

City of Duluth Climate Action Work Plan

2023 Progress Report





Overview

Incorporating climate action into City of Duluth operations helped innovate and improve services, access external funding, and implement many Departmental priorities and projects. Highlights include:

- Renewable energy planning for solar and storage, along with design for a wastewater heat-recovery district energy system.
- The Sustainability and Energy Fund provided \$800,000 towards projects that leveraged \$5 million for Department sustainability initiatives.
- Since 2020, over \$43 million in external funding was awarded to the City for projects focused on climate action and community resiliency.
- Energy efficiency and conservation efforts in City operations have reduced greenhouse emissions 32% since 2016.

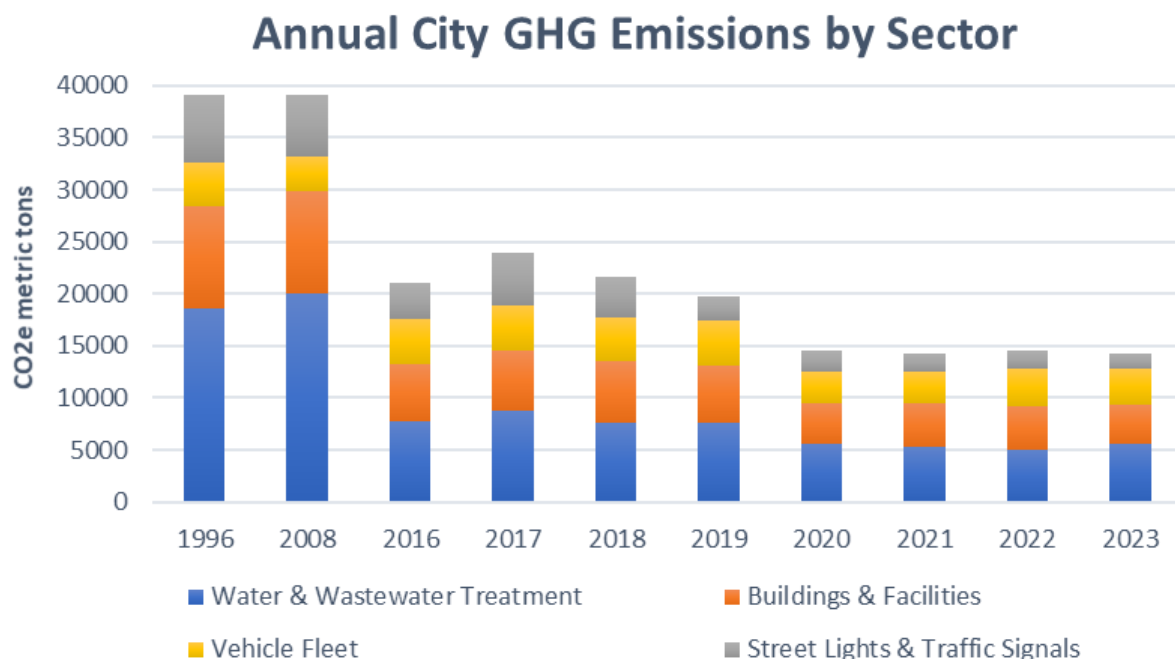
Objective 1 Highlights:

Drive Down Emissions from City Operations



Energy efficiency and conservation efforts were focused on City buildings, utility operations, and the municipal vehicle fleet.

- Fleet upgrades, aided by the Energy Fund, included 4 **electric vehicles**, 1 **plug-in hybrid** van, 1 **hybrid** ladder fire-truck, 12 **e-bikes** for community policing and rescue response and, and 2 new **street sweepers** to improve water quality.
- City Hall is receiving energy and safety upgrades that will improve **heating efficiency** by 30%.
- Carbon emissions from City operations are down **32% since 2016** and **64% since 2008**.

