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## MEMORANDUM City Manager's Office

**DATE:** April 24, 2025

**TO:** Jim Kaiser, Infrastructure Engineering Manager; CRS Coordinator  
Rachelle Plas, Civil Engineer  
Martin Postma, Principal Planner  
Ryan Doyle, Emergency Manager

**CC:** Mayor and Council  
Randy Grant, City Development Director  
Stephen Kelley, Fire Chief

**FROM:** Brett Henry, Executive Director of Utilities & Infrastructure   
acting for Tansy Hayward, City Manager

**SUBJECT:** Approval of April 2025 Review of 2023 Hazard Mitigation Actions

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I have reviewed the April 2025 assessment of the Hazard Mitigation Actions identified in the 2023 Hazard Mitigation Plan. This annual review is performed to maintain the City's rating in the Community Rating System (CRS). The City's Hazard Mitigation Plan is reviewed annually and is scheduled to be replaced in 2028.

To the best of my knowledge, this review was done in a manner that meets the requirements of the flood insurance review application and was performed in the best interests of the City of Thornton and its residents. The review meets my approval.

Please post this memo and the review listed below on the City's website for public access and review. By copy of this memo, the Thornton City Council is hereby advised that the review was completed.

Thank you.



#	Title and Description	Hazards Mitigated	Lead Agency & Partners	2025 Status & Implementation Notes
TH 1	<b>104th &amp; GHC South Tributary.</b> Reconstruct culvert and/or raise roadway east of Irma Drive intersection to provide 100-year conveyance.	Flood	City of Thornton;	<b>Not Started</b> - Will require coordination with Northglenn. Not currently funded by either city.
TH 2	<b>112th &amp; Cherry Street Area.</b> Reconstruct/expand storm sewer system to remove homes from the floodplain.	Flood	City of Thornton;	<b>In Progress</b> - Masterplan still in progress. No recommended alternatives yet.
TH 3	<b>136th Ave to Washington St on Big Dry Creek.</b> Realign channel, grade north of channel, reconstruct Washington Street south of channel to contain 100-year flows. Remove developable properties north of the channel from the floodplain; minimize flooding on property west of the channel. See Big Dry Creek MDP – pg. 11 for reach in question.	Flood	City of Thornton; adjacent developments	<b>Not Started</b> - Business Development is considering future funding for an engineering masterplan specifically for this reach for preliminary design. Not funded in 2025 CIP.
TH 4	<b>Create and Adopt Major Transportation Route Incident Response Plans.</b> Create and adopt an Incident Response Plan for the major traffic corridors and highways throughout the city, so that city staff can reference proper protocol when dealing with hazard events that impact those roadways. This will involve coordinate with CDOT and other jurisdictions to obtain best available data.	Drought, Earthquake, Flood, Expansive Soils/ Undermined Areas, Severe Storms, Public Health Hazards, Tornado/ Severe Wind, Winter Storm, Wildland Fire	City of Thornton; RTD, CDOT, State Patrol, other Fire Agencies	<b>Not Started</b> – Project has been delayed due to limited staffing capacity, lower prioritization, and the absence of identified funding, stakeholder engagement, and policy support.
TH 5	<b>Installation of Advanced Metering Infrastructure.</b> Advanced metering infrastructure (AMI) is an integrated system of smart water meters, communications networks, and data management systems that enables two-way communication between utilities and customers. The system allows real-time access to water usage information at each water meter and allows customers and Thornton to better manage water usage, detect water leaks, and operate the water distribution system. Currently, water usage is measured and recorded monthly. AMI is particularly beneficial in conservation efforts and during a drought. Usage restrictions or conservation efforts can be instantly measured, and quick actions can be taken to modify water usage.	Drought	City of Thornton;	<b>In Progress</b> - Project is estimated to be complete in December 2025.



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TH 6	<b>Big Dry Creek at RTD (UPRR) Railroad Embankment.</b> Construct engineered headwall, new pipe culvert, and additional culverts through the railroad embankment to prevent overtopping of 168th Avenue west of the railroad, west of Colorado. The additional culverts will need to be controlled by a high spillway to avoid creating downstream floods in minor, much less moderate storms, that hasn't occurred since the embankment and current culvert were constructed in 1956.	Flood	City of Thornton; Regional Transportation District	<b>Not Started</b> - This project likely will not occur until RTD extends the N-Line to the proposed SH-7 station, or annexation of Weld County property. This is not in the long-range Storm Water Utility CIP projection.
TH 7	<b>Big Dry Creek Sanitary Sewer Interceptor.</b> Reconstruct, seal, and/or raise manholes in the railroad backwater area to prevent flood flows that pond against the embankment from overwhelming the BDC Lift station on the east side of Colorado.	Flood	City of Thornton	<b>In Progress</b> - Phase 1 from York Street to SH-7 is complete. Phase 2 from York Street to the RTD railroad embankment will bid in summer 2025.
TH 8	<b>Continuity of Operations Training for Local Businesses.</b> The project would include a public education/ training session, material development, and general assistance in the development of business continuity plans.	All-hazards	Economic Development and Risk Management; Neighborhood Services	<b>Not Started</b> – Project has been delayed due to limited staffing capacity, lower prioritization, and the absence of identified funding, stakeholder engagement, and policy support.
TH 9	<b>Colorado Blvd at Big Dry Creek.</b> Reconstruct Bridge on new alignment to convey 100-year flow. New alignment would also serve to remove the Colorado Boulevard/SH 7 (160th Avenue) intersection from the Morrison Creek flood plain.	Flood	City of Thornton; MHFD	<b>Not Started</b> - This project is NOT on the stormwater fund future project priority list. It is anticipated that adjacent development will be the catalyst for this project. Currently there are no plans in for review for this development.
TH 10	<b>Uninterrupted Communications between City Departments During Emergencies.</b> Determine which City facilities currently have radios, assess the appropriateness and feasibility of hardwiring, and investigate other options to ensure constant and uninterrupted communications is maintained during disaster events across City departments and buildings.	Flooding, Severe Storms, Drought, Tornado, Wildland Fire, Subsidence, Earthquake	City of Thornton	<b>Not Started</b> – Project has been delayed due to limited staffing capacity, lower prioritization, and the absence of identified funding, stakeholder engagement, and policy support.



