



Table 5-4 2024 Hazard Mitigation Actions

ID	Jurisdiction	Description/Background/Benefits	Hazards Mitigated	Goals	Lead Agency & Partners	Cost Estimate	Potential Funding	Priority	Timeline	Status & Implementation Notes. RED for 2024
Arapahoe County Mitigation Actions										
A-1 2010-05	Arapahoe County	Continued National Flood Insurance Program (NFIP) Participation. This includes continuing to comply with the NFIP's standards for updating and adopting floodplain maps and maintaining and updating the floodplain zoning ordinance.	Flooding	1,2,3,4	County Public Works, Engineering Services Division OEM SEMSWA	Staff Time	Dept. Budget SEMSWA	High	Ongoing	Annual Implementation. Majority of jurisdictions continue to participate in the NFIP, additional jurisdictional participation added as new Plan Action in 2015. Floodplain Management and Flood Damage Prevention Regulations in Section 4-3 of the Land Development Code have been updated to remain current with State and federal requirements: 2007, 2010, 2013, 2017, 2018, 2020, 2024 in Big Dry Creek Physical Map Revision (PMR) .
A-2 2010-07	Arapahoe County	Monitor proceedings of the Colorado Water Availability Task Force. This will help maintain awareness of conditions that affect Colorado's water supply, including snowpack, precipitation, reservoir storage, streamflow and weather forecasts. The task forces also provide a forum for interpreting potential flood hazard and water availability information. Meetings of the two task forces are held regularly and occasionally are held together.	Drought	2,3,4	OEM MHFD	Staff Time	Dept. Budget	Medium	Ongoing	Big Dry Creek PMR
A-3 2015-03	Arapahoe County	Continue public education about wildfire mitigation	Wildfire	1,2,3,4	OEM Fire Departments	\$0 - \$10,000	EMPG	High	Ongoing	Annual Implementation. Education about fire ban on the website. CWPP reviewed and current Plan is still current. Outreach events limited due to COVID. No updates required.



ID	Jurisdiction	Description/Background/Benefits	Hazards Mitigated	Goals	Lead Agency & Cost Partners	Estimate	Potential Funding	Priority	Timeline	Status & Implementation Notes. RED for 2024
A4 2015-05	Arapahoe County	Centralize the storage and dissemination of FOUO GIS data sets to help ensure the availability and improve the accuracy of data used across the County for numerous efforts. This will include better identification of critical facilities located in areas at increased risk of hazards.	Active Threat, Cyber Threat, Dam Failure, Drought, Flooding, Hazmat Release, Pandemic, Severe Summer Weather, Severe Wind/Tornado, Severe Winter Weather, Wildfire	1,2,3,4	Arapahoe County GIS OEM	\$0 - \$10,000	Dept budget	Low	2023	In Progress. Ongoing project with regional situational awareness viewer. Arapahoe GIS workgroup started meeting to get various GIS administrators to talk about sharing data and collaborating on layers. Plans to expand group beyond current members to increase information sharing. Received GIS data from Denver Water through signing an NDA. Portal project for NCR.
A-5 2015-06	Arapahoe County	Develop, maintain, centralize, and store CIKR GIS data sets. Help ensure the availability and improve the accuracy of data used across the County for numerous efforts. This will include better identification of critical facilities located in areas at increased risk of hazards.	Active Threat, Cyber Threat, Dam Failure, Drought, Flooding, Hazmat Release, Pandemic, Severe Summer Weather, Severe Wind/Tornado, Severe Winter Weather, Wildfire	1,2,3,4	Arapahoe County GIS OEM	\$0 - \$10,000	Dept Budget	Low	2025	In Progress. Arapahoe GIS workgroup meetings with special districts. Coordination with GIS administrators to get information from various special districts - SEMSWA, MHFD, National Guard to get various data sets. Data gathering delayed by COVID.
A-6 2015-09	Arapahoe County	Continued utilization of the MHFD alert system. Real- time alert system provides precipitation and flooding related notifications.	Flooding, Dam Failure	1,2,3,4	OEM MHFD	Staff Time	Dept Budget	Medium	Ongoing	Annual Implementation.



