

Montezuma County, Colorado MC 2023 Water Run-Off

After-Action Report/Improvement Plan

06-21-2023

Revision 1 on 7/12/23

EVENT OVERVIEW

Incident Name	MC 2023 Water Runoff
Incident Dates	March 16, 2023 to June 1, 2023
Scope	This real-world event began in March 16, 2023 when a vehicle dropped off into a washed-out roadway on Rd. P. Our EOC was activated and EOC/ESF Staff and responders began to respond, mitigate and recover to incidents that occurred during the incident dates.
Mission Area(s)	Response, Mitigation, Recovery
Objectives	<ol style="list-style-type: none">1. Provide for the safety of all personnel.2. Establish the Incident Command Post at the Dolores Fire Protection District, Station #1.3. Plan mitigation of water runoff using Montezuma County Road & Bridge and Dolores and Mancos Public Works resources.4. Coordinate with ESF 6 (Red Cross) to ensure plans are in place for emergency sheltering.5. Coordinate security teams for protection of evacuated areas and properties.6. Establish swift water rescue operations for deployment.7. Continue sandbagging operations.8. Review the IAP daily for any changes, or additions.9. Ensure that trigger points are reviewed by all responders.10. EOC Objectives listed below
Threat or Hazard	Flooding
Scenario	Precipitation during 2022-2023 winter in Montezuma was at 185% above normal. During spring thaw, water runoffs were causing washouts in culverts, roadways, and localized flooding due to water snow ratios throughout the county and along rising rivers. This caused 4 roadways to be closed, 2 bridges closed, flooding of infrastructures, and swift water rescues.
Sponsor	The County of Montezuma
Participating Organizations	Total personnel: 4 Policy Group, 10 EOC staff, and 21 ESFs (55 people total). 15 stakeholders present for AAR.
Point of Contact	County Emergency Manager Jim Spratlen

OBJECTIVES, STRENGTHS, AREAS OF IMPROVEMENT

Objectives

- 1. Provide for the safety of all personnel.**
- 2. Establish the Incident Command Post at the Dolores Fire Protection District, Station #1.**

Strengths

The full capability level can be attributed to the following strengths:

Strength 1: Collaborative relationships and interagency cooperation within the County contributed to the Montezuma County responders, EOC/ESF Staff and the Community. This partnership was also seen in all the positions within each discipline, allowing consistent and accurate information to be disseminated to all in a timely manner.

Strength 2: Minimal property damage was due to the mitigation efforts of the responders with a quick response and logistical support acquired.

Strength 3: Prior planning and development of response IAP and ISP by responders and EOC allowed responders and EOC to work together well.

Areas for Improvement

The following areas require improvement to achieve the full capability level:

Area for Improvement:

1. Town of Dolores needs to have a better communication medium during an incident. Radio communication was needed and the Town does not have radios for their staff that could allow interoperability between them, the UC, EOC and responding units.

Context and Analysis: The circumstances we were under were very challenging with not being able to have numerous personnel to respond on occasion. Virtual meeting and doing business by emails, apps, texts and phone calls was a challenge but we were able to accomplish all the objectives that were set by the Unified Commanders and the EOC for the past 11 weeks.

Objective:

- 3. Plan mitigation of water runoff using Montezuma County Road & Bridge and Dolores and Mancos Public Works resources.**

Strengths

The partial capability level can be attributed to the following strengths:

Strength 1: All departments and staff were trained and knowledgeable in the job. Dolores Public Works, County Road & Bridge worked well together in logistical support needs.

Strength 2: The trained staff worked in collaboration with other agencies, including the Ute Mountain Ute tribe and the Division of Fire Prevention and Control.

Strength 3: All assigned personnel were able to critique their procedures and become more effective in the future planned events.

Strength 4: The use of outside resources, including volunteers, fire and law, sandbagging equipment, and sand/equipment from private sources was efficient in acquiring and very effective in deployment into the affected areas.

Areas for Improvement

The following areas require improvement to achieve the full capability level:

Area for Improvement:

1. One of the gaps was the infrastructure of the town was not able to handle the amount of water runoff based on the water shed above the Town. The town needs to re-visit their plans, not only for public property but private property. There is a need to develop a plan to strengthen the infrastructure and the funding to accomplish this task.
2. Town of Mancos worked hard at clearing debris from the river, but there is a need to work on this project throughout the year before the incident. This includes along the river in the unincorporated areas. Beaver ponds were also an issue.
3. CDOT had some culvert issues in the county that could not handle the flow of water which caused some culverts to washout on a State Hwy and potential water flows across State Highways that could cause damage.
4. The Dolores river also has some areas that need maintenance by the Corp of Engineers to help mitigate debris choke points from West Fork to McPhee.

Context and Analysis: The circumstances we were under were very challenging not being able to handle the amount of water that ran off in the county. Inability to access private property to mitigate prior to an incident is also a challenge to all jurisdictions. All properties along the rivers need mitigation to keep debris from causing jams in various areas. In excess of 50 culverts were cleaned, some replaced and some damaged. This has caused us to revisit our county infrastructure and begin a replacement program for their areas of concern. All agree on clearing and inspecting all culverts in the early spring prior to runoff season. Funding to accomplish mitigations will be sought by all jurisdictions.

