



Annual Multi Hazard Mitigation Plan Update City of Longmont 2023

Introduction

The City of Longmont was included in the Boulder County Hazard Mitigation Plan update which was approved in July of 2022. Each year the Community Rating System (CRS) requires that an annual report be prepared for submittal to ISO (FEMA's CRS contractor) by May 1. The following table was included in the updated Plan and will be used to identify the progress on the planned mitigation strategies. In addition to updating the table below, the more detailed action plans summarized below were also updated for 2023.

City of Longmont Mitigation Strategy

A hazard mitigation action planning committee re-evaluated the Hazard Identification Risk Assessment (HIRA) to reassess risk based on actions taken since the previous plan was adopted. The following mitigation actions were identified and evaluated by the committee. These represent new or continued actions identified in supporting plans and documents or actions identified by the committee that support overall hazard mitigation.

Staff identified projects in part by building off previously identified implementation strategies in related planning and sustainability documents. Specifically, the following documents were used to develop these strategies: Tree Canopy Study (2008), Climate Action Task Force Recommendations (2020), Water Efficiency Master Plan (2017); the development of strategies was also more broadly informed by the Envision Longmont Multimodal & Comprehensive Plan (2016), the Sustainability Plan (2016), and efforts of the 2012 Joint Front Range Climate Change Vulnerability Study (2012). In addition, these were vetted through detailed conversations with City staff to identify preferable options for moving forward.

Other mitigation projects listed below are proposed solutions from other studies, existing conditions, and on-going programs. These descriptions are included in the detailed Mitigation Action descriptions below.

Annual Update Process

This year the following actions were taken to update the Mitigation Strategy Plan

Review of Mitigation Actions

Each City department responsible for the mitigation action included in the table was asked up to review the action plan and update as necessary.

Council Approval

The annual update to the Boulder County Hazard Mitigation Plan was submitted to Longmont's City Council on XXX.

Public Outreach

This annual update was included on Longmont’s **What’s New** section of the website ([add link](#)) and included in City Line newsletter that is included with every utility bill within the City of Longmont as shown in Attachment [1](#).

Longmont Mitigation Action Summary and Status

Mitigation Action Title	Responsible Office	Hazard(s)	2023 Status
Floodplain Management	Longmont Department of Public Works and Engineering (PWE)	Flooding	On-going
Expand the City of Longmont CERT Program	Longmont Office of Emergency Management (OEM)	Multi-Hazard	Eliminated
Fire Mitigation at Button Rock Preserve	Parks and Natural Resources	Wildfire	On-going
Community Rating System (CRS)	PWE	Flooding	On-going
St. Vrain Creek Improvement Project/ Resilient St. Vrain Project	PWE	Flooding	On-going
Channel Improvements on SVC at 119 th Street	PWE	Flooding	Removed from projects list
Increase Tree Canopy	Parks and Natural Resources	Extreme Heat	On-going
Vulnerability Assessment for climate impacts, development, and engagement strategy	Strategic Integration Department, Sustainability	Extreme Heat, Flood	In progress
Neighborhood/Community-based Resilience Plans	PWE, Planning, Community & Neighborhood Resources Div. And Humans Services Dept., Sustainability	All Hazards	In progress
Outdoor water efficiency/conservation		Drought, Extreme Heat	On-going
Upgrade Power System Protection	Longmont Power & Communications (LPC)	Wildfire	Starting in 2024
Tree Trimming near Power Equipment	LPC	Wildfire	On-going
Power Grid Modernization	LPC	Wildfire, Long Term Electric Power	On-going

Mitigation Action Title	Responsible Office	Hazard(s)	2023 Status
		Outages, Climate Emergency	
Stormwater Master Plan	PWE	Flooding	Complete
Natural Channel Maintenance Plan	Parks and Natural Resources	Flooding	On-going
Storm Drainage Criteria Manual	PWE and MS4	Flooding	Planned to start in 2024
Ecological Restoration	Parks and Natural Resources	Flood, Wildfire, Drought	On-going
Floodplain Regulations Update	PWE	Flooding	On-going
Stormwater System Improvements	PWE	Flooding	On-going
Airport Road Flood Protection Project (Western Boundary Flood Protection Project)	PWE	Flooding	Removed from project list

Longmont Mitigation Action Plan

Below is the list of mitigation actions.

Name of Action: Floodplain Management

Hazard Addressed: Flooding

Mitigation Goal or Objective Addressed: Goals 1, 2, and 5

Community Lifeline Addressed: Safety and Security| Food, Water, Shelter | Transportation

Issue/Background: There are 4 FEMA mapped floodplains and 2 City-mapped floodplains within the City of Longmont. The 2013 flood severely damaged the area around the City’s two largest creeks, St. Vrain and Left Hand Creeks. The State and FEMA updated the Flood Insurance Study (FIS) and Flood Insurance Rate Maps for those two creeks after the 2013 flood resulting in a much larger floodplain for St. Vrain Creek and some changes to the Left Hand Creek mapped floodplains. However, the other two FEMA mapped creeks were not updated with the current mapping update. The other two creeks through Longmont (Dry Creek No. 1 including Old Dry Creek and Spring Gulch No.1). appear to not have been updated since the floodplains were first delineated in 1977.

Other Alternatives: No action

Action Status: No actions have taken place to date to restudy the two FEMA mapped creeks that were not studied under the CWCB’s CHAMP project.

Responsible Office: Public Works and Engineering Department

Priority (High Medium, Low): High

Cost Estimate: \$225,000 to update modelling and mapping for both creeks.

Existing or Potential Funding: Potential Longmont funding is available. Legislature for a rate increase to

the Stormwater Drainage Fund was approved in 2021 increasing Stormwater rates by 14.2% in 2022 and 12% in 2023. The stormwater drainage rate increase will continue in 2024 to 13% resulting in \$2,489,203 in 2024 for projects. For larger projects outside the stormwater funds available, there is the potential to apply for Federal funding.

Benefits (avoided losses): Minimize flood related damage. Development has occurred on both sides of both creeks and there is no doubt that the floodplains have changed, and Longmont is not managing the actual risk these creeks present especially for new development.

Potential or current subject matter expertise: Hydrology and Hydraulics modeler expertise, GIS expertise, FEMA submittal expertise, and Project Management. Longmont can manage this project in-house and has FEMA submittal expertise, but Longmont does not have the in-house expertise to do floodplain modelling or mapping.

Schedule: Continuing in Process

2023 Update: Proposal to remodel and remap Spring Gulch #1 were solicited in 2023. The final 2024 budget includes \$225,000 for this study. It is unlikely that a request for grant funding for this action will be submitted for in 2024.

