City of Aurora

Hazards Analysis

Hazards that represent a county-wide risk are addressed in the Risk Assessment section of the 2023 Kane County Multi-Hazard Mitigation Plan (Volume I). This section only addresses the hazards and their associated impacts that are relevant and unique to the municipality/area.

Thunderstorms, Lightning, and Hail:

- Aging buildings with limited maintenance, private sector
- Senior housing complexes do not have backup generators.
- The City of Aurora Airport and FAA Center; Control Towers and Buildings Impacted in the past.

High Winds and Microbursts:

- Aging buildings with limited maintenance, private sector
- Mature tree loss
- Utility loss, specifically power

Tornadoes:

- Structural Vulnerability and Disruption of Essential Systems:
    - Tornadoes can cause significant damage to buildings, mainly if they are not constructed to withstand high winds.
    - Tornadoes can disrupt essential systems such as public utilities (electricity, water, sewer), telecommunications, and transportation routes.
- Debris and Fallen Trees:
    - After high winds, fallen trees and debris are common, blocking road access, bringing down power lines, and damaging public and private buildings.
- Impact on the Natural Environment:
    - Tornadoes and high wind events impact trees and woodland most, uprooting trees, shrubs, and bushes.
    - Street trees are highly susceptible to high winds.
- Vulnerable Communities:
    - The Aurora community most susceptible to wind or tornado events includes individuals over 65, under 5, living below the poverty line, unsheltered, and those with communication barriers.
    - Socioeconomic factors can hinder an individual's ability to prepare for and respond to a disaster, affecting their access to services after the event.
    - Individuals relying on electricity for life-sustaining equipment are also at higher risk due to the likelihood of utility disruptions.
- Mitigation Gaps:
    - Small siren gaps due to urban growth may impact early warning systems.
    - There might be a public information gap for non-English speakers who need help understanding sirens or other warning signals.
    - Existing overhead wires pose a risk during high wind events.

  - Critical infrastructure, such as water and sewer treatment plants and multiple schools, are vulnerable to tornado impacts.
  - Power outages can affect lift stations, causing disruptions in sewage treatment.

Extreme Cold Impacts:

- Extremely cold air during the winter affects millions across the United States.
- The highly long-lasting arctic air and brisk winds can lead to dangerously cold wind chill values.
- People exposed to extreme cold are susceptible to frostbite and hypothermia in a matter of minutes.
- Winters are generally mild in Illinois, but Arctic air masses from Canada can bring frigid temperatures for extended periods.
- Polar vortex situations can move in and deliver below-zero temperatures for several days.
- Vulnerable populations (homeless and those with dwellings but inadequate heat) are at the most risk for these situations.
- Extreme cold can cause freezing or bursting pipes and lead to flooded or iced-over locations. Power outages may also occur in cold conditions, leading to the inability to heat homes safely.

Extreme Cold Mitigation:

- Communities should prepare for extreme cold weather by ensuring vulnerable populations can access adequate shelter and heating facilities.
- Regular maintenance and insulation of water pipes can help prevent freezing or bursting, reducing the risk of flooding and iced-over locations.
- Emergency plans should be in place to assist residents during power outages, ensuring their ability to heat their homes safely.

Extreme Heat Impacts:

- Extreme heat can cause buckling of highways, resulting in detours that can significantly affect traffic patterns.
- Extreme heat will increase the community's water usage, which could lead to water shortages.
- Increased power usage for air conditioning may cause power outages or brownouts.

Extreme Heat Mitigation:

- To mitigate the impacts of extreme heat, communities can implement energy conservation measures and promote water conservation during heat waves.
- Investment in the electrical grid's resilience can help prevent power outages or brownouts caused by high power usage for air conditioning.

Aging Critical Infrastructure:

- Cold weather can cause aging critical infrastructure and systems such as electrical, water wastewater, and gas systems to fracture and fail.

Vulnerable Populations:

- Extreme weather events, whether heat or cold, can significantly impact vulnerable populations.
- The homeless population, including the homeless shelter at 659 S. River St in Aurora, will be particularly affected during extreme heat or cold events.
- Senior housing and long-term care facilities without power generators or backups may face challenges during such weather conditions.

Winter Storm on Frozen Ground: Frozen ground can result in stormwater runoff. Within the combined sewer area, these areas can experience surface flooding and backup of storm sewer when sewer capacity is exceeded.

Drought: The city depends on two sources of water: surface water from the Fox River and a blend of water from several shallow and deep wells. The blend is typically about 60% surface water/river water and 40% well water; this percentage can vary. During drought conditions, the City's capacity to produce clean drinking water can be impacted:

- Low flow in the Fox River means that more water from the shallow and deep wells is needed to make up this difference (loss of supply surface and groundwater)
- Increase in demand from customers.
- Deterioration of water quality
- Increase in treatment & pumping costs.

The Aurora Water Treatment Plant can fully treat 36.5 million gallons of water per day.

Flooding: CSO, combined sewer overflows are located in underserved areas and could discharge into the river

The following area within the Borealis Terrace, located west of N. Farnsworth Ave and north of Reckinger Road, has experienced flooding.

The properties are affected areas 1401, 1411, 1421, 1431, 1441, 1451, and 1461 Austin Ave. Flooding sources are the overland flow of stormwater and overflow from Indian Creek.

These subdivisions are located within a regulatory floodplain and have experienced flooding. These properties are located within a known repetitive area. The City provides yearly outreach letters to these property owners.