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TH 11	<b>Community Emergency Response Training Expansion.</b> The project would include funds, marketing capability, and potential part-time personnel to build upon the capability of the city CERT program.	All-hazards	Fire Department, Neighborhood Services; Police Department	<b>Complete / Annual Implementation</b> - Expansion of CERT Team is complete and growing. As of 2025, CERT Team now consists of 35 members which includes uniforms, equipment bags, quarterly trainings, annual exercises, and the FEMA - CERT Basic Course. 2025 Budget includes \$10,000 to support the CERT Team supplies, equipment, public education materials, and supporting city operations. Sustained budget funding will allow for annual maintenance of program and aimed growth to 60 members.
TH 12	<b>Create a Crisis Communication Plan.</b> The city Crisis Communication Plan will be a joint information center for staff to reference so that they're educated about proper communication during and following hazard events.	Earthquake, Flood, Expansive Soils/ Undermined Areas, Severe Storms, Public Health Hazards, Tornado/ Severe Wind, Winter Storm, Wildland Fire	Thornton Fire Dept., Police Dept., 911 Communications Center, Communications Office, City Manager's Office, Information Technology, Infrastructure, Community Services and City Council	<b>Not Started</b> - Lack of staffing capacity to initiate planning process. However, this plan will be added to the 2026-2029 OEM Strategic Plan.
TH 13	<b>Purchase a Mobile Command Post.</b> Purchase a mobile command post to be used to responding to and recovering from disasters. Plan would also have to include a warm storage area.	Drought, Earthquake, Flood, Expansive Soils/ Undermined Areas, Severe Storms, Public Health Hazards, Tornado/ Severe Wind, Winter Storm, Wildland Fire	City of Thornton; Undetermined	<b>Delayed</b> - Grant funded under Federal Earmark 2025 funds, but federal budget has not been approved. No funds have been received to complete purchase. If 2025 Federal budget is not approved, then project will be cancelled.
TH 14	<b>Create citywide debris management plan.</b> Creating a citywide debris management plan that will include mutual aid and cross communication between city departments.	Earthquake, Flood, Expansive Soils/ Undermined Areas, Severe Storms, Tornado/ Severe Wind, Winter Storm, Wildland Fire	Thornton Fire Department, Infrastructure, Communications, and Waste Management	<b>Not Started</b> - Lack of staffing capacity to initiate planning process. However, this plan will be added to the 2026-2029 OEM Strategic Plan.



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TH 15	<b>Emergency Shelter.</b> Create Emergency Shelter facility. Provide personnel, appropriate protective clothing, and sleeping beds/cots/bags/blankets. Identify food resources.	Flood, Tornado/ Severe Wind, Wildland Fire	Thornton Fire Department, Recreations, Thornton CERT, and American Red Cross	<b>In Progress</b> - Grant Funds allocated in 2025 to purchase Conex box of 200-250 shelter bed capacity at Margaret Carpenter Recreation Center. In addition, in 2025 the Shelter Plan will be updated, Shelter Operations Training offered to City Staff and CERT Volunteers, and a Full-Scale Sheltering Exercise will occur in Fall 2025.
TH 16	<b>Emergency Operations Center (EOC) Development Project.</b> The project would be the purchase via City Funds or state grants to buy equipment and technological improvements to the current conference room used as the EOC.	All-hazards	City of Thornton	<b>In Progress</b> - Grant Funds allocated in 2025 to purchase new virtual EOC Platform (\$36,000) to replace Microsoft Teams and grant funding (\$80,000) allocated for audiovisual, camera, and display technology upgrades to the physical EOC.
TH 17	<b>Evaluate technology backup resources.</b> Evaluate all critical facility backup systems. Replace/modify any systems that need it and ensure that they will all work properly in case of hazard event. Coordinate with local cell tower owners to identify infrastructure that may need backup power.	Earthquake, Expansive Soils/ Undermined Areas, Severe Storms, Tornado/ Severe Wind, Winter Storm	City of Thornton Risk Management, Emergency and Safety Administrator; All City Departments	<b>Annual Implementation</b> - Reevaluating business recovery options from a cyber security perspective and continuing to evaluate department software/hardware critical infrastructure.
TH 18	<b>Evaluate current standards and specifications for city infrastructure.</b> Evaluate all standards and specifications for city infrastructure. Update or revise codes to better mitigate effects of natural disasters.	Drought, Earthquake, Flood, Expansive Soils/ Undermined Areas, Severe Storms, Tornado/ Severe Wind, Winter Storm, Wildland Fire	Infrastructure & City Development	<b>Not Started.</b>
TH 19	<b>Evaluate lift stations exposure to flood risk.</b> Evaluate each lift station citywide and determine their exposure to flood risk. Develop plans to mitigate the risk at each station.	Flood	City of Thornton	<b>Not Started.</b>
TH 20	<b>Evaluate sewer/water crossings at roadways.</b> Identify all water and sewer crossings that have the potential to be exposed to scour and mitigate further degradation of crossings.	Flood	City of Thornton	<b>Not Started.</b>