Name of Action: Expand the Longmont Community Emergency Response Team (CERT) Program

Hazards Addressed: Multi-Hazard

Mitigation Goal or Objective Addressed: Prepares residents for multiple types of hazards and engages them in the planning process. Goals 1, 4

Community Lifeline Addressed: Safety and Security

Issue/Background: After the 2013 Floods many residents voiced that they were not prepared for the severity of the emergency. Many residents left behind important documents and items, such as medication, when they were evacuated to a shelter.

Other Alternatives: Expand the BeReady Longmont Preparedness Outreach Program

Action Status: In Progress

Responsible Office: City of Longmont Office of Emergency Management (OEM)

Priority (High, Medium, Low): Medium

Cost Estimate: \$10,000 (\$2,000 per year)

Existing or Potential Funding: Colorado North Central Region Citizen Corps Grants

Benefits (avoided losses): This education program will better prepare our residents to act during an emergency saving the time it takes them to take lifesaving action.

The program also prepares residents to help one another during an emergency. Groups can help staff a shelter, staff the EOC and assist in river watch during run off season.

Potential or current subject matter expertise: CERT Trainers, community outreach specialist, program management, grant specialist.

Schedule: Continuing in Process. By 2026, the plan is to educate and train 250 (50/year) community members to prepare themselves, their families, and be prepared to assist their neighbours after an

emergency or disaster. FEMA recognized CERT Basic Courses are delivered twice a year.

2023 Update: City of Longmont OEM with the support of volunteers successfully put on two CERT basic classes in 2023 graduating 27 students. Due to waning interest in the program OEM will be working on creating a localized abbreviated 1-day course in an attempt to reach more of the community. There are no plans to submit for grant funding for this action in 2024.

Name of Action: Fire Mitigation at Button Rock Preserve

Hazards Addressed: Wildfire

Mitigation Goal or Objective Addressed: Goals 2

Community Lifeline Addressed: Food, Water, Shelter

Issue/Background: City of Longmont's Button Rock Preserve is a reservoir watershed with a mixed conifer forest comprised primarily of ponderosa pine interspersed with Douglas-fir. The Preserve surrounds critical infrastructure including Button Rock Dam and Ralph Price Reservoir – the primary drinking water source for 110,000 people in Longmont and Lyons. While fire is often beneficial for Front Range ecosystem health, decades of fire exclusion policy have increased the risk of extensive high severity stand replacing fires leading to a high threat to life, property, and infrastructure, as well as important natural resources and ecosystem services. Following the Big Elk fire adjacent to Button Rock Preserve, the City implemented the Button Rock Preserve Forest Stewardship Plan in 2003 (updated in 2017) to preserve forest health and reduce the risks of catastrophic fires and noxious weed invasion. The plan outlines management actions in various areas in the preserve to achieve the forest health and safety goals including forest thinning. As an example, since 2004, over 1100 acres have been thinned to reduce wildfire risk. In addition to forest thinning, prescribed fire is a necessary tool to help reduce fuel loads by way of burning existing and future slash piles created by thinning projects and through burning accumulated surface fuels and overly dense young trees. Additionally, the City has created the Wildfire Rehabilitation (Management) Plan to maximize the efficiency and effectiveness of both administrative and resource management actions following a fire within the Button Rock Preserve and its immediate surrounding area. Wildfire mitigation is important to protect the water quality in Ralph Price Reservoir as it is the City of Longmont's primary water supply.

Other Alternatives: None

Action Status: In progress. The City has been thinning overly dense stands of forest since 2004 with over 1100 acres treated. The City consults with Colorado State Forest Service and the St. Vrain Forest Health Partnership (a coalition of 150 stakeholders) on a regular basis to plan future forest stewardship projects. An intergovernmental agreement was adopted in 2023 with Boulder County Sheriff's Office Fire Management Division to leverage BCSO's significant wildland firefighting and prescribed fire expertise, equipment fleet, and personnel to conduct prescribed burning of slash piles in the Preserve.

Responsible Office: Parks & Natural Resources Division and Water Resources Division

Priority (High, Medium, Low): High

Cost Estimate: \$100,000 budgeted annually. Forest management and thinning is an ongoing effort and currently costs \$100,000 plus staff time annually based on the current level of effort. Contract prescribed fire services will not exceed \$15,000 per year in line with the recently adopted IGA with BCSO Fire Management. Leveraging of grant dollars and partnership with Boulder County as a fiscal agent on grant-funded cross-boundary forestry work has expanded the capacity of the forest stewardship program.

Existing or Potential Funding: Annual grants from the State of Colorado and City funding from water

rates. To date, these funding sources are the only ones available and limit the amount of thinning that can be accomplished annually.

Benefits (avoided losses): The mitigation efforts reduce wildfire fuels around Ralph Price Reservoir, which reduces the risk of large wildfires that can threaten Longmont’s primary water supply and associated utility infrastructure. Mitigation also helps protect the Longmont Dam Rd. neighborhood, the town of Lyons, and recreational visitors to the Preserve (60,000+ annually).

Potential or current subject matter expertise: forest health, water supply water quality, forest thinning techniques, wildfire modelling, wildfire suppression and prescribed fire operations.

Schedule: Ongoing and planned projects. Forest management and thinning has been underway since 2004 with over 1100 acres of thinning completed. Maintenance and defensible space treatments are necessary on a recurring basis. Retreatment of thinned stands may be necessary at 10-15 year intervals. Ongoing annual management of the forest will be needed.

2023 Update: The City significantly scaled up forest stewardship treatments at the Preserve in 2023 by leveraging multiple grants, including two Forest Restoration Wildfire Risk Management (FRWRM) grants and two Colorado Strategic Wildfire Action Program (COSWAP) grants from the State of Colorado. The City also partnered with Boulder County Parks & Open Space to treat cross-boundary and engage in a joint RFP to attract more competitive bids for contract forestry work and leverage higher dollar grants with the County acting as fiscal agent. In total, 213 acres of the Preserve were treated to reduce wildfire risk and improve forest health. Capacity building grant dollars also enabled the City to purchase specialized forestry equipment that will be used on current and future forest stewardship projects.

In addition to forest thinning and restoration work, the City invested in fire hardening facilities (e.g., replacing roofs, siding, and landscaping to resist wildfires) and successfully certified all three municipal buildings on the Preserve with Boulder County’s Wildfire Partners program.

This action will be continuing to look for grant opportunities in 2024 and beyond.

