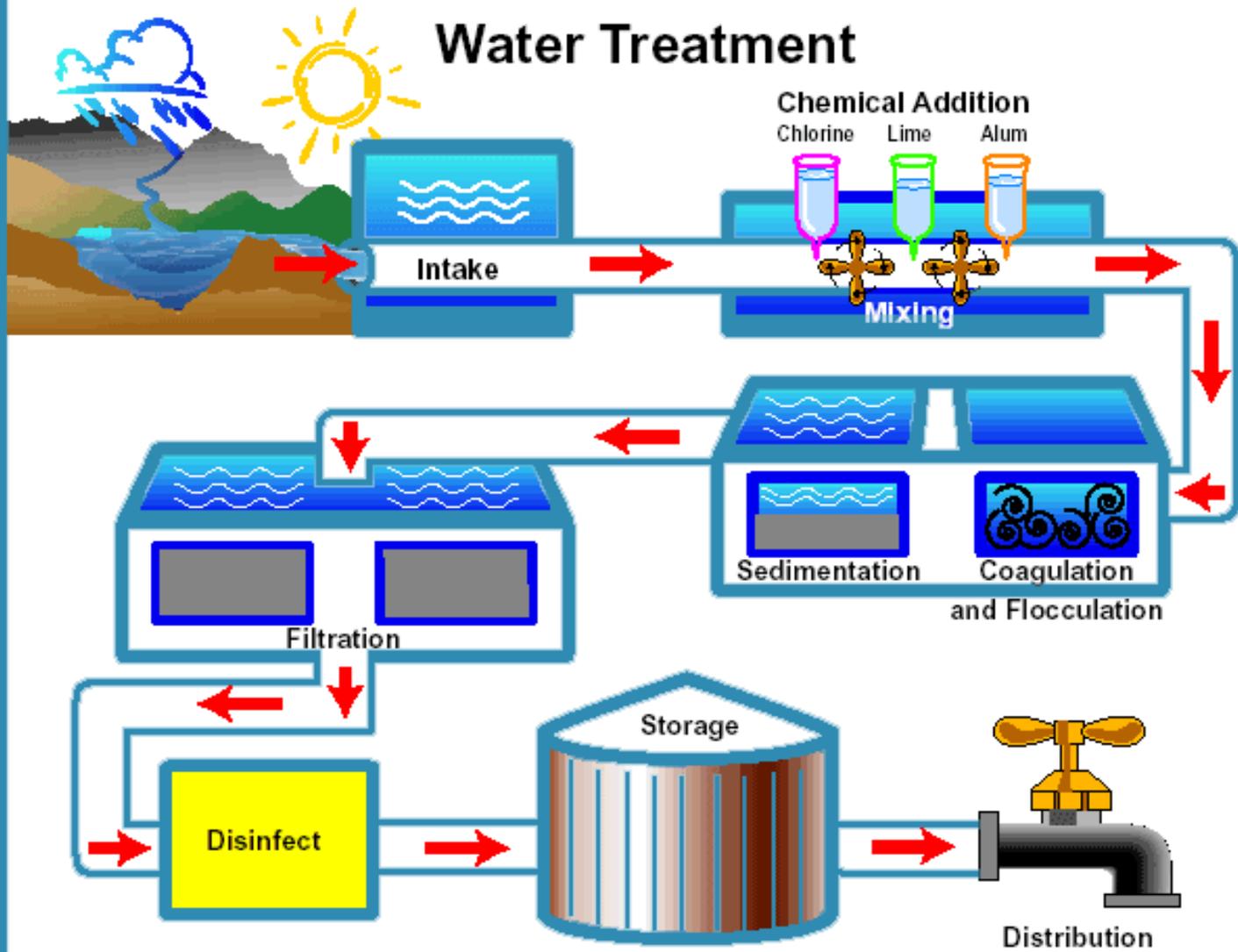
PWS Affected by Gold King Mine Spill

PWS	Population Served	Drinking Water Sources
Aztec Domestic Water System	6,800	Animas River, Bloomfield connection
Bloomfield Water Supply System	7,433	Bloomfield Irrigation Ditch
Farmington Water System	47,000	Animas River, San Juan River (inactive)
Flora Vista Mutual Domestic	4,300	Wells, Aztec and Farmington connections
Lower Valley Water Users Association	8,428	Farmers Ditch, Animas River
Morningstar Water Supply System	6,423	Animas River, Farmington emergency connection
Northstar Mutual Domestic Water Consumers Association	4,123	Animas River, Well (inactive)
Southside Mutual Domestic Water (Indirect)	1,593	Aztec connection, Well
Upper La Plata Water Users Association (Indirect)	2,236	Lower Valley and Farmington connections
Total Affected Population	88,336	

