

MEMORANDUM

To: Twin Cities Metro Area Healthy Communities Planning Project Team

**From: Ross Daniels, Community Planner and Sarah Paulus, Research Assistant
Public Health Law Center**

**Re: Indicator Analysis: Climate Change for At-Risk Communities
Metropolitan Communities Healthy Communities Planning Project**

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Indicator: Climate Change for At-Risk Populations

In preparation for the initial plan review phase of the Healthy Comprehensive Plan Review Project, the Project Team defined various key terms across indicators. The climate change for at-risk populations indicator is concerned with two issues, defined by the Project Team as follows:

Climate equity, which “[e]nsures that all people have the opportunity to benefit equally from climate solutions, while not taking on an un-equal burden of climate impacts,”¹ and

Climate justice, which “[f]ocuses on the root causes of climate change-making system changes that are required to address unequal burdens to our communities and realigns our economy with natural systems. As a form of environmental justice, climate justice means that all species have the right to access and obtain the resources needed to have an equal chance of survival and freedom from discrimination.”²

Overall Takeaways

In total, 15 of the studied communities discuss the effects of climate change for at-risk populations in their comprehensive plans. When taken as a whole, these communities generally approach discussions about climate change for at-risk populations through resiliency planning. Several urban communities also incorporate equity into their discussion of climate change.

Equity

Overall, urban communities are the only communities to incorporate equity into their plans’ discussions of climate change for at-risk populations. The urban community designation section of this memo describes in further detail the equity theme of engagement with vulnerable populations.

Resiliency Planning

Overall, resiliency planning is a common theme that characterizes the planning process with respect to climate change decision-making for at-risk populations. Resiliency planning ensures that the physical environment and local citizens are each prepared to handle future climate crises from severe temperatures to major precipitation events. Resiliency planning involves the prioritization of climate adaptation over climate mitigation; in other words, a focus on responding to the impacts of climate change rather than preventing them.

Maplewood’s plan, for example, contains a sustainability element, which focuses in part on local energy policies. One of the energy action items is to create “[a] Climate Action and Adaptation Plan that includes strategies for dealing with the effects of climate change” (Maplewood, 9-160). While this action item contains strategies related to lowering greenhouse gas emissions, it is primarily rooted in resiliency, as it includes conducting a climate vulnerabilities study, decreasing the urban heat island effect “[e]specially in areas with populations most vulnerable to heat” and increasing food security for vulnerable populations (Maplewood, 9-160). A similar spirit underpins the rural community of **Marine on St. Croix**. The city defines resilience planning as that which “[f]ocuses on all aspects of community, ensuring the economy,



the environment, and social/living conditions are vibrant and upheld through adversity,” and dedicates itself to participation in the GreenStep Cities program in order to meet these objectives (Marine on St. Croix, 31). The idea of ensuring that the physical environment is prepared to handle future climate crises is also addressed in **Arden Hills**. The city’s plan states that, “[t]he need for communities to address environmental sustainability, green building practices, energy efficiency, and conservation is becoming more apparent in the face of energy uncertainty and climate change” (Arden Hills, 12-1).

Interesting and Innovative Approaches

Urban communities take some of the most interesting approaches to climate change, including creating and utilizing Environmental Advisory Committees and mitigating climate change by increasing access to healthy food.

Creation of Environmental Advisory Committees

The creation and utilization of Environmental Advisory Committees (EAC) is an interesting approach utilized in both North St. Paul and West St. Paul. **North St. Paul** discusses the appointment of an EAC “[r]esponsible for advising the council on decisions impacting the ecological health of the city” (North St. Paul, 205). North St. Paul works to promote environmental awareness and increase stewardship in the city in its comprehensive plan. **West St. Paul** also discusses its appointment of an EAC “[r]esponsible for providing residents with opportunities to bring a comprehensive perspective to greening, sustainability, and beautification” (West St. Paul, 9-4).