Name of Action: Community Rating System (CRS)

Hazards Addressed: Flooding

Mitigation Goal or Objective Addressed: Goals 1-4

Community Lifeline Addressed: Safety and Security | Food, Water, Shelter

Issue/Background: This is a FEMA program that is monitored by Insurance Services Office (ISO). The City provides services in many of the general activities including, Public Information Activities, Mapping and Regulations, and Flood Reduction Activities. The City’s CRS classification increased from Class 8 to Class 5 in 2018 and again in 2022 resulting in a 25% discount on flood insurance premiums for all properties within the City of Longmont since the adoption for RR 2.0.

Other Alternatives: Drop CRS activities resulting in no (0%) discount on flood insurance premiums.

Action Status: Continue - In Progress

Responsible Office: Public Works and Engineering Department

Priority (High, Medium, Low): High

Cost Estimate: Currently use Senior Civil Engineer and other staff time + \$15,000 for outreach activities.

Existing or Potential Funding: Storm Drainage Fund

Benefits (avoided losses): Minimize flood risks, public education on mapping changes, information on what to do before, during, and after a flood and flood insurance, updated floodplain information on the City's website, creek, and drainage system maintenance.

Potential or current subject matter expertise: Floodplain and hydrologic modelling and mapping, GIS, CFM, FEMA, ISO, and CRS Manual

Schedule: Requires annual recertification by May 1 and verification every 3 to 5 years. Cycle Verification completed in October 2022.

2023 Update: City of Longmont successfully completed a cycle verification in 2022 resulting in continued Class 5 status. The approved 2024 budget includes \$40,000 to address deficiencies noted in Activity 610, Flood Warning and Response. Annual recertification was completed in May 2023. City does not expect to seek Federal grant money in 2024 for this action.

Name of Action: St. Vrain Creek Improvement Project/Resilient St. Vrain Project

Hazards Addressed: Flooding

Mitigation Goal or Objective Addressed: Increase in community safety and resiliency by increasing the capacity of the St. Vrain Creek channel to carry the updated 100-year flood flows for St. Vrain Creek through Longmont. Goals 1, 2, 3

Community Lifeline Addressed: Safety and Security | Food, Water, Shelter | Energy | Transportation

Issue/Background: The Resilient St. Vrain Alternatives Analysis Study focused on the 100-year storm flows in the St. Vrain Creek through Longmont that range from approximately 13,300 cfs at Airport Road to 17,700 cfs at County Line Road. The existing capacity of the Creek channel through the City is approximately 3,500 to 5,000 cfs resulting in a floodplain that is over half a mile in width impacting hundreds of individual properties and significant City infrastructure that will be damaged in any flood exceeding the capacity of the existing Creek channel. This was demonstrated during the 2013 flood event that caused over \$45 million in damage to the community in one event. Many projects have been initiated based on this study, some have already been constructed but overall project is not yet complete. The remaining projects needed to complete the upstream reaches through Longmont are described below.

Other Alternatives: Do Nothing; large detention facility west of town (not feasible)

Action Status: Continuing; in progress.

Responsible Office: Public Works and Engineering Department; Parks and Natural Resources Department

Priority (High, Medium, Low): High

Cost Estimate: \$140,000,000

Existing or Potential Funding: Existing: City Funding = approx. \$32 million; FEMA PA = \$30 million; FEMA HMGP = \$1.6 million; CDBG-DR = \$13.8 million; U.S. Army Corps of Engineers = \$10 million; Potential: FEMA HMGP = \$15 million; other.

Benefits (avoided losses): This project would result in significant increased public safety and resiliency to the community protecting private property and public infrastructure and significant reduction in public safety risks due to future flooding events.

Schedule: Preliminary Design – complete.

- Final Design and Construction is being completed in phases as work is funded.

- Sandstone Ranch Reach (County Line Road to Boulder Creek) – complete.
- City Reach 1 (Main Street to Left Hand Creek) – complete.
- City Reach 2A (Colorado Way to Main Street) – complete.
- City Reach 2B (upstream of BNSF RR to Colorado Way) – complete.
- Izaak Walton Reach 1 (Boston Ave. to upstream of BNSF RR) – complete.
- Izaak Walton Reach 2 (S. Sunset Street to Boston Ave.) – final design 2023; construction 2024.
- Hover Road Reach (Hover Road to S. Sunset Street) - pending.
- City Reach 3 (Airport Road to Hover Road) – unfunded.

2023 Update: City of Longmont has submitted a FEMA Hazard Mitigation Grant Proposal for the next phase of the Project, the Hover Road Reach from S. Sunset Street upstream to Hover Road. The estimated total project for the next phase is \$22M. Final design and construction of the next phase are pending notice on the grant application.

Name of Action: Channel Improvements on St. Vrain Creek at 119th Street

Hazard Addressed: Flooding

Mitigation Goal or Objective Addressed: Increase in community safety and resiliency by increasing capacity of the St. Vrain Creek channel at the 119th Street bridge crossing to carry the 100-year (1-percent annual exceedance probability) flood flows. Goals 1, 2

Community Lifeline Addressed: Safety and Security | Transportation

Issue/Background: The remapping of St. Vrain Creek after the 2013 floods by the state and FEMA (Preliminary FIRMs dated 9/30/2019) showed there are areas of inundation that were either not within the City’s jurisdiction at the time when the Resilient St. Vrain Alternatives evaluation Study was conducted in 2014 or were not recognized as a potential hazard until the Preliminary Maps were completed. As such, the Preliminary FIRMs show that the existing capacity of St. Vrain Creek from approximately 2,100-ft upstream of the State Highway 119 bridge crossing downstream to County Line Road (Weld County Road 1) is undersized and 100-year storm flows cause out of bank flooding and road overtopping at 119th Street. City owned property and infrastructure (i.e., St. Vrain Greenway and the 119th Street Trailhead) are subject to damages in large storm events. Additionally, overtopping of 119th Street causes road closures, potential damages due to roads washing out, and is a hazard to public safety.

Other Alternatives: None

Action Status: New in 2022

Responsible Office: Public Works and Natural Resources

Priority (High Medium, Low): Low

Cost Estimate: \$6,000,000

Existing or Potential Funding: FEMA Mitigation Funding and City Storm Drainage Fund (local match).

Benefits (avoided losses): This project would result in a significant increase in public safety and resiliency to the community protecting public and private property and public infrastructure and significant reduction in risks from future flooding events.

Potential or current subject matter expertise: floodplain management, project management, engineers, landscape architects, and irrigation designers

Schedule: 2023 depending on funding availability

2023 Update: This project has not become a priority and has been removed from the Actions List.

Name of Action: Increase Tree Canopy

Hazards Addressed: Extreme Heat

Mitigation Goal or Objective Addressed: Goal 1: Reduces loss of life and personal injury by reducing the heat island affect and minimizing the impacts of extreme heat.