PWS Responsibilities

- Serve water that meets all Safe Drinking Water Act (SDWA) Primary Drinking Water Standard Maximum Contaminant Levels (MCLs), regardless of source water quality
- Meet all other requirements of the SDWA and the NM Drinking Water Regulations (20.7.10 NMAC)
 - Monitoring (collect distribution samples, submit monthly operating reports, etc.)
 - Reporting (ensure water quality data are delivered to DWB)
 - Public Notification (inform public when violations occur as required)
 - Operate the facility in accordance with best practices and regulatory requirements
- Have trained, certified operators
 - Maintain Standard Operating Procedures (SOPs) and facilities that treat source water to remove multiple contaminants
- Source water DOES NOT have to be in compliance with SDWA MCLs (and frequently is not)

Water Treatment



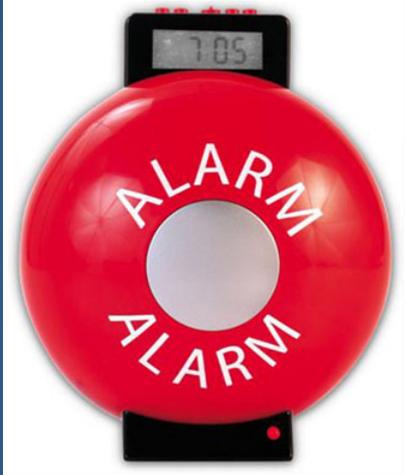
Common Goal = Compliance



Gold King Mine Spill/Wastewater Release

August 5, 2015





DWB Role in Gold King Mine Spill

- August 5th spill occurred
- August 6th NM/DWB informed (by PWS)
- Contacted affected PWSs
- Provided technical assistance throughout response period
- Post-Spill Start Up Guidance
- Regulatory exemption (Morningstar)
- Guidance criteria for opening drinking water intakes

PWS Role in Gold King Mine Spill

- Maintain proper operations:
 - Each system uses an SOP to define quality for desirable & treatable water and river intake operation
 - Monitor source water quality, particularly during times when water quality is likely to change significantly, i.e., during storm events, upstream user discharges, spills, etc.
 - Open/close intakes as necessary and appropriate to ensure maximum supply and to minimize impacts to treatment facilities (fill settling ponds with treatable water while spill passes and maximize treated water storage to the extent possible)
 - Ensure proper treatment and monitor treatment operations

Outcomes/Results

- All PWSs were active during the GKM release and remained in compliance with the drinking water quality standards, confirmed by EPA Entry Point sampling
- Water conservation measures were implemented and water flow remained throughout incident
- Intakes shut throughout spill passing
- Emergency connections used
- Review of available historical data indicated that metals have not been present in the past in this area, despite mine activities and other potential sources of contamination



Now What?



Long Term Plan

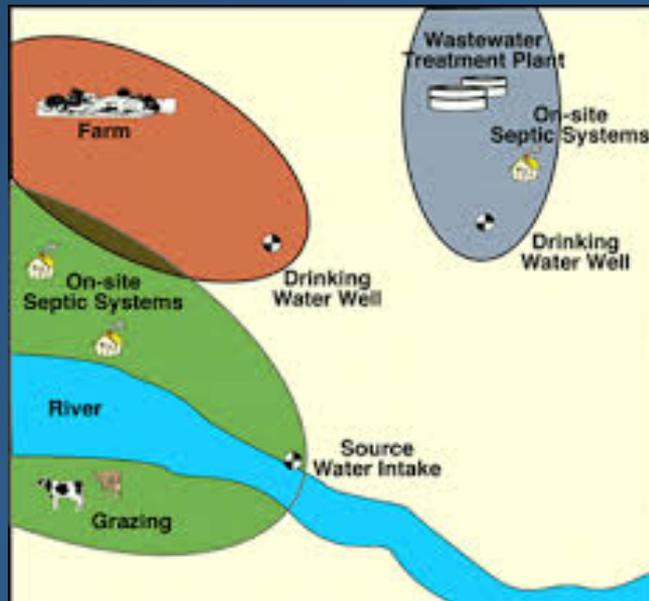
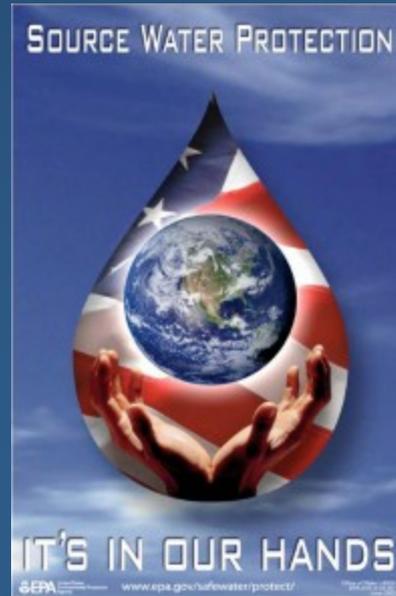
- Increase sampling frequency (if appropriate) in response to any detection of increased heavy metal concentrations in PWS treated water
- Develop regional source water protection plan
- Communication network amongst PWS operators for notification of upstream changes in water quality
- USGS gaging stations with water quality sondes (2 years)
 - Sondes will measure select water quality parameters that will be used to indicate changing water quality
 - Stakeholders, including PWS can subscribe to email notification service of water quality data
 - Stakeholders can then use data to implement appropriate SOPs for use of river
- Monitor produced sludge for increase in metals for disposal purposes

