

REGIONAL CLIMATE VULNERABILITY ASSESSMENT (CVA)



WHY CREATE THE CVA?

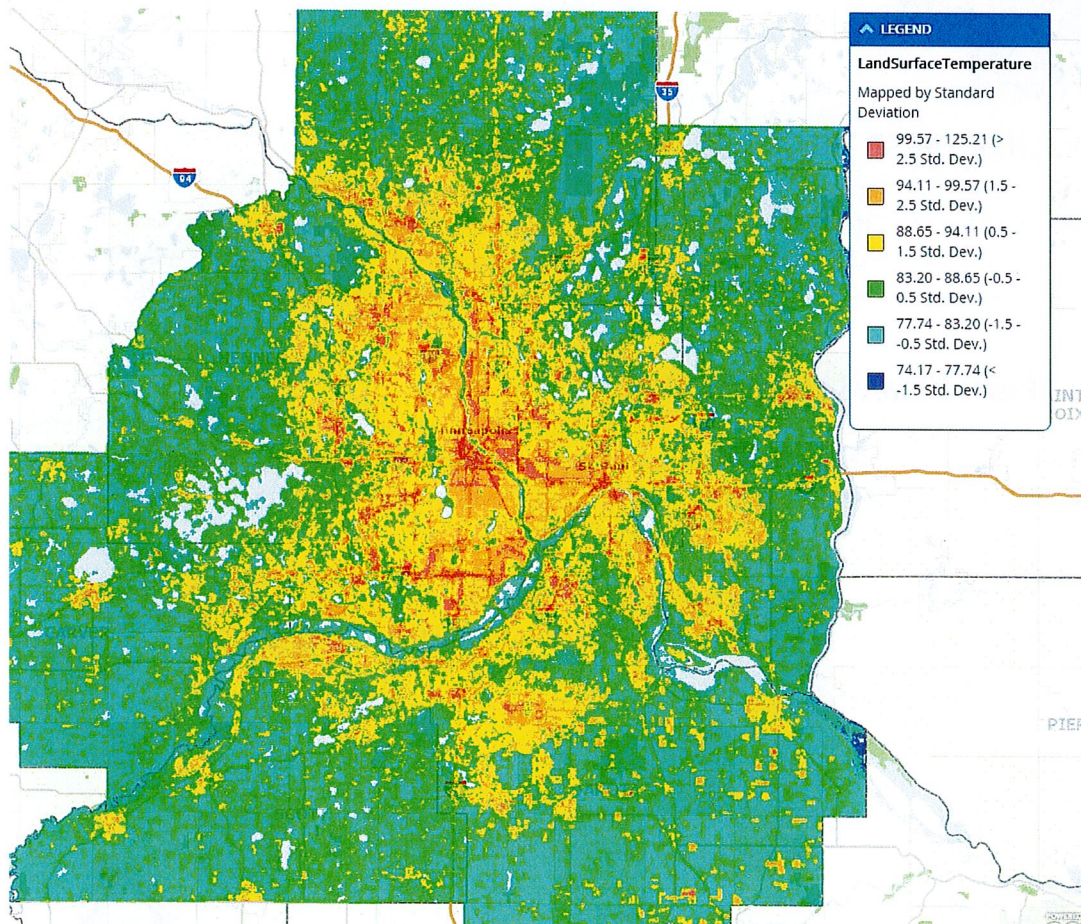
Minnesota's warming temperatures and increasingly severe flood events are projected to trend upwards in the coming decades. The Metropolitan Council has produced a Climate Vulnerability Assessment (CVA) to assist stakeholders in adaptation efforts and building in resilience to extreme climate-related hazards of **extreme heat and localized flooding**.

WHAT IS INCLUDED IN THE CVA?

The CVA is an **integrated set of tools and resources** meant to inform and support communities in adaptation and resilience efforts, as well as to inform resilience efforts related to Council assets. Five report chapters detail the potential impacts of localized flooding on regional systems and assets: transportation and transit, regional parks and trails, wastewater, and water supply. These report chapters propose **tailored strategies** to boost the resilience of these system assets throughout the region. An interactive localized flood map **screening tool** and companion StoryMap allow for independent exploration of how localized flooding may affect communities in the metropolitan region. An **interactive map** of extreme heat and companion StoryMap likewise allow for exploration of **how and why** extreme heat manifests in the region, and what can be done to mitigate its effects. Additionally, the GIS data that supports the analysis can be downloaded from the Minnesota Geospatial Commons for community and stakeholder use.