ID	Jurisdiction	Description/Background/ Benefits	Hazards Mitigated	Goals	Lead Agency & Partners	Cost Estimate	Potential Funding	Priority	Timeline	Status & Implementation Notes. RED for 2024
A-7 2015-10	Arapahoe County	Involvement in the MHFD Emergency Action Plans for the Holly & Englewood Dams. Participate in the roll- out of these newly produced EAPs and integrate into County EOP.	Dam Failure	1,2,3,4	OEM MHFD	Staff Time	Dept Budget	Medium	Ongoing	Annual Implementation. Participation by Arapahoe OEM, but info sent to partner agencies as well. OEM personnel in attendance and participated in training.
A-8 2015-11	Arapahoe County	Participation and adoption of the MHFD master plans affecting the County. Part of the master planning efforts involves identification of capital improvement projects and are based on future conditions hydrology (watershed level).	Flooding, Dam Failure	2,3,4	Arapahoe County: Bennett, Bow Mar, Centennial, Cherry Hills Village, Columbine Valley, Foxfield, Sheridan, Glendale, Greenwood Village, Littleton, Englewood, MHFD, SEMSWA	Staff Time	MHFD, SEMSWA	Medium	2020-2025	Annual Implementation. CHV continues to work with MHFD identifying capital projects and participating in studies. County PWD continue to participate in MHFD Master Planning. Other jurisdictions to verify with Planning Departments. County Public Works and Development along with SEMSWA continue to participate in MHFD Master Planning studies. 2023-Littleton continues to actively participate. A master plan and FHAD update for Jackass gulch is soon to be adopted, as well as SJCD6200 update
A-9 2015-12	Arapahoe County	Continued development of the Cherry Creek School District's collaboration meetings with first responders. Meetings are quarterly and currently involve nine agencies across the district.	Active Threat, Severe Summer Storm, Severe Wind/Tornado, Severe Winter, Weather	1,2,3,4	Cherry Creek School District OEM	Staff Time	Dept Budget	Medium	Ongoing	All cherry Creek school doors have been labeled with numbers and their MCI plans have been digitized with QR codes and shared across disciplines (schools, fire, police, county, etc.).



ID	Jurisdiction	Description/Background/ Benefits	Hazards Mitigated	Goals	Lead Agency & Partners	Cost Estimate	Potential Funding	Priority	Timeline	Status & Implementation Notes. RED for 2024
A-10 2015-21	Arapahoe County	Monitor Hazardous Materials commodity flow by rail through the BNSF and UP rail lines. Obtain and monitor commodity flow from the Burlington Northern Santa Fe and Union Pacific Railroads. Share that information with the Arapahoe County LEPC as appropriate	Hazmat	1,2,3,4	County LEPC Littleton	Staff Time	Dept Budget	Medium	Ongoing	Annual Implementation. Have received commodity flows from BNSF and UP. Need to obtain 2020 flows, delayed by COVID. 2023- Littleton relies upon fire dept (South Metro Fire) for this.
A-11 2015-22	Arapahoe County	Involvement in the Denver Water Emergency Action Plans for the Marston & Harriman Dams. Participate in the update and orientation of the Dam EAPs and integrate into County EOP.	Dam Failure	1,2,3,4	Littleton, OEM	Staff Time	Dept Budget	Medium	Ongoing	Annual Implementation. OEM personnel in attendance. Both Arapahoe and Littleton attend EAP meetings and update plans as applicable. 2023-Littleton has obtained the Denver Water EAP updates
A-12 2015-23	Arapahoe County	Participation and adoption of the MHFD Flood Hazard Area Delineation (FHAD) Studies affecting the County. New or updated flood risk areas are identified, providing communities with best available flood risk data for permitting and land development decisions.	Flooding	1,2,3,4	Arapahoe County Public Works, MHFD SEMSWA	Staff Time	MHFD SEMSWA Other Jurisdictions	Medium	Ongoing	In Progress. County Public Works and Development along with SEMSWA continue to participate in MHFD FHAD studies. 2x FHADs are Under Process: SJCD (N), SJCD (S) North Trib & DFA 6100.5 Crooked Run Cherry Creek Minor Tributaries in Arapahoe County.
A-13 2015-24	Arapahoe County	Continue participation in the NFIP Community Rating System (CRS) Program. Flood Insurance premiums are reduced to reflect the reduced flood risk based on the community's floodplain management programs and activities	Flooding	1,2,3,4	Arapahoe County Public Works, SEMSWA	Staff Time	Dept Budget	High	Ongoing	Annual Implementation. County Public Works and Development has been re- certified as an CRS 7 community effective 2019 CRS 5-year Cycle verification in 2024