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TH 21	<b>Expand and Improve Hazard Education for Seniors. Specific actions that could be taken include the following:</b> <ul style="list-style-type: none"> <li>- Developing a web page or web site specific to emergency tips that would be useful to seniors.</li> <li>- Providing more information about services that are available to them that could help make their homes more resilient to damage that could be caused by natural disasters.</li> <li>- Increasing the information provided in city publications about what seniors can and should do in the event of a natural disaster.</li> <li>- Providing information to seniors about how to file claims for property damage, hire qualified contractors to perform disaster recovery work, and avoid scams in the wake of a natural disaster.</li> <li>- The city should consider GIS mapping of key areas with vulnerable populations and plan accordingly for assisting with disasters that may affect these areas more i.e. mobile home parks, low income housing areas, places where language could be more of a barrier.</li> </ul>	All-hazards	City of Thornton; Education providers, Senior services agencies.	<b>Not Started</b>
TH 22	<b>Expand the CodeRed Program.</b> Research funding for additional CodeRed costs. The program is currently being implemented in the city so that staff and citizens are alerted by phone/email when a hazard takes place. Additional enhancements can be made to the system, but it would require additional funds. The primary audience for this would be the citizens and as the city grows more enhancements would need to be made.	Drought, Earthquake, Flood, Expansive Soils/ Undermined Areas, Severe Storms, Public Health Hazards, Tornado/ Severe Wind, Winter Storm, Wildland Fire	Thornton Fire Department, Police Department, 911-Communication Center, Communications Office	<b>In Progress.</b> No funding allocated. Planning, marketing, and testing CodeRED is occurring in 2025. Additionally, staff are reevaluating the capability of CodeRED compared to other national notification systems to identify notification systems with greater reach and capability.
TH 23	<b>Fire Code Updates.</b> Once every three years, adopt the latest edition of the International Fire Code, related codes, and appropriate local amendments.	Wildland Fire, Lightning	City of Thornton;	<b>Annual Implementation</b> - Fire Code updates have gone to City Council for approval in 2025.



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TH 24	<b>Fire Station Building Maintenance.</b> Annually, captains will inspect and evaluate stations for preventative needs. This will include checking windows and doors for security and function, ensuring all oxygen bottles and SCBA bottles within stations are secured, generators are being filled and functioning, and check stations for any other hazards. Building maintenance will ensure annual testing and inspections of generators by licensed contractors. All needs found will be forwarded as building maintenance requests go through chain of command for budgetary items.	Dam Failure; Earthquake; Expansive Soils; Flood; Water Contamination; Hazmat; Mass Transportation Incident; Public Health; Severe Cold Weather Storms; Severe Warm Weather Storms; Terrorism; Tornadoes; Wildland Fire	Thornton Fire Department; Building Maintenance	<b>Annual Implementation.</b> Continuing support from building maintenance to maintain facilities and generators. Captains have been assigned to all eight fire stations. Annual review and report generated for all City Fire Stations.
TH 25	<b>Fire Station Emergency Procedures.</b> The following response will be completed by each fire station in the event of a disaster. Stations will conduct a self-assessment to determine condition and functionality of station, equipment, and personnel. This will be reported to the Battalion Chief. Emergency call-back will be initiated if necessary and appropriate additional apparatus will be staffed/equipped. Crews will then initiate a windshield survey of their district with priority of assessing high value locations defined as critical infrastructure, high density populations, medical facilities, special need facilities and response support facilities. Findings will be reported to EOC. Specific hazards identified will be prioritized by EOC. Support staff will be needed to check on families of responders, respond to apparatus needs (specifically flat tires) and shuttle equipment and supplies.	Cyber; Dam Failure; Drought Earthquake; Expansive Soils; Flood; Water Supply Contamination; Hazmat; Mass Transportation Incident; Public Health; Severe Cold Weather Storms; Severe Warm Weather Storms; Terrorism; Tornadoes; Wildland Fire	Thornton Fire Department; EOC, TPD, FVS	<b>In Progress / Delayed</b> - Lack of capacity to focus on formal assessment process however informal plans for initial damage assessment and windshield assessments have been discussed with fire operations.
TH 26	<b>Loss Prevention Project – Regulation Update – Flood Notification System.</b> The project is a priority to switch over to a more up-to-date notification system and improve our reach to the community.	Flood	City of Thornton – Infrastructure, Floodplain Manager. Thornton Risk Management, Emergency and Safety Administrator; Thornton Communications Department	<b>In Progress</b> - Floodplain regulations being updated in summer 2025. Emergency management to develop and enhance notification system capability.