The short-term goal is to maintain tree canopy through the 15-year life cycle of the emerald ash borer in Longmont. Long term goals are to increase tree canopy within the Longmont Planning Area. Increasing the tree canopy will increase shade, which can provide protection from extreme heat.

Community Lifeline Addressed: Safety and Security | Health and Medical

Issue/Background: The 2008 Tree Canopy Study determined that current tree canopy in the Longmont Planning Area is 8% with the potential of 47%. Since that study, the goal must sustain and expand tree canopy while dealing with the emerald ash borer. The City is also competing with rising water costs (residents water their trees less) and a hotter and drier climate. Most trees within the City require some supplemental water to maintain good health and the City is currently seeking new varieties that are more drought tolerant.

It is important to not lose tree canopy because it can help reduce the number and impact of extreme heat days in Cities by providing cooling. A 2016 study in Toronto Canada, found that heat-related ambulance calls were reduced by 80% by just a 5% increase in tree canopy.¹ Currently, due to a hotter climate, the emerald ash borer and reduced budget from COVID-19, the City's short-term goal is to maintain tree canopy.

Tree canopy should be expanded in a strategic method. A study in Ann Arbor Michigan used a health impact assessment to identify neighborhoods more vulnerable to the negative impacts of extreme heat.² This study will analyse health, pollution, crime, and demographic indicators of neighborhoods in relation to tree canopy and identified the need for targeted tree planting.

Other Alternatives: Besides planting trees and vegetation, the other alternative recommended by the U.S. EPA is green roofs.

Action Status: Continue The 2022 Tree Canopy Assessment showed an increase in tree canopy in Longmont to 12%.

Responsible Office: Public Works and Natural Resources

Priority: Medium

Cost Estimate: \$30,000 per assessment (every 5-7 years)

Existing or Potential Funding: Existing: Tree Mitigation Fund, Potential: Boulder County Sustainability Tax Funding, Inflation Reduction Act with passthroughs from the Colorado State Forest Service.

Benefits (avoided losses): Reduced extreme heat days, reduced hospitalizations due to extreme heat.

Potential of current subject matter expertise: Forestry, and Sustainability Workgroup

Schedule: Tree Canopy analysis will continue a 507-year basis with Longmont completed a City-wide tree canopy assessment for all annexed land and determined the tree canopy to be 12.7% from 2020 aerial imagery, a growth of 3.7% from the 2008 assessment. Forestry Services is taking the approach of preserving the existing tree canopy by planting future climate adapted trees, treating ash trees to protect them from

the invasive insect, emerald ash borer; and only planting trees in areas that are irrigated and support long-term tree health and survival. However, Forestry Services maintains trees on less than 5% of the total land area of Longmont, so increasing tree canopy needs to occur on private property. Forestry Services supports private property tree canopy growth by hosting the annual Spirit of Arbor Day Tree Sale and subsidizing the cost of the trees by 40-50%. Future planning for implementation of this action will require development of plans for strategically planting trees in areas of Longmont with climate-vulnerable populations.

Name of Action: Vulnerability Assessment for Climate Impacts, Development and Engagement Strategy

Hazards Addressed: Extreme heat/cold, Flood, Wildfire

Mitigation Goal or Objective Addressed: Goal 2 – Reduce impacts of hazard events on property, critical facilities/infrastructure, and the environment OR Goal 4 – Improve public awareness regarding hazard vulnerability and mitigation.

There is not yet a specific goal or objective that addresses identifying and reducing risks associated with climate change. However, the Climate Action Task Force Recommendations Report called for the creation of a climate adaptation plan to prepare for the impact of climate change. Staff are currently developing a climate risk and vulnerability map which is the first step of creating this plan.

Community Lifeline Addressed: Safety and Security | Health and Medical

Issue/Background: Even as many communities, including Longmont, work to reduce greenhouse gas pollution to mitigate the effects of climate change, we know that our community will suffer some climate change impacts – most likely more high and extreme heat days, worsening air pollution, and increased risk of wildfires and flooding. Recent studies show that we have already begun experiencing those impacts, but action within the next decade is critical if we are to avoid the most catastrophic impacts of climate change. Those most likely to suffer impacts disproportionately are low-income residents, older adults, children, and those with certain health conditions.³

Staff is conducting a climate risk and vulnerability assessment in order to understand what the projected impacts are likely to be for Longmont and where those most vulnerable to impacts reside within Longmont. In addition, it will be necessary to develop a community engagement strategy to then work with those most vulnerable to climate impacts in order to determine strategies to best mitigate and adapt to projected impacts that effectively and equitably meet community needs.

Resource on Extreme Heat: C40 Cities Climate Leadership Group (2019). How to adapt your city to extreme heat. C40 Knowledge Hub. https://www.c40knowledgehub.org/s/article/How-to-adapt-your-city-to-extreme-heat?language=en_US

Other Alternatives: N/A

Action Status: New in 2022

Responsible Office: Public Works and Natural Resources – Sustainability

Priority: High

Cost Estimate: \$80,000 for the assessment and community engagement plan; community engagement and implementation TBD

Existing or Potential Funding: Existing: Boulder County Sustainability Tax Funding in 2021 and 2022

Benefits (avoided losses): Reduced hospitalizations and deaths due to extreme heat and poor air quality;

reduced need for potential crisis response during unexpected extended heat waves.

Potential of current subject matter expertise: Sustainability, Senior Services, Community Services, Longmont OEM, Boulder County Public Health

Schedule: In Progress. The assessment and mapping work began in 2021, with anticipated completion in 2022; community engagement strategy should be developed in 2022, with community engagement and strategy development happening in 2022; implementation beginning in 2023.

2023 Update: The Sustainability Office is completing a climate risk and resilience map to determine climate exposures, at risk communities, and elements that increase adaptive capacity. Building off the mapping work, the City has two extreme heat-related initiatives underway.

- Extreme heat resilience through energy efficiency and building electrification: This is a demonstration program that combines energy efficiency, housing rehabilitation and building electrification to enhance heat resilience along with whole home health, safety and comfort while reducing greenhouse gas emissions and utility cost burden. Approximately ten low-income households are participating.

- Heat mapping and community-driven cooling solutions: Partnering with a consultant, the City mapped real-time heat index data to better understand the heat differential between neighborhoods. The City also engaged the community and neighborhoods on cooling solutions through a series of English and Spanish workshops. The heat island map is complete and the final report on neighborhood-based cooling solutions will be finalized by Spring of 2024.

Name of Action: Neighborhood/Community-based Resilience Plans

Hazards Addressed: Pandemic/Communicable/Zoonotic Disease Outbreak, Drought, Extreme Heat, Flood, Wildfire

Mitigation Goal or Objective Addressed: Goal 2 – Reduce impacts of hazard events on property, critical facilities/infrastructure, and the environment OR Goal 4 – Improve public awareness regarding hazard vulnerability and mitigation.