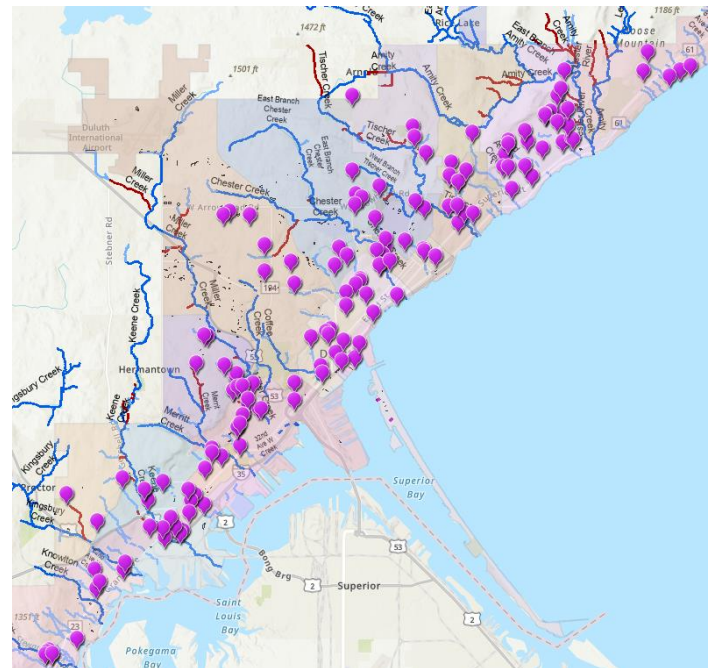


Objective 2 Highlights:

Strengthen Community Resilience



Progress included funding for **water plant resiliency, solar planning, stormwater planning and projects, lead water line replacement programs, partnerships with community organizations,** and completion of the **Love Your Block** program that supported neighborhood improvements.



Stormwater infrastructure issue areas

Sustainability staff engaged with over **500** community members and were featured in more than **20** media stories related to climate action.

Love Your Block 2021-2023 Results

21,820

Pounds of trash removed

6,317

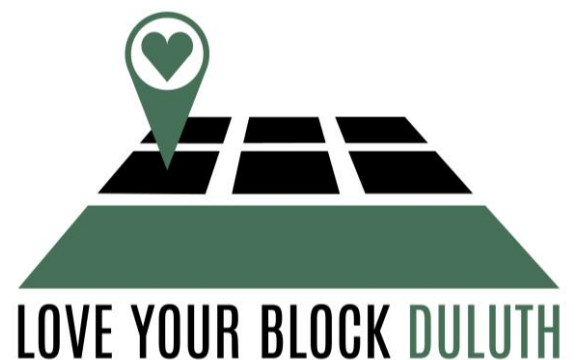
Volunteer hours

38

Mini grant projects

160

Events with community



Objective 3 Highlights:

Eliminate Institutional Barriers and Better Enable Climate Action

- Outcomes from the Communities LEAP project provided: 1) **future pathways for energy efficiency, electrification, and renewable energy improvements** for residential, commercial, and light manufacturing buildings, 2) an **electric vehicle infrastructure** study, and 3) an analysis of **green steel** potential for the region.
- Changes to Chapter 50 of Duluth City were passed by City Council that **eliminated most minimum parking requirements** for development, **required bicycle parking**, and included requirements for **electric vehicle ready development** for multi-family and hotel projects. A review of the City codes and ordinances to **identify language that may inhibit green infrastructure implementation** was completed.
- Internal policies for buildings and fleet continued to prioritize City energy efficiency and climate goals.
- City staff participated in regional and State groups and conferences on transportation, buildings, and climate policy, to **ensure City goals are represented**. Sustainability Officer was appointed to serve on the **Governor's Advisory Council on Climate Change**.

Objective 4 Highlights:

Create Financial and Workforce Plans to Support Accelerated Climate Action



With internal alignment on our Climate Action Work Plan priorities, access to funding for projects and planning became a high priority in 2023:

- Over **\$43 Million** in external funding for projects benefitting City and community sustainability work have been achieved since 2020, with over **\$50 million** in future applications pending for Federal funds.
- Capacity for climate work was added through **Department of Energy** awards (LEAP, RACER, GTO), conference and event scholarships (Midwest Climate Resiliency Conference, an Urban Sustainability Directors Network grant, and two **AmeriCorps VISTA** members.
- The Sustainability and Energy Fund provided **\$800,000** towards projects that leveraged over **\$5 million** for [Department sustainability initiatives](#).
- The 2018 community solar garden purchase (400 kW) has provided **>\$500,000** in avoided electricity costs, so far. The contract is active until 2043.