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TH 27	<b>Gravel Lakes Rip Rap Program.</b> Install rip rap on reservoir slopes.	Flood, Severe Storms	City of Thornton;	<b>In Progress</b> -There are approximately 130,825 linear feet of shoreline along the city's reservoirs. 62,761 linear feet have been stabilized with rip rap protection, and the remaining 68,064 linear feet remain unprotected. We completed 4,100 linear feet in 2024/2025.
TH 28	<b>Hoffman Drainage.</b> Reconstruct culvert under 88th Avenue and improve storm sewers in Hoffman from 88th to 91st to remove homes from the mapped floodplain.	Flood	City of Thornton; MHFD	<b>In Progress</b> - Construction is complete. LOMR process started in Q2 2025.
TH 29	<b>Identify local organizations that can assist with post-disaster needs.</b> Identify specific organizations and facilities that would be beneficial for the city to utilize with in case of a natural disaster. Establishing a point of contact and possibly creating a task force committee who can work together to plan for response efforts.	Earthquake, Flood, Expansive Soils/ Undermined Areas, Severe Storms, Public Health Hazards, Tornado/ Severe Wind, Winter Storm, Wildland Fire	Thornton Fire Department; All City Departments	<b>Annual Implementation.</b> The development and maintenance of resources and key partner lists is an annual implementation which includes updating local vendors, connecting with faith groups and non-profits, meeting new community groups and continually expanding our stakeholders. Planning teams are developed for specific plan needs and development.
TH 30	<b>Implement MHFD Projects Identified.</b> Implement MHFD's recommended projects that identify potential mitigation projects in the Floodplain within city limits.	Flood	City of Thornton; MHFD	<b>In Progress</b> - Brantner Gulch FHAD is officially adopted, working on recommended plan. Basin 4100 study is complete, and recommended projects are in the stormwater utility backlog list. All other cited Master Plans are in progress.
TH 31	<b>Lightning Detectors.</b> The project would be the purchase, installation, maintenance, and public education component for adding lightning detector technology at our city parks, golf course and outdoor areas.	Severe Storm	Community Services, Parks, Golf, & Recreation; Risk Management, Emergency and Safety Administrator	<b>Not Started</b> – Project has been delayed due to limited staffing capacity, lower prioritization, and the absence of identified funding, stakeholder engagement, and policy support.
TH 32	<b>Niver Creek Tributary M.</b> Replace culverts at Huron Street and 92nd Avenue with 100-year capacity culverts; channel improvements between 92nd Avenue and Huron Street for increased conveyance; new 60" storm sewer pipe in 92nd Avenue.	Flooding	City of Thornton; MHFD	<b>In Progress</b> - Construction is complete. LOMR process started in Q1 2025





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TH 33	<b>Public Outreach Project.</b> The project would become a priority for 2017 to develop a website, literature materials, and begin to build relationships in the community. In 2018 the priority would shift to improving outreach at special events, presentations, and promoting whole community planning.	All-hazards	Risk Management, Emergency and Safety Administrator; Neighborhood Services, Communications Department	<b>Annual Implementation / In Progress</b> - Public Outreach is an annual effort. Emergency Management webpage content was added in 2017 but needs updating, CodeRed webpage was added in 2023/24, and CERT webpage will be added in 2025. CERT volunteers support OEM at special events for public outreach and when capacity allows EM offers public education for community organizations.
TH 34	<b>Ozone Treatment at Wes Brown Water Treatment Plant.</b> Install ozone treatment process and associated pump station	Drought and Flood	City of Thornton;	<b>Canceled</b> - We are bringing Poudre water to the WBWTP. Ozone treatment will not be needed per current modeling.
TH 35	<b>Purchase Portable Cell Towers.</b> Purchase portable cell towers to enhance communication and potentially create citywide Wi-Fi. Would need to coordinate with local cell tower providers. Approximately 3-4 would be needed to cover the city. Doing so would also add the need for vehicles to transport the towers.	Earthquake, Flood, Expansive Soils/ Undermined Areas, Severe Storms, Tornado/ Severe Wind, Winter Storm, Wildland Fire	City of Thornton; Fire Department	<b>Delayed</b> – Project has been delayed due to limited staffing capacity, lower prioritization, and the absence of identified funding and stakeholder engagement.
TH 36	<b>Reduce expansion of Emerald Ash Borer.</b> Prioritize affected tree removal and disposal and create a plan to mitigate further loss of vegetation to Emerald Ash Borer.	Wildfire	Parks & Recreation	<b>In Progress</b> - Almost all City of Thornton Trees are entered into our inventory and given a rating of good, fair, and poor, noting any hazard and removing those trees. For residential trees, a notice of correction letter is sent to residents for mitigation.
TH 37	<b>Bring commercial buildings out of the floodway.</b> Develop a plan to coordinate with local commercial building owners to relocate businesses out of the floodway.	Flood	Economic Development	<b>In Progress</b> - 2025 Code update is introducing freeboard requirements for new construction in the floodplain. 2027 I-codes will have stronger requirements per recent ASCE-24 (2024 edition).
TH 38	<b>School Tributary.</b> Railroad/Old Welby Road to Monroe Street; Phase 1, Catalina Apartments driveway to west of Monroe Street being jointly funded Thornton and MHFD.	Flood	City of Thornton; TBD	<b>In Progress</b> - Completion across the "Welby Station" subdivision to and across the RTD ROW is pending development to fund improvements.