Increasing Access to Healthy Food

Another interesting approach seen was mitigating climate change by increasing access to healthy food. In its sustainability chapter, **West St. Paul** mentions its goal is to “[s]upport and encourage local food access by focusing on food proximity, prevalence, types, sources, and reliability of sources” (West St. Paul, 9-12). **Maplewood** also utilizes the strategy of “[increasing] food security for Maplewood residents, especially those most vulnerable” as one of its sustainability measures (Maplewood, 9-160). **Maplewood** also mentions that the city’s biggest climate change risks involve “[s]tresses on the City’s food security with interruptions on transportation networks that could trigger food shortages and spikes in food costs” (Maplewood, 9-154).

Ranking Analysis

The communities received a score of 1 to 4 on the climate change for at-risk communities indicator, which ranks them on how much they incorporated climate change for at-risk populations in their comprehensive plans. If a community scored a 1, that means there was no mention of climate change planning for at-risk communities. The climate change sections of plans scoring between 2 and 4 were scored with the following criteria:

- Level 2 communities broadly mention planning for and prioritizing climate change decision-making for at-risk populations, but do not include goals and policies to this end.



- Level 3 communities include goals and policies for climate change decision-making for at-risk populations.
- Level 4 communities include goals and policies for climate change decision-making for at-risk populations, identify strategies for implementing these policies, and dedicate resources toward achieving them.

The number of communities to receive each score was:

| | |
|----------------|----------------|
| Level 1 | 34 communities |
| Level 2 | 8 communities |
| Level 3 | 4 communities |
| Level 4 | 3 communities |

Level 1

Many communities that score a level 1 discuss climate change, but not its effects on those communities that stand to be burdened most. For example, transportation elements often discuss the need to prioritize forms of transportation that would draw down greenhouse gases. However, these discussions are not always connected to prioritizing at-risk communities in developing goals and policies. Climate-related goals and policies that do not necessarily prioritize at-risk communities are discussed more thoroughly in other indicator memos such as those for Multimodal Transportation, Intense Rain Events and Flooding, and Extreme Heat. To score a level 2, 3, or 4 for this indicator, two conditions must be met. The plan must address climate change *and* climate change must be tied to the health of at-risk populations.

Level 2

Level 2 communities mention planning for and prioritizing climate change decision-making for at-risk populations, but do not include goals and policies to this end. These communities weave together social, environmental, and economic implications of climate change, and refer to vulnerability studies and external plans.

Social, Environmental, and Economic Implications

One theme across level 2 communities is that they do not target specific social, environmental, or economic ramifications of climate change, but rather collectively touch on each of these factors. In discussing their resiliency goals, for instance, **Oakdale** indicates that, “[a] resilient city is an environmentally, economically, and socially healthy community that provides residents with a high quality of life. Resilience is important so cities are positioned to respond, adapt, and thrive under changing conditions” (Oakdale, 64). **Marine on St. Croix**’s Natural Resources section discusses the importance of resilience planning, which it defines as planning that “[f]ocuses on all aspects of community, ensuring the economy, the environment, and social/living conditions are vibrant and upheld through adversity” (Marine on St. Croix, 31).

Vulnerability Studies/External Plan Reference

Another common feature of cities that score a level 2 is a heavy reference to external plans or studies that have either been done in the past or will be done in the future. To this end, a second theme of plans that scored a 2 in the climate change indicator is a discussion of the use of vulnerability studies to inform decisions related to climate change. **Roseville**, for instance, completed a report entitled *Population Vulnerability Assessment and Climate Adaptation Framework* in 2018, which identifies particularly vulnerable neighborhoods to climate change impacts. One of Roseville's goals is to use this framework to "[d]evelop a Resilience Plan that establishes community resilience goals and strategies" (Roseville, 9-20). In a similar spirit, **Bloomington**'s Public Health Department developed a Social Vulnerability Index in 2014, which the city will use to prioritize communities that "[h]ave not benefited from previous flood mitigation projects" in the past (Bloomington, Appendix A, 89). Flood mitigation projects are directly influenced by this index, discussed in Bloomington's utilities element and outlined in the plan's strategy to "[m]itigate flood risk" (Bloomington, 6.28).