Community Lifeline Addressed: Safety and Security | Health and Medical

Issue/Background: Several hazards identified for Longmont and Boulder County may impact neighborhoods or specific segments of the community differently. Identifying plans, policies, and projects to help diverse populations adapt and thrive in the face of challenges like pandemic, drought, and extreme heat. Neighborhood residents and other hyper-local stakeholders know their neighborhoods best. Preparing neighborhood-based plans will enable the city to identify local solutions that have the best opportunities for successful implementation. These plans can identify physical improvements (e.g., areas to plant additional trees to provide shade and offer relief from extreme heat) or can offer programmatic solutions (e.g., identifying local streets where vehicle access could be limited to promote opportunities for bicycling and walking while having to maintain social distance during a pandemic). The 2021 and 2022 wildfires in Boulder County have also shown a need to educate residents not just in forested areas but also in grasslands on wildfire preparedness and steps they can take to protect themselves and their homes.

Other Alternatives: Incorporate information and actions into other subarea/neighborhood plans, comprehensive plan, or sustainability plan.

Action Status: New in 2022

Responsible Office: Planning Division, Sustainability, Community & Neighborhood Resources, Fire Department

Priority: Medium

Cost Estimate: TBD – based on scope of plans, number of plans, and individual components

Existing or Potential Funding: Grants, internal funding TBD

Benefits (avoided losses): More prepared and resilient neighborhoods

Potential of current subject matter expertise: Planning Division, Sustainability, Community & Neighborhood Resources

Schedule: Anticipated implementation beginning in 2023.

2023 Update: In 2023, Boulder County began the process to update the County Community Wildfire Protection Plan (CWPP) that will be completed in mid to late 2024. Afterwards, the City has a goal to create a City –specific CWPP to more specifically identify wildfire hazards in and around the City as well as provide educational information to the public on what they can do to protect their properties such as home-hardening.

The Climate Risk and Resilience Map and associated work to address extreme heat in neighborhoods as detailed in the section on vulnerability assessments, also works to create more prepared and resilient neighborhoods.

Name of Action: Outdoor Water Efficiency/Conservation

Hazards Addressed: Drought, Extreme Heat

Mitigation Goal or Objective Addressed: Goal 2 – Reduce impacts of hazard events on property, critical facilities/infrastructure, and the environment OR Goal 4 – Improve public awareness regarding hazard vulnerability and mitigation

Reduce citywide water consumption by 10% by the City planning horizon (assumed to be 2048) compared to the 2004 baseline. Increase ability to meet future water demands with increasing population, increasing temperatures, and climate variability.

Community Lifeline Addressed: Food, Water, Shelter

Issue/Background: If future water conservation goals are not met, then the water supplies for the City of Longmont will be approximately 2,250 acre-feet short during a seven-year-long drought (using the variability assumption of water conservation saving of 928 acre-feet for Longmont’s planning horizon).

The impact of climate change and climate variability was approximated at an eight percent impact on treated water demand, with a possible range between six to ten percent. This variability was calculated using the different climate variability scenarios for the Front Range of Colorado from the 2012 Joint Front Range Climate Change Vulnerability Study (Woodbury, Baldo, Yates, & Kaatz, 2012). If climate extremes follow the hot and dry model and cause a ten percent increase in treated water demand, this could lead to a future shortage in water supply. Water conservation methods is an important strategy to ensuring an adequate water supply.

Outdoor irrigation is approximately half of water consumption within the City of Longmont. Indoor plumbing codes have become significantly more efficient, so developing strategies for water wise landscaping helps ensure that during times of drought, water demand is being met by the community.

Other Alternatives: Indoor water conservation programs (the City has these programs), increase new supply (could be more costly)

Action Status: New in 2022. This is an ongoing effort, the City has had a Water Efficiency Master Plan since 2008. The Water Efficiency Master Plan was last updated in 2017. The next update will begin in 2022 and will evaluate more ambitious water conservation goals to address the impacts of climate change on water quality and availability. The next plan will be finalized by 2024.

Responsible Office: Public Works and Natural Resources

Priority: High

Cost Estimate: Current Program: \$200,000/year; Expanded program: TBD, depends on new program development

Existing or Potential Funding: Public Works Natural Resources Water Budget, Cash-in-Lieu Water Fund, Northern Water Conservancy District Collaborative Water-Efficient Landscape Grant Program, Colorado Water Conservation Board Grants, USBR WaterSMART Grants

Benefits (avoided losses): Decreased impact of seven-year droughts

Potential of current subject matter expertise: Water conservation, land management, data management, waterwise landscaping, project management, marketing and outreach

Schedule: Annual implementation; by 2024: Update the Water Efficiency Master Plan

2023 Update: The update to the 2017 Water Efficiency Master Plan has begun and will include new ambitious water conservation goals to address the impacts of climate change on water quality and availability. The Water Conservation program has also begun to assess city development code for built in water efficiency opportunities in new development and look for site examples to transition high water using turf grass on city properties to low water using demonstration gardens, rain gardens, and/or native grass spaces.

The City also began sponsoring Lawn Replacement stipends for community members to replace their lawns with low-water gardens. This program will decrease outdoor water consumption in the City while helping to secure future water supplies.

The Water Conservation program will not be seeking Federal grant funding to implement the recommendations of the master plan at this time.

Name of Action: Upgrade Power System Protection

Hazards Addressed: Wildfire, windstorm

Mitigation Goal or Objective Addressed: Goals 1 and 2, Reduce potential electric system from starting fires

Community Lifeline Addressed: Safety and Security | Food, Water, Shelter | Energy | Communications

Issue/Background: On an electrical power system, a "fault" occurs when the normal operation is disrupted by a foreign object (for example, a tree touching the power lines, or a small animal getting too close to the lines) or a piece of equipment fails and allows electricity to flow where it normally does not. When a fault occurs on an overhead power line, equipment can be damaged when excessive current flows. In these situations, the electrical system is protected by some means that clears the fault by turning off the power to that portion of the circuit. The simplest of these protective devices is an overhead expulsion fuse. When these fuses operate, they are designed to fall away from the mechanism that holds them in place to create a visual opening to allow the crews to know it has failed and the power is off to that portion of the circuit.

The least expensive way of doing this is to release some of the energy from the fault in a small flash that mechanically opens the fuse support, called a cutout. This, however, sends sparks flying when it occurs. Much of this energy can be contained within the fuse, however, by using a much more expensive fusing device that is current-limiting, often called a "sand fuse" because the fuse element is surrounded by sand. LPC has chosen to use these more expensive fuses only in areas that in our evaluation have an elevated fire danger.