Objective:

4. **Coordinate with ESF 6 (Red Cross) to ensure plans are in place for emergency sheltering.**
5. Coordinate security teams for protection of evacuated areas and properties.

Strengths

The partial capability level can be attributed to the following strengths:

Strength 1: All resources were notified, trained and ready to respond if needed prior to the event.

Strength 2: MOUs and land use agreements were in place in the event a shelter was needed.

Strength 3: Red Cross assisted in feeding personnel during the incident.

Areas for Improvement

The following areas require improvement to achieve the full capability level:

Area for Improvement: None

Context and Analysis: Plans and agreements were in place prior to the event. EOC and Red Cross work together on numerous incidents and trainings and have a good working relationship.

Objective:

6. Establish swift water rescue operations for deployment.

Strengths

The partial capability level can be attributed to the following strengths:

Strength 1: Both Swift Water Rescue teams, Dolores Fire Department and SAR have developed teams to deploy when needed. They both have trained and worked together on incidents and are very functional in their deployments.

Areas for Improvement

The following areas require improvement to achieve the full capability level:

Area for Improvement:

1. Both teams have protocols for call out and operating procedures. There is a need to consolidate a general protocol and procedure for both teams and have training with all stakeholders on these plans, including Communications Center, Law Enforcement, K9 SAR, Fire Departments, EMS, and Emergency Management.

Context and Analysis: Based on the variety of incidents they were called out on, day and night operations, both teams were able to improvise, adapt and overcome during deployments. Information sharing between teams and responders can be challenging during a life safety operation. Having overarching protocols in place will assist in the communication effort.

Objective:

7. Continue sandbagging operations.

Strengths

The partial capability level can be attributed to the following strengths:

Strength 1: Teams of volunteers from the community and other stakeholders were established quickly. Training was minimal and with the assistance of Salvation Army with a sand bagging machine, oversight staff from EOC and UC, and procedures in place made the operation move quickly and safely.

Strength 2: Placement of sandbags through the county was accomplished in a quick and safe manner based on good communication between supply, delivery and placement teams.

Areas for Improvement

The following areas require improvement to achieve the full capability level:

Area for Improvement:

1. Two types of sand, one course and one fine were determined to be separated from two different operations. Sand bagging operation and berm operation. The course sand needed to be used for building berms and the fine sand was needed to be used in the sand bagging operation. Course sand would clog up the sand bagging machine and fine sand would wash away quicker on the berms.

Context and Analysis: Preplanning this operation was vital to a cohesive and safe event. Sandbagging yard with delivery of sand and traffic movement in loading bags for delivery was the key to a successful mission. At the drop points for bags, a coordinate traffic plan, including transportation of personnel to and from drop points was carried out in a safe and efficient manner.

Objective:

8. Review the IAP daily for any changes, or additions.

Strengths

The partial capability level can be attributed to the following strengths:

Strength 1: All personnel reviewed the IAP and were in approval of the listed work assignments. The IAP was revised every two weeks for any changes or additions needed for the operational period. UC worked diligently in trying to follow the plan on a daily basis.

Areas for Improvement

The following areas require improvement to achieve the full capability level:

Area for Improvement: The amount of water that flowed into the town of Dolores was not expected, as the thought was the current infrastructure would handle the amount of water anticipated. Because it was high volume of water runoff, the infrastructure was not able to handle that amount of water. On the next IAP, a section in the Division Assignment needs to address this concern for response.

Context and Analysis: The IAP was developed and approved by the Command and General Staff prior to events. This was essential in a cohesive operation being run with responders on the same page. EOC Staff assisted in the C&GS meeting to develop the IAP and revising it every two weeks. With additional trained staff, this task will be easier to accomplish in the near future.

Objective:

9. Ensure that trigger points are reviewed by all responders.

Strengths

The partial capability level can be attributed to the following strengths:

Strength 1: Trigger Points were flexible based on multiple factors that were considered. Being fluid in a complex incident allowed the decision makers to have a more informed and accurate decision-making process.

Areas for Improvement

The following areas require improvement to achieve the full capability level:

Area for Improvement:

1. Better communication to the public on how the trigger points are used to make decisions on “Get Ready, Get Set, Go” protocols. The public was leaning more on river heights for a trigger point alone and not an overall picture on the decision-making trigger points.

Context and Analysis: Based on a complex of conditions that needed to be evaluated, the trigger points were established to assist in resource readiness, preparation, and consequence management for incidents occurring within the County. These incidents are complex in nature and have various indicators that could cause any resource to be utilized at any time. Indicators and situational awareness are, but are not limited to, changes in weather, water run-off, soil saturation, hydrology in water tables and rivers, values in secluded areas, debris management in water flows, and public safety concerns. These trigger points allowed the EOC/ESF Staff, Stakeholders, responders and community to utilize valid information in decision-making. These points were a general plan on ESF responses, resource mobilization, alert and warning and communication plans to be activated at specific locations by specific resources available as requested. The terminology is based on the Alert and Warning Plan and the Evacuation and Re-Entry Plan on file.