Area#1 Properties (7) is located within the Borealis Terrace Subdivision (1401-1461 Austin Avenue). Flooding source due to the overland flow of stormwater and overflow from Indian Creek)

Area#2 Properties (523) located East View Estates (located south of Molitor Rd and Selmarten Rd), Acorn Woods Subdivision (located north of Molitor Road and West of Selmarten Road), Lindenwood Woods Subdivision (located north of Molitor Road and West of Selmarten), Walden Woods Condo (located on Tall Oaks Drive), and Oak Creek West Townhomes (located at Charles and Elizabeth Lane). Flooding source due to overflow from Indian Creek and its tributaries.

Area# 3 Properties (9) are located near Marshall Blvd and N. Farnsworth Ave. Flooding source due to overflow from Indian Creek

Area# 4 Properties (58) are located within the Mastodon Lake and Little Doe Lake Area. The area bounded Talma Street to the west and Howell Place to the east. Bardwell/Parker Avenue is to the south, and 6th Avenue is to the north—flooding source due to Mastodon and Little Doe Lake overflow.

Area# 5 Properties (5) located west of Kautz road, north and south side of E. New York Street. Flooding due to overflow of stormwater.

Area# 6 Properties (7) located within Sherwood Glen Unit 4 Subdivision. Flooding sources are due to the overland flow of stormwater.

Dam Failure: The city is responsible for six low-head dams, classified by IDNR as Class III-Low Hazard Dam. The dams in question are:

- Ellington Dam- Unnamed Blackberry Creek. Class III- Location: Culvert crossing at Ellington Drive, just north of Keating Drive
- Farnsworth Dam- Unnamed Blackberry Creek. Class III- Location: Amber Field Subdivision, culvert crossing at S. Farnsworth Avenue, just north of Summerlin Drive
- Orchard Road Dam- Blackberry Creek. Class III- Location: Culvert crossing at W. Galena Blvd, east of Orchard Road
- Savannah 1 Dam- Indian Creek- Class III-Location: Savannah Subdivision, culvert crossing at Savannah Drive, just east of Solitude Lane
- Savannah 2 Dam- Indian Creek- Class III-Location: Savannah Subdivision, culvert crossing at multi-use path, just NE of the Butterfield and Savannah Drive Intersection. Fox River Dam (Downtown)- Fox River. Location: Downtown Aurora.

Potential Impacts: Streets closure for an extended time to repair and restore damaged areas. Flooded yards. The costs of repair will impact the city's budget and personnel.

Lift Stations

Lift stations with measures in place could be in trouble if they fail.

The City of Aurora owns and maintains storm and sanitary sewer lift stations. The storm sewer lift station protects against storm events.

The storm sewer lift stations are:

- Orchard Lift Station, located at 595 S Orchard Road
- Manchester Lift Station at 155 Manchester Way
- Molitor Lift Station at 1610 Molitor Road
- Waubonsee Creek Lift Station at 4300 E. New York Street
- Ginger Wood Lift Station at Ginger Woods Subdivision

The sanitary sewer lift stations are:

- Frieder Lane Lift Station at 2550 Frieder Lane
- Barns Road Lift Station at 3112 Moraine Drive

Mitigation Strategies and Actions

Each jurisdiction's mitigation actions are organized as follows:

- **New Mitigation Actions** - New actions identified during this 2024 update process.
- **Ongoing Mitigation Actions** - Ongoing actions that have not been completed or have no definitive end. During the 2024 update, these "ongoing" mitigation actions and projects were modified and/or amended as needed.
- **Completed Mitigation Actions** - Completed actions.

New Mitigation Actions

The following mitigation actions in this section are "New Mitigation Actions" identified during this 2024 update process.

Sewer Separation Project	
Year Initiated	2023
Applicable Jurisdiction	City of Aurora
Lead Agency/ Organization / Position	Public Works
Supporting Agencies/ Organizations	Water and Sewer, Engineering
Applicable Goal(s)	1
Estimated Cost & Analysis (Low, Medium, High)	High
Potential Funding Source	General Funds
Benefits (Loss Avoided)	Reducing Contamination
Benefits Analysis (Low, Medium, High)	High
Projected Completion Date (Short-term, Long-term, or Ongoing)	2024
Actual Completion Date	N/A
Priority and Level of Importance (Low, Medium, High) (Based on STAPLEE and/or Feasibility Analysis conducted for each mitigation action during the update process)	High
Hazard(s) Mitigated	Flooding
Action/Implementation Plan and Project Description, if applicable	Sewer separation project to reduce contaminated water flowing into Fox River
2023 Plan Update Status and Changes in Priority	New mitigation action for 2023

Public Awareness Campaign	
Year Initiated	2023
Applicable Jurisdiction	City of Aurora
Lead Agency/ Organization / Position	Aurora Emergency Management
Supporting Agencies/ Organizations	N/A

Applicable Goal(s)	1, 2, 3, 4, 5, 6
Estimated Cost & Analysis (Low, Medium, High)	$5,000
Potential Funding Source	General Funds
Benefits (Loss Avoided)	Increase citywide resiliency through catered and appropriately curated public information products relevant to specific populations, including those most vulnerable, and the city as a whole.
Benefits Analysis (Low, Medium, High)	Medium
Projected Completion Date (Short-term, Long-term, or Ongoing)	Ongoing
Actual Completion Date	N/A
Priority and Level of Importance (Low, Medium, High) (Based on STAPLEE and/or Feasibility Analysis conducted for each mitigation action during the update process)	Medium
Hazard(s) Mitigated	Drought, Earthquake, Extreme Heat, Flooding, High Hazard Dams, Severe Summer Storms, Severe Winter Storms, Ground Failure/Erosion, Tornadoes
Action/Implementation Plan and Project Description, if applicable	Develop a multi-lingual public awareness campaign to educate the public on multiple natural hazards and actions to reduce and/or eliminate those hazards. The program will focus on the following for the next five years: - Public enrollment in Aurora Alert, the local public emergency notification system. - Promotion of water conservation and loss program - Protection and mitigation of private homeowner utilities - Updating all flood products to include bilingual offerings
2023 Plan Update Status and Changes in Priority	New mitigation action for 2023

