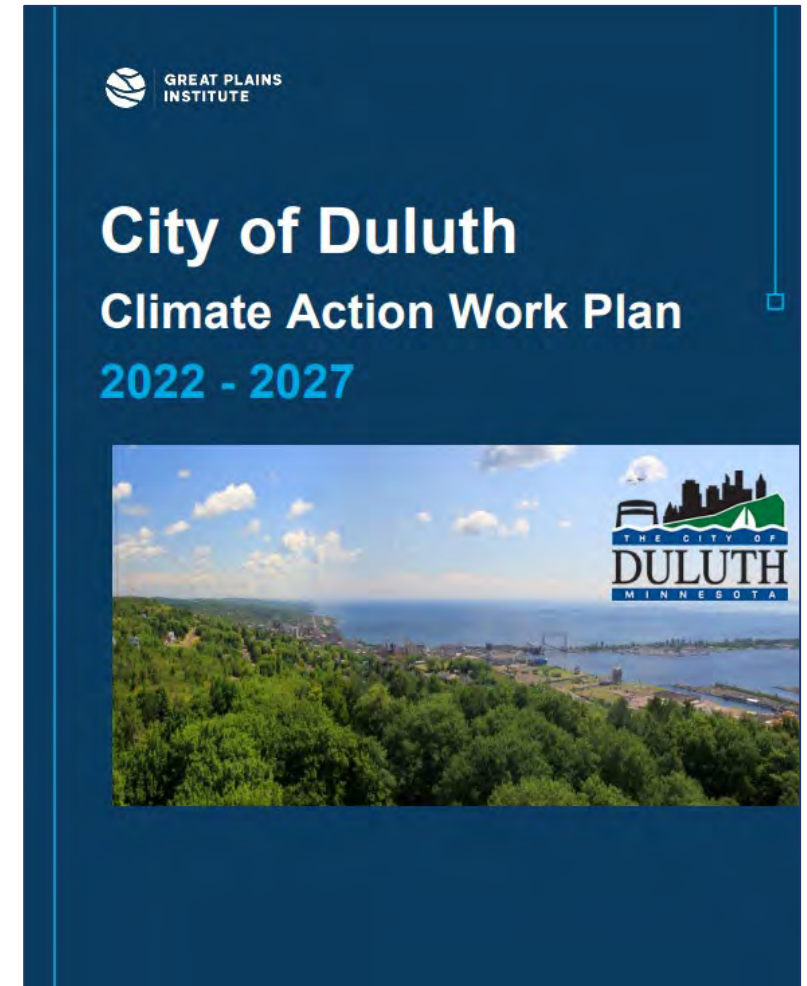


Climate & Energy Progress - 2023



Mindy Granley, Sustainability Officer
Ella Stewart, AmeriCorps VISTA, Energy & Sustainability
www.duluthmn.gov/sustain



Sustainability Office

- Whole-City approach
- Work across Departments
- Community-based organizations



Community Energy Resiliency Project Coordinator



Energy & Sustainability Assistant



Geothermal Project Coordinator



City Sustainability Advisory Team (C-SAT)

2024 Membership

- Cross-departmental
- High-level sustainability goals
- Contribute to and prioritize climate action
- Share technical knowledge

Department	Members
Administrative Services	Ben Van Tassel
City Attorney's Office	Amanda Mangan
Communications	John Dukich, Kelli Latuska
Finance	Jen Carlson
Fire, Life Safety, Emergency	Shawn Krizaj, Jonathan Otis, Jesse Hansen
Human Rights	Laura Laaksonen
Parks, Property, Libraries	Jim Filby Williams, Erik Birkeland, Kate Kubiak
Planning & Economic Development	Chad Ronchetti, Jenn Reed Moses, James Gittemeier
Police	Mike Ceynowa, Nick Lukovsky
Public Works and Utilities	Jim Benning, Jenae Pitoscia
Workforce Development	Carol Turner, Elena Foshay
Sustainability	Mindy Granley, Ella Stewart, Brett Crecelius

Energy Plan Commission

- Formed to advise the administration and city council on reducing the City's greenhouse gas emissions

Chair: Dr. Alison Hoxie



Robert Reichert



Scott Wishart



Tari Rayala



Brian Hinderliter



Cassie Thiessen

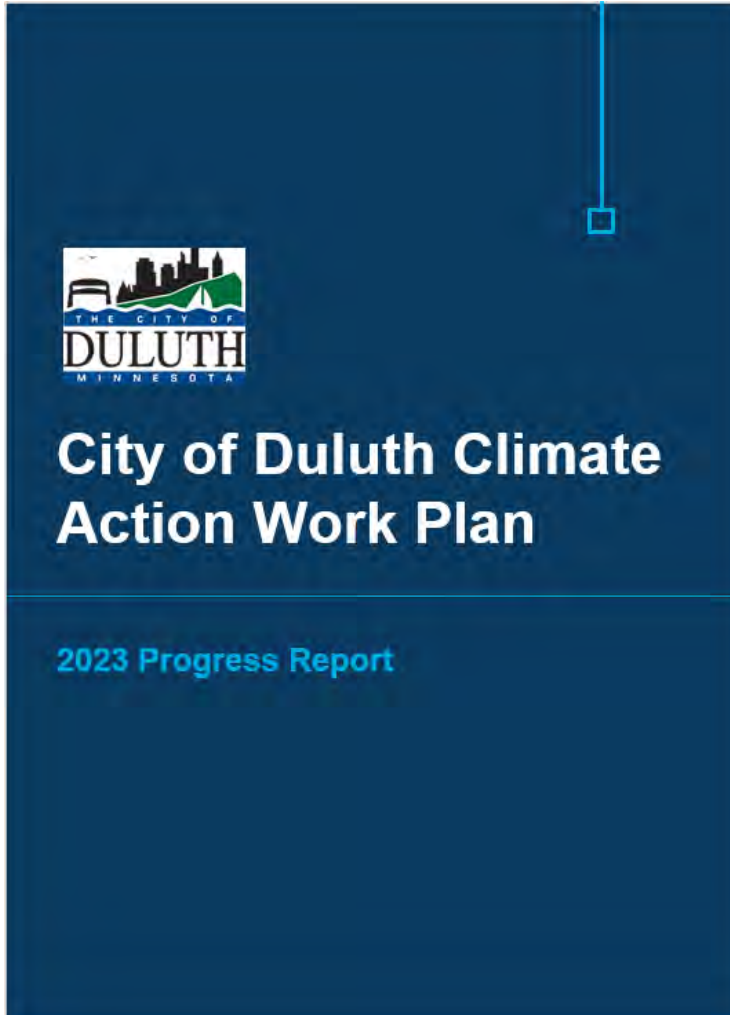


Gary Olson



Climate Emergency Declaration

21-0256R



- Recognize impacts of climate change and need for action
- Broadens City carbon reduction goals (>80% by 2050) to the community
- Climate Action Work Plan
 - Annual updates on progress

