

Table G - 1. Mitigation Actions Identified for Implementation by the City of Arden Hills (2018-2022) (From Ramsey County Master Mitigation Action Chart)

#	Hazard	Mitigation Strategy	City of Arden Hills Mitigation Action	Status	Priority Ranking	Time-frame	Jurisdictions	Responsibility	County/City Comments on Planning Mechanisms for Implementation	Possible Funding
I	All-Hazards	Mitigation Preparedness & Response Support	Continue to ensure that all Ramsey County residents are aware of and sign-up for the County's Everbridge Emergency Notification System.	Ongoing	High	2018-2022	Ramsey County, Arden Hills , Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	Ramsey County Emergency Management & Homeland Security (RCEMHS) & Municipal Emergency Management Agencies (EMAs)	<p>This is a new effort of Ramsey County EMHS being rolled out in 2018. A link for the Everbridge for community sign up is provided on the Ramsey County EMHS website, and reminders are also posted using the Ramsey County EMHS Facebook Page. In addition to Everbridge, the County has IPAWS capabilities for targeted and county-wide emergency notifications.</p> <p>All city jurisdictions within the County are encouraged to promote sign up for the Everbridge system using their means of public outreach (websites, social media, local media).</p> <p><i>City Comment: In addition to access to the County's Everbridge system, the City of Arden Hills provides an emergency alert system on our website to notify residents to an emergency or road condition in the City.</i></p>	County, municipal funding

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4	All-Hazards	Local Planning & Regulations	Update County/City Comprehensive Plans and Zoning Ordinances to include mitigation considerations that help to reduce risk from natural hazards. Utilize data of past hazard events and future climate projections to help inform updates.	Ongoing	High	2018-2022	Ramsey County, Arden Hills , Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS in coordination with Ramsey County Community and Economic Development and local municipal administrators, Planning & Zoning Committees	Ramsey County has a “2030 Comprehensive Plan” prepared to meet the requirements of the Metropolitan Land Planning Act and the Metropolitan Council’s 2030 Regional Development Framework. Ramsey County will encourage municipalities to update their local Comprehensive Plans to include considerations for mitigation in land use planning to reduce future risk to due to natural hazards (i.e., flooding). <i>City Comment: We need to update our Comprehensive Plan to ensure it addresses all necessary topics.</i>	County funding
6	All-Hazards	Local Planning & Regulations	Continue to update Emergency Operation Plans and COOP/COG plans to ensure that they adequately detail the needed steps to respond to all-hazards and ensure continuity of key government functions in the event of a disaster.	Ongoing	High	2018-2022	Ramsey County, Arden Hills , Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS & Municipal EMAs	Ramsey County EMHS maintains an Emergency Operations Plan (EOP) and the Ramsey County Continuity of Operations (COOP)/Continuity of Government (COG) plans as guides for emergency and/or recovery operations. These plans are intended to assist key county/city officials and emergency organizations to carry out their responsibilities for the protection of life and property under a wide range of emergency conditions.	County, municipal funding

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9	All-Hazards	Education & Awareness Programs	Continue to promote education & awareness on all-hazards and emergency preparedness for schools, individuals, families, and businesses.	Ongoing	High	2018-2022	Ramsey County, Arden Hills , Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS & Municipal EMAs	Information is distributed to the public via RCEMHS Facebook/ Twitter and subscription based programs (GovDelivery) on a regular basis. Additional information is provided during the NWS severe weather awareness weeks in spring and winter. RCEMHS also has a YouTube Channel where “Get Ready Gopher” educational videos on preparedness and severe weather training are posted. These are promoted to the schools as well as the larger public for viewing. Cities are encouraged to share information through their own existing channels (i.e., websites, social media, and local media).	County, municipal funding
15	Severe Winter & Summer Storms	Education & Awareness Programs	Continue to promote the use of NOAA weather radios by residents, schools, businesses, and facilities that house persons with functional and access needs.	Ongoing	Moderate	2018-2022	Ramsey County, Arden Hills , Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS & Municipal EMAs	Ramsey County EMHS regularly promotes the use of NOAA weather radios by critical facilities and the public to receive information broadcast from the National Weather Service. NOAA weather radios are recommended as an important way to receive emergency weather alerts from the NWS. Local city Emergency Managers are encouraged to ensure the placement of NOAA radios in key facilities within their communities.	County, municipal funding