Establish Minimum Temperature Requirements with Code Update	
Year Initiated	2023
Applicable Jurisdiction	City of Aurora
Lead Agency/ Organization / Position	Development Services
Supporting Agencies/ Organizations	Emergency Management Agency
Applicable Goal(s)	1, 3, 4, 6
Estimated Cost & Analysis (Low, Medium, High)	Low
Potential Funding Source	Staff Time
Benefits (Loss Avoided)	Reduce and/or eliminate extreme temperature impacts to residents, especially vulnerable populations who are more likely to rent rather than own their home.
Benefits Analysis (Low, Medium, High)	High
Projected Completion Date (Short-term, Long-term, or Ongoing)	2025
Actual Completion Date	N/A
Priority and Level of Importance (Low, Medium, High) (Based on STAPLEE and/or Feasibility Analysis conducted for each mitigation action during the update process)	High

Hazard(s) Mitigated	Extreme Heat, Severe Winter Storms
Action/Implementation Plan and Project Description, if applicable	Review and update housing/landlord codes to establish minimum temperature requirements for occupied residences/dwellings.
2023 Plan Update Status and Changes in Priority	New mitigation action for 2023

Lift Station Improvements	
Year Initiated	2023
Applicable Jurisdiction	City of Aurora
Lead Agency/ Organization / Position	Public Works
Supporting Agencies/ Organizations	Public Works - Water/Sewer Division
Applicable Goal(s)	1, 2, 3
Estimated Cost & Analysis (Low, Medium, High)	Medium
Potential Funding Source	General Funds
Benefits (Loss Avoided)	Reduce and/or eliminate loss of critical infrastructure during a flooding event and minimize secondary impacts of sewage backups and/or basement flooding to residential, commercial, and business sectors.
Benefits Analysis (Low, Medium, High)	Medium
Projected Completion Date (Short-term, Long-term, or Ongoing)	Ongoing
Actual Completion Date	N/A
Priority and Level of Importance (Low, Medium, High) (Based on STAPLEE and/or Feasibility Analysis conducted for each mitigation action during the update process)	Medium
Hazard(s) Mitigated	Drought, Earthquake, Extreme Heat, Flooding, High Hazard Dams, Severe Summer Storms, Severe Winter Storms, Ground Failure/Erosion, Tornadoes
Action/Implementation Plan and Project Description, if applicable	Continue to support the repair and/or replacement of eight existing lift stations throughout the city. With special attention to: 155 Manchester Way is located within the regulatory floodplain. Identify plans to provide flood protection, including elevating existing equipment, installing a backup generator, and other structural mitigation products. Upgrading the Clark Street and White Eagle lift stations. Currently scheduled to install a new force main for the White Eagle lift station in 2023.
2023 Plan Update Status and Changes in Priority	New mitigation action for 2023

Drainage Solutions	
Year Initiated	2023
Applicable Jurisdiction	City of Aurora
Lead Agency/ Organization / Position	Public Works
Supporting Agencies/ Organizations	Infrastructure and Technology Committee, Public Works - Water/Sewer Division
Applicable Goal(s)	1, 2, 3, 4, 5
Estimated Cost & Analysis (Low, Medium, High)	$200,000, annually
Potential Funding Source	General Funds
Benefits (Loss Avoided)	By providing allocated funds year over year, the city will reduce and/or eliminate public reported flooding areas, especially those that have legacy construction where vulnerable populations reside.
Benefits Analysis (Low, Medium, High)	Medium
Projected Completion Date (Short-term, Long-term, or Ongoing)	Ongoing
Actual Completion Date	N/A
Priority and Level of Importance (Low, Medium, High) (Based on STAPLEE and/or Feasibility Analysis conducted for each mitigation action during the update process)	Medium
Hazard(s) Mitigated	Flooding, Severe Summer Storms, Other
Action/Implementation Plan and Project Description, if applicable	Alleviate reported and known drainage problems throughout the city including but not limited to re-grading of ditches, adding underdrains, and installing small storm sewer extension and structures.
2023 Plan Update Status and Changes in Priority	New mitigation plan for 2023

Climate Adaptation Project	
Year Initiated	2023
Applicable Jurisdiction	City of Aurora
Lead Agency/ Organization / Position	Aurora Emergency Management Agency
Supporting Agencies/ Organizations	All City Departments
Applicable Goal(s)	1, 2, 3, 4, 5, 6
Estimated Cost & Analysis (Low, Medium, High)	$300,000
Potential Funding Source	Grant Funding
Benefits (Loss Avoided)	Establish commitment to the community through understanding of how critical infrastructure and populations may be vulnerable to changing climate conditions, and how to combat climate change through informed adaptation.
Benefits Analysis (Low, Medium, High)	Medium
Projected Completion Date (Short-term, Long-term, or Ongoing)	2025