Climate mitigation and adaptation strategies highlighted in the City's climate emergency declaration:

Strategy 1: Reduce energy consumption in buildings

Strategy 2: Increase efficiency and resilience in city utilities

Strategy 3: Support low carbon transportation options

Strategy 4: Support renewable energy

Strategy 5: Improve stormwater management

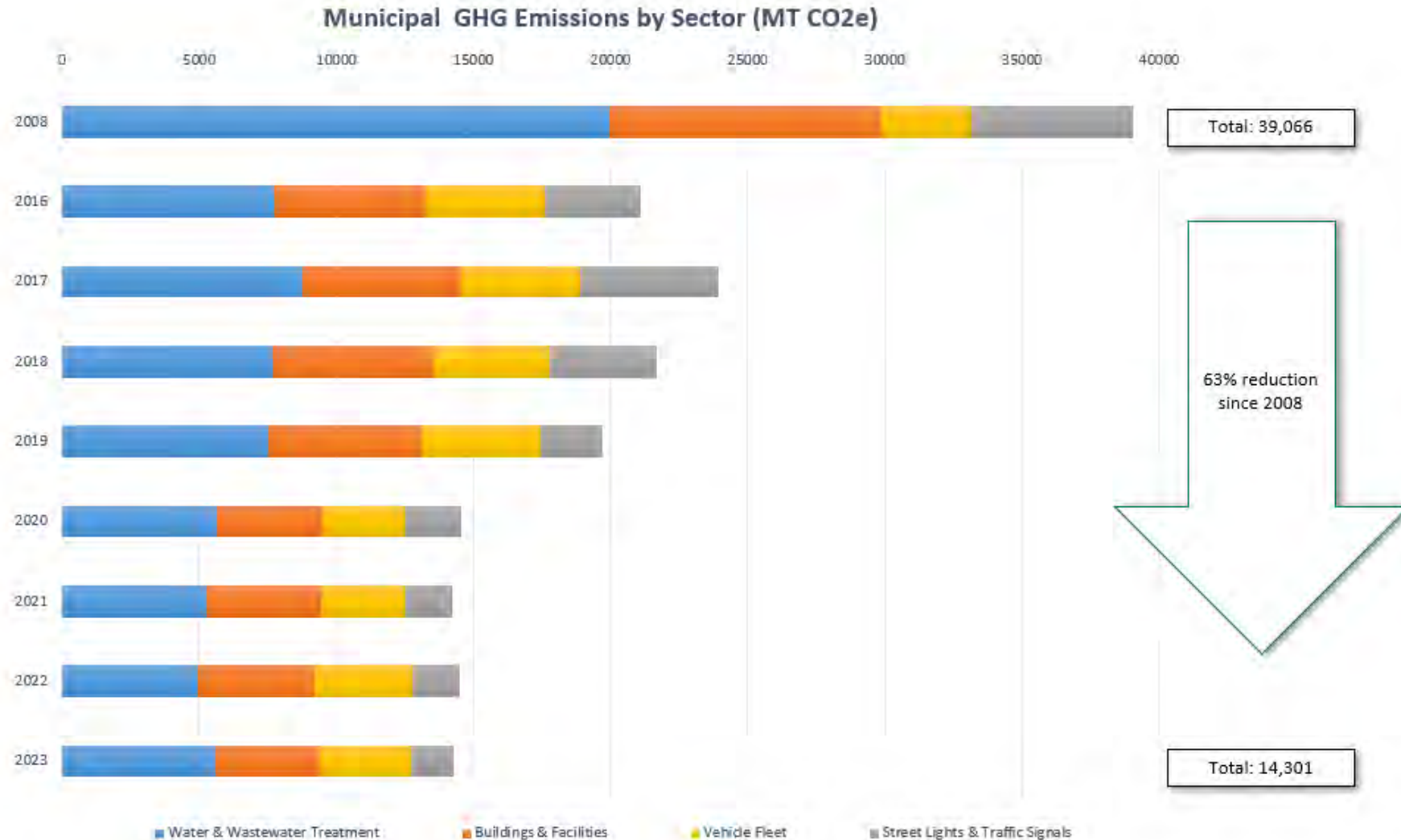
Strategy 6: Reduce solid waste

Strategy 7: Reduce disparities in public health

Strategy 8: Seek sustainability opportunities that support economic growth

Strategy 9: Identify carbon sequestration opportunities

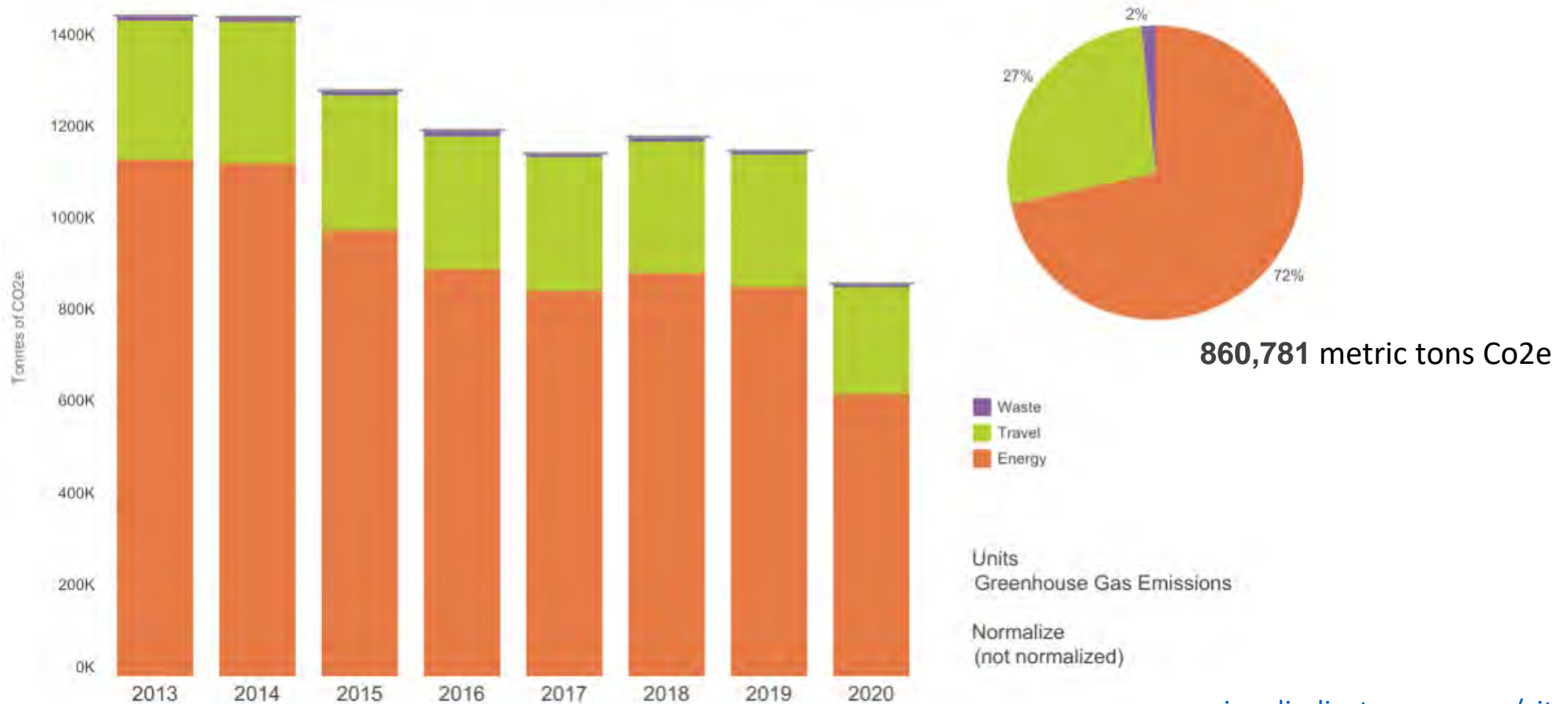
City Operational GHG Emissions 2023



Community-wide GHG Emissions

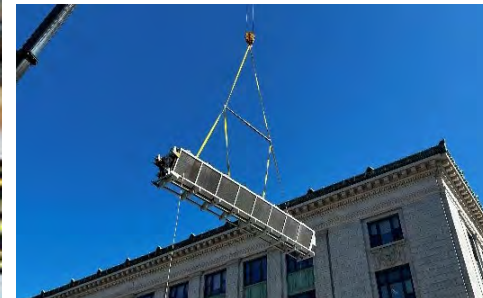
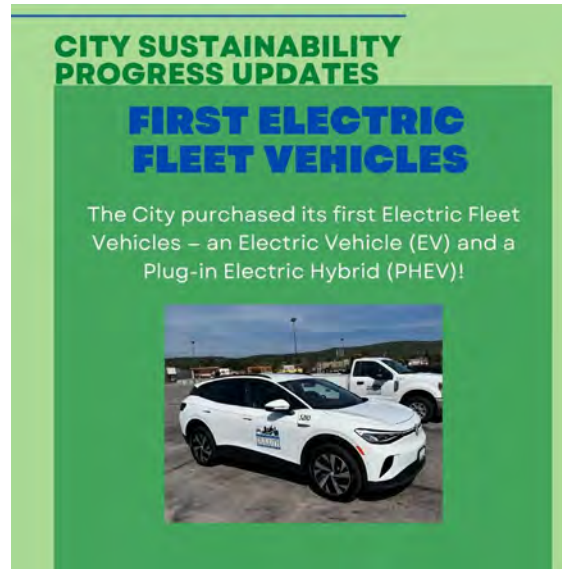
GREENHOUSE GAS EMISSIONS

community-wide greenhouse gas emissions from building energy, vehicle travel, and the management of municipal solid waste



2023 Progress

- **Incorporating climate action into City operations helps us:**
 - access external funding
 - innovate and improve services
 - implement Departmental priorities and projects



External funding: \$44M in sustainability-related projects



FEMA

USDN | urban sustainability