10. EOC Objectives:

- 1) Provide for the safety and security of EOC personnel, incident responders, and others who are part of the response to water runoff in Montezuma County.
- 2) Establish a physical EOC based on trigger points at Level 3 or higher at designated locations pre-selected by Logistics.
- 3) Assist the Sheriff, Incident Commands and ESF partners with consequence management.
- 4) Each EOC section will work with their ESF counterparts to allow for better information sharing.
- 5) Develop and implement a demobilization plan.
- 6) Keep the public informed with current, accurate information through social media and alert and warning systems.
- 7) Ensure accountability of EOC personnel and tasks through the submission of ICS 214 logs to Operations.
- 8) Share information with the Agency Administrators on a schedule based on the trigger points.
- 9) Follow trigger points guidelines and re-evaluate them daily.
- 10) Utilize WebEOC for situational updates.
- 11) Continue to support Incident Commands with critical logistical needs.

Strengths

The partial capability level can be attributed to the following strengths:

Strength 1: Multi-Agency Coordination Group (MAC Group) was quickly formed from various County personnel and Emergency Support Functions (ESF) and based on their life experience, we formed a very functional EOC Staff to tackle this objective during this water runoff.

Strength 2: Trigger Points and Command emphasis were established to allow the response and recovery to be on a consistent decision-making process throughout the incident.

Strength 3: Good communication was achieved between the EOC, ESF, UC, stakeholders, and AA's and all were advised of current situational awareness on a consistent basis.

Strength 4: The JIC was able to inform the public and media in a timely manner with a consistent message, including the establishment of a call center.

Strength 4: The GIS department developed a mapping system that was vital to the EOC operation. Easy to use and very informative on current situational awareness.

Areas for Improvement

The following areas require improvement to achieve the full capability level:

Area for Improvement:

1. EOC Staff of 9 was overwhelmed with the various incidents throughout the County. The EOC staff also had to perform their regular duties during this period. Additional EOC Staff is needed in a large activation such as this event to lessen the burden and keep better track of work performed. This especially pertains to the Planning section.
2. Financial time and cost unit was unable to keep current information due to Staff being overwhelmed in tasks. A submission of costs and time needed to be delivered to the Finance Chief on a weekly basis.

Context and Analysis: The EOC Staff have been in a training and exercise mode for three years, even during COVID-19 when the group first began to formulate. The Staff has worked through various problem-solving exercises dealing with flooding, fires, power outages, rock slides, and snow events. Based on the team's training and cohesiveness, we were able to open an EOC and work through all the issues for those 11 weeks. Starting with the events being small and separate, allowed for the Staff to get a battle rhythm before the bigger events began to take place. Various EOPs and annexes were used and evaluated during this event.

Appendix A: IMPROVEMENT PLAN

This IP has been developed specifically for the County of Montezuma as a result of MC 2023 Water Runoff Incident.

Issue/Area for Improvement	Corrective Action	Primary Responsible Organization	Organization POC	Start Date	Completion Date
Hazard Mitigation Plan	Update the HMP based on water runoff issues	Office of Emergency Management	Emergency Manager Jim Spratlen	6/1/24	10/1/25
River stages accuracy	Adjust National data on river stages based on 2023 observations	NWS and NOAA	NWS Hydrologist, Mancos Marshal, Dolores Fire Chief	7/1/23	3/30/24
Swift Water Rescue protocols	Develop a protocol and procedures for teams to be followed and disseminated to all responders	Search and Rescue, Dolores Fire Protection District, Sheriff's Office	SAR IC, Fire Chief, Sheriff's Command Staff	7/1/23	3/30/24
Sand Bag removal	Develop a plan for removing of sand bags and storage for the future	Each Municipality	Department Heads assigned by jurisdiction	7/1/23	9/1/23
EOC Staffing	Recruit and train more staff in each position for the EOC	Office of Emergency Management	Emergency Manager	7/1/23	4/1/24
Financial Documentation	Develop a Financial Plan for gathering documentation	Office of Emergency Management	Emergency Manager	7/1/23	4/1/24
Dolores River Corridor	Maintenance by the Corp of Engineers to help mitigate debris choke points along the river from West Fork to McPhee.	Sheriff, OEM	Sheriff	8/1/23	5/1/25

APPENDIX B: EVENT PARTICIPANTS

Participating Organizations
Federal
FEMA
NWS
BOR
State
DFPC
DHSEM – Regional Field Managers
CDOT
CSU Extension
Montezuma County
Commissioners
PIO
GIS
Planning
Health Department
Natural Resources
Officer of Emergency Management/EOC Staff
Road and Bridge and Public Works
EMS
Fire
Law Enforcement
Search and Rescue
Communications Center
School Districts
Chambers of Commerce
Emergency Support Functions
Energy and Utility Companies
Dolores Water Conservation District
Local Jurisdictions
Ute Mountain Ute Tribe
City of Cortez
Town of Mancos
Town of Dolores