Actual Completion Date	N/A
Priority and Level of Importance (Low, Medium, High) (Based on STAPLEE and/or Feasibility Analysis conducted for each mitigation action during the update process)	Low
Hazard(s) Mitigated	Drought, Earthquake, Extreme Heat, Flooding, High Hazard Dams, Severe Summer Storms, Severe Winter Storms, Ground Failure/Erosion, Tornadoes
Action/Implementation Plan and Project Description, if applicable	Perform a two phased climate adaptation project to include a vulnerability study and then use the information gained from the study to develop a citywide climate adaptation and response plan. The project will consist of four [preliminary] assessments including climate hazard, social vulnerability, physical vulnerability, and cascading impacts. The project will consist of five [preliminary] methodology areas: identification of exposure to hazards, identification of key populations and infrastructure, sensitivities of infrastructure and populations to hazards, vulnerability to individual hazards, and effect on adaptive capacity. All assessments will maintain an equitable core focus, but the final report and plan will/may identify and account for specific populations that are more vulnerable to climate hazards. Aurora's highest rated natural hazards will be evaluated: extreme heat/cold, riverine/surface flooding, drought, and tornadoes. During phase two of the project, results of the assessment will support changes in, but not limited to, response plans, comprehensive plans, policies, and building/construction codes to enhance resiliency in the face of climate change for all of Aurora.
2023 Plan Update Status and Changes in Priority	New mitigation action for 2023

Water Loss Control	
Year Initiated	2023
Applicable Jurisdiction	City of Aurora
Lead Agency/ Organization / Position	Public Works
Supporting Agencies/ Organizations	N/A
Applicable Goal(s)	1, 2, 3, 4, 5
Estimated Cost & Analysis (Low, Medium, High)	Varies
Potential Funding Source	General Funds
Benefits (Loss Avoided)	Reduce and/or eliminate costs to the city and residents with attention paid to sections of the city with legacy construction that may have older watermain and service connections and where more vulnerable populations reside.
Benefits Analysis (Low, Medium, High)	Medium
Projected Completion Date (Short-term, Long-term, or Ongoing)	Ongoing

Actual Completion Date	N/A
Priority and Level of Importance (Low, Medium, High) (Based on STAPLEE and/or Feasibility Analysis conducted for each mitigation action during the update process)	Medium
Hazard(s) Mitigated	Drought, Extreme Heat
Action/Implementation Plan and Project Description, if applicable	Maintain a water loss control program to protect drinking water source(s) and adapt to climate change through examination of all aspects of the City's water delivery, metering, and distribution systems to identify and mitigate water loss while promoting water conservation through established ordinance, increased inspections and citations, and bilingual public education, particularly during periods of extreme drought.
2023 Plan Update Status and Changes in Priority	New mitigation action for 2023

Floodplain Maintenance	
Year Initiated	2023
Applicable Jurisdiction	City of Aurora
Lead Agency/ Organization / Position	Public Works
Supporting Agencies/ Organizations	Public Works - Water Production
Applicable Goal(s)	1, 2, 3
Estimated Cost & Analysis (Low, Medium, High)	Varies
Potential Funding Source	General Funds
Benefits (Loss Avoided)	Reduce and/or eliminate loss of critical infrastructure and minimize impacts to the community.
Benefits Analysis (Low, Medium, High)	Medium
Projected Completion Date (Short-term, Long-term, or Ongoing)	2026
Actual Completion Date	N/A
Priority and Level of Importance (Low, Medium, High) (Based on STAPLEE and/or Feasibility Analysis conducted for each mitigation action during the update process)	Medium
Hazard(s) Mitigated	Flooding, Severe Summer Storms
Action/Implementation Plan and Project Description, if applicable	Identify and evaluate wells and well houses within a regulatory floodplain, and develop a plan to relocate, elevate, and/or floodproof wells/equipment located in a 100 to 500-year floodplain. Wells and their associated equipment in the floodplain are #21 and #101. Well #103 and the associated outdoor electrical supply, control cabinet, and underground meter vault are in a floodplain, but it is planned to be abandoned.
2023 Plan Update Status and Changes in Priority	New mitigation action for 2023

Emergency Pump Agreement	
Year Initiated	2023
Applicable Jurisdiction	City of Aurora
Lead Agency/ Organization / Position	Public Works
Supporting Agencies/ Organizations	Emergency Management Agency
Applicable Goal(s)	1, 2, 3
Estimated Cost & Analysis (Low, Medium, High)	None
Potential Funding Source	General Funds
Benefits (Loss Avoided)	Reduce response and recovery time and minimize impacts to the community during a flooding event.
Benefits Analysis (Low, Medium, High)	Medium
Projected Completion Date (Short-term, Long-term, or Ongoing)	2025
Actual Completion Date	N/A
Priority and Level of Importance (Low, Medium, High) (Based on STAPLEE and/or Feasibility Analysis conducted for each mitigation action during the update process)	Medium
Hazard(s) Mitigated	Flooding, Severe Summer Storms
Action/Implementation Plan and Project Description, if applicable	Procure emergency backup pump(s) or establish an emergency pumping services agreement with vendor for fuel and extra equipment and supplies and identify and implement potential interconnection with surrounding communities to utilize during emergency response.
2023 Plan Update Status and Changes in Priority	New mitigation action for 2023

Sanitary Sewer Evaluation	
Year Initiated	2023
Applicable Jurisdiction	City of Aurora
Lead Agency/ Organization / Position	Public Works
Supporting Agencies/ Organizations	N/A
Applicable Goal(s)	1, 2, 3, 4, 5
Estimated Cost & Analysis (Low, Medium, High)	$2,500,000
Potential Funding Source	General Funds
Benefits (Loss Avoided)	Reduce and/or eliminate back-ups and damages from sanitary sewers, with attention paid to sections of the city with legacy construction where more vulnerable populations reside.
Benefits Analysis (Low, Medium, High)	Medium
Projected Completion Date (Short-term, Long-term, or Ongoing)	Ongoing
Actual Completion Date	N/A
Priority and Level of Importance (Low, Medium, High)	Medium