Level 3

Level 3 communities include goals and policies for climate change decision-making for at-risk populations. These communities contain budget considerations for achieving climate change resilience goals.

Budget for Climate Resilience Goals

The primary theme across the level 3 communities that was found to be generally consistent is a commitment to budget for climate change in pursuit of environmental protection and sustainability goals. This theme indicates that these communities have not been able to dedicate financial resources to climate change resilience but are making a commitment to do so in the immediate future. The cities of **Falcon Heights, North St. Paul, and West St. Paul** all outline special resource protection, which include goals to "[i]ntegrate climate resilience into city planning, policy, operations, and budgeting processes" (Falcon Heights, 144; North St. Paul, 215; West St. Paul, 9-13).

Level 4

Level 4 communities include goals and policies for climate change decision-making for at-risk populations, identify strategies for implementing policy, and dedicate resources toward achieving them. These communities emphasize social cohesion as a weapon that can be wielded in combating climate change.

Social Cohesion

Communities scoring a level 4 emphasize social cohesion as one of the most powerful tools that can be deployed in the fight against climate change. **Minneapolis** includes a "Climate Resilient Communities" chapter which includes a goal to ensure resident and infrastructural resiliency to the shocks and stresses of climate change. The first action step to achieve this goal is to "[s]trengthen connections among



individuals and networks while promoting social inclusion and cohesion” (Minneapolis, 209). **Golden Valley**’s implementation plan includes a goal to “Increase Community Resilience and Preparedness” for climate impacts. Among the action items listed is to “[engage] community members and [build] social cohesion that strengthens the City’s ability to withstand unexpected disruptions” (Golden Valley, 7-30).

Community Designation Analysis

All 49 plans, representing 51 communities, reviewed in the project were sorted into one of three main designations: urban, suburban, or rural. The project researchers analyzed these types of communities separately to see if communities with different designations approached the task of climate change decision-making for at-risk populations in different ways that were more specific to their community type. As indicated, below, these larger categories are combinations of the more narrowly defined categories the Metropolitan Council (Met Council) uses to distinguish communities. The urban category is made up of urban center and urban communities, while the suburban category is made up of towns that Met Council defines as suburban, suburban edge, and emerging suburban edge communities. The rural category is a combination of rural center, diversified rural, rural residential, and agricultural communities.

Urban

Urban communities discussed equity within their plans to address climate change for at-risk populations. Highlighting the importance of getting input from the residents and populations who will be the most impacted by climate change was a theme found within these plans.

Equity - Engagement with Vulnerable Populations

Minneapolis states that “[o]f priority is the creation and implementation of environmental justice policies that eliminate stationary pollution sources, remediate contaminated brownfield sites, improve access to healthy foods, and address health hazards in housing. It’s important to have significant involvement from disenfranchised communities in this endeavor” (Minneapolis, 91). **West St. Paul** notes that “[i]nput from residents who would be most affected by climate change (vulnerable populations such as low-income families, minorities, handicapped, etc.) will become increasingly important to develop local sustainability” (West St. Paul, 9-11).

The urban communities have multiple themes across cities. First, they focus on retrofitting old buildings and infrastructure to be more energy efficient, as well as ensuring new development has sustainability standards. Second, as with the communities that scored a 4, social cohesion is a common theme. Third, there is a trend of utilizing public space for green initiatives that is mentioned across multiple plans. Fourth, urban communities discuss multimodal transportation as a tool to mitigate the impacts of climate change.