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16	Severe Winter & Summer Storms	Structure and Infrastructure Projects	Work with municipal electrical cooperative and power companies to reduce overhead exposure of power lines that are vulnerable to damage from severe winter/summer storms (i.e., high winds, ice, and heavy snow). Replace overhead power lines with underground lines in areas with high-risk exposure (i.e. high tree concentration areas).	New	High	2018-2022	Ramsey County, Arden Hills , Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RC Public Works, Municipal Public Works in cooperation the appropriate utility company.	RC EMHS County and all cities will work as needed with their appropriate utility providers as needed to evaluate areas of concern. Service providers for Ramsey County include: <ul style="list-style-type: none"> • Xcel Energy • Connexus Energy • North Saint Paul Utility Department Areas of concern will be evaluated to see where putting lines underground may be feasible and make sense.	Coop / Electric Company funding, Possible FEMA HMA grant for Infrastructure Retrofit

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17	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Identify critical facilities or infrastructure that do not have generator backup power in the event of a major power outage resulting from severe winter or summer storms. (Examples of critical facilities include Police/ Fire departments, EOC's, health care facilities, water & sewer treatment facilities, and other facilities deemed as critical, i.e. public schools and sheltering facilities).	New	High	2018-2022	Ramsey County, Arden Hills , Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS, RC Property Management & Municipal EMAs	<p>The Ramsey County Law Enforcement Center (jail, admin.), Emergency Communications Center, Medical Examiner's Office, Public Works Facility (maintenance areas, admin and primary EOC backup power), and Nursing Home have generator backup power.</p> <p>Ramsey County's current priorities for generator backup power include:</p> <ul style="list-style-type: none"> • Plato Building • Public Health and Emergency Management's Department Operations Center (DOC's) • Rec Centers and libraries that serve as cooling centers • Facilities designated for Mass Care Sheltering • Traffic Signal Systems <p><i>City Comment: The City of Arden Hills has identified a need to acquire generators for public works critical infrastructure in the event of an extended power outage.</i></p>	County, municipal funding

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18	Severe Winter & Summer Storms	Mitigation Preparedness & Response Support	Purchase and install generator hook-ups and encourage local generator purchases for identified critical facilities that should have backup power.	New	High	2018-2022	Ramsey County, Arden Hills , Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS, RC Property Management & Municipal EMAs	Ramsey County, local municipal governments, and schools will evaluate feasibility to purchase and install generators for key facilities, and will do so as funding allows.	County, municipal funding, Possible FEMA HMA grant for Generators
19	Severe Winter Weather	Mitigation Preparedness & Response Support	Continue to provide for public safety on roads through anti-icing (application of brine solution before an event), snow removal, salting and sanding to minimize the impacts of snow/ice accumulations on roadways.	Ongoing	Moderate	2018-2022	Ramsey County, Arden Hills , Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, Shoreview, Vadnais Heights, White Bear Lake	RC Public Works & Municipal Public Works	Ramsey County and its municipalities complete the snow removal from all county and municipal roads. MNDOT will remove the snow from Interstate and State Highways as well as disperse salt/sand as needed. Municipalities have snow emergency plans and ordinances in place.	County, municipal funding