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TH 39	<b>Stockpiling Emergency Shelters.</b> Creating stockpiles in each of the city's emergency shelters. This could include water, heat blankets, education materials, food, etc. Staffing would also need to be planned out. An added layer to this would be to identify additional areas to add as emergency shelters.	Drought, Earthquake, Flood, Expansive Soils/ Undermined Areas, Severe Storms, Public Health Hazards, Tornado/ Severe Wind, Winter Storm, Wildland Fire	City of Thornton; TBD	<b>In Progress</b> - Grant Funds allocated in 2025 to purchase Conex box of 200-250 shelter bed capacity at Margaret Carpenter Recreation Center. In addition, in 2025 the Shelter Plan will be updated, Shelter Operations Training offered to City Staff and CERT Volunteers, and a Full-Scale Sheltering Exercise will occur in Fall 2025.
TH 40	<b>Stockpiling Fire Stations.</b> All stations shall be inspected and evaluated for alternative staffing and uses in the event of a disaster. Stations will be measured for sleeping space and staffing of extra apparatus. Station 5 shall be evaluated as alternative EOC and/or dispatch site. Station 5 also houses Emergency Management trailer with extra cots and bedding.	Disasters requiring special attention	Thornton Fire Department; Emergency Manager	<b>In Progress</b> - All stations evaluated. Station 6 has capability for alternate sheltering and Station 1 as Department Operations Center/ backup EOC capability.
TH 41	<b>Tertiary Data Center Location.</b> The project would focus on identifying a new data center location, as well as resources to house there. An option could be "cloud" based, which would provide access from anywhere, but would require a significant shift in ownership and housing of City data. Internet services would be validated and enhanced to provide multiple connections and replication of City data. Services would need to be ordered to facilitate the new server and storage needs, as well as testing to validate connectivity.	All-hazards	City of Thornton - IT Department; City of Thornton - All Departments	<b>In Progress</b> - Working through IGA with Adams County.
TH 42	<b>Thornton as Emergency Transportation Provider for Seniors.</b> Identify and organize city staff and city vehicles, and/or work to mobilize volunteers within the community to provide necessary transportation for seniors in emergency situations to access required medicines, medical treatments, food, or other necessary services, equipment, or provisions.	All-hazards	City Emergency Management, Recreation, Active Adult, Innovage, RTD, Adams 12 & 27J Schools	<b>Not Started</b>



#	Title and Description	Hazards Mitigated	Lead Agency & Partners	2025 Status & Implementation Notes
TH 43	<b>Thornton Facilities as Temporary Shelter for Seniors.</b> Maintain and enhance the city of Thornton's ability and capacity to provide emergency shelter for senior citizens whose homes have been damaged by one or more natural hazards. Such improvements may include maintaining and improving relationships with the Red Cross and other organizations.	All-hazards	City of Thornton; Red Cross	<b>In Progress</b> - Shelter Resources are being stockpiled in 2025 to include bariatric and special needs cots, as well as resources to support those with access and functional needs. Currently no plans exist to separate the senior population into their own shelter due to resource and staffing limitations.
TH 44	<b>Community Tornado Shelters.</b> The project would include the building and training of local manufactured home communities to use and maintain local tornado shelters.	Tornados and Severe Storms	City Development and Neighborhood Services; Risk Management	<b>Not Started</b> – Project has been delayed due to limited staffing capacity, lower prioritization, and the absence of identified funding, stakeholder engagement, and policy support.
TH 45	<b>Utilize Local Organizations for Messaging.</b> Work with local organizations like Community Faith United to notify community members about hazards. These orgs are a great outlet for distributing news and resources. They are great places to utilize message for post disaster events and to increase people's awareness about local hazards.	Drought, Earthquake, Flood, Expansive Soils/ Undermined Areas, Severe Storms, Public Health Hazards, Tornado/ Severe Wind, Winter Storm, Wildland Fire	Thornton Emergency Management	<b>Annual Implementation / In Progress</b> - Emergency Management works annually working with community organizations and networks to share preparedness information and build partnerships. In 2025, efforts are focused on faith-based partnerships through the Faith-Based Community Alliance (FBCA) and meeting with local HOAs.
TH 46	<b>Washington St and GHC South Tributary.</b> Reconstruct culvert to convey 100-year storm – may require lowering the Denver Water - Broomfield water main.	Flood	City of Thornton, MHFD	<b>In Progress</b> - Project is through preliminary design. Final design completed in 2025. Xcel utility relocations in 2025. Remaining construction including Denver Water line lowering to begin in 2026
TH 47	<b>York St &amp; Big Dry Creek, E-470 to York.</b> Replace bridge to handle 100-year flows, eliminate overtopping. Realign channel upstream of York to improve hydraulic efficiency (see "map" page 14 in the Tiff directory)	Flood	City of Thornton	<b>In Progress</b> - Construction completion in summer 2025. LOMR to follow.