(Based on STAPLEE and/or Feasibility Analysis conducted for each mitigation action during the update process)	
Hazard(s) Mitigated	Flooding, Severe Summer Storms
Action/Implementation Plan and Project Description, if applicable	Budget funding and continue to support the annual sanitary sewer evaluation of existing sanitary sewer and combined sewers throughout the city. Activities of the evaluation include: sewer televising, manhole inspections, cured in place pipe lining, and sanitary sewer spot repairs.
2023 Plan Update Status and Changes in Priority	New mitigation actions for 2023

Floodplain Management for Electrical Services	
Year Initiated	2023
Applicable Jurisdiction	City of Aurora
Lead Agency/ Organization / Position	Development Services
Supporting Agencies/ Organizations	Private Sector
Applicable Goal(s)	1, 2, 3, 4, 5, 6
Estimated Cost & Analysis (Low, Medium, High)	$500,000
Potential Funding Source	BRIC, HMGP
Benefits (Loss Avoided)	Reduce and/or eliminate loss of electrical systems and components.
Benefits Analysis (Low, Medium, High)	Medium
Projected Completion Date (Short-term, Long-term, or Ongoing)	2028
Actual Completion Date	N/A
Priority and Level of Importance (Low, Medium, High) (Based on STAPLEE and/or Feasibility Analysis conducted for each mitigation action during the update process)	Low
Hazard(s) Mitigated	Earthquake, Flooding, Severe Summer Storms, Tornadoes
Action/Implementation Plan and Project Description, if applicable	Identify the location of electrical services, backup generators, and fire alarm panels in the city to determine which exists below the 3ft base floodplain elevation and then prioritize removal and relocation.
2023 Plan Update Status and Changes in Priority	New mitigation action for 2023

Floodplain Management Hazardous Materials Hardening	
Year Initiated	2023
Applicable Jurisdiction	City of Aurora
Lead Agency/ Organization / Position	Development Services
Supporting Agencies/ Organizations	Emergency Management Agency, Public Works
Applicable Goal(s)	1, 2, 3, 4, 5, 6
Estimated Cost & Analysis (Low, Medium, High)	$500,000
Potential Funding Source	BRIC, HMGP

Benefits (Loss Avoided)	Reduce and/or eliminate recreational and drinking water contamination to the community.
Benefits Analysis (Low, Medium, High)	Medium
Projected Completion Date (Short-term, Long-term, or Ongoing)	2028
Actual Completion Date	N/A
Priority and Level of Importance (Low, Medium, High) (Based on STAPLEE and/or Feasibility Analysis conducted for each mitigation action during the update process)	Low
Hazard(s) Mitigated	Flooding, Severe Summer Storms
Action/Implementation Plan and Project Description, if applicable	Work to remove, limit expansion, and harden the containment of hazardous materials, which could become contaminants during a flood event, within the 500-year floodplain; achieved through a study and then subsequent improvements to ordinance and code.
2023 Plan Update Status and Changes in Priority	New mitigation action for 2023

Geospatial Information System Floodplain Mapping	
Year Initiated	2023
Applicable Jurisdiction	City of Aurora
Lead Agency/ Organization / Position	Public Works
Supporting Agencies/ Organizations	Public Works - Engineering Division, Information Technology
Applicable Goal(s)	1, 2, 3, 4, 5, 6
Estimated Cost & Analysis (Low, Medium, High)	N/A
Potential Funding Source	General Funding
Benefits (Loss Avoided)	Provide data for residents to make informed decisions on protecting their property, especially areas with legacy construction where more vulnerable populations reside.
Benefits Analysis (Low, Medium, High)	Medium
Projected Completion Date (Short-term, Long-term, or Ongoing)	Ongoing
Actual Completion Date	N/A
Priority and Level of Importance (Low, Medium, High) (Based on STAPLEE and/or Feasibility Analysis conducted for each mitigation action during the update process)	Medium
Hazard(s) Mitigated	Flooding, Severe Summer Storms
Action/Implementation Plan and Project Description, if applicable	Continue to work with geospatial information systems to update and improve floodplain map and coordinated information with Kane, DuPage, Kendall, and Will counties. Illustrate flood risk and limits to the public by obtaining and adding depth grid data and/or flood inundation areas. Make improved maps available to the public.

2023 Plan Update Status and Changes in Priority	New mitigation action for 2023

Bury Overhead Wires	
Year Initiated	2023
Applicable Jurisdiction	City of Aurora
Lead Agency/ Organization / Position	Public Works
Supporting Agencies/ Organizations	Private Sector Utilities
Applicable Goal(s)	1, 2, 3, 4, 5, 6
Estimated Cost & Analysis (Low, Medium, High)	Varies
Potential Funding Source	HMGP
Benefits (Loss Avoided)	Reduce and/or eliminate the disruption of overhead utilities, lessen the cost of recovery in time and funding, and ensure secured public health, safety, and welfare during an incident.
Benefits Analysis (Low, Medium, High)	Medium
Projected Completion Date (Short-term, Long-term, or Ongoing)	Ongoing
Actual Completion Date	N/A
Priority and Level of Importance (Low, Medium, High) (Based on STAPLEE and/or Feasibility Analysis conducted for each mitigation action during the update process)	Low
Hazard(s) Mitigated	Severe Summer Storms, Severe Winter Storms, Tornadoes
Action/Implementation Plan and Project Description, if applicable	Consider as part of future roadway projects to bury all overhead wires located within the project area.
2023 Plan Update Status and Changes in Priority	New mitigation action for 2023