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22	Severe Summer Storms	Structure and Infrastructure Projects	Identify community areas, parks, and facilities (i.e., schools, government buildings, manufactured home parks) that are vulnerable to tornadoes and evaluate for potential construction or retrofit of safe rooms or storm shelters.	New	High	2018-2022	Ramsey County, Arden Hills , Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS, RC Parks & Rec, Municipal parks & rec, and EMAs	RCEMHS and RC Parks & Rec will work to identify priority areas for evaluation for safe room construction or retrofit. Municipal EMAs will also work to evaluate areas of need for storm shelters or safe rooms, such as for local parks or manufactured home parks.	County, municipal funding
23	Severe Summer Storms	Structure and Infrastructure Projects	Implement construction or retrofit projects for safe rooms or storm shelters in identified vulnerable locations.	New	High	2018-2022	Ramsey County, Arden Hills , Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RCEMHS, RC Parks & Rec, Municipal parks & rec, and EMAs	Ramsey County EMHS will seek to work with municipalities and schools to build community safe rooms where needed. Outreach should be conducted to the schools to make sure they are aware of a possible inclusion of a community safe room to their facility when they are planning. Any community safe room projects that the County is involved in will be part of the Ramsey County Emergency Management program. FEMA grant funding may be sought to support an eligible safe room project.	County, municipal funding, Possible FEMA HMA grant for Safe Rooms

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24	Severe Summer Storms	Local Planning & Regulations	Work to ensure Minnesota Department of Health (MDH) Evacuation Plan & Storm Shelter Requirements are met in municipalities with manufactured home parks.	On-going	High	2018-2022	Arden Hills, Little Canada, Maplewood, Mounds View, New Brighton, Roseville, Shoreview, Vadnais Heights	Municipal EMAs in coordination with RCEMHS and MHP Operators	<p>Ramsey County has identified 15 manufactured home parks (MHPs) in 8 municipalities that have trailer parks. Of those 15, 12 have identified they have shelters, one may have a shelter and one does not and one is unknown.</p> <p>Minnesota State Statute (327.205 Shelter Construction Standards) outlines the requirements for MHP's with less than 10 units / more than 10 units for evacuation plans and sheltering facilities for the residents of the park in times of high winds or tornadoes, as well as the responsibility of municipalities with MHPs to assist with/approve of evacuation & shelter plans.</p> <p>Ramsey County EMHS will continue to encourage municipalities to work with local MPH operators to ensure they follow the law.</p> <p><i>City Comment: The city will work with our mobile home park to follow the MDH requirements.</i></p>	County, municipal funding, MHP Owner

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30	Flooding	Local Planning & Regulations / Structure & Infrastructure Projects	Enhance stormwater management plans and ordinances that require improvement of stormwater management systems, including for areas of new development and installation of infrastructure capable of handling a ten to twenty-year rain event. Identify and address where stormwater run-off capacity improvement projects are needed.	New	High	2018-2022	Ramsey County, Arden Hills , Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, Shoreview, Vadnais Heights, White Bear Lake, White Bear Township	RC Public Works and municipal Planning/Public Works depts. in coordination with local watershed organizations	Ramsey County and local cities maintain stormwater management plans and work to identify, prioritize, and address highest risk areas. Mitigation examples may include to construct, retrofit, or maintain drainage systems to include sewage and water retention and detention systems. Outside funding to support stormwater improvement projects may be available through avenues such as the MN DNR Flood Hazard Mitigation Grants, MPCA, and FEMA HMA funding for flood reduction projects.	County/City funding, SWCD, and Possible MPCA/PFA grant funding. Possible FEMA HMA grant for Localized Flood Reduction Projects or Infrastructure Retrofit
32	Flooding	Education & Awareness Programs / Structure & Infrastructure Projects	Provide information & technical assistance to property owners to help mitigate against localized flooding during high-rain events (i.e., landscaping / green infrastructure applications).	New	High	2018-2022	Ramsey County, Arden Hills , Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, Shoreview, Vadnais Heights, White Bear Lake	RC Public Works, RC Conservation District, and municipal planning/public works	This is an ongoing effort of Ramsey County in conjunction with local jurisdictions that have experienced flooding due to high rain events.	County/City Funding, Possible FEMA HMA grant for Property Acquisition & Structure Demolition or Relocation

