METRO'S COOLING CORRIDORS STUDY

Date: September 22, 2025

Department: Planning, Development and Research

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Presenters:
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Length: 75 minutes

ISSUE STATEMENT

Extreme heat poses an urgent and growing risk to greater Portland. Like many places in the world, the region is experiencing the impacts of climate change in the form of hotter summers, more extreme weather events and increased wildfire activity. In Oregon, a 2021 record-breaking heat dome claimed the lives of more than 100 people,[1] with the greatest losses among low-income seniors living alone in Multnomah County without access to adequate cooling. In 2021, there were 258 emergency department and urgent care visits for heat illness in Multnomah County; in a typical year there are 83.[2] Heat-related emergency room and urgent care visits, hospitalizations and fatalities continue to remain higher than normal since the heat dome in 2021, with 192 in 2024.[3]

Metro launched the Cooling Corridors Study in July 2024 to build on the growing number of heat-related research projects and initiatives in greater Portland. A project team made of staff from the Planning, Development and Research department collaborated with the Parks and Nature department, jurisdictional partners and community groups to conduct the study. The study aimed to assess heat risks across the region, identify priority areas and recommend cooling strategies that Metro, local governments and other partners can implement to address the disproportionate impacts of extreme heat on the region's most vulnerable community members.

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[1] Oregon Health Authority. (2023). Climate and Health in Oregon: 2023 Report, page 17.

[2] Multnomah County. (2022). Final Report: Heath Impacts from Excessive Heat Events in Multnomah County in 2021.

[3] Multnomah County. (2024). Seasonal Heat Hazard Brief, page 4.

The study provides a framework for local and regional action that combines recommendations for immediate protections and future planning, partnerships and investment to help prevent heat-related illnesses and deaths, particularly for the region's most vulnerable community members.

The recommendations and actions are informed by best practices research, a regional map-based analysis and engagement with community members and organizations, jurisdictional partners and technical experts. The recommendations build on and complement Metro's existing body of work and initiatives already underway that promote heat and climate resilience in greater Portland.

The Cooling Corridors Study:

- **Used a map-based analysis** to identify the hottest areas in the region and heat focus areas and corridors where cooling strategies can provide the greatest public health benefits.
- **Produced several important findings** that highlight both the scale of the region's heat challenges and the opportunities for local and regional action.
- **Evaluated a wide range of cooling strategies**, from tree planting and reflective pavement to resilience hubs and outreach and education.
- **Engaged with national and international heat experts** to learn about possible solutions; **local and regional partners** to understand existing local and regional efforts, challenges, and opportunities; and **community groups and vulnerable community members** to learn about their lived experience and needs during extreme heat events.
- **Developed a scoring framework** that accounts for urgency, equity, feasibility and community priorities.
- **Identifies nine overarching recommendations, supported by detailed actions**, for regional and local partners to consider pursuing. The recommendations and actions were identified through the research, analysis and engagement.

ACTION REQUESTED

Metro Council will receive an update on the Cooling Corridors Study, hear key findings from the engagement and analysis and review recommendations and potential supporting actions identified in the study.

No action is requested at this time, but Council may choose to prioritize actions to be implemented in the future.

IDENTIFIED POLICY OUTCOMES

The Cooling Corridors Study directly supports Metro Council's adopted climate and resilience goals by:

- Reducing the risk of heat-related illnesses and deaths.
- Supporting equitable access to shaded, cool and safe public spaces.
- Building healthier, equitable and more resilient transportation and land use systems.
- Creating co-benefits including improved air quality, stormwater management and quality of life.

This work aligns with Metro's broader climate and resilience commitments, including the Regional Transportation Plan, the Climate Smart Strategy, Parks and Nature conservation, restoration, and land acquisition efforts, the Social Innovation Program, other Metro conservation and environmental education programs, and ongoing internal and regional coordination on public health, equity and climate justice.

POLICY QUESTIONS

- Does Council have feedback about the nine recommendations or potential supporting actions?
- Does Council have feedback about the five actions proposed for Metro to consider implementing over the next year?
- Are there additional considerations that Council would like staff to incorporate as Metro shares this study with the public and local and regional partners?

STAFF RECOMMENDATIONS

Staff recommends that Council review the recommendations and potential supporting actions proposed for Metro to pursue in the near-term and provide feedback on how Metro should use the study's findings to inform regional climate resilience planning and investments, coordinate with partner agencies and organizations and pursue future funding opportunities.