Regional Source Water Plan Development

- Form a Community Planning Team to develop and implement a Source Water Protection Plan
- Review the Source Water Assessment to identify actual and potential sources of contamination
- Develop a list of methods to prevent contamination of the source water protection areas
- Prepare a Source Water Protection Plan that outlines current and future approaches to prevent source water contamination
- Take action to implement the Source Water Protection Plan

DWB role is to facilitate and assist with development of plan; community stakeholders are responsible for finalizing and implementing.

Source Water Protection



DWB Multi-barrier Approach to Protecting Health



Barrier #1: Risk Prevention

- **Source Water**
- **Barriers:** Selecting and protecting the best source of supply.

Barrier #2: Risk Management

- **Treatment**
- **Barriers:** Installing treatment methods, implemented by a certified operator, that will improve the quality of the source water.

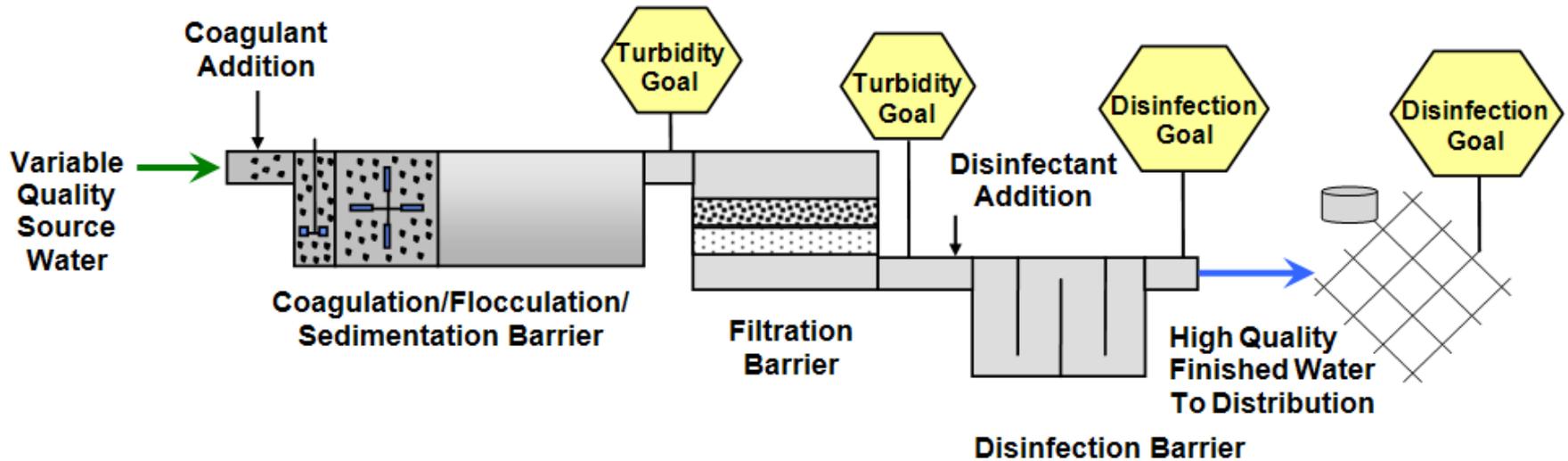
Barrier #3: Monitoring and Compliance

- **Storage and Distribution**
- **Barriers:** Constructing, operating, and maintaining well engineered storage facilities and distribution systems.

Barrier #4: Individual Action

- **Monitoring and Public Information**
- **Barriers:** Providing consumers with information on water quality and health effects.

PWS Multi-barrier Approach to Protecting Health



Source Protection

Sedimentation

Filtration

Disinfection

Safe Storage



Stephanie Stringer
stephanie.stringer@state.nm.us
(505) 476-8625