directors network

NREL
NATIONAL RENEWABLE ENERGY LABORATORY

mn
DEPARTMENT OF
NATURAL RESOURCES

Healthy
Babies  Bright
Futures

 **CITIES OF
SERVICE**

ACEEE

 **Minnesota GreenCorps**


AmeriCorps

GLISA
A NOAA RISA TEAM



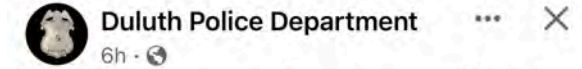
City Energy & Sustainability Fund

Provided >\$600,000 towards over \$5 million in projects:

- **DNR Forestry** - grant match
- **Street Sweepers** – purchase match
- **Lincoln Park Green Infrastructure** – project match
- **Custodial Equipment** - safety, savings, environment
- **Electric Bikes** – community focus
- **Electric extrication equipment** – safety, innovation
- **Hybrid ladder truck** - innovation
- **Electric and Plug-in Electric Vehicles** – savings, innovation
- **EV Charging** – City Hall, Fire HQ
- **Heat Pump Water Heaters** – grant match
- **Capacity** - AmeriCorps member stipends



New Fire Department Fleet Vehicle



This summer was the first year we utilized E-Bikes as part of our Bike Patrol Unit. Members of the Bike Patrol Unit biked 1,539 miles this summer. That's a 34% increase since using these new E-Bikes! We look forward to continuing to utilize this new tool to engage with community members and businesses in the downtown area.



