Strategy 6: Design for resiliency and sustainability

Work to mitigate the effects of climate change and increase resilience of all city systems. This includes evaluating green building standards, upgrading infrastructure to meet climate hazards, designing multimodal streets, and reducing the city's carbon footprint through energy and resource efficiencies.

Guiding values

Outcomes

1. The city, as a municipal entity, and its residents and businesses have collectively decreased our greenhouse gas emissions and reliance on non-local energy sources through mitigation strategies.
2. The city has taken action to ensure climate-resilient infrastructure and facilities, employing redundancy where appropriate to reduce the risk of catastrophic failure.
3. The city plans land uses and new development to reduce vehicle miles traveled and non-local inputs, including energy sources.
4. The city has integrated climate action into all capital projects and annual budgeting.
5. The city has robust physical and social infrastructure in place to reduce the risk of and respond quickly to catastrophic events, including natural disasters.

Actions

1. The following strategies and actions of the city's adopted 2019 Climate Action Plan (CAP) are incorporated to embed them in city decision-making processes:
   a. Establish an in-boundary goal to generate the equivalent of 10% of the city's electricity from rooftop and ground-mount solar installations by 2030.
   b. Identify opportunities to expand renewable energy in or near Northfield; coordinate with Carleton, St. Olaf, Post Consumer Brands (formerly Malt-O-Meal), and Xcel Energy.
   c. Encourage rooftop solar on commercial buildings where there is an economically viable solar resource (i.e. available space with adequate sunlight, and a structurally sound roof).
   d. Coordinate with local waste and recycling haulers to offer curbside compost pickup for residents and businesses that will be delivered to a local compostable waste processing facility.
   e. Use metrics described in the 2019 CAP to establish goals in strategic planning efforts to meet the outcomes in this plan.
2. Encourage the use of energy-efficient mechanical systems and building products and/or the use of building designs and materials that reduce lifecycle carbon and reliance on non-local energy sources in rehabilitation and new construction to decrease building operation costs and impacts on the environment
3. Encourage the use of deconstruction methods over demolition to decrease negative impacts on the environment, where and when possible. Require for City-led and/or financially facilitated projects.
4. Update Chapter 34 of the Code of Ordinances, 2008 Comprehensive Transportation Plan, and 2020 Surface Water Management Plan to:
   a. Require green stormwater infrastructure (GSI) and sustainable stormwater

management practices in public and private projects related to stormwater runoff.

b. Plan and schedule improvements in city rights-of-way to reduce the urban heat island effect and increase resilience to flooding through methods such as shared, stacked-function green infrastructure and planting

c. Collaborate with partner agencies on water quality improvement efforts, including capital projects and programming. For example:

   i. Prioritize and pursue funding to replace the Ames Mill Dam with a high-quality recreation and river-ecological health solution.

d. Require electric vehicle-charging-ready infrastructure (electrical conduit or raceway connection to electrical service with sufficient panel space reserved that is capable of operating at Level 2 (208 volts or greater power) be installed with new developments and public projects. Prioritize locating infrastructure for electric vehicle charging stations at appropriate publicly accessible areas such as in the right-of-way or in parking lots.

e. Require designs that facilitate social interaction and build social connection consistent with best practices from organizations such as Happy Cities or Reimagining the Civic Commons.

5. Create a natural asset management plan and blue-green infrastructure plan which includes parks and public rights-of-way.
6. Strengthen partnerships with groups such as Clean Water Partners, Cannon River Watershed Joint Powers Board, and educational institutions to measure, evaluate, and enhance the health of the Cannon River.
7. Maintain response readiness for emergencies related to water supply contamination or interruption and for damage to treatment and distribution infrastructure.
8. Measure the potential greenhouse gas emissions impacts of transportation citywide in alignment with state legislation to reduce greenhouse gas emissions to net zero by 2050. For new projects, use MnDOT's Minnesota Infrastructure Carbon Estimator (MICE) tool to estimate greenhouse gas emissions and prioritize projects which advance city emissions goals.
9. Analyze and map the city's land surface temperature to establish a baseline heat map for the city.
10. Manage both above and below ground utilities to improve the health of the tree canopy in public spaces and rights-of-way.
11. Comprehensively maintain and improve the tree canopy to provide shade, clean air, and stormwater treatment.
12. Ensure all new buildings meet the requirement of the adopted sustainable building policy and/or Minnesota Energy Code, including prioritizing electrification and use of passive solar design standards and/or renewable energy sources for heating and cooling.
13. Retrofit existing city buildings with energy efficiency upgrades as part of capital improvement scheduling.
14. Manage flood mitigation at the watershed level with regional partners.
15. Work with river-adjacent landowners, including Carleton College, Riverpark Mall, Just Foods Co-op, Post Consumer Brands and others to mitigate negative impacts of flooding.
16. Provide consistent community engagement to identify assets or systems susceptible to critical failure, and where critical failure would have disproportionate community impacts.
17. Design public facilities and public spaces to foster the development and strengthening of social connections by providing community gathering spaces accessible to people of all ages and abilities.