Other Alternatives: In addition to using sand fuses to replace the less expensive expulsion versions, a more versatile and safer alternate is a protective device known in the industry as a "Trip Saver." When they operate to clear a fault, these devices contain all the released energy within the device. They also have the capability to reenergize the line after waiting a prescribed period for the fault to clear, since the majority of problems on an overhead line are intermittent (such as a branch falling across some lines, creating a momentary short). A secondary advantage is rapid restoration of power to customers with minimal interruption, versus requiring a crew to travel to the location of the fuse to restore power. Another important factor to consider is that, while more than 10 times the cost of a sand fuse, a Trip Saver does not need to be replaced after each operation and does not always require a crew to reset or replace it, potentially saving on overall costs.

Action Status: New in 2022

Responsible Office: Longmont Power & Communications (LPC)

Priority: High

Cost Estimate: \$200,000 - \$1 Million

Existing or Potential Funding: Current Electric Rates include a portion for replacing depreciated and failing equipment, but new initiatives for system improvement, such as wider use of sand fuses or Trip Savers, will likely result in rate increases if other funding sources are not identified.

Benefits (avoided losses): Lower wildfire risk, faster power restoration

Potential of current subject matter expertise: LPC has personnel currently on staff that are fully capable of designing and constructing the project.

Schedule: 2022-2025

2023 Update: This initiative was delayed in 2023 in anticipation of grant funding, which required that we not have an on-going project in order to qualify for the grant. Longmont was notified in the fall of 2023 that it was not awarded this grant, so the efforts will begin in earnest in 2024.

Name of Action: Tree Trimming Adjacent to Power Equipment

Hazards Addressed: Wildfire, windstorm

Mitigation Goal or Objective Addressed: Goals 1 and 2; Reduce potential for electric system to start wildfires; Minimize damage from falling branches and trees

Community Lifeline Addressed: Safety and Security | Food, Water, Shelter | Energy | Communications

Issue/Background: Electric and Communication utilities with both overhead and above-ground facilities must actively manage vegetation growth or run the risk of damages and/or not being able to access equipment from over growth. If not kept in check, trees and other vegetation can damage or destroy equipment thru added moisture retention, abrasion, and of course falling into lines and other facilities. This project would entail strategic tree trimming to reduce potential power system impacts.

Other Alternatives: None

Action Status: New in 2022

Responsible Office: Longmont Power & Communications (LPC)

Priority: High

Cost Estimate: Currently budgeted at \$400,000 / year

Existing or Potential Funding: Current Electric Rates include a portion for vegetation management focused on outage prevention and minimizing physical harm to infrastructure (such as a tree falling in a storm and knocking down a line, or a branch repeatedly rubbing against a cable and wearing through the insulation)

Benefits (avoided losses): Lower fire risk, more reliable electric service, fewer work-hours to restore power during unplanned outages, reduced damage to existing infrastructure

Potential of current subject matter expertise: LPC has personnel currently on staff that are fully capable of performing the tree-trimming tasks, but currently contracts these responsibilities to an outside contractor who specializes in proper tree-trimming.

Schedule: Annual Implementation 2022-2027.

2023 Update: 2024 budget increased to \$400,000 from \$330,000 in 2023. The increase is due to an exceptional water year in 2023 (which leads to faster-growing trees that need to be trimmed sooner than anticipated), as well as more aggressive tree-trimming to provide additional protection of overhead power lines. It is unlikely that LPC will pursue any grants for this work in 2024, as the majority of grants focus on high-tech solutions; the tree-trimming program currently employed by LPC is effective and relatively low-cost compared to solutions that employ advanced technology.

Name of Action: Power Grid Modernization

Hazards Addressed: Wildfire, Windstorm

Mitigation Goal or Objective Addressed: Goals 1 and 2; Reduce potential that electric system starts wildfires or is out of service for an extended period of time; use power more efficiently to reduce carbon footprint

Community Lifeline Addressed: Safety and Security | Food, Water, Shelter | Energy | Communications

Issue/Background: It has been established that electric infrastructure has been the cause of some of the largest and costliest wildfires in terms of lives lost and economic impact in recent years. This clearly was the case in California during 2018 with the devastating Camp Fire, where about 153,000 acres burned, 18,800 structures were destroyed, and 85 people perished. Pacific Gas & Electric, along with its management team, have been held liable for more than \$13.5 Billion in damages for this and other fires caused during 2017 & 2018. The Marshall Fire in late-2021 is a local example of the devastating potential of unmitigated wildfires in an urban and suburban area. Grid Modernization or "Smart Grid" deployment has many tools that can aid with all the hazards listed above by reducing the energy to a persistent fault, automatically healing the grid, and allowing the power on the grid to be better managed.

Other Alternatives: Pre-emptively turn off power to high-wildfire risk areas during periods of high fire danger; however, this would lead to businesses and residents to turn to back up and portable generators that also present a potential to spark a fire. Use of these portable generators could also work contrary to LPC's response to the climate emergency, as many backup generators run on fossil fuels.

Action Status: New in 2022

Responsible Office: Longmont Power & Communications (LPC)

Priority: High

Cost Estimate: Currently budgeted at \$1.7 Million over the next 5 years for a project that will likely take 10 to 15 years to complete and potentially cost upwards of \$25 Million to complete.

Existing or Potential Funding: Current Electric Rates include a portion for replacing depreciated and failing equipment, but new initiatives to modernize the grid will likely result in rate increases if other funding sources are not identified.

Benefits (avoided losses): Lower wildfire risk, faster power restoration

Potential of current subject matter expertise: LPC has personnel currently on staff that are fully capable of designing and constructing the project, and additional consultants have been engaged to outline the smart grid plan.

Schedule: In progress 2022-2027 as funding and work crew availability permits

2023 Update: Initiatives in support of this Action are currently underway, including the procurement and installation of "IntelliRupter" devices that work to safely, rapidly, and automatically restore power after very short outages, typically caused by animal or tree contacts with overhead power lines. Other initiatives include a demonstration project to install and review the use of "smart switchgear" that can be monitored and controlled from the centralized SCADA dispatch control room. As described elsewhere, LPC also plans to methodically replace standard fuses (which create sparks when they blow) with non-expulsive fuses that do not spark when they activate. LPC, Strategic Integration, and Platte River Power Authority continuously review new grant opportunities to determine best fit with planned projects like this one. At this time, no grants are in the pipeline for this work, but if new grants are released that are a good fit with this project, LPC will work with Strategic Integration staff to submit a grant application.