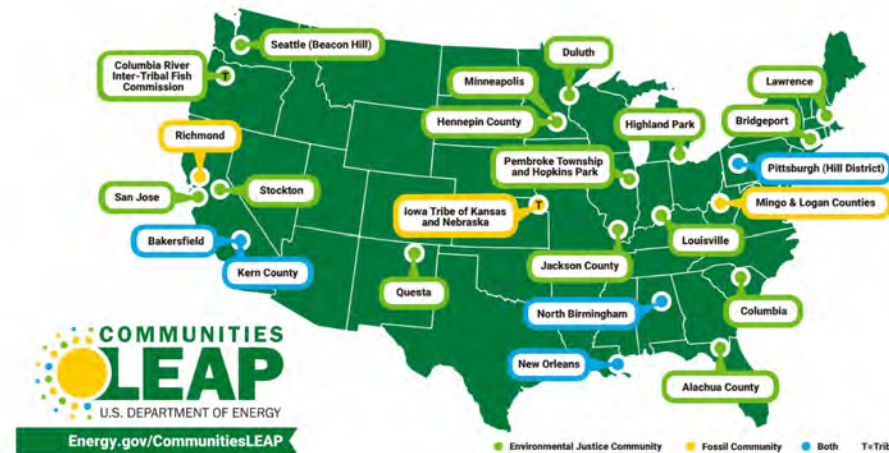
Energy Planning: Communities Local Energy Action Plan (C-LEAP)

- **Department of Energy Technical Assistance Award**
 - **Buildings:** Residential and Commercial buildings
 - Inflation Reduction Act opportunities
 - **Transportation:** EV-infrastructure planning
 - **Industrial Decarbonization:** Hydrogen economy

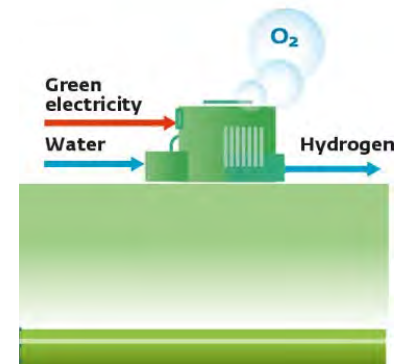


Visit from Secretary of Energy Granholm

Objectives 2, 3, 4

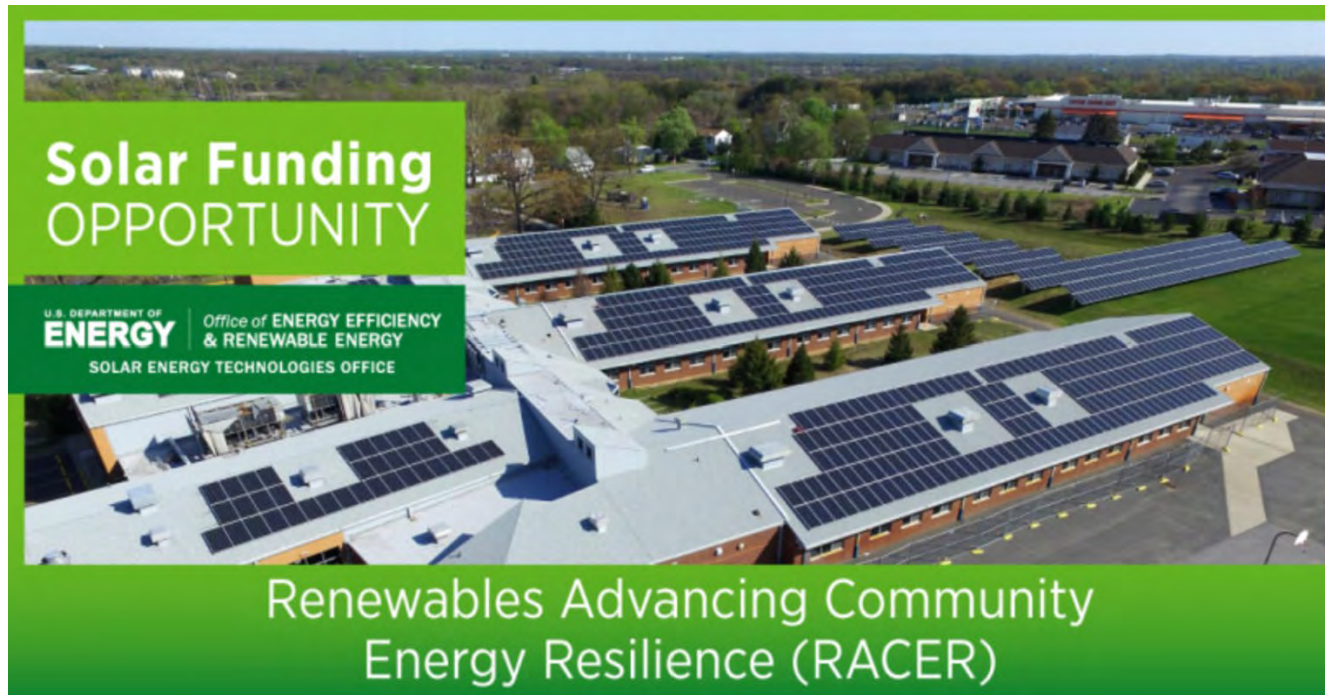


Green hydrogen



Solar Energy Planning: Solar Energy Technologies Office Renewables Advancing Community Energy Resilience (RACER)

Energy resiliency planning: solar + storage opportunities



Outcomes:

- Technical feasibility
- Community desires
- Economic pathways
- Toolkit for other cities

C-SITE (submitted, \$3M)

- Solar deployment
- City + community benefit
- Informed by RACER



Communities Sparking Investment in Transformative Energy (C-SITE) Funding Opportunity

Powered by the Local Government Energy Program (LGEP)



Deliver Local Benefits



Advance Energy Priorities



Spark New Investments



Bayview Pump Water Reservoir

PV Size (kW DC): **1,043**

PV Panels: **1668** Heliene 156 Half-Cut Monocrystalline 605W - 625W Bifacial Modules

