



Overview of Background Research for Metro's Cooling Corridors Study

Research focused on identifying strategies to address extreme heat and cool corridors and communities in greater Portland.

Metro conducted extensive research on cooling strategies that can mitigate extreme heat and build community resilience, particularly for communities disproportionately impacted by extreme heat, such as people of color, older adults, people with low income and unhoused people. These strategies will serve as the foundation for the recommendations in the final report.

Many of the cooling strategies are already being implemented in the region by Metro, cities, counties, state agencies, businesses and community-based groups. Metro has the opportunity to build on existing efforts and fill gaps where needed. To ensure successful implementation, Metro can consider the following key takeaways.

Keys to success

- Coordinate existing efforts and resources across the region
- Strengthen partnerships with public agencies and community-based organizations
- Build political support around the importance of heat resilience work
- Capitalize on quick and low-cost solutions like tree planting, but diversify actions in more densely populated areas

Methodology

The project team conducted a comprehensive review of academic research, guidance documents (from federal agencies, professional associations, and nonprofit organizations), best practices and local and regional initiatives in greater Portland. Cooling strategies across the country were found using the Smart Surfaces Coalition [policy tracker tool](#) and a review of climate or heat adaptation plans from city, county and state agencies within and outside of the region

Cooling Strategies

The report organizes cooling strategies into eight topic areas. Details about each strategy are provided in the report, including benefits and implementation challenges. Local, regional and state-level case studies are highlighted, providing relevant examples from both within and outside of the Portland metropolitan area. Cooling strategies already being implemented in the region are **bolded** in Table 1.

Table 1. Potential cooling strategies for greater Portland

Communication and Education	Community Resilience and Adaptation
<ul style="list-style-type: none"> Public awareness campaigns Heat safety training in schools and workplaces Coordination with emergency response and healthcare 	<ul style="list-style-type: none"> Resilience hubs Cooling centers Community-led adaptation projects Policy protections for outdoor workers
Natural Elements	Parks and Open Space
<ul style="list-style-type: none"> Wind or ventilation corridors Natural water sources Artificial water features 	<ul style="list-style-type: none"> Park conservation Habitat restoration Design standards for open space preservation
Pavement	Roofs and Buildings
<ul style="list-style-type: none"> Permeable pavement Reflective pavement De-paving 	<ul style="list-style-type: none"> Cool roofs Green roofs and sidings Internal building cooling mechanisms
Streetscape Design	Trees
<ul style="list-style-type: none"> Engineered shade structures Street tree planting Rain gardens, bioswales, and groundcover Optimized building orientation 	<ul style="list-style-type: none"> Tree planting programs Workforce development for tree care Tree policies Tree and shade equity mapping

Some strategies can be quicker to implement due to existing programs in the region that can serve as models for implementation in other jurisdictions or community groups. For example, the City of Portland and Portland-based nonprofit Friends of Trees have tree planting programs that could be financially supported by Metro or replicated in other communities. Other strategies such as green roofs, de-paving and resilience hubs may require policy changes, substantial financial investment or significant coordination. However, these strategies are still viable solutions for the region and should be considered.

Interested in learning more?

For more information, visit the project website at

<https://www.oregonmetro.gov/tools-partners/grants-and-resources/cooling-corridors-study>