#	Title and Description	Hazards Mitigated	Lead Agency & Partners	2025 Status & Implementation Notes
TH 48	<b>Hazardous Tree Mitigation.</b> Develop and implement a plan to conduct a city-wide assessment of trees located on public lands and rights of way to determine and catalog the status of their health and if the potential of falling branches or entire trees pose a threat to people and improvements in the area. Implement actions to remove dangerous limbs and dead, sick, or dying trees to reduce the threat that they pose.	Severe Storms, Tornadoes and Severe Winds, Winter Storms, Floods	City of Thornton;	<b>In Progress</b> - Almost all City of Thornton Trees are entered into our inventory and given a rating of good, fair, and poor, noting any hazard and removing those trees. For residential trees, a notice of correction letter is sent to residents for mitigation.
TH 49	<b>Address Risks Associated with Climate Change.</b> The Colorado Climate Change Vulnerability Study produced by the University of Colorado and Colorado State University provides 35 recommendations divided into four categories: assessing, planning and managing for resilience; developing and sharing information; public engagement; and building capacity.	Drought, Extreme Temperatures, Flood, Severe Storms, Public Health Hazards, Winter Storm, Wildland Fire	City of Thornton; Tri-County Health Department	<b>Not Started</b>
TH 50	<b>Flood Threat Assessment &amp; Flood Risk Communication (Website development).</b> Inventory public assets at risk from flooding and categorize the corresponding risk. Develop an interactive public website tailored to each jurisdiction to educate people about flood risks and specific actions they can take to keep safe during dangerous conditions and minimize flood-related losses.	Flooding	City of Thornton; MHFD	<b>In Process</b> - MHFD developing a web-based tool.
TH 51	<b>Grange Hall Creek - 104th Tributary, east of Birch St.</b> The flume carrying the 104th Avenue Tributary over the Colorado Agricultural Canal has adequate capacity for the 100-year event. Floodwaters may, however, overtop the channel and threaten residential structures in the area due to a poorly defined channel upstream. It is proposed that the earth berm west of the canal be raised 2 feet to ensure that floodwaters are successfully funneled to the flume. This would prevent floodwaters from overtopping the canal and threatening residential buildings.	Flooding;	City of Thornton - Infrastructure; MHFD	<b>Canceled</b> - Study completed and revealed no economical solution. Recommended solutions archived for future opportunities when flume reaches end of useful life or adjacent development occurs to support the project.
TH 52	<b>Niver Creek Tributary M - Thornton Parkway to E. Balsam Dr.</b> Increase storm system capacity to remove 22 residential structures from the floodplain.	Flooding;	City of Thornton; MHFD	<b>Not Scheduled</b> - Due to Stormwater Utility CIP not having sufficient funds to complete.



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TH 53	<b>Niver Creek at 96th Ave.</b> Replace existing 78" CPM with dual 8'x5' RCBC. Remove 7 residential structures from the floodplain, current culvert does not have capacity for 100-year flows.	Flooding;	City of Thornton; MHFD	<b>Not Scheduled</b> - Due to Stormwater Utility CIP not having sufficient funds to complete.
TH 54	<b>Niver Tributary N at Huron St.</b> This project would replace the existing crossing with dual 8' x 8' RCBC at Huron St for the 100-yr event and replace concrete channel from Huron St to Thornton Parkway with grass lined channel, including drop structures. This work is as identified in the Urban Drainage Niver Creek Major Drainageways plan.	Flooding;	City of Thornton; MHFD	<b>In Progress</b> - Funding for design in current five-year CIP. Construction funding not identified.
TH 55	<b>Niver Creek crossing at Grant St and 84th Ave.</b> Increase storm sewer capacity for 100-year flows. Remove Grant Street and 84th Ave from floodplain.	Flooding;	City of Thornton; MHFD	<b>Not Scheduled</b> - Due to Stormwater Utility CIP not having sufficient funds to complete.
TH 56	<b>Basin 4100 Outfall Improvements.</b> Construct a defined channel and berm east of Colorado Blvd, replace existing culverts at Old Riverdale Road, and construct a defined channel with drop structure to SPR.	Flooding;	City of Thornton; MHFD	<b>Not Scheduled</b> - Due to Stormwater Utility CIP not having sufficient funds to complete.
TH 57	<b>Infrastructure for water reuse.</b> The city should plan to add the technology to reuse water that is discharged from households. This would mitigate the effects of drought, effectively adding a new water supply for the city. It would also mitigate the long-term effects of global warming which is drying out the South Platte River Basin. Even if precipitation remains the same the basin will dry more due to a longer growing season and greater evaporation due to higher temperatures. The reused water could also be used to increase the health of the city's tree canopy and expand it.	Drought/Excessive Heat;	Thornton Water; Infrastructure	<b>In Progress</b> - Water Resources is currently engaged with the City Attorney's office and the Building Department to draft an ordinance to implement the Colorado Legislature's bill (HB24-1362) that allows for various uses for graywater. The ordinance and processes for permitting and tracking will be in place by December 31, 2025.