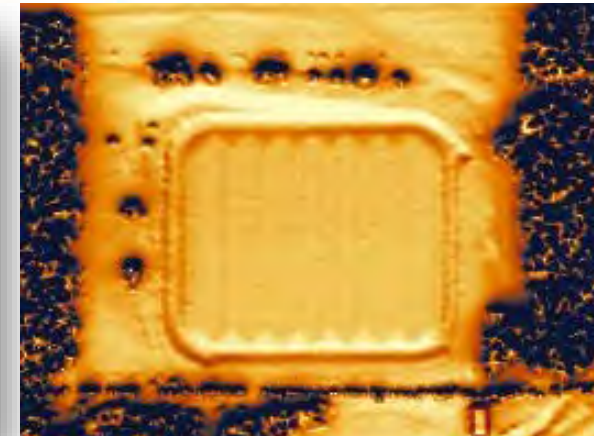
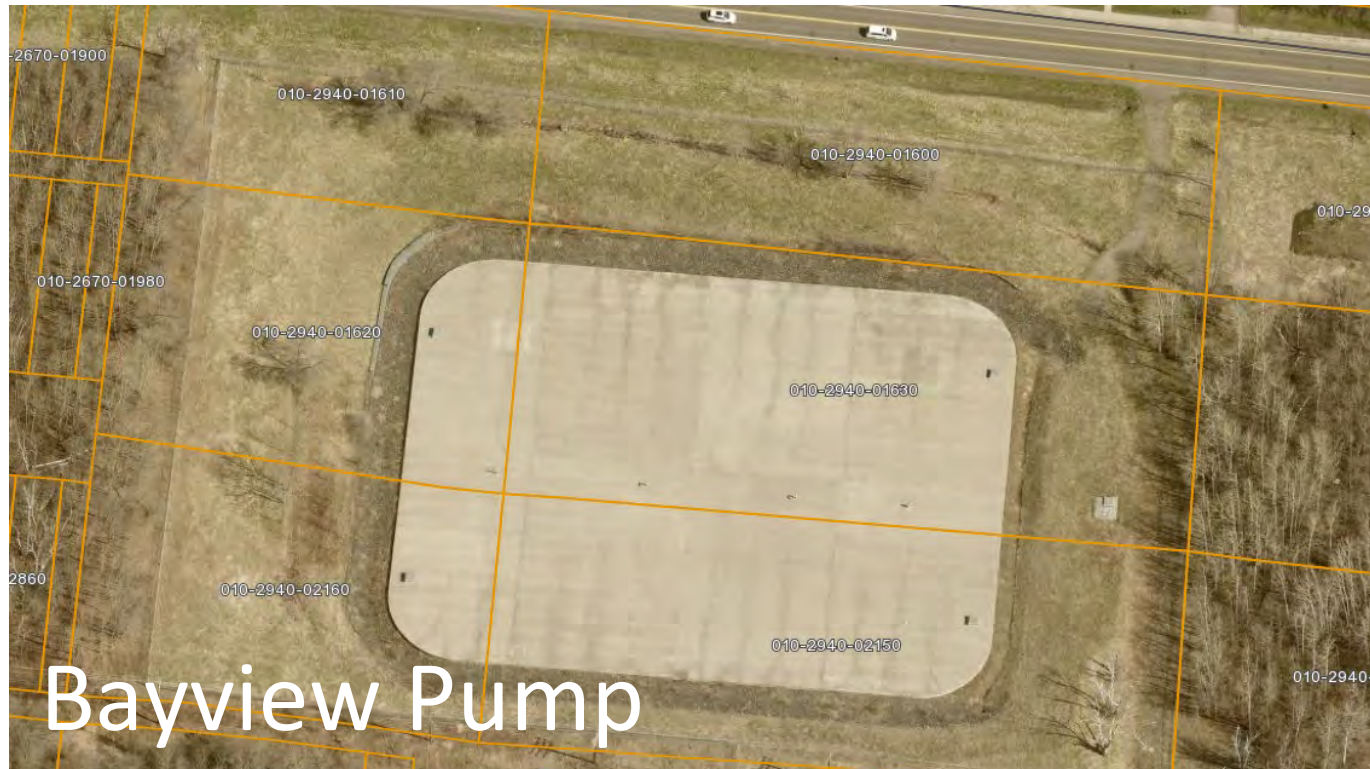
PV Racking: Unirac RM-10 ballasted