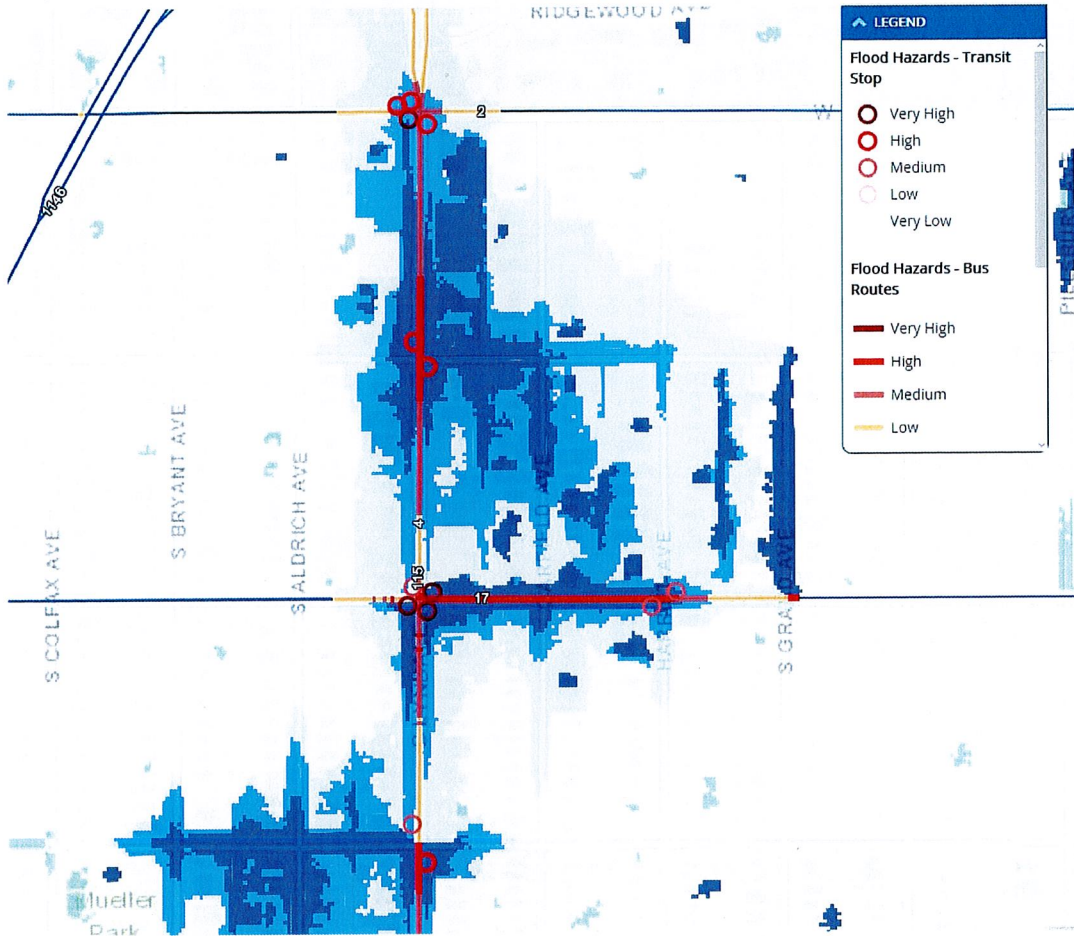
The following two maps are excerpted from the CVA resources:

Map 1: Land Surface Temperature (LST) Map



This map excerpt shows the Land Surface Temperature (LST) during a three-day heatwave in the summer of 2016. The image shows a 50°F difference between the surface temperature of outlying rural areas and the metro core, underscoring how some areas are more vulnerable to extreme heat impacts.

Map 2: Localized Surface Flood Risk to Transit Routes & Stops



This map displays one example of localized flooding analysis that was performed in the CVA. It shows a bus route segment (solid red line) and transit stops (red circles) with localized flood potential during short-term, extreme rain events. The dark red color indicates areas identified as having “very high” vulnerability.

HOW CAN COMMUNITIES USE THESE TOOLS AND INFORMATION?

Communities can utilize the tools and resources provided by the CVA to assess where local vulnerabilities to climate hazards may exist, and **proactively plan and mobilize** to build resilience into systems and specific assets. **Localized knowledge** from each community can be leveraged with the framework put in place by the CVA to create a **community-specific**, and **asset-specific**, analysis workflow. The results may be used to implement **asset prioritization** for adaptation and/or mitigation strategies.

HOW DOES THE CVA ADDRESS HUMAN VULNERABILITY?

Human vulnerability was assessed using both the extreme heat and localized flooding data. A team of students from the University of Minnesota analyzed **extensive social and socio-economic indicators** to inform both where vulnerable populations are, and also how populations may be impacted by extreme heat and localized flooding.

FOR MORE INFORMATION

For more information, check out the CVA webpage at www.metrocouncil.org/CVA or contact Eric Wojchik, Senior Planner, at 651-602-1330; eric.wojchik@metc.state.mn.us

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