Energy Efficiency of Old Buildings and Infrastructure

Many urban communities, with an abundant stock of existing buildings and long-developed public infrastructure, seek to improve energy efficiency in the existing built environment. **Minneapolis** hopes



“[t]o achieve the goal of climate change resilience, [by striving] to substantially increase the energy efficiency of buildings by retrofitting existing buildings and improving the design of new buildings” (Minneapolis, 42). Due to a lack of vacant land that can be developed, **Falcon Heights** mentions that it “[w]ill concentrate on the sustainable and resilient maintenance of neighborhoods and redevelopment as means to maintain the City as a viable community” (Falcon Heights, 15). In situations where the city does have developable land, the city also indicates it “[s]hould include energy efficiency, sustainability and resiliency, thereby improving home durability, health, and comfort, by reducing maintenance and utilization costs as well as increased sense of community. This would greatly impact the City's ability to meet and maintain its carbon reduction and resiliency goals” (Falcon Heights, 25).

Social Cohesion

Golden Valley includes a goal to “[p]repare residents and businesses for abrupt changes in weather as well as prolonged environmental stresses by engaging community members and building social cohesion that strengthens the City's ability to withstand unexpected disruptions” (Golden Valley, 7-30). Also, its “Resilience and Sustainability Goal” of increasing community resilience and preparedness has two specific objectives, including to “[e]nable communities to withstand and adapt to weather- and climate-related impacts,” and to “[p]romote social connectedness” (Golden Valley, 7-25). **Minneapolis** also highlights this theme by ensuring “[c]ity infrastructure and residents are resilient to the shocks and stresses of climate change” through the objective of strengthening “[c]onnections among individuals and networks while promoting social inclusion and cohesion” (Minneapolis, 209).

Using Public Space for Green Initiatives

St. Louis Park plans to “[i]ncorporate diverse cultures into natural resources through community gardens, SEEDs program with summer playgrounds, FIN program, events (such as Parktacular, tree plantings, et al. [sic]), [and] presentations (at schools and targeted groups)” (St. Louis Park, 4-72). **Falcon Heights** includes these efforts in its “Parks and Trails Policies” section by mentioning plans to “[i]ncrease resiliency to weather events by the planting of buffer zones in park borders and public building properties or on public right of ways next to streets” (Falcon Heights, 126).

Multimodal Transportation

Golden Valley plans to “[c]reate a multi-modal transportation system that supports those who walk, bike, drive, or take transit, [that] will celebrate and protect its natural resources and will promote sustainability in its infrastructure in order to remain resilient in the face of climate change” (Golden Valley, 1-5). To achieve its goals of climate change resilience, **Minneapolis** will “[w]ork to accelerate the transition to renewable energy in buildings and transportation. [...] and] will establish a pattern of development and a transportation network that prioritizes pedestrians, bicyclers and transit users” (Minneapolis, 42).

Suburban

The suburban communities have a few common features. One of the main themes for these cities is the focus on reducing car and highway traffic and exploring other multimodal transit options. Another is the



prioritization of becoming a certified GreenStep city. Also, both resiliency and emergency and hazard planning are frequently mentioned throughout the plans of suburban communities.

Reducing Car and Highway Traffic and Exploring Multimodal Transit

Many suburban communities address the impact traffic has on the environment and explore the use of multimodal transportation as a way to mitigate those impacts. **Arden Hills** recognizes that “a significant contributor of carbon and greenhouse gas emissions is [from] traffic passing through on Interstates I-694, I-35W, Highway 10, Highway 96, Snelling Avenue, and Lexington Avenue” and concludes that “[c]ities, counties, and the state need to work cooperatively on other regulatory measures that encourage carbon emission reduction” (Arden Hills, 12-3). **Eden Prairie** connects traffic to climate change by acknowledging that “[r]educing congestion on the regional highway system will help to create cleaner air quality and reduce pollution” (Eden Prairie, 120). **Mahtomedi** includes a Community Health Goal to “[p]romote sustainable transportation infrastructure and adopt zoning language that aligns with the Green Streets Program strategies” (Mahtomedi, 133). **Stillwater** highlights best practices identified by the Comprehensive Plan Advisory Committee (CPAC) as high priority which includes “[a]lternative modes of transportation (e.g., transit), housing for all, climate change action and energy reduction (e.g., green roofs and solar)” (Stillwater, 12-10).