Inverters: **3** SolarEdge SE330KUS

PV Year 1 Production (kWh): **1,230,878**

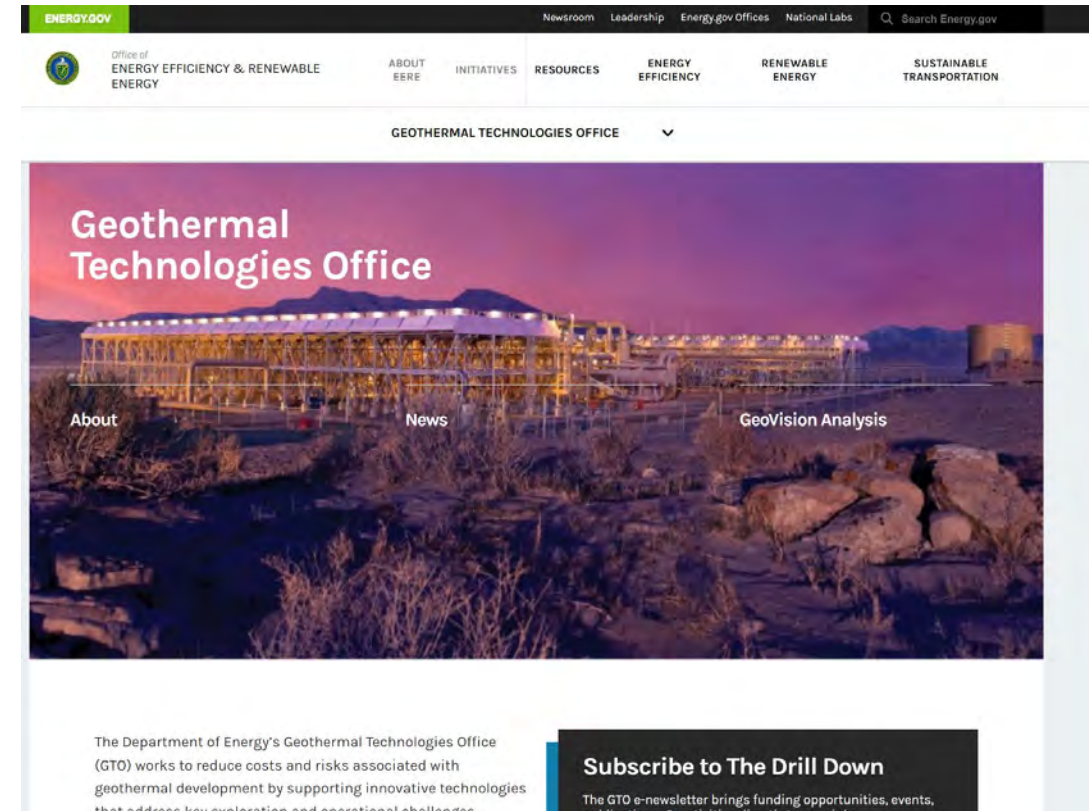
Avg. Annual Load (kWh): **225,048**

PV % of Load: **547%**



Geothermal Technologies Office Community Geothermal Heating and Cooling Design

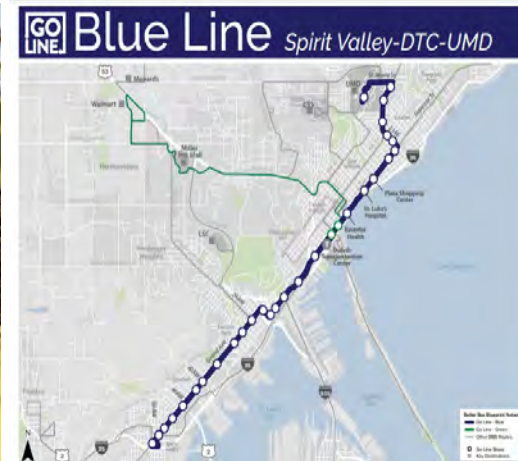
- Phase I: Feasibility study partners
 - **City of Duluth**
 - **Ever-Green Energy** (feasibility and design)
 - **Ecolibrium3/Main Street Lincoln Park** (neighborhood engagement)
 - **CORD/UMD BBER** (workforce)



Rebuilding American Infrastructure with Sustainability & Equity

West Superior Street Active Transportation Corridor

- Business district revitalization
- Street of the future
- Regional infrastructure, neighborhood impacts



LNPK 156

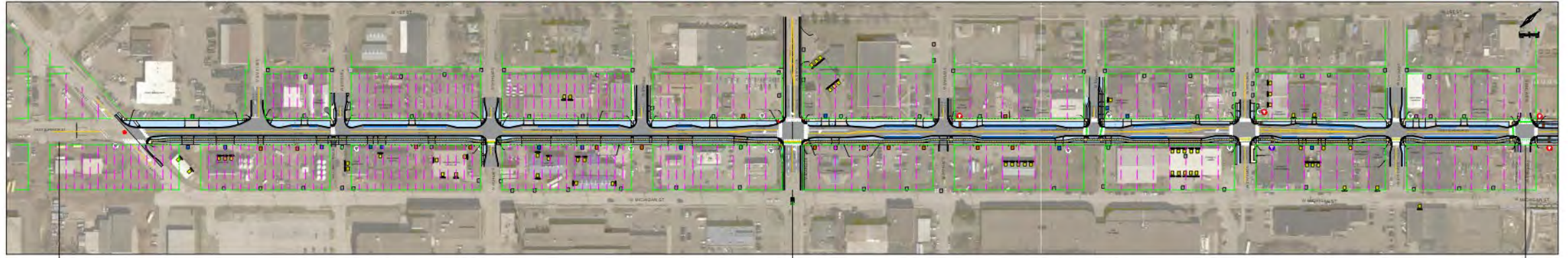
Social Determinants of Health Accelerator Plan, August 2022



WEST SUPERIOR STREET RECONSTRUCTION

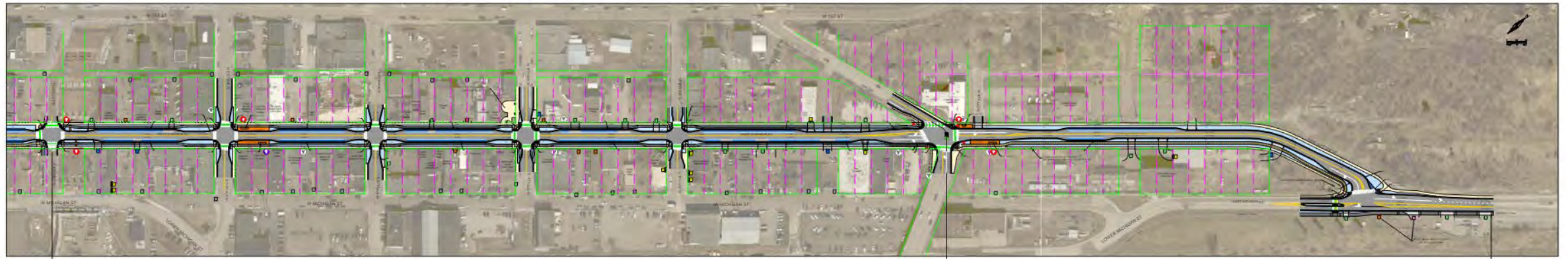
CARLTON ST TO MICHIGAN ST

PRELIMINARY LAYOUT - DRAFT 3/12/2024



CHARACTER DISTRICT 01 / LIGHT INDUSTRIAL

CHARACTER DISTRICT 2 / INDUSTRIAL TO COMMERCIAL TRANSITION



CHARACTER DISTRICT 03 / NEIGHBORHOOD COMMERCIAL CORE

CHARACTER DISTRICT 04 / THE POINT OF ROCKS



Street of the Future - Public Design

Session:

6:00 PM - 8:00 PM

Learn about street design that maximizes livability and economic success in Duluth. Join urban strategist Michele Reeves and community stakeholders for a 2-hour design symposium to inform the rebuild of W. Superior Street through Lincoln Park.

Location: LNPK Hub (2014 W. 3rd Street, Door 1).

[Sign Up](#)

www.westsuperiorstreet.com

Objectives 1, 2, 3

Resiliency: Stormwater and Coastal Planning

Planning

- City of Duluth Stormwater Plan (June 2023)

Projects

- Lincoln Park Green Infrastructure
- Brighton Beach: native plantings for stormwater management
- Irving Park biofiltration
- Woodland Avenue (partnered with St. Louis County)
- Local Climate Action Grants (MPCA, \$5M submitted)
- Coastal
 - Sea Walls
 - Section 11 study (MN Point/MWP-50)



Kitchi Gammi Park + Brighton Beach

Enlargement D

The northern end of the path joins the Lakeside trail away from the shore and connects up to existing trails near or on Old Seward Highway #1. This area was severely damaged by the storms and will focus on vegetation restoration and shoreline re-establishment and revetment protection.