ID	Jurisdiction	Description/Background/ Benefits	Hazards Mitigated	Goals	Lead Agency & Partners	Cost Estimate	Potential Funding	Priority	Timeline	Status & Implementation Notes. RED for 2024
City of Littleton Mitigation Actions										
M-1 2010-05	City of Littleton	Continued National Flood Insurance Program (NFIP) Participation. This includes continuing to comply with the NFIP's standards for updating and adopting floodplain maps and maintaining and updating the floodplain zoning ordinance.	Flooding	1,2,3,4	Public Works	Staff Time	Storm water enterprise fund	High	Ongoing	In Progress: Littleton continues participation in NFIP and adopting new information as published. 2023-Littleton continues participation in NFIP. New Little's Creek mapping was adopted in late 2020, and multiple CLOMRs and LOMRs have been processed 2024: Big Dry Creek PMR was adopted
M-2 2015-11	City of Littleton	Participation and adoption of the MHFD master plans affecting the County. Part of the master planning efforts involves identification of capital improvement projects and are based on future conditions hydrology (watershed level).	Flooding	2,3,4	Public Works	Staff Time	Storm water enterprise and cost sharing with MHFD	Medium	Ongoing	In Progress: Littleton continues to work with MHFD on master plans. Master plan and FHAD update in progress for Jackass Gulch. 2023- Jackass Gulch master plan is near completion. 2024/2025 – Slaughterhouse Gulch Master Plan
M-3	City of Littleton	Involvement in the Denver Water Emergency Action Plans for the Marston & Harriman Dams. Participate in the update and orientation of the Dam EAPs and integrate into City EOP.	Dam Failure	1,2,3,4	Emergency Management, Public Works	Staff Time	NA	Medium	Ongoing	In Progress. Littleton attends these meetings as they are announced, and we are invited. 2024: Littleton received updated EAPs from Denver Water. Have not seen a meeting
M-4 2015-23	City of Littleton	Participation and adoption of the MHFD Flood Hazard Area Delineation (FHAD) Studies affecting the County. New or updated flood risk areas are identified, providing communities with best available flood risk data for permitting and land development decisions.	Flooding	1,2,3,4	Public Works	Staff Time	Storm water enterprise and cost sharing with MHFD	Medium	Ongoing	In Progress. Littleton continues to work with MHFD on FHAD studies. FHAD for Jackass Gulch is nearly complete. SJCD6200 update in progress. Big Dry Creek FHAD update was adopted by city, and by FEMA.
M-5 2015-24	City of Littleton	Continue participation in the NFIP Community Rating System (CRS) Program. Flood Insurance premiums are reduced to reflect the reduced flood risk based on the community's floodplain management programs and activities	Flooding	1,2,3,4	Public Works	Staff Time	Storm water enterprise fund	High	Ongoing	In Progress. Littleton is a Class 5 community. 5-yr CRS Cycle verification is scheduled for 7/2022. 2023- Littleton retained Class 5 CRS rating in 2022 cycle verification.



ID	Jurisdiction	Description/Background/ Benefits	Hazards Mitigated	Goals	Lead Agency & Partners	Cost Estimate	Potential Funding	Priority	Timeline	Status & Implementation Notes. RED for 2024
M-6 2015-49	City of Littleton	Identify evacuation shelters and evacuation routes. Create and refine emergency vehicular evacuation routes and procedures specific to hazard types. Will help reduce loss of life and injuries.	Active Threat, Dam Failure, Flooding, Hazmat Release, Pandemic, Severe Summer Weather, Severe Wind/ Tornado, Severe Winter Weather, Wildfire	1,4	Public Works	\$0 - \$10,000	FEMA HMA grant	medium	5 years	In Progress. Rough evacuation routes established but may need more detail. No progress on shelters. Plans to coordinate with ARC for shelter surveying. 2023- no progress.
M-7	City of Littleton	Emergency Management Organization. Designate emergency manager and/or team for the city and update Emergency Operations Center program including planning and training of city staff. Will help reduce loss of life, property, damages, economic impacts	Flooding, Hazmat Release, Pandemic, Severe Summer Weather, Severe Wind/ Tornado, Severe Winter Weather, Wildfire	1,2,3,4	Littleton Police Department, Public Works	\$100,000	City general fund	High	5 years	New for 2020 Discussing a shared Emergency Manager FTE with Arapahoe County OEM. Preparing to discuss with City Council.