GreenStep City Certification

Becoming certified as a GreenStep City is mentioned in the suburban plans as a method to mitigate climate change. **Chanhassen** makes this certification a policy specifically as a way “[f]or a community to increase its resiliency” (Chanhassen, 79). **Mahtomedi** is utilizing the Regional Indicators Initiative Project in Minnesota which tracks the progress of GreenStep cities ranked three or higher because “[t]his tool will highlight opportunities for the city to save resources and money, provide a baseline for measuring the effectiveness of sustainability measures, enable comparison with peer cities, inform policy, improve city competitiveness for funding opportunities, and assist in promoting public understanding of the city's effect on climate change” (Mahtomedi, 121).

Resiliency

Resiliency is a key theme throughout suburban communities. **Oakdale** has multiple resilience goals including reducing greenhouse gas emissions by 30 percent by 2025 and creating a preparedness plan to “[r]espond effectively to climate change by implementing adaption and resilience strategies” (Oakdale, 65). The city believes that “[a] resilient city is an environmentally, economically, and socially healthy community that provides residents with a high quality of life. Resilience is important so cities are positioned to respond, adapt, and thrive under changing conditions” (Oakdale, 64). **Woodbury** finds similar reasons to include resiliency in its plan, indicating that “[c]onsideration of vulnerabilities - and responses to those vulnerabilities - will strengthen your community's ability to prepare for and respond to climate impacts. Resiliency includes planning for more severe weather and prolonged heatwaves, for improved health of residents, and planning for economic strength and diversity” (Woodbury, 4).



Emergency and Hazard Plans

Many suburban communities include strategies to create emergency and hazard plans in the case of a climate emergency. **Newport**'s plan contains a goal to “[c]oordinate emergency response plans among local partners including the Refinery, schools, railroads and Washington County” (Newport, 136). **Oakdale** also mentions coordination and plans to do so “[w]ith Washington County and other relevant emergency service agencies in the area of hazard mitigation planning.” (Oakdale, 65).

Rural

Rural communities have a common goal of taking precautionary measures to survive a sudden disruption caused by climate while also incorporating resiliency efforts into their plans.

Precautionary Measures against Sudden Climate Disruptions

Marine on St. Croix “[r]ecognizes resiliency is focused towards increasing a community's ability to survive a sudden disruption and to anticipate, adapt, and flourish in the face of change” and therefore made it a priority (Marine on St. Croix, 31). **Nowthen** states that “[c]ities that take precautionary measures now ensure that they are better able to deal with the effects of climate change in the future. The built environment is a primary contributor to climate changes that transcend upon our communities as flooded farm fields and in other ways seemingly unrelated to it” (Nowthen, 61).

Resiliency

Rural communities also found resiliency to be important in handling the implications of climate change. **Marine on St. Croix** commits to resiliency through an overarching statement:

“Resiliency in planning and development helps to ensure the prosperity, livability, equity, and sustainability of a community for future generations. Resilience planning focuses on all aspects of community, ensuring the economy, the environment, and social/living conditions are vibrant and upheld through adversity. Marine on St. Croix will strive to respond, adapt, and thrive under changing conditions and realities. Recognizing the vulnerability of individuals and local systems to the impacts of changing weather, climate, and environmental, societal and economic challenges. [sic] Marine on St. Croix recognizes resiliency is focused towards increasing a community's ability to survive a sudden disruption and to anticipate, adapt, and flourish in the face of change” (Marine on St. Croix, 31).

Nowthen, which as discussed above incorporates resiliency into its plan because it believes in the importance of taking precautionary measures to benefit the future of the city, also recognizes that “[t]he built environment is a primary contributor to climate changes that transcend upon our communities as flooded farm fields and in other ways seemingly unrelated to it” (Nowthen, 61).



¹ “Key Definitions,” Twin Cities Metro Area Healthy Communities Planning Project Team - MN DEPT OF HEALTH (2020), internal project document available upon request.

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