Bloomberg Center for Public Innovation Grant: Love Your Block

5,971 Hours of deliberation

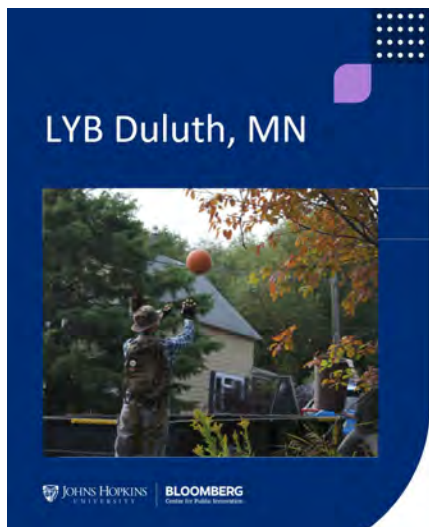
3,403 Residents & Partner Volunteers

5,719 Volunteer hours

38 Mini grant projects awarded

29 Project sites

21,770 Pounds of trash removed



Community Connection



Trees



Trash & Abandoned Waste



Small External Repairs

Plant a Tree with Love Your Block

Love Your Block is inviting **residents in Lincoln Park & Central Hillside** to request a **tree** of select species while supplies last. Trees must be planted in residents' private property.

To submit a request for a tree, visit the Love Your Block website at: <https://duluthmn.gov/love-your-block/tree-request-form/>

Love Your Block Grants are still available!

Grants of \$500 are waiting for residents and organizations in Central Hillside and Lincoln Park. These grants can be used for improving your neighborhood.

What's Next?

2024 and Beyond

Sustainable Duluth Workshops

- Eight-part series with local experts from nonprofits, government, business, and universities, partnered with the Duluth Folk School
 - Presentations, hands-on demos, and Q&As on clean heat, waste and recycling, energy funding opportunities, and more!



Led by AmeriCorps VISTA Ella Stewart

SUSTAINABLE DULUTH
A Community How-to Workshop Series for Your Household



Dovetail Café & Marketplace
3rd Thursday of every month
6pm - 7:30pm

Join the City of Duluth and Duluth Folk School in a community workshop series on how to incorporate sustainable practices in your household! Food provided and child activities available.

SCHEDULE:

1/18 Clean Heat	5/16 Food Systems
2/15 Funding	6/20 Solar
3/21 Waste	7/18 Transportation
4/18 Public Health	8/15 Policy



REGISTER HERE

z.umn.edu/sustainableduluth • 1917 W Superior St, Duluth, MN 55806

Energy Efficiency Conservation Block Grant

(\$144k, awarded)

- Heat Pump Water Heaters



Energy Futures Grant

Awarded, \$500k

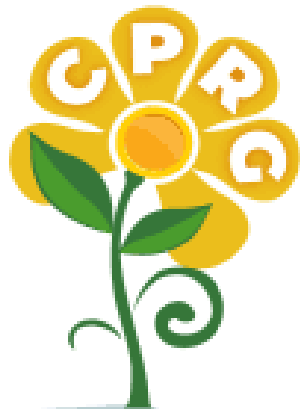
- City was selected for an award to study accelerated planning for reducing carbon from **commercial buildings** and **industry**
 - Largest GHG emissions sector



EPA Carbon Pollution Reduction Grants

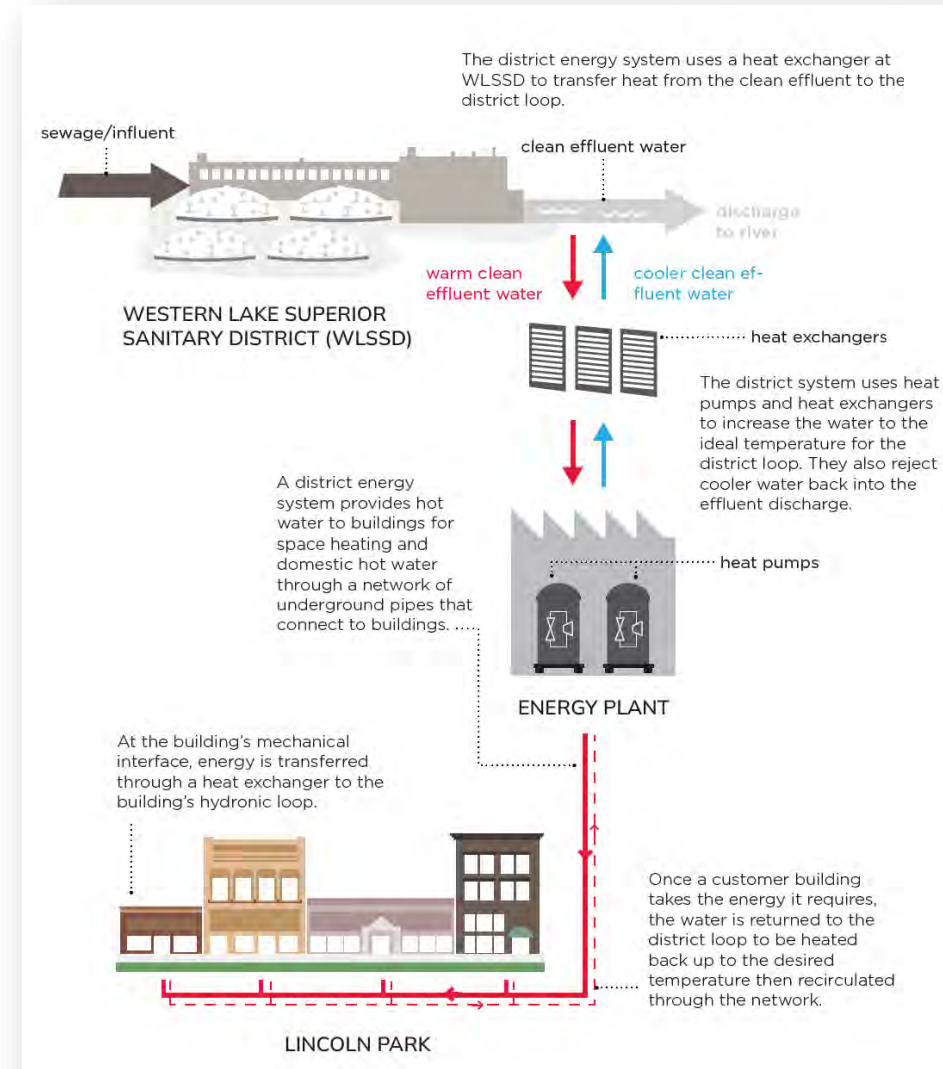
(submitted, \$59M)

- **\$9M** – State of MN submission for energy efficient housing
- **\$50M** - Implementation of geo-exchange district
 - Commercial buildings program