Action	Summary	Status	Department	Objective
RAISE Grant (West Superior St)	\$24.8M Rebuilding American Infrastructure with Sustainability and Equity to redesign 2 miles of W. Superior St. for increased mobility and safety	Ongoing	PWU PED	2, 3, 4
RAISE Grant (Eastern Lakewalk)	\$8.2 million Rebuilding American Infrastructure with Sustainability and Equity for the coastal infrastructure rehabilitation of the Lakewalk to improve resiliency and connectivity	Ongoing	PPL/Natural Resources	2, 3, 4
Lead Water Line Replacement Projects	Lead service line replacement project, water pitcher program and optimizing corrosion control, education and awareness, funded with American Rescue Plan Act	Ongoing	PWU	2
Great Lakes Sediment & Nutrient Reduction Project	\$121k from Great Lakes Commission and \$288k from the United States Army Corps of Engineers to complete GIS Analysis of Green Stormwater Infrastructure feasibility city-wide	Ongoing	PWU	2
Green Infrastructure Code Audit (partnered with MN Sea Grant)	Funded by Minnesota Sea Grant and NRRI to review codes that may inhibit green infrastructure implementation	Ongoing	PED	3
Brighton Beach Resiliency	FEMA and State of MN funding to increase accessibility and stormwater resiliency for bigger coastal storms	Ongoing	PPL/Parks	2
Stormwater Resiliency and Infrastructure Planning	\$100k MPCA Planning Grant for Stormwater Resilience identified areas of concern for flood resiliency. Results are guiding implementation funding requests.	Complete	PWU	2
Lincoln Park Stormwater Treatment	\$300,000 towards \$4.2 M project for green infrastructure in the Park.	Complete	PPL/Natural Resources	2

Action	Summary	Status	Department	Objective
Watershed Focus Areas	Miller Creek Stream Restoration, Amity Turbidity Impairment, Tischer E. Coli Impairment and Feasibility Study, Keene E. Coli and Chloride Impairments	Ongoing	PPL/Natural Resources	2
Water Plant Resiliency (FEMA)	\$7.8M FEMA Hazard Mitigation Grant for second transformer, back-up power, & other updates; Shoreline stabilization work	Ongoing	PWU	2
MN Point Erosion (Section 111 study)	Funding from U.S. Army Corps of Engineers to determine the effect of Federal navigation structures on the shoreline, and develop plans for the mitigation of shore damages, results pending	Ongoing	PPL/Natural Resources	2
MN Point Resiliency Planning	City staff participating to plan future of Park Point resiliency	Ongoing	PED PPL	2
St. Louis River Clean-up and Learning Circle	Clean-up and access work with State, Federal, and non-profit partners. Developed a learning circle with Indigenous Women's Water Sisterhood	Ongoing	PPL/Parks	2
Emerald Ash Borer Removal (DNR)	\$150,000 grant project to remove ash trees in response to the Emerald Ash Borer invasion	Ongoing	PPL/Natural Resources	2
Lester/Amity Land Acquisition	Tax forfeit land swap of 2,000 additional acres of public land for protection, 400 acres to develop	Complete	PPL/Natural Resources	2
Love Your Block	Awarded 38 mini grants for blight reduction projects in Lincoln Park and Central Hillside. Lessons learned about how City systems and residents can better partner at a neighborhood level.	Complete	DFD/Life Safety, Park Maintenance	2