Combined Sewer Overflow Long-Term Control Plan Maintenance	
Year Initiated	2023
Applicable Jurisdiction	City of Aurora
Lead Agency/ Organization / Position	Public Works
Supporting Agencies/ Organizations	N/A
Applicable Goal(s)	1, 2, 3, 4
Estimated Cost & Analysis (Low, Medium, High)	$2,500,000
Potential Funding Source	General Funds
Benefits (Loss Avoided)	Reduce and/or eliminate reported flooding and sewer back-ups generally and would reduce and/or eliminate impacts to areas of the city with legacy construction where more vulnerable populations reside.
Benefits Analysis (Low, Medium, High)	Medium
Projected Completion Date (Short-term, Long-term, or Ongoing)	Ongoing
Actual Completion Date	N/A
Priority and Level of Importance (Low, Medium, High) (Based on STAPLEE and/or Feasibility Analysis conducted for each mitigation action during the update process)	Medium

Hazard(s) Mitigated	Drought, Earthquake, Extreme Heat, Flooding, High Hazard Dams, Severe Summer Storms, Severe Winter Storms, Ground Failure/Erosion, Tornadoes
Action/Implementation Plan and Project Description, if applicable	Maintain and address the Illinois Environmental Protection Agency mandated local Combined Sewer Overflow Long-Term Control plan through various projects and annual program update/reporting. Proposed critical structures (treatment plant and pump stations) shall be constructed 1' over the 500-year Base Flood Elevation per Executive Order 11988. Sewer separation, in areas where known history of combined sewer overflow has occurred frequently. Construction of green infrastructure. Combined sewer treatment plant. Pump station improvements.
2023 Plan Update Status and Changes in Priority	New mitigation action for 2023

Hire Resiliency Specialist	
Year Initiated	2023
Applicable Jurisdiction	Aurora Emergency Management
Lead Agency/ Organization / Position	Aurora Emergency Management
Supporting Agencies/ Organizations	N/A
Applicable Goal(s)	1, 2, 3, 4, 5, 6
Estimated Cost & Analysis (Low, Medium, High)	$65,000
Potential Funding Source	General funds
Benefits (Loss Avoided)	Will ensure mitigation efforts are contemporary, following mandates, and provide for community longevity in the face of climate changes.
Benefits Analysis (Low, Medium, High)	Medium
Projected Completion Date (Short-term, Long-term, or Ongoing)	2024
Actual Completion Date	N/A
Priority and Level of Importance (Low, Medium, High) (Based on STAPLEE and/or Feasibility Analysis conducted for each mitigation action during the update process)	Low
Hazard(s) Mitigated	Drought, Earthquake, Extreme Heat, Flooding, High Hazard Dams, Severe Summer Storms, Severe Winter Storms, Ground Failure/Erosion, Tornadoes
Action/Implementation Plan and Project Description, if applicable	Increase citywide mitigation efforts through the hiring of an Emergency Management Resiliency Specialist to maintain and monitor development and implementation of mitigation plans and programs.
2023 Plan Update Status and Changes in Priority	New mitigation action for 2023

Develop Agreements for Drinking Water Loss	
Year Initiated	2023
Applicable Jurisdiction	City of Aurora
Lead Agency/ Organization / Position	Aurora Emergency Management
Supporting Agencies/ Organizations	Public Works, Development Services
Applicable Goal(s)	1, 2, 3
Estimated Cost & Analysis (Low, Medium, High)	N/A
Potential Funding Source	General Funds
Benefits (Loss Avoided)	Will secure the public health and safety of all populations affected by a loss of drinking water through equitable access to potable water during an emergency or disaster and less
Benefits Analysis (Low, Medium, High)	High
Projected Completion Date (Short-term, Long-term, or Ongoing)	Ongoing
Actual Completion Date	N/A
Priority and Level of Importance (Low, Medium, High) (Based on STAPLEE and/or Feasibility Analysis conducted for each mitigation action during the update process)	High
Hazard(s) Mitigated	Drought, Extreme Heat
Action/Implementation Plan and Project Description, if applicable	Identify suppliers and develop agreements for secondary water sources that may be used in extreme drought conditions or when drinking water is contaminated.
2023 Plan Update Status and Changes in Priority	New mitigation action for 2023

Heating and Cooling Center	
Year Initiated	2023
Applicable Jurisdiction	City of Aurora
Lead Agency/ Organization / Position	Aurora Emergency Management
Supporting Agencies/ Organizations	Community Services, Public Facilities
Applicable Goal(s)	1, 2, 3
Estimated Cost & Analysis (Low, Medium, High)	$2,000
Potential Funding Source	General Funds
Benefits (Loss Avoided)	Will secure the public health and safety of all populations, especially the most vulnerable, through the maintenance and provision of shelters during extreme temperature conditions when access to heating or cooling is unavailable.
Benefits Analysis (Low, Medium, High)	Medium
Projected Completion Date (Short-term, Long-term, or Ongoing)	Ongoing
Actual Completion Date	N/A
Priority and Level of Importance (Low, Medium, High) (Based on STAPLEE and/or Feasibility Analysis conducted for	Medium

each mitigation action during the update process)	
Hazard(s) Mitigated	Extreme Heat, Severe Winter Storm
Action/Implementation Plan and Project Description, if applicable	Maintain operations of and promote access to emergency heating and cooling centers for vulnerable populations.
2023 Plan Update Status and Changes in Priority	New mitigation action for 2023