ID	Jurisdiction	Description/Background/ Benefits	Hazards Mitigated	Goals	Lead Agency & Partners	Cost Estimate	Potential Funding	Priority	Timeline	Status & Implementation Notes. RED for 2024
M-8	City of Littleton	Storm and Flood Master Planning. Develop and implement a storm drainage master plan to identify and mitigate flood risk from inadequate infrastructure or maintenance needs. Will help reduce loss of life and property, property damages. Severe summer storms are typically high intensity and lead to street flooding in the city of Littleton due to lack of storm sewer in many older neighborhoods. Hail can clog storm drains, exacerbating flooding. The storm drainage master plan will identify areas in need of storm sewer upgrades or system expansion.	Flooding, Severe Summer Weather	1,2,3,4	City of Littleton Public Works, Mile High Flood District	\$150,000	Storm Drainage enterprise fund	Medium	2 years	City Storm drainage master plan contract has been awarded and is in progress. 2023-Storm Drainage Master Plan is nearing completion. 2024 – Storm Drainage Master Plan is complete.
M-9	City of Littleton	City data network center. Evaluate and improve the city's network data backup center. This will help protect city data from cyber-attacks, reduce recovery time, and help ensure continuity of critical government services following an attack.	Cyber Threat	4	City of Littleton Information Technology, South Metro Fire	\$200,000 - \$250,000	City general fund, grants	High	5 years	Are in final contracting with a Tier 4 data center partner to assist with secure backups, redundancy, and disaster recovery. Estimate completion by end of 2022 2023- The project was finished in early 2023 and tested for functionality.



ID	Jurisdiction	Description/Background/Benefits	Hazards Mitigated	Goals	Lead Agency & Partners	Cost Estimate	Potential Funding	Priority	Timeline	Status & Implementation Notes. RED for 2024
M-10	City of Littleton	Power line undergrounding master plan and power line burial. Phase 1 would create an Undergrounding Master Plan to access funds in the Xcel Energy 1% undergrounding set aside. This plan would prioritize locations for burying overhead power lines throughout the city and identify costs for each project. Phase 2 would then implement line burials.	Severe Summer Weather, Severe Wind/ Tornado, Severe Winter Weather, Wildfire	2,3,4	City of Littleton Public Works, Xcel Energy	\$75,000 for Phase 1 master plan; Phase 2 costs TBD	Capital Improvements Budget, Xcel Energy Funds	Medium	2022-2025	City has begun the undergrounding master plan and expect completion in 2022. 2023-Master Plan completed. Have not yet started implementation.
City of Sheridan Mitigation Actions										
N-1 2010-05	City of Sheridan	Continued National Flood Insurance Program (NFIP) Participation. This includes continuing to comply with the NFIP's standards for updating and adopting floodplain maps and maintaining and updating the floodplain zoning ordinance.	Flooding	1,2,3,4	Sheridan Community Development	Staff Time	Staff Time Dept budget	High		Ongoing No update provided for 2024
N-2 2015-11	City of Sheridan	Participation and adoption of the MHFD master plans affecting the County. Part of the master planning efforts involves identification of capital improvement projects and are based on future conditions hydrology (watershed level).	Flooding	2,3,4	Sheridan Community Development	Staff Time	Staff Time Dept budget	Medium		Ongoing No update provided for 2024
N-3 2015-23	City of Sheridan	Participation and adoption of the MHFD Flood Hazard Area Delineation (FHAD) Studies affecting the County. New or updated flood risk areas are identified, providing communities with best available flood risk data for permitting and land development decisions.	Flooding	1,2,3,4	Sheridan Community Development	Staff Time	Staff Time Dept budget	Medium		Ongoing No update provided for 2024