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33	Flooding	Local Planning & Regulations	Identify residential, commercial, government facilities, and/or critical infrastructure properties that may experience damage from future flooding and work to implement appropriate mitigation measures (including buy-out for property acquisition & structure demolition or relocation). Areas of focus may include previously unidentified flooding locations.	New	High	2018-2022	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS, RC Public Works, RC Property Management, RC Conservation District, municipal EMA	In 2015, Ramsey County removed seven buildings, including critical infrastructure, from the Mississippi River floodplain. A permanent retaining wall along the bluff was completed in November 2017. Ramsey County remains owners of these properties and will work with the new developers and Saint Paul Emergency Management to provide technical assistance and support on flood protection systems and measures in the future. Ramsey County and its municipalities will continue to evaluate properties that may be at risk of flooding and work with property owners to identify mitigation measure to reduce or eliminate future damages.	County, municipal funding, DNR Flood Mitigation Grant, US Army Corps of Engineers (USACE), Possible FEMA HMA grant for Property Acquisition & Structure Demolition or Relocation
37	Flooding	Local Planning & Regulations	Participate in the National Flood Insurance Program (NFIP) and enforce local floodplain ordinances to ensure that new construction is built above regulatory flood protection elevation.	Ongoing	Moderate	2018-2022	Ramsey County, Arden Hills, Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North St. Paul, Roseville, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS, Municipal EMAs local city planning depts.	Ramsey County promotes and all municipalities participate in the NFIP (except the City of North Oaks). Each city develops and enforces local floodplain ordinances.	County, municipal funding

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38	Flooding	Structure & Infrastructure Projects	Identify, prioritize, and implement localized flood reduction measures to improve drainage systems and reduce over-the-road flooding to County or municipal roads.	New	High	2018-2022	Ramsey County, Arden Hills , Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, Shoreview, Vadnais Heights, White Bear Lake	RC Public Works, City Public Works, MnDOT, Watershed Districts,	Ramsey County Public Works and local city Public Works work to identify and address localized flood risk reduction projects. <i>City Comment: We are currently working through elevating a roadway that passes through a low-lying watershed area that floods over.</i>	County/City Budgets, MnDOT, Possible MN DNR Flood Hazard Grants or FEMA HMA grant for Localized Flood Reduction Projects / Infrastructure Retrofit
42	Wildfire	Local Planning & Regulations	Continue to ensure the strong coordination between local fire departments to provide fire protection.	Ongoing	High	2018-2022	Ramsey County, Arden Hills , Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, Shoreview, Vadnais Heights, White Bear Lake	Municipal fire districts	There are 12 fire departments located in Ramsey County. All the municipal fire departments have mutual aid agreements with each contiguous department that borders their respective fire district, including those in adjoining counties. Written mutual aid agreements are on file with each city.	Local fire department funding

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43	Wildfire	Local Planning & Regulations	Continue to enforce burning permits/restrictions.	Ongoing	Moderate	2018-2022	Ramsey County, Arden Hills , Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, Shoreview, Vadnais Heights, White Bear Lake	Municipal fire districts	Burn permits are regulated by the fire departments in Ramsey County. An actual permit may or may not be required, however, each jurisdiction has rules/regulations available to all residents online.	Municipal or fire district funding
47	Drought	Education & Awareness Programs	Promote water conservation measures to residents during periods of drought, and enforce water conservation ordinances when needed.	Ongoing	Moderate	2018-2022	Ramsey County, Arden Hills , Falcon Heights, Gem Lake, Lauderdale, Little Canada, Maplewood, Mounds View, New Brighton, North Oaks, North St. Paul, Roseville, Shoreview, Vadnais Heights, White Bear Lake	RCEMHS, RC Conservation District & Local City planning depts.	Promoting water conservation during periods of drought is a standing effort of the County and local governments. The State of MN has a stateside drought response plan prepared by the MN DNR that the County may reference for guidance.	County, municipal funding