Action	Summary	Status	Department	Objective
Electric Fleet Investments	\$250,000 for 5 EVS; 1 PHEV for Library, 1 EV for PFM and 3 EVs for Life Safety	Ongoing	PPL/PFM DFD/Life Safety	1
City Hall Improvements	\$12M in American Rescue Plan funding; HVAC to improve efficiency by >30%; Building Owner Performance Requirements adopted, Heating, Ventilation, and Air Conditioning	Ongoing	PPL/PFM	1
Energy Efficiency & Conservation Block Grant	\$144,430 for heat pump water heaters to replace building equipment at end-of-life.	Ongoing	PPL PFM	1
Street Sweepers	\$290,000 for two Elgin Pelican Street Sweepers	Complete	PWU/Street Maintenance	1
Police E-bikes	6 e-bikes for community policing	Complete	DPD	1
Fire E-bikes	6 e-bikes for response and rescue	Complete	DFD	1
Hybrid Ladder Truck	\$18,000 from Sustainability fund for anti idling technology in new Quint 4	Complete	DFD	1
Expanded Comfort Systems Programs	New rebate programs for furnace tune-ups and programmable thermostats; Conversations with MN Power on ECO Act provision and fuel switching	Complete	PWU	3, 4
Parking Revisions	Changes to Duluth City Code eliminated most minimum parking requirements for development and required EV-ready and bike parking	Complete	PED	3
Custodial Equipment Upgrades	\$38,000 for the Tennant T2 and Numatic 244NX floor machines to save time, energy, and water.	Complete	PPL/PFM	1
Electric Extrication Equipment	\$47186 to purchase two-sets of battery operated “auto-extrication” tools	Complete	DFD	1

Action	Summary	Status	Department	Objective
RACER Solar Planning (DOE)	DOE award to study large-scale solar and storage opportunities, awarded in 2022 (\$977k)	Ongoing	Sustainability	1, 2
Geothermal/heat recovery district energy design (DOE)	DOE award to devise plans to develop, design, and install a geothermal heating system (\$700k)	Ongoing	Sustainability	3, 4
Sustainability Fund	\$800,000 spent for Departmental needs, including matching funds for projects, match for EECBG grant, match for street sweepers, match for green infrastructure in Lincoln Park, e-bikes for Fire and Police, electric equipment, etc.	Ongoing	Sustainability	1, 4
AmeriCorps VISTA	Funding for two AmeriCorps VISTA members to add capacity to Sustainability and Transportation functions.	Ongoing	Comfort Systems, Sustainability PED	1, 2, 3, 4
State planning on clean economy jobs	Director of Workforce is involved in preparing the City for clean energy jobs for the future	Ongoing	Workforce Development	3
Strategic Facilities Planning and Energy Projects	The Sustainability and Energy Fund provided support for facility strategic planning and utility tracking support and \$250k for City building energy projects.	Ongoing	PPL/PFM	1
Communities LEAP Energy Planning (DOE)	DOE assistance to develop an Energy Transition Implementation Blueprint to address building efficiency, beneficial electrification, clean transportation, and economic development for residents.	Complete	Sustainability	2, 3, 4
USDN Grant	Provides \$6,000 for 8 monthly community workshops, partnered with Duluth Folk School, focused on topics like energy efficiency, funding opportunities, waste reduction, and more.	Through July 2024	Sustainability	2

Next Steps



- Apply to the Environmental Protection Agency's Carbon Pollution Reduction Grants (CPRG) to address clean energy efforts in residential housing, district energy, and commercial buildings. These grant applications build off data collected in the Department of Energy Communities LEAP grant.
- Finalize a plan for City solar deployment, and create a solar-planning toolkit (Department of Energy RACER).
- Increase water plant resiliency through adding a back-up transformer and power generation, and upgrading switchgear (FEMA grant).
- Continue electrification of equipment for Departments.
- Pursue a City Fleet EV-charging infrastructure plan.
- Eliminate coal as a fuel source at Duluth Energy Systems, and continue system efficiency upgrades.
- Contribute to Minnesota Power's Integrated Resource Plan process in 2024.
- Support West Superior Street RAISE grant project implementation.
- Participate in planning for consolidation of City maintenance facilities for efficiency in operations.

Contributors to 2023 Activities and Reporting



Department	Members
Administrative Services	Ben Van Tassel
City Attorney's Office	Steve Hanke, Rebecca St. George
Communications	Phil Jents, Kelli Latuska
Community Relations	Breanna Ellison
Finance	Jen Carlson
Fire, Life Safety, Emergency	Shawn Krizaj, Jonathan Otis
Human Rights	Carl Crawford
Parks Property Libraries	Jim Filby Williams, Erik Birkeland, Kate Kubiak
Planning and Economic Development	Chad Ronchetti, Jenn Moses, James Gittemeier
Public Works and Utilities	Jim Benning
Workforce Development	Elena Foshay
Sustainability	Mindy Granley, Brett Crecelius, Alayna Johnson, Ella Stewart