Name of Action: Stormwater Master Plan

Hazard Addressed: Flooding

Mitigation Goal or Objective Addressed: Goals 1, 2 and 5

Community Lifeline Addressed: Safety and Security | Food, Water, Shelter | Transportation

Issue/Background: Annual urban flooding issues due to no or undersized stormwater facilities throughout the City. The City is currently working on a city-wide stormwater master plan update. Plan is now nearly complete (2023). Several projects have been identified to reduce urban flooding. Those projects are discussed in the [Stormwater System Improvements Action](#) below.

Other Alternatives: Allow stormwater flooding to continue to occur throughout the City.

New or Deferred Action: On-going

Responsible Office: Public Works and Natural Resources

Priority (High Medium, Low): High

Cost Estimate: \$500,000 to complete the master plan.

Existing or Potential Funding: Existing: Storm Drainage Operations not a CIP fund, Potential: BRIC grant funding

Benefits (avoided losses): Minimize continuous flood damage to City infrastructure and private property from an undersized stormwater system for the City.

Potential or current subject matter expertise: Project Management, hydrology, and hydraulics modeling expertise, GIS expertise, report production expertise and PLS surveying. None of this expertise is available in-house.

Schedule: Currently in process

2023 Update: The minor system stormwater master plan will be completed by the end of 2023. This master plan identified 6 high priority projects that would cost \$15.14 Million in 2023 dollars. No Federal grant money was requested to finish this action.

Name of Action: Natural Channel Maintenance Plan

Hazard Addressed: Flooding

Mitigation Goal or Objective Addressed: Goals 1 and 2; Create a plan with standard operating procedures to perform regular maintenance on the City's stream corridors to maintain flood capacity and infrastructure while also identifying projects to increase the hydraulic, geomorphic, ecological, and physicochemical functions of streams.

Community Lifeline Addressed: Safety and Security | Food, Water, Shelter | Transportation

Issue/Background: The City of Longmont has approximately 28.5 miles of stream corridors that convey flood flows and sediment through the City. As many of these stream's flow through urban areas, it is essential for the City conduct routine maintenance to remove flood impediments and make sure that infrastructure on the stream is functional to protect the residents of Longmont as well as to comply with Federal regulations. This became even more apparent after the 2013 flood. The City also recognizes that these streams provide critical aquatic and terrestrial habitat. Planning is necessary to identify needs for maintenance and stream restoration as well as to provide guidance on how to perform these tasks.

Other Alternatives: None

New or Deferred Action: New

Responsible Office: Public Works and Natural Resources Department

Priority (High Medium, Low): High

Cost Estimate: \$95,000

Existing or Potential Funding: The City spent \$50,000 in 2019 on Phase I of the plan which included existing conditions assessment and data collection. The City has budgeted \$15,000 in 2021 to publish the

plan.

Benefits (avoided losses): The plan, when implemented, would reduce future flooding.

Potential or current subject matter expertise: The City has several staff within the Public Works & Natural Resources Department that are subject matter experts.

Schedule: Ongoing. Publishing of plan in 2021. Additional funding necessary to complete phase II data gathering.

2023 Update: Since 2021 portions of a draft plan have been completed by a consultant. Funding for the project has run out and currently City staff does not have the capacity to complete it. There is no current plan to request grant funding for this project.

Name of Action: Storm Drainage Criteria Manual

Hazard Addressed: Flooding

Mitigation Goal or Objective Addressed: Goals 1, 2, and 5

Community Lifeline Addressed: Safety and Security | Food, Water, Shelter | Transportation

Issue/Background: Longmont's Storm Drainage Criteria Manual has not been updated since 1984. It is very outdated. It doesn't even include a chapter on Floodplain Management. The City of Longmont Public Improvements Design Standards and Construction Specifications was updated by Longmont staff during 2018 and 2019. However, it has not been adopted yet, partially because Section 300 – Storm Drainage Improvements updates were not acceptable to the CAO. There is no Floodplain Management Section in the Design Standards manual. The COA recommended that the Storm Drainage Criteria Manual be updated instead of trying to do that within the Design manual. Consultants and CIP projects need standards for design of stormwater and flood protection projects.

Other Alternatives: Continue as we have been without a useful Drainage Criteria Manual.

New or Deferred Action: New

Responsible Office: Public Works and Engineering

Priority (High Medium, Low): High

Cost Estimate: \$300,000

Existing or Potential Funding: Some Storm Drainage funding is available to begin this work in 2024. Additional funding would be BRIC Grant funding.

Benefits (avoided losses): Longmont has been using revised storm drainage and floodplain management criteria but it has not been documented or officially adopted by City Council. Floodplain Management is done on a case-by-case basis as there is no written criteria beyond the Floodplain Management Ordinance which includes very little specific criteria. Consistent criteria will provide consultants and CIP engineers with the necessary information to complete their projects within the expectation and criteria set forth by the

City. In addition, consistency is key to managing expectations from submitters i.e., every project is treated the same.

Potential or current subject matter expertise: Engineers familiar with stormwater criteria needed for development, CIPs and regulatory agencies, publication specialists, and lawyers (CAO and outside with expertise in stormwater regulations). None of this expertise is available in-house.

Schedule: ASAP

2023 Update: The approved 2024 stormwater budget includes \$100,000 to begin this update. There are no plans to request Federal grant money to complete this action.

Name of Action: Ecological Restoration

Hazards Addressed: Flood, Wildfire, Drought

Mitigation Goal or Objective Addressed: Goals 1 and 2; Restore diverse, functioning, native ecosystems such as grasslands, riparian areas, wetlands, and forests to increase resiliency to natural disasters such as floods, wildfires, and drought.

Community Lifeline Addressed: Safety and Security | Food, Water, Shelter | Health and Medical |Energy |Transportation

Issue/Background: Ecosystems are critical to human survival through the provisioning of such ecosystem services as flood retention, pollination, pollutant filtration, and carbon sequestration. Diverse, functioning native ecosystems can withstand natural disasters and recover which in turn reduces the negative impact on human life. The more diverse an ecosystem's plant and animal species are, the more they are able to adapt to environmental changes caused by disasters. Also, ecosystems are more resilient when such functions as floodplain connectivity, natural fire regimes, and habitat connectivity can occur. Many of Longmont's ecosystems are in a degraded state as described in the existing conditions evaluation undertaken in 2019 for the Natural Streams Management Plan, still in production. Ecological restoration activities such as noxious weed control, seeding and planting native plants, prescribed burning, forest thinning, and stream channel reshaping aim to create more healthy ecosystems.

Other Alternatives: None

New or Deferred Action: New

Responsible Office: Public Works & Natural Resources Department/Parks& Natural Resources Division

Priority: High

Cost Estimate: There has not been an analysis of the cost for all restoration projects across all City of Longmont properties. \$300,000 annually would be a reasonable starting point.