GIS Natural Hazard Analysis and Community Vulnerability	
Year Initiated	2023
Applicable Jurisdiction	City of Aurora
Lead Agency/ Organization / Position	Aurora Emergency Management
Supporting Agencies/ Organizations	Public Works, Development Services, Information Technology, Community Services, Kane County Water Resources
Applicable Goal(s)	1, 2, 3, 4, 5, 6
Estimated Cost & Analysis (Low, Medium, High)	N/A
Potential Funding Source	General Funds
Benefits (Loss Avoided)	Assist city departments in making informed decisions pertaining to economic growth, the offering of mitigation programs to the public, and emergency response and mitigation efforts.
Benefits Analysis (Low, Medium, High)	Medium
Projected Completion Date (Short-term, Long-term, or Ongoing)	Ongoing
Actual Completion Date	N/A
Priority and Level of Importance (Low, Medium, High) (Based on STAPLEE and/or Feasibility Analysis conducted for each mitigation action during the update process)	Low
Hazard(s) Mitigated	Drought, Earthquake, Extreme Heat, Flooding, High Hazard Dams, Severe Summer Storms, Severe Winter Storms, Ground Failure/Erosion, Tornadoes
Action/Implementation Plan and Project Description, if applicable	Utilize geospatial information system (GIS) to develop and make publicly available historical, current, and future natural hazard information and trends to analyze impacts across the city with consideration for vulnerable populations and economic growth. Information may include, but is not limited to: - Hydrological and riverine data, specifically tracking of high water - Tornado and severe storm tracks over a certain threshold - Identification of legacy construction sections of the city - Identification of vulnerable populations of the city - Identification of critical community lifelines within the vulnerable sector
2023 Plan Update Status and Changes in Priority	New mitigation action for 2023

Flood Inundation Signage	
Year Initiated	2023
Applicable Jurisdiction	City of Aurora
Lead Agency/ Organization / Position	Public Works
Supporting Agencies/ Organizations	Emergency Management
Applicable Goal(s)	1, 3, 4
Estimated Cost & Analysis (Low, Medium, High)	$10,000
Potential Funding Source	General Funds or Grants
Benefits (Loss Avoided)	Reduce and/or eliminate flooding incidents (i.e. - stranded motorists, drowning, property loss etc.) where inundation flooding occurs.
Benefits Analysis (Low, Medium, High)	Medium
Projected Completion Date (Short-term, Long-term, or Ongoing)	2028
Actual Completion Date	N/A
Priority and Level of Importance (Low, Medium, High) (Based on STAPLEE and/or Feasibility Analysis conducted for each mitigation action during the update process)	Medium
Hazard(s) Mitigated	Flooding, Severe Summer Storms
Action/Implementation Plan and Project Description, if applicable	Install Turn Around, Don't Drown flooding signage at identified inundation flood locations around the city to inform the public of dangerous roadway conditions when floodwaters are present.
2023 Plan Update Status and Changes in Priority	New mitigation action for 2023

Ongoing Mitigation Actions

The following are ongoing actions that have not been completed or have no definitive end. During the 2024 update, these "ongoing" mitigation actions and projects were modified and/or amended as needed.

Building Code Update	
Year Initiated	2023
Applicable Jurisdiction	City of Aurora
Lead Agency/ Organization / Position	Development Services Department
Supporting Agencies/ Organizations	
Applicable Goal(s)	1, 6
Estimated Cost & Analysis (Low, Medium, High)	Low, $30,000
Potential Funding Source	General Fund
Benefits (Loss Avoided)	Reduce and/or eliminate the effects of an emergency or disaster by creating stronger buildings, reducing time lost post-incident, and minimizing indirect costs such as business interruption and lost income.
Benefits Analysis (Low, Medium, High)	High

Projected Completion Date (Short-term, Long-term, or Ongoing)	Short-term
Actual Completion Date	
Priority and Level of Importance (Low, Medium, High) (Based on STAPLEE and/or Feasibility Analysis conducted for each mitigation action during the update process)	High
Hazard(s) Mitigated	Drought, Earthquake, Extreme Heat, Flooding, High Hazard Dams, Severe Summer Storms, Severe Winter Storms, Ground Failure/Erosion, Tornadoes
Action/Implementation Plan and Project Description, if applicable	Adopt the 2021 International Building Code to maintain minimum requirements for building systems to promote sustainability, efficiency, and resilience.
2023 Plan Update Status and Changes in Priority	Ongoing

Maintain participation in the Community Rating System program as a Class 7 community and identify Community Rating System activities to improve city ranking to a class 6.	
Year Initiated	2015
Applicable Jurisdiction	City of Aurora
Lead Agency/ Organization / Position	Public Works
Supporting Agencies/ Organizations	Public Works - Engineering Division, Emergency Management
Applicable Goal(s)	1, 2, 3, 6
Estimated Cost & Analysis (Low, Medium, High)	Low
Potential Funding Source	General Funds
Benefits (Loss Avoided)	Reduce and/or eliminate pre- and post-event costs (i.e. - insurance premiums, repair, etc.) citywide, especially to sections of the city with legacy construction where vulnerable populations reside.
Benefits Analysis (Low, Medium, High)	High
Projected Completion Date (Short-term, Long-term, or Ongoing)	Short-term
Actual Completion Date	
Priority and Level of Importance (Low, Medium, High) (Based on STAPLEE and/or Feasibility Analysis conducted for each mitigation action during the update process)	Medium
Hazard(s) Mitigated	Riverine/Urban/Flash Flooding, Thunderstorms
Action/Implementation Plan and Project Description, if applicable	Maintain participation in the Community Rating System program as a Class 7 community and identify Community Rating System activities to improve city ranking to a class 6.
2023 Plan Update Status and Changes in Priority	Ongoing