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TH 58	<p><b>Infrastructure and technology for rationing water.</b> The Thornton Drought Management Plan cites water rationing as one of two measures the city can take if there is an extreme disruption to water supplies. (The other is a drought surcharge that is contained in the recent rate ordinance.) The plan anticipates that this would be caused by a multiple-year drought and the resulting low streamflow. Thornton relies on diversions of surface water from the South Platte River and Clear Creek to replenish storage volumes for treatment and distribution to residents, businesses, and other entities such as the Adams 12 School District. Currently there is no plan in place because the infrastructure necessary for rationing does not exist is the city's system. Thornton is also building a pipeline for water supply from the Cache la Poudre River which will also depend on streamflow. Implementing rationing infrastructure prior to a crisis is imperative.</p>	<p>Drought/Excessive Heat; Public Health Hazards; Water Supply Contamination;</p>	<p>Thornton Water; Infrastructure</p>	<p><b>In Progress</b> - Thornton is completing installation of Advanced Metering Technology (AMI) technology which will be in place by December 31, 2025. AMI reports can generate daily data of water volumes used by customers to identify high water users, monitor watering outside of permanent watering rules, and restrictions that could be imposed after a drought designation. Monitoring will allow customer notifications about high water use in a more timely fashion than the current process. Data will allow customers to monitor use on their own.</p>
TH 59	<p><b>Installation of solar energy to boost the move to renewable energy and lessen evaporation from Thornton's facilities.</b> Thornton can move quickly to embrace renewable energy and meet its goals under the Energy Action Plan with Xcel by installing solar PV on reservoirs and irrigation ditches. This would reduce evaporation from city facilities and would bolster the city's raw water supplies. Evaporation from reservoirs currently takes around 5,000 acre-feet (1.6 billion gallons) out of the raw water supply annually. Longer-term this strategy would help to mitigate the effects on global warming.</p>	<p>Drought/Excessive Heat;</p>	<p>Thornton Water; Infrastructure</p>	<p><b>In Progress</b> - Current plan is to continue to research available technologies and evaluate Thornton ditches and reservoirs for a possible project fit. We have not found one yet, but it is an ongoing effort. Also, the Thornton Water Treatment Plant is solar ready and engineering hopes to win approval of the installation during the 2026 budget process.</p>



#	Title and Description	Hazards Mitigated	Lead Agency & Partners	2025 Status & Implementation Notes
TH 60	<b>Multifactor Authentication.</b> Require Multifactor Authentication to gain access to city and SCADA networks. require enhanced password requirements and frequent password changes, set antivirus and antimalware programs to conduct regular scans, enable strong SPAM filters to prevent phishing emails from reaching end user, update software and patches, filter network traffic. assign to Cybersecurity Analyst in IT.	Cyber Security Attack;	IT; Infrastructure	<b>In Progress</b> - Implemented and ongoing maintenance in progress. Sustained evaluation of security requirements for multifactor authentication systems.
TH 61	<b>Topographical study, analysis, and implementation of natural snow fencing or other snow drift mitigation throughout Thornton.</b> Historically, Thornton experiences significant snow drifts during major winter storms that block roadways, strand motorists, decrease emergency response times or create scenarios where responders cannot get apparatus, and are resource heavy to address for plowing and road closure impacting the maintenance of the rest of the city. The goal would be to determine optimal locations in the City where snow drifts and access issues occur, determine funding opportunities, solidify funding, and deploy earthen berms, natural snow fencing, and/or other methods that decrease snow impacts on city roadways.	Severe Cold-Weather Storms;	Thornton Fire Department - Emergency Management; City Planning, Infrastructure, Forestry, and GIS	<b>Ongoing</b> - There are six locations that the city monitors for drifting. None presently show a need for permanent snow fences to mitigate road closures. Road closures historically have been due to crashes and/or human error preventing plows from accessing the road. Monitored segments include: * Thornton Pkwy - I-25 to Conifer Rd, West bound, * 88th Ave - Monroe Street to old Welby Rd, West bound * 120th Ave - Quebec Street to Niagara Street, West bound * Quebec Street - Hwy 7 to 152nd Ave, south bound * 168th Ave - York Street to Colorado Blvd, West bound * Washington Street - 152nd Ave to 148th Ave.