Existing or Potential Funding: Multiple City operating budgets such as Open Space, Water, Sanitation, Parks, Stormwater Operations contribute \$20,050 to annual weed control as well as to the salaries of staff performing vegetation management. Open Space operating budget also earmarks \$40,000 annually for native plant propagation. There are potential grants that could be pursued for ecological restoration such

as Great Outdoors Colorado RESTORE Colorado Grant.

Benefits (avoided losses): Implementing ecological restoration would help mitigate losses associated with flooding, wildfire, and drought such as flood related erosion damage and sedimentation of water bodies following catastrophic wildfire.

Potential of current subject matter expertise: Staff within the Parks & Natural Resources Division are experts in ecological restoration

Schedule: Ongoing with annual work plans. Dependent on funding and staffing.

2023 Update: Parks and Natural Resources Department has requested a senior plant ecologist position to assist with restoration planning. Once plans are in place, projects and cost estimates will be determined and appropriate budgets requested to implement projects.

Name of Action: Floodplain Regulations Update

Hazard Addressed: Flooding

Mitigation Goal or Objective Addressed: Goals 1 and 2

Community Lifeline Addressed: Safety and Security | Food, Water, Shelter | Transportation

Issue/Background: Longmont experienced a significant and damaging flood in 2013. The Floodplain Management Ordinance should be updated with lessons learned from that event. In addition, the current ordinance does not address specific floodplain management criteria used to permit development in the floodplain. Several updates have been proposed through the "Mitigation Solutions through the Land Use" workshop Longmont participated in (2018).

Other Alternatives: Do nothing.

New or Deferred Action: New

Responsible Office: Public Works and Natural Resources

Priority (High Medium, Low): High

Cost Estimate: \$50,000

Existing or Potential Funding: This project is currently underway and should be finished by the end of 2023.

Benefits (avoided losses): Avoidance of flooding and flood damages to public and private property and public safety.

Potential or current subject matter expertise: Code language expertise, there is 1 in-house expert in this area but would require a significant time investment that is not available. Expert consultant help would be

required.

Schedule: 2022 to 2023

2023 Update: A consultant was hired in 2022 to begin a complete rewrite of the Floodplain Regulations Ordinance for Longmont. As of late 2023, a solid Draft for review has been prepared. The draft will be reviewed by the City Attorney's office, the Colorado Water Conservation Board and FEMA Region VIII before the final draft is presented to council in 2024. The City will not be requesting Federal grant money to complete this action.

Name of Action: Stormwater System Improvements

Hazard Addressed: Flooding

Mitigation Goal or Objective Addressed: Goals 1, 2, and 5

Community Lifeline Addressed: Safety and Security | Food, Water, Shelter | Transportation

Issue/Background: Some of the City of Longmont's stormwater system (minor system) is undersized or completely lacking in the older areas of the City which causes flooding nearly every time it rains. Longmont has commissioned a City-wide Stormwater Master Plan update (2019) which will result in a preferred plan with costs to address flooding and conveyance problems.

Other Alternatives: Allow continuous flooding from smaller rain events to occur throughout the City and only address the worst problem areas.

New or Deferred Action: Ongoing

Responsible Office: Public Works and Engineering Department

Priority (High Medium, Low): High

Cost Estimate: See below for cost estimates for each Storm project

Existing or Potential Funding: Stormwater Drainage Fund using increased rates that started in 2021.

Benefits (avoided losses): Decrease damages to private and City property and infrastructure due to urban flooding.

Potential or current subject matter expertise: stormwater engineer, GIS, Hydrology and Hydraulics modeling expert, construction management, project management

Schedule: Ongoing

2023 Update:

Current unfunded CIP list includes:

1. Oscar-Beckwith Ditch – Industrial Circle - \$1.2 Million

2. Old Dry Creek, near S. Pratt Parkway - \$825,000
3. Quebec St to Coffman St @ Left Hand Creek - \$1.38 Million
4. Main St from 21st to 23rd Ave Improvements - \$860,000
5. 12th Ave from Frontier St. to Tulip St. - \$1.5 Million
6. Atwood St from 4th to 8th Ave - \$720,000
7. Dry Creek Concrete Lining Rehab (Hover to Sunset) – UK
8. Spruce St (Denio Ditch) from Sunset St to Bowen St - \$625,000

In addition to the unfunded stormwater improvements listed in the City's current 5-year CIP plan above, results from the completed Minor Drainage System Master Plan include:

1. 2nd Avenue and Emery Street Storm Sewer System (including the Coffman Street Outfall) - \$4.11 Million
2. 14th Avenue and Gay Street Storm Sewer System - \$2.94 Million
3. Roosevelt Park Storm Sewer System - \$6.12 Million
4. 9th Avenue Storm Sewer System - \$1.04 Million
5. 6th Avenue Storm Sewer System - \$0.93 Million

It is likely that one or more of these proposed storm sewer projects will require Federal grant assistance to complete. The 2024 annual update will likely indicate which of these projects is a priority and if a grant application will be submitted.

Name of Action: Airport Road Flood Protection Project

Hazards Addressed: Flooding

Mitigation Goal or Objective Addressed: Goals 1, 2, and 5

Community Lifeline Addressed: Safety and Security

Issue/Background: Flood damage occurs in the western portion of the City of Longmont caused by breaches in the St. Vrain Creek. This project would also protect the community from flood flows to the north that could overtop McIntosh Reservoir and flow south and west to the same areas of the City. By using concrete jersey barriers, we will reduce the risk of flooding to this part of the city. Flood damage occurred in the 2013 flood where flood flows breached the existing St. Vrain Creek channel and flowed to the north causing severe damage to private property and public infrastructure in several neighborhoods in western portions of the City.

Other Alternatives: No action

Action Status: Continuing – not started. Deferred action due to lack of funding source.

Responsible Office: Public Works and Natural Resources Department

Priority (High, Medium, Low): High

Cost Estimate: \$2,000,000

Existing or Potential Funding: City Enterprise Fund

Benefits (avoided losses): This project would result in significant increased public safety and resiliency to the community protecting private property and public infrastructure and significant reduction in public safety risks due to future flooding events. Though the barriers will not remain permanent fixtures, per resident discontent, we now have the supplies and predrilled holes to put these out at the last minute if needed.

Potential or current subject matter expertise: floodplain management, project management, landscape architect, irrigation, engineers

Schedule: 2022-2024. Project start is dependent on an approved funding source which is not identified at this time.

2023 Update: This project was not identified as a priority during the 2024 budget process. The City has decided not to pursue this project and are removing it from the Actions list.