Perform regular preventative drainage system maintenance and improvements	
Year Initiated	2015
Applicable Jurisdiction	City of Aurora
Lead Agency/ Organization / Position	Public Works
Supporting Agencies/ Organizations	Public Works -Water/Sewer Division
Applicable Goal(s)	1, 2, 3, 5
Estimated Cost & Analysis (Low, Medium, High)	Medium
Potential Funding Source	
Benefits (Loss Avoided)	Reduce and/or eliminate flooding citywide with attention paid to sections of the city with legacy construction where more vulnerable populations reside.
Benefits Analysis (Low, Medium, High)	High
Projected Completion Date (Short-term, Long-term, or Ongoing)	Ongoing
Actual Completion Date	
Priority and Level of Importance (Low, Medium, High) (Based on STAPLEE and/or Feasibility Analysis conducted for each mitigation action during the update process)	Medium
Hazard(s) Mitigated	Riverine/Urban/Flash Flooding, Thunderstorms, Microbursts.
Action/Implementation Plan and Project Description, if applicable	Continue to perform regular preventative drainage system maintenance and improvements, such as sediment and debris clearance, manholes, ditches, and stormwater facilities, with special attention paid to periods of long-duration precipitation and increased precipitation amounts; example 1" of rain in one hour.
2023 Plan Update Status and Changes in Priority	Ongoing

Completed Mitigation Actions

The following section represents completed mitigation actions and serves as an archive of identified and completed projects.

Flood Control Projects	
Year Initiated	2009
Applicable Jurisdiction	City of Aurora
Lead Agency/ Organization / Position	City of Aurora
Supporting Agencies/ Organizations	
Applicable Goal(s)	
Estimated Cost & Analysis (Low, Medium, High)	
Potential Funding Source	
Benefits (Loss Avoided)	Replacement of the undersized culvert should alleviate the flooding.
Benefits Analysis (Low, Medium, High)	

Projected Completion Date (Short-term, Long-term, or Ongoing)	
Actual Completion Date	8/27/2011
Priority and Level of Importance (Low, Medium, High) (Based on STAPLEE and/or Feasibility Analysis conducted for each mitigation action during the update process)	N/A
Hazard(s) Mitigated	
Action/Implementation Plan and Project Description, if applicable	The City of Aurora has experienced flooding upstream of Illinois Avenue in a drainage from Greenfield Lake to Orchard Lake. The city has identified the cause of this flooding to be undersized culverts under Illinois Avenue. The undersized culverts need to be replaced.
2023 Plan Update Status and Changes in Priority	2011 Update: Completed - Completed on 08-27-11 with a final cost of $228,972.00

Flood Control Projects	
Year Initiated	2009
Applicable Jurisdiction	City of Aurora
Lead Agency/ Organization / Position	City of Aurora
Supporting Agencies/ Organizations	
Applicable Goal(s)	
Estimated Cost & Analysis (Low, Medium, High)	
Potential Funding Source	
Benefits (Loss Avoided)	
Benefits Analysis (Low, Medium, High)	
Projected Completion Date (Short-term, Long-term, or Ongoing)	
Actual Completion Date	2010-2011
Priority and Level of Importance (Low, Medium, High) (Based on STAPLEE and/or Feasibility Analysis conducted for each mitigation action during the update process)	N/A
Hazard(s) Mitigated	
Action/Implementation Plan and Project Description, if applicable	The City of Aurora is proposing to construct storm sewers within sewer basins 5, 6, and 13.
2023 Plan Update Status and Changes in Priority	2010-2011: Completed - 2.1 Basin 6 Fulton, Smith, and Fenton St. Storm and Sanitary Sewer Improvements – which consists of approximately 6,800 lineal feet of storm sewers ranging in size from 12” to 42” in diameter. Completed on 4-21-11 with a final cost of $1,452,066.81 2.2 Basin13 River St Sub Basin Storm Sewer Improvements Phase 2 - which consists of approximately 3,900 lineal feet of storm sewer ranging in size from 6” to 27” in diameter.

	Completed on 10-5-10 with a final cost of $307,436.86 2.3 Basin13 River St Sub Basin Storm Sewer Improvements Phase 3 - which consists of approximately 7,800 lineal feet of storm sewer ranging in size from 12” to 26” in diameter. Completed on 12-10-10 with a final cost of $2,046,580.07

Flood Control Projects	
Year Initiated	2009
Applicable Jurisdiction	City of Aurora
Lead Agency/ Organization / Position	City of Aurora
Supporting Agencies/ Organizations	
Applicable Goal(s)	
Estimated Cost & Analysis (Low, Medium, High)	
Potential Funding Source	
Benefits (Loss Avoided)	Completed project should reduce frequency of sewage overflows into the Fox River and Indian Creek.
Benefits Analysis (Low, Medium, High)	
Projected Completion Date (Short-term, Long-term, or Ongoing)	
Actual Completion Date	2010
Priority and Level of Importance (Low, Medium, High) (Based on STAPLEE and/or Feasibility Analysis conducted for each mitigation action during the update process)	N/A
Hazard(s) Mitigated	
Action/Implementation Plan and Project Description, if applicable	The city is in the process of preparing a CSO LTCP that will be used as a planning tool to decrease the frequency of combined sewage overflows into the Fox River and Indian Creek. The plan is a requirement listed in the City’s CSO NPDES permit.
2023 Plan Update Status and Changes in Priority	2010: Completed - The preparation and review of the LTCP was completed in July of 2010.