#	Title and Description	Hazards Mitigated	Lead Agency & Partners	2025 Status & Implementation Notes
TH 62	<b>Fuels management strategy and proscribed burns in open space areas to reduce wildland fire risks.</b> The Marshall Fire, Black Forest Fire, and Thornton Quebec & 136th Fire have shown that wildland fire risk is not only limited to the Wildland Urban Interface in the Foothills. Open spaces when left unmanaged can cause fuel loads to build up and when combined with favorable weather conditions could lead to an uncontrolled wildland fire threatening any Thornton neighborhood with its proximity. In addition, with the environmentally and drought friendly landscaping initiatives the city is implementing, the need for fuel managements in our open spaces and anywhere native vegetation is reintroduced grows. This project would include a Wildland Fire management strategy, policy, plan, and schedule to be developed within the appropriate city departments and external agencies. As well as the actual live burning of high-risk open spaces on an appropriate rotational schedule.	Wildland Fire;	Thornton Fire Department - Emergency Management; Parks and Recreation, City Manager's Office, Communications, Infrastructure, Adams County SO, State DFPC, and more	<b>Not Started</b> - Identified in long-term strategic plan.
TH 63	<b>Air Quality Monitoring.</b> This project would include the planning and deployment of stationary air quality monitors throughout the city to monitor air quality for public/environmental health, EPA reporting, but especially to provide a quality measuring along I-25, US-85, Commerce City and E-470, to assist with tracking fallout from major hazmat spill in the city.	Hazardous Materials;	Thornton Fire Department - Emergency Management; Infrastructure, City Planning, City Manager's Office, and Adams County LEPC	<b>Not Started</b> – Project has been delayed due to limited staffing capacity, lower prioritization, and the absence of identified funding, stakeholder engagement, and policy support.
TH 64	<b>Weather Stations at City Buildings.</b> The project would include partnering with the NWS to put weather station monitor on key city buildings to improve data sharing with the NWS, improve forecasting, and weather conditions monitoring during weather related events.	Drought/ Excessive Heat; Flooding; Severe Cold-Weather Storms; Severe Warm-Weather Storms; Tornado/ Microbursts;	Thornton Fire Department - Emergency Management; Building Maintenance, Management Services, Infrastructure, and National Weather Service	<b>Not Started</b> – Project has been delayed due to limited staffing capacity, lower prioritization, and the absence of identified funding, stakeholder engagement, and policy support.





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TH 65	<b>Cyber Security Response Plan.</b> This project is to develop a Cyber Security Response Plan as part of the City's EOP structure, that addresses prevention strategies, roles and responsibilities, authorities, damage assessment, response procedures, investigations, and more for a cybersecurity incident.	Cyber Security Attack;	Thornton Management Services - Information Technology; Thornton Police Department, City Manager's Office, Communications, & external agencies as needed.	<b>Not Started</b> - Lack of staffing capacity to initiate planning process. However, this plan will be added to the 2026-2029 OEM Strategic Plan.
TH 66	<b>Vehicle Borne Attack Prevention at Margaret Carpenter Recreation Center.</b> Annually the City hosts its largest public events, Winterfest, Thorntonfest and July 4th Fireworks, at the Margaret Carpenter Recreation Center fields drawing crowds of 10,000 up to 60,000 with both driving and walking pedestrians. In 2018 a Threat and Risk Assessment of the facility by the Dept. of Homeland Security, identified vehicle borne attack as a potential danger for the events on the field from Colorado Blvd. This project would include determining funding and deployment of natural features (i.e, earthen mounds or boulders) along the field to reduce risk for accidental or intention vehicle borne threats to the public at special events.	Terrorism/Active Shooter;	Thornton Fire Department - Emergency Management; Thornton Police Department, Parks and Recreation, Infrastructure	<b>In Progress</b> - Initial conversations in 2023 with Parks Special Projects for future redesign of grass mounds and boulders along Colorado Blvd. No funding allocated for redesign or construction. Discussions in 2024/25 of applying for HSGP Grant through the NCR-UASI for vehicle barriers. However, plan is to request barriers through mutual aid from regional partners for July 4th, 2025, before applying separately. Temporary solutions of utilizing city vehicles along Colorado Blvd. during special events.



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TH 67	<b>Hazard Mitigation in other City Plans.</b> Incorporate the concepts of hazard mitigation planning in the development, amending, and updating of other city planning documents.	Cyber Security Attack; Dam/ Levee Failure; Drought/ Excessive Heat; Earthquakes; Expansive Soils/ Undermined Areas; Flooding; Water Supply Contamination; Hazardous Materials; Mass Transportation Incident; Public Health Hazards; Severe Cold-Weather Storms; Severe Warm-Weather Storms; Terrorism/Active Shooter; Tornado/ Microbursts; Wildland Fire	Thornton City Development, Policy Planning and/or other Departments & Divisions as appropriate	<b>Not Started</b> - An update to the Thornton Comprehensive Plan is scheduled to begin in 2026. Part of the process of this update should be incorporating more elements which are supportive of hazard mitigation. RFP Template considerations for mitigation.
TH 68	<b>Hazard Planning in the Development Code.</b> The City of Thornton is undertaking a major update of its Development Code that will include many substantive changes to the city's regulations for land use and development. As one part of this update, the city will work with consultants to evaluate and propose changes or new standards that could address aspects of hazard mitigation. If adopted, having codified regulations would strengthen the city's resiliency against hazards.	Drought/ Excessive Heat; Flooding;	Thornton City Development Department;	<b>In Progress</b> - Improvements were made in the updated development code nearing completion. Most changes relevant to hazard mitigation would be found within Article 8, pertaining to landscaping. City standards and specs update is also in progress.
TH 69	<b>Building Code Updates.</b> Complete an update to the building codes every three years.	Dam/Levee Failure; Drought; Earthquakes; Expansive Soils; Flooding; Water Supply Contamination; Hazmat; Mass Transportation Incident; Public Health Hazards; Severe Cold-Weather Storms; Severe Warm-Weather Storms; Terrorism; Tornado/ Microbursts; Wildland Fire;	Thornton City Development; None	<b>Annual Implementation</b> - International Building (and related) Code updates, including local amendments are typically adopted by the city the year after they're published.