BACKGROUND

The Cooling Corridors Study was initiated by Metro's COO, Marissa Madrigal, on behalf of the Metro Council, to explore Metro's role in addressing extreme heat. Several agencies and groups in the region are already working to respond to the worsening heat crisis. Public health departments are tracking annual heat-related deaths, illnesses and hospitalizations and implementing initiatives to increase access to cooling resources and information. Local governments are implementing initiatives to prepare for and respond to heat events,

supply more heat pump cooling units and build more energy-efficient and climate resilient transportation infrastructure and buildings. Community organizations are leading efforts in their communities to plant more trees, provide education on how to prepare for extreme heat events and connect vulnerable communities to cooling resources.

Metro staff were tasked with conducting a study to assess where extreme heat poses the greatest risk in the region and to identify a broad array of cooling strategies that have the potential to save lives and alleviate the negative impacts of extreme heat conditions.

Over the course of the project, staff completed the following:

- **Background Research**
  Staff reviewed cooling strategies being implemented in greater Portland and across the country and world to identify proven and innovative approaches to mitigating and adapting to urban heat. This review included evaluating academic research, guidance documents and local and regional policies and programs supporting tree protection, infrastructure design, education and outreach and community-led resilience efforts. By learning from other regions and local efforts, the study positions Metro and its partners to adopt approaches that are both effective and feasible in a local context as well as build on existing local efforts.
- **Regional Heat-Risk Assessment**
  Staff conducted a regionwide analysis to map where extreme heat is most prevalent using data on surface and air temperatures, tree canopy coverage and demographic vulnerability. This analysis identified "cooling corridors gaps" where cooling strategies are most urgently needed and where investments can have the largest impact on protecting public health.
- **Community Engagement**
  Staff worked with community-based organizations to directly engage residents most affected by extreme heat, including older adults, renters, and unhoused community members. This input shaped the study's emphasis on equity and highlighted the importance of investing in life-saving cooling resources that protect the most vulnerable. Community members identified priority cooling strategies, such as shaded bus stops and other public spaces, increased access to drinking water, expanded tree canopy in low-income neighborhoods and home wellness checks during heat emergencies.
- **Technical Engagement**
  Metro hosted a panel featuring chief heat and climate officers from other parts of the world to learn about solutions being implemented outside of the region. Metro also convened a technical advisory group representing local jurisdictions, state agencies and regional partners, alongside a focus group with community-based organizations. Together, these groups helped refine the study methodology and

ensured that recommendations reflected both technical expertise and the lived experiences of communities most impacted by extreme heat.

- **Action & Recommendation Development**
  Building on the background research, map-based analysis, community engagement and input from local and regional partners and technical experts, staff developed a comprehensive set of nine recommendations supported by detailed potential supporting actions. These actions were designed to be both technically feasible and responsive to community priorities, ranging from immediate, low-cost measures to longer-term policy and infrastructure investments. Each action was assessed for implementation challenges, potential co-benefits and estimates on cost and level of effort, ensuring they form a practical toolkit of cooling strategies for Metro and local and regional partners to consider implementing.
- **Scoring Methodology Development**
  A scoring framework was created to evaluate potential cooling strategies based on urgency, equity, benefits, feasibility and alignment with community and regional priorities. This transparent framework allows partners to compare a wide variety of strategies, such as shade structures, tree planting or reflective pavement, on equal footing and to support decisions that balance impact and practicality.

The nine recommendations in the Cooling Corridors Study reflect the collective input of regional partners, international and national subject matter experts and community members. These recommendations and potential supporting actions provide an array of cooling strategies that Metro and partners can implement and adapt to local needs and priorities.

Next steps

- **October and November 2025:** Metro staff will share the Cooling Corridors Study findings with jurisdictional partners, county health departments and community partners through briefings and presentations to Metro's policy and technical advisory committees.
- **Winter 2025-Spring 2026:** Metro staff will publish the study's data, analysis and findings on Metro's website and begin to identify opportunities to integrate them into the Regional Transportation Plan (RTP) update and other Metro-led climate resilience initiatives to ensure alignment with regional planning efforts.

Additional steps may be identified, pending Council feedback and direction.

ATTACHMENTS

- Attachment 1 – Cooling Corridors Study Executive Summary
- Attachment 2 – Project Schedule and Engagement
- Attachment 3 – Draft Recommendations and Potential Supporting Actions for Metro and Other Partners
- Attachment 4 – Draft Cooling Corridors Study Report
- Attachment 5 – Draft Appendix B: Engagement Summaries