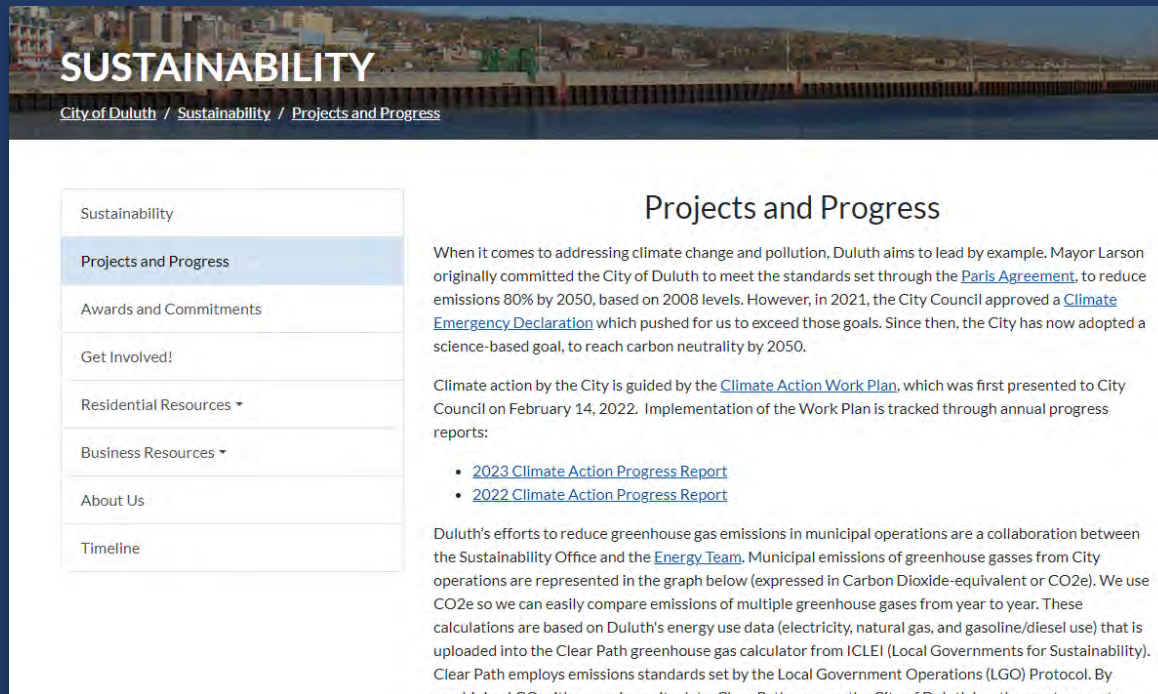
**CLIMATE
POLLUTION
REDUCTION
GRANTS**

U.S. Environmental Protection Agency



Thank You!

2023 Climate Action Work Plan Progress Report: www.duluthmn.gov/sustain



SUSTAINABILITY
City of Duluth / Sustainability / Projects and Progress

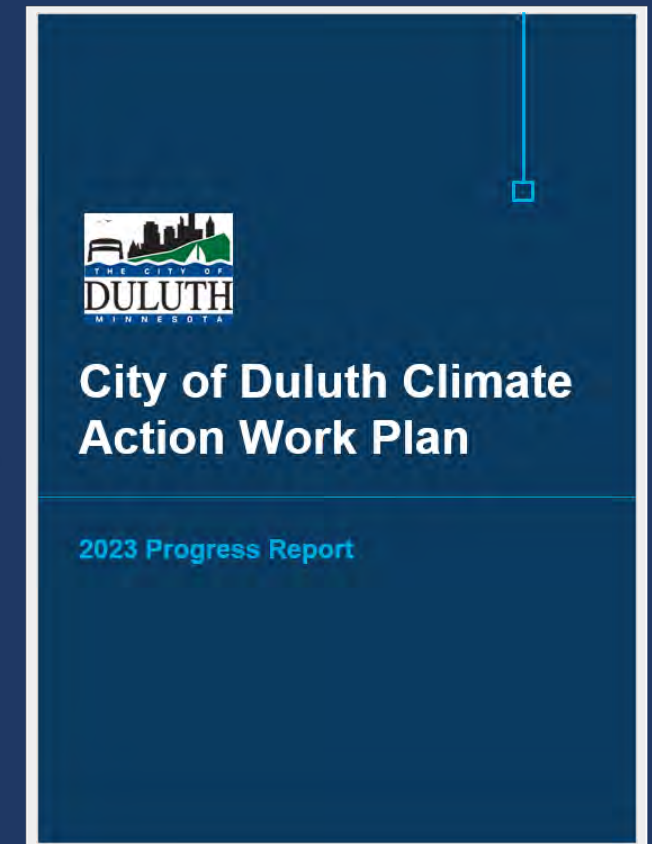
Projects and Progress

When it comes to addressing climate change and pollution, Duluth aims to lead by example. Mayor Larson originally committed the City of Duluth to meet the standards set through the [Paris Agreement](#), to reduce emissions 80% by 2050, based on 2008 levels. However, in 2021, the City Council approved a [Climate Emergency Declaration](#) which pushed for us to exceed those goals. Since then, the City has now adopted a science-based goal, to reach carbon neutrality by 2050.

Climate action by the City is guided by the [Climate Action Work Plan](#), which was first presented to City Council on February 14, 2022. Implementation of the Work Plan is tracked through annual progress reports:

- [2023 Climate Action Progress Report](#)
- [2022 Climate Action Progress Report](#)

Duluth's efforts to reduce greenhouse gas emissions in municipal operations are a collaboration between the Sustainability Office and the [Energy Team](#). Municipal emissions of greenhouse gasses from City operations are represented in the graph below (expressed in Carbon Dioxide-equivalent or CO2e). We use CO2e so we can easily compare emissions of multiple greenhouse gases from year to year. These calculations are based on Duluth's energy use data (electricity, natural gas, and gasoline/diesel use) that is uploaded into the Clear Path greenhouse gas calculator from ICLEI (Local Governments for Sustainability). Clear Path employs emissions standards set by the Local Government Operations (LGO) Protocol. By combining LGO with our unique city data, Clear Path assures the City of Duluth has the most accurate



THE CITY OF DULUTH MINNESOTA

City of Duluth Climate Action Work Plan

2023 Progress Report